As a Matter of Size

The Importance of Critical Mass and the Consequences of Scarcity for Television Markets

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The Doctoral School of Organisation and Management Studies (OMS) is an interdisciplinary research environment at Copenhagen Business School for PhD students working on theoretical and empirical themes related to the organisation and management of private, public and voluntary organizations.

Foreword

This thesis "*As a matter of size"* has been a long journey in terms not only of time used for researching and writing the doctoral thesis, but also for finding the right theoretical and methodological approach to study the concept of size empirically. This is a result of the different areas studied while attempting to identify empirically the impact of size. While size plays the dominating role, there is an underlying theme on the benefit of provisioning services in the public interest.

During my work on the thesis, a lot of time and energy has been invested in other projects to explore twists and turns in the understanding of the theories and approaches applied. Several theoretical and methodological approaches have been investigated, as well as empirical studies, and not all have been presented in this thesis. Two of the articles published (one as co-author and one as main author) are present in the appendix B. None the less there is still a lot of material left for further work on regulation and public services. The doctoral process has been a process of in-depth gathering of information and data by mapping the available media data in a European context. Not all is presented in detail or in totality, but an attempt has been made to develop a work useful both empirically and theoretically within media studies. This also means that much secondary material has been studied and used in the dissertation, but this does not mean that I did not make a more original contribution in the dissertation (even though more of it is present in the two articles, and some require more development), as by using different databases I combined audience data of channels owned by media companies with the audience share to establish an overview of market concentration in each market. Such data is not directly available elsewhere, and did provide some interesting insights.

The end-product submitted here is only half of the actual written material, and there is thus more work to be done in using the remaining material as spin-off articles.

Too many people to be named have helped make this work possible. Thanks to all – no names, no one forgotten, would be the correct phrase. However, special thanks go to Prof. Anker Brink Lund, former GD of DR, Christian Nissen, Knud Emborg Ebbesen (formerly DR) and the Danish public broadcaster (DR) without whom this work would never have been possible.

I hope you will find the work interesting.

Christian Edelvold Berg, October 2012

Abstract

This thesis *"As a matter of size"* demonstrates that size does indeed matter. Television markets have common characteristics across small and large markets, but the implications of these characteristics are varied due to the difference in size of economy and population. The influence of variable size is a consequence of the economic conditions of scarcity (limited resources) and thus the relative critical mass of the media market. Thus, the influence of size is an expression of the television market's inability to operate on normal market terms for provisioning particular types of services. Larger markets (measured by economy and population) have a higher potential of securing such content commercially. But all markets suffer from challenges in securing provisioning of original domestic content. Market intervention and public subsidy play an important role when it comes to securing domestic production. Political intervention can to some extent counteract the effects of the common characteristics, by changing market conditions through political regulation or subsidisation.

The thesis shows that the European television markets mainly operate under conditions of oligopoly, usually in the form of different types of duopolies. The effect of size on market concentration is not as unambiguous as estimated in the literature, as the scope and extent of market intervention influence this quite intensely. Moreover, the study shows that television markets are dominated by relatively few, usually local, media companies and the multinational companies in most markets currently do not pose a real danger - but there are signs of a development which requires further research. Public service companies remain relatively strong in the markets studied, and continue to play an important role as a counterweight to national and international commercial competitors.

Different markets require different policies that take into account the conditions in that specific market, in order to achieve a certain desirable merited effect. The thesis supports the view that a "one size fits all" policy across several markets when it comes to media regulation, risks not yielding the warranted results. Markets with different conditions, exposed to the same type of regulation, might have overall positive effects, but could also easily have a very negative impact if the conditions in a particular market do not fit with the intent of the policy. It is therefore far from certain that a "one size fits all" regulation will have the intended uniform effect on the affected market across several markets.

This is especially true for markets that are challenged by having both a small population and a small economy. In a sense it is a paradox that the interest at European level in fair competition and equal opportunity for success can lead to different conditions of competition in a domestic market, as players may be subject to various conditions (in a way it can also be regarded as a

consequence of domestic policy interventions), where the domestic players can face a strong international player, and as a result of the internal market and the Audiovisual Media Services directive, can achieve a competitive advantage, for example in relation to choosing the most lenient advertising rules.

The analytical work of the thesis can substantiate claims that size has a significant effect and that there are concrete policy implications depending on size of economy and population, due to scarcity of resources in the individual market.

Resume på dansk (abstract in Danish)

Denne afhandling *"As a matter of size"* underbygger argumentet om, at tv-markeder har fælles karakteristika på tværs af små og store markeder, men samtidig, at konsekvenserne af disse karakteristika netop er forskellige som følge af henholdsvis økonomisk- og befolkningsmæssigstørrelse. Den indflydelse variablen *størrelse* har, er en konsekvens af de økonomiske knaphedsbetingelser og dermed af markedets relative kritiske masse. Dermed er det et udtryk for tv-markedets manglende mulighed for at fungere på normale markedsmæssige vilkår for bestemte typer af samfundsmæssigt meriteret indhold. Dette er et resultat af tv-markedets markedsfejl og dets deraf afledte ufuldkomne konkurrence. Markedsintervention og offentlig subsidiering har derfor en væsentlig betydning, når det kommer til produktion af meriteret indhold.

Politiske indgreb kan til en vis grad modvirke effekterne af de fælles markedskarakteristika, herunder knaphedsbetingelserne, ved at ændre markedsvilkårene gennem politisk regulering eller subsidiering. Analyserne viser, at tv-markederne overvejende fungerer under oligopole forhold. Virkningen af *størrelse* på markedskoncentrationen er ikke så entydig som anslået i litteraturen, da omfanget af markedsintervention også har en indflydelse. Undersøgelsen viser desuden, at tv-markederne er domineret af relativt få, som regel lokale, medievirksomheder, og at de multinationale selskaber i øjeblikket ikke på de fleste markeder udgør en reel fare - men der er tegn på en udvikling som fordrer yderligere forskning. Public service-virksomhederne forbliver forholdsvis stærke i de undersøgte markeder, og indtager fortsat en vigtig rolle som modvægt mod nationale og internationale kommercielle konkurrenter.

Forskellige markeder har behov for politikker, der tager højde for de særlige vilkår på det specifikke marked for at opnå en bestemt ønskelig meriteret effekt. Analyserne underbygger, at der ikke findes en "*one size fits all policy*", når det kommer til medieregulering og mediepolitik. Markeder med forskellige vilkår, der udsættes for samme type af regulering, kan godt resulterer i overordnede positive virkninger, men særligt også negative virkninger – hvis reguleringen ikke er tilpasset markedet. Som udgangspunkt vil effekterne være forskellige, og forskellen vil afhænge det enkelte markeds særlige vilkår – det er derfor langt fra sikket, at en "one size fits all" regulering vil have en ensartet effekt på de påvirkede markeder, samtidig er det ikke sikkert, at reguleringen opnår den ønskede effekt. Dette er især tilfældet for de markeder, der er udfordret af at have såvel en lille befolkning som en lille økonomi. På en måde er det et paradoks, at interessen for fair konkurrence og lige vilkår på europæisk plan kan føre til forskellige betingelser for konkurrencen på et indenlandsk marked, da spillerne kan være underlagt forskellige betingelser, hvor den indenlandske spillere kan stå over for en stærk

international aktør, der som følge af det indre marked og tv uden grænser direktivet (nu AVMS) opnår en konkurrencemæssig fordel.

Det analytiske arbejde der er foretaget i afhandlingen, kan anvendes til at konkluderer, at *størrelse* har en betydning, og har konkrete policy konsekvenser afhængig af økonomisk- og befolkningsmæssigstørrelse, som følge af de begrænsede ressourcer og den tilgængelige kritiske masse på markedet. Men det kan også konkluderes, at der ikke findes én enkelt metode, der kan behandle denne udfordring, da dette netop er en konsekvens af de markedsmæssige vilkår som opstår som følge af de fælles markedskarakteristika.

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Chapter 1. Introduction

The aim of this Ph.D. thesis is to study the influence of size in order to identify the differences between small and large television markets and *to show* how this can be relevant for media policy. More specifically, I shall analyse the structural influence of size on the mechanisms of the TV media market. This will be done by studying differences using scarcity conditions as my point of departure and using proxies for market volume, production of original domestic content and market competition. All in all, this will document important aspects of the reasoning behind the current forms of state intervention in media markets, and facilitate a more coherent discussion of the implications of size related to policy decision-making in Europe[i].

That size matters in commercial markets is obvious, but when one asks how size matters in media markets with high levels of political intervention, little empirical evidence is available. Even less empirical evidence is available on how size matter for public service broadcasters (PSB), even though they are important institutions in most European media market. There is especially a lack of research on the influence of PSB in different regulatory frameworks. PSBs have been applied as policy tools for a long time with different purposes in diverse markets. This has led to a situation where size indirectly is taken into account by the PSB. None the less *size* as a concept stating the overall challenges for small markets often appears in policy debates, but it remains rare for actual research to be conducted, especially with a policy perspective. Availability of data is a major reason for this as cross-comparisons are very challenging as the actual policy-construction processes are usually hidden in "black boxes" in the public administration and political negotiation. This is also why PSB is not a direct part of this thesis, as I study the results based on input (money and investment in original production) and output (share and market concentration) in small and large markets. However, studying this at a structural level using comparative method will enable me to identify similarities and differences between small and large markets based on size. This will also because of the strong European tradition of PSB indirectly help substantiate the influence and importance of these institutions. As such the focus is on the impact of size for media policy in general.

When developing media policy, size is usually ignored or regarded as a 'black box'. I intend to open this box. In doing so, I will supplement former work from different fields of research, primarily Robinson (1960), Amstrup (1976, 1979), Handel (1981), Hanf and Soetendorp (1997), Ott (2000), Alesina and Spolaore (2003), Puppis (2009), Lowe & Nissen (2011). In spite of their efforts, questions about the influence size has, and what policy implications may be triggered

in the wake of increasing international competition and the transnational regulatory regime of the European Union, are often still dismissed or overlooked.

In this first chapter, I shall present my research problem and the subsequent hypotheses and research questions. After that, size is defined empirically, leading to theoretical and practical delineations, and the introduction to my choice of research design. Before doing so, however, I shall discuss my fundamental motivation for doing the thesis in the first place, i.e, offering my assistance in mitigating the current lack of knowledge related to policy implications of size, especially demonstrated by the efforts of European national states and the EU[ii].

1.1. Policy implications of size

My motivation for doing research of this kind is not strictly empirical, but also normative, i.e. to inform current debate on media policy nationally and transnationally in Europe. In the TV markets regulatory interventions have primarily been based on market failure and merit goods arguments legitimising Public Service Broadcasting (PSB). Consequently, most European nations have PSBs, but currently we are witnessing a situation in which television markets of different sizes have had similar policies imposed on them in spite of dissimilar working conditions, as a consequence of EU competition policy for the common market and *the audiovisual media service directive* (AVMS), formerly known as *television without frontiers*.

I shall argue that as far as television is concerned, size has been neglected not only theoretically and empirically, but also in European media policy. This became apparent when the concept of size was removed from a first draft of the *Communication on Broadcasting* from the European Commission after a consultation, only to be re-introduced in the following draft as a consequence of several small states and public broadcasting organisations presenting their arguments relating to size. In this respect, it became apparent from an empirical perspective that there was a belief in the influence of size which, while not contrary to the literature, was based more on the perceived challenge of small states, such as scarcity concerns and the protection of perceived merited interests.

The thesis will demonstrate empirically that size is important and has policy implications for the television markets, but also that political intervention remains frequent and has a significant impact on the markets. My point is that as a consequence of their special characteristics, TV markets represent a strong case to be investigated for the purpose of studying the influence of size. Furthermore, that TV markets constitute a particularly interesting case is also due to the fact that conditions of TV market failure have long been an argument with clear empirical

consequences in terms of political intervention. This is also very clear empirically where more than €22 bn was allocated in subsidies in 2007 in Western Europe[iii] alone, making it the third largest publicly aided industry in the EU, only surpassed by the transport and agricultural sectors (Screen Digest, 2007). Furthermore, the interest in television and original domestic content by the European audience should not be underestimated with an average daily viewing in Europe of 3 hours and 37 minutes per individual in 2008 (Eurodata TV, 2009).

In short: Based on theoretical arguments, the impact of size as small and large markets are subjected to different market and content good characteristics, may lead to regulatory failures and incompatible market conditions, when regulating dissimilar markets with harmonised policies, which risks leading to externalities and, in the worst cases, adverse effects.

1.2 Research problem

I shall argue that size is a factor of great (but neglected) importance for European media policy. I will do so by investigating how size influences small and large markets by analysing the influence of size on the structural mechanisms of the TV media market in particular[iv]. More specifically, what will be studied is scarcity in terms of market volume and domestic production, as well as examining the market competition. This analysis will enable a more coherent discussion of the implications size has for policy in the European TV market, including the consequences this has for the reasoning behind the arguments for state intervention. The research problem can be stated as follows:

I am going to analyse how size matters for television markets in Europe, measured and compared by statistical data, in order to discuss potential policy implications.

The fundamental basis of my thesis is the scarcity argument. Scarcity in this sense means that the small markets lack sufficient critical mass to leverage the challenges posed by the characteristics of the market (level of market volume and available resources to invest in original domestic production as well as imperfect competition). This I shall argue have special implications for the role of public service broadcasting.

The consequences of size may be that small markets cannot procure commercially the domestic services of interest in terms of information and cultural goods of sufficient quality independent of state intervention. To frame the analysis of size, the argument of similar characteristics but different leverage has been developed and will be used to analyse how size influences. This will help document empirically the influence of size and assess whether the argument that size

should play a more prominent and informed role is an important premise for the regulation of the European TV market.

In other words: I shall argue that the consequences of size for the media lie in the inherent traits and distribution of the media content goods and media markets. Both the media content goods and the distributive infrastructure carry characteristics which have natural modes of market failure. These characteristics are intrinsically linked to market volume, particularly because of the public interest in original domestic content, and to the competitive market conditions. This leads to differences between small and large markets based on the content and market characteristics. Large markets have a broader basis for securing revenue, i.e. a larger market volume, to invest in original production, as well as a larger critical mass which means that there is the potential for more companies to enter the market.

1.2.1 Hypotheses

As a starting point, I have two hypotheses, each of which will be investigated through a set of research questions well suited to frame the analysis of the research problem on how size matters.

> Hypothesis one: ***Size is linked to scarcity and therefore influences the critical mass of television markets: meaning that size influences the critical mass in television markets based on availability of revenue understood as monetary TV market volume and the availability of original domestic content. Consequently the larger a market is, the greater is the potential volume of the television market and domestic production.***

This will be investigated based on three research questions:

A. How does size influence the availability of revenue in television markets (TV market volume)? The larger a television market is, the more revenue should be available, which again sets the frame for the potential number of companies and the level of domestic production as this is based on scarcity considerations.

B. How does size influence the level of original domestic content in television markets? The larger a television market is the more original domestic content should be available as the incentive for companies to invest in content should be higher.

C. Is there a relative influence of size (varieties of size) on TV market volume and production of original domestic content? Size influence could also be viewed relatively based on small and large categories, meaning that a large market measured by population, can be small measured by economy, which can result in different implications for policy.

The investigation of the first hypothesis will be made based on these three research questions, each to be studied in a separate chapter and summed up in a conclusion. Combined, these three analyses will help investigate whether size matters for volume and production of original domestic content on TV markets and what policy implications this influence could have from a structural market perspective.

> Hypotheses two: ***Size influences the competitive conditions in television markets. This is a consequence of imperfect competition due to the characteristics of media markets and media content in combination with differences in critical mass (scarcity). Consequently the larger a market is, the better conditions are there for private commercial media, as the larger markets can sustain a higher number of companies, which should show in lower degrees of market concentration - if not at the overall level, then as the number of companies increase.***

The second hypothesis will be investigated based on two research questions:

D. How does size influence the conditions of competition in television markets? This will be divided into two separate sub questions:

    a. How does size influence public and private television?

    b. Is it possible to identify differences in small television markets with same-language large neighbours?

E. How does size influence the level of concentration in television markets? This will be divided into two sub questions:

a. How does size influence market concentration from an overall structural perspective?

b. Is it possible to identify any trends concerning ownership of multinational companies?

The investigation of the second hypothesis will be based on these two research questions, each to be studied in a separate chapter focused on a set of sub questions and summed up in a conclusion. Combined, these analyses will help investigate whether size matters in TV markets and which policy implications this influence could have from a structural market perspective.

1.2.2 Delineation of the analyses of the research problem

This study will investigate the variable of size to explore whether or not there are differences between small and large television markets.

The radio, online and print markets will not be included. Radio, online and print-markets are all interesting, and – with some variations - they have similar characteristics to television. Television is of main interest as this field is regulated nationally, as well as by the EU, which should make it easier to identify potential policy implications. Radio is also regulated, but mainly nationally and not to the same degree by the EU. Online and print are mostly also unregulated, except for cases of piracy, right of reply and other similar concerns. But it is a different type of regulation than for television. The objective is not to analyse the regulatory measures of the sample markets, as this is beyond the scope of the purpose of this dissertation.

There will not be a detailed and comprehensive description of either the history of the individual media systems in each market or of the individual PSBs; this has been conducted by a number of media researchers, e.g. Kelly et al (2004), the Hans Bredow institute (1957-2004/2005) Internationales Handbuch Medien, as well as in qualitative studies in the individual countries. Nor will in-depth case-studies be conducted: this is a variable-oriented study, and single cases of regulatory history and effect will not be introduced.

The unit of analysis for the thesis comprises European markets; a sample of 26 European markets will be included, and depending on the chapter there are some markets divided based on language, namely Belgium (French and Flemish). The limit to 26 European markets is due to the difficult availability of media data, which requires resources and contacts to gather. Nonetheless,

this study will also be one of the more comprehensive pictures of the media markets based on empirical material from a mid-range of markets. The question of size has been examined in case studies based on single or a few cases, but few comparative studies based on quantitative data exist. An example of one of the few comparative studies is McKinsey (1999), conducted for the BBC which compares 20 countries.

The intention is to enable statements on the observed similarities and differences concerning size as well as to identify potential patterns. This means acceptance of a social world which can be studied systematically and where it is possible to identify regularities/irregularities of social phenomenon. This also means that this study cannot claim to provide either the entire answer or the whole explanation as to how size matters, but it is an attempt based on economic theory with the purpose of establishing a particular interpretation of the influence of size based on the assumptions of public interest in the production of original domestic media content.

The economics applied cannot be used to prove value-judgments in terms of which policies are the best, or if the media should or should not have state aid. That would in many ways be a question of ideology and values. What it can do, is to nuance and help explain trade-offs between different solutions and problems, but where values become the central concern, politics and political consideration enter the game. Therefore it is necessary to clarify that, while I will study size to investigate differences between large and small markets within a set of parameters based on the selected framework, I will not make normative value judgments in terms of what to do about the potential problems of small markets or small/large language areas, but I will attempt, based on theory and empirical studies, to nuance the arguments on the challenges of these. The explanation of empirical phenomena is the main purpose of theory and testing them is important in the further development and refinement of theory. I hope this dissertation can be used to further the understanding of how size, as a variable, affects markets in different ways, and also how this can be applied to nuance and refine media theory and policy in areas related to size, and understanding of the television media from an economic perspective and possibly establish a debate on public service broadcasting.

1.2.3 Defining size

The intention of this dissertation is to study the influence of size. Consequently a definition of how to measure this is required. Conceptually, I can distinguish between different facets of size such as territorial mass, industry, the military, population, market size or economy (Robinson, 1960; Friedman, 1977; Trappel, 1986; Trappel and Meier, 1992; Findlay, 1996; Alesina and

Spolaore, 1997, 2003; Ott, 2000; Wittman, 2000; Puppis, 2990; Puppis et al. 2009; Lowe & Nissen, 2011). Omitting the military, most of the other facets can be argued to have a more continuous effect on the media, with the challenges being that these again are relative in terms of the operational definition. When conducting comparative research, I have to be able to define and discuss when a market is large or small and by which criteria. The demarcation applied can always be challenged by others, and it therefore becomes important to ensure that there is complete clarity in the distinction between large and small. So the concern is the definition of the included variables: what is small and in which context? Or, in short, what is smallness and what are the criteria for being small vs. being large?

To give an example of the difficulty of definition, I can use the fact that the attempt to bring size back into media research has focused on population as being a measure, as seen in the Special Gazette issue (2009) definition of 15 million+ for large, while for Lowe & Nissen (2011) was 20 million+. Small states are defined by others as those with less than 5 million inhabitants (Commonwealth Secretariat, 2008), while another use of population defines those states with more than 5 million people as large, and only those below 1.5 million as small, with the rest falling into the medium category (Ott, 2000). The point I have to make is that there are no clear-cut definitions and the one applied here is not a final answer as to size, but will indicate some relationships of interest between the variables for use in a particular context.

In short, size is a complex concept to work with; what is large in contrast to small? And is this only on the national level? How should a small market, home to a large broadcaster such as in the case of Luxembourg, count? Population size as a variable has been criticised (Hallin, 2009), but it remains useful (Puppis et al., 2009) and as I argue, we should perceive population as just one of several facets of size. Alesina and Spolare (2003, 2005) suggest different indicators for size such as, among others, the separate economic indicator of GDP and geographical area.

The included markets are different in size; therefore it is necessary to stipulate clearly where they are respectively, large or small. A country with a small population but a large territory poses different questions to those of a small, flat country such as Denmark when it comes to penetration of and investment in telecommunication infrastructure. Size as a concept is quite ambiguous and relative, and in order to use it systematically, it is necessary to establish clear definitions for the facets used. As such it is necessary to note that there are no clear-cut definitions, but there are some useful indicators for size, such as population, economy, e.g. GNP, GDP or PPP GDP, geographical size (Ott, 2000; Alesina and Spolaore, 2003; Puppis, 2009).

As pointed out in the literature, market size, territory, economy, the military and industry among others are all relevant facets of the concept of size. It would, however, be difficult to include them all. I will apply population, economy and language as variables, with the reasoning for this given below.

Economy can also be measured in different ways; a usual way is GDP, GDP per capita, or GDP corrected for purchasing power parity (PPP). Another method is gross income or disposable income. Different measures will be used for different purposes. To limit the challenge of multicollinearity when conducting the multivariate statistical analysis a decision has been made to use a GDP per capita figure corrected for PPP. It can be argued that economy and market size are mutually dependent, but these facets can also be affected by the size of population. Markets such as Norway have large economies due to oil exports while being relatively small in other aspects; at the same time, Saudi Arabia has both a large population and a large economy due to oil. A large population with a small economy is also a possibility, as well as a small market with a population having a relatively large purchasing power.

Population is directly related to the number of available customers. If the population is sufficiently high it achieves a critical mass capable of attracting investment, thus changing the market conditions. Market volume is an important selection criterion, but it can be viewed as dependent on both population and economy. Language, while having a relation to population size, is also related to neighbouring markets as well as the spread of the language globally. Small markets for television content, meaning language areas, face other challenges from large consumer markets, such as large language areas with an international perspective. While the domestic market of available consumers might be small, such as in Austria, the total German-speaking market is large, equalling 100 million. Language is thus also a facet in determining actual market potential.

All in all, size is a relative concept: Mexico, while having a relatively high population (110 mio.), is still smaller than its neighbour the USA in both territory and population size. The same is the case for Canada which, while being small in population in comparison with the US and Mexico, is still big compared to most European countries, and is larger in territory than the US.

Smaller markets can at the same time usually only maintain a smaller number of competing companies, and therefore tend to be more concentrated than their larger counterparts, which can entail an increased intervention into the market. Market concentration is central for small markets and in theory marks important differences between small and large. But these factors

are also related to the size of population, economy and language as they can influence the level of competition.

The Austrian market risks higher levels of competition due to the German language, the same being the case for the French-speaking part of Belgium in relation to France. This indicates language affiliation affecting a country, especially if a small country has the same language as a larger neighbour (Puppis et al., 2009), but this is more a variance of size than a separate concern. This is of course speculation, but when studying the share of countries such as Austria and Switzerland, we find indications for an effect not normally visible for other small countries. Language area becomes a way of distinguishing small countries from each other. When looking at the Scandinavian countries (Denmark, Norway and Sweden), it can be seen that they also have the potential of cross-viewing, but for some reason this has not been as widespread as in, for instance, Austria.

One interesting point to study is whether it is primarily the large countries which penetrate into their smaller same language neighbours, or if this can also be the case for small country neighbours. One interesting aspect here is actually the conception of language similarity; although the Scandinavian countries (Denmark, Norway and Sweden) have somewhat similar languages, they are not as similar as German spoken in for instance Austria, nor the English spoken in Ireland. The same is the case for the Slavic countries: although similar, they are not completely alike. Thus cross-viewing is not as viable as in Austria and Germany, for example, or for that matter in French Belgium and France. Language will therefore be considered a separate facet of size, perceived as language area.

What I argue is that while there are several different ways to measure size, there are three of particular interest for media economics in the form of economy, population and language. In this dissertation I will draw on Alesina and Spolare (1997, 2003) as well as Witman (2000) by including economy as an indicator for size measured by PPP in GDP and GDP in absolute terms, and Puppis et al. (2009) by including population and language. In principle, several more facets could be included, but for the purpose of this comparison these will present a particular variety of size based on case-study research within media studies and wider studies within other disciplines that could indicate some difference related to size. I am in line with Lowe & Nissen (2011) in finding it important to include both economy and language as separate indicators for size in an attempt to establish an increased coherence in the way it is applied in policy. For the purpose of the media, claiming that small is below 5 million (Commonwealth Secretariat, 2007) or even below 1.5 million (Ott, 2000) would bring miniscule leverage potential in terms of ability to provide domestically produced media content. Thus the 20 million population

definition by Lowe & Nissen (2011) is more useful as an indicator for the categorical definition, when it is taken into consideration that the analysis is mainly based on continuous scale variables based on the logic of the hypothesis, where the influence of size is argued relative as based on the differences in size.

Size will be defined by three empirically testable parameters: population, economy and language. I apply both a scale definition and a categorical definition of size. Using a scale definition means that the larger the population or economy, the higher the critical mass is of the market and vice versa. Using a categorical definition means that the markets are grouped according to a pre-determined population and economy.

- Scale population and economy definition: Population in millions and economy in PPP GDP per capita in dollars are used as scale variables, as the hypothesis states that in that the larger or smaller a market is, the more or less evident the influence of size becomes.
- Categorical population definition: The categorical definition applied for population is that a small population is defined as below 20 million and large when above.
- Categorical economy definition: The categorical definition applied for economy is that a small economy measured through GDP PPP per capita is below the European average figure of $24.216,80 in 2007, and economies equal to or above that are considered large. The figure of $24.216,80 is equal to the average of all European markets in 2007. This definition has been chosen in order to establish a non-subjective definition of economic size.
- Language is used indirectly by analysing small markets with large same-language neighbours based on the categorical definition of population size.

These variables and small/large definitions should give indications of the effect size can have. The definitions are based on a conceptualisation which has an inherent challenge of scale, meaning that the larger the economy or population, the easier provision will be; but this is also is the case vice versa. But this way of distinguishing the markets will establish some leverage with which to differentiate effects of size based on more than population, although this is the main parameter applied in terms of categorisation: for a list see the table in appendix A.

1.3 Theoretical argument based on the hypothesis

I have argued that media markets in general and TV markets in particular are subject to market and content characteristics which will increase the influence of size due to conditions of scarcity. This is what leads to the different conditions in small and large markets. The argument is based on the conditions that media content good are generally identified as public goods due to their characteristics of being non-rival and non-excludable. This does not mean that these goods cannot be made exclusive using different methods, because through distribution they can become excludable. I argue that media content is a traditional public good in the specific linguistic and cultural context of a geographical market, but perceived from an international perspective, language and culture exclude and change the non-excludable media good to a club good, thus becoming excludable but remaining non-rival. This leads to the question as to why domestic content is necessary; the reason is that within a society there has to be a function for the diffusion of information such as news, debate and cultural programming within a specific national sphere of political influence in order to secure cohesion and the ability of citizens to navigate in a democratic society.

A small population also means that there are fewer people to pay for a similar level of service. I therefore argue for a change in the way in which we perceive domestic production, as while media content does have the characteristics of public goods, they are, especially in small markets, limited to a particular cultural and linguistic context which functions as an exclusion mechanism, suggesting that it would be beneficial to perceive originally produced domestic content as a club good.

The intention of my investigation is to study how size, as a variable, influences large and small markets differently. This will be done to help close some of the empirical and theoretical gaps in media theory as well as testing the theoretical assumptions applied in the hypothesis. I argue that, based on a conceptual framework derived from economics, we should see the conditions for the media with a) content characteristics of non-rivalry and the potential for either excludability or non-excludability (Samuelson, 1954; Buchanan, 1965, 1967; Holcombe, 1997) in combination with b) increasing returns to scale under conditions of consumption being independent of cost of production (Bator, 1958), leading to difficulties in achieving c) minimum efficient scale for media companies (Sutton, 1991, 1998) based primarily on one domestic market. Based on this we have a mode of market failure by existence (Bator, 1958). Based on the three conditions the television media market has per definition imperfect competition.

The argument is that every size of television market has characteristic dynamics that are more or less applicable everywhere, and that the explanation of key differences lies in relative market leverage. This can be conceptualised as an expression of the market's inability to allocate resources efficiently in media. Consequently, the inherent assumption in the argument is that size matters for both performance and policy in TV markets. The prerequisite for this is the scarcity argument, meaning that the larger the market volume, the more revenue is available, and thus the higher the level of original domestic content possible. This can stimulate increase in competition. Consequently, it denotes that while small and large markets face similar challenges due the characteristics of media content and media markets, small markets have less available revenue, which in theory leads to difficulties with high levels of market concentration and reduced levels of original domestic content produced. This led to the construction of the relative market leverage argument which is described below.

Table 1: Theoretical reasoning: relative market leverage

The claim is that smaller and larger TV markets have similar characteristics as a result of how broadcasting technology works; there are significant differences in the dynamics that characterise comparative contexts. These differences are caused by variations in market volume and supply, which affect the competitive conditions in the market as a whole. This suggests the importance of *market leverage*: differences in the dynamics accounting for variation in smaller markets are due to the market's inability to leverage the critical mass necessary to provide media content goods, where cost of production is independent of consumption. In short, it costs as much to make a programme for a few people as for a multitude because costs are in large part fixed. This is especially pertinent to the dynamics of smaller markets because less ability to leverage must limit the potential for achieving higher efficiencies related to scale.[v]

This is related to the media content good characteristics which make it difficult to establish a business based on a traditional profit model. I define a media content good by defining the media content characteristics. Media content characteristics are defined by the following main concepts:

- Media content characteristics – MCC
- Non-rivalry in consumption – NRIC
- Non-excludability – NE
- Excludability – E
- Increasing returns to scale – IRS
- Minimum efficient scale – MES

I can express it like this: the difference between small and large markets is a consequence of market leverage as an effect of:

MCC = NRIC + either NE or E ⇓

+ IRS ⇓

High MES level ⇓

The lack of volume in small markets establishes that their critical mass is insufficient to leverage the MCC adequately, leading to an increased potential of market failure, especially in the face of converging media.

The established market failure concerns as a consequence the media content good characteristics combined with increasing returns of scale under costs of production being independent of consumption. These establish a high efficient scale level of domestic companies, but also the potential of utilising economies of scale for international players.

For smaller markets, this is problematic because domestic programming is typically unable to produce sufficiency across all types of genres in quantity, quality, or both. The market is materially too small to support that. Domestic companies in smaller markets therefore face difficulties in being unable to reach the efficiency of scale required to produce all the content that is needed domestically based on the market alone.

This situation fuels a related tendency. Mass media require some form of collective funding because production cost is independent of consumption.[vi] Because content is expensive to produce but cheap to purchase, there is an incentive to buy tested formats, popular series, hit motion pictures, and other media goods because this lowers uncertainty in attracting viewers. Risk of market failure and lack of incentives are governing principles in determining a market's lack of original domestic content.[vii]

This complexity is explained by difficulties related to the nature of media content as public goods, as well as in economic theory where increasing returns to scale explain how the cost of production is independent of consumption. This situation produces typical challenges in securing sufficiency in original domestic content:

The non-rivalry characteristic of media content (meaning that the same content can be consumed by more than one person at no added cost) with high potential for non-excludability[viii];

Increasing returns to scale are important because the cost of production is independent of consumption (meaning that most of the costs are sunk in producing the first copy, with duplication being fairly cheap);

Higher levels of efficiency in scale caused by the collective funding function, meaning that domestic broadcasters depend on single markets while multinational corporations are able to distribute the same channel or content – dubbed or subtitled – to several markets at once, making it much easier to realise economies of scale. This is especially important for smaller markets and single market broadcasters.

The theoretical assumptions imply potential differences and explanations for size which could help nuance the discussion of size as well as the contemporary policy debates, especially in terms of state aid. The purpose of this approach is both to test the theoretical explanations and to study size and the television media.

1.4 How does size matter?

The question of *how size influences* has been raised within media studies before (Trappel & Meier, 1990; Trappel, 1991; Meier and Trappel, 1992). But the focus was mainly on small state[ix] problems and the topic was not pursued for some time (Siegert, 2006), despite the fact that there have been several significant changes within media development since the 1990s. There have been recent attempts to bring back the small state issue within the media, two examples being the Special Gazette issue Puppis et al (2009) and Lowe & Nissen (eds) (2011). The method applied when studying size consisted of conducting case studies involving a few small markets, with interesting results. Unfortunately, comparisons with large countries were usually not included in such research, and there were limits on the number of markets included, consequently leaving the questions open as to whether or not there are differences between large and small markets.

Size has not in general been neglected in academic literature. Other fields such as International Politics focus on issues such as small state behaviour within the EU and weak/strong states (Koehane, 1969; Dosenrode, 1993, 1997) and democracy (Dahl and Tufte, 1973; Ott, 2000); in Political Economy there is research into how small states develop different strategies to cope with their conditions (Katzenstein, 1985; Pedersen and Campbell, 2005); in Economics (Robinson, 1960; Friedman, 1977; Witmann, 2000; Alesina and Spolaore 1997, 2003 & 2005) size has continued to be of some importance as a question of research. Most of these studies have argued that small markets experience different conditions. However, within media studies the number of comparative empirical studies has been relatively limited.

Neglected issues in some of these studies on small states often encompass the lack of comparison between large and small markets. This leaves some difficulties in identifying what specifically constitutes a small market challenge and what is due to other conditions such as regional extension and lack of funding or, even more importantly, an effect influencing both small and large markets.

In other words, there are arguments based on empirical studies claiming that size has an effect, but little comparative empirical evidence to substantiate a generalisation of the claim. Within media studies, size has thus been neglected in comparative research, leaving few studies available on its potential effect.

This was also an important part of the conclusion in the Special Gazette issue on small nations, where Puppis, d'Haenens, Steinmaurer & Künzler (2009: 110) stated that: *"Only systematic cross-country research, considering big and small states with and without giant neighbors sharing the same language, will help us answer the question of how size matters"*.

I argue that within media studies there is a theoretical and empirical gap concerning size as a variable when it comes to the question of policy. In other words, if I want to answer the question as to how size matters for policy, it would be beneficial to study this empirically and quantitatively in order to establish an idea of its importance, by conducting a systematic comparative study including large and small markets as well as those with and without same-language large neighbours.

The difficulty is that it can be argued that size can be based on so many different conceptualisations and definitions that the fuzziness of the concept becomes increasingly complex to apply and define; for the definition used in the thesis see chapter 1.2.3, *Defining Size*. The issue of the everyday understanding of the concept further complicates the problem. Almost everyone has an understanding and conceptualisation of the fact that size is important, but within media studies little empirical material is available in which both large and small markets are compared. The purpose of this review is thus to clarify some areas which size is argued to affect and point out how this leads to differences between large and small markets for use in the analysis, and which can be followed up in chapter 2, *Media market characteristics*. When studied in detail, many of the conditions we argue are size-related in general literature might have other both beneficial but also adverse effects for the media. I cannot just apply the understandings from other fields of research without relating them to the potential effect on the media.

First I will present some of the literature on how size is perceived to influence conditions differently in large and small markets. The purpose is to identify areas which present the potential for study.

1.4.1 Identifying the influence of size

In this chapter, the reason for studying size is argued based on literature and related to the effect for the broadcast media. This is done to conceptualise why size is interesting to study. First the

general factors are presented, after which those with the main potential impact on the media are presented in turn.

Studying the literature in general, the following factors with relevance for the media distinguish large and small markets: a) Vulnerability, b) Dependency, c) Adaption, d) Competitiveness and e) Cohesion[x] (Robinson, 1960; Azar, 1975; Amstrup, 1976, 1979; Handel, 1981; Katzenstein, 1985; Alapuro, 1985; Hanf & Soetendorp 1997; Ott, 2000; Alesina & Spolaore, 1997, 2003, 2005; Alesina, Spolaore, Wacziarg, 2004). More specifically for the media, the question leads primarily to a focus on the special conditions for small markets. This leads to four primary factors of difference with relevance for the media between small and large markets in the form of vulnerability and dependence, as well as the linked problems in relation to market volume and resource shortages (Trappel and Meier 1992; Puppis, 2009). As shown, there have been several attempts to study size before. There have been several other contributions in literature on how size influences which will be presented below.

One of the most important factors of interest for the media, based on the literature in general, appears to be the difference between large and small market conditions and the way the state deals with them. Below, I will primarily focus on vulnerability and dependency, which are considered the points of macro influence, where market size and resource shortage are related to those differences when using economy, population and language as indicators for size.

Due to their size, small markets are more vulnerable to fluctuations in the international economy and have to be flexible and willing to change in accordance with world markets, as a consequence of their (usually) open markets and dependency on trade. If a small country is not capable of adjusting and adapting to change it risks undermining its competitiveness. Large markets are more able to withstand and adjust the international agenda to their own and are therefore less vulnerable (Katzenstein, 1985, Jensen & Campbell, 2006).

Small market characteristics of vulnerability and dependency due to the open economy as well as a lack of self-sufficiency also apply to the media sector and especially so to the broadcasting industry. From an economic perspective, this development is due to changes in incentive structure making the business profitable, especially where economies of scale and scope are possible.

Market intervention, usually because of cultural, social, informational or democratic reasons, functions as a national self-defence mechanism with which to correct market failures, which vary in large and small markets. Formerly, the natural monopoly of the airwaves for instance

limited broadcast competition; however, new technology has increased the number and type of outlets and has thus established the potential for increased competition[xi].

Vulnerability and dependency are the macro variables in this sense, but they are expressed in different ways. For the broadcasting market these will be indicated by: a) production of original domestic content b) market volume, c) language and d) international regulation. The related difficulties will be presented to demonstrate how in theory there should be differences between large and small markets.

1.4.1.1 Production of original domestic content

Electronic media content has the same characteristics as public goods: it is non-rival in consumption and non-excludable. Non-rival in consumption means that it does not matter whether one person or one million people are audiences to the same content, as the content does not diminish like for instance a cup of coffee; furthermore the content can be used again and again. Non-excludable means it is not possible to include some while excluding others from this good, or rather that no one can be excluded from using the good effectively, for instance people watching television together can easily do this at the same time.

The problem from a small state perspective is that the cost of production is therefore the same as in large markets, due to a situation of increasing returns to scale based on the first copy cost of production. Electronic media content thus has conditions of increasing return to scale; however, due to distribution, it is possible to make these goods artificially scarce through encryption, e.g. club goods. But that does not change the problem from the state perspective on the provision of services in the general interest of society (based on having public good and/or merit good characteristics). Small markets are thus usually dependent on imports to ensure sufficient programming to satisfy consumer interest.

The difficulty with electronic media content is that commercial enterprises cannot be certain of establishing a profitable business on domestic content due to high sunk-costs; thus experiments on content, unless cheap or with assumed high success rates, will not be provided by the market. In other words, the private commercial sector will have difficulties in providing diverse, high-quality electronic media content. For commercial private companies there is a related difficulty of minimum efficient scale due to increasing return to scale: the broadcasting industry has high fixed costs due to the good characteristics; the cost structure makes it difficult due to the high fixed cost relative to the variable costs, meaning that the market structure will tend to be concentrated, forming structural barriers of entry.

From a state perspective this is a case of market failure, as the desired genres of quality will not be privately produced to a reasonable degree. This is because private commercial business has no incentive for doing so from a profit perspective.

In short, large markets should have higher degrees of AV works production and export potential due to their larger production sectors; this is especially true of North America and the UK because of their particular focus and competition on fiction These countries also have an interest in the establishment of common markets and free trade due to their export potential, while their small counterparts have an interest in the protection of their own markets. This led to a controversy between the EU and the US concerning television, when the US claimed that the EU had violated the GATT agreement in their policies, i.e. the Television without Frontiers Directive (1989, amended 1997) article 4a on quotas for European works; for further discussion of this see Filipek (1992).

Quotas are for instance retained in the AVMS directive where the Member States are obliged by §16 to ensure that "…broadcasters reserve for European works a majority proportion of their transmission time, excluding the time allotted to news, sports events, games, advertising, teletext services and teleshopping….", as well as according to §17 to ensure: "that broadcasters reserve at least 10 % of their transmission time, excluding the time allotted to news, sports events, games, advertising, teletext services and teleshopping, or alternately, at the discretion of the Member State, at least 10 % of their programming budget, for European works created by producers who are independent of broadcasters." Within the EU, there continues to be a focus on securing audio-visual production and access to European works by regulatory means.

Market intervention to secure domestic production is not only present nationally in the individual Member States, but also present in EU regulation. Intervention usually takes place to ensure production of domestic [and European] content the argument is primarily related to cultural products.

1.4.1.2 Market Volume

Small markets have less potential for commercial funding than their larger counterparts, especially if television programming in the national languages of the smaller countries is taken into consideration.

Production of programming for a limited audience in a specific language and cultural setting is costly and might not always be provided by small markets due to high costs. At the same time,

programmes are available in international trade from both large and small markets, especially from North America at a lower price than the cost of own-production and co-production.

Smaller markets can at the same time usually only maintain a smaller number of competing companies, and therefore tend to be more concentrated than larger ones, which can entail an increased intervention in the market.

Large markets also have a similar line of difficulties to small ones: high quality programming is costly and might not be profitable; however, foreign direct investment is more likely to be attracted to large markets. While large markets have more resources available, they also have the problems of securing nationwide services. Although the market size might be larger, this also means the amount of competitors increases when there is a potential for profitable investment.

Certain goods and services will simply not be offered if the language area is too small to be profitable. This is also in line with the perspective represented by the EC Communication on broadcasting (2009, pkt. 42) which points out the potential problem of small member states funding public services: *"The Commission will also take into account the difficulty some smaller Member States may have to collect the necessary funds, if costs per inhabitant of the public service are, ceteris paribus higher while equally considering potential concerns of other media in these Member States."* This is further elaborated in *note 38: "Similar difficulties may also be encountered when public service broadcasting is addressed to linguistic minorities or to local needs"*. In short, size is important and has policy implications, due to the relative cost of public goods being higher in small markets than in large.

This is also where another difference between small markets and small markets with large neighbours comes into view: they will be treated as being a part of a "large language area", with the consequences this entails. In other words, as pointed out above, language cannot function as protection in the same way for those types of markets.

As such it is possible to argue that there are differences between the provision for large and small markets. Market concentration is a particular difficulty for small markets as the domestic market has difficulty in sustaining more than a few competing domestic firms and risks high levels of concentration, as the domestic companies with a primary domestic focus have difficulties in achieving minimum efficient scale. This also gives rise to high barriers of entry (Gal, 2003; Hoshkins et al, 2004) and this becomes a central concern for small markets and marks important differences between small and large markets where market strength becomes an important factor.

1.4.1.3 Small markets with same-language large neighbour

The way small countries react to their lack of independence in the media sector can also differ from country to country depending on various conditions (Hallin, 2009), but small countries with large same-language neighbours have a special problem due to language (Puppis et al., 2009) and are not able to use the same strategies as other small markets can.

Small markets in a specific small language area can protect their electronic media market through language combined with regulatory measures, as has been the case in the Nordic countries (Lund & Berg, 2009).

Small markets with same-language large neighbours are not able to use the same protective strategies. When studying the share of countries such as Austria, Ireland and Switzerland, I find indications for a higher degree of foreign television penetration which is not normally visible for similar small countries. Language area becomes a way to distinguish small countries from each other.

Looking at the Scandinavian countries (Denmark, Norway and Sweden), it can be seen that while they also have the potential of cross-viewing, it is not as widespread and represents only a very small degree of the total television consumption.

Another point of concern is the Slavic languages in Eastern Europe[xii]: although somewhat similar, they are still different (somewhat as in Scandinavia, but with more variations). Small markets in larger language areas thus face other challenges than their other small counterparts.

The cross-viewing in Switzerland, Austria and French-speaking part of Belgium, where protection through language and subsidised high levels of national production are not sufficient to secure the domestic market, makes different strategies to those used in other less vulnerable markets necessary,[xiii] especially because of the dependence of public broadcasters in Austria, Ireland and Switzerland on advertisement revenue.[xiv] Language can in this way influence the degree of vulnerability of a small market.

1.4.1.4 International regulation

Small states have less potential for exerting pressure in international relations due to their smaller markets and vulnerabilities; on the other hand, their large counterparts are more able to do this, with an example being the pressure from large markets and international organisations

for the liberalisation of the media markets in the EU, WTO and GATT (Hesmondhalgh, 2002). This is a beneficial situation for the large media markets with a developed content industry which can export the products, but the usually less developed industries in smaller markets face some difficulties in this respect. Filipek (1992) indicated this by the conflict between the US and the EU, as pointed out above.

The challenge of international regulation is that the effects – adverse and beneficial - are not always evident when introduced. Often there will be a positive effect of the regulation, but there will almost always be a negative side effect as well. The challenge lies in the evaluation of the positive versus the negative effects. Increased liberalisation of cultural markets internationally might help increase competition, but at what cost to national cultural production?

1.4.2 Small versus large summarised

Size is related to national conditions in the markets and state regulatory measures. All the points made on size which has been presented above are related to the differences in market conditions between large and small markets. The literature indicates important differences between small and large states in potential media company conduct and thus national interest, when it is taken into consideration that the media has a central role in modern life where its news and debate function fulfils the role of providing an arena for public debate between politicians and the public, but also for securing different types of entertainment and cultural content (Hutchison, 1999). In the table below the main differences between small and large market are presented briefly.

Table 2: Differences between large and small markets

	Large Market	Small Market
Trade	Higher degree of self-sufficiency and less dependence on international trade.	Open economy dependent on international trade and less potential for self-sufficiency. Risk of high degree of foreign media ownership and penetration
International regulation	More weight in international politics, e.g. trade issues in for example WTO.	Less weight in international politics, special problem in terms of resisting pressure of opening AV markets.
External shocks	Less influenced by international political and economic fluctuations. Potential for less dependency on trade, more resistant to external shocks and more able to influence development (internally).	The dependency on trade and open economy yields increased vulnerability to external shock through international political and economic fluctuations. More vulnerable to increased globalisation and less able to influence development due to a) by-passing of national regulation or b) liberalisation.
Economies of scale[xv]	Higher potential for economies of scale, due to large audience and advertisement markets, potentially leading to lower MC in media production; and higher potential for exports and for targeting neighbouring countries with domestic channels to increase revenue flow.	Lower potential in benefiting from economies of scale as limited by small audience and small advertisement market, leading to higher MC in media production. Risk of advertisement and cable relay revenue flowing towards foreign commercial media companies, due to foreign penetration. Difficulty for small domestic media companies in reaching minimum efficient scale if based on domestic markets alone.
Diversity	Potential for higher diversity due to larger market size; the larger the revenue streams the higher potential for profit, and thus investment into the market.	Risk of less diversity due to small market size with possible low potential for profit; main concerns are not necessarily diversity in terms of programmes, but domestically produced programmes.
Competition	More competitive broadcasting markets due to increased revenue, e.g. higher potential for profitable pay niche-channels, especially pay channels.	Potentially less competitive broadcasting markets, higher industry concentration, higher entry barriers. Problem if foreign channels massively target the nations, if there is interest in a domestic perspective on informational and cultural programmes in particular.
Public goods	Higher potential for the provision of public goods and for some of these goods if they are independent of a number of uses, such as broadcasting, entailing lower costs for providing these types of public goods.	Lower potential for the efficient provision of public goods (especially security and defence), and for goods with high fixed costs, such as broadcasting, where the provision is independent of the use, entailing higher production costs and smaller domestic sales.

Summing up, I can argue that markets with a small population involve less potential for profit. Furthermore, they face problems of self-supply in terms of programming and thus require imports. A primary problem for small markets is the lack of an audio-visual industry. Whereas the large markets can to a certain degree expect informational and cultural programmes to be produced, small countries will usually have to secure such programmes by investing in the industry and adapting their markets by using different strategies.

Vulnerability due to openness of economy, lack of resources and the necessity of imports leaves the media markets vulnerable if left unregulated. The small markets also face problems in terms of diversity, not necessarily in numbers of channels, but rather in programme supply. They also risk the late introduction of new technology, due to lack of incentives for such innovation, and they may also face problems in terms of language; small languages can on the one hand be beneficial in protecting the media market from foreign influence, especially if well regulated, but there is still the problem of sufficient high-quality domestic production.

On the other hand, if a small market has the same language as a large neighbour, especially if there is regional extension, then it risks being considered a secondary market for that neighbour's media activities, and this can potentially challenge its cultural identity because of foreign media dominance. In other words, language can either protect or harm small market media markets. Large broadcast markets are bigger in terms of available consumers and thus encompass different possibilities than small.

Table 3: Summarising differences between large and small markets

Large	Small
• Support a higher degree of private commercial channels; • Cater for niche-audiences commercially due to a higher number of consumers; • Faster introduction of new technology and services because of higher potential for return on investment; • Drive towards increased concentration due to media characteristics, but to some extent because of critical mass; • Higher cost to secure provision of regional services; • Higher cost to secure and establish universal coverage.	• Less potential for providing domestic programmes through private commercial broadcasters; • Higher cost for catering to narrow audiences with domestic programmes; • Company difficulty in achieving minimum efficient scale when not internationalised; • Risk of being highly concentrated; • Later introduction of technology; • Lack of incentives to establish universal coverage, e.g. penetration, unless the infrastructure is easily accessible; • Higher potential for international media companies to introduce niche-channels, utilising economies of scale and scope (e.g. Discovery, CNN, Animal Planet).

From a state perspective, there are several difficulties related to size as 1) there is a limit to how many competing companies can operate within each market depending on size and 2) small market firms risk problems of achieving sufficient scale; this is primarily the case if focus is on the domestic market. This leads to limits in the small market tendencies of being a) highly concentrated; b) having few domestic players and usually comprising small market structures of duopoly or oligopoly; c) high cost of producing original content in a range of genres and d)

imports are necessary. These are some of the challenges which could be identified in the analysis and will be studied more in depth in chapter 2 *Media market characteristics*.

Basically this can be divided into limited market volume and content as well as limited market competition, which should be especially evident in a comparison between small and large markets.

1.5 Research design

Analyses of the influence of size are done by using a comparative design consisting of both small and large markets. The approach is variable oriented and at the structural level. The structural level is necessary to substantiate if size has a general influence in Europe. The applied method is comparative methodology using mainly analysis of quantitative data and desk analysis. This is supplemented by statistical analysis of the relationship between size and the dependent variables consisting mainly of multivariate regression analysis. Desk research is analysis of markets based on already existing material collected by others: either consultancy companies, governments, UN organisations or by interest groups in the field – so called secondary data.

Most data in the thesis is from secondary sources. A single exception is that one set of data has been established for the purpose of the thesis using a set of data from Eurodata TV on TV channel audience share, combining this with database searches, studies of annual accounts and regulatory authorities on the ownership of the individual channels in the included markets. This led to the construction of a new set of raw data for use for the analysis in chapter 5, not available elsewhere, presented in appendix D. Please note, however, that the research has been discussed at length with people in the industry: public service broadcasters, and people from regulatory authorities – in addition background interviews have been conducted with people from the Danish public service broadcaster, the EBU office in Brussels, representatives of the Scandinavian public broadcasters and the BBC.

The research on the influence of size is divided into two analytical chapters 4 and 5, each based on researching one of the hypotheses. Chapter 4 focuses on investigating the first hypothesis on differences of size based on market volume and original content. Chapter 5 focuses on investigating the second hypothesis on the difference of size on market competition. Studying these areas enables a broad and in-depth perspective on the influence of size on TV media markets.

Each analysis is meant to help identify the effects of size at the structural level. In addition market intervention using public broadcasters or other regulatory measures will be studied in both as part of the discussions. Language will mainly be taken into consideration in the investigation of the second hypothesis where there will be special emphasis on small markets with same-language large neighbours.

The empirical investigation of the first hypothesis on the market volume and original production is related to the conditions of critical mass and thus scarcity. The indicators used are TV market volume and provision of original domestic content:

- TV market volume will indicate if and which differences there are between large and small markets and how market size influences the market defined both by the aggregated and the individual sum of the three primary revenue streams (advertisement, subscription and subsidy). This is a critical mass and scarcity type of analysis, where the level of public subsidy will be a factor that could differentiate the markets, and thus change the rules of the game.

- Production of original domestic content covers the dilemma associated with the production of public goods, where a traditional assumption is that the larger the market, the more capable it is of providing such services. The reason for entering original domestic content is due to the difficulty of collective financing and free-riding. This is also a critical mass and scarcity type of analysis.

The indictors can be used to establish an overall idea of the influence of scarcity conditions under small market conditions.

The empirical investigation of the second hypothesis is subject to questions on market competition and thus dependent on market intervention practices influencing the barriers to entry. The indicators used are competition, market concentration and language:

- Competition will show the difference between the domestic and international actors and substantiate the influence of pan-European and global conglomerates *vis- à-vis* domestic companies.

- Market concentration will show the overall competition in the markets, i.e. if the small markets are more or less concentrated than their large counterparts. Market concentration is measured using: a) concentration ratio using the combined share of the one to six

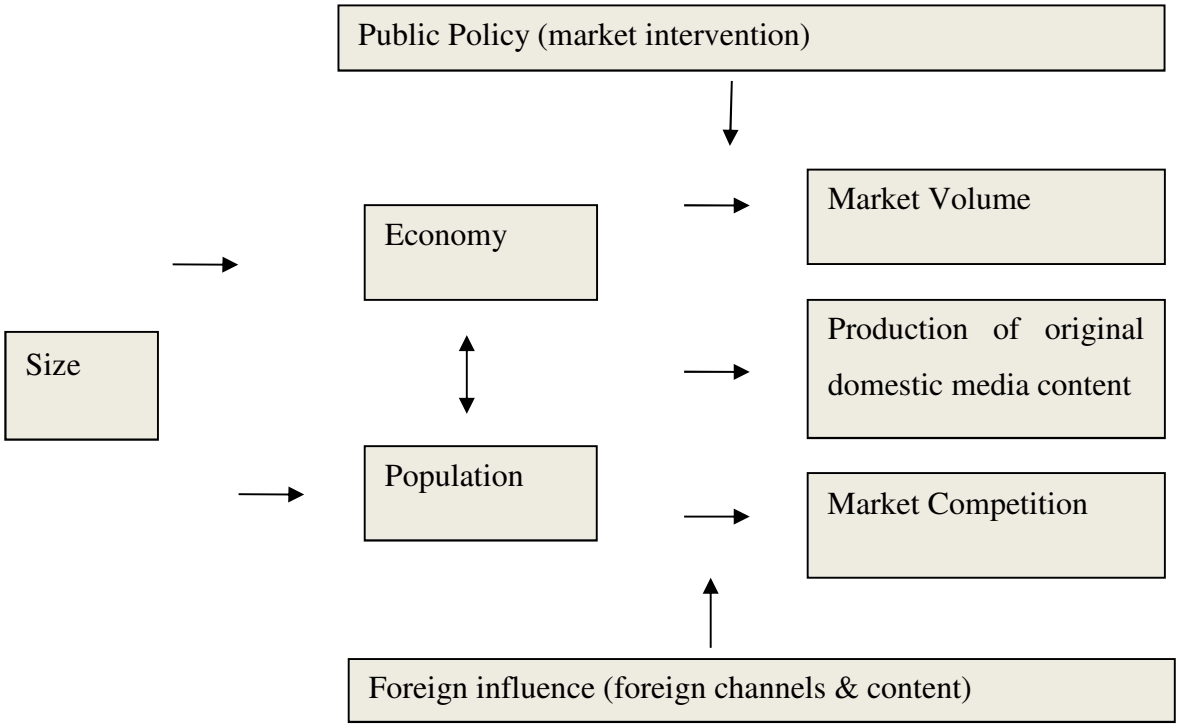
largest TV companies and b) concentration using the Herfindahl–Hirschman Index (HHI).

- Language is important as it can function as a measure to increase or decrease barriers to entry. Small markets with a large same-language neighbour will be especially subject to this, and therefore there could be differences between small markets with and without such a condition. Small markets with large same-language neighbours are expected to face conditions equal to those of the large markets. This is because language facilitates the ability of the commercial players in the large markets to perceive small markets with the same language as an enlarged part of their own, especially if these are regionally extended.

The indicators should help establish if the competitive conditions are different in small and large markets, as well as help establish the effect of being a smaller country with a same-language larger neighbour.

Combined, these analyses should give new insights into the influence of size, as well as the influence of market intervention practices. The analysis should enable a broader and more reasoned perception of how size affects the TV market than is currently available within media studies. The figure below shows the perceived influence of size based on the design.

Figure 1: Analysis of the structural influence of size.



In summary, this analysis should show differences in the markets based on which I will be able to establish if and how size is of importance at the structural level. This is based on considerations of critical mass and scarcity conditions. Consequently, the analyses should enable a more coherent perspective on the policy implications posed by size and the consequences this has for public policies in small and large markets.

The concrete method of measuring size and the dependent variables is presented in more detail in chapter 3.3, *measuring the influence of size*

The results of the analysis should enable a more comprehensive picture of the influence of size on the markets included.

1.6 Structure of the thesis

The research thesis consists of six chapters and two résumés (one in English and one in Danish) and is structured in the following form:

Chapter 2: Media market characteristics: In this chapter the initial theoretical argument as presented in the introduction is described in more detail, based on a discussion of the characteristics of media content goods, i.e. the characteristics of these particular types of goods (public/club good, merit goods, increasing returns to scale, minimum efficient scale and market failure). Concluding the chapter is the mix of consideration which lies inherently in the dissertation argument on the challenges of television markets.

Chapter 3: Methodological approaches: In the methodological chapter the selected approach is presented along with the arguments against and on behalf of comparison. The advantages and disadvantages inherent in comparative methodology are presented and discussed. The pitfalls of empirical cross-market comparison are presented and related to the particular concerns of this dissertation. Furthermore the concept of size applied is defined, followed by the concrete empirical approach of measuring market volume, production of original domestic content and market competition is presented.

Chapter 4: The influence of size on market volume and production of original domestic content: This chapter explores the logical side of the size argument on scarcity by identifying the difference in small and large market volume and originated production. A potential typology of size varieties is also investigated, followed by concluding on the argument.

Chapter 5: The influence of size on market competition: This chapter investigates the influence of size on conditions of competition in television markets. This is also where the influence of state intervention in the market should become particularly evident. The analysis is done by studying public vs. private competition, penetration of foreign television channels, market concentration and ownership. Combined, this should establish the relationship between size and the competitive conditions in the sample markets.

Chapter 6: Conclusion: This chapter concludes the empirical investigation into size, as well as the relative policy implications for the European TV markets.

Chapter 2. Media market characteristics

2.1 Introduction

This thesis revolves around the research problem of documenting and analysing how size matters for television markets in Europe in order to discuss potential policy implications. I have formulated two hypotheses on the influence of size based on considerations of critical mass (scarcity). The theoretical reasoning is that the influence of size is a consequence of small and large markets being subject to similar market and content good characteristics, which in effect, due to differences in size, leads to different market conditions. The consequences of size for the media therefore lie in the inherent traits and distribution of the media content goods and media markets. From a policy perspective this means that similar policies for dissimilar markets can result in unintended effects.

Using the inherent traits and distribution of the media content goods and media markets I will present and discuss how the media markets are challenged in both large and small markets how this leads to difficulties in ensuring that original content caters for democratic, cultural and social needs. This is especially an issue in small markets, but particularly critical for small markets with same-language larger neighbours. Due to the public good characteristics and increasing return to scale, the financing of public goods is more difficult for small markets than large: this generates difficulties in terms of securing original production as they have to achieve minimum efficient scale to function profitably.

In this second chapter, I will look into media market characteristics, as well as the related difficulties. First the public goods characteristics of media content will be presented, followed by a discussion of merit goods in relation to government intervention, then the issue of increasing return to scale for media content and market characteristics is presented; afterwards the difficulty related to minimum efficient scale is introduced, followed by a short discussion on market failure. Lastly the challenges of television are summarised.

2.2 Public good characteristics

This chapter introduces the characteristics of public goods in relation to electronic media content and the challenges of such conditions.

Electronic media content has the same characteristics as public goods. They are non-rival in consumption, and non-excludable, meaning that it does not matter whether one person or one million people form the audience to the same content. This stands in contrast to private goods

being rival and excludable (Samuelsson, 1954, 1955 & 1958; Buchanan; 1967 & 1975; Ostrom, 1990).

Overall, however, it is possible to distinguish between four different types of goods based on these considerations of commodity characteristics being rival or non-rival and excludable or non-excludable:

Table 4: Commodity characteristics

Types of goods	Excludable	Non-excludable
Rival	Private	Common resources
Non-rival	Artificially scarce goods/ Club goods	Public goods

Samuelson (1954; 1955; 1958; 1959) defined a particular set of goods as public goods, which due to inefficiency should be provided by government. He used broadcast television as an example to contrast a discussion in the FCC on whether to allow cable pay-television by applying the issue of non-rivalry. The distribution of television was made into a debate between Samuelson and Minasian (Samuelson 1958; 1964a; 1964b; Minasian; 1964a; 1964b); see also Buchanan (1967) on the discussion as well as Samuelson's reply (1967). Samuelson's (1954) paper focused on the issue of rivalry and non-rivalry in consumption, as well as the characteristic of non-excludability. Buchanan points to the issue of club goods and thus links in the issue of excludability of non-rival goods (1965) which is in line with Musgrave's perception and as such bridged the gap between public and private goods (see also Buchanan, 1968). For the common good characteristic difficulties see Olstrom (1990), and Hardin (1968) for the tragedy of the commons.

Mixed goods were also characterised (for instance by Musgrave (1969)) by pointing out externalities which could combine characteristics of private and social goods, in the sense of some goods being more meritorious than others in terms of whether the market would be able to provide enough demand for a particular good of this type through consumer demand, or if increased supply should be provided by government. For a general introduction and discussion

of public goods theory, both historically and theoretically, see the volume on Providing Global Public Goods edited by Inga Kaul (2003).

The basic premise is that a media content good is non-diminishable as a consequence of non-rivalry in consumption. However, through distribution, the characteristic of non-rivalry in consumption can be combined with either excludability or non-excludability; in other words, either a club or a public good. It can be argued that the characteristics are that of a public good, but they can change according to distribution; for instance news when distributed functions like a club-good in terms of access to that particular perspective on a news story; however, the good can easily be applied to a platform online or a newspaper and thus lose the club-good characteristic (not taking copyright into consideration).

A point to make first is that it is not mainly the distributive mechanisms which are challenging, but more that the electronic media content have the same characteristics and difficulties as other types of creative works combined with the increasing returns to scale and cost of production being independent of consumption. In other words, it is a move from the original arguments on public goods to a discussion of the characteristics of the content good where the main focus is on non-rivalry conditions in combination with either excludability or non-excludability. In game-theory, the difficulty of private market public good provision is linked to the prisoner's dilemma as presented below.

Table 5: Private provisioning of a discrete public good

		Consumer 2	
		Buy	Do not buy
Consumer 1	Buy	-50, -50	-50, 100
	Do not buy	100, -50	0,0

Source: Varian, 1992: 417

The principle here is that each consumer can choose whether or not to buy. What is important is the willingness to pay privately for a public good with a reduction of income for use in other consumption. The difficulty is that it becomes pareto optimal to provide the discrete public good if the consumer's willingness to pay exceeds the cost of provision. The problem is that while it

would be pareto efficient to provide the discrete public good, the dominant actor strategy would be to free-ride, and thus the good would not be provided.

Consequently, the result of this type of game is the non-provision of the good that would have been efficient if provided (Varian, 1993). As pointed out by Varian (1993:425), the difficulty when dealing with continuous provision is that: *"the efficient level of the public good is determined by the condition that the average willingness-to-pay must equal the average cost"; however "if the median consumer wants the same amount of the public good as the average consumer, the amount of the public good is provided by voting will be efficient"*.

The free-riding difficulty is in essence what is established when an agent cannot be excluded from consumption, as this will raise the question of incentive to buy versus the incentive to benefit from others' costs. When non-excludability is in play, single rational actors have no real incentive to purchase. The difficulty for broadcasting in this case is one of decreasing average cost on the one hand, but also the need for continuous provision on the other, as public goods within broadcasting are a continuous game. The problem of provision is thus a type of market failure.

Failure by existence is the direct implication where the characteristics of public goods are present. Bator states this in the following way (1958): *"there does not exist a set of prices associated with the (perfectly definable) bliss point, which would sustain the bliss configuration. The set of prices which would induce profit-seeking competitors to produce the optimal bill of goods, would be necessarily inefficient in allocating that bill of goods. Moreover even abstracting from production, no single set of relative prices will efficiently ration any fixed bill of good so as to place the system on its contract local, except in the singular case where at that output and income-distribution MRS's of every individual are identically the same (or Zero for all but one). There is failure by existence"*.

The difficulty for the TV media is that programmes are indivisible and the variable costs are equal to zero, equalling zero marginal cost. In other words, the price of adding another person to the audience is zero. The costs of production are as such sunk and make producers face the difficulty of free-riding, as well as having to establish ways of spreading the cost through collective funding, either through advertisement, subsidy, subscription or PPV.

There are externalities related to the non-provision of media services if these are not made available on the market, as well as if the market is left unregulated. Media content goods are interesting as they in principle bear the characteristics of a global public good on the one hand

(Kraul, 1999) and a club good on the other (Buchanan, 1965) when combined with a neo-classical market definition taking market size in terms of geography into account.

To conceptualise this: the same soccer match can be broadcast to the entire world and as long the viewers understand the rules of the game, the audience is able to understand what happens. However, taking culture and language into account changes the good characteristic from non-excludable to excludable within a specific linguistic (and cultural) area. A specific piece of drama, regional news, national history and other programmes made for a specific cultural setting or language are not *per se* usable for another cultural or linguistic setting. While dubbing is easily applicable, changing from one language to another first of all imposes extra costs (increased transaction costs), and it also does not ensure that the programme is understood, nor perhaps even liked outside its cultural context.

The challenge of media content and market characteristics in relation to commodity characteristics have now been introduced and will be followed below with a presentation of the argumentation behind merit goods.

2.3 Merit goods

Following the discussion of public goods, it should be realised that this has changed into a discussion about the characteristics of specific types of commodities more than a question of state provision, but also that this does not in any way encompass all goods regulated by the state. This is where the question of desirable and undesirable goods and consumption enters the picture. When discussing such concerns I in a way leave micro economic theory, but in principle a question of cost-benefit for society remains. In order to conceptualise this I have to use the concepts presented by Richard Musgrave in his work on the Theory of Public Finance (1959); Fiscal Systems (1969); Public Finance in Democratic Society – The Foundations of Taxation and Expenditure (2000) as well as Musgrave & Musgrave on Public Finance in Theory and Practice (1980).

The particularity of the question is that merit goods are goods which could be provided through private markets, but which are provided or subsidised by budget finance for various reasons (Musgrave, 1959). The argument in principle concerns debates on the social characteristics of goods, and the questioning of their particular desirability and undesirability, meaning evaluation of particular good merits or demerits in society.

As argued by Musgrave (2000): *"The distinction between private and public or social goods arises from the mode in which benefits become available, that is, rival in the one and non-rival in the other case …. As a result, conditions of Pareto optimality differ, as do the appropriate mechanism of choice. But whether met through market or political process, both choices and the normative evaluation of outcomes rests squarely on the premise of individual preference. Consumer preference is taken to apply to both cases. The concept of merit (or for that matter, of demerit) goods questions that premise. It thus cuts across the traditional distinction between private and public goods. …issues which do not readily fit into the conventional framework of micro theory as based on clearly designed concept of free consumer choice"*.

The discussion revolves around choice, but not only consumer choice; it also includes the relation between consumer and state, and the interest in the regulation of consumer choice.

Table 6: Additional social characteristics

Good types with social characteristics		
De-merit	Non-merit	Merit

Public interest and consumer choice can differ, should there be free consumer sovereignty with market provision of all goods viable for consumption. Resources should be allocated according to consumer demand, as per individual preference. In contrast to this, there are also public wants considered meritorious or de-meritorious by government (most likely a majority in a democratic society, but probably not always so), which directly interfere with free consumer sovereignty in an attempt to either further or limit consumption.

In short, the state intervenes directly into consumer choice in order to change patterns of consumption. Even though these types of services could in general be provided by the market, the state intervenes to encourage or discourage usage (Musgrave, 1959; 1969). What is at stake here is conflict between public and private wants, where a group which presumably consists of a majority, but is potentially an elite, attempts to change consumption patterns. As argued by Musgrave & Musgrave (1980): the *"issue of merit goods, dealing with situations where it may be questioned whether the basic premise of individual preferences offers an adequate framework for public sector analysis"*.

The critics of public goods and the concern of market failure base their stance on the problem of state intervention by arguing on behalf of consumer sovereignty and that the market could and would have provided the service; but does that mean that we should have a channel carrying child pornography if there is a demand for it? Should we allow all types of content for all age-groups? What happens when the consequences of a choice have consequences not only for the individual consuming the goods, but potentially for society as a whole or which indirectly harms another individual?

A study of regulatory practice and EU legislation indicates that intervention to limit what is considered harmful is something which is done quite often. The Audiovisual Media Service Directive (AVMS) for instance allows restricting the broadcast of unsuitable content (article 2 (4)-(6)) and protection of children from adult content (article 12).

There can be various reasons for government regulation and it can be utilised in different ways. Musgrave points out (2000) that we can distinguish between a) pathological cases, b) rule of fashion, c) community preference and d) paternalism. When discussing broadcasting content we primarily focus on community preference, where this can be perceived as a result of historical processes of interaction with somewhat common values. As pointed out, we can expect the private commercial broadcaster to cater for services of general consumer interest and to an increasing degree to niche-interest, but content produced in a particular societal setting remains costly, especially for small markets, where high-quality programming of both informational and fictional genres will not be provided by the market alone.

We are really discussing conditions in which the state substitutes individual choice by that of the collective by introducing regulatory measures to either deter or encourage consumption. In principle, we are referring to prohibitions or other types of penalising such as extra taxation for specific de-meritorious goods, while there might be established policies subsidising either partially or completely goods considered meritorious (Musgrave, 1969).

As noted by Musgrave (1959:85), this entails that "Policies to provide merit goods, or to deter the provision of de-merit goods, cannot be explained in terms of our earlier approach to social-goods theory. Although the approach calls for the compulsory acceptance of the voting decision and involved some interference with minority views, such interference is not accidental but the very purpose of public policy. The existence of merit goods thus defined may be taken to suggest that our society, which considers itself democratic, retains elements of autocracy which permit the elite (however defined) to impose their preferences. Or, it may be interpreted as adherence to community interests of values by which individual preferences are overridden.

Either explanation contravenes free consumer choice, the otherwise accepted principle of resource use".

This actually brings me back to the question of market failure on whether economics are sufficiently based on private consumer interest, where it has to be argued that in a world of states, this is not the case: it might be the case of coercive power changing allocation of resources and thus patterns of consumption for either better or worse, but this does not change the fact that in a world where politics, normative belief and uncertainty exist, there will always be an attempt to change patterns of consumption for various reasons.

This also means that if I apply pure economic logic of the market alone, the logic of public good characteristics will not be sufficient to underpin the argument for Government intervention; only when this logic is combined with the logic of merit in the service of the public interest can we begin to establish arguments coherently and related to actual empirical practice.

Below the characteristics for media content and media markets is studied using the discussions on increasing returns to scale to reinforce the additional challenge for media content.

2.4 Increasing return to scale

In general, we can distinguish between three types of scale: constant, increasing and decreasing. Traditional trade theory is based on constant returns to scale, where there are potential efficiency gains by economies of scale available through specialisation. Notable examples are the model of comparative advantages by Ricardo (1817), further developed by Dornbusch, Fisher and Samuelson (1977) and Heckscher and Ohlin (Heckscher, 1919; Ohlin, 1933). The line of thought is that through specialisation and trade, it becomes possible for nations to increase efficiency, more so than by producing domestically. This means that free trade is beneficial as it on the one hand creates value for both parties and thus results in gains, and on the other there is an opportunity cost involved in not taking advantage of it.

For electronic media content we have increasing return to scale, or rather - in a way - the lack of a constant return to scale. This is because electronic media content carries characteristics of public goods as content comprise works of creativity. This leads to increasing returns to scale with conditions of consumption being independent of consumption. Under conditions of increasing return to scale, there is no competitive equilibrium: in other words, there cannot be perfect competition. The difficulty is that the production function for increasing returns to scale implies that the average cost curve associated with the point of production is sloping downward

at the level of output; as such the curve for marginal cost lies below the average costs (MC < AC).

In the case of media content, free trade leads to all producers offering their programmes and/or formats to a world market with no real increased costs (besides securing non-infringement of their rights). With little extra cost other than marketing and distribution, they have an incentive (like all others) to increase sales, but under a condition where selling does not limit their ability to sell the exact same product again for use in another territory (or in some cases even in the same territory).

Electronic media content is a case in which marginal costs can become less than the average costs of production. Average cost (AC) equals total cost (TC) divided by the quantity (Q) produced, i.e. produced units of a particular good for consumption, $= \frac{\mathrm{TC}}{\mathrm{Q}}$. Marginal costs include the cost of adding the next unit. Marginal cost (MC) is the effect of change in TC when the Q changes by 1. In other words, the MC function is an expression of the derivative (d) of TC, $MC = \frac{\mathrm{dTC}}{\mathrm{dQ}}$. The problem of increasing returns to scale is that in relation to cost of production of media content, the cost of adding 1 audience unit of consumption is equal to zero.

This is related to the high sunk-cost/fixed-cost of production with cost of production being independent of consumption, i.e. should the production only be seen by one person, the cost of it remains the same even if we change the number of viewers to one million. Cost is related to the level of audience which is able to watch, meaning that the more we are able to spread the costs, the lower they will become.

In short, we have a condition where costs are declining when consumption increases (declining cost per unit). This makes producing programming for small markets inefficient if it is primarily interesting for the domestic market, while it becomes increasingly efficient as the market increases in volume. It is demand dependent, and what limits the company is the extent of the market. Under these conditions, we enter a market in which no single company is able to become profitable under a case of perfect competition. Under these conditions we operate in an imperfect market (Begg, Fischer & Dornbusch, 2005; Varian, 2003 & Stigler, 1951).

The difficulty with electronic media content is that commercial enterprises cannot be certain of establishing a profitable business due to high sunk-costs; thus experiments on content, unless cheap or with assumed high success rates, will not be provided by the market. In other words, the private commercial sector would have difficulties in providing diverse electronic media content of a high quality. From a state perspective, this is a case of market failure, as the desired

genres of quality will not be sufficiently privately produced, because of a lack of profit incentive for the private commercial businesses.

To exemplify: we first produce a children's series, for example, for a television audience; if it is successful we can re-run it, sell it to foreign stations or on DVD, sell the rights to use the characters and so on, thus utilising economies of scope. We can continue to do this until there no longer is a consumer demand, and we can do this without having to produce the original work again. Furthermore, we can keep up interest by continuing the series to generate more attention. One example is Thomas & Friends (formerly Thomas the Tank Engine) which has now been aired for more than 25 years with ten different seasons. While the cost of production is a sunk-cost, the revenue will likely have a long tail as new generations of children find the engine interesting. The important aspect of media content is the first copy cost of production, which does not have to be repeated for that particular piece of work.

In other words, in order to conceptualise the world market of television, we need to understand that rights are sold, and furthermore that some markets appear to be more specialised than others within the audio-visual industry. When it comes to fiction production, good examples of this would be Hollywood and Mumbai. This brings the difficulty from the small markets to the international market: large markets have the potential of exporting to a greater degree than their small counterparts, but this is again related to culture and linguistics. AV-products are also cultural products, meaning that exports for some nations are from a limited range of produced content. Small markets have a problem in this regard, with the exception of specialisation in formats where the concept is sold for reproduction.

Large markets thus have an advantage based on a higher amount of production as well as the potential of a bigger market. A large market such as the US has the potential of applying fast failure when testing shows for an audience. If the ratings are bad, the show can be cut: the faster it is deemed a failure, the better, as it means lower costs and thus less loss of revenue; in other words, continuation would entail opportunity cost.

On the other hand, if a show is a success, it can be syndicated and economies of scope can be applied, potentially worldwide. Successful examples include Beverly Hills, Friends, Seinfeld and SpongeBob SquarePants. SpongeBob SquarePants alone represents an annual $8 bn. merchandising franchise (Advertising Age, 2009).

For commercial private companies there is a related difficulty of minimum efficient scale due to increasing return to scale: the broadcasting industry has high fixed costs due to the good characteristics, and the cost structure makes it difficult because of the high fixed-cost relative to

the variable costs, meaning that the market structure will tend to be concentrated and therefore will form structural barriers to entry. Minimum efficient scale will be introduced and discussed below.

2.5 Minimum efficient scale

This characteristic is based on the assumption that there is a lower limit for market concentration depending on market size on the one hand, and optimal company size on the other. The lowest concentration margin is a condition in which competition is the hardest possible, and all companies have exactly the optimal size (Sutton, 1991, 1998). Sutton distinguishes between two types of industries based on where competition is mainly on price and where conditions of research and development are important.

There are differences between industries in the sense that if minimum efficient scale is relatively small compared to total market size in bakeries for example, while industries like electricity production and telecommunication have high minimum efficient scale due to high ratios of fixed cost as compared to variable costs, under such conditions the market tends to be dominated by a few players. This is especially true where there are conditions of natural monopolies with the average cost curve falling continuously for large ranges of output. In such conditions, only one or a few competitors might be available, leading the market structure to monopoly or oligopoly.

In terms of the media, this characteristic poses an interesting difficulty or in a way a policy paradox, by stating the question: Do we have to take public interest into account? If not, should we allow that competition is based on primarily foreign produced content, especially in small markets? In order to conceptualise this we have to take into account the market boundary. In the case of the traditional mass-audience dual market model between advertisers and audience (usually with distributors) within a national market, this is not an issue, even if there are international distributors and advertisers. However, when introducing the media content good, it becomes more important: content is not a *"test card"* screen on the tv, or at least there would be little audience for such content; it is as such a work of creativity (commercial or non-commercial).

The problem here is that the public good characteristics of media content make it possible to claim that there is a world market for rights and existing media content which can be purchased and shown for a specific period within a given market. This, combined with the increasing return to scale issue, makes it difficult to ascertain that the companies in the market will produce the content deemed in the public interest by the individual state; instead, it would be more

prudent to assume that television companies will purchase cheap foreign production on the one hand and proven formats on the other, which could then be produced to fit the national cultural context.

In such a situation, we must refer to the difficulty of securing production of original domestic content. In a market where there is an abundance of creative works which can easily be purchased to show for a period of time, why should a domestic company choose to do anything else? An easy answer would be that the audience prefers domestic television, which is the case empirically (see Eurodata TV, 2009), and that the companies are dependent on the audience watching their packaged content. If they did not, then services would not be offered for long. However, they would still face the difficulty of financing new productions, which could then be done at the lowest cost possible. The point here is that in a small market without state regulatory protection and/or public subsidy, the level of domestic production would be low or would probably consist of a combination of repeated domestic production and foreign programmes.

This leads to a second difficulty, which is derived from company size: the larger the media company, the more able it is to cope with production failures which do not attract a sufficient audience. Separately, this also emphasises why size for a company is necessary to enable utilisation of scale by for instance securing channels in a number of nations to ensure the improved use of their own productions and rights, as well as using the potential of bundling rights to nations. Company size enables more efficient utilisation of economies of scale and scope in this instance, which at the international level can secure profit based on multiple markets, while those based only on single markets will face problems (unless aided by the state).

2.6 Market failure

Size in effect due to economic conditions can give rise to market failures for domestic broadcasters and thus lead to intervention due to public interest. When it comes down to it, the important factor remains the relation between state, market and civil society.

Coase (1992) argued that in cases where the transactions costs for government are lower than for the market, state solutions offer more advantages. As pointed out by Hahn (1982), it remains to be questioned whether government intervention is desirable and less damaging than market failure. Keeping this in mind, it should be pointed out that there is no certainty that government provision will be more efficient than private (Holcombe, 1997), but evidently there is an incentive problem. It should be noted that any decisions on provision in terms of the electronic media can have a relation to the fear of monopolisation of ownership, or more accurately, the

prospect of a few people in control of the primary media: the situation of Berlusconi in Italy and Murdoch's News Corporation are cases of concern (Hutchison, 1999; Doyle, 2002).

What the critique of market failure theory and public goods tells us is that

a) State involvement is not per definition necessary
b) The actual cases where both non-rivalry and non-excludability are available are few- to non-existent, as excludability can almost always be established
c) There is a choice of distribution system, meaning that private operators could also provide goods

But what I find more important is:

a) There are conditions where it is not business as usual, where the traditional economic approach risks leading to adverse effects
b) That while it is possible to exclude, this does not mean that there should be established exclusion
c) That rivalry matters, as the same cup of coffee cannot be used twice, but media content can be used more than once; and while the second time a particular audience watches the programme the experience might be inferior to the first, the content remains in existence for usage as reruns where it might be of interest to a new audience.

What I have identified is a version of Shapiro and Varian's (2003:50) statement that information goods are "*costly to produce but cheap to reproduce"*, where this is the basic premise underlying the problem of size as a consequence of the critical mass requirement. This means that what I discuss are mechanisms of choice. For the market, the combination of population and economy should show the same mechanism in countries if they have the same relative conditions, which for this dissertation would be small population, small economy or large nation and so on. These mechanisms are, however, dependent on the state-market relationship. The conditions do not change the fact that broadcasting content, after it has been produced, is non-rival and can be either excluded or non-excluded, with this choice being related to funding.

To understand government intervention [and public broadcasting principles] I have to include the merit argument, and argue on a public merit good reasoning instead of public alone. In short,

I have to bypass the argument that the individual consumer knows what is best as I have to consider public interest as well. This opens a separate question of community/public versus individual interest, but when operating with state interest, the community/public interest supersedes the interest of the single individual. Can we choose to adhere to the principle of consumer sovereignty as argued in micro economic theory, or not?

When presented in this way, it becomes an either/or question, but what is needed is to include the concerns about externalities, and the media content commodity does carry particular characteristics which require attention to secure provision. So the market versus state tension is also an individual versus community/collective tension where the question of merit becomes increasingly relevant, as the state has an interest in ensuring its continuation. The problem for the media market can be presented like this:

Table 7: Media market characteristics of interest

Media Commodity a) Idea based commodity, which has to be produced b) Either non-excludable or excludable depending on mechanism of distribution c) Non-rival d) Increasing return to scale e) Cost of production is independent of consumption; e.g. first copy cost of production is most important f) Commodities have longevity; they can be shown in different places at the same time and repeats are possible g) Risky business as high production costs combined with low potential of predicting relative success, e.g. economies of failure h) Potential of franchise/merchandise if sufficient interest is attracted	This commodity has to be produced based on an idea for a programme, which means that I have to distinguish the conditions before and after production Before production: first there has to be an idea for the content which has to be produced. This establishes a high cost of production due to the needed combination of equipment and personnel for a certain quality. The high cost presents the difficulty of funding as the success of a particular programme is an unknown and thus becomes a risk when not all genres and services will be catered for unless funding has been secured beforehand, meaning that not all risks will be taken. Content is based on an idea or a particular presentation of reality depending on the type of genre; sports in this way become an exception. After production: media content carries characteristics of non-rivalry when produced; it can have longevity and an average declining cost due to the cost of production being independent of consumption. The commodity characteristics also entail that there is the potential for repeats as well as use in different places at the same time; the same series could be played in the US, Norway and South Korea at the same time if there is sufficient interest. This also establishes the potential for merchandising and franchising if the commodity attracts sufficient interest.
Market a) Distribution mechanism of packaged content, i.e. a channel either continuously or as PPV b) The business model is based on either advertisement revenue, subscription revenue, sponsorship, teleshopping, public revenue or a combination of these c) High level of minimum efficient scale for companies based on a single domestic market due to economies of scale d) Economies of scale (increasing) and scope; potential for global markets using thematic approach e) High barriers to entry and exit f) Tendency for high levels of concentration	Due to its content characteristics, the media market has a tendency to become concentrated, which is the reasoning behind the high level of minimum efficient scale. The minimum efficient scale difficulty can be off-set by targeting several markets at the same time, and is thus especially difficult when there is only a single domestic market. There are economies of both scale and scope, but the increasing returns to scale due to links to consumption present a difficulty of average declining costs. The main problem lies in establishing the infrastructure for distributing the packaged content. The combined characteristics of market and content establish high barriers to entry in particular, but also exit for a domestic player.

Source: Own depiction

I have not seen convincing arguments that the private market can be expected to provide all types of content, but rather that the main focus will be mass-audience-related in the first instance of domestic provision and niche-oriented in the second due to financing mechanisms.

2.7 The challenges of broadcasting

Summing up, it can be seen that from a state perspective, there are several difficulties related to the issues of public good characteristics, increasing return to scale and minimum efficient scale, with the primary being: a) there is a limit to how many competing companies can operate within each market, depending on size and b) small market firms risk problems in achieving sufficient scale; this is primarily the case if the focus is on the domestic market. This leads to limits in the tendencies of small markets to be highly concentrated, as they have few domestic actors, and usually small market structures of duopoly or oligopoly. The high cost of producing original content in a range of genres means that imports are necessary.

Small markets have less potential for commercial funding than their larger counterparts, particularly if broadcasting in the national languages of the smaller countries is taken into consideration. Production of programming for a limited audience in a specific language and cultural setting is costly and might not always be provided by small markets due to high costs. At the same time, programmes are available in international trade from both large and small markets in abundance, especially from North America, at a lower price than the cost of domestic production and co-production. Smaller markets can at the same time usually only maintain a lower number of competing companies and therefore tend to be more concentrated, which can entail an increased intervention in the market.

Large markets also have a similar range of difficulties: high quality programming is costly and might not be profitable. While they have more resources available, they also have the problems of securing content for nationwide services. Although that market size might be larger, the number of competitors increases when there is a potential for profitable investment. Certain goods and services will simply not be offered if the language area is too small to be profitable due to minimum efficient scale, i.e. lack of critical mass.

I argue that media markets and especially television markets face difficulties in which a traditional approach of securing competition should be considered unreliable. My point is that this is shown in the discussion of market failure and the more detailed study of the characteristics, which indicate that the characteristics of the broadcasting market and content establish difficulties in securing competition and thus lead towards market concentration, but

also that this is dependent on the critical mass of the market or, in short, how many companies of efficient scale the individual countries can sustain, and how high the market barriers are for potential new entrants, both domestic and international. This is in reality a condition of scarcity based on critical mass. Critical mass is an expression of the availability of resources, i.e. market volume, talent mass and more, which again is an expression of scarcity of revenue for particular purposes, scarcity of talent and more. This also means that competition can become a double-edged sword: if wielded correctly it can be utilised wisely to increase overall quality in the market, while if used badly it will lead to declining quality and cut-throat competitive conditions, which can reduce citizen/consumer benefit.

We know that consumers prefer domestic linguistic content, even though national media companies are subjected to competition from international niche-channels (and thus multinational corporations); this content has to be dubbed or subbed in order to be made understandable for the majority (usually). This would be a significant problem for small markets when faced with their inefficiency in combination with competition with multinational corporations. We have to enable the conceptualisation of the exchanges of both the state and companies/organisations at national and international levels. An example of this is evident in Scandinavia, where the primary commercial television companies without public service obligations are a) owned by a multinational corporation and b) act opportunistically by maximising utility by transmitting under the more relaxed advertising rules in the UK.

I argue that by conceptualising language and thus culture as excludable factors, that although electronic content has the characteristics of public goods, these are actually club goods (artificially scarce goods) due to the limitations of language, as even when dubbing, the linguistic and cultural nuances can get lost. An example is content produced for small markets: although in principle non-excludable and non-rival, when language is introduced into the equation it becomes a function of excludability. Language thus becomes another function of exclusion, where media content as a consequence becomes similar to jointly supplied goods, e.g. club goods. Denmark and Danish-produced content thus becomes a *club* in the sense of it being non-rival but excludable, meaning that it would only be the 5.6 million Danes who would enjoy primary understanding: even if that particular piece of content was distributed worldwide, only a fraction of people would understand it. The main difference in this perspective is that instead of perceiving a market as national, it should be seen internationally to enhance the understanding of electronic content in a multi-linguistic environment.

The particulars of this have some consequences when I examine the difficulties of broadcast markets, where the goods per definition are non-diminishable. The point here is that electronic

media content is non-diminishable (Varian, 1992), but this does not change the fact that it could be produced for the particular purposes of a society. I also have to take into account the investment perspective of new original content, which when it comes down to basics is behind the reasoning for some of the elements generating market failure in the broadcast markets; as such we have both production functions and channel output functions where content is shown. The individual channels could easily purchase sufficient content to fill the output time, but what interests the audience the most is (original) domestic programmes. This also relates to the argument for broadcasting market failure in lack of provision.

I have to distinguish between a production value chain and the television value chain, where production is only one, albeit vital, link. This is important in order to understand the difference between the channel output of packaged content and the production of content. This is because the media market characteristics of the dual market of broadcasting are well known and often applied in the literature (e.g. selling audience to advertisers, attracted by shown content).

Table 8: Simple phases related to individual programmes/shows

1st programme production			**2nd Showing**	**3rd Performance**	**4th Re-use**
Idea generation	Production	Finalising	Part of packaged output	Audience results	Selling, repeating or format

Source: Own depiction

When we take the individual programme creation process into account, we can see that while the broadcasting phase is related to the value chain of television business, the chain of programmes is somewhat different as it retains significant scarcity issues. There is a limit to talent, especially in small markets; production facilities might also be limited and - not least - where does the financing revenue come from for a product which, when finalised, achieves non-rival characteristics and has economies of scale in consumption? The incentive structure of actually producing particular programmes is also at stake; just as most states subsidise the production of domestic films, there is a situation in which television content, or high-quality

online content for that matter, will not be produced as there are no guarantees of profit: this is especially true in small language areas.

This does, however, also emphasise the difference between the movie theatre economy and television when discussing concerns like inefficient exclusion with content where the cost of an extra audience besides that first one is more or less insignificant; e.g. MSC = 0. When we discuss television we have the potential of offering roughly 8.600 hours of content per channel annually. Keeping full flow provision is a continuous process, where we can fortunately reuse the content created by repeating it.

Furthermore, for films, series and more, there is also the potential for international sales which, in cases like Beverly Hills 90210, can make particular shows quite profitable compared to the original costs of production; this can even be done while using the same content in the particular producer's home market. It can also be applied in several countries simultaneously on thematic channels. Both conditions are due to the media content characteristics of non-rivalry and economies of scale in consumption.

From a national domestic position, one of the difficulties is securing sufficient original domestic content; this is because of the risk of failure, especially in small markets. This is where another primary use becomes apparent: different types of content based on ideas can be used as formats for those productions by other producers - indies or broadcasters – while it actually appears like domestic content, as "domestic personnel" are used in the production phase; this alone can reduce risks significantly as the idea phase for that production is reduced, thus lowering overall costs. At the same time risk is reduced, with the level of that risk being dependent on the track record in other countries.

Overall, the economic conditions of the commodity are dependent on the potential of the content produced versus the relative risk taken in selecting that investment instead of another. The imperfect market conditions lead to difficulties in securing provision of all types of interests, especially so when the volume of the market becomes niche in type. While a programme might still be viable to produce, it will have to be done for the international market, where the aggregated mass of the niche audience might be large enough to risk the investment.

Table 9: Conditions before and after production

Before production	When shown, after production
Scarcity of resources and talent	Non-rival condition
High cost of complete production; incl. idea phase	Economies of scale in consumption; +1 audience = 0 MSC increase, e.g. negligible cost
Risky investment in unproven idea (making talent more important)	Repeatable and potential of long-tail; copyright protected (unless only format)
High risk of failure, but also if mass-audience related, potential of high profit	Language dependent

Source: Own depiction

The various challenges of the broadcast media are in reality in combination with concerns of culture the primary reason for public broadcasting along with a merit-good line of thought, where the key issue becomes public merit goods. As pointed out by Andrade (2001), both broadcasting and telecommunications have been deregulated significantly since 1973; even though this has been the case, and especially in combination with high market concentration, there continues to be a strong argument in favour of public broadcasting to secure domestic services.

The reason for this is that "a strictly commercial approach to television – even in large and rich markets – is not reconcilable with cultural goals. Such an approach is even more unrealistic in smaller countries and in most countries of the world"(Juneau, 1997). It becomes a question of incentive, not only from the individual consumer, but also from the industry in terms of what sort of provision and why? The challenge from a state perspective is that as a community and a culture from a merited perspective, there is a difference in what will be provided and what there could be an interest in having provided.

The cultural argument is strong. "When we consider what I call the satellite culture," said T. S. Elliot, "we find two reasons against consenting to its complete absorption into the stronger culture. The first objection is one so profound that it must simply be accepted: it is the instinct of every living thing to persist in its own being… It would be no gain whatever for English

culture, for the Welsh, Scots and Irish to become indistinguishable from English-men. What would happen, of course, is that we should all become indistinguishable featureless "Britons", at a lower level of culture than that of any of the separate regions. (as citied in Juneau, 1997).

This is in principle also connected to the argument on perceiving domestic content as a club-good; we provision goods from our own culture with a reason for distinguishing it from others. Otherwise we might as well purchase productions from other nations as they are available in abundance. As Tracey (1992) argues, philosophies of broadcasting are related to or rather *"born out of a philosophy of society"*. We cannot remove the civil society and cultural dimensions from the discussion, and this is why public broadcasting as an argument to limit market failure remains coherent, and why the market–state discussion is insufficient to grasp PSB and also why [public] merit good arguments remain the strongest for intervening into the market in a particular community to secure universality of the services provided in the service of the public.

An element which is sometimes forgotten when looking at media products is that languages and culture exclude. It is forgotten because we look at these goods mainly from a national perspective and not an international one.

No matter how we look at it, even if the Danish television station was able to reach a watching world population of 6 billion people, only a fraction would be able to understand the programmes, not only in terms of the language, but also in terms of cultural differences. The rules of the game in this way become governed by the language in question; while sports are differentiated due to the rules being international, a watching Asian audience would not understand the commentators, but could understand the rules of the game. Is this interesting and why should we even perceive language (and culture) as an excluding factor? Small markets' potential for export is relatively limited, although this is not necessarily the case for formats, and this actually proves the point, as the shows based on international formats are given a national domestic appearance: in other words, they buy the idea and make it national. While you can almost always sell a good and proven concept or idea, it is more difficult to sell content devised and produced for a particular small language area.

From an international perspective, this implies that domestic broadcasters with domestically produced content lack the potential of utilising economies of scale and scope sufficiently partly due to their market being national and partly due to the produced content. In contrast, multinational corporations are able to utilise the potentials of the public good in a way which also utilises economies of scale and scope by a)producing to an international market and b) using dubbing/subbing. This is also why this is interesting. By applying the geographical

perspective from the traditional perceptions of the market and combining it with the usual de-contextual public good in relation to media content, we can perceive language and an excludable factor making Danish and more or less Denmark into a club. In other words, domestically produced content should rightly be perceived as a public good from the national perspective, but it is actually a club good from the international perspective.

To illustrate, we should perceive this in the number of citizens or consumers of interest. The number of *n* from a national domestic perspective is somewhat different between large and small nations on the one hand, but also between national domestic companies and international companies on the other. The Danish state primarily focuses on securing the provision of necessary content for the Danish market. In contrast the German state, while also primarily securing domestic provision, also attains some international output through *Deutsche Welle*: here, they manage public good status as the *n* equals a larger language area than the German.

A Norwegian domestic broadcaster focuses primarily on the national market producing content in Norwegian, making it a club good; in contrast, an international company such as Disney utilising economies of scale and scope can take complete advantage of the potential of the media goods by targeting as many countries as possible using dubbing, but with international content and only very limited or no domestic content having an effective *n* equalling not the entire world, but very close to it. It is estimated to be profitable based on advertisement, cable relay, merchandise sales or other revenue sources.

In other words, the differences lie in the potential number of customers; whereas a state at a national level is correctly assuming that in order to secure national domestic content, subsidies are needed due to the nature of the commodity, from an international perspective this is due to it being a club good. On the other hand, an international media company has the potential to utilise the media goods to their fullest extent across markets to an *n* higher than those of most nations.

This actually has consequences for both public and European policy. Realistically, if the argument is correct, then the EU is too small to manage *de facto* competition against content from, for instance, the US. There are too many languages and too little competition between European media companies compared to the content available from US production. From the international perspective, the EU member countries (except France, Spain, Poland, Germany and the UK) risk being trampled by international content, with consequences for their own culture and production industries. The nation-state has to preserve its nationality, language and production, while at the same time having to cope with the demand for uniformity of rules at the EU-level.

The reason is not due to lack of content production at a European level, but rather that the entertainment, TV series and drama from North America are not only cheaper but have also been through a significantly harder competition process before being labelled a profitable and perhaps continuous series. On the other hand, this also places a great strain at the EU-level, as the content is produced by a collective of "clubs" not able to compete directly at the European level but more within a regional context.

2.8 Analysing the influence of size

Testing the hypotheses stated in the introduction requires analysis of the available revenue in the market, the level of original content and a study of the market competition with focus on barriers to entry in terms of concentration. The important issue is finance, meaning the availability of funds, also defined as critical mass. The availability of funds in a market is related to the media company's potential for profit and willingness to invest in original domestic content. This is linked to population and the economy, which means that in theory I should be able to identify differences between small and large markets conditioned on these two premises on account of:

a) Available revenue where critical mass becomes paramount for funding
b) Level of original domestic content
c) Market competition and therefore also the level of market concentration

The reasoning for this is linked to the provision of public goods and the logic of merit goods, where due to the characteristics of broadcast markets and media content, I cannot expect small markets to provide what is of general interest to the same degree as large markets can.

In the next chapter of the dissertation the methodological approach is discussed and the applied empirical measurement used to investigate the hypotheses is presented.

Chapter 3. Methodological approaches

3.1 Introduction

This chapter presents the methodological approach consisting of both the theoretical challenges and empirical measurement. The influence of size and the differences I can observe in small and large markets are the primary focus of this thesis. This makes the relevant units of analysis the individual national markets combined with regional markets for some of the countries with special language conditions.

In consequence, the thesis is planned as a comparative variable oriented study of measureable units of size. The phenomenon of size is expected to matter; the question is how it shows empirically. The operational definition of size has been defined in the introduction in chapter 1.2.3, *Defining size, page 19*. There will be a natural bias as well as error term for the immeasurable units and effects of size. It is thus important to point out that this dissertation does not claim to answer all the questions concerning size, but it gives a perspective on a variety of size definitions and their potential policy implications for European markets. As pointed out by Robert Dahl and Edward Tufte (1973), size is quite an ambiguous concept and there are various ways of operationalising it. The choice made on how to study size is thus exactly that: a choice, one way among others to conceptualise how size influences. The purpose of this chapter is to clarify the basic methodology of this thesis.

In this chapter, I shall present firstly the selected approach including the challenges and pitfalls. This is done in chapter 3.2, *Why compare?*, where a short discussion of the advantages and disadvantages of the variable oriented approach is presented, followed by the challenges of conducting empirical cross-market comparison, as the implications for the project. Subsequently I present the methods applied for measuring the influence of size in chapter 3.3, *Measuring the influence of size*, by defining the measurement in each five research questions (A-E) related to the two hypotheses.

3.2 Why compare?

The first question which needs an answer is why we compare at all. The point of this dissertation is two-fold: on the one hand to argue that the overall market characteristics are similar, and on the other that the difference size constitutes is a consequence of the difference in critical mass of resources available. To show this we have to compare small and large markets.

There are various approaches to comparative research (see for instance Przeworski & Teune, 1970; Lijphart, 1971, 1975; Skocpol, 1984; Ragin, 1987). The point is that comparative research has a long tradition of highly useful works which have had tremendous impact not only on research but also on our understanding of society. Comparisons can be used to establish similarities and differences based on various characteristics; without comparisons it would be difficult to establish if there are variations of social phenomena and how they can be differentiated. As argued by Gabriel Almond (1966: 878): *"It makes no sense to speak of a comparative politics in political science, since if it is a science, it goes without saying that it is comparative in its approach" … "whether it: be in the experiment, in the analysis of the results of quantitative surveys, or in the observation of process and behavior in different contexts in the real world, is the very essence of the scientific method"*. In short, without comparisons, how would it be possible to identify difference?

Overall, I have to include an understanding of the objective behind the research in order to establish whether comparisons are relevant. I can distinguish between two overall rationales of political science research:

a) Research conducted to solve actual policy problems in order to improve if not how policies work, then to reduce adverse effects
b) Research conducted to advance knowledge within the field (Hakim, 2000) and to potentially increase the overall quality of the data the current knowledge is based on.

Thus, there are two criteria which can be distinguished; importance for the policy making, and contributions to the scholarly body of knowledge by increasing the available number of verified explanations of particular areas (King et al. 1994).

The research proposed in this dissertation revolves around the influence of size on the TV media with a primary focus on European states. The relevance of this is that more than €22 bn. annually is contributed in public revenue to public television companies, as well as it being a medium viewed by almost all European consumers.

Size thus becomes a case of interest if the conditions caused by it are different in ways that establish variations in the challenges for states in general and small states in particular. It would be difficult to establish if there were actually differences between small and large states by comparing only either small or large states.

The objective of this dissertation is twofold; firstly it is an attempt to establish a new brick in the wall of knowledge within the field by using comparative empirical studies aiming at explaining how size influences the broadcast media; secondly the research potentially could help deduce policy implications in the form of externalities of policy and adverse effects. In order to advance the field it is important to establish more comparative research crossing more than the few case studies. The reasoning for this lies in the low level of large cross-nation comparisons within media studies with an emphasis on empirical research; usually the diachronic approach is applied mainly in studies comprising only a few markets.

There are several challenges involved in selecting such an approach which have been pointed out by Satori (1991), Collier & Mahoney (1996), Ragin (1987, 2000), which become evident in the material presented by John H. Goldthorpe (2000), who argues on behalf of the variable-oriented approach; see also the discussion between Goldthorpe (1997) and Ragin (1997) on the same issue. Below the advantages and disadvantages of the variable-oriented approach are briefly presented.

3.2.1 Variable-oriented approach

The method applied is a comparative variable-oriented method, which will allow some degree of generalisation, at least for Europe. The main challenge is first to argue why it is beneficial to apply a variable-oriented approach for this type of study.

As argued by Ragin (1987: 53): "…the variable-oriented approach is theory-centered. It is less concerned with understanding specific outcomes or categories of outcomes and more concerned with assessing the correspondence between relationships discernible across many societies or countries, on the one hand, and broad theoretically based images of macrosocial phenomena, on the other." Understanding social phenomena as complex where generality is only possible to a certain degree underscores the case-study approach versus the focus of the variable-oriented approach on the potential of establishing general explanations, while ignoring to some degree the complexity (Ragin, 1987).

This can also be perceived as a thick-descriptive versus a thin-descriptive approach. From a case-oriented perspective, the main emphasis is on contextualised descriptions of the cases based on recognition of historical development for understanding and identifying important factors. The case-oriented approach requires some degree of familiarity with the selected cases, which is also why it becomes difficult to include large numbers of them. In contrast, this is also

where the variable-oriented approach can be applied, but at the cost of the familiarity and contextual understanding of the individual cases in the sample.

Concerning this dissertation, it would not be possible to establish sufficient familiarity with the context of all the markets involved to present a meaningful and thick-descriptive analysis containing all involved objects of analysis. The variable-oriented approach will be applied as the primary methodology in this study which will have a price in terms of the thick description and primary date, but will have a benefit in terms of generalisability.

Ragin points out the following on what should be investigated in variable-oriented studies (Ragin, 1987: 56): "…The investigator examines relationships between general features of social structures conceived as variables. The implicit model of causation central to this strategy is structural. Social units, such as nation-states, have structural features which interact in the sense that changes in some features produce changes in other features, which in turn may produce changes in others. … In this approach, data on social units provide snapshots of instances of structural processes. Thus, structural features and their interrelations can be represented in terms of variables and intercorrelations. By studying the patterns that emerge from such snapshots of structural processes (that is, by studying correlations between variables), it is possible to derive empirical generalizations about the structural processes…".

This presents a challenge for this dissertation, due to the difficulties of access and availability of resources which limit the access to data; on the other hand, the number of cases involved do not allow for the degree of familiarity required for an in-depth comparative case-study approach, without substantial external research assistance. The 26 national markets involved do not allow complete use of the most sophisticated econometrical tools, but it is sufficient to apply them and secure the validity of the results through some degree of contextualisation of particular areas.

The variable-oriented approach can be criticised for over-simplification as the use of statistical techniques requires that, as pointed out by Ragin (1987), we are interested in the *"average effect of a cause in a theoretically defined set of observations"*. The choice of a variable-oriented approach means that there is a limit in terms of how much of the actual complexity of the relationship and limitations in terms of descriptiveness. However, due to the number of cases used it would be an immensely challenging prospect to go in-depth with all the markets included as required by a case approach.

The intention in this chapter has not been to establish a comprehensive and detailed account of all the challenges involved in comparative research, but mainly to indicate the consequences of pursuing a variable-oriented approach. For more detailed discussion of variable- versus case-

oriented approaches, see Ragin (1991) *Issues and Alternatives in Comparative Social Research,* and Van de Vijver & Leung (1997) *Methods and Data Analysis for Cross-Cultural Research* for a more extensive treatment of the subject.

3.2.2 Challenge of comparison

In comparative studies there are four primary methodological problems which have to be addressed in order to qualify as an empirical study. These are 1) The small n and too many variables problem, 2) Galton's problem, 3) the black box problem, 4) the problem of selection bias and 5) the challenge of multicollinearity. See, for example, Goldthorpe (1997, 2000), Rauchmeyer & Stephens (1997) and Ragin (1997). Each of these will be discussed in turn. These challenges link to considerations of comparability, case selection, units of analysis, level and scale of analysis as well as the risk of the independent variables being collinear.

3.2.2.1 Small n and too many variables

A main challenge is having too many variables or too small a number of cases. This study having 26 observations in the least category has to be careful in terms of not including too many variables.

The small-n problem refers to the problem presented by Lijphart (1971:685): "The principal problems facing the comparative method can be succinctly stated as: many variables, small number of cases. These two problems are closely interrelated. The former is common to virtually all social science research regardless of the particular method applied to it; the latter is peculiar to the comparative method and renders the problem of handling many variables more difficult to solve". Having too few cases and too many variables are two different challenges, but one problem is that assessing too few cases often results in too many variables with which to establish coherent explanations. This also remains a challenge for the analysis in this dissertation.

In relation to the challenge of small n, Goldthorpe (1997) argued: "…it is above all else necessary to recognize here is that au fond the small N problem is not one of method at all, but rather of data: more specifically, it is a problem of insufficient information relative to the

complexity of the macrosociological questions that we seek to address. … Conversely, what is vital to overcoming the small N problem is in principle easy to state, albeit in practice toilsome, even where possible, to achieve: that is, simply to increase the information that we have available for analysis."

The small-n too many variables problem has often been posed by Goldthorpe (1997, 2000) and King et al. (1994), who argue on behalf of a statistical orientation, but the problem of over-determination remains, caused by the potential of too few degrees of freedom in the statistical analysis. It thus becomes a critique of case-orientation relying on small n. And as pointed out by King et al. (1994), as the number of observations increases, the confidence in the tests performed also increases, as we in effect have enhanced the observable implications of the proposed model. If I relate this to the discussion between variable-orientation versus case-orientation, there is criticism from proponents of small-n comparative methodology, as they argue that thick-description and particular circumstances become more or less invisible at the macro-level, and thereby they risk excluding viable explanations. I can also argue that even if there is a relationship in the model, there is no guarantee that I actually measure what I intend to measure at the aggregated level (as pointed out by Satori 1991).

In a way, the small-n, many variables challenge is a trap for researchers, as in an attempt to salvage an explanation we include more variables, which can cause small-n difficulties again. The same goes for small and large sample studies, as the small sample studies yield more thick-descriptive explanations, which the large sample studies can benefit from in their thinner descriptive explanations.

It is in effect a choice between methods and availability of data; this also refers to the selection of cases, where the scale of the analysis is chosen. I have decided on a mid-scale comparative analysis. Unfortunately, for various reasons, availability of media data is quite scarce and this has limited the analysis to 26 markets. This places some challenges on the comparative analysis, but by applying this sample, I can investigate the argument and attempt to identify whether there is a difference between small and large markets as suggested by the hypothesis.

3.2.2.2 Galton's problem

Galton's problem is the predicament of dependence between countries, or, phrased alternatively, the problem of historically non-independent cases. Galton's problem as identified by Raoul Naroll (1961, 1962, 1965) causes statistical problems when the common dependence or influence of historical factors affects the similarity of cases.

Galton's problem in essence argues that similarities identified between cultures could be caused by imitation, learning or diffusion which appear as dependence both within and between countries in the form of auto-correlation. Take Europe as an example: these countries are dependent, imitate and learn from each other, but when we then identify similarity, what is it exactly we identify? Is it an historical process, legislation or otherwise? If we test the hypothesised argument based on similar development, we risk having institutionalised dependence between the countries in question, which can threaten what we actually compare and how we can explain it, or rather interpret the statistics. For statistics at least, we have to take it into account by adjusting and conducting the relevant significance tests. The challenge is one common to all cross-cultural research, i.e. both variable-oriented and case-oriented.

Naroll (1961, 1965) suggested the first ways to deal with this challenge in statistics and thus how to identify similarity based on geographic closeness and cultural resemblance. This is a challenge when the intention is to test theories. Let's take the liberal convergence thesis of Hallin & Mancini (2004:76): *"…there is a trend in all countries toward commercialization of the media and professionalization of journalism and other media-related occupations, and a corresponding separation of the ties that once connected the media to the world of politics – most particularly to political parties and other organized social groups. There is, in this sense, a convergence toward the liberal model"*. What is the trend they identify? Is it globalisation, is it that other countries imitate the liberal system, is it evolutionary, or is it all three?

Looking at the countries they compare, there is high potential for imitation processes, learning and other relationships making them dependent on each other (for instance OECD); thus it is not necessarily a comparison of independent cases. The obvious answer would be to secure cases independent of each other, but political systems and economies are usually open, especially in small countries. How can we find actual independent cases in the first place? And secondly, is that at all warranted in this study of size where we actually expect the conditions to be similar?

Galton's problem is relevant for understanding the difficulty of using, for instance, small countries with large same-language neighbours as the only cases, but on the other hand, these should in theory be the deviant cases and present interesting relationships between the two

markets. The problem has been ignored in political science comparative studies for some time, and this is probably in relation to the openness of political systems and the tendency of diffusion of *best practice*, as for instance the UNESCO (2005) publication on public broadcasting. I have to be aware of the challenge of this problem and be able to counter it in statistical time-series analysis, for example, and in other tests of statistical significance.

Within media studies, several arguments are actually based on the logic of similarity and dependence, such as the cultural imperialism hypothesis or the aforementioned liberal convergence hypothesis. The advance of international trade, foreign direct investment (FDI) and developmental aid as well as international organisations such as the World Trade Organisation (WTO), the World Bank, the United Nations (UN) and so forth ensures increasing dependency between the countries and even more so between markets; I cannot in any way in the selected markets for this study argue that they are based on independent cases.

They are dependent: the small national markets are theoretically and empirically argued as being dependent between themselves and between the small and large markets. This is something I have to take into consideration when establishing explanations, but it is also a *problem* which can prove a point in itself on the influence of size. Following Goldthorpe (1997) and Rauchmeyer & Stephens (1997), I agree that the problem posed is overstated and can be investigated and compensated statistically: at least it should not be a direct hindrance to conducting comparative studies.

3.2.2.3 The black box

Theory and empirical evidence goes hand-in-hand for both variable-oriented and case-oriented methods. The variable-oriented statistical analysis carries the cost of not understanding particularities of the individual cases (Rueschmeyer, 1991). Using size as an example, I can apply a regression on the relationship between population size and market size; this will offer insight into the relationship between population and different types of revenue, but it will explain little on the reasoning for, the level of public revenue or the daily strategy of media companies. This would require more in-depth understanding of the individual cases and market conditions. Thus, I have a black box.

Goldthorpe argued the black box challenge in the following way (1997): “We know the "inputs" to the analysis and we know the "outputs" from it; but we do not know much about why it should be that, within the black box of the statistical model that is applied, the one is transformed into the other.” For the analysis utilised in this dissertation I point out that there

have been several case-studies of various types of size on which this dissertation can on the one hand rest and on the other supply a more general approach. Without the work of Trappel & Meier, I would not have been aware of the small same-language neighbour difficulty beforehand, but would have deviant cases I would have had to explore independently in detail for explanations. In this, I support the fact that the individual method offers reciprocal support and potential for substantiating theory on different levels of analysis.

The challenge of the black box is inherent in the variable-orientation, but in contrast, few case-studies are able to cope with all relevant variables and information to completely unlock the box. Variable orientations have a separate use to depict a general relationship; while case-oriented have the capability of showing a more embedded understanding.

I have to acknowledge the existence of a black box under all circumstances in order to reduce complexity. It is inherently a part of variable-oriented analysis, but rather than arguing that it is a problem, I will take the approach of it being a choice, a sacrifice of thick-understanding a few cases to a more general understanding of the involved mechanisms. It is a question of weighing statistics versus depth of understanding.

I will use statistics in an attempt to conceptualise the influence of size which will leave potential blind spots which can be studied more in-depth using qualitative methods. The intention of this dissertation is to establish a mid-range level of description to help illustrate the differences between markets, and thus, that not all markets have similar conditions to the Austrian, Switzerland and the French speaking part of Belgium ones. Case-studies and in-depth studies help unlock the black boxes using particular and thick-descriptive approaches. I in contrast cannot reach that level of unlocking with the applied method, but instead what will be left is a structure available for further analysis. The study conducted will suffer from the black box problem of the variations within the individual markets.

3.2.2.4 Selection bias

Selection bias is a problem when using a sample of the population which leaves the resulting sample non-representative of the population. Usually, this is concerned with variable-oriented statistical analysis, where this type of bias can distort the analysis. The consequence can be one of over-representation on the one hand and skewed distribution on the other, especially if the variables are selected according to scores (gerrymandering in statistics). The outcome of this in statistical probability theory, on which statistical analysis rests, is a high risk of interference in the causal relationships. Sampling bias is one of the challenges, caused by for instance self-

selection of the sample population. However, selection bias is a cause of concern for both case-oriented and variable-oriented analysis: see for instance Ragin, 1997.

The markets have been selected to represent the European television media markets in order to identify similarities and differences between small and large markets. I have selected the cases based on size, large language neighbour and availability of data. Not all markets had the same level of detail in the data, which would have made a comparison difficult at best, and potentially wrong at the worst.

I have chosen the markets where the data was on a level of acceptable comparison; this also led to the exclusion of several markets where it was questionable. In the various chapters, there is a core of 26 markets in each structural analysis. This will have consequences in terms of the degree to which the findings can be generalised.

Furthermore, one can ask why these cases have been chosen and not others: the selection has been based on the principle of sufficient examples with which to conduct the analysis of interest of the European television landscape. The markets selected are representative for the EU and will help establish a reasonable level of comparison between the TV media markets.

3.2.2.5 Multicollinearity

The prerequisite in multiple regression analysis is that the independent variables (predicators) are not highly correlated. Multicollinearity occurs when two or more independent variables are highly correlated. Multicollinearity is something that, when studying the influence of size, I have to ensure is limited when conducting the multiple regression analysis.

Berry & Feldman (1985:38-40) state that: *"First, multicollinearity is a problem referring to correlated independent variables in a specific sample of data, and not in the overall population. … "Second, note that – setting aside the case of perfect collinearity – even a high degree of multicollinearity does not violate the assumptions of regression". … "Third, multicollinearity should not be conceived as something that either "exists" or "does not." Rather multicollinearity exists in degrees and the degree determines how important a problem is posed. When multicollinearity is present in only a very small amount, there is little reason to be concerned about its impact, but as the degree of multicollinearity increases, its consequences becomes more pernicious".*

*The problem of m*ulticollinearity is separating the effect of the independent variables on the dependent variable. This is a problem because the more alike the correlated variables are the more difficult it becomes to determine which variable is accountable for the variance in the dependent variable. The more correlated the independent variables are, the more challenging the problem. As such multicollinearity constitutes a quite serious threat for the estimation regression is normally applied for.

Using regression with highly correlated independent variables can result in overly sensitive parameter estimates (Farrar & Glauber, 1967). In a sense as stated by Goldberger (1991) it becomes a challenge of micronumerosity (see Goldberger, 1991 for a more detailed discussion on the issue of collinearity).

In short multicollinearity leads to high levels of standard error as there is uncertainty in terms of the effect of the different independent variables. In short, a lack of data will result in too small a sample to test the assumption.

This is a serious challenge for a study involving size of population and economy, where the tendency is for high levels of multicollinearity between these variables. In order to take this into account in the statistical analysis multicollinearity is not problematic in the multiple regression analysis. The Variance Inflation Factor (VIF) will be applied. Fox and Monette (1992) argued that: *"The variance-inflation factor is a useful diagnostic because it indicates directly the harm inflicted by collinearity on the precision of the estimation".* VIF can be used to interpret if there is excessive multicollinearity. The test will be conducted at the same time as the multiple regressions and will be reported along with the other results.

Identification of too high levels of collinearity is based on the rule of thumb, that if the individual multiple regression models has variance inflation factors higher than 10 it indicates a serious multicollinearity problem (Marquardt, 1970), while others would treat a VIF score above 5 with caution (Belsey, Kuh and Welsh, 1980). Preferably it should be as close as possible to 1 as this would indicate that there is no collinearity.

Note that controlling the statistical analysis for multicollinearity is highly important in this type of study where variables concerning population and economy tend to be highly correlated.

3.2.3 Implications for the project

I have accounted for the methodological approaches, perspectives and problems faced when conducting comparative research. Faced with the methodological discussion I agree that the

considerations of comparative studies often lack some understanding of the basic pitfalls in comparative methodology. While I am aware of the challenges and problems presented, this does not mean that they can be bypassed.

For this research I have chosen an empirical comparative variable-oriented study. This has also required rigorous consideration of the sample of the units of analysis, and the decision to analyse Europe to secure a basis for discussing potential policy implications. Availability of data on the national markets is a severe barrier for empirical research within media studies, especially when conducting comparative studies.

The empirical studies presenting systematic evidence-based research within media studies are few and far between for various reasons. The understanding gained by studying the methods applied and evidence used in comparisons established the question of where the evidence behind the evidence-based conclusions originated. When I studied this, I found a general lack of focus on comparison of more than a few markets.

In the literature I found others with a similar perception, for instance Michael Elasmar (2003) who noted that: “My interest in developing this book [The Impact of International Television] can be traced to an observation I first made during the course of my doctoral studies … I found out that most writers, including those of books, articles, and conference papers, assumed that imported TV programs have a strong cultural influence on local viewers. However, when sorting articles according to their topic and method of inquiry, I could only find a very few empirical studies about this topic. Where was the systemic evidence that was being relied on for assuming strong influence? I figured that the evidence must have been profuse as the writers were so confident in their contentions of strong influence. I was determined to find it. The more I searched, the more disappointed I became. … I could not believe that there were only very few empirical studies about this topic”.

The same is true for size. Little empirical evidence containing both small and large markets is available, which poses the question: are the conditions observed only viable for small markets? This is a challenge caused by the lack of empirical evidence available for a larger scale analysis.

I will face all sets of problems discussed above. The black box is the most evident and the one which cannot be avoided, but this will also imply that the comparative research can be used to further development of qualitative studies and thereby hopefully the development of theory in comparative media studies. I cannot hope to conduct in-depth case-studies of the individual markets, as this would require far more time with the number of cases included; therefore per

definition, there will be a black box of particular similarities and differences which cannot be explained within the individual markets.

I see no reason to hide this black box, but this is also in line with the method applied: I sacrifice particularisation to gain more breadth in the analysis. Weighting between explanatory strength versus particularity led to the conclusion that the more valuable approach in relation to the existing research would be to conduct a variable-oriented study consisting of medium-scale observations, e.g. 26. There will be a black box of how size actually impacts differently in the individual markets based on specific historical and cultural conditions embedded in each society, but what will be established is the overall effect of size based on the model. There will also be a specific focus to ensure that there is limited multicollinearity between the independent variables, which can jeopardise the degree of trust in the study.

The definitions of size applied in this study are defined in chapter 1.2.3, *Defining size*, *page 19*. The method of measuring the influence of size on the variables of interest is defined below.

3.3 Measuring the influence of size

I will conduct a comparative variable-oriented study applying statistical and comparative methodology. The research problem of this thesis is to ***analyse how size matters for television markets in Europe, measured and compared by statistical data, in order to discuss potential policy implications.***

This is done by stating two hypotheses in chapter 1.2.1, *Hypotheses*, *on page 16-18*, each with a set of research questions used to frame the analysis. The analysis is divided into two separate chapters in order to study each hypothesis individually. Each analytical chapter has a set of chapters used to substantiate part of the hypotheses. The variables analysed are based on the study of the influence of size given in the introduction and chapter 2, *Media market characteristics*, discussing media content and market characteristics. Each analytical chapter will be considered below in order to clarify how the variables are measured. The empirical analysis of the influence of size is intended to investigate how size matters for television markets using comparative method supplemented by statistics.

The primary statistic technique applied is multiple regression. The technique is used to predict the variance in a dependent variable based on independent variables. The multiple regressions will establish the proportion of the variance in the dependent variable that the set of independent variables explain (size of economy and population). This is done at a specific significant level,

i.e. by a significance test of R^2. The multiple regressions on the hypothesized relationships are tested using a significance level of 5%.

These settings are used when the multiple regression are conducted in each of research questions A, B, D and E, which specify a linear relation of the independent size variables and the dependent. Note that all regressions are tested for multicollinearity using VIF with an acceptance criterion of VIF < 5 (Belsey, Kuh and Welsh, 1980) and for serial correlation using the Durbin–Watson test with an acceptance criterion of equal to or below 3 (Field, 2005).

In the chapter 3.3.1 below the operationalisation applied for investigating the first hypothesis will be presented, followed by chapter 3.3.2 where the operationalisation for the second hypothesis is presented.

3.3.1 Analysing the first hypothesis on the influence of size on market volume and the production of original domestic content

This chapter will describe how the first hypothesis and the related research questions are operationalised. First the hypothesis is stated, as on page 16, after which each research question has a separate chapter which describes how the dependent variables are measured.

The first hypotheses it that ***Size is linked to scarcity and therefore influences the critical mass of television markets: meaning that size influences the critical mass in television markets based on availability of revenue understood as monetary TV market volume and the availability of original domestic content. Consequently the larger a market is, the more potential volume of the television market and domestic production is possible.***

The hypothesis revolves around the influence of size on the structural market conditions of scarcity, i.e. the critical mass available in the market. There are two variables of interest when investigating the first hypothesis, a) the level of available revenue in the market and b) the level of domestic production.

The analysis of the first hypothesis consists of three different sub-analyses each with the purpose of investigating part of the hypothesis on the influence of size using the measures of market volume and production of original domestic content argued above. The three sub-analyses (Research questions A-C) are introduced in turn with the related variable, but first the sample markets are introduced.

3.3.1.1 Sample markets used in the analysis

The analysis of the first hypothesis is conducted based on a sample of 26 European markets, all of which are influenced by the EU policies, either by being Member States or be being affiliated by membership of The European Economic Area (EEA)[xvi]. The table below shows the markets as divided by categorised size.

Table 10: Sample markets for the first hypothesis by categorised state size

			Categorical population definition	
			Small	Large
Categorical economy definition		n	19	7
	Small	9	Bulgaria, Estonia, Hungary, Latvia, Lithuania, Slovakia, Portugal	Poland, Romania
	Large	17	Austria, Belgium, Cyprus, Czech Republic, Denmark, Finland, Greece, Ireland, Netherlands, Norway, Slovenia, Sweden	France, Germany, Italy, Spain, UK

Source: Own depiction/model

The sample consists of 26 European countries which should as such be sufficient to establish an overall idea of the influence of size on market volume and original domestic production in a European context.

3.3.1.2 Research Question A: How does size influence the availability of revenue in television markets (TV market volume)?

This chapter will describe how TV market volume is measured to enable analysis of the influence of size on this variable. First the research question is stated, followed by how it will be researched.

RQ A: How does size influence the availability of revenue in television markets? The larger a television market is, the more revenue should be available, which again sets the frame for the potential number of companies and the level of production of original domestic content as this is based on scarcity considerations.

This will be researched by investigating whether the strength of the relationship between size and market volume follows the assumption that the larger the market, the more revenue is available. Size is used as a scale variable as this is important for the investigation of this part of the hypothesis on scarcity and market leverage, where the larger the market (population and PPP GDP per capita), the larger the market volume. This is because advertisement and subscription revenues are related to respectively industry interest in advertising, and pay-TV subscription is related to consumer interest as well as ability to pay subscription fees. Secondly, the larger the size of the population, the more costs can be spread out and thus lowered. Multiple regression and quantitative data will be applied to study differences between small and large markets. The dataset will also allow a discussion of the different markets and their market volume using the quantitative data with the purpose of substantiating in more detail the statistical analysis.

In order to measure the influence of size on the level of available revenue, i.e. TV market volume, this variable has to be defined. For the purpose of this thesis TV market volume is measured by combining the three different main revenue resources in a television market: 1) advertisement, 2) public and 3) subscription. This of course does not include all available revenue in a market, but it represents the major part of the TV market volume. In some markets donations play a role for the TV market as well as revenue from sales of produced content and rights in general. These figures are not included, not because of an inability to find a solution by including more types, as several annual accounts have been analysed, but usually the accounts were insufficiently detailed to include the figures. The combined figures of these three sources of revenue will be defined as a proxy for TV market volume on which I will investigate the influence of size.

The analysis is based on secondary data from the sources mentioned below:

- The public revenue is from a variety of sources with annual reports of financial figures in combination with Screen Digest and controlled by using EBU figures. Furthermore, in markets where public radio companies are independent, their public subsidy has been included in the calculations to ensure comparability. The inclusion of public radio revenue was to ensure that the markets with separate companies did not fall below the level of similar markets, where television and radio are combined.
- For advertisement revenue a combination of the World Association of Newspapers' annual publication and the Euromonitor database for exchange rates and corrections, is used, the figure representing the method of calculating this in the individual markets.
- The subscription revenue is from the Screen Digest Television intelligence database representing the individual domestic market figures.

The sum of these different sources is used as a proxy for market volume. As mentioned above this is not a "total" market volume, but as these sources represent the main revenue sources for television companies it represents a realistic picture of the individual market volume in the sample markets. In short, total market volume is defined as the total sum of combining advertisement, public and subscription revenue. As such it is a measure representing the consumer expenditure on media in a specific market.

3.3.1.3 Research Question B: How does size influence the level of original domestic content in television markets?

This chapter will describe how production of original domestic content is measured to enable analysis of the influence of size on this variable. First the research question is stated, followed by how it will be researched.

RQ B: How does size influence the level of original domestic content in television markets? The larger a television market is the more original domestic content should be available as the incentive for companies to invest in content should be higher.

This will be researched by investigating whether the strength of the relationship between size and production of original domestic content follows the assumption of the hypothesis that the larger the market, the higher the level investment in domestic production. Size is used as a scale

variable, as this is the important for this part of the hypothesis on scarcity and market leverage, where the larger the market (population, PPP GDP per capita), the more potential there is for providing original domestic content. Small markets have less ability to provide original media content. Multiple regression and quantitative data will be applied to study differences between the ability of small and large markets to provide original domestic content. The dataset will also allow a discussion of the different markets and their market volume using the raw dataset with the purpose of substantiating in more detail the statistical analysis.

In order to measure the influence of size on the level of original domestic content production I have to identify a variable allowing such an analysis. Several considerations were made in this regard as what were required were figures that to some degree could be considered comparable. A first attempt was made to identify the level of original production measured in hours from the broadcasters. However, this attempt met with part failure as the levels from commercial broadcasters were not easily available; a success was the data from the public broadcasters, but having half a market's level of domestic production was considered insufficient for the purpose of investigating the hypothesis.

A decision was made to apply investment in domestic production as a method of measurement. This resulted in a figure of volume of originated programming understood as all programming commissioned by domestic operators rather than acquired from the international market in million euros. The figures include funds used for news, but it does not include funds used for the acquisition of sport rights. Using the measure as a proxy for original domestic programming will allow the hypothesis on how size matters for the production of original domestic content to be investigated.

The analysis is thus based on secondary data from Oliver & Ohlbaum Associates (2009). The expenditure on originated content expenditure in 2006-2007 on originated content is defined above. The analysis using this variable will help substantiate the hypothesis on differences based on size in terms of investment in original domestic programming. In short, original domestic production is measured using investment in million euros in original production, meaning the funds the television companies invest in new content.

3.3.1.4 Research Question C: Is there a relative influence of size (varieties of size) on TV market volume and production of original domestic content?

This chapter will describe how the relative influence of size on the TV market volume and production of original domestic content variables is measured. First the research question is stated, followed by how it will be researched.

RQ C: Is there a relative influence of size (varieties of size) on TV market volume and production of original domestic content? Size influence could also be viewed relatively based on small and large categories, meaning that a large market measured by population, can be small measured by economy, which can result in different implications for policy.

This will be researched by investigating whether the relative influence is understood as interaction between size of population and economy, which should enable me to distinguish between varieties of size influence in relation to TV market volume and scale of original domestic content production. The analysis is done using the categorical definition of size by dividing population and economy in small and large markets, and thus testing if different conditions of being small and large can be identified. This will substantiate part of the hypothesis that government intervention can help leverage the influence of size.

In order to measure the relative influence of size I will apply the categorical definition of size based on economy (small, large) where a large market is understood as a market where the GDP PPP per capita is equal to or above the European average figure of $24,216.80 in 2007 and where population (small, large) where a large population is understood as a market with a population equal to or above 20 million. Besides this I will use the two variables on TV market volume as presented under research question A and original domestic production as presented under research question B.

In short this analysis will help show that different varieties of size have different conditions, meaning that markets with a small population and economy have a different condition than for instance markets with a large populations and economy.

3.3.1.5 Summarising the analysis on market volume and original domestic content

The focus in chapter 4 will thus be on the difference in scale between small and large, first in relation to TV market volume, and then to scale of domestic production. This is in conclusion used to test whether there are relative influences of size based on categorisation of population (small, large) and economy (small, large) in relation to the scale of TV market volume and

production of original domestic television content. The combined analysis chapter 4 is carried out to substantiate the first hypothesis based on the three research questions stated about where size should influence as a consequence of similar market and content characteristics. This will help verify if the theoretical assumptions can be considered in accordance with empirical observations.

3.3.2 Analysing the second hypothesis on the influence of size on market competition

This chapter will describe how the second hypothesis and the related research questions are operationalised. First the hypothesis is stated, as on page 17, after which each research question has a separate chapter, which describes how the dependent variables are measured.

Following the analyses of the first hypothesis, I will study market competition using the second hypothesis as an analytical frame, which states that ***Size influences the competitive conditions in television markets. This is a consequence of imperfect competition due to the characteristics of media markets and media content in combination with differences in critical mass (scarcity). Consequently the larger a market is, the better conditions are there for private commercial media, as the larger markets can sustain a higher number of companies, which should show in lower degrees of market concentration if not at the overall level, then as the number of companies increase.***

The second hypothesis revolves around the influence of size on the overall market conditions in television markets. Theoretically scarcity, i.e. the critical mass available in the market combined with the market and content characteristics, especially minimum efficient scale and increasing returns to scale, should lead to highly concentrated markets. However, in this analytical chapter, the influence of government intervention should be especially evident due to the existence of PSBs.

None the less, the hypothesis should still be viable, but I also have to secure some degree of indication on the effect of government intervention. The purposes of these measurements are to investigate whether I can identify the influence of size on market competition, and secondly if the expectations concerning government intervention can be identified when tested using these proxies. There are five variables of interest; three of these are used to analyse the first research question: a) competition between public and private channels, b) competition between foreign

and domestic channels as well as c) language, mainly focused on small markets with same-language large neighbours; the two remaining variables are used to analyse the second research question on d) market concentration and e) ownership.

The analysis of the second hypothesis consists of two different sub-analyses each with the purpose of investigating part of the hypothesis on the influence of size using the measures of overall competitive conditions. Below the two sub-analyses (Research question D-E) are introduced in turn with the related variables, but first the sample markets are introduced followed by a short introduction to competition.

3.3.2.1 Sample markets used in the analysis

The analysis in chapter 5 will be conducted based on a sample of 26 European markets, all of which are influenced by EU policies either by being Member States or by being affiliated by membership of the European Economic Area (EEA). Table 11 shows the markets divided by categorised size.

Table 11: Sample markets for the second hypothesis by categorised state size

			Categorical population definition	
			Small	Large
Categorical economy definition	Small	n	19	7
		9	Bulgaria, Estonia, Hungary, Latvia, Lithuania, Slovakia, Portugal	Poland, Romania
	Large	17	Austria, Belgium, Cyprus, Czech Republic, Denmark, Finland, Greece, Ireland, Netherlands, Norway, Slovenia, Sweden	France, Germany, Italy, Spain, UK

Source: Own depiction/model

The sample consists of 26 European countries which should as such be sufficient to establish an overall idea of the influence of size on market competition in a European context. Note that one extra country – Switzerland – has been included in the analysis on markets with same-language large market neighbours where separate data for the French, German and Italian speaking parts of Switzerland is important, but this is only the case for chapter 5.3. Also note that Switzerland is not part of the EEA, but is part of EFTA and has bilateral agreements I (1999) and II (2004) with the EU concerning a range of areas. As the extra country is only present in a limited part of the analysis it is not included in the table above.

3.3.2.2 Competition and the level playing field

To frame the analysis of competition the concepts used in the thesis on this is defined below, before the actual measuring of the variables is defined.

Competition as defined in the New Palgrave Dictionary of Economics means: "rivalry between two actors over a limited resource or reward" … *"Competition is a rivalry between individuals (or groups or nations), and it arises whenever two or more parties strive for something that all cannot obtain"*. The second hypothesis will study competition in a synchronic perspective for 2008, using the companies' share of the time the audience used on watching television. Competition can take place in a variety of ways, for instance between:

- Companies in general
- Public and private companies
- Foreign and domestic companies

These differences can result in different market structures, which can vary depending on the size of the market. The analysis has to take this into account. Competition between companies in general can be analysed by studying the level of concentration in a market, which will also reveal the overall market structure, while competition between public and private companies requires identification of ownership, and the same goes foreign and domestic channels and foreign and domestic companies. Note that it is possible to have a channel originating for instance in the UK, but owned by a Danish company.

Having a single market in Europe with focus on reducing obstacles for trade, the concept of a level playing field is often used. The concept *a level playing field* is important in terms of understanding the purpose of the single internal market. The Oxford Dictionary defines the concept as: *"a situation in which everyone has a fair and equal chance of succeeding". This basically means that all companies should have equal opportunity to succeed, without being subject to unfair competition due to state interference, monopoly conditions or other factors.*

Although competition and concentration in a market is completely interlinked, I have decided to measure competition in two ways by separating the analysis of market concentration from the analysis of the overall competition.

Following the second hypothesis the television market should be concentrated as a consequence of the content and market characteristics, but Europe is also known as having fairly strong intervention practices on behalf of public television, which should be evident in the analysis. As focus is also on the importance of state intervention, the impact of public ownership will be studied.

Contrasting the measurements used to investigate the first hypothesis is somewhat more challenging as most of this data is unavailable for direct use from secondary sources. In order to examine market competition comparatively, country of origin (see chapter 3.3.2.3.2 below for a detailed definition) and ownership (see chapter 3.3.2.3.1. and 3.3.2.4.1 for a detailed definition) will be used to establish a dataset for use in this thesis to measure competition. In order to measure the influence of size on the level of competition audience share figures will be used to show the differences in small and large markets by using a set of different techniques.

Below the analyses of research questions D-E are introduced in turn with how the related variables are measured.

3.3.2.3 Research Question D: How does size influence the conditions of competition in television markets?

This chapter will describe how conditions of competition are measured to enable analysis of the influence of size on this variable. First the research question, including sub-questions, is stated, followed by how it will be researched.

RQ D: How does size influence the conditions of competition in television markets? This will be divided into two separate sub questions

a. How does size influence public and private television?

b. Is it possible to identify difference in small television markets with same-language large neighbours?

This will be researched by investigating the influence of size on market competition to identify the difference between public and private, and between domestic and foreign companies respectively in small and large markets to identify differences in regards to size as well as impact of government intervention. This will show if the small markets tend to have smaller private market share than their larger counterparts, as well as the difference in degree of domestic vs. international share.

Analysis of size influence on market competition in television markets will be done by using the two sub-research questions. This will allow investigating the relationship between size and the strength of the public and private audience share, as well as domestic and foreign television share using multiple regression and quantitative data. This will also allow me to identify the degree of state intervention in the sample markets. Additionally it will allow me to measure differences based on language, especially in relation to small markets with same-language large neighbours.

In order to analyse these sub-questions related to differences in the competitive conditions of public and private channels as well as to divide domestic from foreign channels the concepts have to be defined in a way which is empirically measurable.

In order to measure market competition I will use two different methods to categorise the data:

- I will differentiate between ownership of public and private companies to assist in measuring differences between small and large markets in the degree of state intervention and commercial market.
- I will use the country of origin principle to distinguish foreign from domestic channels; in this way it becomes evident which channels are subject to similar rules and to what degree a particular market is subject to foreign competition.

The public and private ownership will be presented below, then the country of origin principle will be defined, followed by an analysis of the effects of language in regard to small markets with same-language large market neighbours.

3.3.2.3.1 Ownership: Public and private

Ownership will be applied as a method to enable me to distinguish private from public ownership. Ownership in this sense is from an overall perspective used to identify whether or not a particular television channel is owned by a private or a public company. This will help identify the importance of government intervention in each market. Public ownership is understood as where a television channel is owned publicly in a broad sense, either by the state or indirectly by the state through for instance a foundation. But it does not mean that the state retains direct control over the particular channel or company. Private ownership is understood as channels owned by private companies or persons.

Public and private ownership will allow me to measure effect of state intervention in the individual sample markets, as well as in combination with the country of origin principle to distinguish foreign public and private channels from domestic.

The analysis is based on secondary data from the sources mentioned below:

- The data from EURODATA TV (2009) on television channels and their share in 2008 from each market is used to identify the names of the television channels in each of the selected sample markets.
- The names of the television channels are then combined with information from the European Audiovisual Observatory's database MAVISE, the Television Business International Yearbook, and in a few situations contact with regulatory authorities to construct the information necessary to separate public and private ownership for the

channels. In cases where a public company owns a share of a company, it would count as a public company if above 50% of the shares were owned by the public company.

The variable alone can be used to identify share of public and private television channels. This will help identify differences in terms of public and private share in small and large markets.

3.3.2.3.2 Country of origin principle

The country of origin principle is applied to measure the penetration of foreign television channels by identifying the individual country of origin, and thus whether or not these are foreign or domestic in a particular market.

The country of origin principle is defined by using the definition of the European Union, as stated on an EC website concerning the understanding of the principle[xvii]: *"The country of origin principle means that when a service provider wants to provide his services into another Member State without a permanent presence there, he has, in principle, to comply only with the administrative and legal requirements of his country of establishment. This means that Member States may not restrict incoming cross-border services from a provider established in another Member States by applying its own administrative and legal regime in addition to the requirements the service provider is already subject to in his Member State of establishment…"*.

The importance of this principle for television is not to be underestimated, as it is identified thus in AVMS §33: *"The country of origin principle should be regarded as the core of this Directive, as it is essential for the creation of an internal market. This principle should be applied to all audiovisual media services in order to ensure legal certainty for media service providers as the necessary basis for new business models and the deployment of such services. It is also essential in order to ensure the free flow of information and audiovisual programmes in the internal market."*

An example of this is that jurisdiction of a television channel is in the country of origin, meaning that for instance a channel whose country of origin is the UK targeting another country adheres to rules in the UK, and not in the country of reception. The purpose of this principle is to secure the free competition in the internal market – but still also having some minimum rules to which the Member States are required to adhere.

The analysis is based on secondary data from the sources mentioned below:

- The 2008 data from EURODATA TV (2009) on television channels and their share in each market is used to identify the majority of television channels in each of the selected sample markets.
- The channels are then checked in terms whether or not they originate in a particular sample country or from a foreign country. This is done by using primarily the MAVISE database from the European Audiovisual Observatory and in some cases the independent regulatory authorities' websites for more detailed information.

This method of measurement can be used to identify share of domestic and foreign television channels. More importantly it can also assist in identifying if market conditions are different for small markets with larger same-language neighbours, and in combination with the defined ownership below on public and private competition it can help establish a more detailed picture on difference in competition between small and large markets.

3.3.2.3.3 Language: Small market with same-language large neighbours

Language is important as it can function as a measure to increase or decrease barriers to entry. Small markets with a large same-language neighbour will be especially subject to this, and it is therefore of interest in terms of identifying any difference between these and similar small markets in contrast to larger ones.

Small markets with large same-language neighbours are expected to face conditions equal to those of the large markets, or at least harsher than ordinary competition as a consequence of their similar language. This is because language makes it easy for the commercial players in the large markets to perceive small markets with the same language as an enlarged part of their own, especially if these are regionally extended.

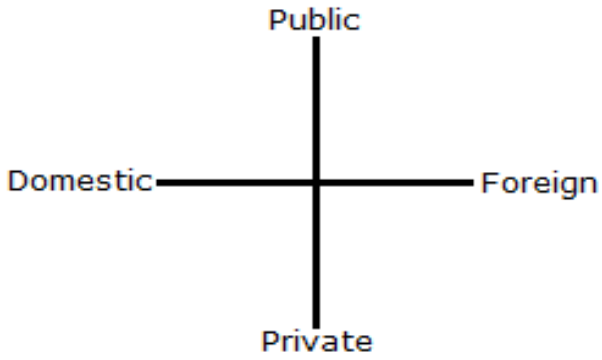
To analyse this I will use the analysis on market competition to include a separate analysis on small markets with a same-language larger neighbour. That is because usage of the country of origin principle allows me to identify difference between a small market with and without larger same-language neighbours in terms of relative foreign penetration from the same-language markets into the domestic market.

Data and usage is similar to the use of the methods above using country of origin and public – private ownership. The measure is important to get a grasp on the challenge of a particular category of markets in Europe with particular conditions.

3.3.2.3.4 Summarising competition measurement

In short, the combination of foreign and domestic based on the country of origin in combination with public and private ownership will enable me to compare the influence of size on the differences between the public and private competition, as well as the degree of difference there is in domestic television *vis-à vis*-foreign television channels. Figure 2 below illustrates the division.

Figure 2: Analytical overview of competition



The figure illustrates the analytical perception used to answer the first research question. Furthermore, the combination will allow me to establish the level of government intervention as well as establish an idea of foreign penetration.

3.3.2.4 Research question E: How does size influence the level of concentration in television markets?

To frame the analysis of concentration the concepts and measurements used on this is defined below. First the research questions as well as sub-questions are stated, followed by how it will be researched.

RQ E: How does size influence the level of concentration in television markets? This will be divided into two sub questions:

a. How does size influence market concentration from an overall structural perspective?

b. Is it possible to identify any trends concerning ownership of multinational companies?

This will be researched by investigating the influence of size on market concentration to identify difference in level of concentration in small and large markets, as well as to identify difference with regard to impact of government intervention. The analysis will show if smaller markets are more concentrated than their larger counterparts, as well as the position of the PSBs in the sample markets.

Analysis of size influence of market concentration will be done by using the two sub-research questions. Using this division will allow investigating the relationship between size and the level of market concentration by using multiple regression. Importantly, it will also allow me to identify the importance of state intervention. Furthermore, there will be established a short overview of transnational ownership of television companies in order to identify the potential difference in impact of multinationals in small and large markets.

In order to analyse these question concerning difference in market concentration the concepts have to be defined in a way which is measureable.

In order to measure market concentration and transnational ownership I will use two different markets to categorise the data:

- I will use ownership to identify the owners of television channels to identify the largest television companies in each market, which will also help identify differences in the degree of state intervention. Identification of ownership of individual television channels is also a prerequisite for measuring market concentration.
- I will use market concentration to identify differences in the level of market concentration measured by two different methods, namely concentration ratio (CR) and the Herfindahl-Hirschman Index (HHI) to enable perception of differences.

3.3.2.4.1 Ownership

I will use ownership to assist in measuring market competition by studying State intervention and as a perquisite for analysing market concentration. Similar to above it will be a technique to define the units of analysis before analysing them. The concept will be used to help measure market competition two-ways:

Firstly, it will be applied as a way to link television channels in particular market to the company which owns them. This enables the basis for measuring market concentration. This proved a bit challenging as ownership by share of television channels made it somewhat difficult in some markets. In some instances, where joint ventures are involved, a decision was made on where to place the particular channels. One example is the joint venture between BBC World Wide and Virgin Media television LDT, where the channels have been placed under Virgin. This information is present in appendix D.

For instance, the Danish publicly owned television station TV2/Denmark A/S consists of six channels, one of which is owned jointly with MTG (TV2 Sport), and five own channels (TV2, TV2 Zulu, TV2 Charlie, TV2 Film, TV2 News). Combined these channels establish a share of 40% daily audience share, and 41,9% in primetime. This means that TV2/Denmark A/S represent the single largest television company measured by audience share in Denmark. The channels with relation to TV2/Denmark was identified and the share combined to establish the company overall position in the market.

Secondly, it will be applied as a method to identify transnational ownership using ownership in each of the included markets as a way to identify the influence of multinational corporations on domestic television markets. Note, that ownership by a multinational corporation of a domestic company does not make that particular channel foreign based on the country of origin principle. This is as such way to measure foreign ownership of television companies.

This enables me to identify the impact of multinational corporations in each market by studying for instance the position of for instance Pro.7.Sat.1. in the sample markets.

The analysis is based on secondary data from the sources mentioned below:

- The data from EURODATA TV (2009) on television channels and their share in 2008 from each market is used to identify the names of the television channels in each of the selected sample markets.
- The names of the television channels are then combined with information from the European Audiovisual Observatory database MAVISE, the business database – with

financial reports – Amadeus, the Television Business International yearbook, and in a few situations contact to regulatory authorities to construct the information necessary.

Combined, these measurements of ownership are required to measure market competition. One set of data has thus been constructed specifically for use for the analysis in chapter 5 to enable investigation of the hypothesis; this was done by using the share of individual channels from EURODATA TV and identifying the ownership of these channels using databases. These data have been established combining different data sources in the research process and consist of original information not directly available elsewhere. The data is available in appendix D.

3.3.2.4.2 Market concentration

Market concentration measurement is a useful tool with which to indicate the level of competition in the television market. But it also illustrates the importance of political intervention. Along the same line of argument, it can also identify differences in market structures and company ownership. While I mainly focus on the European markets, research on the legislation and regulation of the horizontal merger guidelines of the EU (2004) and the US (1992, revised 1997)[xviii] will be applied to establish some tools and methods on how and why to study market concentration. The concentration in a market is a function of the number of firms and their respective share of a market (Albarran, 1996), television viewing in this case. In other words, it is a tool used to illustrate the relative market competition (Tirole, 1988).

The hypothesis that television markets in general are highly concentrated and operating under conditions of oligopoly is based on assumptions of imperfect competition based on market and content good characteristics. The theory of oligopoly, being relevant for TV markets, is embedded in literature, but little research has been done to indicate the overall market concentration ratios comparatively. A main challenge lies in the method of measurement, where Hannah and Kay (1977) have argued on behalf of one-parameter concentration indices, containing both the Concentration Ratio (CR), the Herfindahl-Hirschman Index (HHI) and entry measurements. Both the CR and HHI are commonly used; see for instance Whinston (2006) for application in horizontal mergers as well as Porter & Zona (1993, 1999) for research into collusion in relation to state highway construction and school milk contracts.

Although application of competitive behaviour comprises more than market concentration measured horizontally, is does provide a picture of the competition in the individual markets,

indicating the market structure and thus is useful for further research. However, there have been cases such as the electricity market, where it has proved an inadequate measure, as indicated empirically by Borenstein, Bushnell and Knittel et al (1999). The intention here is to establish an initial perspective on comparative TV market concentration, in order to document this empirically.

Applying the market share of television viewing is equal to establishing consumer *consumption* of the television commodity; it is thus useful to establish the current level of concentration in an environment characterised by fragmentation of audience. The degree of market concentration is usually evaluated based on number of companies (one, few, and many) and their relative size. A market is considered concentrated if it is dominated by a limited number of firms. In short, the fewer the producers, the more market power the individual firms can utilise due to their market position.

Market competition and market concentration are related and increased market power of single or few companies can have adverse effects on the competitive environment. This will allow studying the level of concentration in the markets, and to which degree the markets can be identified as concentrated.

The analysis is based on the data established by combining the raw data from EURODATA TV and ownership as defined above. This is thus a set of data established specifically for this thesis.

In order to measure market concentration the prerequisite of how to determine market share of the individual companies in the market has to be defined and how this will be applied to the concentration measurement techniques.

3.3.2.4.2.1 Measuring market concentration

Market concentration calculations are based on primary owner, meaning that they show the aggregated share of television viewing for a particular media corporation. What the tables indicate is the concentration of television viewing based on the aggregated share of corporations owning or having a majority share in specific television channels in different companies.

There are several different ways of measuring market concentration: two of the more usually applied are the CR and the HHI (Albarran, 1996; Hoskins, 2004; Wirth & Bloch, 1995; Tirole 1989).

Applying these two methods for measuring market concentration is also in line with what has been pointed out in the EU (2004) Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (hereafter EU guidelines) are given in point 16: *"The overall concentration level in a market may also provide useful information about the competitive situation. In order to measure concentration levels, the Commission often applies the Herfindahl-Hirschman Index (HHI). The HHI is calculated by summing the squares of the individual market shares of all the firms in the market. The HHI gives proportionately greater weight to the market shares of the larger firms. Although it is best to include all firms in the calculation, lack of information about very small firms may not be important because such firms do not affect the HHI significantly"*. As supplemented in the guidelines, note 17, the *"If appropriate, the Commission may also use other concentration measures such as, for instance, concentration ratios, which measure the aggregate market share of a small number (usually three or four) of the leading firms in a market.*" Both measures of concentration will be applied in the analysis.

The HHI and CR are applied to estimate the relative market concentration where the index ranges between zero and 10,000, while the CR maximum is 100. In both cases, the closer the figure is to zero, the less concentrated the market and the more atomistically it functions, while the higher the figure and the closer it is to 10,000, the more monopolistic it is, where pure monopoly conditions are at the top. In between there are oligopoly and duopoly conditions. As pointed out in the EU guidelines, small companies do not impact the HHI as the weight given to larger companies is proportionally larger; to counter the fact that I mainly consider the six largest companies, I have corrected the remaining share into single percentage companies to increase the level of concentration to a more correct level.

Furthermore, to establish differences between all-day and prime-time concentration, both have been included in the calculation. There is still a small bias for the most fragmented of markets, meaning that for those border cases, I have to take into account that the figure might be a little higher, but not by much as the largest have been included in the calculations.

As not all data for all markets were available a dataset based on the six largest TV-companies in each market and their type of ownership was constructed, see appendix D.

Two different measurements will be applied to establish the overall market structure in each market.

3.3.2.4.2.1.1 Herfindahl- Hirschman Index (HHI)

The HHI will be applied to establish an initial level of market concentration based on the HHI level set by the US Department of Justice and the Federal Trade Commission (1992, revised 1997) in their Horizontal Merger Guidelines (hereafter US guidelines) for concentration market shares in chapter 1.5, which are the following: *"The Agency divides the spectrum of market concentration as measured by the HHI into three regions that can be broadly characterized as unconcentrated (HHI below 1000), moderately concentrated (HHI between 1000 and 1800), and highly concentrated (HHI above 1800)…"*. Applying this framework will help establish the difference between small and large markets, as well as the overall difference between the included markets.

HHI is calculated in the following way: $HHI = \sum_{i=1}^{N} s^2$ where s^2 represents the squared market share of the media company. The N represents the total number of companies in the market. The application of squared market shares means that the largest companies are attributed a higher importance for the concentration than the smaller companies.

This is also why the lack of smaller companies is not important; the main concern is to recall that the share of the *rest* must not be represented as a single company as this might skew the resulting level of the index, i.e. having a 10 % market share left can have an impact if the company represented is a single entity, but if it is 10 single 1 % companies, or even 20 ½ % share companies, the impact would be minimal.

This is also the reason why I can apply the HHI using the six largest companies' market shares. In short, the equation ensures that the market share of the larger companies is attributed a larger weight; this is done by considering the relatively higher importance of the competition process (Tirole, 1988).

The ratios from the US will be applied to establish the level of concentration in each market.

3.3.2.4.2.1.2 Concentration Ratio (CR)

The dataset allows me to establish separate concentration ratios for the one to six largest companies, hereafter CR1-6, in the sample markets. The figure represents the number of total share each company has when combining all the channels they own. The CR1-6 index will be

applied to study the difference in concentration and ownership in the included markets. I will present CR1-6, because this is a supplement to the HHI analysis, which will enable me to identify differences in the market power and constellation of companies, such as duopolies.

The CR is a simple but effective way of showing the relative concentration within the market (Bain 1953; Tirole, 1988) and has been applied broadly in literature as the determinant for market structure. Concentration ratio is calculated the following way: $CR(n) = \sum_{i=1}^{n} s_i$ where the s_i represents the i'th company market share, n is the included number of companies used to measure the concentration ratio.

The measurement of the CR is based on ownership as defined above, where the individual channels of a company is combined to establish a figure for its market position.

I will apply the CR1-6 figures to establish the degree of change between the CR (n's), meaning that if you have a CR4 of 83.4 as in Denmark, is becomes easy to neglect the fact that the first two companies represent 68.9 of these (DR and TV2 Denmark A/S), and also that this places severe limits on how large the 5'th included company can be. Applying the variation between the i'th companies can indicate the market structure in terms of major companies.

The analysis will be useful in determining the market position in different markets, and help enable use of the HHI for a separate measurement of the market structure.

3.3.3.4.2.2 Summarising market concentration

In short, this combined analysis will help establish if size influences these aspects of market competition, but also if there is a difference. I expect size to impact the market concentration level, but also that I can identify the influence of state intervention. To be clear, I cannot know how these variables relate to size, although I in general expect media markets to be concentrated; this goes for both small and large and there is no pre-conditioned research available substantiating the size impact using analysis of this type. On the other hand, following the same logic, interpreting the results is also challenging, as what I see might well be a consequence of intervention practices. This chapter could establish information on the consequences of governmental intervention or the lack thereof. Furthermore it will help establish is small markets are more concentrated than large, or if television markets in general are highly concentrated.

3.3.2.5 Summarising the analysis of market competition

The focus in chapter 5 will thus be on the difference in competition between small and large markets, and in small markets with large same-language neighbours. Furthermore it will help identify the scale and scope of state intervention in the market. The combined analysis of public and private ownership as well as domestic and foreign television in chapter 5.3, with the analysis of market concentration and transnational ownership in chapter 5.4, should establish an overall idea of how size influences in small and large markets. The combined analysis in this chapter is carried out to substantiate the hypothesis that size should influence market competition as a consequence of similar market and content characteristics, but also if this is offset by state intervention. This analysis will help verify whether the theoretical assumptions can be considered in accordance with empirical observations.

3.3.3 The structure of the analysis

The structure of the analysis follows the hypothesis and related research questions:

The first hypothesis presented in chapter 3.3.1, *Analysing the first hypothesis on the influence of size on market volume and the production of original domestic content*, is studied using three research questions (A-C) operationalised in chapter 3.3.1.2 till 3.3.1.4.

The analysis in chapter 4, *The influence of size on market volume and the production of original domestic content,* will investigate the first hypothesis where research questions A-C represents the three research questions which are analysed in turn.

The second hypothesis presented in chapter 3.3.2, *Analysing the second hypothesis on the influence of size on market competition*, is studied using two research questions (D-E) operationalised in chapter 3.3.2.3 and 3.3.2.4.

The analysis in chapter 5, *The influence of size on market competition,* will investigate the second hypothesis, where research questions D-E represents the two research questions which are analysed in turn.

The combined analysis will help document the influence of size in the European television markets using statistical data as presented in chapter 1.2, *Research problem*, and should enable discussions and conclusions on potential policy implications of size.

In the chapter below the first hypothesis will be investigated by studying the relationship between size and TV market volume as well as original domestic content.

Chapter 4. The influence of size on market volume and the provision of original domestic content

4.1 Introduction

The media plays a central role in modern life: its news and debate function provides an arena for public debate between politicians and the public, but also for securing different types of entertainment, informational and cultural content (Hutchison, 1999). Media pluralism does not appear due to an invisible hand, neither does media content, just because of consumer demand, since there is no guarantee of the home-produced commodity being more profitable than acquired content. This is because it is challenging to establish a profitable business in a single domestic market alone. The conditions for the provision of media content in small markets are absent. Traditionally, newspapers had the benefit of the subscription model in combination with advertising, and this model moved successfully on to the TV markets, with the result being more dependable revenue streams, at least for now; at some point the television industry will face the same challenges as the newspapers, but for now and for the foreseeable future, the current conditions will dominate. However, even if the change happens, the argument presented below will continue to hold for as long as culture remains representative of an exclusionary function.

My first hypothesis is that Size is linked to scarcity and therefore influences the critical mass of television markets: meaning that size influences the critical mass in television markets based on availability of revenue understood as monetary TV market volume and the availability of original domestic content. Consequently the larger a market is, the greater the potential volume of the television market and domestic production.

This is based on the argument that every size of television market has characteristic dynamics that are more or less applicable everywhere, and that the explanation for key differences lies in relative market leverage. This can be conceptualised as an expression of the market's inability to allocate resources efficiently for television content, which is generally the case in media markets due to conditions of imperfect competition and the higher potential for market failure in media goods. This analysis focuses attention on how size influences market conditions. I approach the task by examining differences in market volume and domestic programming between smaller and larger markets. I utilise population size and economy size as proxies for market size as defined in chapter 1.2.3, *Defining size*, on page 19.

I begin with quantitative analysis to clarify the available revenues in the individual television markets. This establishes TV market volume and is the result of combining the three primary streams of funding for television: public subsidy, advertising and subscription. I rely on

statistical multiple regression to investigate the relationship between size and market volume. The findings are substantiated by using the quantitative data.

Secondly, I study whether size influences the level of investment in domestic TV content. That is handled by investigating the volume of originated programming, defined as all programming that is commissioned by domestic operators rather than acquired from the international market. This is useful for identifying the relationship between the two size variables (population and economy) on the expenditure for originated content. The same statistical techniques are applied.

Thirdly, I substantiate the claim that size of population and size of economy interact. This is useful for establishing how size influences TV market volume and expenditure on originated content both individually and through interaction. Both the size of the population and the economy are important because they influence the critical mass of the market. The larger the market, the more revenue should be available on the one hand, and the more cost can be spread on the other. I argue that the provision of domestic content is influenced by size, due to the logic of collective funding and increasing returns to scale.

Investigating the first hypothesis begins with a recap of the essential argument, followed by three chapters (4.3-4.5) where the relationships of interest are investigated. Chapter 4.2, *The argument on the difference in the influence of size*, focuses on why there should be a difference. That is followed by empirical analysis of the TV market volume (chapter 4.3). Then indication for difference based on expenditure on originated content is demonstrated empirically (chapter 4.4). This leads to the presentation and testing of four varieties of size (chapter 4.5). The analysis concludes with a discussion of the importance of size in the way that TV markets are structured and how TV systems work (chapter 4.6).

4.2 The argument on the difference in the influence of size

The theoretical argument presented in chapter 1.3 is that the influence of size is a consequence of small and large markets being subject to similar market and content good characteristics, which in effect due to differences in scarcity (critical mass) leads to different market conditions.

Although it is certainly the case that smaller and larger TV markets have similar characteristics as a result of the way broadcasting technology works, there are significant differences in the dynamics that characterise comparative contexts. These differences are caused by variations in market volume and supply. This suggests the importance of market leverage: differences in the

dynamics accounting for variation in smaller markets are due to the market's inability to leverage the critical mass necessary to provide media content goods, where cost of production is independent of consumption. In short, it costs as much to make a programme for a few people as for a multitude because costs are fixed, in large part. This is especially pertinent to the dynamics of smaller markets, because less ability to leverage must limit the potential for achieving higher efficiencies related to scale[xix].

The argument is based on an assumption: it is in the joint interests of both the state and consumers to secure domestically-produced content because audio-visual representation has a crucial role in contemporary national culture. The culture that characterise a people as a nation, both in their distinctions and connections, are produced and must be continually reproduced in society. A complex interaction between preservation and incorporation is obvious everywhere, and increasingly today this is related to influences from abroad via the impact of globalisation. This is not always a peaceful, easy-going process, but rather frequently characterised by clashes over values and identities, both inside domestic cultures and in response to external cultures. Domestic content distils and represents these cultural dynamics in various generic formulations, including humour, news, drama and current affairs – really, in every genre as the concept of "working through" clarifies (Ellis 1999). For matters related to cultural identities, self-perceptions and perspectives on the world, and every collective routine of social practice in societies today, domestically originated television content plays crucial roles.

For smaller markets this is problematic because domestic programming is typically unable to produce sufficiency across all types of genres in amount or quality, or both. The market is materially too small to support that. Domestic companies in smaller markets therefore face common difficulties, i.e. difficulties they all experience, in being unable to reach the efficiency of scale required to produce all the content that is needed.

This situation fuels a related tendency. Mass media require some form of collective funding because production cost is independent of consumption[xx]. Because content is expensive to produce but cheap to purchase, there is an incentive to buy tested formats, popular series, hit motion pictures, and other media goods because this makes attracting viewers more likely. Risk of market failure and lack of incentives are governing principles in determining a market's lack of original domestic content[xxi].

Financial strength is a relevant issue when it comes to the media, especially when studying the relative potential of investment into domestic content as well as being able to withstand fragmentation and increased international competition. Below, I will look further into this issue

by studying the volume of the television market. Media content commodities are public goods, while encryption changes them to excludable and thus into club goods (Samuelson 1958; 1967, Buchanan 1965; Ostrom, 1990); some can be argued as being merit, or de-merit goods (Musgrave, 1969). The electronic media content good carries characteristics of non-rivalry per definition and can be non-excludable as well as excludable, depending on the form of distribution. Nonetheless, their characteristics as creative works[xxii] establish them with public good characteristics in terms of their production[xxiii].

In other words, the companies face difficulties in reaching an efficient scale for enabling domestically commercial media companies with national produced content. This is an effect caused by characteristics of electronic media content goods, and this brings about the condition of collective funding, where cost of production is independent of consumption. To clarify this, I have to emphasise the funding of television, which usually comprises advertisement, subscription relay from distributors, public subsidy or a combination of all three. Advertisement is a risky way of doing business, especially in small markets, and particularly if dependent on a single domestic market, as domestic companies in times of crisis have difficulty investing in the content of interest due to decreases in advertisement revenue. Subscription relay, while being more stable, is still problematic as it is dependent on the willingness of the consumer to maintain the subscription and not to select a substitution, especially if the distributor attaches less popular channels to popular ones to secure supply. As it is expensive to produce domestic content and cheaper to buy programmes, there is an incentive to purchase tested formats such as series, films and other content known to attract viewers, rather than investing in a project of which the success is unknown and the period of production potentially long. Risk and lack of incentives caused by market and media content good characteristics are the governing principles here when it comes to the lack of original domestic content.[xxiv]

This complexity is explained by difficulties related to the nature of media content as public goods, as well as in economic theory where increasing returns to scale explain how the cost of production is independent of consumption. This situation produces typical challenges in securing sufficiency in original domestic content:

1. The non-rivalry characteristic of media content (meaning the same content can be consumed by more than one person at no added cost) with high potential for non-excludability[xxv];
2. Increasing returns to scale because the cost of production is independent of consumption (meaning that most of the costs are sunk in producing the first copy, with duplication being fairly cheap);

3. Higher levels of efficiency in scale caused by the collective funding function, especially important for smaller markets (meaning that domestic broadcasters depend on single markets while multinational corporations are able to distribute the same channel or content – dubbed or subtitled – to several markets at once, making it much easier to realise efficiency of scale).
4. The scale and scope of the market intervention are determined politically and thus are based on what is considered to be in the merited public interest in a particular market.

Smaller and larger media markets certainly share challenges that are inherent in television and indeed in other forms of mass media (especially newspapers, but also radio and online). These create considerable difficulties in ensuring adequacy in the public service dimensions of media, long accepted as being of essential importance in the EU and other mature democracies (if only) because media are necessary for answering the democratic, cultural and social needs of respective societies. It has also long been accepted that smaller countries share challenges in being subject to significantly higher degrees of vulnerability to and dependency on foreign-originated content. This legitimises varying levels of policy intervention that are intended to correct the deficiencies.

I argue that the small and large media markets share challenges which lead to difficulties in ensuring the provision of original content serving democratic, cultural and social needs. The argument is that states have common challenges in the broadcasting market, which the market is not capable of securing independently of state intervention. This is a familiar premise presented in relation to state intervention in the electronic media market (Peacock, 1986; UNESCO, 2005). A similar line of argument has been present in the EU since the Amsterdam Treaty, when a Protocol on the system of public broadcasting in the Member States was adopted (Treaty of Amsterdam 2 October 1997). This is also in line with arguments presented in the revised communication on broadcasting from the EC on the application of state aid rules to public service broadcasting (2009) where the states have the right to provision services in the general economic interest (SEGEI) as per the Treaty and the Protocol when of the purpose is fulfilling the democratic, social and cultural needs of a particular society as well as securing "pluralism including cultural and linguistic diversity" (communication, point 47). Furthermore, it is explicitly noted that smaller Member States face real limitations in their ability to finance public services in media due to the higher cost per inhabitant (Communication, point 42).

Media is a risky business and there is a reason for publicly supporting broadcasting in terms of securing content. These are some of the problems common to the broadcasting industry, which from a policy perspective could require market intervention in both large and small markets, but it can be argued they are affected differently, as the level of collective funding for securing the same level of services will impact on small markets more than large, as a result of how cost can be distributed. However, even in the US, the largest media market of this study, there is an on-going debate on the topic of subsidising news production (Downie & Schudson, 2009).

The market in and of itself cannot be expected to provide the full variety of desired programmes, especially in smaller countries with their reduced volumes of domestic resources. To this I can add the even greater problems with regard to informational and educational programmes, that are typically not commercially profitable. In practice, this means that while the costs for a one-hour production are relatively the same in Germany and Denmark, for example, the main difference lies in the number of people available to co-finance production, as well as the relative wealth of the respective societies (an issue that becomes especially pointed in certain countries in Eastern and Central Europe today). As a function of population size alone, Danes must pay more per capita than Germans if they want to enjoy the full range of media goods that are typically considered necessary for democracy, society and culture.

The background to this discussion hinges on the notion of a public interest in providing specific media goods and services to society as a whole, and which are inherently beyond the particular tastes of an individual consumer (McQuail 1992). This implies the importance of accounting for differences in the volume of public expenditure on media as a factor of available revenue. Of course, the commercial sector has an understandable interest in establishing common markets and promoting free trade.

The potential of export markets does significantly increase business opportunity. But it is equally understandable that in smaller markets, policy-makers have a quite reasonable interest in ensuring the viability of domestic audio-visual production in all the varied genres of content and media products necessary for the well-being of the societies for which they are responsible, and to which they must be accountable.

The fact that this is understandable on both sides accounts for the continuing disagreement between the EU and US over policy in television trade (among other things). The US claims that the EU violated the GATT agreement in formulating policies that require some percentage of European originated works in the totality of programme output in Member States (e.g. in the Television without Frontiers directive from 1989 that was recently amended in 2007 and again

in 2010 as the Audiovisual Media Services Directive (see Filipek (1994) for further information).

EU legislation since the mid-1980s has facilitated the establishment of the dual system of public and private broadcasting sectors competing in Europe, along with a strong commercial media sector that is now able to compete in scale and scope across the continent. This has undeniably benefitted diversity in content and pluralism in provision.

Although under fierce attack today, public subsidy has been essential to ensure that competition is robust for markets where it would otherwise collapse due to problems inherent with economies of scale inside and across European media markets. Ironically, however, EU policy is today limiting the competence of state policy to handle media matters, matters that have undeniable importance for both historical and cultural interests as well as efficacy in the performance of competition. The evidence points to a very different conclusion than the contrary claims about public subsidy creating 'unfairness' in conditions of competition.

The reason for choosing the relation between the dependent variable media market volume and the independent size variables of population and economy is that if there were no relation, this would make the reasoning behind existing policy problematic; if the relationship on the other hand was positive, it would establish that small markets were in effect challenged in a way where policy directed towards large markets would risk worsening the effects. This should also show the market failure argument concerning the level of media content provision, in the relation between TV market volume and the provision of public goods. To be fair, it would also question the validity of studying large market policy success, as implementation could easily have little effect, or in the worst cases adverse effects in a small market.

Nonetheless, most markets are vulnerable and dependent to some degree on foreign production, and this is expressed in different ways: for the broadcasting market this should be indicated clearly based on the volume of the media market and the (in)ability to provide domestic media content goods. This entails the fact that vulnerability and dependency are ex ante conditions of the overall challenges facing the TV markets. It also means that these concepts are more descriptive than actual as they are attributed to an effect of a separate condition, here in the case of TV markets related to scarcity, critical mass and the media content good characteristics.

This analysis deals with material limitations and necessities caused by differing levels of potential in market leverage in variously sized markets, which affect the ability to provide domestic public services in the media. Despite claims of market distortion and the desire for some universally applicable template to steer media policy fairly in respective Member States,

variability in market conditions means that what might count as distortion in one country cannot be considered as such in another.

There is no universal best practice. Rather, policy in each Member State must take account of all the particularities and traits of each respective television market, even if the medium as a technology has inherent characteristics that create commonly shared challenges, as noted earlier. There is a case to be made that in the struggle between commercial and cultural interests, which is certainly evident in EU media policies, what has been taking shape in recent years appears to be tailored more towards catering to the interests of the large Member States with their inherent advantages than to the small Member States with their inherent disadvantages.

There are four points to highlight. Firstly, that size is important for the television market volume as the size of the population and economy influence the critical mass of the market. The larger the market, the more revenue should be available, and the more cost should be spread out. Secondly, if this is correct, a relation between size and the provision of domestic media content, defined as expenditure on originations, should follow. In connection with the point above, I argue that the provision of domestic media content should be influenced positively by size, due to the potential for spreading out cost based on the logic of collective funding and due to the increasing return to scale, and therefore the potential for more than a few companies to achieve efficient scale. Furthermore, the prerequisite for this is that the total available revenue is higher in large markets. Finally, I argue that I should be able to identify interaction effect between the categorical (small, large) size variables.

4.3 Research question A: How does size influence the availability of revenue in television markets (TV market volume)?

4.3.1 Introduction

I argue that there is a relation between size and the available revenue in the television market, i.e. the market volume. The three sources of revenue all influence the total market volume. If this is correct, I should be able to identify an effect of size on TV market volume as per research question A.

My hypothesis is that I should are able to identify an effect of size on television market volume. I have argued this to be positive due to the characteristics of media content and the difficulties of the non-rival in consumption characteristics which ensure difficulties of collective funding and minimum efficient scale in combination with increasing return to scale. The problem here is that the bias should consist of a positive number dependent on other potential revenue sources which may well be higher in large markets. The argument is that market volume defined as the aggregated measure of public subsidy, advertisement revenue for television and subscription revenue in million € is dependent on size defined as the size of the population in millions and economy as PPP GDP per capita in dollars.

The analysis is a first step to ascertain the relationship which in theory should be there, based on the characteristics combined with scarcity considerations and thus critical mass. Should this not be the case, size might not have an effect on television market volume, which would be an interesting finding in itself.

To investigate this, I applied a multiple regression analysis for both the independent variables of population size and economy size on TV market volume. As the number of observations is limited to 26, I must be cautious about conclusions. On the other hand, the sample includes the majority of EU member states, so there should be fair validity for the European context. This analysis is a first step to ascertain whether the expected relationship is statistically significant.

First I will present the multiple regression analysis of market size on TV market volume. Subsequently, I examine the statistics: first the individual markets are ranked and divided into the three types of revenue. A short conclusion on the empirical findings ends the chapter.

4.3.2 Regression analysis on TV market volume

This is the first step in substantiating the influence of size on the television markets, where I will present the difference between smaller *vis-à-vis* larger markets. This can help position my argument on the importance of leverage.

I assume that size influences the level of market volume: this calls for a statistical analysis of the hypothesised relationship between size of economy and population regressed on TV market volume. The results of the regression can be stated like this:

Table 12: Regression statistics on the relation between population and economy size on the TV Market volume

	Population	Economy
Coefficient	154.459***	0.006***
SE	8.568	0.19
t-statistic	17.835	3.238
Observations	26	
Adjusted R^2	.933	
R^2	.938	
F statistic	174.932	
Prob > *F*	0.000	
Durbin-Watson	1.883	
Variance Inflation Factor (VIF)	1.018	

*** (**) [*] denote significance at $p < 0.01$, ($p < 0.05$), [$p < 0.1$]. The regression statistics are available in appendix C.1.

The table shows the results of the multiple regression for population and economy size in relation to TV market volume, and indicates that even based on this sample, the regression does a good job of explaining the variation: the explanatory strength for the overall model is around 93%. The assumed relationship between size and TV market volume has been substantiated with this. Summarised, the model is statistically significant with the coefficient of determination

showing a strong positive relationship between the variables in question in terms of the variation between the overall model of size and TV market volume. This means that the smaller the market, the less available revenue there is, i.e. in small markets there is less revenue than in the large. This is in line with theory, but implies that small markets provide less domestic media content: this will be investigated in chapter 4.4, *The influence of size on the level of original domestic content in television markets*, below. Furthermore multicollinearity is not a concern when using these particular variables for measuring size as the VIF figure is just a little above 1.

The model proposed substantiates the relationship between size and TV market volume in terms of the level of revenue as hypothesised. This confirms the first step of my statistical analysis of size, which also illustrates the difficulty of small markets in securing sufficient size to provide public services, e.g. they cost more per capita due to the public good characteristics of media content, assuming that the less volume a market has, the less revenue is available for domestic production. The increasing return to scale difficulty combined with the problems of reaching minimum efficient scale in the market lead to high potential levels of market failure in the television markets if there is an interest in domestically-produced content in small markets; while larger markets are more able to sustain production, they also face the difficulty of providing specific niche content, which cannot be utilised efficiently through economies of scale at the international level.

The results for population and economy size in relation to TV market volume indicate that the regression is robust in explaining variation. The assumed relationship between size and TV market volume is substantiated. This also partly underlines the importance of studying whether there are varieties of size influence. For instance, while Poland is large when measured by population, it is relatively small when measured by economy. This is a good contrast with the Danish market, which displays the opposite characteristics. This points to the relative character of size where a small population with a relatively large economy can, in principle, invest a similar amount of revenue to a market with a large population but a small economy. In short, the model is statistically significant with the coefficient of determination showing a strong positive relationship between the variables.

This initial analysis confirms the first step in my statistical analysis of size and supports my discussion about the difficulties that small markets have in lacking sufficiency of size (in one or both dimensions) to provide public services in media. They simply cost more per capita due to the public good characteristics of media content as larger markets can spread the costs more. The increasing returns to scale combined with a difficulty in reaching efficiency lead to a higher

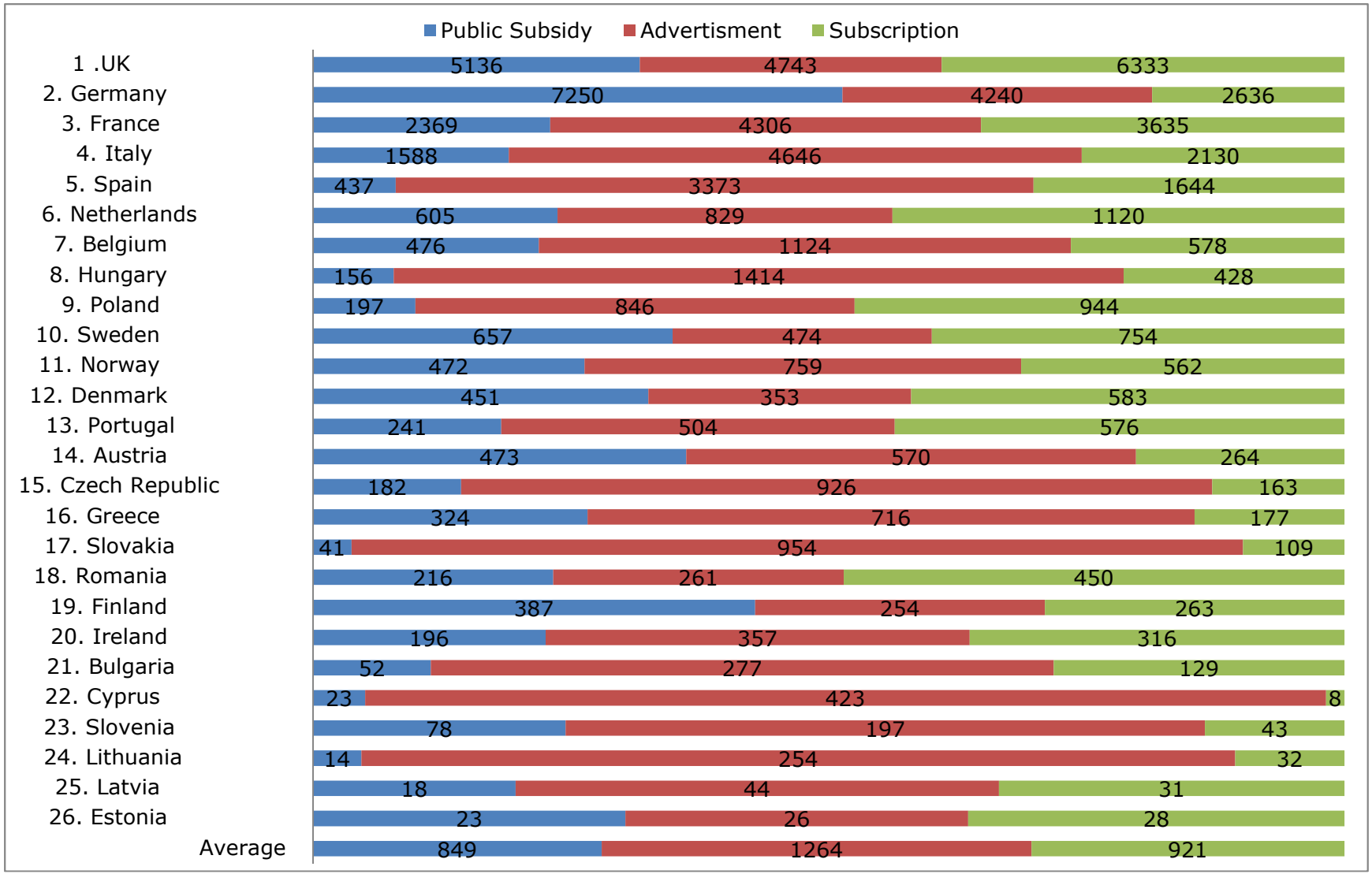
potential for market failure in domestically-produced content. This is especially the case in smaller markets.

Below, I shall look into the relative figures using statistics on the variation between the three types of revenue in individual markets to further elaborate the results of the regression.

4.3.3 Market volume distribution by type

In this chapter I examine the distribution of revenue in the individual markets. My purpose is to identify the differences between these markets regarding the distribution of the three types of revenue (subsidy, advertising and subscription).

Figure 3: TV market volume by type of revenue in million € in 2007 (by total market volume)



Source: Based on Screen Digest for public and subscription funding and Euromonitor International for advertisement funding

Figure 3 shows the division of revenue sources in the included markets as well as the size of this revenue in million Euros. The smallest market in aggregated terms is the Estonian with €77 million, followed by the two other Baltic markets, Latvia with €94 million and Lithuania with €300 million. The largest market is the UK with €16,212 million and the second largest is Germany with €14,126 million, followed by France, Italy and Spain. The big five also represent the largest market volumes. The middle markets are largely made up of the Nordic states, Switzerland and Austria, but also large population markets with weak economies such as Poland. The most interesting aspect is the diversity of the revenue levels where the individual markets are dependent on different types of revenue. Nonetheless, from an overall perspective, the variance in the included markets is quite interesting, and there is potential for further research into the impact and importance of different revenue types for television diversity.

The table also indicates some noteworthy differences between large and small markets, or rather the size of the advertisement revenue. It is interesting that the large matured markets have such differences to the small maturing markets. The big five markets in Europe have the largest TV advertisement markets. It is quite interesting that Hungary has a relatively large advertisement market compared to similar market types, but on the other hand, the Hungarian public broadcaster is relatively weak measured by audience share. The small markets are very diverse in terms of revenue, and public subsidy is just one factor of difference, while level of subscription revenue also plays a role. As well as the difference in advertisement revenue level. We can learn a lot about the structure and dependencies of the small and large markets by studying these three types of revenue, as they present information on the revenue dependencies of media companies as well as which markets have what types of structures, i.e. pay-penetration. Surprisingly, the markets are quite diverse, with different levels, and the effect of public subsidy makes interesting study.

Europe is often compared with the US. The US market, with advertisement revenue of €43,668 million and subscription of €51,229 million, almost rivals the aggregated EU markets. For the US case the entire EU market revenue would have to be pooled to be of comparison. Even the pooled resources of the five largest EU markets would only be above 50% of the US total. That puts into perspective whether or not the EU can actively establish reasonable competition on audio-visual products with the US.

Most markets apply public subsidy. However, the level of that support is quite different. Several small population markets use public subsidies to reach a higher market volume through public broadcasting corporations, than similar sized markets measured by population. Public subsidy and subscription revenue play major roles in some markets, but what can be claimed to be of

importance to media companies is the diversity of revenue to reduce risk of fluctuation. European markets overall appear to have small population, high economy markets where public revenue plays a strong role. Large markets measured by both population and economy such as the UK and Germany, also have very high levels of public subsidy.

Small markets in general, not surprisingly, have smaller TV advertisement markets; relatively they represent a higher cost per household and per capita than large markets. This is in line with the theory on public goods. A main point to remember is that what is shown on TV is *content.* What generates revenue on TV is content, either through subscription fees or by selling the audience to advertisers.

This means that revenue on TV is generated by (a) what the advertisers are willing to pay for their productions to be broadcast to a specific target group in a specific timeslot on a specific date or (b) what the consumers either on-demand or through subscription are willing to pay for access to pay-TV networks.

The markets with relatively little public revenue have higher advertisement revenue to some degree: Germany and the UK are interesting exceptions due to their particular public television structure. Just as the relative public expenditure per capita in general is less, in large markets the same is the case for advertisement. As the cost is mainly for the first copy production, large markets should either have a higher amount of original content production or lower relative costs, because what is sold to advertisers is the audience and the audience gets the content. We know empirically that audiences in general prefer domestic content, and the tables on revenue confirm that large state markets in general have a higher potential for providing domestic content as a result of larger market volume.

The markets with the largest advertisement revenue are also some of those with the strongest private commercial media companies. It might be interesting to study what type of original production is provided; in general the smaller markets should be more dependent on imports and have lower degrees of original production. The interesting aspect here is what differences there are in origination and the potential impact on small markets *vis-à-vis* their larger counterparts.

A separate aspect here comprises the content production originating from the US, caused by the relatively high media revenue available. Although advertisement revenue is used to represent part of a market's available resources for the media, it is also revenue that can be earned by foreign-owned or foreign broadcast TV channels, especially in the small markets. This can lead to less available revenue for domestic TV companies for production of new (original) content.

This is part of the fragmentation problem and the small markets with same-language large market neighbours are especially vulnerable to this diversion because of their being secondary markets. Small markets with weak domestic media are very vulnerable; and in worst case scenarios this can increase the dependency on foreign imports (negative spiral), weaken the domestic production industry (due to reduced revenue), or result in an increased dependence on well-known and tested formats. Such a development can pinpoint the reasoning for increased public subsidy of the domestic media if the intent is to secure content produced with a national perspective.

Studying the figures leads to the question of the dependency hypothesis, where, when I take into account TV market volume difference, I can argue that most markets and media companies are dependent on foreign-produced content, i.e. acquisitions. The interesting points lies in where the media companies buy programming from and why, as well as what effect we can perceive from the level of public subsidy, which plays quite a large role in some markets measured against the relative market volume.

The analysis reveals that most markets apply public subsidy to some degree. But the level is quite different for several smaller population markets, which provide more public subsidy in order to attain a higher market volume. Moreover, this is done mainly via PSB. Denmark and Ireland also have pools of public funding for TV production, established in 2007 and 2003 respectively, and there is also the EU media programme supporting TV production. Public subsidy and subscription revenue also play major roles. But what seems of greatest importance to media companies is that the diversity of revenue has varying risk reduction potential in relation to wider fluctuations of domestic and regional economies.

European markets in general have small populations in comparative terms, and thus even in large economy markets such as Germany and the UK, public subsidy plays a strong role in supporting domestic audio-visual production. We should also observe that the markets with the largest advertising revenue are among those with the strongest private commercial media companies. It is fair to say that most individual European markets are small in comparison with giants like the USA.

Furthermore, the tables point towards the level of political involvement. Public subsidy is revenue allocated politically, although large markets have the potential to allocate more than small ones and do so in most developed economies; however, it is dependent on political choice. Public expenditure is an expression of a political choice in terms of how to deal with perceived

merited interests and/or market failure; thus the size of public revenue is more attributable to historical reasons and political climate than other factors.

Studying the figures of the total public expenditure illustrates a fairly diverse picture in terms of large and small markets, as there appears to be no definite relation between public expenditure on broadcast media and size: however, what it does indicate is that large states have more potential to subsidise the market than their small counterparts. The big five European markets (Germany, UK, France, Italy and Spain) are the top five countries, which clearly shows that. Within Europe the east–west cleavage is evident, indicating that some market types are more vulnerable to external pressure and competition than others, i.e. I cannot assume equal challenges for all markets. Public expenditure is an expression of political will manifest in terms of how governments choose to deal with media goods, either as merit goods or in terms of market failure.

This chapter 4.3 has established the influence of economy and population size on the level of TV market volume, which was as I had expected. Intervention in the market from the state can be argued to play a major part in increasing volume in the TV market. When studying the descriptive quantitative data, and the data on the US market, it is evident that the US market was of such a large size that the top five European markets aggregated would only be a little above 50% of it.

Importantly, this also means that when I take into consideration the difference in public subsidy, we can see that the European markets on the one hand are dependent on public subsidy, but also on the other that when it comes to pay-television and level of subscription revenue, the maturation continues to be on-going. Overall, I have highlighted what I call a first step in identifying the influence of size by determining statistically that size as measured by population and PPP GDP per capita influence the level of volume in the TV market.

There is no doubt that size matters for TV market volume. Size measured by population and economy have both been shown to have significant, instrumental influences on the availability of resources for TV broadcasting. Of course, factors beyond size also matter, as indicated. The level of subscription revenue is dependent on the penetration of pay television, and the level of public subsidy is dependent on the political will to intervene, as well as historical and cultural concerns establishing path-dependency. Advertising revenue is dependent on the level of turn-over of companies in combination with their interest in TV advertising. So although the aggregated levels of population and economy size are significant factors, there are several underlying mechanisms in play.

In chapter 4.4 below, the relationship between size and expenditure on originated content will be explored to demonstrate that this would be a logical step following the documentation of size influence on TV market volume.

4.4 Research question B: How does size influence the level of original domestic content in television markets?

4.4.1 Introduction

The hypothesis is that size is of importance to scale economies, meaning that due to the relationships already demonstrated, I expect to see a strong positive relationship between size on the levels of investment in originated content as per research question B. If proven correct, this will substantiate an argument that differences in state circumstances owing to the relative variation of size in populations and economies lead to differences in the ability to provide public media services. I will again apply multiple regression to substantiate the relationship between the dependent variable (expenditure on originated content) against the independent variables. The 26 markets comprising my sample are again relatively limited in global terms, but sufficient to substantiate the relationship for European policy concerns. The reasoning behind the assumed linearity is that the larger the market, the more able it is to provide such goods. I assume that size influences the level of expenditure on originated content. This requires analysis of the hypothesised relationship between size regressed on expenditure for originated content.

In this chapter 4.4, the intention is to show the influence of size on expenditure on originated content in the domestic markets. This will indicate if size has an impact, but also that, if this is so, it would entail differences in the policy interests depending on the scale of economy and population as these variables influence the market condition, i.e. in the case of Europe it would entail different conditions for small population and small economy markets, such as in Eastern Europe for instance, when compared with the Nordic markets. Above in chapter 4.3, I have identified the difference between volume in small and large markets, and in this chapter 4.4 I shall further examine the influence of size by studying originated TV production.

The hypothesis is that size is of importance to scale economies, meaning that due to the relationship shown above, I expect a strong positive relationship between size and the level of investment in originated media content. Should these variables be strongly correlated, it will be demonstrated that size does matter, and also that public subsidy increases the level of expenditure on originations and thus helps the production industry to fulfill consumer demand for domestic production. Furthermore, it would help substantiate the small–large population and economy matrix on the variance of size. This analysis, in combination with the relationship on market volume above, will help substantiate my argument on difference in state circumstances conditioned by the relative size of population and economy leading to differences in the ability to provide public services.

In order to investigate the relationship, I shall apply a multiple regression on the relationship between the dependent variable expenditure on originated content defined as the level of expenditure on originated production against the independent variables of size (economy measured by PPP GDP per capita in dollars and population in millions). The reasoning behind the assumed linearity is that the larger the market, the more able it is to provide these goods; furthermore, it can be argued that the higher the level of public subsidy, the higher the level of provision. In other words, I should be able to deduce the effect of size on the level of media content provision. The relationship is understood to be positive, as the larger the market, the higher the level of provision. I have argued that the larger market should have higher levels of TV content provided due to their characteristics, but this does not mean that small markets cannot reap an advantage by using the characteristics of these goods and selling the ideas for shows (in practice defined as formats, where the idea and set-up are described) to other markets producers for a fee: *Big Brother* is a successful example from the Netherlands, as is *Strictly Come Dancing* from the UK.

First I shall conduct the multiple regression analysis of size on expenditure on originated content, after which I shall elaborate the results comparatively using the statistics for the individual markets per revenue type and per capita. The empirical findings will conclude this chapter.

4.4.2 Regression analysis on the provision of domestic TV content

I have demonstrated that size was important for the level of available revenue, i.e. TV market volume, it should follow that size is important for the level of provided originated TV content; this will be studied using regression analysis, to be further elaborated using statistics for the individual markets afterwards.

I assume that size influences the level of originated content. This requires analysis of the hypothesised relationship between size and the expenditure on originated TV content. The results can be shown like this:

Table 13: Regression statistics for expenditure on originated TV content (2006/2007)

	Expenditure on originated content	
	Population	Economy
Coefficient	46.042***	0.022**
SE	4.231	0.009
t-statistic	10.883	2.340
Observations	26	
Adjusted R2	0.840	
R2	0.853	
F statistic	66.469	
Prob > F	0.000	
Durbin-Watson	1.914	
Variance Inflation Factor (VIF)	1.018	

*** (**) [*] denote significance at $p < 0.01$, ($p < 0.05$), [$p < 0.1$]. The regression statistics are available in appendix C.2

What can be seen from this regression based on a 26-market sample from Europe is that one extra unit of either population in millions or economy in PPP GDP per capita influences the level of originated content. The figures indicate that size in a European context can be convincingly shown to carry strength, where 84% of the variation in expenditure on originated content can be related to the size variable based on the overall model. Furthermore the regression is significant and there is no real multicollinearity between the independent size variables with a VIF figure just above 1. In other words, the larger these variables are, the more leverage there is and consequently, the higher the level of expenditure on originated content.

This verifies my initial hypothesis on the relationship between size and originated content. These results were as expected by economic theory, e.g. size help establish framework conditions for market volume as indicated in the analysis above, and thus secure conditions for commercial broadcast activity in facilitating economies of scale; whereas private commercial companies are able to utilise economies of scale across markets, public broadcasters usually have to function in

their particular market of interest, which can limit their ability to utilise economies of scale, especially in small markets.

This makes sense with scarcity conditions of talent and resources in the production phases where limitation in smaller markets in particular can lead to reduced production because of a lack of ability to take advantage of economies of scale in the provision of public services where the end-product is similar to public goods.

Even though news and debate programmes are relevant, their export potential when they are produced in small markets is quite low. This does not mean that there is no domestic production in small markets, but rather that the large market conditions establish a more viable frame for commercial activity as it becomes more feasible to reach economies of scale; the small markets can in this regard function as subsidiaries where the larger production companies can purchase entry or set up ventures to utilise economies of scale.

Government can in general counter some of the challenges caused by the market and content good characteristics by using public broadcasters, i.e. represented by the level of public revenue, but this will not counter all, nor will it allow perfect competitive conditions in the individual markets.

Higher levels of subsidy leading to increased domestic production are also rational, as this would be the primary purpose of intervention. Large markets having the volume to a higher degree service the demand for certain genres, which combined with public revenue secures high levels of provision, as is the case in the five largest markets; the small markets with high levels of expenditure, e.g. the Nordic countries, are highly subsidised and have a dual system with a combination of pure public, hybrid and commercial broadcasters; see for instance Lund and Berg, 2009. As will be indicated in figure 5 on page 129 below, these also establish these markets as some of the most expensive per capita.

There are some issues of relevance which need to be addressed: the difficulty of measuring public goods is also apparent in this case. It is necessary to point out that the problem lies in the higher cost of domestic production (compared to buying in programmes) combined with the influencing factor of public expenditure.

The economies of scale argument is relevant: a small market can only sustain a few production companies due to minimum efficient scale, where larger markets have the potential for production industry clusters, not primarily dependent on public revenue. The Netherlands, for instance, has had success with formats, which benefit from the logic of increasing returns to

scale as a creative work, where the purpose is that the purchased *design* can be adapted to the individual state, market and civil society culture and language. This also means that commercial or public broadcasters in small markets can buy in formats with proven success and adapt them to national culture, and as such have a new piece of original material, which could be problematic if this is the only original production there is besides news.

What can be argued is that from a political decision-making perspective, it would be beneficial for small markets to visualise a state as a 'club' sharing culture and language, and while television content does carry the characteristics of public goods, when language and culture are applied they in a sense become club goods.

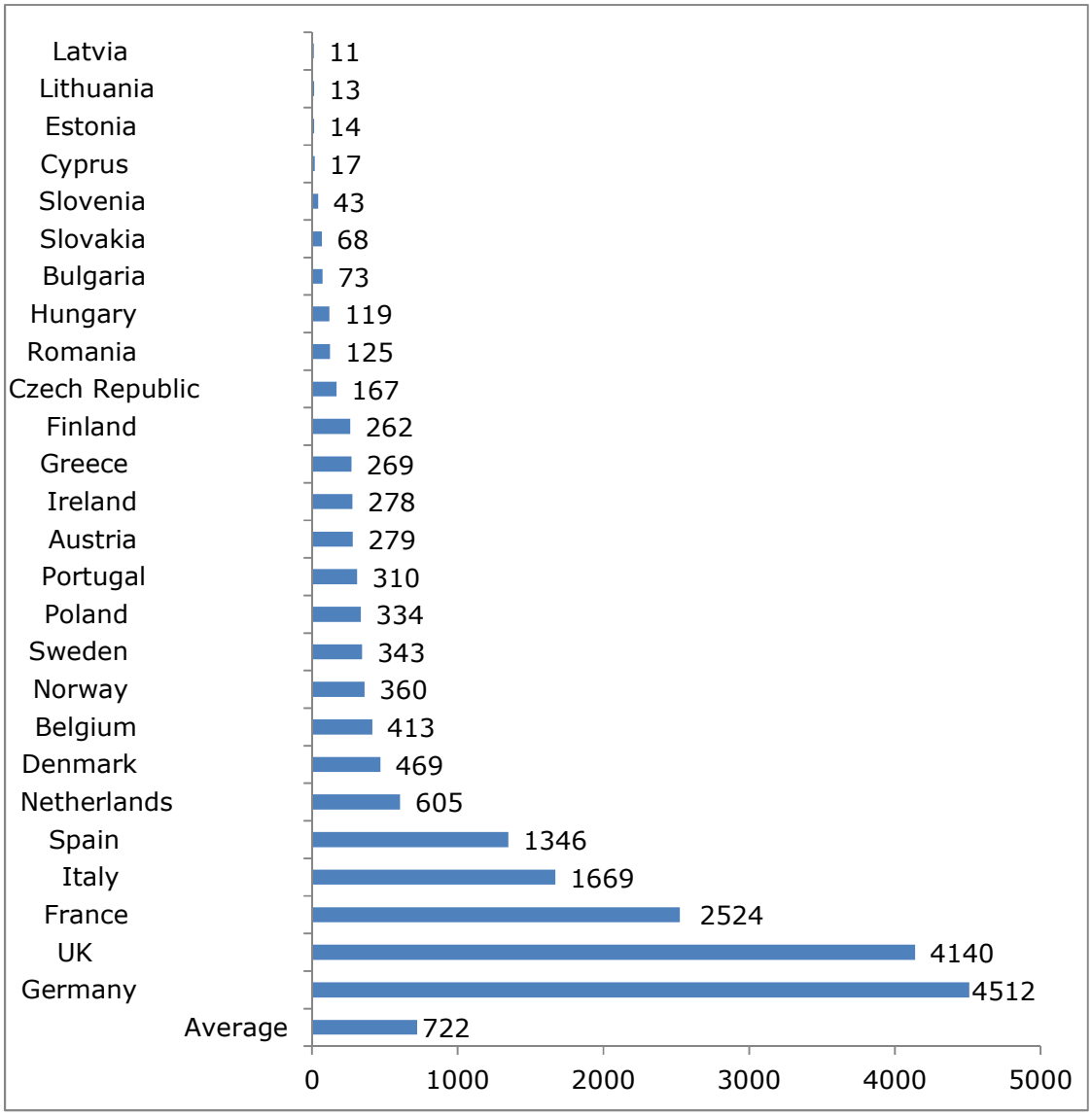
The purpose of originated content is to secure national culture, language and to provide news and debate. This is done for the benefit of a particular group. While the UK and the US can benefit from language in terms of potential commercial use of the economies of increasing returns, this is more challenging for a small club with an individual language and culture. At the same time, competition with the larger club is difficult, as the market volume is bound to create successful shows, i.e. using logic of failure (i.e. a market situation where shows are taken off, it they fail to live up to a set of criteria, as only one out of ten shows will perhaps succeed), which can be bought by other markets more cheaply than the original production can be produced.

4.4.3 Expenditure on originated TV content in the individual markets

I will further elaborate the production of original domestic content by showing statistics of the individual markets below, where it will become evident that large markets have the highest expenditure on TV content as is also shown using multiple regression analysis. First, the data for the individual market is presented, then for the relative expenditure per capita and finally for the categorised state size. The intention is to establish an overview of the individual markets as well as to discuss particularities.

Figure 4 shows the expenditure on originated TV content per market and will establish an overview of the challenges faced by small markets and substantiate the relative size influence.

Figure 4: Expenditure on originated TV content per market in € million 2006/2007 (from lowest to highest)



Source: Oliver & Ohlbaum performance (2009)

The figure shows the expenditure on originated content and indicates the market difference, which, as the regression pointed out, illustrates that the larger the market, the higher the expenditure on original production. The market with the highest expenditure on originated content is Germany with €4,512 million, followed by the UK with €4,140 million: these are by far the ones investing the most. They are also the ones representing the largest language markets: Germany has a language market of around 100 million people capable of understanding German,

and the UK has the benefit of *lingua franca*, with a large global primary language market of around 400 million as well as an important secondary nearly global market.

These are markets with a huge potential for export, but are also the ones with very high levels of public subsidy. The markets with the least expenditure on originated content are the Baltics and Cyprus, ranging from €11 to €17 million, indicating differences in terms of their relative size, but also possibly pointing to political differences.

To conceptualise the actual difference in the markets, I can point out that the BBC alone had a TV content expenditure of roughly €2,132 million in 2009, and also importantly had commercial business sales of around €508 million for television activities, such as channels, content and production. The BBC group surplus for the 2009 financial year was roughly €291 million (BBC annual report 2009). When studying the figures, it becomes evident that the BBC is a giant and an important distributor of content, and not only for Europe.

There is also a set of markets comprising Sweden, Norway, Belgium and Denmark which appear to have a higher than expected level of expenditure on originated content. This can to some extent be explained with reference to the combination of hybrid and public broadcasters in these Nordic markets and the combined Flemish and French language market PSBs in Belgium; however, these also happen to be small population and large economy markets.

It is also worth noting that these markets equal or have higher levels of expenditure on originated content than for instance Poland or Romania. Portugal is a separate case altogether. I have classified it as a small economy based on my exclusionary PPP GDP per capita categorisation; however, it has very high levels of expenditure on originated content, and there are two elements which can help explain this: a) language markets and b) both commercial and public television companies are active in the production of original content.

The purpose of this table is also to show the problem slightly differently. Firstly, there is a clear small-large difference in Europe; and secondly there is a large population, large economy market advantage in terms of securing domestic production, but also a small population, large economy strength. The markets with the highest public subsidy also have high levels of expenditure on original content. Nonetheless, Germany and the UK individually both have the same level of expenditure on originated content as the aggregated expenditure in the 21 small markets.

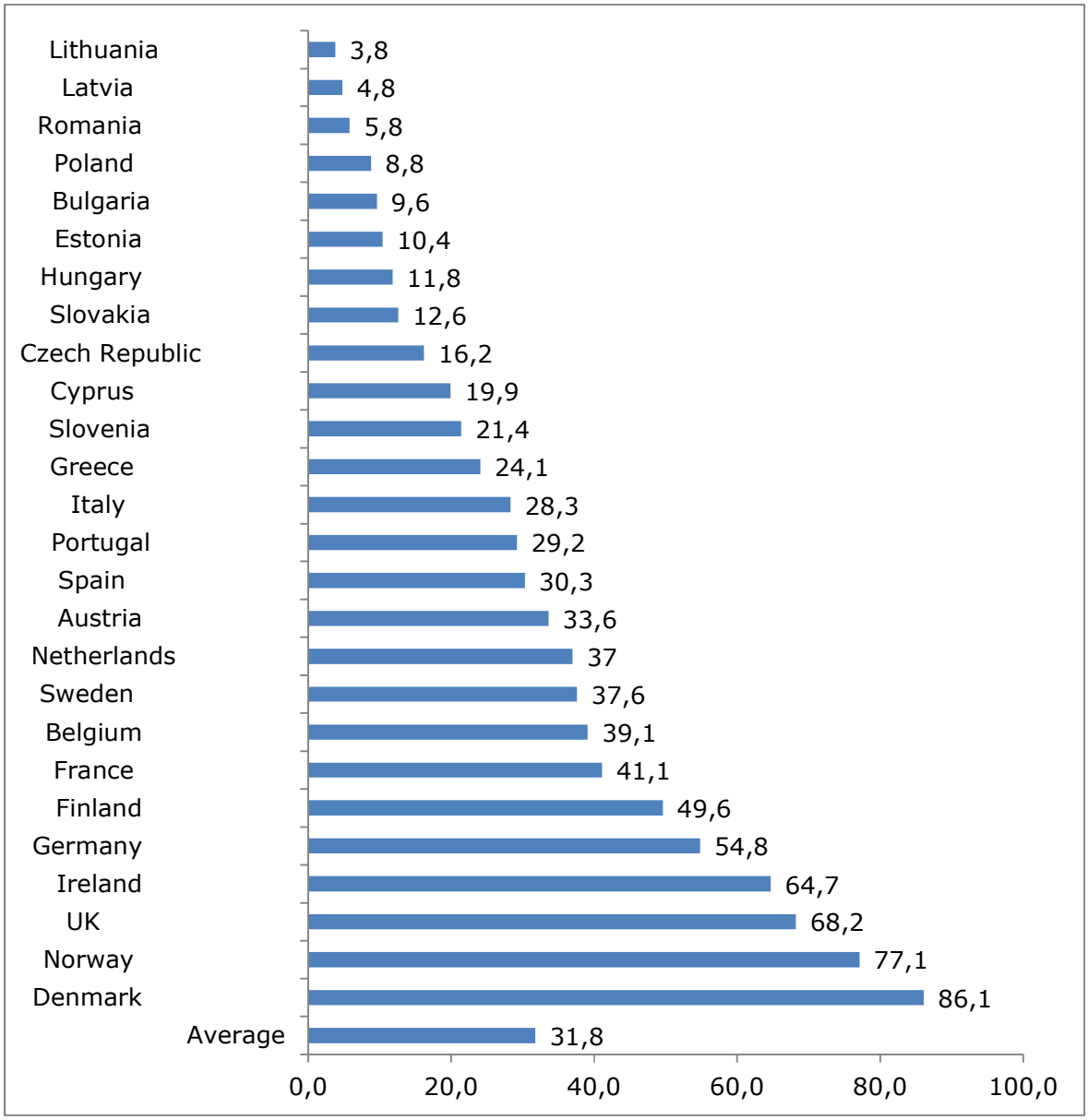
The minimum efficient scale challenge for domestic small market companies appears to be an empirical challenge if there is an interest in securing strong, diverse content markets domestically. In combination with the large market TV market volume and scale of production, it

enables them to export to the small markets which identify with them culturally, establish windows, and purchase bundled rights, which all are elements allowing companies to take advantage of increasing returns to scale. For these works to be introduced into different language markets only requires either dubbing or subbing. Germany and the UK are also the markets with the highest amounts of public subsidy.

The markets with more than one public broadcaster or hybrids, meaning Denmark, Norway, Sweden, Belgium, Germany and the UK, are the ones with the highest expenditure on originations. Due to the special 'pillar' system of public broadcasting in the Netherlands, they also have a high expenditure level. But still, the difference in size is almost 10 million measured by population, and yet the Danish media system generates a particularly high rate of expenditure on new content in relation to its population size; in contrast, the 10 million population markets of Greece and Portugal are both below the Danish level of expenditure on originated domestic content.

Furthermore, the table shows the related issue of relative strength between the models. For instance, the three markets with special conditions all have both advertisement and public subsidy revenues, but even so they are still competing with the Nordic duo-models. On the other hand, the table also indicates the benefit of scale for large markets: a plausible estimation of production environments would be a claim that the German and UK markets are quite competitive. In order to establish a little more relative evaluation, the per capita figures shown in figure 5 will be discussed below.

Figure 5: Expenditure on originated content in the TV market per capita in € 2006/2007 (from lowest to highest)



Source: Oliver & Ohlbaum performance (2009), own calculations based on national statistics on population collected by Euromonitor.

The Danish and Norwegian markets with €86.1 and €771 per capita are the ones with the highest level of expenditure on originated content, followed by the UK with €68.2, Ireland €64.7 and Germany €54.8. This is interesting as it shows that the two Nordic markets should have a level of provision higher than similar markets, which when I look back at the subsidy and total market

level, in chapter 4.3, might very well be the case. The least expenditure is found in Lithuania with €3.8 per capita, followed by Latvia with €4.8, Romania with €5.8 and Poland with €8.8. There is no clear cut distinction stating the small markets per definition have the highest per capita or vice versa. I have both types of markets, from the highest to the lowest, and what I identify is more in line with a difference in the stage of economic development or the relative size.

The per capita figures illustrate rather dramatically that it costs relatively little for big market countries to produce much more originated content compared with their small market counterparts. Per capita expenditure confirms my expectation that public subsidy is the crucial influence determining the level of originated content. In the light of this data, it seems clear that small market countries are able to sidestep the typical difficulties associated with media market and content good characteristics through public subsidy and/or regulatory measures.

The relationship between size and the provision of expenditure on originated content is very strong, and without public subsidy there would be significantly less expenditure on originated content. The small/large population and economy cleavage appears clearly and poses questions for further research in terms of what effect, if any, less provision of expenditure on originated content entails. An interesting aspect is that large and small markets have roughly equal expenditure per capita, with the large markets having higher expenditure. In other words, the large markets provide higher levels of expenditure on originated content, but have roughly the same level of expenditure as small ones, which is in line with theory.

Denmark and the other current or legacy duo-systems have a higher than average level of expenditure on originated content. Denmark appears as a special case with a higher level of provision than warranted by its TV market volume. This is also substantiated when controlling for markets with two or more public or hybrid TV broadcasters, where there was a positive effect on the level of expenditure on domestic content. This is usually regulated in a way in which the hybrid broadcasters receive benefits and privileges such as must-carry conditions from the state in return for providing a certain level of service such as informational content [especially news and local news] as well as drama and children's programmes. The Danish system is in this sense extremely successful, as domestic content is available on most of the channels, albeit quite differently. There are similar systems in Norway and Sweden, but in a different variety, where the hybrid, or former hybrid is privately owned.

When I combine all the indications, the picture of dependence on foreign content becomes evident: the smallest markets are not able to provide entirely home-grown programming [not that this is necessarily important], and for the most part they are dependent on acquisitions from large markets. What is also important is the relative size concern, where France, Italy and Spain and especially Germany and the UK have substantially higher levels of domestic content than for instance Romania and Poland. If I base my assumptions on population size alone, the picture I get is distorted, as what I see above in general appears to be some relative combination of population and the relative consumer purchasing power.

In this chapter 4.4, I have looked into the provision of domestic content across 26 markets and have substantiated that there is a linear relationship between the size variables on the expenditure on originated TV content using regression analysis. This has been as I suspected based on the potential of joint-funding functions and non-rivalry conditions where cost of production is independent of cost of consumption. Furthermore, I have studied the individual figures in total and relative character where the differences in the individual markets became apparent, as did the existence of a cleavage in the European landscape when taking into consideration the benefits of being large.

An overall perspective where the five largest markets appear to account for around 75% of the total expenditure on originated content does pique some interest in terms of their programme-exports *vis- à-vis* the small markets as well as the difference between small and large market provision in terms of hours per genre. Markets with duo-systems also appear relevant, as what I identified was an increased effect when taking into consideration these types of systems when estimating the level of expenditure on originated content; a similar picture was available when studying the relationship using per capita figures.

The per capita figures indicated what I also showed to be a possibility using regression analysis: that small eastern European markets face a separate set of challenges to their central and northern European counterparts. While this also might be a political choice, it does pose some questions as to how this affects the market and what types of programming are provided. Surprisingly, the per capita figures also substantiated that while theory pointed out that keeping a similar level of provision should result in lower costs in larger markets, what I see is that while this holds good when comparing them to similar markets, it also tells me that some markets have very high levels of provision, such as the UK and Germany.

The findings verify my hypothesis on the relationship between size and originated content, and are precisely as expected in economic theory. Population and economy size help establish the

framework conditions for market volume, as earlier indicated in this analysis, and thus secure conditions for commercial television activity in allowing utilisation of economies of scale. It is especially important to understand that private commercial companies are able to utilise economies of scale across markets, while public broadcasters (for the most part) are confined to functioning in the home domestic market, thereby necessarily limiting their capabilities to utilise proximate economies of scale. This makes sense, given the general scarcity of talent and resources that correspondingly limit the scope of what is possible in domestic production. Very often as well, a considerable portion of available resources must be invested in news and current affairs programmes because these are so highly relevant to the public service mandate, but for such programming the export potential is extremely low in smaller markets with unique languages.

Large market conditions establish more viable frames for commercial activity even here, because it becomes more feasible to achieve economies of scale and also because their languages tend to be spoken abroad. Smaller markets thus function as subsidiaries where the larger production companies find it attractive to gain market entry or to set up ventures that allow them to better utilise economies of scale already largely achieved elsewhere. In general, it is fair to say that smaller states can only realistically counter some of these challenges by relying on PSB, i.e. by investing public revenue in public media.

Obviously this will not counter everything, nor should it in the interests of pluralism. On the other hand, no media system appears yet to have produced perfect competition. The evidence is conclusive: size does impact the level of provision for originated content. However, there are differences among the small states and markets in their ability to provide this, with the main difference reflected in per capita figures. The result is not always purely a matter of market economics, but rather indicates the importance of political choices via the affordance of subsidy.

Overall, I substantiated my hypothesis as presented on the relationship between size and expenditure on originated content as well as the importance of public subsidy. Below, I will establish the relative importance of size using a multivariate [factorial] general linear model (GLM) forming a four-field matrix of categorised state size on TV market volume and expenditure on originated content to investigate research question C on varieties of size, i.e. the relative influence of size being dependent on the market leverage.

4.5 Research question C: Is there a relative influence of size (varieties of size) on TV market volume and production of original domestic content?

4.5.1 Introduction

So far I have been able to substantiate the assumed relationships between the continuous size variables and TV market volume, as well as the impact on expenditure for originated content. Analysis of smaller and larger markets reveals differences in levels of available revenue for the TV market, and how that affects the provision of domestic content. Market intervention through public subsidy for originated content appears to be quite important, even crucial, for determining the level of such provision in individual markets in all countries in Europe, and especially important for smaller market countries.

The public broadcasters in this perspective appear to have a more significant role than originally expected in the markets in securing domestic content in Europe, and function as a buffer for different modes of market failure but especially so in the small markets. The arguments on dependency and vulnerability appear to have merit in the sense that there is a difference, and that small markets are worse off than their larger counterparts, and thus by default under classic assumptions of dependency will import more programming than they are able to export.

My argument is that the influence of size is a consequence of small and large markets being subject to similar market and content good characteristics, which in effect due to differences in size leads to different market conditions. My main point hinges on the factor of market leverage. This is relevant due to industry conditions where high fixed costs combine with a recurring need for fresh investment in new domestic production. This is where scarcity in the absolute volume of available talent comes into play, because that is a crucial input for capacity to train creative personnel. Where there is a smaller talent pool and also a small financial base there are two scarcities, making the domestic market less commercially viable due to lack of incentives. Both aspects of market leverage constitute the critical mass needed to justify joint investments by reducing risk on the one hand and increasing commercial incentive on the other.

To summarise, the assumed relationships between the continuous size variables and TV market volume as well as level of expenditure on originations appear substantiated, i.e. small and large markets have differences both in their levels of available revenue and in the provision of originations, based on the gradual increase and decrease of overall volume and scale.

What remains is what can be defined as varieties of size based on categorised size variables of small and large populations and small and large economies, i.e. interaction between the categorical population definition (POPCAT) and the categorical economy definition (ECOCAT).

Large population markets are defined those as having a population of 20 million or above, while large economy markets have a PPP GDP per capita equal to or above the European average figure of $24,216.80 in 2007 as per the definition in chapter 1.2.3, *Defining size.*

The challenges posed by the media market and media content good characteristics are not equal between markets. While I argue that the relative characteristics are similar, this does not necessitate that the influence of size is equal because of the varying potential of leverage; rather than that, it is exactly different between markets, depending on the scale of size as well as the level of political intervention in the form of regulatory measures. While the characteristics are similar, the leverage and thus advantages and disadvantages of having a larger or smaller size of population or economy are different.

To substantiate my argument, I will apply a multivariate general linear model (GLM) analysis using the categorised size variables (economy and population) to study the relationship, instead of size as a continuous variable as above. This will be done on the dependent variables of television market volume and expenditure on originated content.

First I shall present the suggested hypothesis based on the initial argument and the results of the analysis in chapter 4.3, *Research question A: How does size influence the availability of revenue in television markets (TV market volume)?*, and 4.4., *Research question B: How does size influence the level of original domestic content in television markets*. After this the descriptive variable statistics will be presented, then the multivariate tests on the suggested relationship are conducted; this is followed by the test-between-subjects on the relationship between the size variables of population and economy in relation to TV market volume and expenditure on originated content. Finally, I conclude with the statistics and the overall model. This way, I will attempt to substantiate the relative influence of size using the leverage argument.

4.5.2 Categorised state size leverage argument

The data indicates that the larger a market is on a combination of size of population and economy, the easier it is to provide domestic content (due to scale economics). Being a small eastern market defined with a small population and a transition economy can be detrimental (caused by a combination of insufficient finance and lack of political interest). On the other hand, a small northern market with a small population but an established economy has an increased potential for providing new content (due to level of investment based on financial capability and political interest). The east/west difference can be considered as related to this

difference and will be illustrated below, where the relative challenge from a theoretical perspective is presented.

In principle, I deal with conditions where size of economy (small, large) and population (small, large) can range continuously. However, for simplification purposes, I operate with the four overall types to clarify my point. My main concern is leverage, which is here understood as the collective funding potential where the relative cost can be spread among a larger number of individuals or households in a form of joint funding; this is relevant as we have conditions of high fixed cost combined with recurring investment into new domestic production with conditions of increasing returns to scale and cost of production being independent of consumption. The is where the second condition of scarcities enters the picture: the small markets for instance have less talent-mass to train creative personnel from and less available revenue, which makes the market less commercially viable due to a lack of incentives for domestic production. Large economy markets being more commercially viable in terms of potential revenue also have a higher potential for public subsidy if there is a political interest. Both leverages can constitute different critical masses for potential joint-funding as well as potential commercial incentive.

I operate with four different overall varieties of size, each of which has different leverages in terms of size, using those I should be able to conceptualise the challenges posed by size based on similarity and difference in the markets.

- Type 1 represents small population and small economy market conditions (-,-): This is the market with the lowest potential leverage, where the population *club* is relatively small in terms of the potential for spreading the relative cost, and with the small economy potential of expanding the market to a higher level using public subsidy; combined, this equates to a smaller market volume and reduced level of originated content.
- Type 2 represents small population with large economy market conditions (-,+): These markets have the same small *club* to collectively fund the originated content, but the difference here is that the market can be both more commercially attractive and that political intervention through for instance public subsidy can be established to a higher level if there is political interest.
- Type 3 represents markets with a large population, but a small economy (+,-): These markets have a larger *club* available for collective financing, and there is also more potential for public subsidy similar to type 2 due to the larger population.
- Type 4 represents combined large economy and population markets (+,+): In these instances there are *larger clubs* (population) to increase the joint funding, and combined

with large economy conditions this makes these markets more commercially viable as well as enjoying increased potential for public subsidy.

What remains to be assessed are varieties of size based on the categorisation in my typology of size, with a focus on the extent to which leverage is different between markets depending on the relative scale of sizes of population (small, large) and economy (small, large). My main point hinges on the factor of market leverage. This is relevant due to industry conditions where high fixed costs combine with a recurring need for fresh investment in new domestic production.

This is where scarcity in the absolute volume of available talent comes into play, because that is a crucial input for capacity to train creative personnel. Where there is a smaller talent pool and also a small financial base, this amount to a double challenge: there are two scarcities, making the domestic market less commercially viable due to lack of incentives. Both aspects of market leverage constitute the critical mass needed to justify joint investments by reducing risk on the one hand and increasing commercial incentive on the other.

To substantiate the model, I carried out a multivariate general linear model analysis using the categorised size variables to study the relationship. This was done on the dependent variables (TV market volume and expenditure on originated content). First the multivariate tests were conducted, followed by the test-between-subjects function. Finally the statistics were summarised to assess the overall model.

4.5.3 Analysis on the evidence of the categorised state size leverage

Here I shall apply a factorial general linear model (GLM) design analysis of the relationship of the categorised size variables on TV market volume as well as domestic content. This way the argument can be studied statistically to illustrate any differences in the relative leverage attributed to categorised size of population and economy in TV market volume and expenditure on originated content. First the descriptive statistics are presented, followed by the multivariate test statistics to substantiate that there are individual effects for the dependent variables. This is followed by between-subject tests where the strength and significance of the relationships and potential interaction will be studied. A short discussion of the results of the chapter close the analysis.

Table 14: Descriptive statistics for market volume and originated TV content expenditure in million €

	Categorised Population	Categorised Economy	Mean	SD	N
TV market volume	Small	Small	760	733	7
		Large	1345	670	12
		Total	1129	733	19
	Large	Small	1456	750	2
		Large	9866	3222	5
		Total	7463	4884	7
	Total	Small	915	753	9
		Large	3851	4350	17
		Total	2835	3784	26
Expenditure on originated content	Small	Small	87	106	7
		Large	292	167	12
		Total	216	176	19
	Large	Small	230	148	2
		Large	2838	1431	5
		Total	2093	1729	7
	Total	Small	119	123	9
		Large	1041	1400	17
		Total	722	1208	26

I have identified that size influences the market volume and level of expenditure on originated content. With this I establish categories of small-large interaction between categorised population and economy where I intend to investigate the influence of size. The descriptive statistics indicate an initial difference of size for both variables, where I can identify difference in the *mean* scores between small and large population and economy, but also show that there is difference based on the means: I have to accept that the observations in some of the single

categories are low. But as there are no empty categories, I will proceed with the statistical tests of the model.

I have suggested a multivariate factorial GLM design with two independent variables with two levels each, i.e. small and large based on categorised size as well as two dependent continuous variables. In this sense I operate with a two-way GLM model. As my model includes multiple independent variables of categorical nature, i.e. the two size variables (population and economy) as well as multiple continuous variables, it can be called a factorial design, where the independents are factors. Please note that this is not to be understood as the multivariate statistical analysis called actor analysis, as there are differences.

I will test three effects in the analysis below. First I test if there is a main effect for categorised population (POPCAT) [small, large], categorised economy (ECOCAT) [small, large] and the effect for the interaction of POPCAT and ECOCAT. What this means is that I want to know if the independent variable is dependent on the other. This also means that I can indicate the hypothesis on which they are based:

Table 15: Hypothesis

Main effect of:	Hypothesis	Tests performed at
Type of population size	There is a difference between market volume and expenditure on originated TV content in million € based on categorised population size	$\alpha = .05$
Type of economy size	There is a difference between market volume and expenditure on originated TV content in million € based on categorised economy size	$\alpha = .05$
Interaction effect of population and economy size	There is a difference between size in population and economy on TV market volume and expenditure on originated TV content in million €	$\alpha = .05$

First I shall conduct the multivariate tests to see if these are significant. I will test if there are increases in TV market volume and expenditure on originated content based on the two independent variables of size. In order to do this I will calculate a multivariate *F* value of Wilk's (λ), Pillai's Trace, Hotelling's Trace and Roy's Largest Root. I will report the Wilk's Lambda indicating the significance of the four test conditions and the partial Eta-squared. Wilk's Lambda range between 0 and 1 and the lower the value, the more effect is attributed to the model.

The reason for reporting Wilk's Lambda is to take into account the potential of covariance between the measures which has to be taken into consideration when conducting a test of significance: it gives an exact F-statistic. I will also look at Hotelling's Trace which will give a more conservative F-statistic to ensure that there is significance; this will be done in case there is a difference in the test statistics. Should I achieve significant multivariate tests I am able to conclude that the respective effects of size are significant. While this is a complex test, it can identify any differences usually not revealed by other categorical tests.

I will now move on to test whether each of the effects is significant for one of the dependent variables. This will be done by applying four similar multivariate tests on the with-subjects effects to indicate if they are equally rated. The multivariate tests denote whether each of the effects in the models is significant for one of the dependents and used to consider the independents and the interaction between them.

Table 16: Multivariate tests of the relationship between categorized population (POPCAT), categorized economy (ECOCAT) and the interaction effect on TV market volume (TV MV) and expenditure on originated content (EOC)

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[xxvi]
Intercept	Pillai's Trace	.837	53.864[a]	2.000	21.000	.000	.837	107.728	1.000
	Wilks' Lambda	.163	53.864[a]	2.000	21.000	.000	.837	107.728	1.000
	Hotelling's Trace	5.130	53.864[a]	2.000	21.000	.000	.837	107.728	1.000
	Roy's Largest Root	5.130	53.864[a]	2.000	21.000	.000	.837	107.728	1.000
POPCAT	Pillai's Trace	.677	22.041[a]	2.000	21.000	.000	.677	43.081	1.000
	Wilks' Lambda	.323	22.041[a]	2.000	21.000	.000	.677	43.081	1.000
	Hotelling's Trace	2.099	22.041[a]	2.000	21.000	.000	.677	43.081	1.000
	Roy's Largest Root	2.099	22.041[a]	2.000	21.000	.000	.677	43.081	1.000
ECOCAT	Pillai's Trace	.652	19.650[a]	2.000	21.000	.000	.652	39.300	1.000
	Wilks' Lambda	.348	19.650[a]	2.000	21.000	.000	.652	39.300	1.000
	Hotelling's Trace	1.871	19.650[a]	2.000	21.000	.000	.652	39.300	1.000
	Roy's Largest Root	1.871	19.650[a]	2.000	21.000	.000	.652	39.300	1.000
POPCAT * ECOCAT	Pillai's Trace	.590	15.111[a]	2.000	21.000	.000	.590	30.222	.997
	Wilks' Lambda	.410	15.111[a]	2.000	21.000	.000	.590	30.222	.997
	Hotelling's Trace	1.439	15.111[a]	2.000	21.000	.000	.590	30.222	.997
	Roy's Largest Root	1.439	15.111[a]	2.000	21.000	.000	.590	30.222	.997

a. Exact statistic / b. Design: Intercept + Size + Size3 + Size * Size3

All four tests are significant; as such I will only report Wilk's Lambda (λ). Wilk's Lambda (λ) is significant for categorised population with a λ value of .323 and its associated F and p values, $F(2, 21) = 22,\ p < .001$, $\eta_P^2 = .677$ and for categorised economy with a λ value of .348 and the associated values $F(2, 21) = 19.6,\ p < .001$, $\eta_P^2 = .651$. On all accounts I can reject the null

hypothesis and conclude that TV market volume and expenditure on originated content change with the size variables. Studying the interaction effects of categorised population*categorised economy I see a λ of .410 with corresponding F and p values of $F(2, 21) = 15.1$ $p < .001$, $\eta_P^2 = .590$. I can reject the null hypothesis and conclude that there is interaction between the variables as expected by my model.

I have identified effects of the dependent variables on the categorised size variables, and can conclude that each effect is significant for the dependent variables, and move on the identification of the effect, which will be done by testing the between-subjects effects.

The tests of between-subjects effects is an analysis of variance indicating the effect within the individual size categories [small, large] of the independent variables. When there is 1 degree of freedom it means that there are two levels of size [small, large] meaning that two minus one, equalling 1 df for the estimation of variance for the main effect of the variables. When I claim that there are main effects I point out a result representing a constant difference between the levels of the independent variable, i.e. factor.

For my variables, identifying main effects would mean that there is a difference statistically between for instance small and large population size, irrespective of economy size. As will be shown below, it is possible to have simultaneous main effects of the factors. More importantly, and the reasoning for conducting a multivariate factorial GLM, is that they allow me to scrutinise interaction effects between the independent variables.

First and foremost it is important to point out that I want to investigate whether there is an interaction between size of population and size of economy where I also identify cross-over interaction between small, small; small, large; large, small and large, large conditions. The factorial design of the GLM is a useful analytical tool to examine the influence of variations of size using statistics.

Table 17: Tests of between-subjects effects on categorised state size

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared [xxvii]	Noncent. Parameter	Obs. Power [xxviii]
Corrected Model	TV MV	3.078E8	3	1.026E8	44.911	.000	.860[xxix]	134.732	1.000
	EOC	2.795E7	3	9306135.604	23.849	.000	.765[xxx]	71.620	1.000
Intercept	TV MV	1.947E8	1	1.947E8	85.215	.000	.795	85.215	1.000
	EOC	1.283E7	1	1.283E7	32.869	.000	.599	32.789	1.000
POPCAT	TV MV	9.174E7	1	9.174E7	40.160	.000	.646	40.160	1.000
	EOC	7805551.841	1	7805551.841	20.003	.000	.476	20.057	.990
ECOCAT	TV MV	8.735E7	1	8.735E7	38.238	.000	.635	38.238	1.000
	EOC	8549192.427	1	8549192.427	21.909	.000	.499	21.965	.994
POPCAT * ECOCAT	TV MV	6.611E7	1	6.611E7	28.940	.000	.568	28.940	.999
	EOC	6237039.250	1	6237039.250	15.984	.001	.421	15.929	.968
Error	TV MV	5.026E7	22	2284319.195					
	EOC	8584641.074	22	390210.958					
Total	TV MV	5.669E8	26						
	EOC	5.004E7	26						
Corrected Total	TV MV	3.580E8	25						
	EOC	3.650E7	25						

This multivariate GLM model with economy size (small, large) and population size (small, large) as between-subjects factors identified an effect of the continuous dependent variables TV market volume and expenditure on originated content with the corrected model significant for each dependent TV market volume with $F(3, 22) = 44.9$, $p < .001$, $\eta_P^2 = .860$ and for expenditure on originated content with $F(3, 22) = 23.8$, $p < .001$, $\eta_P^2 = .765$. The individual size factors had effects for categorised population indicated effects on TV market volume with $F(1, 25) = 40.2$, $p < .001$, $\eta_P^2 = .646$ and for expenditure on originated content with $F(1, 22) = 20.0$, $p < .001$, $\eta_P^2 = .476$.

The variable categorised economy indicated effects on TV market volume with $F(1, 22) = 38.2$, $p < .001$, $\eta_P^2 = .635$ and for expenditure on originated content with $F(1, 22) = 21.9$ $p < .001$, $\eta_P^2 = .499$. What is also revealed are main effects of the categorised size variables, which is qualified by the interactions between categorised population and economy on TV market volume with $F(1, 22) = 28.9$, $p < .001$, $\eta_P^2 = .568$ and for expenditure on originated content with $F(1, 22) = 15.9$, $p = .001$, $\eta_P^2 = .421$.

The results of the test of between-subjects effects show that the multivariate GLM is significant for both dependent variables. Furthermore, I can conclude that the effect of factors in the model is significant. All interactions have sufficient observed power, understood as the change of a study having a significant effect, i.e. ≥.80, to ascertain that the chances for type II error are sufficiently low for identifying non-significance by the F test. The partial Eta squared indicates the degree of variance in the dependents explained by the independents, meaning that the partial Eta-square figures (η_P^2) here are a measure of effect size which for my model of size indicates a relative strong model fit with adjusted R squares figures respectively for TV market volume effect .840 and expenditure on originated content effect at .733.

This indicates that what I have identified is an effect of categorised size variables and the interaction between the categorised size variables on the television market volume and the level of provision of originated content.

4.5.6 Summarising the results

The multivariate GLM design has been identified as statistically significant based on the multivariate tests and the between-subjects test. This has revealed that in statistical terms, there is a difference for both categorised population and economy on the dependent variables proxies for market volume and domestic content. Furthermore, I also identified a statistically significant interaction effect between the categorised size variables indicating an effect on market volume

and expenditure on originated TV content: this is in line with the *mean figures* in the descriptive statistics as well as the results in chapter 4.3 on market volume and chapter 4.4 concerning expenditure on originated TV content.

There is a statistically significant effect in assessing the relative impact of population and economy. The respectively large population and economy markets exhibit higher levels of TV market volume as well as expenditure on originated content, while small population and economy markets exhibit less TV market volume and expenditure on originated content. Importantly for the model, there is a positive and statistically significant interaction effect between population and economy; the combination affects the scale of TV market volume and expenditure on originated content. As for the varieties of size, the results show interaction effects between the categorised size variables. This analysis does not specify which policy solutions are best for which individual markets, of course. That is a matter for political deliberation and decisions on the basis of social preferences. It says that all markets are not equal, and strongly refutes the policy preference currently in vogue that a one-size-fits-all framework is appropriate.

The problem in general lies in the fundamental effects of population size and economy size. A small market faces different challenges if it must simultaneously deal with a small population and a small economy, e.g. Latvia. The parameters and possibilities are quite different from the situation in a large market where there is simultaneously a big population and a big economy, e.g. Germany. The degrees of freedom are better for small market countries that have bigger economies, like Sweden. EU policy makers do a grave disservice to the needs of Member States when they fail to properly take into account the comparative degrees of differences in difficulty in providing originated media content under the respective conditions.

Of course it is understandable that policy makers would like to simplify processes and procedures, as these also simplify their lives and work. The higher one ascends in the policy-making apparatus, the more complex and complicated the issues that must be tackled.

The desire for simplification is fine to the extent that it is about ensuring fairness, but it verges on being simplistic when it results in policies that demonstrate insensitivity to variance in material conditions, and limits domestic competence to handle local matters with appropriate sensitivity to realities on the ground, culturally and socially, as well as economically. An argument that makes sense for the commercial media sector as a whole or in a particular type of market environment is not inherently right in all cases or under all conditions. The exercise of wisdom is important for the appropriate execution of the policymaker's obligations.

In conclusion I argue that I have substantiated the relative influence of categorised state size, having identified differences in the effects of the categorised size variables as well as the interaction between them on the market volume and expenditure on originated content I have confirmed my hypotheses. I should take into account that there are differences across markets based on their particular characteristics related to the overall leverage conditions as well as the scale and scope of intervention practices in the market, which can establish difficulties if the policy options of the individual markets are limited by policies directed against other categorised state types.

Uniform policies across media markets with the purpose of securing beneficial effects based on state intervention may very well lead to adverse effects because of the difference in relative leverage. However, more research more research into the interaction effects of the size variables is require to understand how this in effect influences the varieties differently.

4.6 Conclusion on the investigation of the first hypotheses

4.6.1 Introduction

While I accept as a prerequisite that size matters, I also argue that it is important to study this comparatively using both small and large market samples. There is more than just one type of size influence and it becomes challenging to identify when applying case studies alone. I take the point of view that we cannot base this on an argument of *just size*, but rather that we should operate with varieties of sizes. Size, measured by both population and economy, influences both the television market volume and the domestic television content, and while I could not include all possible variations of size definitions in this study, I did identify influence based on the independent variables of size. That size influences is also what is documented empirically using the relative influence of population (small, large) against economy (small, large) on the proxies for TV market volume and expenditure on originated content.

The conditions of size have been overlooked, and more or less ignored as a potentially important factor for understanding the challenges facing the television markets, as well as being included in consideration of what policies could be followed to counter some of those challenges politically. Both small and large states face challenges when it comes to the television markets, especially so in terms of securing the provision of the warranted content: if the *club* interested in a particular type of content is not large enough then it will not be catered for commercially, and only politically if there is a merited interest. Even though we are in a period where the business models are under change, this does not alter the fact that content of specific genres and types still needs to be produced and it also needs to be of a certain quality: this is especially so for small group informational and cultural programming.

The analysis of size on TV market volume showed that there is a significant relationship between population and economy in relation to the scale of market volume. The analysis of size on expenditure on originated content showed that there is a significant statistical relationship between population and economy in relation to the level of expenditure on originated content. The multivariate GLM indicated statistically significant effects for the categorised size variables on both TV market volume and expenditure on originated content, but also demonstrated that the interaction between the categorised size variables had merit, as assumed in my constructed classification of size.

That size matters for the level of market volume and originated content could thus be the short conclusion of this chapter; in short, the presentation above tested empirically what was expected on the influence of size based on the regression analysis. In this my prerequisite assumption on

the importance of size was verified as statistically significant, as suspected based on the case study research in the literature. The case presented when studying the categorised size figures is one of highly subsidised and regulated television markets.

Interestingly, I could also substantiate that my varieties of size hold significance as I can identify differences related to the interaction of the categorised size variables. The main interest lies in the identified statistical significant effect in the interaction between the categorised size variables. This also indicates that when size is discussed, we should take into account not only the relative level of population, but also the level of economic development understood as per capita purchasing power. Also notable is the level of political intervention in the markets, which appears to impact the level of TV market volume and expenditure on originated content through public subsidy, especially in the economically strong markets.

First I will consider what can be concluded based on the individual chapter of TV market volume (4.3), domestic content (4.4) and varieties of size (4.5), after which I shall position this chapter in relation to theory and potential implications of policy.

4.6.2 TV market volume

The analysis indicates differences due to population and economy size on the volume of the television market, i.e. size matters. This is not surprising: I expected that size would matter from the onset. The surprising element is the scale of difference in the market volume, and the extent to which this reveals resource scarcities in small markets and the importance of diversity in revenue dependency. Advertisement revenue is linked to the scale of the economy, which follows the logic of the market, as the marketing budgets usually form a percentage of the revenue; should the revenue decrease due to economic fluctuations, advertisement revenue will do the same, as seen in the in the years 2008-2009. Subscription revenue is on the rise, due to the establishment of niche content and the purchase of sports-rights for exclusive sports channels, premium content, adult content, on-demand functions and more. This makes for tough competition in the rights market for content, as having premium rights are important survival conditions for both advertisement-financed and subscription-financed channels. The suspected influence of public subsidy is a consequence of political choice, where the size of the economy can have influence.

Political decision-making and path-dependency have established traditions of public subsidy creating public broadcasting organisations with the purpose of sustaining creative works and indirectly subsidising domestic production industries. Uncertainty and asymmetric information

have established difficulties in political decision-making for the media markets, and there is a fear of foreign influence on several levels such as 1) ownership, 2) imported content, 3) domestic news and debate.

The cultural imperialism consideration was one of the reasons behind the Television without Frontiers Directive (TWF) due to the trade deficit of AV-works with the US. There is a fear that foreign culture could encroach on national culture: while enrichment of culture through exposure to other cultures can be perceived as positive, dominance by another culture is from a state perspective problematic. Thus the perspective of the state is to secure the media markets through regulatory measures in order to ensure national culture and production. On the other hand, the intention of securing a domestic production industry faced with conditions of increasing returns to scale in small markets in particular makes the competitive conditions difficult.

It is relevant to point out that the larger the market, the more revenue is available, as I suspected based on scale theory; this also means that minimum efficient scale is a relevant issue for small state domestic broadcasting. This is especially relevant in terms of the east/west cleavage of financial conditions, as the Eastern European markets have higher degrees of vulnerability to international competition.

A set of questions arises due to this: a) what is the effect of foreign influence on the media system and what influence does this have on domestic production in small markets? b) how does this influence production of originated content? c) does this influence the potential of the small production industry? These questions will not be answered here; however there is some degree of relevance from a policy perspective: the emphasis in Europe is based on securing a single market on the one hand thus emphasising competition rules, and on the other the individual Member States focus on securing cultural issues, such as the production industry.

Already in the late 1980s with the establishment of the TWF directive there was a focus on competition with US content production, although what changed the issue is that when combined, the aggregate revenues of EU Member States only just manage to compete with the revenue available in the US. In other words there is a significant difference in scale. The US market have good competitive conditions for audio-visual production; in contrast we have the European myriad cultures and languages with some common rules and legislation focusing on catering to their particular domestic market but with little common strategy on content production besides the Media 2007 programme.

In the green paper from the European Commission (1994) on "*strategy options to strengthen the European programme industry in the context of the audiovisual policy of the European Union"*

they make an argument in point 3.3.2 on how to turn diversity of the European landscape into an advantage: *"As for 'cultural barriers', the increased specialization of supply will, to some extent, enable Europe to develop a quality market where the diversity of programmes will become a valuable economic asset. As the public is faced with an exponential increase in services and a growing variety of forms and media, the differentiation of products on the market will be a vital factor. The trend towards more uniform programmes supplied by companies seeking to maximize their share of the audience will be followed by a fragmentation of the market; companies will be forced to develop a strategy based on differentiation with the aim of satisfying ever-smaller audiences that are nevertheless capable of sustaining a specific product. This opens up the prospect of a European audiovisual industry where diversity and quality of production are allowed to flourish and which at the same time is economically viable…. It is tempting to draw conclusions from this analysis for trends in the market as a whole in the 21st century, but we must bear two things in mind: concentrating on 'market niches' may be a way of safeguarding and developing diversity, but it is no substitute for a wider strategy aimed at building up attractive programme catalogues for broader segments of the European and world markets; to make the most of these 'market niches' we need a pan-European approach: the narrower the target audience, the greater the need for broad geographical coverage…."*

As the European production industry stands now, competition with the US market on fiction and entertainment must be considered extremely hard. Europe is not a single, nor dual, nor tertiary language or cultural market. The US market is multi-cultural, which generates an indirect advantage when establishing production, but without *per se* state interest in providing for all cultural segments. Europe in contrast consists of many different independent languages and cultures, each having to sustain and enhance its culture and creative works and usually with differences in copyright protection, leaving the state more or less responsible for securing sufficient revenue to ensure minimum efficient scale. The largest European markets are also the ones with the highest public subsidies. One might well suspect that the European content industry production is so dependent on public subsidies that there are no real exit strategies, nor that this would be applicable.

4.6.3 Domestic content

Size had an impact on the level of domestic TV content provision, as indicated by the regression analysis of the relationship between size and expenditure on originated content. In this sense my analysis showed what I expected: size matters for the level of expenditure on originated content. All in all, the results are largely in line with theory; the small markets appear more vulnerable,

but there are differences between the ability of small and large markets to provide expenditure for production of originated content. The main difference was in the relative per capita figures, where the per capita expenditure was not clear between the included markets; rather, based on the regression, it is what we should expect related to subsidy and political choice in combination with market potential of exports. The differences between the markets are significant; however, we need further in-depth qualitative studies of the levels of provision in the individual markets in order to substantiate this analysis further.

An EC green book points to the following challenges for the television industry, as per point 2.1.2 in the EC green paper (1994:7-8): "*Strategy options to strengthen the European programme industry in the context of audiovisual policy of the European Union*:

In the television sector the explosion in programme demand has failed to boost the European programme industry, which remains locked into fragmented national markets.

(i) Explosion of demand and rising production costs

The proliferation of broadcasters in the 1980s combined with longer viewing hours produced a veritable explosion of programme demand. Increased receipts have not compensated for rising production costs or for soaring fees for rights to broadcast sports events. Programme budgets have been cut and broadcasters have had to make massive use of non-European material from programme catalogues that have already paid for themselves on other markets.

(ii) Low rate of programme circulation within Europe

Moreover, as most of the new broadcasting services have been developed on a national basis, television production has focused on satisfying national audiences with very little by way of programme circulation within the Community (other than in language areas). The small number of co-production and co-financing ventures involving operators from more than one Member State is not conducive to the development of projects likely to attract European or world audiences. This has had an adverse effect on the production of television films in particular but television series, cartoons and documentaries are also affected, and these programmes are vital for the creation of catalogues. They are stock programmes which can be screened repeatedly. Catalogues of such programmes are the economic heritage of the television programme industry."

The economies of scale and the importance of population size for collective financing become evident when the figures are studied. If this is put in a theoretical perspective of non-rivalry in consumption, the reasoning for the difference becomes evident. When we have conditions of rivalry in consumption, collective funding would only mean less of a particular good to be distributed between the payers, i.e. if all of us buy a Mars Bar and share the costs collectively, we only have to pay a fraction of its cost, but we also only receive a fraction of the chocolate bar.

For the media this is different: when we share the cost of the content, there is no reduction in the amount of good we receive, meaning that we all receive an equal amount of the good. This also means that when there are fewer persons to pay for the content, the provided content will either be of a smaller scale or of reduced quality.

This is the result of non-rivalry in consumption with costs of production independent of costs of consumption, and these are the funding challenges facing television companies. Large markets are in this way more able to provide higher levels of expenditure on originated content, and while they also represent the highest levels of public subsidisation – the UK and Germany especially so[xxxi] - this does not mean that this is the case for all included markets, such as for instance the large population markets of Poland and Romania. Small markets are not lost, but heavily dependent on having a strong economy, political intervention or export potential if they are to secure a certain level of provision; thus there also appears to be a strong economy perspective. What the figures also indicate are that there are significant differences related to the question of size, where there appears to be interaction between the size and population variables.

A consideration of the importance of public revenue has to follow that logic of the market. Both large and small markets subsidise; while the scale is different the importance of these investments should not be underestimated in terms of the individual markets' production environments. At the same time there should be an investigation into the degree to which the European production industry is dependent on public revenue and PSBs for continued survival, as well as the considerations which could be taken into account to strengthen a combination of broad European interests and the individual small state cultural interests.

A single fit policy, except minimum requirement, for these markets when it comes to original domestic content does not appear to be a viable solution. There appears to be a serious difference between the included markets, and what becomes a challenge here for European legislation is instigating policies which take into account both the particularities of the individual merited interests of both small, small markets such as Latvia and large, large ones such as Germany.

There remains a challenge, where the large population and economy markets appear to have most of the benefits.

4.6.4 Varieties of size

I have identified a statistical significant effect, and I have found that a statistical difference for both the categorised population and economy exists, meaning that the respectively large population and economy markets can expect higher levels of TV market volume as well as expenditure on originated content, while the small population and economy markets can expect less. This is also what I expected based on the analysis in chapters 4.3 and 4.4. Importantly for my model, I have also identified that there is a positive and statistical significant interaction effect.

As for the variations in size, it shows that there are interaction effects between the categorised size variables, and accordingly we should consider if and how these relative size considerations are expressed and could be substantiated using qualitative comparative research. With the data available it becomes difficult to evaluate and find potential policy solutions to individual market challenges. What I have done is to identify the differences based on categorised size in the constructed model. But this also indicates that there are differences related to size differences within the individual categories.

The predicament indicated in my four varieties of size is that in general there are three main effects. First we have the influence of the population size; secondly we have the influence of the economy size and thirdly the interaction between the variables of size of population and economy based on categorised state size.

This means that my initial idea of relative leverage holds merit. Small states based on categorised size face different challenges when they have a small population and a small economy, exactly because the market and content good characteristics are similar. This means that because of different leverage, the challenges facing different state types are dissimilar, indicating that a type 1 like Lithuania (-,-) having a small economy and small population is in a sense worse off than for instance a type 2 such as Norway (-,+). The Polish challenge (+, -) as a type 3 with large a population but small economy is different when contrasted with the challenges facing type 4 Germany (+,+) with both a large economy and large population. However, type 2 and type 3 still have more options than a type 1, though less than a type 4.

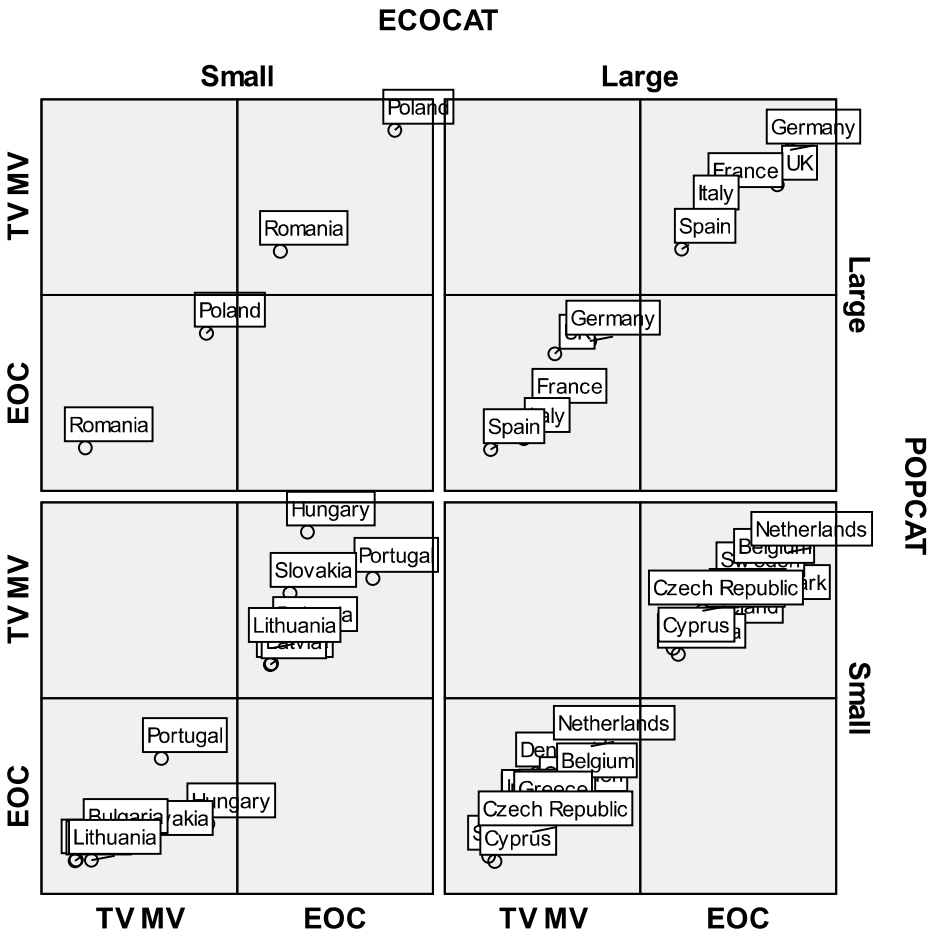
Generally, the differences between small and large states based on categorised state size are apparent when studying the aggregated figures, where the relative figures were more diverse, especially in the case of public subsidy. The strongest difference lies between type 1 (small, small) and type 4 (large, large) conditions, but this also means that if type 1 is put under regulatory conditions as though it were a type 4, unintended adverse effects could possibly be seen in the market.

Based on this model of categorised state size substantiated using a multivariate factorial GLM design, I argue that the difference between the four varieties has policy implications, where the different types require different policy options to circumvent the market and content good characteristics in order to achieve both market efficiency and circumvent the scarcity concerns and to find ways of establishing incentive structures to make it viable for commercial companies to enter the market to make a profit, and in some degree to act in accordance with the state-merited interests on behalf of the public. In a similar vein, I argue that the role of PSBs remains similar as they counter market failures, but also that their role of balancing in the market will be different depending on political choice in combination with the level of public–private competition.

Policy-makers need to take into account the difficulty of providing the media content good in small markets under their particular conditions, and also that the good can be used strategically to focus on core national domestic production and purchase or cooperate with other markets or broadcasters in securing provision of services at a higher level, which is not viable in the individual market.

An example is the cooperation between the five Scandinavian PSBs in the Nordic region called NORDVISION, focused on co-production, programme-exchange and the sharing of experience and expertise to find a way round some of the small-market scarcity challenges. A similar potential lies in the non-profit Commonwealth Broadcasting Association (CBA) International Programme Bank where programmes are offered to the members free of charge. The purpose of the bank is the exchange and access to high quality programming for the members with the aim of improving available quality broadcasting content. The programme bank works by members submitting programmes and allowing other members to obtain this content for use in their domestic market. While this does not generate new content, like the Nordic cooperation in Nordvision, the CBA Programme Bank can enable developing markets to focus their production on core areas, while having access to an increasing supply of alternative programming. There are a variety of policy options available to circumvent the challenges posed by size, as indicated by these two examples. I will illustrate the model below using a matrix scatter.

Table 18: Matrix scatter of categorized population (POPCAT) and categorized economy (ECOCAT) on the dependent variables TV market volume (TV MV) and expenditure on originated content (EOC)



This matrix shows where the individual markets are placed relative to their TV market volume and expenditure on originated content levels based on categorised state size. As we can see, the individual markets are not placed in exactly the same spot, as different markets have different scale. What I can use this for is to indicate that my proposed model of size with four different combinations shows me the aggregated and statistical effect of the relationships, and also that within each square there could in principle be four new varieties of size. What we also need is to understand is how this in effect impacts the individual markets, but this requires new in-depth case-research.

In general, the multivariate factorial GLM design analysis indicates that my assumptions of economy of scale based on the collective funding function under the conditions of non-rivalry have merit in terms of the small market challenges as compared to their large counterparts. There appear to be positive signs for allocation challenges in these markets, and as the markets across size have similar characteristics, it becomes less interesting commercially to invest directly in the production environment because of the lack of incentives.

4.6.5 Theoretical considerations and implications for policy

The empirical material supports the notion that size is an important factor for understanding the similarities and differences in the potential of small and large states for countering the general market challenges rooted in the TV market and content good characteristics. The argument presented on the relative market leverage being dependent on size of population and economy where there is both interaction and cross-over effects appears to have merit. These conditions influence the frame of competition by placing restraints on the rules of the game, in the sense of scarcities and incentives. The relative leverage of the state thus represents their potential of countering market failure based on size of population and economy. While the four variety of size model represents my perspective on the influence of size documented using comparative methodology, it can also be used to question whether the EU policy on the media takes size into consideration by allowing sufficient room for individual state policy.

I have illustrated that the US market volume is larger than the combined EU market in terms of available revenue; at the same time the originated production in Europe is more divided and there are several barriers to entry to efficiency in the small markets, while competing with content produced in North America, the UK or Germany. The influences of public funding in Europe secure originated production in the markets with a perceived political interest, or for various historical and/or cultural reasons.

In this way the small markets are able to bypass some of the challenges, such as lack of critical mass, through collective funding. For the large markets, public subsidy helps sustain their production industries and increases the competitiveness of their markets. The big five markets represent around 75% of the origination expenditure (Oliver & Ohlbaum, 2009). Public funding is currently the key to securing original production in Europe, and there is no real exit strategy in the face of international competition.

This indicates how size impacts, by showing the benefits of being large both in population and economy; in the same line of reasoning it presents the challenges of small, small categorised

states where scarcity concerns are more severe. In order to rectify the market failure caused by market and content characteristics, political intervention appears important for securing domestic content provision, but it is more important for some types of states than others.

The analysis indicates that small market producers will have a hard time reaching efficient scale; this can lead to increased pressure on public broadcasters with the argument that they have to purchase their domestic content from domestic producers instead of producing it themselves. While this can be cost-efficient, it might also establish conditions where the public broadcasters in small markets decide which companies survive, because the producers can indirectly end up becoming dependent on public revenue. There are several variations in such arguments, but the conditions applying to the broadcast media markets also apply to the producers.

The state's interests in regard to the commercially-oriented production companies therefore have to be taken into consideration when intervening, as does the degree to which the public broadcasters function as indirect industry subsidisation. Small market producers can also be purchased by foreign production companies seeking expanding markets before the domestic market reaches maturation; while this actually might be a benefit for the market, it can also question what interests we support with indirect public revenue.

The point here is that relatively high level market concentration will appear under all conditions as the revenue is limited unless the states either force broadcasters (public or private) to purchase production from independent producers or they make funds available for production. While it is relatively easy to set-up a production company, it requires ideas as well as getting them produced to reach some kind of efficient scale.

Television media companies also have high levels of efficient scale, and if they are dependent on a single market, this can pose a serious challenge, especially if they are also dependent on a single type of revenue. Large or multiple market companies are able to reap the benefits of scale economies which can help secure the provision of particular services in the general interest, such as news and debate, but there will remain areas and interests where there is no economically viable incentive to establish provision under the media market and content good characteristics. This also provides some explanation for state intervention through regulatory measures to ensure the provision of domestic media content, as is the case in most European markets using public service media with a focus on domestic media content and/or funds for domestic content. In short, companies can either adapt to the conditions in their particular markets, small or large, or they can give up.

This is also where economies of scale become important. When there are conditions of cross-ownership, the multinational corporations can play the bundling game of rights utilising economies of scale, by acquiring for instance the rights to all areas where they have interests. While this poses a challenge for companies relying on domestic markets, it also presents the benefits of scale. In principle, this also means that such ownership can be beneficial for the domestic market insofar as this allows for reduced acquisition prices and increases investments in original domestic programming. This is also a potential benefit of the EU legislation under the right conditions, but could also be considered a double-edged sword depending on the actual strategy of the multinational corporations in relation to the individual markets; differences in the strategies in Lithuania and Denmark indicate that this might have some merit.

The EU policy has helped establish conditions in Europe where it has become feasible to spread costs securely across borders to utilise the economies of scale and scope, but this does not mean that the interests of large media corporations and states are similar. Instead we have what has been identified before as conditions in which cultural concerns stand against commercial concerns and where the large media corporations, depending on strategy, can either be favourable or detrimental, but this requires further research with that particular focus.

When studying the dependency hypothesis, we should take into consideration the economic risk of TV as a business, especially content production, which combined with increasing audience fragmentation establishes dependence of public broadcasters on foreign imports. European broadcasters are dependent on foreign programming imports and/or co-production of programming, especially from North America and the UK, but also Germany. It can be argued that this is a question of scarcity where resources available for production of programming in combination with the willingness to risk resources play a role.

In Europe the main producers of domestic television programming are the public broadcasters, and as they are supposed to provide the whole palette of genres, but especially news and factual programmes; there are limits to their potential of investment as the competition becomes stronger in the individual markets. In Europe dependencies of this type are not only on North America, but also the UK. But what we in effect are looking at is a dependence on *other* markets' production of domestic content which can be considered of interest in a commercial or civil society perspective in a particular market setting.

An example is the dependency of the Greenland public broadcaster on Danish publicly-owned broadcasters DR and TV2/DK programming, while another is the overall dependency on US and to some degree UK content in Europe; this is especially the case for commercial broadcasters

dependent on importing successful programmes to secure the business. Keep in mind that this is not per definition a problem, but rather a natural exchange of content commodities.

Scarcity conditions continue to rule the television markets, and what remain important are the established incentive structures for commercial activity in combination with scale and scope of political intervention. Consumers can be accustomed to domestic programming by public broadcasters, which can force domestic commercial companies to adjust their programming strategies to this. This is indicated by the markets with duo-broadcasters in a dual system, where the averages of volume and investment in originated content are higher than for most other market structures.

Policy can, in other words, make a difference, and this is especially evident in the UK, Germany, Denmark and the rest of the Nordic markets. In this sense what becomes important is what is considered to be meritorious, and what push-pull factors there are in the individual markets to secure consumer and state interests versus the company focus on profitability. In this respect what are important are the media companies' incentives for acting in accordance with state interest *vis–à-vis* the required level of political intervention in the market. Using public broadcasters is in this sense cost-efficient, especially if they are able to establish framework conditions for competition, i.e. setting the rules of the game in such a way that they supplement the intended state policies. This can be defined as having a balance function, where the PSBs become standard setters in the markets, and where existing and new entrants either have to focus on niches or follow the rules of the game. The UK and the Nordic markets are core examples.

However, this also poses a challenge in the contemporary environment of audience fragmentation. The increases in fragmentation of audience based on niche-channels in effect undermine the core of the television business model reliant on advertisement; this in combination with the increased focus on the cable television model with calls against bundling of channels to further free choice can threaten the development of new content as the dependency on such revenue is increasing [but continues to be market dependent].

Public subsidy remains what appears to be an easy solution to secure domestic content, but in practice it will be under continued pressure as it can easily be challenged as being detrimental to private competition as well as raising questions of scale and scope of their activities: this is where the remit and political acceptance of the state and civil society interest stand against commercial interests.

What I have identified is also a beneficial effect of PSBs, in the sense of the effect of their level of public subsidy. But what is also apparent is that there are differences in the roles which PSBs

can hold in the individual markets, besides securing some minimum rules of the game in some cases and placing higher standards for competition in others. This is based on the logic that the more revenue is available, the stronger these organisations are as competitors in the individual markets, as their focus is not [in general] on profit, but in fulfilling their purpose of existence. There are concerns of policy as a consequence, as what becomes important is how European legislation allows the individual markets to take into account what they consider of interest in response to their particular historical and cultural conditions using political intervention in relation to their relative leverage.

By applying comparative methodology, I have analysed the relationship of size on a proxy for the TV market volume in combination with a proxy for production of original domestic content. I have done this to establish a more detailed and comprehensive understanding of the influence of size. What I have found is that size does indeed matter, but also that the variety of size matters even more for the way in which we can perceive its influence in terms of the leverage argument under the conditions of having similar market and content characteristics across markets.

This makes me question whether the way we take size into account in current European policy, while having some benefits in some instances, actually has adverse effects in others with detrimental consequences for available policy options. The focus on an all-encompassing market is indeed beneficial from a commercial perspective as this allows utilisation of economies of scale and scope across markets with similar requirements, but this also means that the markets with the strongest commercial players are those with first mover advantages, and this can threaten the development potential of domestic players.

What must be conceptualised is that, based on size, markets are different in a way that goes beyond the approach applied in, for instance, the *Communication on Broadcasting*. There also has to be an understanding that the media industry contains elements of importance based on cultural and historical perspectives that contrast with the interests of the commercial media. When taking into account the four varieties of size model, I have presented a frame in which to show these similarities and differences based on categorised state size. There are of course other concerns, but what I have presented is a way of perceiving how size in effect influences differently and how these results can be interpreted.

What this suggests is that we should perceive the individual markets relative to their particular challenges in combination with the level of political interest as expressed by public subsidy and regulatory measures, as well as their historical and cultural traditions. However, the benefit of legislation such as the TWF and now the AVMS directive is that it has helped to establish the

European markets as a single whole, which has benefitted the development of companies able to utilise the economies of scale required to function efficiently. However, this has also challenged particular market types with a level of competition where barriers of entry cannot be effectively erected.

This does not mean that European legislation does not allow the perceived interests of a state in particular markets to be taken into consideration, as this is possible by the articles of the Treaty which allow state aid on the basis of services in the general economic interest and cultural considerations, such as for promoting cultural diversity. Taking this into consideration, the EU policies on this have some merit and some de-merits in terms of securing a whole-market perspective.

I am not directly critical of EU policy on the media; rather, I perceive that there are both beneficial and adverse effects as seen from a state perspective. My concern is that the policy as it is put into effect is directed to the benefit of large states and large market commercial companies, which could be detrimental for the small state policy options as proposed and indicated by my model based on categorised state size. Companies entering and utilising large market scale benefits are reaping the benefits of these policies, while small states face the challenges; this is especially true for the public broadcasters which have been given the purpose of correcting market failure. However, as comprehensive studies into the effects of these policies in the different types of categorised states have yet to be conducted, it is too early to understand the effects. In short, we need more research on these first steps to ascertain the similarities and differences between the four varieties of size suggested.

Market and content good characteristics cause imperfect conditions of competition and limit investment in original production as a result of uncertainty of profitability, especially in small markets. Political intervention in the television market appears to be an important remedy for securing production, but different conditions warrant different policy strategies. There is no single policy fit for all when it comes to the media, as it appears to be dependent on the individual market leverage combined with the political interest. Both media market volume and expenditure on originated content are related to population size and PPP GDP per capita as scale variables, as well as population and PPP GDP per capita for categorised size. The level of provided originated media content is dependent on the relative leverage of the markets in combination with the level of public subsidy and regulatory measures in the market.

It is possible to argue that the state intervenes in order to off-set or limit the degrees of failure by subsidising originated production of media content. This does not remove market failure, but it

makes the states more able to secure the wanted services. For small markets this becomes challenging, as there are limits to the market and thus failure on several accounts, with the primary one being structural as there is a limit of the number of companies able to reach efficient scale as a result of the conditions of non-rivalry, increasing returns to scale under the cost of production being independent of consumption.

While the set of common challenges based on market and content good characteristics affect large and small markets similarly, they have different leverage. What I have provided is another way to perceive size which takes into account that there is more than one type of size, and with my varieties of the concept I hope to have established a first step in an increased understanding of its potential influence and how this can help further qualitative studies into the perceived influence of size and how the different types of markets deal with their particular characteristics.

Chapter 5. The influence of size on market competition

5.1 Introduction

Globalisation and increased commercialisation within television can threaten and weaken national culture and history (Herman & McChesney, 1997; Aalberg, Aelst & Curran, 2010). Consequences of increased audience fragmentation are the deterioration in the shared experiences and sense of society (Graham & Davies, 1997) which is for instance seen in the decrease in the number of programmes with more than one million viewers in Denmark (DR, 2009). Such a development risks undermining a sense of common purpose and the public discourse needed for a functional democracy and the establishment of a common frame of reference (Dries & Woldt, 1996).

High levels of media concentration can damage the common knowledge in society as this is not *per se* the focus of commercial media; on the other hand very high levels of fragmentation (low level of concentration) can result in similar consequences. PSBs can counterweight monopolisation and widen the choice of programming and thus have a positive influence on the quality and behaviour of the system of broadcasting as a whole (Graham & Davies, 1997).

Current EU regulation on television based on the analysis in chapter 4, might very well benefit large companies utilising economies of scale and scope, but at the same time risk harming diversity and benefitting convergence in television markets.

Therefore it remains important to take size into account, as not all markets are able to sustain a strong domestic TV media environment with high levels of original domestic production when competition is between domestic and internationally owned companies.

This is because a domestic company might be large domestically but measured against the economic strength of the international company it can very well be minuscule. Public companies are no exception to this, and even their function might very well be under pressure when competing in an increasingly international environment with large international companies utilising economies of scale.

My second hypothesis is that: Size influences the competitive conditions in television markets. This is a consequence of imperfect competition due to the characteristics of media markets and media content in combination with differences in critical mass (scarcity). Consequently the larger a market is, the better conditions there are for private commercial media, as the larger

markets can sustain a higher number of companies, which should show in lower degrees of market concentration - if not at the overall level, then as the number of companies increases.

This will be analysed by studying market competition from an overall perspective using public and private competition, penetration of foreign television channels, market concentration and foreign ownership. Furthermore, as a consequence of **arguing that state intervention circumvents traditional economic logic by limiting commercial conduct, i.e. for instance the barriers to entry, this also has to be taken into account in the analyses.** However, it remains certain that the basis conditions due to scarcity and thus minimum efficient scale would create a drive towards higher levels of concentration in smaller markets to ensure sufficient commercial funding: but without taking state intervention into consideration a vital element in understanding the influence of size would be lacking.

In this analysis two related perspectives on market competition are studied to identify the influence of size.

1. First I shall document the level of competition between public and private companies in the individual markets, as well as demonstrating the difference between domestic and foreign television channels market share. The influence of size on these four indicators will be investigated using multiple regression analysis in combination with statistics for the individual markets in the sample.

The purpose is to illustrate the relative difference between public and private media strength, as well as to examine the difference between domestic and foreign television in small and large markets. Based on the analyses in chapter 4, I suspect that the commercial companies are stronger – measured by share - in the larger markets. Furthermore the analyses will allow me to investigate the influence of language for small markets with same-language large neighbours using these market shares divided into domestic and foreign based on the country of origin principle.

2. Secondly, I will investigate if size influences market concentration - measured both by HHI and CR - as one could suspect based on the presentation in chapter 1, *Introduction*, and chapter 2, *Media market characteristics*. Note that it is taken into account that market concentration is a theoretically defined function of the number of companies and their relative strength, but also that state intervention has to be taken into account, meaning that regulatory measures and PSBs set the rules of the game for commercial broadcasters.

I will investigate this by using the defined market concentration measurements and using multiple regression analysis on the relationships as well as by presenting the statistics for the individual markets. Furthermore, I will use the market concentration measurements comparatively to establish the ownership strength in terms of market share of audience in the individual market in order to draw up an overview table of the strongest media companies in the sample.

The purpose is to study the influence of size on the TV market concentration levels, and to show that while size matters, market concentration is also a function of a combination of factors including regulatory measures taken by the state. TV markets based on economic theory tend to be concentrated, either moderately or highly; this can be the case for both small and large markets as indicated by the literature. Here I will also investigate the influence of multinational corporations and their different strengths in the individual markets.

Combined, I will use these empirical studies with the theoretical insight from the literature to establish the influence of size as well as the role of political intervention and public media in most European TV markets.

The analysis begins with some follow-up considerations on market concentration and ownership in chapter 5.2, *Ownership and market concentration*. The discussion includes a theoretical introduction to market structure with focus on market concentration, in combination with results from empirical studies on competition and ownership. This is followed by chapter 5.3, *How does size influence the conditions of competition in television markets?*. which focuses on the influence of size on the conditions of competition between public and private TV companies, as well as domestic and foreign television channels, including a discussion on language based on small markets with same-language larger neighbours. That is followed by an investigation of the influence of size on market concentration and ownership in chapter 5.4, *How does size influence the level of concentration in television markets*. The analysis concludes with a discussion of the influence of size on the competitive conditions in the market and market concentration, which is followed by an overall conclusion of the analyses.

5.2 Ownership and market concentration

5.2.1 Introduction

I will make the case that the scale and scope of intervention alters the rules of the game in the European television markets, especially in the face of the scarcity conditions substantiated in the analysis of the first hypothesis. What, based on theory, I would suspect to be a consequence of size, therefore also depends on the degree of state intervention. My point is that the media markets, especially heavily regulated TV markets, should not be analysed independently of politics, as market (economics) and politics are interdependent. This is also what was evident in the analysis in chapter 4.3 where public subsidy in some markets accounted for quite high percentages of the market volume.

There are several elements of interest when it comes to media competition (including market concentration and ownership), ranging from the concern over media pluralism to securing production of domestic content. The state emphasises its concerns by a merited interest in securing a national production environment as well as original domestic production on the one hand, but on the other there is also a focus on ensuring a level playing field between public and private media companies in order to protect *fair* competition, i.e. a level playing field where all companies have equal chances of success. This results in a dual-sided policy focus where market and state interests clash. This is because commercial actors do not *per se* have an interest in securing domestic production unless there is an incentive to do so, such as potential increases in profits, while the state has an interest (paternalistic or otherwise) in taking merited public interest into account, for instance news production.

The argument is that market intervention is based on regulating state-merited interest as crystallised in legislation concerning for instance PSBs, subsidies, content requirements, advertisement limitations and more. Size matters; however, even small states are able to regulate in a way which in effect sets the rules of the game, thus circumventing the economic logic, which establishes a theoretical drive towards high concentration in smaller markets. The reverse of this would be large states with higher concentration due to regulation, which can also be a condition of market intervention based on public interest. However, in some cases the national manoeuvrability has been limited because of international legislation –in Europe especially because of EU legislation.

Market structure will be discussed below first from a theoretical perspective (chapter 5.2.2), then based on the challenges of competition and market concentration (chapter 5.2.3), and finally what this means for television markets (chapter 5.2.4).

5.2.2 Market structure from a theoretical perspective

Market concentration is an often discussed concern when it comes to the media, yet little comparative material has been made available to study either the level of concentration, or the tangled ownership of media corporations and channels around the globe.

Market structures are used to compare the relative conditions of a particular market as compared to ideal models of for instance perfect competition or oligopoly. While television and other media markets tend to be concentrated, there are also related challenges, such as high barriers to entry, economies of scale, increasing returns to scale and more. While these conditions have some similarities to, for instance, pharmaceutical markets, they differ insofar as their distribution and protection of rights are concerned. I will attempt to establish the level of concentration in the markets and the type of structures this relates.

Historically, market structure has been studied for a long period of time; perfect competition by Jevons (1871), Edgeworth (1881), Clark (1899) and Knight (1921) and monopoly by Marshall (1890) and Straffa (1926). The features of imperfect competition in monopolistic markets were emphasised by Chamberlin (1933), Robinson (1933), Sweezy (1939) as well as Dixit & Stiglitz (1977); for oligopoly conditions see Cournot (1938), Bertrand (1883) and Chamberlin (1933). While these are mainly some of the first authors with original work, several remain relevant today with conceptualisation of, for instance, first mover advantage by Cournot, or the duopoly conditions of the leader-follower game proposed by Van Stackelberg (1934).

Market structure is usually defined with the help of four ideal models used to construct predictions of market and producer behaviour. It is likely to change over time in accordance with company, political or similar strategic action. As such, all analyses are time-dependent, but because of that it is also a useful tool with which to study the media market (Bain, 1968; Varian, 2003; Albarran, 1996).

In general, the elements of market structure comprise the number and size distributions of companies, product-type, entry and exit barriers, information flows and price control. Market structure can be perceived as being on a continuum of competitiveness between the two outer points of perfect competition and monopoly (Hoskins, 2004). What is of interest for the broadcast media is primarily the condition of oligopoly.

Table 19: Market structure

	Perfect competition[xxxii]	Monopolistic competition[xxxiii]	Oligopoly[xxxiv]	Monopoly[xxxv]
Number of producers	Many	Many	Few	One
Product type	Homogeneous	Heterogeneous	Homogeneous/ Heterogeneous	Homogeneous/ Heterogeneous
Market barriers	None	Few	Many	Total
Information	Perfect	Perfect/imperfect	Perfect/imperfect	Perfect/imperfect
Industry examples	Stock market, commodity markets for primary goods	Furniture, textiles, restaurants	Carproduction, pharmaceuticals, broadcasting	Electricity production,

Source: Based on Varian (2003); Albarran (1996)

Market structure is an expression of the organisational market characteristics which appear to have a strategic influence on market price and competition. In this chapter, some of the conditions which can influence the overall perception of market structures will be introduced. There are divided into 1) Market concentration, 2) Degree of product differentiation[xxxvi], 3) Market barriers[xxxvii] and 4) Cost-structures[xxxviii]. The main point discussed here is the concept of market concentration.

Depending on how these variables interact, there will be different types of market competition and thus market structures. For the broadcast media in particular, this means conditions characterised by a tendency towards market concentration, as a consequence of market failure. The market structures are ideal types, but the trend is towards oligopoly due to regulatory measures as well as market and media commodity characteristics.

When taking the media into account, the main points in relation to market structure are that concentration in television markets, especially small ones, should be evident based on theory following the conditions of high fixed costs, economies of scale and scope, the cost of production being independent of consumption and dual market situations. Measuring concentration is not sufficient to understand the market structure, nor the influence of size, but it

will indicate the difference between small and large markets and establish an overall idea of the market structures in the included sample markets.

5.2.3 The challenges of competition and market concentration

Media ownership and thus market concentration has been viewed as a problematic issue in most democratic societies due to the risks it entails – this has for instance led to regulation in several markets to limit ownership. Traditionally, television has had very high barriers to entry which limited the *potential* competition from new entrants in the market, which continues to involve large investments in infrastructure and a licence to operate. From an economic perspective, it leads to reduced competition, which due to the natural monopoly characteristic of the airwaves has been a general problem (Doyle, 2002), although one which has been reduced through technology such as DTH, Cable, IPTV and DTT (Hoskins et al., 2004).

In consequence, in theory there could be a higher concentration of media ownership in small markets, due to the challenge of achieving efficient scale. It can also lead to diversity problems, if the concentration results in reduced opportunity for different opinions, especially in the case of minority groups. A general fear also centres on the possibility of controlling the media output, especially the news, generating a potentially one-sided public debate. On the other hand, if not perceived on the national level but on the global, it can be argued that it enables increased utilisation of economies of scale (thus reducing costs), as well as increasing competition nationally against the global conglomerates (Doyle, 2002).

The trend of deregulation in the EU in particular has led to a higher focus on the potential problems of increased concentration. Below I will discuss the potential beneficial and adverse effects of concentration, and thus also of competition.

Technology and regulation like the TWF (1989, 1997) and AVMS (2007, 2010) directive in the EU to some degree limited regulatory barriers to entry. The individual television markets in Europe consequently faced growing competition as the number of channels competing for the same audience increased. This was primarily driven by increasing access to subscription services and pay-television through DTT, IPTV, DTH or cable. The existence of strong public broadcasters can also be perceived as a market barrier, making a potential new entrant question whether their company can reach an efficient scale in that market, if they are mass-audience financed.

There are two primary concerns limiting competition in television media markets: media content characteristics and high barriers to entry which deter new entrants, both of which establish a drive towards concentration. While what has happened in the EU is a massive fragmentation of audience, this is not the same as to claim that there has been a massive increase in the number of new entrants in terms of companies. Rather, what it usually means is that there has been an increase in channels from already existing companies carrying international subtitled or synchronised content. However, it could also be international channels which utilise economies of scale by entering a new market with almost the same content as in the others, with the main difference being that the material has been dubbed or synchronised into the native language.

Barriers of entry do not *per se* limit or decrease welfare or consumer surplus; in some cases it can be more optimal to limit the number of companies in a market through regulatory measures. This was done in for instance Sweden and Denmark with establishment of DTT, or with licences for new terrestrial television or radio channels. Other conditions in the television market relate to the question of rights where premium rights can help establish or limit competition for the audience, as is the case when there are exclusive agreements concerning the broadcast of sports, new movies, series and so on.

I will mainly focus on the structural barriers. In the case of television I can argue, based on the presentations in chapter 1.4, *How does size matter?,* and chapter 2, *Media market characteristics*, that these markets carry high levels of efficient scale, but also that this is dependent on regulatory measures taken by the state, as shown in the analysis in chapter 4, *The influence of size on market volume and the provision of original domestic content*. Sunk-cost is an example of this, where new entrants will have to invest to enter the market, but the investment is lost if the company withdraws, because it has little or no alternative value. The higher the investment required for entering the market, the bigger the deterrent for potential entrants. Examples of sunk-costs are advertising, investment in films, programmes and formats, computer games and research as well as research and development (R&D) in general.

Television companies relying primarily on foreign productions do not carry the same risks as those investing in new productions. This is because companies investing in domestic content do not know if the ROI will be higher than the one from acquired programmes: there is no such guarantee. What incentive is there then to produce original domestic programmes? Formats are a less risky option, but while they can be domestically altered, they are based on an imported idea. Acquisition of programmes is the lowest risk option and should they not live up to the expectations, they can fairly easily be replaced.

In small markets, original domestic programming is not a best practice option due to the scarce amount of resources. Consumer interest can establish an incentive for television networks to secure domestic production, but at the same time, there are no guarantees of success. Therefore the acquisition of programmes and formats with a good track record becomes a more attractive option.

The higher the degree of increasing returns to scale there is on a market, the less attractive it becomes for new companies, and the more attractive it is for existing companies to penetrate new markets to utilise economies of scale and scope. Television business requires content, and while much can be bought, own-production is usually more attractive to the audience. When the content is produced and has a general appeal there are benefits in utilising these structural market characteristics to secure the lowest possible average costs.

Under conditions of increasing returns to scale, the minimum efficient scale of companies is relevant as this can establish a negative influence on the influx of new entrants. The threat to domestic markets thus often emanates from international channels utilising scale economies to their benefit; measured in terms of competition this is beneficial, but in regard to the consumer interest in domestic production, there are two possible outcomes: either (a) the companies in the market will secure shares through domestic programming and premium rights, or (b) they will attempt to reduce costs by acquisitioned programmes.

The usual argument is that free competition is beneficial as it provide the most diverse supply of good to the best price (Blumler 1992; Garber 1993). In policy discussion there is an assumption that increased competition would secure diversity, even though this has been shown to be uncertain in studies (Wildman & Owen, 1985). It remains inconclusive, to what degree competition is beneficial or adverse to the diversity and quality of media products (Litman 1992; Wright 1994; McQuail 1992). Studies indicate that excessive (cut-throat) competition can result in decreased diversity (Wurff and Cuilenburg 2001, Blumler et al. 1986; Einstein 2004).

In short, competition might actually not be beneficial for diversity under all conditions. Competition can be beneficial insofar as it forces broadcasters to compete on programmes and their quality; however, there can also be adverse effects if the development is a continuous downward spiral of ever-cheaper domestic productions.

The open international and the European markets in particular are a dual-faced entity for small markets and are beneficial to large markets. This is caused by two separate conditions: a) there

is less content production in small markets and b) the large market media companies are used to higher levels of competition as the large markets can sustain more companies. This can be a benefit to the content producers able to utilise scale economies, as indicated in other industries (Bernard & Jensen, 1999, 2004) where companies exporting tend to be more efficient than their non-exporting counterparts, meaning that exporting companies either face more competition and adapt or have to be more efficient to enter the export markets. This is also why an international focus can be important for commercial TV operators to ascertain their business success, but from a state perspective it can threaten the level of original domestic content, especially in smaller markets.

According to Nickel (1996), based on U.K. data, competition has positive effects on productivity; this was supported by Disney, Haskel & Heden (2000), who in their study of 143,000 establishments in the UK supported Nickel's results. Consequently, the state and consumers are both better off with companies competing to ensure productivity. However, this is not a one-sided concern; for instance, Schumpeter (1942) argued that there are several benefits of larger companies and for companies in concentrated markets. Based on profit-maximisation, he argued that innovation would be driven by an expectation of increased profit. This is because in a concentrated market, the company knows that it should be able to achieve a return on the investment as the profits are not *lost* due to competition on the market. As pointed out by Tirole (1988), conditions of dominance can impede innovation incentives, because the larger the profit a company has before innovation, the less the increase will be after it. In short, while the company can increase profits through innovation, this is caused by the cannibalisation of its old technology/product: Tirole (1997) calls this the replacement effect.

Market concentration is a Janus-faced condition in which the negative sides comprise conditions in which companies representing very high levels of concentration or monopolies can lack incentives to develop new products or services in accordance with consumer interest; they may also lack incentives to cut costs and may have the ability to engage or keep excess labour; and in such a situation, the organisation can suffer. Under conditions of supernormal profits, these funds can be applied to establish higher levels of entry through predatory behaviour. However, concentration also carries positive benefits, as it can bring the benefits of economies of scale, i.e. lower AC, especially where there are high levels of fixed costs such as in television and communication industries[xxxix]. This can also ensure more revenue available for R&D to adapt to the market conditions and thus increase general efficiency. There are therefore industries where a higher level of market concentration can be perceived as beneficial, and this is indeed the case of broadcasting, insofar as we accept the premise of cultural difference prompting the development

of and interest in high quality original works of content, be it news, documentaries, dramas or other types of programme.

Arrow (1962) demonstrated that in innovations reducing the marginal costs of production (process innovations), the incentives of monopolies protected from competition of products and R&D are lower than for companies in a competitive environment. However, under the condition that the innovation rights remain under the innovator, monopolies can have higher incentives for product innovation.

On the other hand, as pointed out by Tirole (1997), the reverse can lead to reduced innovation, as the monopolist then makes its own products obsolete. Monopolists may invest in innovation to secure their position in the market and thus strategically to deter competing companies and new entrants, and ensure that they themselves release any new products; this was indicated by Gilbert & Newbery (1982), meaning that R&D investment provides monopoly companies with the incentive to secure their position and profits.

What this also means is that where companies are under oligopoly competition, the dominant providing company has an incentive to invest more in R&D as a pre-emptive strategic move. The discussion on this indicates that high levels of market concentration can have both beneficial and adverse effects. For television this is especially true, as all products are by nature creative works produced with high sunk-cost; a good recipe for content is thus highly regarded, which is also why formats, especially those with a good track record, are viewed positively, as this reduces risk.

Each new type of show, programme or even episode of a drama series is a creative work based on an idea and a purpose; as such it requires research, development and some level of testing. In shows such as *The Fear Factor* for instance, where the contestants have to eat different ominous looking foods, these have to be tested beforehand to ensure that they are actually edible. Competition in television therefore becomes a competition for talent and the rights to premium and attractive content. Television content comprises innovative products, requiring serious research and development. Combining these with the condition of collective funding under the sunk-cost and consumption being independent of cost of production, it is possible to establish that the domestic media company has to be willing to take the required risks to ensure its business with domestic content, or make the decision to take the middle road with formats and the secure road by acquiring programmes.

Gilbert (2006) pointed out that the companies which provide horizontally differentiated products can have an incentive to offer new products themselves to cater for variations in consumer

preference for similarly priced products. This is actually another road taken by television networks, where they in order to secure revenue and market share have launched supplementary channels which on the one hand compete and cannibalise their main generalist channel, but on the other can help limit new entrants with the same type of channel. News and children's channels are examples, where these have been launched either to counter or to deter international competition, but in general domestic broadcasters have an interest in securing their own revenue and deterring competition at the same time. Instances with several supplementary niche-channels in both public and private domestic broadcasters are not uncommon and can be considered an active counter-strategy.

This is also where the importance of copyrights and exclusivity enters the picture. When broadcasters or producers have invested in the production of what is in principle a non-rival product, there is a risk from day one that it can be found on the Internet with little possibility of capturing the violators. This harms the second condition which helps content industries, namely taking advantage of economies of scope, e.g selling boxed DVD sets, and even in some cases the potential of selling the content internationally. Why should a network buy a show when consumers can go online and view it before it hits the screen domestically? This can also threaten the first condition of economies of scale, as it can limit syndication.

As argued by Ludvig von Mises (1998 [1944]: 24): "…Hardly anyone attacks the copyright laws. Thanks to the monopolistic position that these laws secure to authors, it is possible for successful writers of fiction, and likewise of non-fiction, books and articles destined for the general reader to make a living from their writing. The author no longer depends on the munificence of some Maecenas as in the older days. He depends on the buying public". Contemporarily, with the potential of disseminating material online, electronic media content producers in particular face challenges in securing rights for their work, not to mention payment for it.

This is especially true for the AV-production and television industry (as well as music industries), where the first showing of a film in a cinema, or the first airing on prime-time TV or otherwise can lead to an illegal copy being distributed online, which is freely, but not necessarily legally, available for all with access to a computer with an internet connection. This can hardly be defined as public acceptance of the rights to one's own intellectual work.

Caused by its commodity characteristics, the high quality content commodity can end up returning to a situation in which the generosity of a patron becomes required, where rights are purchased in bundles and released freely or in combination with subscription to specific services.

These industries face the free-riding consumer behaviour directly and thus stand to take the most damage as well. This can become a long-term threat against AV productions caused by consumer behaviour without regard to the economic logic; just because it is freely available, it does not mean that a product had no cost of production, when the idea on which a creative work has been based required time, effort and financial investment.

Concentration in markets carries both disadvantages and benefits. Problematic conditions can arise when companies have the potential to utilise monopoly power in very highly concentrated markets, or when they enjoy a degree of market power which allows them to collude through 'tit for tat' games or voluntarily lead to limit competition in the market and potentially distort it in a way which causes inefficiencies and loss of welfare.

However, there are also conditions where a certain level of concentration is required to secure a sufficient scale of business. Should a possible entrant not perceive a potential for profit in competition, it will not enter the market. The TV market, when focusing on a single domestic market, has high levels of concentration requirements if based on the mass-audience model. Only one or two of such companies would be viable in small markets, whereas more would be able to reach an efficient scale in larger markets.

Table 20: Benefits and disadvantages of high levels of market concentration

Benefits	Disadvantages
Economies of scale, market concentration and monopoly can decrease the average costs of production due to higher critical mass; this can in principle generate lower consumer prices.	Inefficient allocation of resources and production caused by lack of incentives. This can entail higher prices and thus loss of consumer surplus. This can also be caused by diseconomies of scale if the company becomes too large to function effectively.
R&D requires some volume to innovate in industries with high fixed costs, which can lead to improvements or reduced prices, with one case being the establishment of the format business.	Risk of reduced innovation: if there are very high levels of market concentration and little competition, there are few incentives for product innovation. A case similar to the monopoly days of public broadcasting
International competition can secure overall competition; even though there are high levels of concentration in the national market, television is a case of this.	Risk of reduced quality of products and services caused by lack of interest in production development and potential for higher profit at lower cost.
Monopoly can arise if the company in question is more efficient than its counterparts and thus out-competes them – and as such it can be a sign of successful strategic conduct and good products/services. In particular, Google and Facebook would be examples of this, but this does not ensure that they do not have competitors.	Risk of super-normal profits caused by lack of competition. Collusion by cartels or monopolistic conditions can cause the company or companies to charge higher than average prices and thus generate higher profits than would have been the case under competition. This is because the company becomes a price-maker instead of a price-taker.

Based on the conclusions of the theoretical chapters and the discussion above, I can assume that the existence of market barriers constituted by the media market and commodity characteristics establish conditions that from an overall incentive perspective lead to market structures tending to be oligopolistic.

Media companies operate with conditions of high fixed costs and high efficient scale levels, economies of both scope and scale, as well as the particular condition of first-copy costs in combination with high regulatory intervention. This recipe can easily lead the media industry towards monopoly or oligopoly structures. It also positions the potential leverage of small and large markets differently.

Through the discussion above I have indicated that insofar as the characteristics in both small and large media markets are similar both have the potential for being more or less concentrated

depending on their particular combination of structural barriers and organisational strategic conduct, in combination with the level of public intervention in the form of public broadcasters. This appears important when taking into account the analyses of funding, especially public funding, in chapter 4.3, *How does size influence the availability of revenue in television markets (TV market volume)?*

5.2.4 What does this mean for television?

Concentrated media ownership has been increasingly in focus as broadcasting is turning more global due to increased internationalisation and technological advances. These developments have resulted in multi-channel environments (Hoskins et al., 2004), but also in international ownership where multinational corporations utilise economies of scale by entering new markets with similar content, or where domestic TV stations are acquired by international media corporations.

The strategic answer from domestic private TV and PSBs was to launch their own channels to stem the loss of share and revenue. While these strategic actions were necessary to reduce losses in market share and revenue, they also inadvertently intensified the audience fragmentation; in some markets this is attributable to cannibalism of own audience by using niche-channels to deter entry of competing commercial companies. The development of the niche-channels led to a fragmentation visible by studying the leading channels' audience decline, which over time can undermine the traditional FTA (free-to-air) advertisement-funded business model.

If perceived not on the local level, but on the global, the development can be argued to enable increased utilisation of economies of scale as well as altering local media conduct against the global conglomerates in attempts to deter new entrants (Doyle, 2002).

This is reasoned in the economic logic of the media content goods which cause conditions of imperfect competition as well as allowing utilisation of increasing returns to scale economies. This is in line with theory as it can be argued that the economies of scale in the television market are a consequence of the initial sunk-cost investment combined with the continuous investment in programming, i.e. media content which is non-rival in nature can be re-used as long as there remains interest in the content. This follows the logic presented by Shapiro and Varian (2003:50) that information goods are "costly to *produce* but cheap to *reproduce"* as a consequence of their characteristics.

I will show that most markets are subject to few player conditions, e.g. under conditions of oligopoly. Indeed, the economic characteristics of the market and media content goods should create drives towards high market concentration for TV markets in general, as these based on the hypothesis are similar. By applying economic logic, it would be correct to assume that small markets have fewer players based on scarcity considerations; however, this does not take into account market intervention practices. Furthermore, as a consequence of market intervention, the link I should assume based on theory between size and the level of market concentration might not be the case.

I argue that the differences in scale of political market intervention practices result in conditions that circumvent traditional economic logic by balancing potential commercial conduct. The argument in literature on why market concentration should be higher in small markets is based on scarcity of revenue; however, as governments intervene using both regulatory measures and PSBs, the rules of the game in the market change, usually to the benefit of local players. Scarcity considerations continue as intervention practices also follow the scarcity principle as public revenue is limited, meaning that the public funding used for PSBs amounts to €7.3 bn. in Germany, €5 bn. in Japan and €4.2 bn. in the UK, which is in contrast to the Canadian PSB which gets €643 mn. the Spanish €544 mn. and the Danish €469 mn. (Screen Digest, 2010). All this is dependent on political choice. The public funding alters the market and in effect the PSBs will function as balances to the commercial players, both local and global. This, in combination with audience preference for domestic content (see EurodataTV, 2009), positions the local public and private players as the main players in their individual markets (as argued by Tunstall 2008, albeit slightly differently), as the incentive to invest in domestic production is higher than for the international channels.

My point based on the analysis in chapter 5.2.3 is that market concentration ratios in small and large markets do not have to be different as they become dependent on the magnitude of political intervention in the individual market settings, and not on commercial revenue scarcity alone. And while the multinational corporations have increased in volume, this is related to the increase in pay-television and digitalisation, meaning that as they primarily utilise economies of scale, the level of domestic content in these international channels is fairly limited, often preferably culturally neutral.

What I will show is the TV market concentration level, the position of PSBs and the share of multinational corporations within the six largest players. This will establish an indication of domestic vs international players, as well as the primary market structure in TV markets.

This analysis will show that the media markets are one of the instances where it can be argued that neither the market nor politics exist independently. They should be studied jointly, as politics can affect the market and the market can compel political action. None of these forces exists in a void; for a similar perspective, see the literature on Public Choice (Mueller, 2003), Political Economy (Mosco, 1996; Evens, Rueschemayer & Skocpol, 1985) or Positive Economics (Friedman, 1962). In Europe this has led to dilemmas on the question of securing competition and regulation as well as cultural versus commercial concerns in broadcasting. This is substantiated as Western Europe alone subsidised the PSBs with more than €22 bn. in 2007, making it the third largest publicly aided industry only surpassed by the transportation and agricultural sectors (Screen Digest, 2007). Consequently, the traditional supply and demand in the market is offset as a result of domestic content from PSBs changing available market supply and potentially audience demand. What is promoted here based on the hypothesis is that TV markets in general are under conditions of oligopoly with relatively few players.

This is in line with Graham & Davies (1997), who argue that left alone, broadcasting would end up heavily concentrated as a consequence of the market. Their argument is that the PSBs are advantageous as they are able to promote specific roles in a media system; this would not be viable for commercial players on the one hand, and difficult to regulate on the other. The argument is based on a counterweight to monopolisation, widening of audience choice and influencing the quality and behaviour of the system as a whole.

I will substantiate this argument here as being a consequence of failures in the television market, which PSBs can help remedy. The reason is the effect of market intervention: by using PSBs to alter the rules of the game, the intervention can function as a balance to the commercial companies in the market. The consequence of these interventions in best cases are PSBs as standard setters which impose a specific level of services and quality which the competitors have to equal, otherwise the consumer has the choice of a PSB provisioned service. It would follow that market concentration is influenced by a variable in the form of government intervention.

Increased competition for audience and revenue is a result, but internationalisation has also changed the conditions so that a part of the domestic revenue available for television is now diverted from national to international media companies. International corporations such as Disney and VIACOM divert revenue from domestic TV, increasing the competition for revenue, usually while carrying little or no domestic content. Domestic actors become increasingly dependent on alternative revenue because of this, and the level of domestic content is therefore threatened.

The primary difficulties of increased competition for revenue are lower domestic production, and increases in acquisitions and repeats, which are the main ways of reducing costs. Domestic media companies face increasing competitive pressure, forcing increased focus on profitability. But the increase in competition caused by either the potential of new entrants or actual entrants distorts the balance in the markets and forces the media companies to adjust to the new situation, where numbers of supplementary thematic niche-channels are on the rise.

This can theoretically be either helpful or harmful for the overall market concentration and thus competition, but it also influences the revenue streams. In order to adjust to this, domestic media companies have different strategic choices, whereby they can either accept a lower market share, establish new channels, and de- or increase domestic content and/or the quality of existing domestic content.

In some markets a feasible solution could be to increase domestic content to out-compete the new entrants based on audience favourites; this does not *per se* mean that this is the best solution in terms of immediate profit, but rather that it could be an option in that it would retain barriers to entry. One of the main challenges in media studies is that there is no comparative perspective on the global development that enables critical assessment.

Below, the analyses of the competitive conditions start with an initial focus on competition between public and private as well as domestic and international channels.

5.3 Research Question D: How does size influence the conditions of competition in television markets?

5.3.1 Introduction

I have shown in the analysis of the first hypothesis in chapter 4 that there is an interaction effect caused by size of population and economy in the TV market volume and expenditure on domestic content. This confirmed my hypothesis of size influence based on scarcity and incentive concerns on the TV market volume as well as on the level of domestic content. Combined, this helped substantiate the first hypothesis and the theoretical argument that the relative conditions in the markets are similar as a consequence of market and content good characteristics. What is different is the relative leverage of population and economy. What I shall study here revolves around the influence of size on market competition based on the research question D presented in chapter 1.2.1 and chapter 3.3.2.3.

I argue that there is a relationship between size and the competition between public and private respectively domestic or foreign companies in small and large markets. The analysis is carried out to identify difference in regards to size as well as impact of government intervention. This will allow me to identify if the larger markets tend to have larger private market share as well as the difference in degree of domestic vs international share.

However, this might not entirely be the case, based on the level of state intervention in the markets, which is evident in chapter 4.3. This means that in effect size is not the only variable influencing the TV market concentration levels, but rather is probably a function of a combination of factors including regulatory measures taken by the state, besides the drive generated towards concentrated markets as a consequence of media market characteristics.

The argument is therefore based on chapter 1, *table 1*, and the discussion in chapter 2, *Media market characteristics*, that the television markets in general have characteristics of imperfect competition based on market and content good characteristics, and thus tend to be concentrated. The theory of oligopoly, being especially relevant for TV markets, is deeply embedded in literature, but little research has been carried out to indicate the overall market structure of television markets using cross-market methods.

Here I will study the competition between public and private companies where competition as defined in the New Palgrave Dictionary of Economics means: "rivalry between two actors over a limited resource or reward" … *"Competition is a rivalry between individuals (or groups or nations), and it arises whenever two or more parties strive for something that all cannot obtain"*.

Competition in the terms of TV is singular in the sense that both public and private companies compete for the same viewing audience who spend a specific amount of time watching television. They compete by using substitutable products where taste and interest influence the chosen viewing at a specific time. At the same time, the *time* audience has available for television viewing is limited making prime-time programmes, here meaning the peak period of audience watching, the most preferable time to gather the viewers. Competition can also be dual-sided depending on the specific business model of the television companies in relation to their different channels.

Advertisement-based business models face other challenges as they are dependent on gathering mass-audience to finance their operations either in a singular market, or segmented across multiple markets. Subscription-funded channels function the same way, but as business models they are dependent on their audience choosing their channels for the household portfolio or being placed in a specific channel-bundle by the platform operator; in this way international channels can relatively easily penetrate a market even if the audience is quite limited. Publicly-funded channels or broadcasters are dependent on fulfilling their specified purpose or losing legitimacy. These variations in the competition for the television audience show that there can be significant variations across the individual markets based on political decision-making as well as the individual market characteristics.

Public and private media co-exist in the market where they compete for audiences and, in most cases, also advertisement revenue. This also means that there is a pressure from private media companies on national legislation to limit the activities of their public counterparts, as well as increased competition for premium rights. The public media have to walk a fine line between preserving distinctiveness and attracting broad audiences to retain a national domestic legitimacy from state, market and civil society.

Competition is a condition where one or more parties fight for the same scarce resources in the same setting. Television networks compete for market share and revenue, which both constitute scarce resources. Audience viewing is equal to the time used on viewing television content: this is a scarce resource which can be sold to advertisers, but also to pay-tv channels, where high audience rating can enable the network to increase the price of access.

Competition can have both adverse and favourable effects on the market. On the positive side it can limit prices and secure quality, while on the other side it can cause unfavourable conditions such as ruinous competition with high levels of low-quality programming, or where competitors can end up as ripe pickings from outside players due to lack of stability.

Demand and supply conditions, incentives, profit, return of investment, marginal cost, commodity characteristics, barriers of entry and exit are all conditions affecting the economy of the media. The purpose of the media industry is the same as other industries in a market economy: to secure economic and social welfare in society. However, from a state and civil society perspective, the media companies have a separate function as they are expected to provide and diffuse (critical) information to their audiences (in an understandable way).

In this chapter I will establish the degree to which size affects the relative strength of public and private television. This will also establish if and how the conditions of small markets with large same-language neighbours are affected differently from small and large markets in general. The competitive environment should show high levels of variance as the level and type of market intervention is different. This chapter will thus give an indication of the relative impact of these market interventions as well as the overall balance of public and private market competition, and will potentially contribute to the concern over a level playing field.

The general competitive differences in large and small market competitive conditions in the broadcast markets will be studied by (a) the difference between public and private competition and (b) the influence of foreign channels. This is followed by an analysis of same-language neighbour problems based on the influence of foreign channels. The intention is to establish whether there are differences between small and large markets, especially the small markets with same-language large neighbours.

5.3.2 Public – Private competition

The purpose of this chapter is to study the degree to which I can identify differences in public and private share based on size. While share of television consumption should not directly be affected by size in the traditional sense, the relative share of private and public companies should from an overall perspective be influenced by size based on the difference in market volume as indicated in the analysis of the first hypothesis in chapter 4. This analysis will help substantiate if this is empirically the case. It will also establish an overall picture of the variance of these strengths in different markets, as well as the characteristics of the small markets with large same-language neighbours where this should be especially evident based on Meier and Trappel (1992) as well as Puppis et al (2009).

The purpose of this is twofold: first of all to identify influence of size on public share (domestic and combined with foreign) as a proxy for state intervention and the influence of size on private share (domestic and combined with foreign) as a proxy for identifying if larger markets have

more domestic private markets as suspected based on economic theory. The rather large intervention in terms of public subsidy of public broadcasters should influence the relative share levels, but at the same time larger markets should have more beneficial conditions for private commercial TV companies. The analyses should help establish if there is a relationship between size and the relative share of public and private companies.

First I will establish if there is a relationship between size and the public/private audience share. This will be done be using multiple regression analysis of the continuous scale variable of size on the public and private share of audience in the sample markets.

The intention of these regressions is to examine the hypothesised relationship between the sizes of economy and population and the audience share of public and private. The public share is differentiated by domestic and total, where total is equal to domestic combined with foreign public share. Likewise the private share is differentiated by domestic and total share. First the public and then the private share statistics are presented.

Table 21: Regression statistics on the relation between size and audience market share

	Public Share				Private Share			
	Domestic		Total		Domestic		Total	
	Population	Economy	Population	Economy	Population	Economy	Population	Economy
Coefficient	.156*	.001***	.100*	.001***	.239**	-.001***	.014	-.001***
SE	.087	.000	.092	.000	.115	.000	.095	.000
Obs.	26		26		26		26	
Adj. R^2	.479		.511		.503		.256	
R^2	.520		.550		.543		.315	
Prob > *F*	.000		.000		.000		.013	
Durbin-Watson	1.792		1.906		2.200		2.134	
VIF	1.018		1.018		1.018		1.018	

*** (**) [*] denote significance at $p < 0.01$, ($p < 0.05$), [$p < 0.1$]. The figures for Belgium are the mean for French and Flemish speaking Belgium. The regression statistics are available in appendix C.3.

The regression of size on the level of domestic public share shows a significant and strong statistical relationship explaining 47.9%, the relationship based on total public share was a bit stronger explaining 51.1%, which is a consequence of some markets having penetration of foreign PSBs, especially Ireland, Austria and the French-speaking part of Belgium. Size influences the scale of public share, which is expected based on the findings in chapter 4.

The larger the size of economy and population the more investment in public television and the larger the market volume. A well-funded public television company can invest more money into original domestic production and possibly more channels.

At the same time this does not have to influence the potential for public companies as this is (usually, but not always) mainly funded publicly, with a few exceptions like Denmark, where TV2/Denmark is commercially funded, and markets like Austria and Ireland, where the PSB

funding is split almost equally between public and commercial funding. This also means that in markets like Norway, where the second largest television company (TV2/Norway) is commercially funded but private, the influence would be different from Denmark where the two main companies are publicly owned, but differently funded. Furthermore, as the commercial channels are dependent on (usually, but again not always) mainly advertisement or subscription revenue it means that the main channels must attract large audiences to fund their continued operations. This is also why the result of the regression on private share can be equally strong.

The regression of size on the level of domestic private share also shows a strong and significant statistical relationship explaining 50.3% of the variance, while the relationship based on total private share was weaker with 25.6 % and while significant for the model overall, it was not so for the population part of the size variable. Size thus also influences private share, but remains strongest for the domestic part, as most large markets mainly consist of domestic television, which is in accordance with the findings in Eurodata (2009) stating that domestic television continues to be primary.

What this means is that size influences the commercial television share because large markets (both population and economy) have higher levels revenue available than smaller markets. This is in a way similar to the relative size effect identified in chapter 4.5, as the relative size influence means that small population markets, but large economies, like Norway, have a strong private commercial presence as well as a strong public one, the same being the case for the UK, even though it also has a strong public presence.

This means, looking again at Denmark, but also at Ireland and Austria, that state intervention is of massive importance as this influences the type of players present in a market, as well as the level of foreign penetration, which can also lower the domestic share in small markets with similar languages as their larger neighbours.

This also accounts for the reduced strength of the relationship when it comes to the total private share, as the country of origin principle means that in some domestic markets the commercial companies utilise the AVMS to establish origination from another market, usually in order to achieve economies of scale, and/or to achieve more lenient advertisement rules, than in the target domestic markets.

Based on these regressions I can claim a relationship between size and public as well as private share. This regression showed that the level of public and private share is influenced by the size variable. This was somewhat expected based on the theory presented in chapter 2, *Media market characteristics*, and the results from the analyses of the first hypothesis in chapter 4, as there are

several factors involved in the decision on what is seen on the individual channels and funding levels – but also that the larger markets (size of population and economy) tend to have stronger public broadcasters, and more potential for commercial television (due to larger critical mass).

What could have been the case was that the larger markets could have a lower public share, due to the increase in the segmented niches, but this was not indicated in the analysis. The reason is that the level of policy involvement in relation to the domestic public broadcasters, and the resulting public share, can be considered to be a result of a politically defined frame of operation based on history and culture in the individual markets.

What can be argued is that it is determined more based on the political intent in the particular market setting; UK and Germany, for example, both have a fairly strong political intervention in the market with a direct effect on share, in contrast to Romania, for instance.

What remains interesting is the degree of policy influence in the television market and how this can be explained. This also indicates that for further analysis I could ask what influences the domestic public share in order to identify which factors regulators could apply to influence the overall market setting.

For private share I can identify a similar picture to the one found in public share, with a strong relationship for private domestic television. The domestic private share result can be argued to have a relationship to the way in which the television market works in Europe in particular, where there is significant cross-penetration from, for instance, the UK and Italy, leading to quite a large difference in some markets, yielding a weaker relationship for the total private share.

However, overall, the regressions indicate that I can assume that size overall is strongly correlated with public and private share, especially domestic. These results are in line with the conditions of scarcity identified in analyses of the first hypothesis in chapter 4, and the challenges of size based on minimum efficient scale combined with increasing returns presented in chapter 2.

What this tells me is that the state can circumvent the scarcity conditions in the market by investing public funds or other benefits. Larger markets in the sample tend to have relatively strong public television companies – especially the rich markets. At the same time foreign penetration means that the domestic television share in the large markets has less foreign penetration, while small markets have more, especially in the used sample.

The relative levels of both domestic and total private share indicate similar strong relationships. Total public share had the strongest relationship, stronger than the domestic public share. This

can be argued to be a consequence of the foreign penetration in Europe in particular, where specific markets function as outlets for channels applying the country of origin principle, as well as markets sharing a language with a larger neighbour which establishes penetration of these in the smaller markets. Similarly the second strongest relationship was domestic private television which indicates that the larger a market is, the more attractive it becomes for private companies to attempt entry into the market and the more competition the public companies will be subject to, but only if political intervention or regulatory regimes do not set up barriers to entry (direct or indirect).

When both public and private share can be attributed to strong size influence, I can ask the question as to what influences the individual share levels of public and private companies. I have an indication that the public policy and thus political intervention establishes the rules of the game. Overall the multiple regressions indicate that the scarcity conditions found in chapter 4.3 and 4.4 in the analysis of the first hypothesis plays an important role in the European market, due to the strong tradition for public broadcasting, but also that the variety of size from chapter 4.5, shows that size is relative and a strong economy combined with a large population constitute one setting, while a small economy but large population constitute another. The most important point in this appears to be that state intervention in the markets for the most part is massive.

I will show the statistics on the competitive conditions in the individual sample markets below to establish a comparative perspective.

5.3.2.1 The competitive conditions in the individual markets

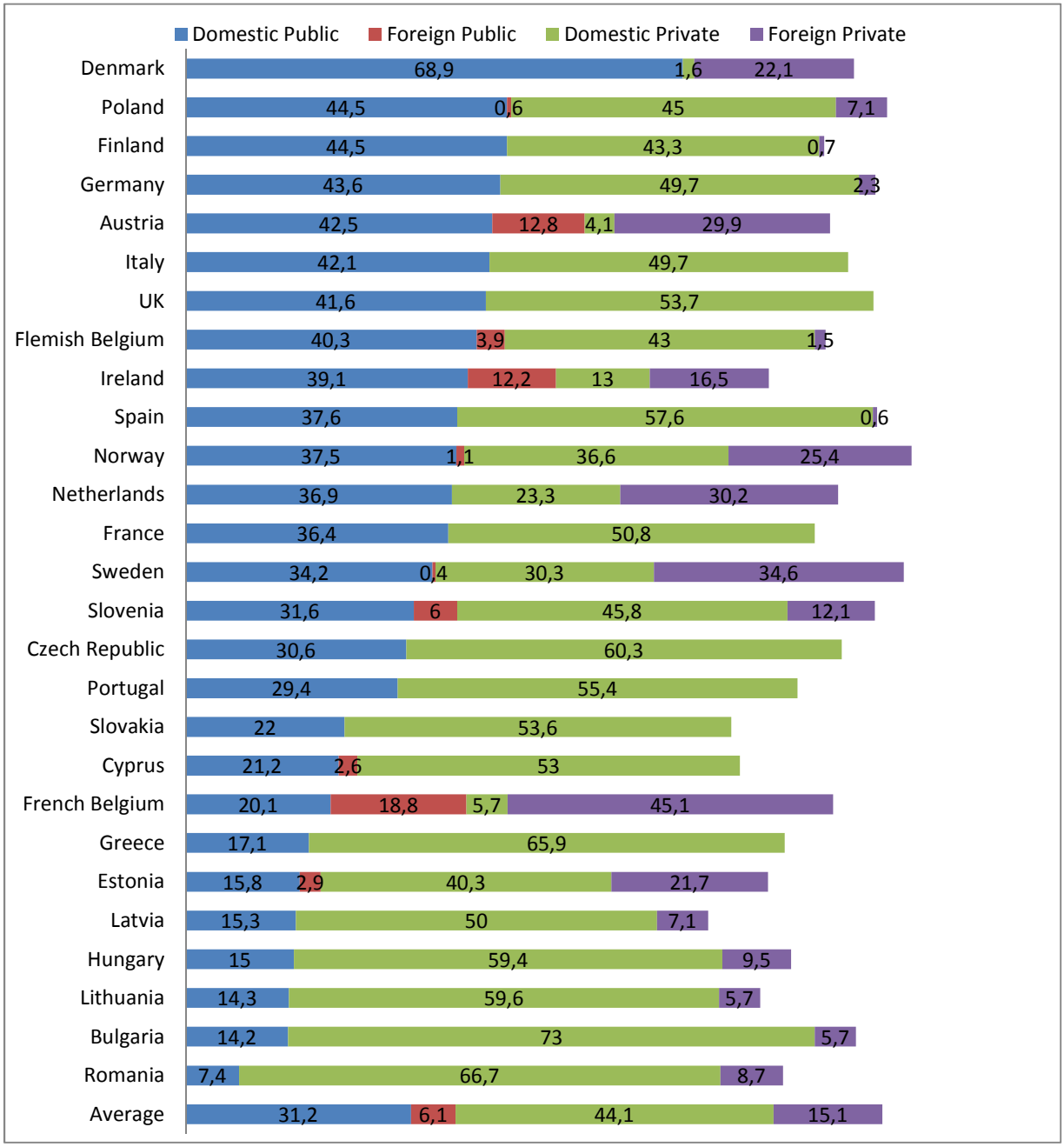
Below, the competitive conditions between public and private broadcasters will be studied comparatively by using statistics of the individual markets. This will provide an overview of the individual markets, as well as enable study of similarities and differences between them. The competitive conditions will be shown by dividing them into four categories of domestic and foreign public channels, and domestic and foreign private channels.

Together, this will illustrate the relative market strength of domestic versus foreign TV and the relative strengths of private and public television. This will also indicate the difference between small and large markets in terms of the strength of market intervention in the form of public market share.

The synchronous picture will illustrate the balance between public and private media. Furthermore, this will substantiate the difference of effect in small markets with “large

languages", such as English, French and German. First this will be shown below using 26 different markets where Belgium is divided into French and Dutch markets, (i.e. 27 markets due to separation).

Figure 6: Public and Private Market share in 2008 (by domestic public share)



Source: Original categorisation of data based on ownership type (public and private) and *country of origin* principle (domestic and foreign) by using Eurodata TV data on channel names and audience share. Data is rounded, furthermore there is residual data as a consequence of data below 0.1%. not being reported, and that some markets do not report some channels publicly if they do not pay to be measured. Some markets also record viewing of VHS and DVD, which is not included.

The figure shows the market share of television between public and private players in the relevant markets. The picture it establishes is one of high degrees of variance between markets, but in most of those involved, the private broadcasters have more than 50 % of the total market share, with the exceptions being Denmark[xl], Austria and Ireland. What appears intriguing is the spill-over effect defined as non-domestic originating television, where there are some apparent differences between the markets, as well as the reasoning on the differences between the included markets.

I will not investigate the background for the massive variance, but I have to point out that there might be differences between markets where public and private broadcasters dominate, not only structurally, but also potentially in programming availability.

Domestic television channels are dominant in all but a few markets: this is not surprising and from a perspective of further research, establishing time-series comparison on the development of share would enable a perspective on public share. In studying the markets with high levels of foreign penetration, the initial observation is quite different: I can identify different types of penetration.

That small markets with same-language large neighbours have massive spill-over of both public and private television is apparent under certain conditions of regional extension. The data also indicate that spill-over poses challenges in a set of markets not only concerned with same-language small neighbours.

Besides those clear cases, there are also a) the Nordic markets where there is significant spill-over from channels carrying international subtitled as well as domestic content, and b) national markets with ethnic, linguistic or other minorities such as Estonia's Russian minority, as well as c) thematic channels targeting various European markets from *countries of origin* such as the UK, Italy and Sweden. This will be studied in more depth below in chapter 5.3.2.4, *Foreign penetration: spill-over effects* and chapter 5.3.3, *Language and the next door challenges*. This is an area which requires further general research where the provisioning of programming from both public and private broadcasters in the markets is analysed comparatively with similar and dissimilar markets.

When studying the variance in the national markets, those of Denmark and Romania stand out as especially different, as they represent the highest and lowest scores of public television. Comparing populations of, respectively, more than 21 million against 5.6 million can be considered atypical, but it does provide some insights into the impact of market intervention –

especially taking into consideration that Denmark invests more than twice the amount in public subsidy as Romania.

As I argue that the conditions in the markets are equal based on the similar characteristics of content and market, that would also entail as a consequence of size that they have different starting points on how to deal with or counter these difficulties. These conditions set the frame for the competition in terms of scarcity of revenue and personnel as well as overall and segmented audiences. The size variables do not directly influence the inter-market public and private competition, which to a large degree is defined by the frame established through policy and intervention practices; in this sense I can differentiate between state and market policy orientation, where I use share as proxies for that, i.e. it becomes evident that a market with almost 70% audience share on publicly owned television channels such as in Denmark holds some strong regulatory measures.

Romania is a market with private company dominance, while the Danish case is one of public ownership dominance, to the degree where the channels from TV3 (MTG) and SBS TV are broadcast from London to bypass Danish regulatory measures on, for instance, limitations on advertisement. From a company perspective, it makes no sense to place higher restriction on operations than required. Almost 70% of television viewing in Denmark in centred on the two publicly-owned TV-networks. In contrast 7.4% of the viewing in the Romania is public – but nonetheless, even in the most market-dominant system, there is a market intervention.

Although Romania and especially Denmark could be considered outliers, they are not so different from the markets closest to them. Denmark is somewhat different from the market with the highest domestic public media share, with the main difference being that TV2/Denmark equals 40% of the share and the rest is taken by the other publicly owned network DR. Denmark is a case of public duopoly. In contrast to that Italy is a case of a public-private duopoly, as the market is almost divided between PSB RAI and MediaSet owned by Berlusconi.

Overall, I can point out that while larger markets can have a lower public share than their smaller counterparts, this is a result of policy in combination with cultural and historical path dependencies of political decision-making.

When studying state-oriented regulation, the Nordic markets appear especially interesting. The condition of the Nordic markets of Denmark, Norway and Sweden is significant because of the combination of either existing or previous hybrid broadcasters[xli] combined with DTH (direct to home) competition from MTG channels and SBS TV a Pro7/Sat1 subsidiary. These were systems of duopoly with public broadcasters having specific responsibilities, but in combination

with a broadcaster receiving special benefits such as must-carry if they provided specific services in the interest of the public.

Small markets with a same-language large neighbour have less domestic television - Austria, Ireland and French-speaking Belgium all have massive foreign penetration from larger same-language neighbours. This also underlines the potential problem of private media originating in small markets with large market neighbours (same language) in getting advertisement revenue in competition with the large market channels, where the spill-over effect is most significant. French-speaking Belgium is an interesting case with one of the lowest domestic public broadcasting shares in central and northern Europe. In general, these markets have a relatively high consumption of public television, due to a high consumption of both domestic and neighbouring public television. Swiss regional areas are other examples of this, with significant foreign penetration in the individual language areas from the surrounding similar larger language markets; see chapter 5.3.2.4.

Eastern Europe is an interesting example of the weakening of public television in small markets due both to competition from private commercial media companies and/or political intervention in some, resulting in PSBs which have been almost crushed by commercial media, while in other markets they have managed to retain a relative strong position (EBU Strategy Brief, 2003). However, it was also reported that both Central and Eastern European markets were experiencing an explosion of theme-channels and thus were subject to a very dynamic development (Eurodata TV Worldwide 2007, annual report). The interesting part is that where some small market PSBs succumb, others survive and remain strong despite the development. Thus studying the PSBs can yield an interesting aspect of the differences not only between large and small markets, but also in strategies both from a national and an organisational perspective in small markets in, for instance, programming and funding.

One non-European example is Canada, a large market with an even larger market neighbour, which also has a spill-over; the share is relatively small, but taking into account prime-time programming, I can see that the top 10 programmes in Canada are all from the US (based on Eurodata TV, 2009); in order to avoid spill-over and thus loss of advertisement revenue, the Canadian broadcasters use American content.

There are some quite strong differences between the markets, and as my regression analysis indicated size holds significance as an explanatory variable with quite strong relationships.

There are two factors of interest in the degree of competition between the public and private networks and accordingly the level of channel supply in the market to meet demand. This is

where market volume and level of domestic production have an impact; in the process of constructing the table it became evident that when the mass is larger, it attracts or enables more competition, which becomes possible due on the one hand to larger niches and on the other to the potential of bundling less popular channels in with high-profile popular ones on pay-tv.

Recalling that the public media companies are in effect market interventions with a specific mission, I have to acknowledge that what appears important are the concerns (cultural or otherwise) relating to the reasoning behind public broadcasting.

One of the main drivers in the European context of public media is to secure domestic production of content and reach the whole population based on a principle of universality; in theory, there should be a level of funding allowing for differences in expenditure and the subsequent level of original production produced for the input. Secondly, the willingness of the private networks to invest in the market rather than relying on acquisitions also establishes a difference, where the relationship between dominant public and private networks can have a role.

In none of the markets included in the analysis has public television been completely abolished; there is a certain longevity of the institutional structure in which the practice of muddling through and coping with change suppresses extreme structural changes. The choice of market intervention carries path dependency characteristics: if the US were to establish an entity similar to the BBC, it would take time and would generate high levels of both criticism and discussion, while an actual abolition of the BBC in the UK would unthinkable.

Political decision-making and a long-term process of embedding practices in social and cultural structures have constructed path dependencies which resulted in the existing systems of broadcasting where major dislocations will generate friction between the old and the new companies. The public broadcasters represent a particular system guided by political action, bound up with state, market and civil society.

Upholding a balanced competition between public and private when the figures are taken into consideration prompts the question as to what a level playing field actually means. Is there really a level playing field, where all have equal opportunity to succeed, when some companies are able to use the country of origin principle to circumvent rules in the individual domestic markets? Furthermore, all market intervention is per definition a distortion, but that is not really the nub of the matter. The real question is when is it unduly distorted? The argument could also be changed to ask when intervention to remedy the perceived market failure ends in government failure. The second question is whether the intervention is to benefit the population based on community or niche interests; when the distortion is limited, does it then not risk running counter

to the original purpose of the intervention? There is a fine line, which is difficult to identify, this also indicates difference in the perceived interest of the state towards the media and how this is expressed in regulatory intervention practice.

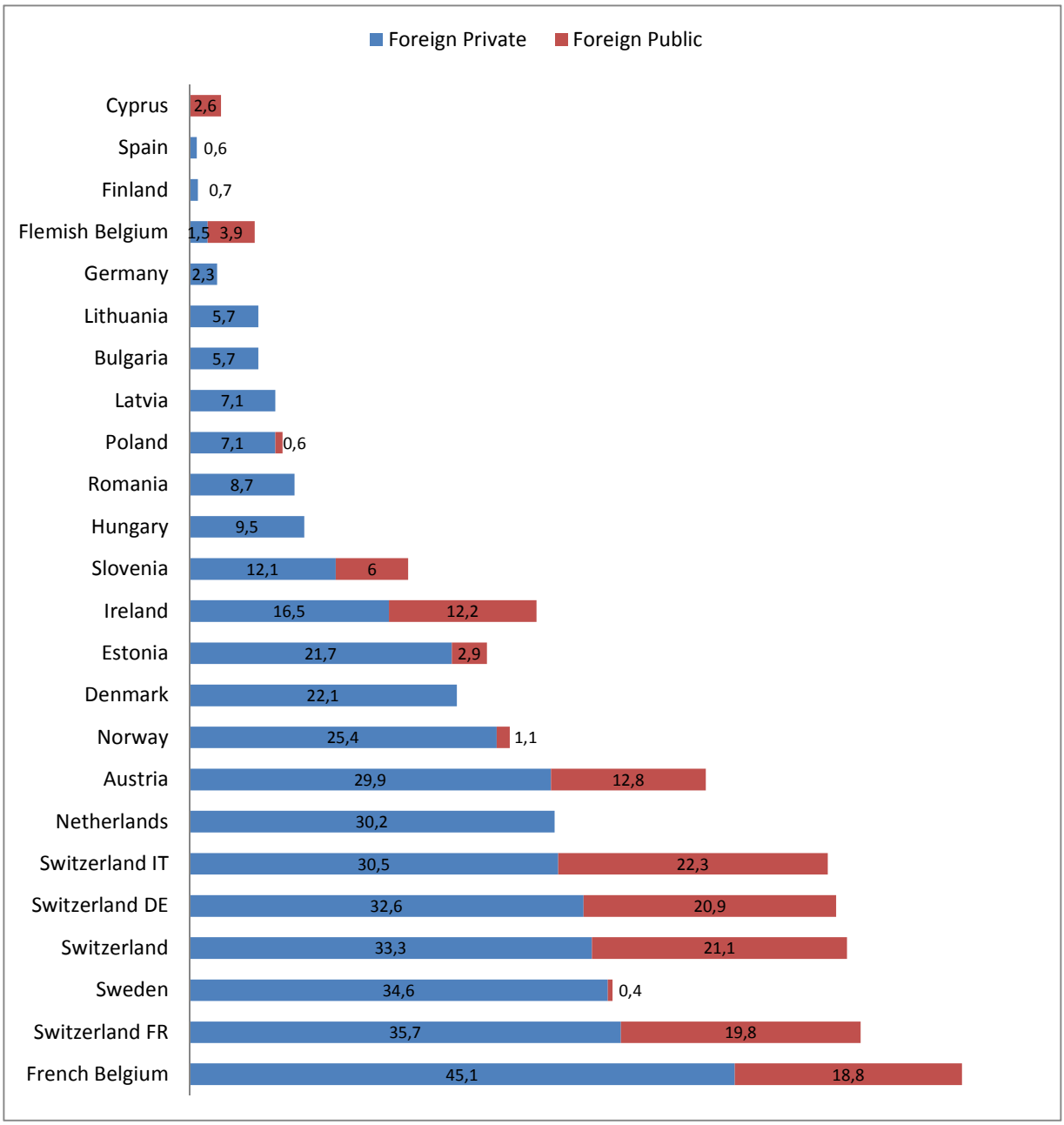
This is also why community-merited interests are what should be considered as public good provision, as there is a difference between public good characteristics and the actual public benefit gained by services provided on behalf of the public. The public–private media balance of share is quite diverse and appears linked to a variety of reasons such as a) distribution platforms and the reach of these; b) channel supply – meaning increases of product diversity; c) regulatory measures – barriers to entry and exit; d) funding regimes and levels of PSB, e.g. the means allocated to enable the institutions to fulfill their purpose; e) the historical development of media as well as f) the purpose of the public media as designated by the state.

In the chapter below I will discuss foreign penetration of small markets sharing a large language a little more thoroughly.

5.3.2.2 Foreign penetration: spill-over effects

In this chapter I will study the relative overspill of share between markets measured as the share of television viewing from stations based in other markets. There have been several indications of small markets sharing their language with large market neighbours; this will be studied in a little more detail below to substantiate differences based on sharing languages as well as the conditions required for effect. As stated in chapter 3.3.2, *Analysing the second hypothesis on the influence of size on market competition*, Switzerland has been included in the analyses below.

Figure 7: Foreign Penetration (by foreign private share) in 2008



Source: Original categorisation of data based on *country of origin* principle (domestic and foreign) using Eurodata TV data on channel names and audience share. The markets of Italy, UK, France, Czech Republic, Portugal, Slovakia and Greece have been left out as a consequence of limited data on foreign country of origin channels. This is mainly because channels with a share below 0.1 is not reported, but also a consequence of for instance the position of the UK and Italy in regards to being the host to channels targeting other markets.

In figure 7 foreign share equals the share of television viewing in stations under the jurisdiction of the regulatory authorities of other markets as per the country of origin principle. The main hypothesis concerning this is that small markets with large same-language neighbours have the highest spill-over.

Foreign spill-over is not exclusive to same-language markets: it is most evident in the markets which share a language as well as being regionally extended. Penetration happens from both public and private channels, which in principle can cause different challenges: this concern will not be discussed in length as it is outside the scope of this dissertation. The variance and difference between the markets with foreign penetration establish that I cannot single out one reason for spill-over.

As expected, the small markets beside a large same-language large market neighbour have a significantly higher spill-over than other markets if they are regionally extended; without some direct regional extension the effect is not comparable. French-speaking Belgium has the highest degree of foreign penetration, which is caused by RTL-TVI being counted as originating in Luxembourg, followed by the Swiss regional markets. The relatively low figure in Ireland is due to their relatively strong private commercial broadcaster TV3. The understanding of smaller, instead of small appears relevant in this respect, with the same being the case between Cyprus and Greece, where the Greece PSB ERT penetrates into Cyprus.

Neither small nor large markets in general have significant spill-over, but there are several exceptions besides the same-language nations with large neighbours.

The Scandinavian markets in particular have relatively high degrees of foreign spill-over, although mostly from the UK; the channels with the highest share also carry domestic material, and in this way in effect avoid the regulation in their target markets. But this type of spill-over is not exactly similar to that in the small markets with large neighbours as these channels often also carry domestic content.

There is also some spill-over in the Baltic markets, especially Estonia; this has some relation to the Russian-speaking minorities, as well as in Slovenia where there are different minority groups. Perceived separately, this is somewhat similar to the problem in small markets with large same-language neighbours, but here it consists of a large minority also interested in being supplied with media content in their native language. There are also positive benefits of the spill-over, such as that minority groups can watch (or listen) to programmes in their primary language, if there are no domestic alternatives that allow this. Should this end in split civil societies, a separate challenge for the market in question would be presented.

Initially, I can identify three different aspects of spill-over: a) "national" channels with domestic content by-passing national legislation by broadcasting from another market; b) foreign channels without domestic content spilling over into the neighbouring markets and being viewed there; c) minorities serviced by foreign channels in their own language. These represent separate problems.

From a policy perspective, the by-passing of national legislation from a regulator-perspective as in the case in the Nordic market as well as in French-speaking Belgium, distorts competition for the domestic channels and hinders the purpose of the legislation in effect. The spill-over is a problem for the domestic media both in ensuring sufficient funding, but also for the state in supporting a national domestic perspective.

The minority servicing is an option dependent on the state, either to supply these services or letting the minority buy access in so far they are able.

This said, I can also identify the (dubbed) channels of multinational corporations like Disney, Discovery or MTV networks (and in principle also the BBC) distributed into most of the markets studied, which can be considered a different type of spill-over which affects them all. In other words, it might not just be spill-over but rather channels targeting a specific market dubbed in the language in question in order to achieve economies of scale and avoiding minimum efficient scale difficulties of focusing on a single domestic media market.

The main challenge from a national legislative perspective is the loss of advertising revenue which in small streams ends up elsewhere, if not in the neighbouring market, then in an multinational corporation. This is especially evident in Switzerland, where the cost-structure in securing national domestic television in the language areas is extremely high. The consumer demand could probably be met through foreign channels, but news, debate, cultural programmes and fiction with a domestic perspective cannot. The second related problem is the loss of effective domestic regulatory measures if, for instance, OFCOM neglects the control of channels targeting foreign markets, making it possible to by-pass not only national legislation in the markets they are targeting, but also EU legislation; see Svendsen (2011) for a further discussion of this. The foreign spill-over of share indicates a difference between small markets with a same-language large neighbour (with regional extension), but it is also possible to identify some impact of international competition affecting the markets through competition with domestic TV stations.

The small markets with a large same-language neighbour have to be considered more vulnerable due to the threat of the regionally extended function of secondary markets. But there are also

other causes, such as increased international competition, where increased vulnerability from an economic perspective is due to the diversion of domestic funds to international players in small streams. Increased competition can be considered an on-going process in many small markets in particular, which can harm the domestic media companies and production, due to very scarce resources.

In a green paper from the European Commission (1994) on "*Strategy options to strengthen the European programme industry in the context of the audiovisual policy of the European Union*" there are similar perceptions on the myriad European cultures and languages argued in the conclusion of the analysis in chapter 4, where suggestions as to how to overcome the language barriers are presented in point 3.3.1: *"Besides the obvious structural defects in the European audiovisual industry, observers over the last thirty years have generally pointed to the linguistic and cultural diversity of Europe to explain or justify its permanent state of crisis and underdevelopment. … it is worth noting that the 'digital revolution' brings with it the potential to overcome or even capitalize on what has hitherto been seen as a structural constraint. On the language front, digital compression makes it economically viable to edit and broadcast works in a number of languages. … Compression cuts costs drastically and allows a wide variety of combinations to be used in the same broadcasting medium thus offering audiences increased possibilities of access to European programmes. These new technical possibilities must be used to the full in order to remove partitions between national markets and enable programmes to cross borders."*

This in effect, as argued by the European Commission, would change the market towards less importance for domestic markets; the conceptual difficulty here is the ignorance of culture, with it denoted as being similar to language and nothing more. The belief in the usage of technology only is an illusion: what is required in the legislation is an understanding of identification with the programming, where cultural proximity plays an important role; as argued by Straubhaar (2003: 85), cultural proximity[xlii] is *"... the tendency to prefer media products from one's own culture or the most similar possible culture"*. The application of the concept is related to the difference between foreign and domestic media; see also Straubhaar 1991 and 2001 for further information and elaboration on the concept. The neglect of taking into consideration culture and the difference in culture across the European single market can very well be an explanatory factor of why there is no direct single market, but rather a set of individual markets with little spill-over besides the same-language markets.

5.3.3 Language and the next door challenges

Studying the figures on the small markets sharing a large language helps establish a preliminary argument on the difference between these markets and others with a separate language. There were several different indications of sharing a language as well as neighbourhood effects in general.

Based on the data, I can identify the following criteria which establish different conditions between markets sharing a large market and the conditions of externalities, aka foreign penetration.

a) Channels in national languages which escape from domestic policy to avoid regulatory criteria, for instance for advertisement breaks.
   - This is perceived especially in Denmark, Norway and Sweden, but also in other markets. Usually this is done to avoid national domestic legislation on advertising if the other markets have looser rules on the subject.[xliii]

b) International satellite channels/Pay-TV
   - This is perceived in most markets across Europe to a varying degree in both small and large markets. Large markets in particular have several of these thematic channels; this is somewhat dependent on the distributive platforms of pay-TV.

c) Foreign channels spill over due to minority: Heterogeneity vs Homogeneity
   - This is both a potential benefit and a threat under assumption of the importance of national unity and culture. This is especially the case if there are large minorities; an instance of this is perceived in Slovenia with among others Italian, Hungarian and Roma minorities, as well as in Estonia and Latvia with large Russian minorities.

d) Larger neighbour channel spill-over in smaller states
   - Small markets sharing the same language as a larger market neighbour appear to have an impact, especially when these markets have large market benefits and language.

I will primarily discuss the question of small markets with large market same-language neighbours. This is because these markets and states face competition to an increased degree due

to their having a form of what I define as a *secondary market*[xliv] *function* which can enlarge the market of the large neighbour with its smaller next-door counterpart.

Basically, commercial media companies should utilise economies of scale and a) purchase stations; b) penetrate into the neighbouring market to establish cross-viewing; or c) target the sale of popular programming. Cross-viewing is a challenge as it can potentially divert revenue from the domestic market and thus increase pressure on the domestic market players and their dependency on foreign imports.

In other words, for small markets with same-language large neighbours, there is a risk of increased competition for the same revenue, with the difference that this is diverted outside the domestic market. This is a general problem of the media market, but it should be especially visible in these types of markets due to the effect of the secondary market function, which is partly due to language and regional extension, enabling commercial companies to utilise economies of scale through an enlarged domestic market with the potential for both increased audiences and enhanced profit. However, this is primarily a predicament for small markets with same-language larger neighbours, and not *per se* a general small market problem.

The challenge of revenue diversion is one facing all markets due to fragmentation of audience, and these markets could indicate what increased dependency on international programming from multinational corporations would entail. As the first part of the argument stated, based on the characteristics of media goods, the small media markets, particularly in television broadcasting, will have difficulties obtaining sufficient revenue to function efficiently. Small markets with same-language large market neighbours will have increased vulnerability due to this, and if multinational corporations manage to divert revenue from the domestic market. This can be a threat for the local zone of creativity for producing original domestic content in these markets.

In this way, language becomes both a benefit and a disadvantage. The way small markets react to the lack of independence can also differ from market to market, depending on different conditions (Hallin, 2009), but small markets with large same-language neighbours have a special problem due to language (Puppis et al., 2009) and are not able to use the same strategies as other small markets. Small markets in a specific small language area can protect their electronic media market through language combined with regulatory measures, as has been the case in the Nordic countries (Lund & Berg, 2009).

Small markets with same-language large neighbours are not able to use the same protective strategies. When studying the share of markets in countries such as Austria, Ireland and Switzerland, I find indications for a higher degree of foreign television penetration, which is not

normally visible in similar small markets. Language area becomes a way of distinguishing small markets from each other: when examining the Scandinavian markets (Denmark, Norway and Sweden), the potential of cross-viewing is there, but is quite limited. Another issue concerns the Slavic languages in Eastern Europe: although somewhat similar, they are still different (somewhat comparable with Scandinavia, but with more variances).

Small markets in larger language areas face different challenges than other small markets. The cross-viewing in Switzerland, Austria and French-speaking Belgium, where protection through language and high levels of subisidised national production are not sufficient to secure the domestic market, makes different strategies more necessary than in other less vulnerable markets, especially because of the dependence of the public broadcasters in Austria, Ireland and Switzerland on advertisement revenue. Language can in this way influence the degree of vulnerability of a small market.

In other words, if a small market has the same language as a large neighbour, especially if there is regional extension, then it risks being considered a secondary market for its large neighbour's media activities, and this foreign media dominance can potentially challenge its cultural identity. Language can either protect or harm small market media markets.

Regional extension combined with a shared language establishes the potential of a secondary market effect, when the market can be considered both markets at the same time for a commercial television company (if possible under existing legislation) which enables utilisation of economies of scale effectively.

Traditionally, I would discuss television markets as having the characteristics of a closed market with high barriers to entry, but the secondary market effect entails open (dynamic) markets with low(er) barriers to entry, as these have already been bypassed in the *country of origin*. Secondary market effects seen in countries such as Switzerland, Austria, Ireland, and French-speaking Belgium can thus become threats to national cultures and potentially create difficulties in establishing local zones of creativity. Furthermore, there might be difficulties in securing original domestically-produced content as the import potential is increased. Overall, these markets face similar conditions to a large market, but the domestic market does not have the critical mass of the large same-language neighbour.

These conditions entail difficulties for these markets in securing cultural heritage as well as in preserving national identity without market intervention lending a protective measure, which is exactly what has been applied through PSBs in these markets, albeit differently. Austria, Switzerland and Ireland all have in aggregated figures some of the best funded PSBs in Europe

(2007). Note that the effect of the secondary market is also visible in smaller markets, such as Flemish-speaking Belgium and Cyprus, but to a significantly lesser extent. What appears to be of importance is the maturation of the media market in combination with the potential of profit that establishes the incentive to utilise the economies of scale, along with the interest of the consumers in the small markets sharing a language to increase the channel supply with low-cost programmes.

All pay-tv markets have and utilise the potential of bundling to finance small channels by packaging them with more popular ones. Large markets with pay-tv have a higher potential of securing financing for niches in this way, as the collective funding system will ensure that the weight felt by the individual consumer is relatively low compared to the total cost of the channel. Against this there is the neo-classical concern of consumer sovereignty which is disregarded in this way, as consumers pay for unwanted content. The state, market and civil society are all involved here. Market concerns are based on consumer sovereignty, while those of the state encompass both consumer and public interest, and civil society groups have an interest in securing a broad variety of content and the potential in large markets to fund channels for niche-groups. What this also shows is that cable (as well as other pay-tv forms) is generating turnover and thus economy: this is also indicated by the profitability of HBO in the US.

The secondary market effect comes into play here, as this also occurs in the situation where small markets share the same language while also having regional extension: the extra market helps increase revenue.

Although I argue for the secondary market function of these market-types, this does not imply that the small markets sharing a language but not having regional extension are less vulnerable; there is just a different effect. Beside the potential of using their other same-language market channels, if the distributors are interested, it also enables for instance Austria to use German public broadcaster correspondents in various parts of the world. Similarly, Danish television stations are able to use Swedish and Norwegian, due to the language similarity.

Consequently, I argue that it is possible to identify a secondary market function for small markets which worsens the conditions for securing public interest in the markets with regional extension and also threatens their cultural identity in the long term, but this can also help establish some large market benefits. The main challenge for these markets is securing their local zone of creativity of production, which can easily be overwhelmed by the large market same-language neighbour.

5.3.4 The difference in competitive conditions between large and small markets

Size influences the level of commercial private television share, especially the domestic, but also the level of public private share, both domestic and total. However, especially the total public share which is a consequence of the small markets with similar language large neighbours. The reason for this is that the smaller the market in terms of population, the fewer consumers there are to sustain the commercial media, while in economically larger markets the consumers can afford to pay more and the state can subsidise broadcasting to achieve a specific purpose. Basically, there is a limit to how much the market can sustain domestically, especially in very small markets, which is also why larger international companies can compete effectively against domestic television as their market surpasses that of a particular domestic market.

The larger (measured both by economy and population) European markets have the potential to sustain stronger commercial television channels, but the same is the case for public television channels. This is a consequence of the conditions described in chapter 4.5; where relative size influence means that strong economy markets can sustain stronger public companies, and also that the market with both a large population and strong economy can sustain both a strong private commercial and public presence. This also indicates that smaller markets risk facing difficulties when subjected to high levels of international competition, as they do not have the same amount of tools to secure a strong domestic presence.

This is also an indication of the commodity-type TV-programmes; as defined above, they are non-rival and either non-excludable or excludable, meaning that the cost of the first copy is the primary expense equalling the cost of production: this means that the smaller the potential audience of a given regions is, the fewer there are to pay the production costs. There should therefore be less high-quality television available in small markets only supplied through that market. Secondly, the distribution of television originally had the characteristics of a natural monopoly; again technological development has reduced this issue, but the capital investment (e.g. the sunk-cost) in establishing platforms is relatively high.

There are therefore usually conditions of oligopoly in the distribution markets. The market is not able to efficiently allocate resources due to its conditions, especially those of scarcity, and this leads to market failures and thus almost always state intervention. The small markets are less able to allocate sufficient resources efficiently to allow competition due to market imperfections.

It is intriguing to note that small television markets with a large same-language neighbour are the least concentrated. There are some different reasons for this:

First of all, those in Central Europe have a very developed infrastructure, combined with a strong public broadcaster which is partly funded by advertising. As such, in order to secure the desired domestic media goods and services, some of these markets have focused on securing programming through public broadcasters, which then compete against foreign broadcasters in the same language.

Secondly, the same-neighbour large market broadcasters perceive the territories as an enlargement of their market, especially if regionally extended. French-speaking Belgium appears to be a case in which the public broadcaster is relatively weak even compared to its Flemish neighbour, leading to the question of whether its strategy is to focus on particular services and let the rest be serviced by private operators. Nonetheless, it certainly appears that if regionally extended, large markets have the potential to affect their smaller neighbours sharing the same language.

In other words, these types of small markets are under pressure from their larger same-language neighbours hindering their options, or rather changing the rules of the game. It should be taken into consideration that some cultural connectedness and regional nearness is necessary to establish the enlarged or secondary market.

International competition and the increased fragmentation of audiences will help increase the diversity of the market, which is seen in the rise in international channels and other niche-channels launched by both public and private domestic broadcasters. Consequently, the domestic broadcasters help increase fragmentation to avoid the slow but certain bleeding of audience share to other new niche-channels, with the result that *niche* content and audience segmentation are in progress. While in general having resulted in lowering the share of the market leaders, most notably in Sweden and the UK (Eurodata TV, 2009), this also indicates a rise in international competition from large media corporations as well as the increasing competition for revenue (advertising, cable relay or otherwise).

Although this development has yet to be completed, it indicates the problems the broadcast media are currently experiencing: niche-channels like Disney, Cartoon Network, Animal Planet and more are part of international corporations diverting revenue from domestic TV, increasing the competition for revenue, usually without carrying domestic content, generating problems for the small markets in securing nationally produced content.

The primary problems lie in the risk of lowering of programme quality, reduced informational or cultural programmes, and an increase in imported programming, all resulting in the primary issue for small markets of financing the domestic content.

The main issue encompasses the foreign companies utilising their economic prowess to:

a) purchase and distribute popular formats and content, while small market broadcasters who lose revenue are less able to invest in content. The consequence of this development is that while content in general becomes more diverse, the level of national content is reduced. In short, small markets risk being flooded with foreign content, which in itself is not a problem, unless in combination with reduced domestic quality content as well as
b) investment in new platforms such as HD where the large media companies are able to introduce content before small market broadcasters; in contrast large markets continue to be able to finance the development. While large market domestic broadcasters might have the financial strength to keep up, their small market counterparts are hardly able to do so.

This analysis has shown some of the variety of television competition, with the difference being heavily dependent on the level of state intervention. The UK is an example of this, where both the BBC and Channel 4 are public channels balancing the market. This brings into question the levels of competitive advantage public broadcasters possess, especially when compared to the multinational corporations' turnover.

Public broadcasting constitutes a condition of market intervention establishing market barriers through its existence; the benefit of this is the level of public benefit it provides, which can have a detrimental effect on private competition. The economic large markets, especially if they also have small populations, have stronger PSBs, leading to assumptions of these having a competitive advantage in providing their services in the public interest. However, due to their existence, they also help the training of creative personnel, thereby helping to maintain the creative zone which otherwise could have been reduced. What is substantiated is that this establishes a potential which is not easily imitated and with little prospect of substitution. Where programmes can both be imitated and have high a factor of substitution, the development of talent is a process where domestic accountability helps secure an industrial sector.

Public and private operators compete for the same scarce time-resources available for consumers, where competitive advantages become important, and where the potential for reducing imitation and substitution of programmes becomes viable to secure distinctiveness. What is of concern is the condition of economically weak markets, where the impact of economically strong private operators can distort the benefits of the public broadcasters if not regulated so as to ensure the private operators provide services on behalf of the public good. The

emphasis here is on the production industry as well as the local pool of talent, which can be at a disadvantage compared with private operators with a focus on profit.

Studying the differences in the level of public and private competition in Europe indicated a strong effect of size for public and private channels, especially domestic channels. Indeed, it appears that political intervention strongly impacts the scale of competition and that any discussion of a level playing field in Europe is difficult because if all should have equal opportunity based on the country of origin principle, this might actually mean that domestic and foreign channels have unequal opportunity as a consequence, as they are subject to different regulatory demands.

Should a level playing field have full impact it should entail the existence of a single European market for TV. However, for a single European market for TV to exist would mean that heavy state intervention by public broadcasters would present a separate challenge, as these also – with their varying degrees of strength and impact – should be limited. However, that would mean limiting the protection of what is in the preamble of the treaty, namely the protection of diverse European culture and heritage.

The point to make is that the idea of a single European market for TV should not be considered viable when taking into account that myriad European languages and cultural difference, if a single European market actually were to be implemented, would be hard pressed. This also means that it would be beneficial to study the market concentration level in the individual markets, which will be done below.

5.4 Research Question E: How does size influence the level of concentration in television markets?

5.4.1 Introduction

The influence of size is evident in the analysis of the first hypothesis, but this also showed massive differences in scale of public funding, which could circumvent part of the influence of size as based on the similar characteristics. Secondly, what I identified in chapter 5.3 was that size influences the level of public and private television share, especially the domestic television share. Here the relationship between size and market concentration will be studied.

I shall examine the relation between size and the level of market concentration in television markets. Based on the results of the analysis in chapter 4, I might not identify that smaller markets are more concentrated as per the second hypothesis, but this would still be in line with theory as argued in chapter 2, as television markets in general have a drive towards concentration.

One of the reasons that this might not entirely be the case is due to the level of state intervention in the markets, which is evident in the analysis in chapter 5.3 above as well as chapter 4.3.

This means that size is not the only variable influencing the TV market concentration levels, but rather is a function of a combination of factors including regulatory measures taken by the state, besides the drive towards concentrated markets as a consequence of media market characteristics.

The argument is therefore based on the theoretical discussion in chapter 2, *media market characteristics*, that the television markets in general have characteristics of imperfect competition based on market and content good characteristics, and thus tend to be concentrated. The theory of oligopoly, being especially relevant for TV markets, is deeply embedded in literature, but little research has been carried out to indicate the overall market structure of television markets using cross-market methods.

My research is based on my systematic research of literature on oligopoly, and especially the following literature. Oligopoly has been studied intensively using different methods, but for Cournot, oligopoly (1839) means in some instances studying this using imperfect competitive factors as done by Okuguchi (1998, 2000), but also under assumptions of perfectly competitive factors markets as done by Vives (1999) and Martin (2000). A main challenge lies in the method of measurement where Hannah and Kay (1977) have argued on behalf of one-parameter concentration indices, containing both concentration radio index (CR), and the Herfindahl-

Hirschman Index (HHI). Both the CR and HHI are commonly used; see for instance Whinston (2006) for application in horizontal mergers, and Porter & Zona (1993, 1999) for studying collusion in relation to state highway construction and school milk contracts.

However, there have been cases such as the electricity market where it has proved an inadequate measure, as indicated empirically by Borenstein, Bushnell and Knittel et al (1999). Other researchers such as Cowling & Waterson (1976) have utilised a separate perspective by using a Cournot-Nash equilibrium, along with Clarke & Davies (1983), who applied the method to establish an industrial diversification index.

Nonetheless, analyses of competitive behaviour using market concentration measured horizontally will provide a picture of the competition in the individual markets. The analysis will help establishing indications of the market structures and concentration levels in European television markets.

The purpose of this analysis is to establish an initial perspective on market concentration and competition in European television markets, in order to document empirically the relative concentration levels. This is done to substantiate whether small markets are more concentrated than large, or if TV markets overall are relatively concentrated. This is based on the theoretical chapter 2 which states that TV market generally generate a drive towards high concentration.

This will be discussed in more detail below, where market concentration from a policy perspective will be discussed.

5.4.1.1 Market concentration from a policy perspective

In order to present the challenges perceived from a policy perspective, I will present and work through some of the arguments found in a European Commission staff working document on media pluralism.

There is a potential policy interest in this particular study related to the scale of market concentration and the ownership of media TV companies as well as to the difference in small and large markets.

One of the premises argued in chapter 2 is that television markets should be relatively concentrated, particularly the small markets, as revenue is scarce, meaning that only a few companies are able to survive as a consequence of relatively high investment and operating

costs. However, as discussed in chapter 5.3 above and chapter 4.3 and 4.5, I cannot ascertain this as the scale of political intervention also plays an important role.

In the European Commission working paper on Media Pluralism (2007) it is stated that: *"In the last ten years, media concentration has been an important issue in all parts of Europe. A major concern is the possible domination of a number of markets by national and international companies. In this respect, the question of audience and readers plays an important role. A few companies may control the majority of TV channels and newspapers, potentially leading to an enormous opinion-forming power in that market."* … "While competition policy is one central aspect of pluralism, it is difficult to pin down how much size matters or which way competition policy is good or bad for pluralism: a number of studies already signal that even if media concentration is limited, this does not necessarily mean that media pluralism is ensured. And the mere fact that concentration takes place does not automatically indicate that there is a loss or a lack of media pluralism. Several aspects have to be taken into account. Furthermore, the question of concentration has always to be considered in the light of the size of a particular geographic or linguistic market". …. "The fact that only a few players are present in a small market may not in itself threaten media pluralism as long as companies respect internal codes that promote diversity of opinion".

The European Commission states the concerns about market domination in general. Furthermore – in line with theory – it is stated that concentration does not necessarily present a challenge for media pluralism. What is particularly interesting is their argument that concentration has to be considered in the light of the size of a geographic or linguistic market. That perception is in line with the results of the analysis in chapter 5.3.2-5.3.3, which indicate that some markets have particular challenges as a consequence of language. But are high concentration levels worse in larger markets than in small? Rather than differentiating by size, it could be that market intervention or the role of international companies in markets have resulted in different competitive conditions, and that what is important is the actual structural conditions in each market. This analysis could help to provide a partial answer to this.

It is for instance common knowledge that the increase of niche-channels has led to audience fragmentation, visible by studying the leading channels' audiences decline. This development could over time result in an undermining of the FTA (free-to-air) advertising-funded business model. This can lead to a negative spiral as a potential adverse effect of less available revenue for domestic production of original content.

What I will show is that large markets can be as concentrated as their small counterparts as a result of government intervention and the general characteristics.

This is in line with theory as the economies of scale in the television market can be argued to be a consequence of the initial sunk-cost investment combined with continuous investment in programming, i.e. media content goods which, being non-competitive in nature, can be re-used as long as there remains interest in the material.

The increase of pay-tv in combination with the new technological development of digitisation has increased the benefits of the economies of scale of the platform by enabling potential access to an increased amount of TV channels; this can reduce barriers to entry on the one hand, but it also strengthens the potential of utilising economies of scale. This is the consequence of media market characteristics as presented in chapter 2.

This can also lead to an increased move towards combining pay-tv with advertisements to supplement financing, as these are not *per se* mutually exclusive. This, in combination with exclusivity on particularly attractive content goods, can secure a financial basis for commercial television, especially in a small market where revenue is particularly scarce. The process has accelerated as a consequence of digitisation, which has increased the potential for more channels with high levels of market penetration.

This can create a drive towards either more concentrated or more pluralistic markets measured by the existing players' strategies in the eye of changing rules of the game.

From a consumer perspective, the best cases of increasing supply of channels will establish higher levels of individual choice in the TV markets, but with the risk of there being little domestically-produced content available in the market, or in the worst cases, ruinous competition. This is also where the difference between concentrated markets can have an influence, as there is a potential for investment in original programming to secure audience viewing of particular channels, especially if this enables high profit margins (EC, 2007). This is where the separate challenge evolves, as there are no clear-cut studies indicating a relationship between efficient TV markets also having large investments in originated programming, especially not in small markets.

Basically, the state runs into a paradox of choice with an increasing supply of television channels in the market drawing audiences from generalist channels, while at the same time risking the level of original domestic content as this in essence threaten the economy of generalist channels

usually financing the most domestic content. In short, concerns of competition versus cultural concerns of securing original domestic content.

As presented above there is a difference in the results of market concentration in different industries, but little research has been carried out on this for the television industry in Europe. I will therefore establish the degree of market concentration in the TV industry across the sample markets to establish the relative level of concentration. This will help first of all to establish if there is a relationship between the size variables and market concentration. Market concentration might not be a consequence of size alone, but rather appears to be a form of externality of the combined effects of the market conditions and political intervention – but as size influences the scarcity conditions it remains important to investigate.

I will identify the market concentration levels as well as international ownership in the included markets. I will do this by examining the relationship between size and market concentration (measured both by HHI and CR), to identify the strength of the relationship based on the sample. I will investigate this using comparative method by applying multiple regression analysis on the relationships and by using the statistics for the individual markets.

Furthermore, I will use the data to establish the ownership strength in the individual markets in order to draw up an overview table of the strongest media companies in Europe.

This will help to identify international ownership and is followed by a discussion on market concentration and the influence of multinational corporations and lastly by a conclusion.

5.4.2 Regression analysis on the relation of size on market concentration

Here I conduct the regression analysis of the size variables on the level of market concentration. The purpose is to examine whether there is a relationship between size and market concentration using the Herfindahl-Hirschman Index measurement, denoted respectively HHI (calculation based on all-day viewing) and HHI prime (calculation based on prime-time viewing). Furthermore *concentration ratios* will also be applied as measure using CRx as abbreviation, i.e. CR1-6. First I will identify the relationship between size and HHI, followed by size on CR.

Table 22: The influence of size on market concentration measured by Herfindahl-Hirschman Index (HHI)

Market concentration	HHI (all)		HHI (prime)	
	Population	Economy	Population	Economy
Coefficient	2.657	.020*	-1.314	.027**
SE	5.338	.012	5.565	.012
Obs.	26		26	
Adj. R^2	.056		.099	
R^2	.132		.171	
Prob > *F*	.197		.116	
Durbin-Watson	1.266		1.328	
VIF	1.018		1.018	

*** (**) [*] denote significance at p < 0.01, (p < 0.05), [p < 0.1] / [note that the Belgium total is applied]. The regression statistics are available in appendix C.4.1 and C.4.2.

The regression analysis results for the overall model are non-significant for HHI (all) as well as for HHI (prime). This does not mean that the results are insignificant, but rather that the HHI levels are too similar between the small and large sample markets to establish a linear relationship. The reason for this is lack of variance in the concentration levels in the sample markets. The size of economy was significant for both regressions, using single regression analyses yielded relationships with a strength of 8,6 % for all-day and a little stronger for prime-time with 13,4 %. In short, size is non-significant in relation to HHI for the overall model, but with a weak relationship for economy alone.

Small markets should be more concentrated than large ones as a consequence of the media market and content good characteristics, but theoretically large ones would have a similar drive towards concentration.

In short, this indicates that television markets in general are concentrated. The concentration ratio in the individual markets does not have to be very different, especially since most markets

have strong public broadcasters which are either independent of or only partly dependent on commercial revenue.

Parts of this are also because of the foreign owned companies reaping benefits of scale, and it also becomes fairly clear that this is a consequence of state intervention practices in the individual markets.

This might not look interesting as it could be interpreted as if size does not matter. But it actually is interesting, as it indicates that there is a high concentration in television markets in general (see appendix C.3-C.4 and D for the descriptive statistics).

Let's go through the argument in more detail: larger markets could be less concentrated than small markets, but in general they appear to be similar in level of concentration to small markets. This also means that the companies in the larger markets have a higher potential for profit, as their "basis" for generating revenue is larger – as per the leverage argument from the introduction.

Basically, this means that as larger markets are as concentrated as small markets, the companies should have a higher potential turnover as the larger markets (pay and advertising as well as potential public revenue) have a larger critical mass than the small markets.

Similarly, this substantiates some of the considerations of the influence of state intervention circumventing the number of players there otherwise could be in the market.

This underlines the fact that PSBs help set the rules of the game in the market, especially since I identified in chapter 4 the tendency for strong economic markets to have stronger and better funded public broadcasters than small markets. The reasoning behind this is that the (usual) dual funding structure of the PSBs increases the market volume and as such does not destroy the potential for commercial players in the market, even if they do carry advertisements.

An exception to this can be seen in small same-language markets with regional extension, where the large market broadcasters can divert advertising revenue from the market, thus limiting the ability of a number of domestic companies to reach efficient scale.

In this sense, the public broadcasters help secure a minimum level of competition in the markets, while they also as a consequence of their remit are obliged to invest in and produce original domestic programming.

This also means that the assumption linking market concentration based on advertisement revenue as in the Commission's working paper on media pluralism (2007) does not take into

account the total TV market volume including subscription and public subsidy. That working paper states (2007) that: *In smaller markets it is economically impossible for the advertising spend to sustain more than a few broadcasters. The size of the TV advertising market in 2004 in Finland, for example, was 230 million €, in Hungary 242 million € and in the Czech Republic 246 million € compared with a market size in Germany of 4235 million €, United Kingdom 5537 million € or Italy 4124 million €.… "The fact that only a few players are present in a small market may not in itself threaten media pluralism as long as companies respect internal codes that promote diversity of opinion.*"

What this study does indicate is that the assumptions of the EU based on the media reduces complexity, as this does not take into account foreign penetration and increased dependence on foreign content in smaller markets, as they in principle could have a similar level of television companies, but a massive difference in number of channels. Added to that is the challenge of the country of origin principle, meaning that a channel can be targeted towards a specific market from for instance the UK, even though it carries domestic content from the target market.

This does not establish a direct critique of the EU, but it does question whether or not the premises of the EU legislation on TV in effect favour particular types of markets or large companies. The lack of the inclusion of public and subscription revenue as well as in principle supplementary revenue limits the breadth of the EU perception of the individual markets, and the consideration of trans-market, cross-channel ownership. Not only this, it lacks understanding of the consequence of the country of origin principle. This finding does appear to carry some policy implications requiring further investigation.

At the same time, it underlines the impact of political intervention in the markets, as this primarily remains dependent on the regulatory measures taken in the individual markets to ensure competition on the one hand, while securing the domestic production industry and original domestic works of creativity on the other.

The trend in the TV industry is towards concentration in either duopolies or oligopolies; the more concentrated the more potential for profit. But several markets are, as a consequence of their platform competition and digitisation, in a process of securing more channels. What this study indicates is that the strategic behaviour from a company perspective is to deter entry or aggressively fight entry by establishing niche-channels for segmented audiences to secure profitability.

This technological development is taking place in conjunction with a process where the increase in pay-penetration increases the potential of the new channels to be funded by subscription

revenue, and thereby limits the dependency of the commercial companies on advertisement revenue.

In this game, the public broadcaster plays the actual role of balance, forcing the individual commercial broadcasters to adhere to a certain level of quality if they want to secure an audience; this also happens in some markets by actively establishing their own niche-channels in direct competition with commercial actors.

I will now attempt to identify a relationship between the size variables and the increase in market concentration from CR1 to CR6 which will enable a differentiated perspective from the HHI calculation. Note that this is not individual channels, but the combined number of channels for the company in question: see appendix D for the overview. For Italy this means that RAI is the largest media company measured by the combined share of 42.1 % based on the following nine channels: RAI DUE, RAI GULP, RAI SPORT PIU, RAI TRE, RAI UNO, RAISAT CINEMA, RAISAT EXTRA, RAISAT PREMIUM and RAISAT YOYO. In this way I can view it in relation to the effect it has on the *i'th* company share based on the equation in chapter 3.3.2.4.2.1.2, *Concentration Ratio (CR)*. Should this also indicate that there remains little difference between small and large market concentration levels, then it follows that the part of the second hypothesis concerning the influence of size on market concentration is not substantiated.

The reason for applying the combined share of the largest companies, and not the share of the largest channels is to exemplify that the three largest channels might be owned by either the same company, two companies or even three companies. If that combined share was 50 % the three different situations would constitute different market situations.

In table 23 below, the results of the regression analysis of the size variables on the level of market concentration using CR1 to CR6 will be presented. The purpose is to examine the hypothesised relationship between the size and market concentration denoted respectively CR1, CR2, CR3, CR4, CR5 and CR6. This will establish if, statistically based on the sample, I can identify a relationship between the variables.

Table 23: The influence of size on market concentration measured by concentration ratio (CR)

	CR1		CR2		CR3		CR4		CR5		CR6	
	Population	Economy	Population	Economy	Population	Economy	Population	Economy	Population	Economy	Population	Economy
Coefficient	-.007	.000	.030	.000*	.049	.000	.072	.000**	.058	.000**	.057	.000***
SE	.067	.000	.103	.000	.103	.000	.083	.000	.071	.000	.064	.000
Obs.	26		26		26		23		23		23	
Adj. R^2	.033		.064		.019		.172		.234		.305	
R^2	.111		.139		.097		.247		.304		.368	
Prob > *F*	.260		.179		.308		.058		.027		.010	
Durbin-Watson	1.460		1.465		1.600		1.847		1.720		1.626	
VIF	1.018		1.018		1.018		1.010		1.010		1.010	

*** (**) [*] denote significance at $p < 0.01$, ($p < 0.05$), [$p < 0.1$] / [note that the Belgium total is applied]. The regression statistics are available in appendix C.4.3-C.4.8.

Table 23 shows that the overall model on the influence of size for CR1-3 was non-significant based on the sample. This does not mean that the results are insignificant, but rather that the concentration levels by CR1-3 are too similar between the small and large European television markets to establish a linear relationship. In other words, they are not sufficiently different between small and large markets to claim a causal relationship at CR1-3. In contrast the CR4-CR6 ratio is significant with an explanatory strength of 17.2 % for CR4 at $p < 0.1$, 23.4 % for CR5 at $p < 0.05$, and 30.5 % for CR6 at $p < 0.01$.

The results of CR1-3 indicate that markets at these levels of market concentration are relatively similar – but also that the inclusion of more companies has a positive influence on the strength of the relationship. This indicates that when the number of companies is four or more, the larger the size variable is, the more concentrated the market. Presented slightly differently, the larger the size variables, the more potential there is for an increasing number of companies. This is realistic as larger markets have a higher critical mass available for an increasing number of companies, and because in larger markets companies can achieve minimum efficient scale with lower share numbers, than in smaller markets. Studying the betas (in appendix C.4) it is evident that economy plays an important role for concentration, as this also represents the level of available revenue (critical mass) in a market, and thus influences the number of channels that can be in the market for that amount of revenue.

Recalling the individual coefficients for size of economy and population in table 22, the strongest – and the only one that is significant - is size of economy. This indicates that the larger the economic purchasing power per capita, the more potential there is for a higher number of television providing companies.

This makes sense, as what I measure for economy is the relative purchasing potential for each consumer, and the more resources there are available per capita, the more demand there can be for television, for instance *à la carte* channels.

The larger the size of the economy, the more channels can be supplied, especially in economically developed markets - with encrypted distribution allowing for subscription revenue. Segmentation of channel audience allows more targeted commercials or content directed towards a specific niche.

The increase in channel supply can be done by large players, either domestically or internationally. Domestic players using this strategy are usually former companies with generalist channels using new possibilities for potential profit, and to deter competition.

International players usually target markets with their niche channels, for instance Disney using children's channels to target as many markets as possible where there is potential profit. This can increase diversity in content output, but it might also mean higher percentages of re-runs and acquired content, to make ends meet if the level of competition becomes too high, especially in markets with weakly developed pay-subscription.

In weaker economy markets the increase in channels will usually not be supplied – or only to a degree where it is financially feasible – as the critical mass in the markets is insufficient to sustain larger number of companies and the result if it happened could easily be cut-throat competition with downward spirals of quality and overall diversity.

For both measures I find an indication of oligopoly market structures for the European markets, but with high levels of variation for the individual markets. I will study this further below by comparing the individual markets. I have found the size variable significant in relation to the horizontal market concentration levels for CR4-CR6, but not for the HHI measurement, nor for CR1-3. The coefficients (especially when studying the beta coefficient, see C.4) indicate that economy is the strongest explanatory part of the size variable in this multiple regression.

My point is that this is a consequence of varying levels of market intervention, which remains somewhat independent of size variables, or rather circumvents the market. The larger markets are thus able to have more companies competing with the public companies, as these have higher chances for succeeding in achieving minimum efficient scale, as the included 4^{th}-6^{th} company is relatively smaller measured by share, than the 1^{st} to 3^{rd} company.

I have shown that, based on the size definition, it is possible to identify a significant relationship between size and market concentration levels based on CR4-CR6, but not for the HHI measurement, nor for CR1-CR3, which I argue is a consequence of market intervention. The economy part of the size variable does however appear to exert some influence. Note that the HHI measurement is an overall concentration measure where it is evident that most markets are moderately to highly concentrated; this also means that it makes sense that there is a limited direct link to size, especially in the eye of the rather strong state intervention in the form of public broadcasters present in more of the sample markets. The size influence CR4-6 is interesting and substantiates my initial argument that the market characteristics are similar, but that the larger the market, the more potential there is for an increasing number of companies, i.e. due to higher potential for achieving minimum efficient scale due to more resource availability. In the CR1-CR3 public broadcasters hold important positions for most sample markets, which tells us about the influence and effect of state intervention.

5.4.3 Market concentration comparatively

Below, I will introduce and discuss the individual market concentration measured by CR1-6 for all-day viewing, and HHI for both all-day and prime-time viewing. The reason for showing both is that all-day viewing illustrates the general level of competition, while the prime-time slots are where the toughest competition between the companies lies. This is to be expected, as prime-time is when the audience primarily view television. This also means that this is when the "premium" content, such as first run home-grown shows and high-profile news programmes are launched, i.e. when channels roll out what they believe can attract the most viewers. This shows in the HHI figures that while prime-time is different in each of the markets, this is dependent on that particular market's working culture, and I have therefore applied the individual market prime-time definitions. The purpose of these tables is to study differences in market concentration to indicate the importance of market intervention.

First I will present the CR index followed by the HHI figures.

Table 24: CR1-6 index based on combined company audience all-day viewing (ordered alphabetically).

	CR1	CR2	CR3	CR4	CR5	CR6
Austria	42,5	58,1	72,7	81,3	85,5	88,5
Belgium Flemish	40,3	67,5	78,4	82,3	85,8	87,3
Belgium French	26	46,1	63,2	80,3	85,6	87,6
Bulgaria	40,2	54,4	71,5	78,4	81,1	82,6
Cyprus	21,2	41,2	58,6	70,5	74,2	76,8
Czech Republic	38,2	68,8	86,5	n.a.	n.a.	n.a.
Denmark	40	68,9	77,4	83,4	86,3	88,2
Estonia	22,6	43,2	59	71,8	75,2	77,1
Finland	44,7	76	90,1	90,9	91,6	92,2
France	34	63,3	76,1	78,9	80,9	82,6
Germany	26,6	48,2	71,5	86,8	89	90,1
Greece	18,3	35,4	50,6	64,2	75,3	85,7
Hungary	24,6	45,9	59	63,8	67,7	70,2
Ireland	36,6	48,8	57,3	62,9	67,9	72,3
Italy	42,1	81,8	86,2	89,3	90,3	90,8
Latvia	22,6	43,3	58,6	69,3	72,2	72,4
Lithuania	27,7	50,4	64,7	72,4	78,1	79,3
Netherlands	34,9	58,5	77,8	82,3	85	86,9
Norway	37,5	68,5	78,2	87,5	91,9	93,8
Poland	44,5	68,3	85,6	87,5	89	90,3
Portugal	30,5	59,9	84,8	n.a.	n.a.	n.a.
Romania	25,9	38,9	46,3	51,1	55,7	59,7
Slovakia	35,1	57,1	74,1	n.a.	n.a.	n.a.
Slovenia	37,7	69,2	74,9	79,3	81,5	83,2
Spain	23,2	41,7	58,7	68,4	74	77,5
Sweden	34,2	63,3	79,5	89,1	91,7	93,5
UK	33,4	56,3	68,2	75,1	81,2	87
Average	32,8	56,4	70,7	77,0	80,7	83,2

Source: Original data categorisation. The table is based on the table in appendix D, and was constructed following chapter 3.3.2.4, *How does size influence concentration in television markets?* The calculations are based on the equation from chapter 3.3.2.4.2.1.2, *Concentration Ratio (CR).* The table only depicts all-day viewing, but prime-time is also available in appendix D. The abbreviation n.a. equals that the data was not available in the dataset. Source data: Audience data is from EURO Data TV and the national audience measurement agencies. Ownership data is based on MAVISE and Amadeus databases in combination with annual reports.

Table 24 shows the calculated concentration ratio based on the primary owner of the largest television companies in each market. The table shows CR1-6, except for three markets where the CR1-3 could be calculated. These are Portugal, Slovakia and the Czech Republic where it was mainly possible to identify the three largest media companies: however, leaving them out when they all reach above 70% on the CR3 ratio would not be reasonable as they all represent markets with high concentration levels. I will not include these markets in the description below, but keep in mind that they are more concentrated than in general.

The CR ratio scores across the markets indicate some interesting similarities and differences. The reason for using all-day consumption is that this measure represents the general level of competition. The purpose is to study differences in market concentration to indicate the importance of market intervention, and to establish indications for the type of market structure.

Note that the difference between the CR ratios is important: Italy for instance only has a difference between CR5 and CR6 of 0.5% but this also means that CR7 cannot increase more than 0.5% from CR6. This tells us about the maximum size of the remaining players in the market.

The markets with the highest ratio based on the six largest companies can be distinguished between those above 60-69%, 70-79%, 80-89% and 90+% ratios:

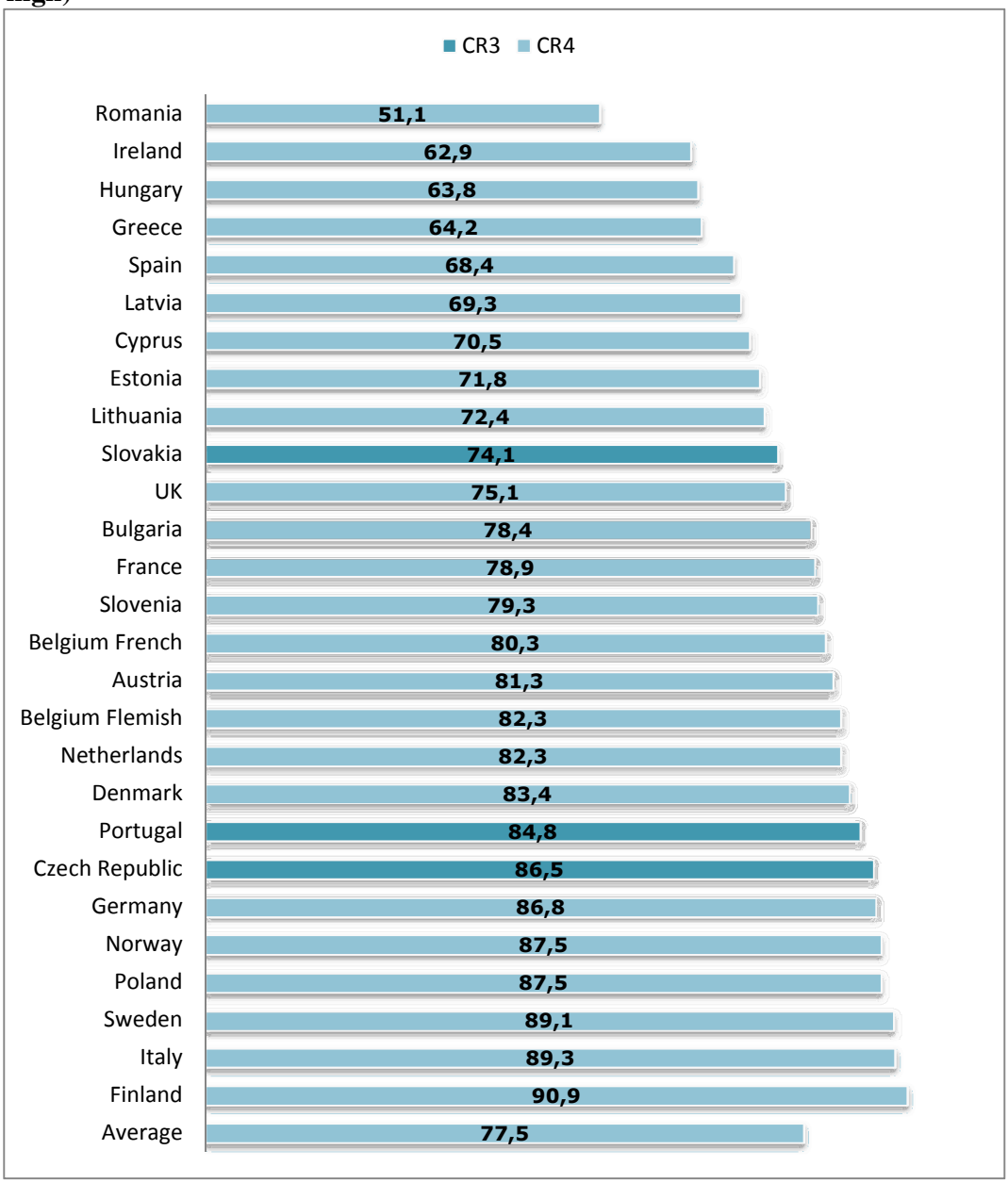
- The six markets with CR6 equal to or above 90% concentration level are 93.8% in Norway, 93.5% in Sweden, 92.2% in Finland, 90.8% in Italy, 90.3% in Poland and lastly 90.1% in Germany.
- There are nine markets (not counting Flemish- and French-speaking Belgium separately) with ratios equal to or above 80%: Austria with 88.5%, Denmark with 88.2%, Belgium French with 87.6% and Flemish with 87.3%, UK with 87%, Netherlands with 86.9%, Greece with 85.7%, Slovenia with 83.2% as well as France and Bulgaria both with 82.6%.
- Seven markets have 70% ratio: Lithuania with 79.3%, Spain with 77.5%, Estonia with 77.1%, Cyprus with 76.8%, Latvia with 72.4%, Ireland with 72.3%, and Hungary with 70.2%.
- Romania is the only market with less than 70%, having a CR6 ratio of 59.7%.

Studying these figures establishes a first synchronic perspective on the TV market concentration levels. What I have identified is that the television markets are mainly highly concentrated markets showing oligopoly tendencies and what is also evident is the degree of difference between the markets for the most part. The CR6 index shows me that from an overall perspective, I can substantiate the high concentration claim for the TV markets, but also that there is a set of markets viable for further research on market competition. The ratios also indicate that the market is usually dominated by roughly three-four companies, and usually not above six. This also helps explain why the linear relationship that was expected between size and market concentration was non-significant.

The table shows quite a diverse picture of the structures in the individual markets, but it also indicates a trend of high concentration levels, which is emphasised by the CR4 ratios based on Albaran & Mierzejewska (2004): *"a simple way to measure concentration is to use the four largest companies, i.e.… If the four-firm ratio is equal to or greater than 50 percent … then the market is said to be highly concentrated"*.

In figure 8 below the CR4, except for three markets where just the CR3 is used, is presented to show the degree of concentration.

Figure 8: Highly concentrated markets based on CR4 (by level of concentration from low to high)



Source: Similar to table 24

The figure shows that all TV markets, when using Albaran & Mierzejewska's definition of the consumption figures, have: CR4≥50% = highly concentrated markets and that none are below

50% ratios. Indeed all except Romania would be highly concentrated even at CR3. The average is 77.5%, which underline the strong oligopoly tendencies in TV markets.

Applying as a rule of thumb that CR4≥80% establishes challenges for competition, this is the case for 12 local markets (counting Belgium once): Austria, Belgium (Flemish- and French-speaking), Czech Republic, Denmark, Finland Germany, Italy, Netherlands, Norway, Poland, Portugal and Sweden. While this method is not conclusive, it does indicate high levels of concentration. Furthermore, the table also indicates very diverse market structures in the sample. I will look into this below where the figures are recalculated into HHI. But first I will examine the relative position of the PSBs in the sample.

The differences between the included markets are highly dependent on the scale of government intervention as based on the relative PSB market strength. I will use the PSB position in CR1-6 to provide an example of how PSBs function as balances against commercial companies.

Table 25: PSB rank in the concentration ratio (ordered alphabetically)[xlv]

	First PSB rank	Second PSB rank	Third PSB rank
CR position 1	**Austria** (ORF), **Belgium Flemish** (VRT), **Cyprus** (CYBC), **Denmark** (TV2/Denmark), **Finland** (YLE), **France** (France Televisions), **Germany** (ARD), **Ireland** (RTE), **Italy** (RAI), **Netherlands** (NPO), **Norway** (NRK), **Poland** (TVP), **Spain** (RTVE), **Sweden** (SVT), **UK** (BBC)		
CR position 2	Belgium French (RTBF), Czech Republic (CTV), Greece (ERT), Portugal (RTP), Slovakia (STV), Slovenia (RTV)	Denmark (DR)	
CR position 3	**Bulgaria** (BNT), **Estonia** (ERR), **Hungary** (MTV), **Latvia** (LTV), **Lithuania** (LRT), **Romania** (TVR)	**Ireland** (BBC – UK), **Slovenia** (HRT – Croatia), **UK** (Channel 4 Group),	
CR position 4		**Austria** (ARD - Germany), **Belgium Flemish** (NPO – Netherlands), **Belgium French** (France Televisions - France), **Germany** (ZDF)	**Ireland** (Channel 4 Group – UK)
CR position 5			**Austria** (ZDF - Germany)
CR position 6		**Cyprus** (ERT – Greece), **Estonia** (VGTP – Russia), **France** (ARTE), **Netherlands** (ORN TV), **Spain** (ASSOCIATION RELATIVE A LA TELEVISION EUROPEENNE),	**Germany** (3SAT – joint operation),

Source: Original data categorisation based on appendix D.

Table 25 shows the position of the public media companies in the individual markets, where foreign PSBs have the name of the market of origin stated as well. In a majority of markets (15 counting Flemish-speaking Belgium), the PSBs are market leading; in seven markets they are secondary; in five they are third. This means that the PSBs in general are among the strongest companies, and – usually – major domestic players. While there are differences in the relative strength of these, there are also markets with more than one PSB in CR1-6, such as Denmark where public companies hold both first and second position, Germany where they hold both first, fourth and sixth, as well as Spain, France and Netherlands where they hold first as well as sixth position.

PSBs can function as a balance to the commercial companies, i.e. taking their relative market position into consideration. The most competitive markets are those with the weakest PSBs, and I can therefore show that government intervention does work in the sense of ensuring that audiences view domestic broadcasters, which insofar as they are defined as PSBs would broadcast content in the service of the public interest. While differences can also be related to the choice between state or commercial models towards the media, all included markets have relatively heavy regulatory regimes in TV, even if the deregulatory trend since the 1980s and 1990s has removed some restrictions.

My research aim is not to evaluate whether strong PSBs are beneficial or not, but conclusively these companies are surprisingly popular, even in a situation where fragmentation of audiences is a trend. The conclusion on PSBs is that without them, especially in small markets, the availability of domestic programmes would be limited, especially for genres like information and drama. What is important to remember is that the PSBs represent direct state intervention in the market with the purpose of securing public interest. Looking at the differences in programming output in the Nordic market, I see a significant difference between the output of the main public and private companies (see Lund & Berg, 2009).

The balance argument holds interest for public media companies as they have to secure some degree of legitimacy based on content and services provided, but at the same time they have to compete with their commercial counterparts.

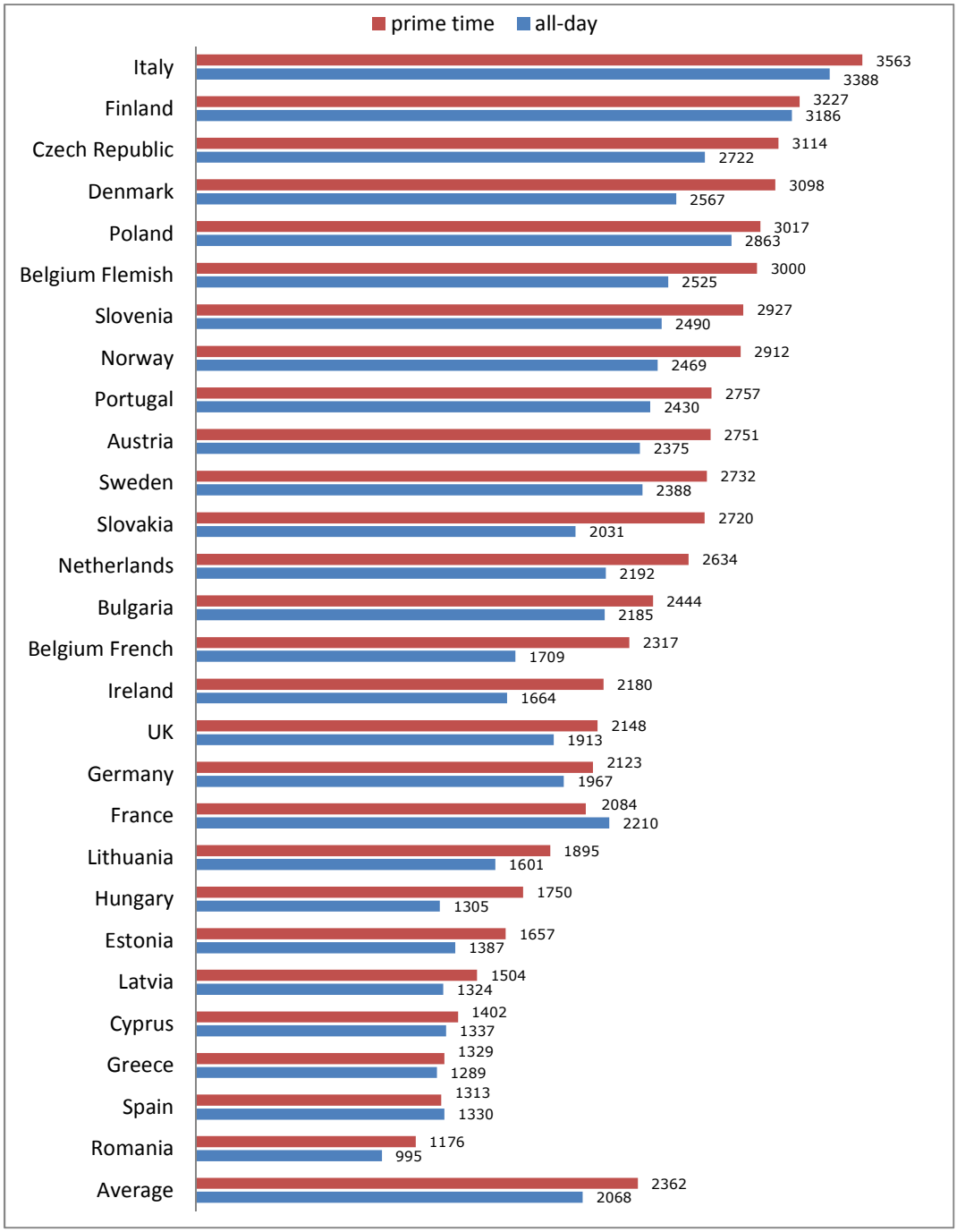
Below, I will investigate the market concentration levels measured by HHI for both all-day and prime-time viewing. This will establish the relative market concentration levels in the individual markets while taking into consideration the differences in company strength using the HHI measurement.

5.4.3.1 HHI measurement

The application of the CRx measurement showed that the markets included are highly concentrated based on the CR4 figures, but I also identified high levels of difference. As such I will establish an HHI which gives greater weight to the share of the larger companies; this also means that even though I lack some small companies, this has little impact on the HHI (EU, 2004). The remaining share is diverted into single share companies to establish the HHI as correctly as possible (Tirole, 1988). The figures will be presented in table format below and include both all-day and prime-time viewing to establish the level of difference.

The measurement will be applied to establish an initial level of market concentration based on the HHI level set by the US Department of Justice and the Federal Trade Commission (1992, revised 1997) in their Horizontal Merger Guidelines (hereafter US guidelines) for concentration of market shares in section 1.5, which are the following: *"The Agency divides the spectrum of market concentration as measured by the HHI into three regions that can be broadly characterized as unconcentrated (HHI below 1000), moderately concentrated (HHI between 1000 and 1800), and highly concentrated (HHI above 1800)…*". Applying this framework will help establish the concentration level based on another method of measurement.

Figure 9: Market concentration measured by HHI for both all-day and prime-time consumption (ordered by prime time)



Source: Own categorisation of data based on the constructed table in the appendix D. Similar to table 24. The calculations are based on the equation from chapter 3.3.2.4.2.1.1, *Herfindahl-Hirschman Index HHI*.

Figure 9 shows overall similarity between the all-day and prime-time HHI figures where the averages are 2068 for all-day and 2362 for prime-time. Both indicate – on average - highly concentrated markets, but it also shows differences in the individual markets. This picture with a stronger prime-time concentration was what could be expected as the audience views most television in the evening. This is what increases the incentive for broadcasters in general, and commercial broadcasters in particular, to roll out their most audience-attracting programming to secure viewers and thus revenue[xlvi].

The large Italian market is the most concentrated in the involved sample with an HHI of 3388 in all-day and 3563 in prime-time consumption; this is heavily reliant on the duopoly relation between the public broadcaster RAI and Mediaset S.P.A. This is closely followed by the small market in Finland for all-day consumption with an HHI of 3186 and 3227 in prime-time, where there is a similar pattern with the public broadcaster YLE and the Bonnier owned MTV Media; the main difference lies in the strength of the third competitor where Nelonen Media is stronger than Sky (Newscorp) in Italy.

The high Italian and Polish market concentration is to some degree attributable to the positions of RAI and TVP, the same being the case in Norway and Denmark as well as in several other markets. The established duopolistic and oligopolistic market competition actively limits entry by applying deterrent niche-channel strategies.

The degree of market concentration appears to have a significant relationship to the scale and scope of government intervention in the markets as also indicated in table 25 above, especially when combined with figure 9 above.

Romania is the least all-day concentrated with HHI of 995 in all-day, increased to 1176 in prime-time, but it is not that far from the Greek, Latvian and Hungarian markets. This establishes an indication of market similarity, where I can claim that both small and large markets can be more or less competitive, depending on the market barriers to entry and exit combined with the regulatory conditions and PSBs in the markets.

What remains are that both the most and least concentrated markets are large ones and this also indicates something about the influence of market intervention. Large markets like UK, Germany, France, Italy and Poland are all highly concentrated in all-day viewing as well as prime-time, while the others are moderately concentrated in these instances like Spain,. These large markets have heavy governmental intervention in the media in common, using reasonably funded PSB in combination with strong commercial broadcasters. Similarly all small markets

range from moderate to high concentration levels. The main difference is Romania, which based on all-day viewing is unconcentrated.

One interpretation of these results could be that size does not matter, as I expected smaller markets to be more concentrated based on the second hypothesis. But size does matter, as the differences lie in the strength of the companies in each market, meaning that the large market companies with similar strength to a small market, have more potential revenue as a consequence of critical mass and the market characteristics, as argued in chapter 2 and shown in the analysis in chapter 4 based on the first hypothesis.

The is because scarcity conditions have to be kept in mind when interpreting the results as this links the results with the level of funds in each market. A large market television company with a similar strength of concentration (level of audience share) would have a higher potential turnover due to critical mass, than a similar strength small market television company. Thus, what I have identified substantiates my first hypothesis researched in chapter 4. Importantly it also documents that small and large markets are usually highly concentrated when studied using this method of measurement.

The market difference when using HHI in contrast to the CR analysis shows the differences related to relative company strength. Table 26 below illustrates in more detail that, based on the sample, the television markets in general range from moderately to highly concentrated, whereas only a one can be defined as unconcentrated. The unconcentrated market is around the borderline towards moderate concentration. This remains in line with the theory stating that television markets will be concentrated, but it does question whether small markets should be more concentrated than large ones. It also shows that the markets where the PSBs have the weakest market position are the ones with the least concentrated markets measured by HHI.

Table 26: Difference between all-day and prime-time

	Low concentration	**Moderate concentration**	**High concentration**
All-day	Romania	Hungary, Latvia, Estonia, Spain, Greece, Cyprus, Belgium French, Ireland, Lithuania	Austria, Belgium Flemish, Bulgaria, Czech Republic, Denmark, Finland, France, Slovenia, Netherlands, UK, Germany, Poland, Italy, Sweden, Norway, Slovakia, Portugal,
Prime-time		Romania, Hungary, Latvia, Estonia, Spain, Cyprus, Greece	Belgium French, Ireland, Lithuania, France, Bulgaria, Slovenia, Netherlands, UK, Belgium Flemish, Denmark, Austria, Germany, Poland, Italy, Finland, Sweden, Norway, Slovakia, Portugal, Czech Republic

Source: Original data categorisation based on the results in figure 9

Table 26 shows that for all-day consumption, 17 markets (counting the Flemish-speaking Belgium) can be considered highly concentrated, while nine (counting French-speaking Belgium) are moderately concentrated and one can be considered unconcentrated, albeit at the margin of moderate concentration. In prime-time consumption, this changes to 20 highly concentrated markets (counting both Flemish- and French-speaking Belgium), seven moderately concentrated and none unconcentrated.

This original data categorisation substantiates the argument that the TV market carries an inherent drive towards concentration. But it also shows a great deal of variation between both small and large markets. This indicates that I cannot per definition expect size automatically to have significance on the level of market concentration, as state intervention practices offset or balance commercial market logic.

I argue that what influences market concentration is a combination of factors, where market intervention in the form of a public broadcaster and other regulatory conditions impacts by changing the rules of the game.

This should not be interpreted as meaning that size does not matter, as a similar ratio would mean that size actually impacts, the reason being that the difference is in the size of the companies required to reach an equal level of concentration. For instance the German market competition between the public broadcasters (ARD, ZDF) and the main commercial companies (RTL and ProSieben.Sat.1) consists of stronger companies (measured by revenue) than the Danish, Swedish and Norwegian market companies, even though the overall competition in these markets is similar between purely publicly funded public broadcasters, a large domestic company (TV2/Denmark, TV2/Norway and TV4/Sweden), and the two main commercial competitors (owned by ProSieben.Sat.1 and MTG in all three markets).

Even though the Nordic markets are overall a little more concentrated than the German and the UK markets, this does not in any way mean that the companies in the Nordic markets are stronger in level of relative economic capability.

The case of Romania with a level of concentration around the threshold between low and moderately concentrated markets is interesting, as it is the only one. One of the evident reasons is the relatively limited public broadcasting intervention strength and that Romania has high audience fragmentation levels.

The relative strength of the market intervention caused by public broadcasters also shows that I cannot isolate the actual effect of size in this. The argument that small markets have less critical mass and thus should be more concentrated rings true, but government intervention through PSB using public revenue means that I cannot fully substantiate this.

The main point here is that interventions in the market ensure that the critical mass is surpassed in terms of what the market can yield in commercial terms and thus change that condition: this is one of the situations where the characteristics of market and content goods are leveraged by direct intervention.

The data supports the hypothesis of concentrated TV media markets, but also that there are major differences between the included markets. I also see that PSBs highly influence the concentration level as a consequence of the market positions.

As a rule of thumb, the TV markets are oligopolies for all included European markets, where the main question is what type of oligopoly there is, i.e. is it a duopoly with a weak third, or are there

three-four companies of almost the same size? Different market constellations can result in differences in terms of services provided and in quality of content. It is beyond the scope of this dissertation to investigate actual effects of different oligopoly market structures.

The PSBs appear to hold a significant position in several of the markets. There are reasons to be concerned in some markets based on their constellation for television, while the multinational corporation challenge appears most viable for the Eastern European markets.

The TV markets are fairly concentrated. Part of this is related to the relative strength of the PSBs and their position in the markets.

Moderate and strong PSBs (usually) with state funding and privileges function as market correctors which can change the rules of the game in the market. PSBs distort market competition per definition.

However, correcting market failure, understood as per the established merit-good definition of the state, is the purpose of their existence. In effect, PSBs can function as quality standard setters for content in general, as well as for news and information in particular.

This can also help the AV-industry in the individual markets, as the public company has to train media professionals and fund television content, which will not otherwise be financed to the same degree.

Furthermore, it appears that it is the regulatory measures and PSBs that set the rules of the game for commercial broadcasters. This means that large markets can be as concentrated as small markets as a result of government intervention. The point is that size is not alone in influencing the TV market concentration levels, but rather this is a function of a combination of factors including regulatory measures taken by the state, and especially the effect of the PSBs – as they remain the largest companies in most of the sample markets.

The current condition of the TV industry is moderate to high levels of concentration for most markets in either duopolies or oligopolies. The public broadcaster in this game plays the actual role of balance by setting a level of quality for the individual commercial broadcasters to compete against if they want to secure an audience. I have established that the TV markets range from moderate to high concentration levels in most domestic markets measured by HHI and highly concentrated measured by CR4. Furthermore, I have sought to present the relative position of the PSBs in this measurement, and the level of government intervention appears to have an effect on the level of market concentration.

I find an indication of oligopoly market structures for the European markets, but with high levels of variation for the individual markets in terms of specific type of oligopoly.

Below, transnational ownership considerations are presented and discussed in relation to the considerations above on ownership and indirect considerations on large market player benefits.

5.4.4 Transnational ownership of television companies

There are dwarfs and giants in the TV markets. While the audience trend moves towards increased fragmentation, the ownership of these outlets, it has been argued, is becoming increasingly concentrated. Above, I have presented the market concentration levels in the individual markets and here the intention is to show the ownership across markets using these figures.

The purpose of studying transnational ownership of television companies is twofold:

1. Firstly it is done to identify the competition public TV companies is subject to in small and large markets, and if there are changed conditions of competition in a way where a "dominant" public television company in a particular market is actually in international comparison under pressure due to the strength of multinational corporations.
2. Secondly it is done to determine whether the multinational corporations appear to benefit from economies of scale and thus having a benefit of size, by entering multiple markets, thus increasing their crucial mass. multinational corporations can in principle be small in one or more particular market, but when combined could actually be a large player. This would also mean that these companies are not in the same way subject to the conditions of size as domestic companies in small markets, as their markets are larger (i.e. more than a single domestic market) than most domestic broadcasters, and especially most public broadcasters.

To study this particular aspect of size, such companies much reach across at least two markets. By defining multinational corporations as companies owning multiple stations and outlets internationally, I should be able to measure the relative share levels in the individual markets based on primary ownership.

Public media are usually argued to be acting on behalf of the public interest (at least in most of the included markets) with some differences in the scale and scope of government influence.

All types of ownership can be accused of having a bias of one type or another, the public towards government policies, the private towards their commercial interests, and the non-profit private media towards their particular cause. The benefit of a combination of public and private media is that they effectively have to compete for the audience, and this can yield benefits to the quality of content insofar as the competition is advantageous; should it be disadvantageous, the quality is at risk of worsening as a consequence of cost-saving or profit-optimisation due to ruinous competition. As indicated by Park (2005), high levels of competition may result in reduced levels of diversity; this has also been shown by Richard van der Wurff and Jan Van Cuilenburg (2001) in their study of the Dutch market, where they identified that competition can lead to ruinous competition with high-levels of low-quality programming.

When concentration of ownership is discussed as being problematic, it can be argued that this is a consequence of high levels of concentration of media ownership which increase the risk of very few agents having potential influence on both economic and political affairs and thus being unaccountable to the public.

Accountability is a key term here, especially when it comes to ensuring that the media are following public interests and not only particular commercial[xlvii] or state interests.

The public TV media have served as an effective counterweight, ensuring that the commercial media have not been able to monopolise information streams, as well as how this information is presented.

A second concern is that even though there might be an increase in fragmentation, as a consequence of increasing channel-supply, this does not mean that these are not owned by the same companies. If there is an increasing amount of outlets in combination with fewer owners, diversity is not necessarily increased, but is not necessarily decreased either.

The questions of interest are whether the multinational corporations (a) are actually pan-European and (b) if they are marginal factors or (c) if they have the potential for a significant impact in terms of share of consumption by their supplied services.

In table 27 below, I will show the trans-market share of the primary media companies in the individual markets which are present in the CR1-6 in two or more markets. The domestic public media have been retained in the table, but names of the foreign public TV companies involved in cross-viewing have been removed, but can be seen in the appendix D under the individual

sample market. It is a matter of argument, but there is cross-viewing especially in Austria, Switzerland, Flemish-speaking Belgium and Ireland, as well as in some of the Eastern European markets, as per chapter 5.3.2.4.

I have plotted the share figures of the largest companies with similar primary ownership in the table, but keep in mind that only those companies in the top six in combination with having a presence in two or more markets are included.

The table illustrates a proxy for trans-national ownership in the included markets based on the primary ownership principle and derived from the six largest media companies in the individual markets. As the included companies are the largest in the individual markets, this means that in companies with low share ratings, as can be the case with specialist channels such as CNN, Disney, Discovery and MTV/VIACOM, there is more cross-ownership than indicated in the table.

I have decided on this method to simplify the output. While I have the other figures for several of the markets, it became evident that there were massive differences in each of them, based on regulatory frameworks and the strength of the public TV media. I have decided to keep the strongest channels in the individual markets to establish a first synchronous perspective of trans-national ownership; this makes it easier to correct the figures before beginning the establishment of time-series data. This table is relevant solely for Europe as I lack more global-wide data to establish a more coherent picture of trans-national ownership. The abbreviations used in table 27 are shown below.

Abbreviation	Name
Nat. PSB	National PSBs
For.PSB	Foreign PSBs
P7S1	ProSiebenSat.1 Media AG
RTL	Bertelsmann & RTL group
Disney	The Walt Disney Company
MTG	Modern Times Group
VIA	VIACOM INC (Video & Audio Communications)
DIS	Discovery Communications Inc.
BON	Bonnier AB
MAI	MEDIA AD INFINITUM
BOU	BOUYGUES (TF1)
ITV	Independent Television
NC	News Corp. +BskyB
VIV	Vivendi SA
Mset	Mediaset S.p.A.
PRI	PROMOTORA DE INFORMACIONES SA (\Prisa\)
LA7	LA 7 TV
TW/CEME	Time Warner & Central European Media Enterprises
ANTV	ANTENNA TV S.A.
PBK	PIRMAIS BALTIJAS KANALS SIA

Table 27: Cross-ownership share of a company having a CR1-CR6 in the individual market and reaching two or more markets

	Nat. PSB	For. PSB	P7S 1	RTL	Disney	MTG	VIA	DIS	BON	MAI	BOU	ITV	NC	VIV	Mset	PRI	LA7	TW/ CEME	ANTV	PBK
AT	42,5	12,8	15,	14,6																
BE FL	44,2		10,				1,5			3,8										
BE FR	20,1	17,1		26			2			5,3	17,1									
BG	14,2					17,1							40,2					2,7		
CH	33,1	8,9	8,9	14,2							5									
CH IT	32	22													25,6		1,3	2,5		
CH DE	32,8	17	13	16,2																
CH FR	30,6	15,9		12,1							18,1							2,2		
CY	21,2	2,6																	17,4	
CZ	30,6					17,7												38,2		
DE	43		21,	23,3			2,2													
DK	68,9		8,5		2,9	8,5		1,9												
EE	15,8	3,4		1,9		22,6														12,8
EI	36,6	13,5										4,4	5,6							
ES	26,7														18,5	9,7				
FI	44,7		0,8				0,7	0,6	31,3											
FR	35,7			12,8							29,3			2						
GB	45,3			6,1								22,9	6,9							
GR	17,1			13,6															15,2	
HU	13,1		21,	24,6		4,8														
IT	42,1				1								4,4		39,7		3,1			
LT	14,3					27,7														5,7
LV	15,3			2,9		20,7	0,2						22,6							10,7
NL	36,8		19,	23,6			4,5	2,7												
NO	37,5		9,7		4,4	9,3		2,9												
PL	44,5						1,5	1,3						1,9						
PT	29,4															30,5				
RO	7,4		4,8															25,9		
SE	34,2		9,6		1,8	16,2		2,6	29,1											
SI	31,5	4,4		2,2		5,7		1,7										37,7		
SK	22																	35,1		
US					13,4		12,2						10,3					13,4		

Source: Original categorisation of data based on appendix D

Table 27 shows that the multinational corporations' impact in most markets is not one of domination, as in most they have not reached a level of direct threat to the individual ecologies. But they have reached a level where further research would be valuable, especially in Eastern Europe and on the role of the RTL group and Pro7.Sat1 in Europe.

Information-wise, the table includes the figures of the 20 commercial media companies present between the six largest TV media companies in the 29 included markets (counting Flemish- and French-speaking Belgium separately) and not counting the three Swiss regions. I will not report on the three Swiss linguistic areas, but they have been retained to show that language matters in terms of cultural proximity. Note that the US has been included, as many of the largest companies originate there, in order to secure some comparison. Markets such as Bulgaria reach 60%, French Belgium 50.4%, the Czech Republic 55.9%, Hungary 50.7%, Lithuania 57.1 and Netherlands 50.1%. Sweden also yields a positive with 59.3%, primarily due to TV4 majority holder Bonnier, but there are differences in the type of potential threat this represents. The main challenge in the Netherlands lies in the strength of two European multinational corporations, the RTL group and Pro7.Sat.1. In French-speaking Belgium, it is the foreign penetration that has influence, while the main challenge in Eastern Europe is a consequence of market development flowing from their acceptance into the EU, i.e. regulatory and legislative alignment. Here, it is interesting to look at the potential challenges facing the Eastern European markets. For the most part domestic companies continue to dominate, and while there are differences, the levels of potential threat have to be studied individually using in-depth case-study methods.

First, there are seven companies operating in two markets (Swiss regional): *Bonnier* which is present in Sweden and Finland; *MEDIA AD INFINITUM* is in Flemish- and French-speaking Belgium markets; *ANTENNA TV S.A* is present in Cyprus and Greece; *ITV* is in the UK and Ireland; *PROMOTORA DE INFORMACIONES SA (Prisa)* is in Spain and Portugal, *Media Set* is in Italy and Spain, and *Vivendi* operates in France and Poland. Secondly there are two companies present in three markets; *PIRMAIS BALTIJAS KANALS SIA* is in the Baltic markets of Estonia, Latvia and Lithuania; *BOUYGUES*[xlviii] *(TF1)* is in France, Switzerland and French-speaking Belgium. These are not the companies I have a main interest in. Below, I will study the companies present among the six largest companies in at least five markets. I will not go into detail about each of the companies, nor include all their properties in this particular study.

Walt Disney Company is present as one of the six largest companies in five of the markets, being in Denmark, Norway, Sweden and Italy primarily with children and youth channels, but

also in the US with the Disney/ABC television group. The children and youth channels are actually broadcast by satellite to most European markets as subscription channels; in fact Disney Channel in 2009 had 194.3 mn. subscribers around the world, albeit with around 98 mn. of these in the US (WDC, 2009[xlix]). To this I can add ESPN, AETN/LIFTIM as well as other cable type properties, such as Jetix, Disney XD and Playhouse. By using the pay-TV development and digitalisation, Disney has managed to utilise their economies of scale as well as scope. An indication of this is the increase in revenue from $24.4 bn. in 1999 (Disney, 1999), to $36.1 bn. in 2009 (Disney, 2009). This is a reduction from the $37.8 bn. in 2008, but still better than the $35.5 bn. in 2007, meaning that they are beginning to regain ground after the financial crisis.

News Corporation is present in six markets as one of the largest six companies in: Bulgaria, Ireland, the UK, Italy, Latvia and the US. The company represents a total revenue of $30.4 bn. in 2009, an increase from $21.8 bn. in 1999. The News Corporation has interests across a wide spectre of media outlets, ranging from newspaper and information services in the UK and Australasia and internationally, to the Fox Broadcasting Company, 20th Century Fox, Sky Direct satellite television and the publisher HarperCollins (News Corporation, 1999, 2009).

Time Warner & Central European Media Enterprises is present in six TV markets. Time Warner operates in Bulgaria, Romania, Slovenia, Slovakia, the Czech Republic and the US. Time Warner's assets are in networks, filmed entertainment and publishing with the companies HBO, Turner Broadcasting System, Warner Bros. Entertainment and Time Inc. In addition Time Warner has a 31% stake in CEME. Time Warner's total revenue in 2009 amounted to $25.8 bn., a decrease from $26.5 bn. in 2008 due to the economic crisis (Time Warner, 2009.)[l].

Discovery Communications Inc. is present in seven TV markets as one of the six largest: Denmark, Finland, Norway, the Netherlands, Poland, Sweden and Slovenia. Discovery Communications Inc.'s primary business consists of its US networks, their international networks and its auxiliary business related to commerce, education and other activities. It has channels like Discovery Channel, TLC, Animal Planet, Discovery Health, Own, Discovery Kids, Hub, Science Channel, Planet Green, Investigation Discovery, Military Channel, Fit TV and HD Theater. The company revenue in 2009 was $3.5 bn., a small increase from 2008 when the revenue was $3.4 bn.

VIACOM is one of the six largest companies in eight of the TV markets: Flemish and French Belgium, Germany, Finland, Latvia, the Netherlands, Poland and the US. Company-wise, it owns media network properties including MTV Networks (MTV, VH1 CMT, LOGO, HARMONIX and MTV Games), Nickelodeon (Nickelodeon, Nick@nite, Nick.com, Nick Jr. Teennick, Nicktoons and more), Comedy Central (Comedy Central, Spike TV and TV Lnd) and Bet Networks. Under filmed entertainment it has Paramount Pictures, Paramount Vantage, Paramount Classics, MTV films and Nickelodeon Movie brands. Total revenue in 2009 amounted to $13.6 bn., a decrease from $16.6 bn. in 2008, but more than the $13.4 bn. in 2007 (Viacom, 2009). The company has been able to utilise its properties and intellectual property on an international scale. While National Amusements Inc. is a majority owner of both VIACOM & CBS, I have kept the two separate here in terms of ownership.

Discovery Communications Inc. is an interesting case as its activities are primarily related to TV; this can help in the understanding of the drivers in the contemporary TV industry. Its revenue is divided between $1.7 bn. for distribution (i.e. subscription), $1.4 bn. for advertisement and $375 million from other sources. The international network reaches roughly 685 mn. subscribers in 170 countries, but its advertisement revenue only counted for 29% in contrast to the 51% of the US network (Discovery Communications, 2009); this also establishes an indication of revenue dependency.

As stated in the Discovery Communications annual report (2009): "Nearly 50% of Discovery's revenue is generated from recurring subscriber fees through multi-year contractual relationships with our distribution partners. This long-cycle revenue provides top-line sturdiness and helps insulate the company from choppy and difficult environments, such as we experienced this past year. Importantly, Discovery's revenue is also geographically diverse with more than one third generated outside of the U.S., including many of the fastest-growing pay-TV markets in the world"… "Internationally, Discovery's networks leveraged the continued secular growth trends of pay-TV around the globe to expand its subscriber base and deliver 9% affiliate revenue growth, excluding the impact of foreign currency fluctuations".

In a similar way to Disney, Discovery also piggy-backs on the spread of pay-penetration to increase global reach, which enables utilisation of economies of scale in particular, but also scope. This is also substantiated in the report where it is stated that *"The segment [International networks] maximizes the use of shared content and our global programming pipeline in order to*

drive consumer engagement and efficiencies across all core brands, and delivers locally targeted customized programming, on-air content and schedules in 38 languages via more than 100 localized feeds". …"Our media content spans genres including science, exploration, survival, natural history, sustainability of the environment, technology, anthropology, paleontology, history, space, archaeology, health and wellness, engineering, adventure, lifestyles and current events. This type of programming tends to be culturally neutral and maintains its relevance for an extended period of time. As a result, our content translates well across international borders and is made even more accessible through extensive use of dubbing and subtitles in local languages, as well as the creation of local programming tailored to individual market preferences.". In a sense, Discovery attempts full utilisation of the benefits of its particular portfolio, with the benefits granted by its brand.

Disney, Discovery, Viacom, but also partly Time Warner and News Corporation, have followed a similar strategy internationally when it comes to utilising economies of scale, but have operated slightly differently when it comes to scope. A primary perspective here is that in a sense their primary market is the US, but the development of the international entertainment business has encouraged and made viable a more global business perspective which these companies have utilised. This development continues as the TV markets and their auxiliary businesses mature.

Modern Times Group (MTG) is present in 10 of the markets, consisting of the Nordic countries (Denmark, Norway and Sweden), the Baltic states (Estonia, Latvia and Lithuania) and other Eastern European markets, i.e. Bulgaria, the Czech Republic, Hungary, and Slovenia. The MTG properties range from Free-TV, Pay-TV (VIASAT, TV1000) through to radio, online activities and studios. MTG revenue amounted to 14.2 bn. SEK in 2009, an increase from 13.2 bn. SEK in 2008).

ProSiebenSat.1 Media AG is present in 11 of the markets (not counting the German- and French-speaking Swiss regions). They operate in the Scandinavian markets (Denmark, Norway, Sweden and Finland), in Central Europe (Austria, Germany, Flemish Belgium, Switzerland, the Netherlands) and in Eastern Europe (Hungary and Romania). The company has made a complete list of properties available in its financial statement and management report for 2009:

its core business mainly consists of free-TV, but also includes pay-TV and radio activities. The company reaches 78 mn. European TV households and had consolidated revenue of €2.76 bn. in 2009, a decrease of 9.6% compared to the revenue of €3.05 bn. in 2008 (Pro7.Sat.1, 2009)[li].

Bertelsmann (RTL group) is present in 12 of the markets (not counting the German-speaking Swiss region). The markets where they are among the six largest players are Austria, French Belgium, Switzerland, Germany, France, the UK, Greece, Hungary, Latvia, the Netherlands and Slovenia. The company's consolidated revenue in 2009 was €15.36 bn., a decrease from the 2008 revenue of €16.24 bn. The RTL group represented 34.4% of the total revenue in 2009 equal to €5.4 bn., a drop from €5.77 bn. in 2008. This makes RTL group with its content production arm Fremantle Media a leading player in the European TV landscape. The revenue originated mainly in Europe, with 34.4% from Germany, 58.1% in the other European markets, 5.1% from the US and just 2.4% from other markets. Its properties cover both radio and television in the RTL group; the publishers Random House [books] and Gruner + Jahr [magazines] as well as the media and communications services provider Arvato. A complete list of properties and subsidiaries is available in its annual report (Bertelsmann, 2009)

The larger corporations are active in several markets, but usually through different means and using different strategies. Buy-ups appear to have been the way forward, pursuing the more profitable markets first. The overall influence of multinational corporations appears remarkably balanced by both domestic public and private companies. Some multinational corporations have a major presence in particular areas, but the picture was far more diverse than anticipated before starting the investigation.

5.4.5 Discussion on market concentration and the influence of multinational corporations

While I cannot ascertain that the multinational corporations pose a direct threat in most markets based on these figures, this has been perceived in the context of strong PSBs. This is not the entire explanation and what table 26+27 substantiates is that the PSBs in effect balance the commercial strength, where it does not matter if the competitor is domestic or foreign. The main challenge lies in ensuring that the PSBs have sufficient revenue to secure their role in the market in the eye of increasing competition. Studying the multinational corporations' presence in the

individual markets, I see three large European players RTL, Pro7.Sat.1. and MTG. RTL and Pro7.Sat.1. are clearly the largest in terms of economic capability. These companies are the ones with the strongest presence in most of the included markets. The individual companies present among the six largest companies in at least five markets are presented below. I will not go into detail for each of the companies, nor include all their properties in this particular study.

The markets with the highest rate of multinational corporations are in the Eastern European market: Bulgaria, the Czech Republic, Hungary, Lithuania and Slovenia have the most. Besides these, there are also some in Central Europe based on RTL and Pro7.Sat1 ownership. But what I can see here is also that in most markets, the strength of the PSB is capable of balancing the commercial companies. The main concern is that the market strength in some cases appears to be divided between two primary players with a weaker third/fourth. What should have increased focus is the actual conduct of the companies in the individual markets in order to investigate what happens when there are relatively few competing companies. There would be merit in investigating the effects in the Eastern European region, which has high level of foreign entry in terms of both acquisitions and foreign penetration. This would help to establish the differences between domestic and foreign company conditions.

Studying the development of the companies, I see that they increasingly take advantage of their potential for economies of scale by using niche-channels to enter new multi-channel markets, or to launch new channels in already established markets to secure full utilisation of resources and investment in content. The benefits for the multinational corporations lie in the potential for bundling rights and purchasing power for premium sports, where the companies dependent on single markets risk being unable to fund these rights. In effect I find that there is a three-tier system in the domestic market competition between PSBs and both domestic and/or international players, potentially with local auxiliaries. Studying the ownership features also indicates that there is a dual market between players with primarily domestic interests and those with a more pan-regional or international interest. This indicates that I should distinguish between competition at the local level and competition in the global marketplace, e.g. those competing in a particular market and the battle over the most attractive content rights (potentially bundled) across territories.

The transnational-ownership in TV markets does not appear to be a considerable danger in terms of audience consumption in most markets, although there is high impact in certain countries. What does appear interesting is the economic strength of these companies in contrast to the public companies. Furthermore, there is a question of cultural proximity on the one hand and international niche-channels on the other when studying the impact of multinational

corporations in the markets. Some of the markets with *larger* same-language neighbours have very high foreign penetration share rates, which should not be considered a direct result of multinational corporation impact, but rather linked to the cultural proximity thesis. As defined by Straubhaar (2003: 85), cultural proximity is *"... the tendency to prefer media products from one's own culture or the most similar possible culture"*. Overall, the domestic companies, including the public ones, dominate the TV market for the most part.

Both the critical and the more realistic approaches to media ownership and concentration have merit. In the individual markets, there can be high levels of concentration which can be detrimental for the market, but on the other hand, in terms of multinational corporations, I can see an advent in the aftermath of digitalisation and growing pay-penetration which increases the globally available consumer group.

What I am interested in is whether the multinational corporations have an impact or significance outside their home-markets. Several large media conglomerates within TV are only present in their domestic and neighbouring markets. Can these be considered more problematic than a situation where Berlusconi controls Media Set on the one hand, and at the same time was in a position with the potential to influence the Italian PSB RAI? Is the strength of the Pro7.Sat1 in the Nordic markets any threat when taking into consideration the market structure? Companies such as Disney and Discovery are taking advantage of the digitalisation process to enable them to increase revenue globally. Technological development drives these trends and increases audience fragmentation and thus alters market conditions. But overall, the TV market structure is relatively stable.

In terms of impact, Herman and McChesney (1997) argued that the influence of globalisation on national cultures can in the worst cases be considered destructive, and in the best varied. The central point is the growth of transnational corporations, increased internationalisation and centralisation of media control. They state: *"We regard the primary effect of the globalization process – the crucial feature of globalization, and manifestation of the strength of the great powers and TNCs whose interests they serve – to be the implantation of the commercial model of communication, its extension to broadcasting and the 'new media' and its gradual intensification under the force of competition and bottom-line pressures. The commercial model has its own internal logic and, being privately owned and relying on advertiser support, tends to erode the public sphere and create a 'culture of entertainment' that is incompatible with a democratic order. Media outputs are commodified and are designed to service market ends, not citizenship needs"*.

While I can contend that the TV markets are global if a company is able to utilise economies of scale, this is an argument with limitations. While I accept that the multinational corporations are able to penetrate more and more markets, and in this way can grow in the maturation process of the TV markets thanks to digitalisation and increased pay-penetration, this does not necessarily entail a high-level threat to the domestic media systems in the short term. However, should these organisations reach a level where they have a major impact, there is a risk of revenue being diverted to international companies which can put increased pressure on the domestic TV industry; in particular, it is also important to take into account the risk of accountability displacement.

The finding that, from an overall perspective, it remains the domestic companies which dominate in the analysis, is in line with Tunstall (2008), who argues that national media industries are dominant worldwide, and that the US media have a relatively small market share in other countries. This is based on the argument that audience preferences are national, cultural and linguistic.

However, what is often forgotten is that even though national media companies are dominant, the question remains whether this is with domestic programming or foreign. This makes the understanding of domestic companies a bit elastic as I can reasonably argue that for the most part it is foreign in small markets.

This conclusion is in an overall perspective substantiated in this analysis as well. Although there are markets where the multinational corporations have a larger role, the audience continues to prefer domestic channels and domestic content, which is in line with Sinclair, Jacka and Cunningham (1996), who note that although TV is increasingly global in an industrial sense and even when taking the multi-channel development into consideration, it remains more local (i.e. domestic) than global (i.e. international) in the increasingly multi-channel market. Straubhaar's (1991) argument on cultural proximity in this sense rings also true, as such behaviour from the audience will generate advantages to local TV production. While the market concentration generally ranges from moderate to high, domestic media companies retain the major positions in most of the markets, but there are conditions in certain parts of Eastern Europe which warrant increased scrutiny.

Under conditions of increasing returns to scale, minimum efficient scale of companies is a condition of interest as this can establish a negative influence on the influx of new entrants. The threat towards domestic markets thus arrives from international channels utilising economies of scale to their benefit; measured in terms of competition this is beneficial, but in regard to the

consumer interest in domestic production, there are two possible outcomes: either the companies in the market will secure share through domestic programming and premium rights, or they will attempt to reduce costs by acquisitioned programmes.

This can be a benefit to the content producers able to utilise scale economics, as indicated in other industries (Bernard & Jensen, 1999, 2004) where companies exporting tend to be more efficient than their non-exporting counterparts, meaning that exporting companies either face more competition and adapt or have to be more efficient to enter the export markets. This is also why an international focus can be important for commercial TV operators to ascertain their business success.

Instead of perceiving the current development as a direct threat to television, it is more a development towards increased competition and diversification of television products, which will focus the media companies either towards niche-markets, or other revenue sources. Competition can be beneficial if it forces broadcasters to compete over the quality of their programming content, which is where a standard-setting PSB is beneficial as it can raise the bar.

However, there can also be adverse effects if this develops into a continuous downward spiral of ever-cheaper domestic productions, as most audiences cannot evaluate programme quality due to information asymmetries. This can result in cut-throat competition.

I have identified that in most markets PSBs continue to be dominant, but also that there are, especially three large scale international players (mainly Pro7.Sat.1. and RTL, but also MTG) in Europe, which in comparison rival many PSBs and other domestic companies in their domestic markets. The large-scale companies have the benefit of being able to apply economies of scale when producing and purchasing rights, as they can buy bundles. In contrast this places small-market domestic public players (financed by a single domestic market) at a disadvantage as they compete against the strength of a large market multinational corporation.

This is especially the case as a consequence of the country of origin principle where the large companies can use this principle to potentially benefit from the lowest denominator in advertising rules.

This also means that the large international players could place strong competitive pressure on private domestic players, which are limited by scarce resources in a single market and not able to utilise a similar benefit of scale economies.

Secondly, I find the data substantiate the risk of regulation failure if the perception of the EU being a single television market gets greater weight. The regulation in place appears to benefit

large-scale players and competition, meaning that it directly furthers the convergence of the markets; however television content is also an important cultural production, which does not necessarily benefit from being subject to convergence, as it might harm diversity. If the regulation in place risks harming the diversity of European culture based on a perspective of increasing competition and belief in a single European market for television, is this really the approach politicians want to take – especially in small markets?

The investigation into the transnational impact of using the country of origin principle in regulation shows that regulatory measures do indeed have significant impact, but also that while using the country of origin principle does increase the potential for competition, it also potentially differentiates the conditions of different players in the same market, as some might be under domestic regulation, while others might be under regulatory jurisdiction in another market. This is indeed beneficial in terms of establishing a single European market, but for a single domestic television company competing with both a public and a foreign commercial company under different regulation, it could very well generate unfortunate consequences. As the individual EU markets can have "harsher" regulation, it actually means that companies in principle can "shop" for the least harmful or most beneficial regulation.

5.5 Conclusion on the investigation of the second hypotheses

5.5.1 Introduction

The second hypothesis is only partly verified based on the two analysed research questions. Size does influence competitive conditions in television markets, where there are different levels of critical mass in different market sizes, as indicated in the analysis of the first hypothesis in chapter 4. This analysis thus also helps substantiate the first hypothesis. However, this does not automatically entail that a market becomes more concentrated, as state intervention has to be taken into account, as most markets have either one or more strong PSBs. Size influences the level of share of public companies, but also private domestic commercial share, but not to the same degree market concentration, as based on HHI most markets are moderately to highly concentrated, while they are all highly concentrated measured by CR4. Moreover, a significant influence could not be identified based on CR1-3, but only on CR4-6, meaning that size could hold influence as the number of companies included increases. State intervention appears to be highly important for the functioning of the European television markets, and EU legislation likewise. The level of state intervention influences the rules of the game and alters the markets. Based on literature this is possibly acting as a counterweight to the commercial market tendency

for concentration, and increasing the overall diversity of content output. What was basically not taken into account in the hypothesis was the importance of the state, which thus has been described in more detail in the analysis, and furthermore that the challenge of using the concept of the level playing field in conditions where equal opportunity might have a different effect than intended, as equal treatment, might actually result in unequal results.

State intervention crystallised in the form of public policy regulates the media and establishes the rules of the game for the conduct of media companies. In essence, these rules should establish a level playing field, ensuring equal rules for all players. The challenge is that this is not necessarily what secures the best possible solution, especially not in small markets, as regulation determined at an international level is usually unable to take into account specific conditions in the individual markets.

Imagine a football field where the players fight the opponents and cooperate in order to win under a specific set of rules. As long as the referee is fair, the players are equal in terms of the rules, but still different in terms of skill and strategy. The problem is that the teams have different monetary volume and different potential of capitalisation, thus yielding different incentives and potential for investing in domestic talent and securing a broad selection base of developing talents over time. Public broadcasting can be understood as an entity in this game, where the companies are both players and part of the rules. I argue that in the best cases, the public companies with a non-profit perspective and purpose of existence of public interest act in accordance and produce domestic content.

In short, they balance the market by setting standards in it, not primarily with the purpose of limiting the conduct of commercial media companies, but by securing some volume of domestic content and some level of quality. The level of domestic content and the quality of the content in essence become a barrier to entry. If new entrants want to access the market with more than a niche function, the company will have to match up to some degree by producing particular genres as the public broadcasters do. Usually these genres are informational, especially news and high quality fiction, such as domestic drama.

Chapter 5.3 on public-private competition indicates this nicely, but not sufficiently to verify the argument. Therefore, I studied the smaller same-language markets, where some indirect results also indicated this first of all by those channels using the European competition rules to circumvent stricter national legislation, by for instance selecting the UK as country of origin, and also with the secondary market effect of larger neighbour channels spilling over into their smaller same-language markets, caused in essence by what Straubhaar (2003) called cultural

proximity. This is a concept more or less useful for most of the difficulties related to international channels as well as to spill-over effects. This also indicates the impact of language, where small markets with separate language and culture continue to have an inherent benefit as a protective mechanism; however, language is not always a benefit, especially when the market is sufficiently small to encompass scarcity challenges too large to circumvent in potential competition with international players.

There is no real clarity on what a level playing field constitutes. First of all there are huge differences between public and private players, and the focus will have to be on establishing as transparent a market as possible if the intention is to institute effective competition without destroying PSBs, which are the primary content producers in most European markets. Or rather, asking the question of balance is a problematic approach: what is required is in effect a transparent level playing field in which the public and private broadcasters can compete, and fulfil their cultural function as per their remit.

Market concentration measured by HHI does not carry relation size. The important influences are public policy (i.e. regulatory measures) and the strength of the public broadcaster. While this seems much too simple an answer, it remains in the logic of market failure, but in some markets it is like walking on a knife-edge: it is too easy to fall down in the wrong place, with consequent adverse effects.

Arguments for strong public broadcasters lie in the range of quality, universality in reach and content, and domestic production over concerns of cultural identity, i.e. news perceived from a domestic perspective.

Combined, the concept of public policy with a public broadcaster can assist in securing a reasonable market situation in which domestic cultural interests are taken into account by public broadcasters acting as stewards of the playing field, while not actually being the judges. PSBs set the bar for access, and they do it based on a public mandate; private competitors can easily find such competition unfair and unreasonable, but the fact remains that their concerns are about *profit and their shareholders*, and not about what is in the best interests of the public.

In short, private media do not exist primarily to serve the public; they exist to serve their owners, and their conduct has to be perceived in this light. Competition might be considered unfair, but it remains a traditional clash between commercial and cultural interests.

In essence, what I have attempted to show empirically are the rules of the game in practice.

5.5.2 Market concentration and ownership

As I have documented, there are usually three-four primary companies in a single domestic market, and no more than six. This means that the TV market studied remains under conditions of oligopoly. The primary players continue to be domestic for most markets, questioning the impact of multinational corporations; however, accountability displacement is a major concern when it comes to multinational corporations, and while this could be serious, it does not appear to be so in most of the markets. However, the conduct of the Eastern European and the Italian markets could warrant some attention.

Political intervention works: PSBs remain in most markets in strong positions balancing commercial activities and widening the choices available for the individual citizens. In the battle between commercial players, the PSBs influence the result, showing that the state using regulatory measures as well as PSBs balances that market.

Overall market concentration in TV markets measured this way does not appear for the most part to be a serious threat, with some exceptions such as the Italian situation in the research years 2007-2009.

What I have identified is that the TV markets remain under fairly high concentration levels, but also that they remain dependent on the impact of the domestic TV market ecology and strength of PSBs. The interdependency between politics and markets appears to be important for understanding the TV market concentration ratios and why for the most part they remain dominated first of all by domestic players more than their international counterparts. PSBs often help secure this market situation. Based on the concentration ratios discovered, I cannot automatically claim that the levels are too high to warrant attention, but rather that it is important to focus on the actual conduct in the individual markets, where TV market dominance such as in Italy could be perceived unhealthy in terms of free access to information based on editorial independence. On the other hand, in the markets where concentration remains balanced between public, private domestic and private global/pan-European players, no single company is able to attain a monopoly.

Global/pan-European players act side by side with domestic private and public players. Local players remain dominant in the battle for the TV market ecologies, and while the global/ pan-Europeans attempt utilisation of economies of scale, their effects remain fairly limited. The global players, while increasing their revenue, do not have manageable control over the markets in the analysis; rather, they utilise economies of scale.

While domestic private players remain fairly strong in the competition with both global multinational corporations and local PSBs, it is clear that the relationship between politics and the market remains inherently interlinked.

The TV markets remain heavily regulated and in most of the studied markets the PSBs manage to keep strong positions in the domestic media landscapes, which could not happen without the political resolve to secure this. The global players challenge domestic TV, but for now local domestic companies remain dominant.

The European countries have a state-oriented approach to the TV markets which contrasts with the more market-oriented approach in, for instance, the US. The PSBs are accountable to the public, but in principle also to the state. Furthermore, the PSBs have the potential to act as a counterweight to intrusive global players insofar as the regulatory measures allow this. In this sense the PSBs (usually) have less revenue than multinational corporations when measured against the total turnover, but in terms of means available for investment in the domestic market, the PSB can be better off and thus retain the potential to compete for audience.

The main challenge lies in the fight for premium rights, where the multinational corporations such as News Corporation can have an interest in furthering pay channels using the exclusivity potential of premium rights. The multinational corporations have advantages in terms of bidding for rights and being able to recoup possible losses in one market using revenues from others to ensure competitiveness. This is a benefit for the multinational corporations, as they can grow by using the on-going global trend until saturation is reached in the global market.

From a general perspective, TV markets generally operate under conditions of oligopoly, but with significant differences in terms of oligopoly type, i.e. what difference does it make in a society if there is a dominant company with a few followers, or a duopoly structure?

I could not identify strong relationships between the size variables and the market concentration levels measured by HHI and from CR1-3; however, this is probably a consequence of the market intervention practices and the relative market strength of the PSBs – as was indicated by the quantitative data the PSBs in most markets remain the largest companies. PSBs are able to function as counterbalances in their domestic markets [procuring domestic production of creative works of art]. That PSBs function as counterweights to the increasing commercialisation and profit-oriented conduct of private broadcasters makes sense, but only insofar as they are kept in check by other types of companies to avoid reaching monopolist conditions in the individual markets.

It could be argued that the role of the PSBs worsens the conditions for commercial broadcasters as they divert share and potentially revenue from those, but on the other hand, it secures organisations able to invest in national production and take risks with potentially non-profitable projects, and which are usually funded mainly by public funds. What was identified was a positive relationship between size and CR4-6 becoming stronger from the 4th to the 6th company, meaning that in practice the larger market can have more firms achieving minimum efficient scale.

State intervention continues to be a major factor influencing the scale of market concentration, but also one which will prove important to balance the potential development of multinational corporations. However, in line with Bargadian (2000), narrow government or private enterprise control over the media would not be feasible; rather, the challenge lies in securing multiple information streams where particular concerns might bias one stream of information, but not all.

The TV market is turning increasingly global in terms of international trade and ownership, but the local is what primarily interests the audience. While international channels and technological development create a drive towards decreasing concentration, the domestic media approach is similar in that they also can establish specialist channels using similar technology. On the other hand, this creates a drive towards increasing concentration as it can deter or oust external players.

Therefore, the development is dependent on government intervention, domestic commercial media company strategy as well as the advantages for multinational corporations in a particular market. If the world market follows the current trends of increasing pay-penetration and market maturation, the multinational corporations will be able to employ their financial strength, media content and knowhow to utilise economies of scale and scope to a significant extent. However, even if this happens, the impact of their existence will be dependent on the counter-strategies of domestic companies, if they are able to utilise any.

Overall, this indicates that barriers of entry are set by the state and the conditions of market structure are thus related to the regulatory regimes in the individual markets based partly on licensing practice, available number of competing platforms, strength of the public broadcasters and the type of political regime, where conditions of corporatism or clientelism can establish barriers to entry to secure a particular set of rules of the game, which is in line with Hallin & Mancini (2004).

The argument is based on the logic of both high fixed sunk-costs and continuous costs for domestic production in combination with some degree of limited spectrum, all establishing

conditions of economies of scale as well as scope in the condition of the media content. As indicated by the study above, this appears to have established significant variation in the regulatory models in the individual markets depending on what is perceived as state interests, meaning that regulating with the intent of having a single European market for television generates unintended effects. Heavy domestic market regulatory measures appear to be taken to secure individual market production industries in combination with securing state-merited interest by applying PSBs. This is a condition in Europe that is highly dependent on cultural and political path-dependency of a long running history. However, this also demonstrates that many of the barriers in Europe are politically constructed, as barriers to entry protect domestic market activities by limiting entry for foreign players.

This is similar to the argument presented in the Commission's working paper on Media Pluralism (2007); on the point of media content it is argued that: *"Diversity of ownership of media outlets is not sufficient per se to ensure media pluralism of media content. The way media content is produced also has an impact on the overall level of plurality in the media. …Television viewers who switch from one channel to another often see the same news reports, documentaries or dramas. The reason for this uniformity is that the newsrooms of media companies do not themselves produce all their articles or programmes. They use outside agencies that supply information, photos, newsreel, broadcasts, documentaries, series and films. News agencies play an important role especially for broadcasters in smaller countries, unable to afford a full network of foreign affairs correspondents. …The intense competition between newspapers or television channels may not itself guarantee pluralistic content. This raises the concern of whether, and if so to what extent, inadequate competition among information sources can have a negative effect on the functioning of democratic society, owing to a pluralism deficit". …" "Strong ownership could strengthen the position of media companies vis-à-vis other actors in the value-chain such as printers. In those countries where newspapers or channels are owned by large media groups, smaller newspapers or channels can benefit from a strong owner who, apart from the economies of scale aspect, holds sufficient command in the industry production line to be able to negotiate effectively with strong news agencies, newsprint producers, right holders, global advertising agencies etc…."*

However, in the analysis I conducted, besides not being able to identify a difference between small and large markets in the sample, I also found high degrees of variation in the concentration levels in the individual TV markets. It is important to remember that the competition in the TV markets is primarily indirect and based on substitutable products closely

related to the choices of broadcasters competing on which genre and quality level of programming they intend to produce. In this the choice made by the state to use public broadcasters as intervention mechanisms for domestic production protects the individual domestic markets by securing domestic content.

Discussing competition without considering the actual products provided is problematic, especially considering that I discuss easily substitutable products depending on taste, where quality is almost impossible to measure reasonably.

Public broadcasters in this sense compete against private broadcasters by offering directly substitutable products, and if the private companies are not able to compete, then this might be a decision based on the type and quality of the required services, rather than undue distortion.

What is important from a policy perspective is to establish transparency to secure a level playing field in order to enable the potential beneficial effects of PSBs in the market to be furthered.

The point is that there are no guarantees of securing pluralism of views, nor the production of domestic content by weakening the PSBs. Rather, it appears that in a European context, it is the state intervention either directly using PSBs or indirectly using regulatory measures to coerce commercial broadcasters to produce specific content or ensure that specific rights should be available FTA – like for instance in Germany - all measures taken to ensure domestic content production.

When regulating media markets the state is caught between concerns for competition and diversity. Thus, the state can end up in a catch-22 situation: we want competition to secure a diverse media landscape, but we also need some degree of concentration to ensure that the companies can function in the market with economies of scale and increasing returns. If we do not want competition, we are in practice foolish, as we do not attempt to secure the interest of the consumers by having a diverse market. However, we are also foolish if we have too little concentration; in that case we risk that the citizens/consumers suffer anyway, as what they are offered might be of lesser quality and mostly of foreign origin.

In short, we are foolish if we focus only on competition and foolish if we do not secure competition: the catch is that we do not know if there actually is a balance. We want domestic original content, and the simplest way of securing this is through the public broadcasters, especially in small[er] markets, and this is what happens in Europe. However, as long as there remains a primary focus on the national level, rather than global, more effort should be put

towards limiting the adverse effects in the market by monitoring the actual conduct of TV companies comparatively.

5.5.3 Regulating the levelled playing field

All countries analysed have chosen to intervene in the market to secure the provision of services in the public interest, but this does not mean that the private media will not compete against the public institutions or that the regulatory barriers are equal. Instead, there are differences in the playing field where the rules are usually determined by the state and the EU.

In the markets where public media companies are sufficiently strong, these are in effect set by them as per their remit. When merit goods are taken into account the exact types of services provided are different in the markets in question. It is important to remember that television for the commercial private media is first and foremost an industry with the purpose of making a profit: as such they have to take into account the demand function as well as the potential of product diversification and audience segmentation.

This also means that there will be a drive towards reaching high levels of market concentration to enable a profitable business in a single market, or to use economies of scale and reach for the global market with thematic channels. The public media has a role of serving the public or civic interest on behalf of society. This means a difference between purpose and perspective on the audience, but this does not change the fact that both have to take into account the function of demand. I therefore distinguish between programming targeting the population in general and niche-programming targeting specific groups.

Overall, the general picture of media competition in the markets studied is one of mixed systems in which both public and private media players are present, but with varying degrees of strength. The main difference lies in what has been the point of origin for the media system, or rather what has been the main battleground for media development. Was it the state or the market? In line with theories on market intervention, I distinguish between two principal approaches as either state or market based; it is also possible to imagine a civil society approach based on a non-commercial, bottom-up evolution. In Europe, the state was the basis for the evolution of the broadcast media beginning with public media monopolies. Private media developed in competition with the public media organisations providing access to new programming and often new voices. The private media thus helped create a more diverse media environment. In contrast to the European development, the private media were the base in the US, where public media fulfil a more civic function of niche programming.

I will not engage in discussion of either the vices or the virtues for public or private broadcasting, but rather illustrate the current situation of market competition and identify the market leaders. Public and private media both supply services to the public, albeit with different purposes, but as long as the de-merit characteristics of the services are limited and there is an interest they both carry societal value.

Media content can entertain as well as inform, but this does not mean that entertainment surpasses the need for information, neither that there is no need for entertainment. The challenge lies in securing variety, where neither conditions of complete monopoly, nor ruinous competition are the rule of the game. Private media can provide services of public interest as well as public media can; the main difficulty is to ensure a certain standard of quality, universal access and a variety of genres. There can be adverse effects of both public and private media concentration; private media conglomerates using their companies to present ideological perspectives on public policy, or public media presenting biased state perspectives and more, but there is no iron law stating that this per definition is what will happen.

This is related to the conceptualisation of market structure, where the trend within media is a move towards increasing market concentration. There is a benefit in retaining a competitive pressure in the market to ensure that it does not reach conditions of monopoly (Doyle, 2002). The purpose of competition is to secure multiple sources of information; to avoid uniformity of programming; diversity in information sources; and ensure quality competition as lack of competition can lead to decline of overall quality. On the other hand, there are also benefits of increasing market concentration, such as with companies utilising economies of scale and scope, gaining easier access to capital, higher revenue and thus potential of investing more in diversity of content (Meier & Trappel, 1998). The problem is that it is quite difficult to know which conditions lead to what for the television markets.

While this study establishes some general ideas, the difference in scale and scope of political intervention makes this even more challenging. This is especially true due to conditions of asymmetric information, which are caused by the audience's lack of information on quality.

In short, commodities such as television programmes are not easily evaluated by viewers. This difficulty was showed by Richard van der Wurff and Jan Van Cuilenburg (2001) in their study of the Dutch television market where they showed that high levels of low-quality programming can lead to ruinous competition. This study questioned the relationship between product diversity and competition; however the authors also showed that moderate competition may increase diversity, which indicates that competition is a function of a complex set of variables.

Theory states that both monopoly and hyper-competition can lead to less distinctive programming[lii].

What I expect is in line with Dimmick (2005): as niche-channels grow in number, the markets end up in situations where the aggregated ratings rival or surpass the broad generalist channels, but channels serving mass-audience interests will remain for now. The main concern here is that due to the characteristics of the media content. It cannot be expected that extreme conditions of competition is viable in a media market. On the other hand, as conditions of monopoly might lead to other concerns and potential uniformity, this is also not a viable solution.

I will make the point that while competition is probably not that different in small and large markets based on the dependency of the funding regime and regulatory measures influencing the barriers of entry and exit.

What remains important is a role for public television companies to secure diversity in competition with private media.

The public broadcasters act in the service of the public by supplying services of merit, but this should not stop competition between public and private players. The public broadcasters will, if funded sufficiently, act as standard setters and the private media have to comply with this to some degree to attract an audience. Public media can in this way establish the rules of the game. During the recent work on the revision of the broadcast communication, Information Society and Media Commissioner Viviane Reding (EurActiv, 09.03.2009[liii]) argued that *"the Commission would have to weigh the need to uphold the public good derived from public service broadcasters against the principle of competition"*.

This is exactly the conundrum in the question of competition, as public media per definition will intervene in the market and thus distort competition in the service of the public; but at the same time it should not destroy the market for private operators.

It can be argued that the services provided by the public media should provide a contrast to the private media: what gain in services do the public and civil society receive? The logic between public and private media is different, as long as the purpose of the public media is to serve the public and not generate revenue for the state.

The private media will have to meet some minimum requirements in order to compete, and this is usually set through policy and public media standards: this also means that there will be difference between markets. The argument on the balance between public and private will thus

mean sufficient clarity between public and private media roles to ensure competitive conditions, allowing both to thrive.

The is in line with the argument from Competition Commissioner Neelie Kroes (2009) after the decision on the amended broadcast communication: *"The new Communication strikes the right balance between the interests of public and private media to ensure healthy competition in the very rapidly evolving media environment, to the benefit of Europe's citizens. Public broadcasters will be able to take advantage of the development of digital technology and Internet-based services to offer high quality services on all platforms, without unduly distorting competition at the expense of other media operators"*. Studying the arguments of the European Commission on the adoption of the new broadcast communication (2009), there are questions revolving around the difficulty of the competitive conditions. What is healthy competition in the first place? What is undue distortion of competition at the expense of other media operators? There are several difficulties revolving around public and private media competition: there is little general knowledge of the workings of competition and competitive pressure of public and private media companies in a comparative perspective.

I have presented a picture of the competition between public and private operators. I cannot answer the questions opened up by the statements of the Commissioners, nor would that be viable, but I document the variety between the markets included, and I question the conceptualisation of healthy competition and undue distortion; when studied, the concerns appear more to be on the behalf of the private operators, than in securing civil society interests.

The perspective presented as an option for the rules of the game in the Commission's green paper (1994) on strategy options to strengthen the European programme industry was that: *"With a view to a European Union policy to boost the programme industry, the development of the market by the establishment of infrastructure, the liberalization of services and the removal of obstacles to the single market is the first objective. Improving the transparency of the audiovisual market calls for better cooperation between the Community and national authorities responsible for applying the rules of competition and cooperation between the Community and anti-trust authorities in non-member countries. …"The Commission believes that existing rules in the European Union to promote European programmes provide a sound framework for the cross-border development of the programme industry that should be retained for the time being."*

This is what has been attempted in the EU, but with little actual success as the individual European markets are significantly different from the more single US market; stated otherwise,

the perception of a single European market remains an ideal difficult to reach in the face of differences in regulatory regimes and the role of the PSB in the individual markets.

The question to be asked is whether the PSBs should be allowed to utilise economies of scale by permitting cooperation across the EU market to increase the number of players capable and willing to raise the European market up to the next level. This is already the case to some degree through the European Broadcasting Union (EBU), where the PSBs negotiate for rights, primarily sports, and stage events like the EUROVISION song contest. This type of cooperation could be increased, but would at the same time risk hampering competition in the domestic markets due to scale benefit. In short, there are no easy solutions.

The main focus on media competition in chapter 5.3 was the level of public and private share, where a picture of the difference caused by size was established. It is important to recall that television media competition focuses on scarcity of time for both audience viewing and advertisement spots in and between programmes. There are also scarcities of advertising revenue, of premium rights and of talent as well as of consumer willingness and resources available for pay-tv.

In most markets public and private media fight to secure these limited resources. The result of this battle is measured in market share divided by public and private companies. This entails that large populations equal a higher potential for private operators using economies of scale and have a greater pool of consumers with which to lower the average cost due to collective funding functions. This would also mean that public television overall should be stronger in economically large markets, especially if they are small measured in terms of population.

The analysis in chapter 4 of market volume and expenditure on original production indicated that this could be a function where size impacted relative to the small population and small economy categories, while the large economy and small population category would face different challenges. This also means that the maturation of the markets is important as this points to the level of potential for foreign investment in the market to reap the benefits of the maturation process[liv].

5.5.4 The level playing field

Competition between public and private media runs along the lines of time consumption on audience viewing for specific types of programmes and population segments The competition in the individual market runs between channels having different segmented audiences and hence

markets; the increase in niche-channels has also changed the focus in several markets, where application and utilisation of rights across markets have increased in importance.

I can identify a similar argumentation structure in a green paper from the European Commission (1996: 14) on "*Strategy options to strengthen the European programme industry in the context of the audiovisual policy of the European Union*". Here, there are several intriguing observations that continue to hold merit, such as in point 2.3.4 on industrial imperative: "*This all points to an industrial imperative in terms of both the size of the structures involved and the way in which they operate. The globalization of the market and the increase in production and promotion costs demand not only talent but also industrial structures of the critical size needed to secure the necessary financing and to constitute programme catalogues which have appeal for the different markets. … Quite apart from critical size, another element in the industrial imperative is the modus operandi. With the economics of the sector being conditioned more and more by individual consumer choice it is important, if programmes are to find their public, that each production should determine the market segments on which its profitability can be guaranteed. To this end structuring the information flow between the different operating markets and the programme industry is just as vital as providing information for the public. And the constraints affecting audiovisual production vary depending on whether it is targeted at the world market, a local market or a very specialized segment of a transnational market.*"

A level playing field is a condition where the players in a particular market are required to abide by the same rules and consequently have equal opportunity to compete. The metaphor of a playing field is used to indicate the condition of equal opportunity for the individual actors to prevail as it is compulsory to play by the same set of rules. As in football, this can require the interference of an external player in the form of a referee to monitor and enforce the rules as a consequence of potential collaboration, free riding, cheating, unsavoury action and other activities with potential adverse effects for equal market competition. The government can claim to play that role, although for some state intervention in the market distorts equal competition, while for others it is important to set, secure and implement the rules to be followed by establishing some minimum set of rules for the market. This is what happened in the European Community with the establishment of the TWF (1989, 1997) and the AVMS directive (2007, 2010) setting some minimum rules and requirements for the competition within the European audio-visual industry.

What is important to conceptualise is that new entrants should follow similar rules as the existing companies without being faced with extreme regulatory barriers to entry, while competitive barriers to entry might exist as a consequence of individual market competition and

company market power. The challenge here is that this is an area of business which carries distinctiveness as a consequence of *public interest*. The problem with the level playing field is that some operators in Europe face regulation while their competitors do not, such as in Denmark, Norway and Sweden, where some of the commercial operators are in effect under UK jurisdiction as well as potentially adhering to different copyright rules. In the current era of convergence, I also have to take into account that the media content could in principle be accessed online from anywhere in the world unless a barrier based on country of origin has been set up to prevent this. For example, top US shows could be viewed online before they are shown on TV in Europe.

If there is a perception that specific TV content production and services are in the public interest, these will interfere with the level playing field, albeit to a varying degree depending on the method applied for provision. The public broadcasters with their remit to inform, educate and entertain do in effect interfere with the level playing field as they compete for the same scarce time resource as the commercial companies, usually while carrying special privileges such as must-carry, public funding and more. This is why the overall perception of a level playing field as traditionally applied does in effect have a different function in most European television markets.

The challenge here is that the public television organisations establish a competition which is different from other fields as they compete for the same scarce time resource of the audience. So how can an equal field of competition be established within the markets when there remains an interest in the provision of services in the public interest, while on the other hand we do not want to distort competition unduly? And at the same time when some channels in a specific domestic market can be subject to different regulatory settings due to the use of the country of origin principle in EU legislation?

As pointed out in the Commission's working paper on media pluralism, point 2.7 (2007): "Broadcasting in Europe has since its beginning undergone an exceptional development: from single, national radio channels with only a few hours of daily broadcasting to the multichannel systems of today, where radio and television is broadcast 24 hours a day to listeners and viewers all over the continent; from broadcasting as a public monopoly to the present "dual system", where public broadcasters live side by side and compete with a still growing numbers of private, commercial media corporations. Both public service broadcasters and commercial broadcasters contribute to media pluralism and this dualism itself further strengthens pluralism. High quality information is an important remit of public service broadcasters and fulfilment of this remit makes an important contribution to media pluralism. A functioning dual system also means that

it must be balanced. Even if the broadcasting regulation is in place, the implementation of legislation while ensuring media pluralism is crucial."

While mainly relevant for the EU markets, the condition here has been to establish some financial clarity of commercial and non-commercial activities. This means that public financing must be done in accordance with the EU articles on state aid and that their commercial activities have to be carried out in accordance with normal market standards and separate from their public activities as well as in accordance with the financial transparency directive. Furthermore, the provision of new AV services should be tested as to the degree to which they are in accordance with the democratic, social and cultural needs of society and do not have undue effects on market trade and competition as per the new broadcast communication. This also means that the state should ensure that the public funding does not distort trade and competition in the markets and that the impact on market competition should be balanced with the assumed benefit of the new services for society.

These are conditions with the intention of levelling the playing field between public and private operators, but these will have effect in the sense of minimum requirement and increased transparency. It does not in effect have the same result as within other business types as the definitions of the public service remit and funding regimes are left in the hands of the individual states as per the protocol on PSB from the Amsterdam Treaty; these will have tremendous effect on the actual rules of the game within the individual markets.

The reasoning behind this is that the EU rules attempt to establish a transparent market with relatively easy entry conditions for new entrants and fair competition between public and private television companies, while taking into consideration the aims of the state in relation to the provision of services in the public interest. This means that no matter what, under the current legislation, there will be an imbalance where it cannot be argued that there is a level playing field in the traditional competition policy sense.

Furthermore, this might be a benefit for broadcasting as the existence of PSBs can be argued to carry some important functions for society where they can help establish positive spirals of competition based on state-merited interest. These functions are the standard setter, i.e. quality benchmark across that particular media market for competition in relation to at least domestic content; this also makes a difference to primary acquisitioning and format dependent commercial broadcasters.

This can also help accustom consumers to seeing high quality domestic content, and this helps pressurise commercial actors to compete at that level. This also entails that PSBs should carry

obligations to secure a broad provisioning of genres of high quality. Intervention in the conventional way using PSBs can benefit the democratic, cultural and social conditions of civil society. But this also means that the perception of a level playing field has to be considered rather differently when discussing broadcasting markets with PSBs as they can in effect be used by the state to set the market standards for a broad range of services in the public interest.

The question here is whether a reasonable conceptualisation of balance using a singular definition can be upheld under the current European regulatory regime where there is significant variance in the competition between public and private broadcasters in the individual markets, not to mention the increasing cross-border penetration of television channels, particularly with international content. I find that the application of balance illustrates more of a conceptual illusion than a useful policy concept. What is and remains important is the market transparency enabling each part in the dual broadcasting system to have established ideas of role, where the remit of the PSB as set by the individual merited state interest remains paramount. In effect this also means that the rules of the game are set, not by the PSB per se, but rather through the state in the defined remit, which again illustrates the impact of political intervention in the European TV markets.

Chapter 6. Conclusions and implications of regulation

6.1 Major findings

To sum up my thesis, I claim that size does indeed matter. As promised at the beginning, I have conducted a broad empirical study containing both small and large European television markets. I have verified to some degree the economic argument based on scarcity considerations established in the introduction and chapter 2.

The TV markets in particular are challenged by size, as has been indicated before; what is also evident is that public intervention plays an important role and has long been implemented to take into account the conditions that are a consequence of size, i.e. scarcity and lack of critical mass. The economic argument holds, and is thus by default an argument on behalf of public intervention in the media.

The two hypotheses were investigated in chapter 4 and chapter 5 respectively and are presented below.

The first hypothesis studied was as follows: ***Size is linked to scarcity and therefore influences the critical mass of television markets: meaning that size influences the critical mass in television markets based on availability of revenue understood as monetary TV market volume and the availability of original domestic content. Consequently the larger a market is, the greater is the potential volume of the television market and domestic production.***

This was investigated based on three research questions in chapter 4.3-4.5:

1. Research question A: How does size influence the availability of revenue in television markets (TV market volume)? The larger a television market is, the more revenue should be available, which again sets the frame for the potential number of companies and the level of domestic production as this is based on scarcity considerations.
2. Research question B: How does size influence the level of original domestic content in television markets? The larger a television market is the more original domestic content should be available as the incentive for companies to invest in content should be higher.
3. Research question C: Is there a relative influence of size (varieties of size) on TV market volume and production of original domestic content? Size influence could also be viewed relatively based on small and large categories, meaning that a large market measured by population, can be small measured by economy, which can result in different implications for policy.

This has been done using comparative analysis of the mechanisms of TV markets in terms of scarcity and critical mass, using proxies of size, TV market volume and domestic production. What has been shown is exactly one aspect of how size matters, but it also shows that there is an interplay between the varieties of size.

The study of the first hypothesis in chapter 4 verified that larger markets have more market volume and higher levels of investment in original production as stated by the argument on market leverage as consequence of similar media market characteristics. The results of the analysis substantiated the first hypothesis, but also showed that the politics cannot be left out, as this is an immensely important factor in the television markets, and one which alters the rules of the game in the individual markets.

There is a significant difference in scale between small and large market TV market volume as well as domestic production. I also identified a positive correlation on the relative influences of size based on categorisations of population (small, large) and economy (small, large) in relation to the scale of TV market volume and domestic TV content.

As assumed, the analysis in chapter four on scarcity and critical mass clearly showed what I expected in terms of substantiating the argument, but there were interesting findings, as can be seen by some policy implications which are presented in chapter 6.2 below, on *scarcity and critical mass*.

The second hypothesis studied is as follows: ***Size influences the competitive conditions in television markets. This is a consequence of imperfect competition due to the characteristics of media markets and media content in combination with differences in critical mass (scarcity). Consequently the larger a market is, the better conditions there are for private commercial media, as the larger markets can sustain a higher number of companies, which should show in lower degrees of market concentration - if not at the overall level, then as the number of companies increase.***

This was investigated based on two research questions in chapter 5.3-5-4 respectively:

4. Research question D: How does size influence the conditions of competition in television markets? This will be divided into two separate sub questions:
    a. How does size influence public and private television?
    b. Is it possible to identify differences in small television markets with same-language large neighbours?
5. Research question E: How does size influence the level of concentration in television markets? This will be divided into two sub questions:
    a. How does size influence market concentration from an overall structural perspective?
    b. Is it possible to identify any trends concerning ownership of multinational companies?

This has been done using comparative analysis of TV markets in terms of competition, using proxies of size, public and private competition, foreign penetration, market concentration and international ownership.

The investigation of the second hypothesis in chapter 5 partly verified the hypothesis, but also showed that it is difficult to establish the influence of size on competition with certainty due to state intervention practices.

I have shown the influence of size on market competition. The analysis confirmed the general argument, but also indicated that a lot more emphasis should be placed on scale, scope and type of public intervention to identify influences and effects. The barrier to entry argument is related to this, as TV markets in general remain quite concentrated.

Public intervention is evidently part of this, as PSBs are among the strongest companies in most European markets. Domestic companies continue to lead, but foreign ones are increasing, albeit for different reasons, as some markets have same-language larger neighbours, some large minorities and others companies using the country of origin principle to achieve increased efficiency, see chapter 5.3.2.4 concerning foreign penetration.

Share of domestic and total public broadcasting (competition) is stronger in larger markets, but the same is the case for private domestic broadcasting, but less for total private broadcasting. Nonetheless, the larger the size of economy and population, the larger the market share of domestic channels. Domestic share continues to dominate in most television markets.

There appears to be a rather strong intervening variable in terms of public intervention.

Additionally, I could not identify an influence from the size variables on the market concentration measurements based on HHI and CR1-3, but then again, this is because in general TV markets are moderately to highly concentrated, meaning that the theory holds in general as the difference between large and small markets level of concentration is limited, but also that the scale and scope of public intervention play important roles.

Using the CR4 >50% as a measure of strong competition led to the finding that all included markets being are strongly concentrated. However, the size influence on CR4-6 was increasing and indicates that size does influence market concentration, but that it is based on the number of possible companies in a market.

Both measures indicated that the TV market have oligopoly markets structures, dominated by usually three to four companies.

Studying the rank and position of the PSBs in the individual market showed that these organisations – in most markets – continue to be if not the strongest, then one of the strongest television companies, measured by share.

International ownership was not identified as a serious challenge in most markets, as domestic television companies mostly retained the strongest position. But some companies like RTL, Pro7.Sat.1. and MTG have successfully utilised economies of scale and scope in Europe being present in 10 or more markets, where they are among the six largest companies.

There were interesting findings, such as for instance in some implications for policy which are presented in chapter 6.3, *market competition*, below.

Through the analyses in chapters 4 and 5, I have verified the first hypothesis and partly verified the second, meaning that the argument presented in the introduction us also substantiated, i.e. that small and large markets are subject to similar market and content good characteristics, which in effect leads to different market conditions as a consequence of size.

But there is a required add-on to this, which is that public intervention remedies, or rather leverages, the influence of size to some degree, which makes it quite reasonable to just take the influence of size for granted.

Unfortunately, this is not optimal, as a comprehension of how size influences is important when establishing regulatory measures. But as *size conditions* are something people live and work in and with, these are continuously taken into account per default as a consequence. Small and

large markets have different conditions in television markets and this study has helped highlight the externalities of size.

Subjecting dissimilar markets to similar policies – as in the EU - thus risks leading to unintended externalities and in worst cases adverse effects. The analysis has substantiated that size matters for the TV markets. Size specifically matters for TV markets, but also for the media markets in general, albeit with varying effect depending on type. However, there is also more than size, which was indicated when the second hypothesis was only partly substantiated. The analysis made it evident that the influence of the state (politics) should not be underestimated.

Size remains quite difficult to examine without also studying political intervention. In many ways, political intervention has been a long-term practice for TV, which helps leverage parts of the challenges for the TV markets. The private TV channels have increased in number with enhanced competition for the public media as a consequence. This development has in the long run been a benefit for both.

The importance of the state (with the PSBs) in setting the rules of the game is not forgotten, but is often neglected in actual empirical analysis. While this dissertation only scratches at the surface of the importance and influence of state intervention, the results of the analysis verify this.

This is because, that from a state perspective, there are several difficulties related to the television markets and media content good characteristics:

a) There is a relatively low limit to how many competing companies there can be within each market.

b) Television companies risk problems of achieving sufficient scale: this is primarily the case if the focus is on a single domestic market, unless they work with other similar, single domestic market broadcasters in the purchase of rights.

This leads to media market tendencies of concentration; few domestic actors; market structures of duopoly or oligopoly; and a high cost of producing original content on a range of genres, with imports important for almost all markets[lv].

In other words, small markets have less potential for commercial funding than their large counterparts, especially if original content in the national language is taken into consideration. Production of programming for a limited audience in a specific language and cultural setting is costly and is usually provided by commercial operators in small markets due to high costs.

At the same time, programmes are available in international trade from both large and small markets in abundance, especially from North America, at a lower price than the cost of home-production and co-production in the domestic market.

Certain goods and services will simply not be offered if the language area is too small to be profitable due to minimum efficient scale, e.g. lack of critical mass.

In many ways, what I have established is an argument for public intervention into the media. What has been identified forms part of where the rules of the game in the individual markets are established between the domestic and international regulation as well as domestic and international competing companies. Especially small markets benefit from a strong PSB, but there are also benefits for large markets. Through this thesis I have established a perception on the influence of size which fits well with the research carried out before and recently in the Special Gazette issue (2009) and the book edited by Lowe and Nissen (2011).

Below, the conclusions of the analysis in chapter 4 based on *scarcity and critical mass* (chapter 6.2) and chapter 5 based on *market competition* (chapter 6.3) are presented with an emphasis on the conclusions and policy implications.

Following this, there are chapters on the *regulatory dilemma – economic versus cultural concerns* (chapter 6.4), the *implications for policy* (chapter 6.5), *the implications for EU regulation* (chapter 6.6) and finally Implications for public service broadcasting (chapter 6.7), which are used to discuss and generalise the argumentation for the media more generally.

6.2 Scarcity and critical mass

Size is a significant factor for addressing the challenges that face television markets in Europe (at least, and probably also beyond). This is an oversight in the construction of media policies, especially worrisome because the trends indicate a growing lack of appreciation for market differences in the drive for market harmonisation in Europe.

Small and large states alike face complex challenges in managing as well as developing television markets, especially in securing adequate provision of originated content. Whenever the number of people (club) that is interested in a genre of content or kind of service is not large enough or rich enough to attract sufficient commercial investment, it can only be secured by policy intervention. Securing this very often requires subsidy, as the evidence clearly shows in markets of every type and size.

Although media industries are certainly in a period when old business models are not working well and demands for change in the interests of economic viability are understandable, this does not alter the fact that many and specific genres are still needed and at a certain quality. This is especially important for informational and cultural programming for smaller groups.

I have investigated the influence of size empirically in three ways: first by TV market volume, secondly by expenditure on originated TV content, and thirdly by investigating the relative importance of size in my four varieties of size. The analysis of the influence on the size on TV market volume revealed a relationship between size of population and economy. This has relevance from a policy perspective. The emphasis in Europe continues to be based on securing a single market, which emphasises competition rules. But it is also the case that European policy is a bit schizophrenic in that individual member states are supposed to focus on securing media services that address the democratic, cultural and social needs of host societies, but handling these has often created dilemmas for competition policy.

It is also important to keep firmly in mind the fact that European countries are all relatively small in comparison with the truly big countries, especially the USA. All EU member states would have to be combined just to reach the approximate size of the USA. Thus, it is not actually surprising that managing to compete with American products has required high levels of subsidisation.

The analysis revealed a relationship between size and the level of expenditure on originated content. In media, everyone helps to pay the costs for content and can receive some approximately equal amount of the goods. This means, however, that when there are fewer people to pay for the content, then the provision must either be of smaller scale or of reduced quality. In this way, larger markets are more able to provide higher levels of expenditure on originated content, and at the same time also represent the highest levels of public subsidisation. This is especially evident for UK and Germany, which differ quite a lot from markets such as Poland and Romania.

The analysis also revealed the influence of size on the basis of relative importance as this depends on size variety. I found statistically significant effects for the categorised size variables on both TV market volume and expenditure on originated content, and moreover the interaction between the variables supported the validity of the proposed model.

This suggests that the most appropriate perspective reckons with distinctive challenges that respective markets face, in combination with difference in political interest as expressed by

public subsidy and regulatory measures, as well as more general historic and cultural traditions in these markets. As argued earlier, similar policy does not fit all size of markets.

Of course TWF, now AVMS, has helped establish European television as an integrated market, and this has benefited the development of many companies that are able to utilise economies of scale to function more efficiently. But this has also certainly challenged particular market types with a level of competition they cannot easily withstand, and in fact can only cope with adequately by erecting certain barriers to entry.

I do not intend to imply that current European media legislation does not allow for consideration of the distinctive needs of markets in different member states; indeed, the treaties make this possible, but the utilisation of the legislation tends to drown in considerations of market competition, rather than cultural distinctiveness. Taking this into account, then, EU policy has both merits and de-merits, which reveals a peculiar kind of schizophrenia as suggested earlier.

The short conclusion of the analysis in chapter 4 is that size matters in defining the level of market volume and originated content. Further, I have substantiated that the four varieties of size are significant in identifying differences in the interaction of the categorised size variables. This indicates that when one discusses size, he or she should take into account not only the relative size of population but also the level of economic development *vis- à-vis* per capita purchasing power. Also notable is that the level of political intervention in media markets clearly impacts the level of TV market volume and expenditure on originated content through public subsidy, and this is especially the case in the economically strong markets.

The model has policy implications for media market regulation. Policy-makers should take into account the differences that size makes on system parameters and operational possibilities. The individual state should, from an EU perspective, be allowed to take into account particularities in their domestic markets, allowing for more independence in state policy based on material characteristics. EU media policy has helped establish conditions that have made it feasible to secure growth across borders, enabling the broadcasting industry to prosper by utilising economies of scale and scope.

That is well and good. But this does not mean that the interests of big media corporations are identical with the interests of respective member states. On the contrary, conditions are often identified where cultural concerns are opposed to and by commercial concerns, and where large media corporations deploy strategies that can be favourable in some cases and detrimental in others.

This, however, requires further research with that particular focus and is not a topic of investigation in this study. As noted in the comparative analysis, US market volume is larger than the combined EU market in terms of available revenue. At the same time, the originated production in Europe is far more segmented across member states, with several barriers to entry that hamper efficiency in the smaller markets, and which must also compete with content produced in the bigger, wealthier European markets (primarily the UK and Germany). It is therefore important to recognise that Europe does not have one dual system, but rather some diversity of dual systems.

Finally, the influence of public funding in Europe has secured considerable originated content in many markets, certainly more evident than what has been produced by the commercial sector alone. This has been especially significant in facilitating the potential of the smaller markets to offset key challenges related to the lack of critical mass. Even for the larger markets, which are still quite small in comparison with the USA, public subsidy has done much to sustain their production industries and to increase the competitiveness of their markets, shrill claims to the contrary notwithstanding. The Big 5 markets in Europe represent the majority of expenditure on originated content (about three-quarters of the total). Thus, it is undeniably the fact that public funding is the cornerstone for securing originated European content. It is difficult to see any realistic 'exit strategy' that would not have calamitous impacts in the face of increasingly sharp and effective international competition.

The overall implications of this research can be summarised:

1. Markets are not the same, but often quite different due to differences in domestic conditions. This strongly challenges European legislation to evolve policies that are appropriate for application that properly address the respective interests of every size of member state.
2. Media companies in larger states that are able to utilise large market scale benefits are reaping the benefits of EU policies today, while those in smaller states are mainly facing keener challenges, especially their PSB operators. These cannot enjoy the same scale advantages because they are limited to domestic markets and entrusted with the specific purpose of securing domestic production.
3. Currently, EU media policy mainly benefits member states that have both large size of population and economy markets, while member states with small population and economy markets suffer the most adverse effects of various trends, including deregulation and stricter governance on matters of subsidy.
4. No one-size-fits-all policy is a best option for Europe as a whole because in matters of media, it is not (and might never be) exclusively a single market. In media, at least, Europe is a union of numerous single markets, each with its own distinctive conditions, needs and interests. There cannot be unity without accommodating diversity.
5. EU media policy that is oriented to benefit the interests of the media industry in larger and wealthier member states is likely to have a detrimental impact by limiting the options for smaller state policy responses.
6. Political intervention through public subsidy is of cornerstone importance for securing domestic production throughout Europe.
7. PSB operators are the best instruments currently available for securing adequate domestic production in both small and large domestic markets. There is nothing so far to suggest that PSB is replaceable or substitutable.
8. Key differences between small and large markets are accounted for by the public media sector because it does the best job of offsetting scarcity.

Scarcity of revenue, i.e. based on critical mass, influences the amount of profitable channels with quality content. Too much competition, cut-throat competition, can easily yield not more, but less quality of content, as revenue scarcity will limit the rationale for commercial investment in the production of originated content goods, when international productions can be acquisitioned more cheaply.

While it is correct that more channels yield more content, not all content is of equal quality, and it can to a high degree be foreign or have high levels of repeats. A state has a choice in terms of regulation and potential of subsidisation to secure its warranted level of quality, if any, of broadcasting services of originated content.

PSBs have in many European markets functioned as standard setters of quality, as audiences could always choose these services instead of the commercial for-profit channels. However, we should not be blind to the fact that commercial for-profit services can create higher quality content in several genres, and do so today, but this requires either the potential for sufficient revenue, or a regulatory/legislative requirement to do so for the television companies/content producers.

This is also why critical mass becomes one of the primary challenges for small markets, as many channels in a zero-sum advertising revenue game can result in a downward spiral of declining quality.

The question raised in this analysis is whether the media should be treated as an 'ordinary business', no different from other industries such as pork bellies or detergents. If the answer acknowledges there are significant differences, then a one-size policy is not appropriate for a multi-sized Europe.

Personally, the analysis leads me to conclude that it is far from any ordinary business, despite having business interests and an important role in business generally. Media are distinctive in that both market and content good characteristics create imperfect conditions for competition and limit investment in original production as a result of uncertainty of profitability. This is clearly especially the case in smaller markets.

Political intervention in the European television market is an important remedy for problems in securing adequate originated production, although of course different conditions warrant different policy strategies and designs.

That there is no one-size-fits-all policy does not mean that member states should do anything they please; accountability demands transparency and benefits from constructive friction. The level of originated media content depends on relative market leverage in combination with the level of public subsidy and regulatory measures governing the market. While common challenges based on market and content good characteristics affect large and small markets similarly, they clearly have different degrees of market leverage. This analysis provides an

empirically based way to perceive size, one that takes into account the variability of markets as a function of size in various dimensions.

Only considerable qualitative research in each market can answer many of the questions that remain of concern. But this study takes a good step towards establishing the necessity for policy-makers to make TV broadcasting policy that accounts for differences based on size characteristics.

6.3 Market competition

The competitive conditions in television markets have been in focus several times, but with little comparative material reaching across both small and large markets. I have studied market competition as a stepping stone to both confirm and question parts of theory, not because the current lines of thought are mistaken, but because the effect of political intervention has been ignored to some degree.

I have studied the influence of size on competition understood as influence on public and private channel market share, market concentration and transnational ownership. This also led to findings on the relative influence of PSBs in the individual markets.

The results of the analysis only partly verified the hypothesis, as the influence of size was not as assumed. Larger markets had both stronger public (domestic and total) and private (mainly domestic, but also in total) share levels. Larger markets can thus be argued to have better conditions for television, but foreign penetration (as measured based on the country of origin principle) also influences this, as well as the scale of political market intervention.

Television markets in general proved to be relatively concentrated which indicates imperfect competition as assumed, but because of the scale of market intervention, it is difficult to actually claim that smaller markets are more concentrated. On the other hand, as the results are measured by comparable ratios, this also means that a large market with a relatively similar level of concentration to that of smaller markets, would have larger companies measured by turnover. This is in line with the analysis in chapter 4 on scarcity conditions.

Market concentration in television markets is – in accordance with general economic theory - relatively high. This result is linked to market scarcity conditions combined with the media content good characteristics. Without market intervention the markets could be more fragmented, similar to the Romanian market with a weak market intervention, depending on the type and construction of distribution networks. Nonetheless, there is a limit to the number of

companies in particular markets able to reach efficient scale, but this could also change if international channels become increasingly available, and potentially increase pressure on the business models of domestic television companies.

There are two factors circumventing the logic on the influence of size, which were quite interesting findings. These were a) PSBs/state regulatory conditions and b) multinational corporations.

Both of these alter the original logic on the influence of size. For the PSBs as a consequence of reducing scarcity artificially (increasing market volume and funding a television company that would not otherwise be in the market) as well as increasing barriers to entry, and for the multinational corporations because they can utilise economies of scale and scope when buying bundled rights (sports and other content) as well as using international channels (for instance like Discovery by producing relatively culturally neutral content).

Additionally, I empirically identified that TV markets are in general under conditions of oligopoly, usually with between two and four main companies. Primarily, the structure is one of duopolies (two companies) with one or two smaller competing companies (there are different variations). From an overall perspective, the market concentration levels range between moderate and strong with massive differences in relation to market structure, which indicate differences in the actual conduct of the involved players.

However, I could not identify significant correlations between the size variables and the calculated market concentration ratios for HHI and CR1-3, i.e. meaning that there is too little difference between smaller and larger markets' concentration levels to establish a significant relationship. This does not mean that relationship between size and market concentration is a myth, but rather that market concentration in general tends to be high for television, especially as political intervention influences this heavily and in effect sets the rules of the game in the individual markets.

This is also why and where the TWF directive and now AVMS have a positive effect due to the potential of increased competition. Size however influences CR4-6, not strongly, but it indicates that the larger markets have potential for more companies achieving sufficient scale. i.e. sustain a larger number of companies.

Political intervention in the market in effect changes the link argued theoretically between size and market concentration, meaning that small markets do not per definition have to be more or

less concentrated as this depends on the particular regulatory setting combined with the influence of the PSB.

The scale of political intervention is important, especially in terms of the role of PSBs. Surprisingly, in most markets PSBs remain strong, especially where channel portfolio is allowed to increase. This somewhat places a wooden stake in the assumption that the PSBs are dying; rather, they are changing, although this remains very market specific; in some markets they improve, in others they decline. It is interesting to note that state-oriented approaches to the TV market yields different results to one that is market-oriented; this is not surprising because it is different, but rather because both approaches to media policy can yield both positive and negative externalities in terms of competition and domestic production. PSBs in principle act as counterweights to commercialisation, if allowed and at the same time kept in check to avoid monopolist conditions. Political intervention comprises more than PSBs, but these organisations continue to have an important role in contemporary society, and will remain in most markets as the primary producers of domestic content, as well as an alternative voice to the private commercial players.

This argument is based on the effect of PSBs, as they can circumvent the logic of the market by reducing the effective scarcity level in a particular market using public subsidy. This increases the barriers to entry effectively for new players, and thus establishes a situation in which companies with a competitive advantage can enter the market. For instance, multinational corporations are able to utilise economies of scale [and scope] using satellite channels with their content, which then increases audience fragmentation in markets where this is possible due to rises in pay-penetration. Domestic companies try to avoid the competition of the new entrants by a variation of strategies, usually in the form of active defence by introducing new channels, to avoid bleeding of share by increasing their portfolio.

Markets for the most part continue to be dominated by local players, rather than global ones. In this sense multinational corporations are no direct threat in most markets, but there are some signs of change in Eastern Europe in terms of foreign ownership. The question is, is this is beneficial or will it result in adverse effects? However, multinational corporations help balance domestic commercial and public players and in this sense can be argued to increase competition (especially under duopoly structures).

The overall implications of this research can be summarised as follows:

1. Market concentration: oligopoly is the rule of the game. The dominating companies are in most markets domestic, but this does not mean that they primarily carry domestic content. Smaller markets are not per definition more concentrated than their large counterparts, but this is heavily dependent on the scale of market intervention in the individual markets. Although the overall level of concentration is high, the level of concentration in TV markets does not appear to be a serious threat to society – in most of the analysed markets.
2. Political intervention works. Market intervention in the form of combining public policy and a (sufficiently funded) public broadcaster appears to secure a market where merited public and domestic cultural interests are taken into account. Public broadcasters in most markets represent one of the largest market players and this appears to have a beneficial effect. There are no guarantees of securing pluralism of views, or the production of domestic content when financial stability is under pressure. However, it appears that, in the European context, the state through intervention - either directly using PSBs and/or indirectly using regulatory measures - coerces or incentivises commercial broadcasters to follow a specific behaviour, such as for instance producing merited types of content like news.
3. Level playing field. The scale and scope of market transparency is of tremendous importance for the level playing field, as transparency enables each type of player in the dual broadcasting system to have established ideas of role and current competitive pressures. Balance between the different types of players appears important to ensure that no single company can attain a monopoly. International players challenge domestic TV companies, but for now the domestic companies remain dominant in most markets. The remit of the PSB as set by the individual merited state interest remains paramount in this. In effect, this also entails that the rules of the game are set not by the PSB per se, but rather through the state in the defined remit, which again illustrates the impact of political intervention in the European TV markets.
4. Overall barriers to entry are set by the state. This means that the conditions of market structure relate to the regulatory regimes in the individual markets. But in the European context they are also heavily influenced by the EU with both beneficial and adverse effects, the reason being that there is no single fit policy for dissimilar markets. Language plays an important role – albeit not to the same degree as just 10-15 years ago – and continues to influence the barriers to entry. For some markets this is beneficial, while for others it means more competition.
5. Clash of cultural versus market/competition concerns. Public concerns over the type of programming provided clash with market interest in securing profitability of

programming. This is only natural, but it remains a condition through not only the individual markets, but also in the EU. There is an inherent double bind in terms of an action paradox between wanting to secure domestic culture vs. competition. If domestic culture is promoted it is good, but it can have adverse effects on competition and vice versa. There is no simple solution, as this paradox – the catch 22 - remains inherent not only in the European legislation, but also in the legislation in the individual European member states.

Competition in the markets is required to secure a diverse media landscape, but some degree of concentration is required to ensure that the companies have sufficient scale to function in the market with economies of scale and increasing return to scale characteristics. We are justly trapped between concerns for competition and diversity where market concentration plays a major role. Can we have a highly concentrated yet diverse content market with several outlets, or does this require a moderately concentrated market with several owners? The concern for a level playing field is part of this, where the main purpose is to secure visible rules of the game, and thus also what is expected of the PSB. PSBs have provided merit goods in the public interest, but have also been attacked for distorting competition, and they in effect increase concentration as a consequence of their function. PSBs increase the barriers to entry for new entrants and to some degree hinder other companies in the market, as the latter have to provide either better quality programmes or more service in order to compete with a for-free service. But this is in essence why the PSBs exist – to rectify market failure and secure a certain level of domestic content and quality.

An interesting effect which can be argued to be a consequence of PSBs is that if they are sufficiently funded they will indirectly force private commercial broadcasters to achieve some degree of strength to enable competition with the PSB. Otherwise, they would have to find a niche or lose the competition, as they would be hard pressed to achieve sufficient revenue otherwise.

The analysis has shown that the influence of size on market concentration is somewhat challenging to define as a consequence of political intervention. More knowledge is required on the actual conduct in relation to type of policy as well as the real effect of regulatory measures. However, this is an interesting finding in itself as it provides some perspective on the theoretical discussion and demonstrates that large markets intervene as much as the small in the European context. This is also emphasised by the analysis on scarcity and critical mass. Furthermore, the

analysis indicated a regulatory dilemma facing European markets in terms of weighing economic versus cultural concerns.

6.4 Regulatory dilemma – economic versus cultural concerns

The basic dilemma in regulating the media (not only television, but also other platforms) at both national and European levels is weighing cultural versus economic (or business) interests. On the one hand there is an immense pressure from business interests, such as interested organisations (for instance The Association of Commercial Television in Europe (ACT) and The European Publishers Council (EPC)) and in the US for liberalisation of the media markets[lvi] both in the EU, WTO and GATT (Hesmondhalgh, 2002). On the other hand, the European member states (as well as the EU) have an interest in generating cultural cohesion as well as sustaining the common European heritage, cultural diversity and media pluralism as mentioned in the preamble of the treaty. Within the EU this is apparent between *DG Information Society and Media* that is responsible for media initiatives, like AVMS (Audio Visual Media Service)/TWF (Television Without Frontiers) directives, and *DG Competition*, which is responsible for securing free trade and competition in the EC. This division places the administration of issues concerning state aid and competition under the remit of DG competition, making it quite an important part of the European media regulation. The issue is evident in regard to state aid to PSBs and the question of their potential market distortions. It is over these issues that the economic and commercial interests collide with the cultural, democratic and social interests of the member states.

The EU is Janus-faced between competition/market and culture bound together, but this is no different than in the individual states. European regulation is divided between two sets of interests:

- Cultural vs. business/economic interests
- European vs. national interests (national media legislation vs. European legislation).

The dilemma consists in weighing cultural against economy/industry interests at both national and European levels.

The European concern is competition; the concept of cultural exception is applied strictly in regards to the European Commission's control over the state aid rules, but on the other hand national culture is protected by the concerns of the individual member states.

It is important to be aware of the dilemmas between the member states and the EC Treaty. The "more economic" approach of *DG competition* could reduce the protection of culture in the small language areas of the community (consisting of more than half the members). In many ways it appears that this particular issue of weighing culture versus economy is a general dilemma constituted by a smaller set of dilemmas concerning the regulation of the media environment.

Table 28: Dilemmas of EU media regulation

Culture	Versus	Economy/Business/industry
Cultural diversity		Liberalisation
Public interests		Private interests
Media pluralism		Media concentration
Market failure		Government failure
National media		Transnational media
Public media funding		Private media funding
Public service media companies		Commercial media companies

The dilemmas should not be viewed as separate, but rather as interconnected and dependent. In many ways the PSBs are serving the general interests in the individual member states and at the same time securing the technological development, particularly in the smaller markets, where the private media would not have any incentive to do so, equally or rather especially so in terms of content production of certain genres. The PSB's obligation is to reach as much of the population as possible, which is why the concept of reach instead of share is usually deployed as a measure of success (at least for the non-commercial PSB), where the primary incentive of private media is to focus on the largest possible population density (and possibly creating niche services to secure other segments) and share.

My point here is that at some point there has to be an understanding of the benefits the PSBs have for the member states that would not be economically viable for private media companies. The main point for the private media is that the PSBs distort competition when they offer services which the private companies could have supplied. These allegations (both the right and wrong) question the role of the public service media role in society.

The problem is in many ways that we are not really able to evaluate the role of the public service media and we lack the correct measures if we are to assess the cultural, social and democratic benefits they generate. However, as shown in the thesis, there is a strong argument on behalf of public intervention in the media, and that PSBs have a beneficial effect. There is no claim that this could not be done through other methods.

My argument is that the European regulation of the audio-visual media markets results in a conflict between the upholding of the ideals of the common European cultural heritage and media pluralism against the ideals of free market competition and trade. A worst case scenario of this conflict comprises regulation errors (both government and market failures) that might end up damaging European cultural diversity to enhance economic competition and free trade, while not gaining the wanted result. The issue concerning PSB access to the new media environment (IP-based services) is the current one of interest. My concern is that if the media regulation is not better coordinated in regard to protection of culture, including the public service broadcasters at both national and European levels, it might end up disrupting exactly what it was initially proposed must be protected in the preamble of the treaty – the common European cultural heritage.

Some of the key reasons for regulating the media, in this case TV, is to:

- Secure cultural diversity and national cultural embedded content.
- Ensure national identity and cultural cohesion through a common frame of reference.
- Invest in national production due to the heavy investments necessary for the production of informational goods, drama, art, literature, children's programming etc. which might not be profitable.
- Invest in and act as drivers of new technology.

Size is important as an understanding of the potential of the individual member state to secure domestic production. Competition might be considered unfair, but it remains a traditional clash between commercial and cultural interests. In essence, what I have attempted to show

empirically is the result of the rules of the game in practice. The analysis shows that PSBs remain paramount for securing domestic production.

The picture concerning the dilemmas and the EU is of course more complex than presented here. The rules on state aid are briefly set out below to illustrate that the dilemmas are in a way inherent in the legislation.

Table 29: Rules on state aid based on The Treaty on the Functioning of the European Union (TFEU)

Article 107, paragraph 1	General ban on state aid
Article 107, paragraph 2 and 3	Exemptions for the ban on state aid
Article 108	Administration and procedure
Article 109	The power to regulate
Article 106, paragraph 2	Public services
Article 14	Services in the general economic interest (SGEI)
Protocol 26	Protocol on services of general interest
Protocol 29	Protocol on the system of public broadcasting in the member states

The legislation stated in the table above represents the articles concerning state aid in the European context. The culture–economy dilemma is integrated in those rules, meaning that there is a wide range of opportunities for securing the services furthering cultural goals.

The legislation in place allows different situations to be taken into account as long as the main principles are followed. The member states notify the EU of new state aid schemes in order to ensure that these schemes are in accordance with the TEUF and that there is no unreasonable distortion of competition. In short, the state aid rules can be considered somewhat beneficial as they force a more comprehensive perspective on the influence of state aid in the individual market.

This is a benefit as it requires the individual member states to take the effect of competition into account when establishing new state aid schemes, and thus makes it more difficult to cut corners. While this pulls in the direction of taking competition more into account, it is helpful for securing some degree of a level playing field, not only in the individual member states, but also across borders. There are risks of negative externalities as it might position different companies in different competitive conditions, if they broadcast from one EU member country into another, which can establish a comparative advantage for one of the companies, depending on individual member state legislation and the competitive situations in the individual markets. This can also help competition, but may have negative consequences for domestic services funded by the same type of revenue.

My point is that tension between provision of merited goods in the public interest (irrespective of the method) and competition is almost impossible to avoid. This is because public provisioning will always influence the market, and because of that TEUF is beneficial as it secures a continued focus on competition, while the member states might primarily be focused on the particular goods and not so much the influence of the market competition. This way the member states are forced to take into account the influence of the intervention on competition: it might very well be that the intervention is in line with cultural, social or democratic concerns, but is it the appropriate measure and is it proportional to the intent? In this way the EU is beneficial, but when a single fit line of thought is established in polices across dissimilar conditions as in AVMS, there are risks of adverse effects for domestic cultural production. Every regulatory measure has externalities (positive and negative), and it is important to realise the consequence of the principles on which regulation rests, as it will influence actual conduct, and where the effect of the intervention depends on the conditions in the individual markets, i.e. it does not have similar influence everywhere as there are dissimilar conditions.

Combined, the concept of public policy with a public broadcaster can assist in securing a reasonable market situation where domestic cultural interests are taken into account by public broadcasters acting as stewards of the playing field, while not actually being the judges. PSBs set the bar to access, and they do so based on a public mandate; private competitors can easily find such competition unfair and unreasonable, but the fact remains that their concerns are about *profit and their shareholders*, and not necessarily what is in the best interests of the public.

In short, private media companies do not exist to serve the public, they exist to serve their owners, and their conduct has to be perceived in this light. Competition might be considered unfair, but it remains a traditional clash between commercial and cultural interests.

In essence what I have attempted to show empirically is the result of the rules of the game in practice.

The Janus-face of the EU regulation carries more benefits than adverse effects as it challenges national culture and secures both independent production and European works. The European Commission's general media policies with a one size fits all principle carry both positive and negative effects. The EC influence on the state aid rules secures an important focus on equal competition and a level playing field, while the DG information society and media secures knowledge and information on the individual markets in a comparative perspective.

When regulating media markets, we are trapped between concerns for competition and diversity and the EU legislation reflects exactly that. Thus, we can end up in a catch 22 situation: we want competition to ensure a diverse media landscape, but we also need some degree of concentration so that the companies can have sufficient scale to function in the market with economies of scale and increasing returns to scale characteristics. If we do not want competition, we are in practice foolish as we do not attempt to secure the interest of the consumers by having a diverse market. However, we are also foolish if we have too little concentration, as in that case we risk that the citizens/consumers suffer anyway, as what they are offered can be content of less quality and mostly of foreign origin.

In short, we are foolish if we focus only on competition and foolish if we do not secure competition: the catch is that we do not know if there actually is a balance between the different concerns (culture vs. competition).

The EU wants to further a single European market for television to ensure competitiveness. This is done using – among other instruments – directives like TWF before and now AVMS (2007, 2010) based on the country of origin principle. Such regulation in effect lowers the barriers to entry, establishes general content requirements, and thus allows a freer competition across borders for television channels; however, it also differentiates players, as although the intention was to establish equal opportunity for all, in effect players in different markets have different opportunities, depending on the actual set of regulatory measures in that particular market.

We want domestic original content, and the simplest way to secure this is through the public broadcasters, especially in small[er] market conditions, and this is what happens in Europe. However, as long as there remains a primary focus on the local rather than global, more emphasis should be put on limiting the adverse effects in the market by monitoring the actual conduct of TV companies comparatively.

6.5 Implications for policy

The point of this chapter is the demonstrate that the economic argument applied in the thesis holds for informational types of content as well as other types of high quality domestic content across platforms. This thesis in a way presents arguments on behalf of political intervention in the media, but with a focus on securing their independence.

A policy is usually adopted for a specific purpose in one particular context, and cannot be designed to take into account all future developments, so while it might carry beneficial effects under the conditions when the policy was established, it might easily carry adverse ones under other conditions. Applying the language from economics, I can argue that policy carries externalities which are either positive or negative as well as conditioned for adverse [or favourable] effects. In short, the state has choices but has difficulties in establishing the potential [adverse] effects or externalities of a given policy.

The normative argument of state intervention in the media - for democratic societies. There is a general belief that the individual consumer has the right to choose and purchase what he or she wants, when he or she wants it (neoclassical economy). Unfortunately, consumers sometimes have limited information, there is limited competition and they can make a lot of unfortunate choices as a consequence (market failure). This is part of the argument for the media: a lot of the content, especially informational, would not be produced by commercial companies as a consequence of non-profitability, especially in small markets. Consumers would not normally have any incentive for purchasing such goods, nor for demanding them. However, in order for democratic society to function, such types of goods, preferably independent of particular interests so as to secure some degree of unbiased information, are required.

What is important from a state perspective is not only what the consumer wants, but what the citizens need in order to navigate in democratic society. The citizen needs to be enlightened to a certain degree and this is an important function of the media, and also part of the legitimacy of political intervention in the media. Public service media has done this for a long time, and newspapers likewise. This is in a way part of the journalistic ethics: the argument in general also holds for editorial goods, but this is not the point here. What are required are merited goods, which should not be rejected due to fear of paternalism or the so-called *justified* belief in the individual choice. Merited goods can be secured through regulation or provided otherwise; there is no requirement that they have to be under state control. The method of providing merited

content has changed with the introduction of new media, which has challenged the *traditional* way such services were provided for society.

The challenge created by the new media (IP-based) and increased internationalisation is increased choice, which is a great benefit but also a great challenge for the media. The challenge lies in the difficulty of securing interest in their particular content in competition with other time-consuming activities, entertainment or otherwise. This has placed some types of media (mainly print media, but also some TV channels dependent on advertising revenue) in peril as their business model has come under pressure. This is not really a problem for most public media. The economic logic of public service media is that of collective funding, i.e. that the many pay for a service that is in the public interest to be catered – indeed a paternalistic interest or rather a merited good – at least insofar as the particular public media has some kind of state funding (licence fee, grant or otherwise).

For media based on dependency on subscription in combination with advertising which primarily provide news and current affairs, this has proved a challenge where *free choice* is available as the increased number of substitutable products (especially if they are free) creates pressure on their business model. Having to sell a *good* which has a lifetime of mainly a day or a few days in a situation where information flows more or less freely online is challenging.

Language and ownership to rights have helped TV so far, albeit the offers online are increasing, but for the newspapers this is rather different. For some time the customers buying newspapers (single copies or subscription) have helped pay for the provision of information to the many (due to the news cycle). This development has been amplified through the new media where the main trend has been to provide these goods freely (for advertising revenue), but where most in reality is paid for primarily by the print version, meaning the paying customers (keep in mind the dual-market system where the readers are sold to the advertisers).

However, for other media, like TV, subscription revenue has proved a *smart* way forward as the system of pay television (especially packages where the consumers pay for a few high profile channels and for some extra channels as well) functions like a club good (the many pay for all users, however limited). Using this method, TV channels such as CNN are distributed internationally, but also in the domestic market the subscription model is an effective method for securing revenue (but mainly if there is a package system). Note that this is true for both merited content and other content types.

The challenge for the newspapers is that the (now) limited subscribers paying for the service have numerous alternative channels of information, usually even that particular newspaper's

online site. This means that there are substitutable goods easily available and that the consumers can easily opt out and go for the free services. This has resulted in a predicament for some media types, while others have benefited – mainly TV and online services.

Media concentration is an important concern here, as it in essence is a domestic question; unfortunately, it is also an extremely complex question due to international development as the global markets have opened online and increased national competition. The competition from free content online and thus increased competition for advertisement revenue has eroded the effectiveness of the newspaper business model. But it is also a challenge that faces other media types. This is a regulatory challenge for the politicians insofar as they want to protect a merited public interest in specific content, editorial or otherwise. There is a limit to the number of companies in the individual markets which can help leverage the required informational goods at both the local and national level: a certain degree of market concentration is required for a company to secure sufficient scale to allow this and continue to provide local news production.

In short, *it's the economy,* no more, no less. Revenue is required to fund informational goods (and other types of merited content) and the arguments concerning scarcity and critical mass continue to hold for both small and large markets, even online. It is just that with the current development, we risk having fewer editorial goods or rather less funding of editorial goods than before the new media. As a consequence of new media and technological development, advertising revenue has been diverted to non-media services which places the typical media funding under pressure: this will continue until a reasonable [or rather more stable] business model has been established.

Basically, the eco-systems in the individual markets have been placed under pressure and new predators take part in the hunt for advertising revenue to increase turnover. Size emphasises such a challenge, as there are limited stable sources of revenue available. The argument is thus useful for other types of media and not only TV, although TV has been used as a particular case study. However, the effect is of course different.

This thesis has helped identify the influence of size more in-depth in terms of establishing a general argument based on economic logic, where the main principle is that the market characteristics across small and large markets are similar, and that it is the scarcity conditions (of various types) that influence the market's ability to provide various types of content goods. This also showed that public intervention in the media has some beneficial advantages and remains important in order to circumvent some of the market characteristics. However, more research is required to establish how different policies influence different types of markets in

order to establish an idea of best practices. In a similar vein, we require information on the influence of market concentration in the individual markets, especially from a comparative perspective (internationally), and not only from the individual single market. Without comparing, we cannot perceive difference, whether this is done diachronically across one of more markets, or synchronically.

I argue that even though that there are several challenges in comparison, it remains important to secure further knowledge of the relationship between policies and the influence of media outlets. If we want to establish a more comprehensive understanding of the production of media content (journalistic, television, radio or otherwise), comparison is important to establish differences in the individual markets.

Comparative research emphasising both a state and market perspective is important, but inclusion of the separate civil society perspective helps to conceptualise the interrelation in the individual markets and the effects of different policies, as different markets have different levels of civil society trust.

The thesis establishes a way forward in the process of establishing a more coherent discussion on the implications of size. I have studied different aspects of size from a structural perspective using the mechanics of the TV media markets as a case. The analysis establishes an argument on behalf of intervention and regulation of the TV market in particular, but also media markets in general, insofar as there is a merited public interest for democratic society.

I have done as stated in the introduction and the result is a combination of *we already knew* with some surprises. I make no claim that size is investigated in totality, but rather that this thesis is one particular perspective on the influence of size where I can claim that size matters for the most part, but that state intervention also has to be taken into account. I hope that this thesis opens the way for more new research within the media into not only size, but also on public intervention and the role of the state. The state–market relationship is also somewhat ignored within the media, which is unfortunate as it continues to play a huge role in society. More comparative and in-depth case analysis is required to establish in more detail the role of the state in relation to the media.

Size of economy is paramount in terms of leveraging the TV market and media content characteristics. Population impacts the level of available revenue, as more people establish a larger critical mass to secure collective funding from and also constitute a larger talent mass. The scarcity of resources is a serious challenge as this influences domestic production of merited content. This can be generalised to other media types, such as for instance newspapers

and other media companies producing different types of media content goods, like editorial goods.

This is most easily perceived by the current crisis in the newspaper industry, where the former ecosystem (streams of revenue) has been altered. Money is required to secure merited content goods and under conditions of financial difficulties this challenge is emphasised.

This impacts the scale and scope of market concentration and thus the barriers to entry and exit in the market. Under such conditions, it becomes quite logical that when the state finances public service institutions or subsidises other types of media [usually editorial media content as well as domestic movie- and TV-content] in combination with public regulation, it influences the rules of the game in the market, for TV as well as for other types of media.

Studying the market indicates that applying a broad approach to the media markets generates better results in terms of securing the merited content, than by fragmented and case-by-case action. In the future, public intervention in the media – no matter by which type - should be closely investigated to identify, using comparative methods, how such interventions influence the conduct and rules of the game.

Media markets require more in-depth study on the policies in different markets across media types to show the influence of the state, and thus how different approaches yield different results. Size matters, but economic strength in combination with public service broadcasting institutions is a strong influence on the impact of size in both small and large markets.

This, however, does not change the catch 22 situation between balancing the interests of wanting competition versus wanting to secure culture, which in many ways spells out the current dilemma of European media politics.

6.6 Implications for EU regulation

Conceptualisation of policy implications have been discussed and presented above, and while there are implications for the media due to policy, there are also consequences for the state, market and civil society. In many ways, polices weigh different interests and choices are made in terms of which preferences to weigh higher than others, and when it comes to the issue of size, small markets in particular can be subject to unintended effects based on regulation made in the EU.

The understanding of policy implications is similar to the line of thought from economics based on market and government failure. I argue that while discussing policy implications in general, in principle there should be a distinction between the implications for the state, the market and civil society; this can emphasise the understanding that there can be consequences of both intervention and non-intervention in different areas.

Furthermore, we have to acknowledge change or the possibility for change due to at least the three push/pull factors argued by McQuail (2000, 1992), meaning that states have made different strategic choices for their media systems based on their perception of development. If we look into the conceptualisation of the media system, it can be argued that it is shaped and transformed by three inter-related push/pull factors in the form of the political, economic and technological spheres. These three factors are interdependent and influence each other. The way the media is organised in a given society can be related to the inter-dependence between these three forces (McQuail, 2000).

This constitutes one of the challenges concerning small/large state discussion, namely the different strategic choices and the way the different markets cope with neo-liberalism and liberalisation when introduced to foreign or new mediaplayers, or new technology: how do the media players and politicians react? Do the commercial market players ignore the new technology or do they embrace it? Such a perspective has roots in political economy and is a way to conceptualise reasons for change and unintended long-term adverse effects of policy.

Basically, the analysis shows that PSBs with a certain level of minimum resources are very beneficial in a small markets. The benefit of the PSBs is the versatility of their potential to cope with change and adapt the organisations (slowly) to new purposes.

I have established a particular way of conceptualising the potential policy implications of size for Europe, but the study has verified that the PSBs are a brilliant utilisation of policy with which to secure merited content across platforms: paradoxically it is competition that endows these companies with the required drive.

Unfortunately, we have seen that, due to the PSBs' provision of online services with merited content, they engage in competition with companies they only indirectly competed with traditionally. These companies unfamiliar with that type of competition are of course against such an intrusion. But can we rightly claim that PSBs should not be present and compete on this platform, insofar as this is used by the citizens in order to keep themselves informed? What is important is that the relative strength between public interest is measured against the existing

commercial services. Unfortunately, the balances between those separate concerns are quite difficult to weigh.

Distinctiveness is in a way the key word. The focus has been on the distribution[lvii] of broadcasting from a regulatory perspective more than on the content, except when it comes to securing European content, as per the cultural quotas in TWF/AVMS. The difficulty faced is a paradox. It should be evident that the necessity for regulation lies not only on the distribution side, but also and especially so on the content side, particularly in small markets. The problem faced in regulatory texts and in general in broadcasting is the lack of thought about the inter-relation between regulation, competition, policy, public interest and the economics inherent in the media.

Usually we think of the interaction between regulation, competition and policy when studying the political economy and regulatory aspects of the media, but there has been some neglect in including the frame of public interest in the analyses, and how the inherent conditions in television make some of ways of thinking about competition difficult.

In other words, what must be taken into account are the different interests of the state, the market and the civil society, and policy development has to include conceptualising the impacts which policy will have. Even so, there is a choice between whose interests to advance and which to prevent. Here is one of the areas where the impact of being small versus large can be felt. As the main markets compared in this study are democracies, a main purpose remains the diffusion of information to ensure an informed public, which lies in line with the argument on merit goods on the one hand, but more importantly makes debates on regulation of the media a core discussion for both state and civil society. The point of interest here is public interest in high quality journalism for informational programming, as well as high quality domestic programming of other genres like drama.

What I argue is that policies have implications in different areas and that a particular policy option cannot take all beneficial or adverse effects into account. The influence of size is in a way often taken into account indirectly, as this influences the very conditions of how the media operate, but doing this also leaves open the difficulty of applying universal policies across a number of countries with different conditions in the name of competition and efficiency.

My argument is that the interests not only have to include the market and industry perception, but also the state, and civil society. The lack of inclusion of such concerns might create a kind of competitive market, as competitive as possible with the broadcast market and media content good characteristics, but will involve a cost of national culture, especially in small markets. In

relation to the media, it has to be recognised that there are not only market concerns, but also important functions of the democratic state in informing the public, and the public potential of monitoring the state. This is of course not all, as there are also entertainment purposes and more. But public intervention helps secure the important elements of news, current affairs and debate (informational genres) which in small markets are difficult to provide under the market conditions; to this can be added high quality fiction. Control over the media by conglomerates can – if not kept in check by the state - result in situations where the concerns of retaining power or profit are ruled above the concerns of the [uninformed] public.

This dilemma is also quite evident in TV markets from a business perspective, as pointed out by Thomas Ebeling, CEO of ProSiebenSat.1. Media Group: *"News is important for the image of politicians but not necessarily for all viewers," … "Our company loses about €50 million every year with the news business in Germany. We had to solve this problem." German politicians skewered Mr. Ebeling for his inconvenient truth."* (FTM, July 9, 2010: Television News: New course or main course). This is not just an economic – culture perspective: it is also a question of merited public interest. Even large markets such as Germany have problems in terms of funding news production. But as pointed out by Torsten Rossmann (CEO of N24), N24 could not go down the road of partisanship like Fox News. "*He argued how the new N24 profile should be "We will produce a different, stronger news format." When asked if that meant giving N24's newscasts a particular political spin, like News Corporation's Fox News in the United States, Rossmann demurred. "I have always refused," he said to media website viSdP (July 2). "Decades of the audiences' experience with public service information allow no room for partisanship. N24 is a balanced, critical and business-friendly (channel) in the tradition of the German journalism."* (FTM, July 9, 2011: Television News: New course or main course). This informs us from the business side of the beneficial externality of PSBs, in that they have a set of functions in society that help secure the ability of the individual citizen to navigate in democratic society, insofar that they invest the time .

I show that funding of public media and specifically types of content is required to ensure a healthy production environment, [balanced] informational content and a certain level of quality. This is caused by the conditions of scarcity and market characteristics.

The analysis in chapters 4 and 5 shows that this is an important part of securing production. I have indicated that the market was subdued by policy and PSBs in order to save what is considered public interest, thus protecting the distinctiveness of the individual market by changing the rules of the game.

A level playing field is required because of that to ensure equal chances for success where the publicly owned company does not hold a publicly entrusted mission. Where public interest enters the game, the rules change as the public broadcaster rightly can distort competition based on its entrusted mission with public money.

The private company can of course challenge the PSB trying to do better, but that is also part of the game, as this equals the PSB setting the bar. This analysis substantiates this, but also that state intervention – national as well as EU - plays a major role in the competitive conditions in the individual markets.

6.7 Implications for public service broadcasting

Public service broadcasting is known to hold great importance for society (see for instance UNDP, 2004). This thesis demonstrates that all markets can benefit from PSB, but in particular small markets. The current challenges of PSB have been argued before (Tracey, 1998; Lund, Nord & Roppen, 2009), but few studies have demonstrated this development from a political economy point of view including the potentials of PSB as a cultural policy tool with increased importance – especially in relatively small media markets.

This thesis carries a main narrative on the influence of size, or rather the similarities and difference between small and large markets in Europe. I have - in line with other literature on the influence of size - shown that size is indeed important. Nonetheless, it is also a narrative that shows the importance of state intervention into the media markets, and thus in the European context the importance of PSB.

Public service broadcasters are part of the European cultural heritage. From the beginning of radio transmission of news and concerts to include television and now online content, these institutions have been present to serve the public interest with a mandate to inform, educate and entertain.

Studying the European television markets I found that PSBs continue to be important in contemporary Europe:

- The analysis in chapter 4 indicated the strength of PSBs, measured by public funding, and also showed the level of investment in originated production. The analysis made clear that markets with high levels of public funding usually also had high levels of

funding in production of domestic content. This shows the importance of PSBs in each market as a provider of content for the population, and thus that they function as a method of securing continued content production in general, but for small markets in particular.

- The analysis in chapter 5 showed that the PSBs were, if not the largest television companies, then usually the second largest, in each domestic market. This is a testament to the importance of these organisations, and their ability to attract audience to domestically originated content. The generalist channels have been under threat, but most PSB have launched new more thematic channels to curb the decline. The chapter also substantiates that PSBs help balance the market by presenting a not-for-profit alternative. In other words they set the standard and help secure a certain level of market concentration, meaning that the presence of a strong PSB will function as a counterweight.

The political intervention indicated in the analysis is evidence of the importance of PSB, but also that politics circumvent traditional economic logic. In television markets PSB continues to hold major strength in terms of market share and makes a major contribution to domestic content production. The thesis shows that PSBs in the European context are functioning as the main pillars of domestic content production, and thus per default as safe keepers of the audio-visual content production industry in Europe.

In many ways the PSBs are central in continuously securing domestic content production and thus ensuring domestic talent a "sandbox" where they can experiment and learn the business. This also tells us that without the PSBs there would be a high chance that domestic production of content would be downgraded to a much smaller scale in all markets, but especially in the smaller ones.

This is important as markets without a diverse audio-visual content production industry will become increasingly dependent on foreign productions. While this might not seem problematic at first, it would challenge part of the reproduction of cultural identity and the common frame of reference in society, as content mirrors contemporary and past "societies" way of life (such as norms, values and perspectives on life). This is not to say that domestic content would disappear completely, but many genres of content are unprofitable to produce (too costly and time-consuming) measured by the potential return especially in smaller markets.

Furthermore, PSBs present a not-for-profit perspective and secure additional pluralism of views in a market. PSBs help diffuse news and debate in domestic markets as well, which would not otherwise be present to the same degree.

PSBs can in the same vein function as a balancing force in a market, being counterweights to commercial pressure. Meaning that if PSBs are sufficiently funded they will indirectly force private commercial broadcasters to achieve some degree of strength to enable competition with the PSBs as well as balance the views on society.

Right now European media are standing in the middle of a converging media environment changing the way media content is received by increasing the number of ways content is used and created. Radio and television continue to be well-used media, but consumption of content in changing. The change means that PSB now competes more directly with publishers, especially newspapers, for audience online. This has placed increasing pressure from publishers on politicians to ensure a level playing field online.

This presents several challenges for PSB in the near future: first of all, to provision their content on all platforms to ensure that the audience can receive it, and secondly to be allowed a strong presence online.

Formerly the media economic ecology was mainly domestic, meaning that advertisers were highly dependent on mass-media (radio, television and print) to reach their target consumers. Online advertisement changed this and "set advertising free" in the sense that you can easily be subject to domestic commercials even by visiting international sites, as well as the power of companies like Google (also includes YouTube) in attracting advertisement revue. This has hit publishers of mass media print publications especially hard, as news was presented free of charge online without sufficient advertisement revenue to cover the costs. In many ways the print subscription model impeded incentive for innovation, as their main turn-over is generated by the printed paper (bundled news and other informational content). Thus by offering content for free online, they directly cannibalised their own funding model, in a way a version of Tiroles (1997) replacement effect.

In other words their business model broke down, as the subscriptions and advertisement of the print edition paid for the online edition. Basically, the revenue that formerly went to the publishers now goes to online sites, often international companies, and not towards securing domestic production. The reason for this is that it's cost-efficient to the advertisers to focus on the legacy media to the same degree as the eyeballs went online.

This tendency increase pressure on the PSBs because commercial companies feel their continued existence is threatened. Thus they attempt to limit the scale of PSB exploration and use of resources of delivering content online. Nonetheless the presence of PSBs online is completely in line with what the commercial television and radio companies were subject to formerly. PSBs represent a market intervention not only to secure a certain level of content online, but also to secure general availability of domestic content. The main difference lies in the characteristics of distribution, but there is no real difference in terms of content. Content does not diminish even if +1 person uses it whether it online, radio or television. The difference lies in the fact that people have to pay for accessing the content (i.e. the streamed/downloaded bits). What will change in the future as mobile broadband and other ways to access the internet increase in penetration and capacity, is how people access the content. The thesis stresses the importance of PSB content production and the value of this for democratic and cultural reproduction in a domestic society.

On-demand content online does not disappear after use like flow television content where the programmes follow a particular schedule. It can be used by all who are able to access it continually, unless encrypted. This is because of the media content characteristics, which makes production of content dependent on some type of collective-funding model. But in contrast to free-to-air broadcast, bandwidth is used when streaming, downloading or viewing material online. This means that the original distribution argument based on the airwaves public good characteristics is altered. Even so, this change just alters the original argument on PSB from the technical perspective to revolve more around the importance of the content and services provisioned by PSBs and their effects for culture and democratic society, than on the form of distribution. This will involve even more policy challenges in regards to net neutrality and the question whether all bits are equal or not, which become increasingly important as audience moves online, even though they also remain on the original radio and television platforms.

Nonetheless from a pure market failure perspective it could be questioned whether or not PSBs should be allowed to compete directly online. On the other hand this increases the tension between market failure arguments and the proponents of the democratic, cultural and social role of the PSBs. Clearly I find that there continues to be a market failure as per the challenges of securing domestic content, but also that the benefits of a PSB like institution should not be underestimated – especially not as a policy tool.

The future for the media markets is uncertain as we have only scratched the surface of the change the current premise of convergence will bring. None the less the argument about the

importance of PSBs will continue to impact as cultural policy tools as long as there is a desire to secure originated production of content.

It might be appropriate to restate the words of Juneau (1997): “a strictly commercial approach to television – even in large and rich markets – is not reconcilable with cultural goals. Such an approach is even more unrealistic in smaller countries and in most countries of the world”, to be that a strictly commercial approach to public service content irrespective of platform – even in large and rich markets – is not reconcilable with cultural goals. Such an approach is even more unrealistic in smaller countries and in most countries of the world”. The reasoning for this is that PSBs do not usually focus on profit, but rather on how they can best serve the public, which should not focus on an individual platform, but rather on the main purpose of creating new original content in each market and distributing it to the public irrespective of platform.

All in all, my research-based claim is that size matters for European TV markets - what is evident also is the benefit of PSBs in general, and for small markets in particular. The influence of size is probably also true for other platforms that have not been studied empirically in this thesis, but of course I cannot say anything in general about this. Such statements would involve more research with the purpose of investigating this in detail. My thesis indicates that it is important that such research includes comparative economic analysis, and does not depend only on qualitative studies and normative arguments. The frame of research I have used to analyse European TV markets is one method of doing so, and will be applicable for other platforms as well. Using such a framework could help increase understanding of the importance of size for other platforms, especially taking the current media development into consideration where diffusion of content increasingly ignores borders and international players more easily than the TV markets can penetrate into markets with their content. This is especially true since the challenge and importance of securing high quality domestic content in a variety of genres will continue to be a challenge in the future in spite of the current development. This is why the argument of size will remain important even in the future, as my research indicates that securing high quality culturally embedded content is one of the main challenges for smaller markets.

7. Litterature

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8. Endnotes

[i] Europe is understood as being compromised of the following markets: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Lichtenstein, Luxembourg, Malta, Monaco, Netherlands, Norway, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdoms. Albania, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Poland, Russia, Serbia, Montenegro, Slovakia, Slovenia, Ukraine

[ii] The EU consists of the following 27 member states: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, Sweden and United kingdoms

[iii] Western Europe is understood as: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Lichtenstein, Luxembourg, Malta, Monaco, Netherlands, Norway, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdoms

[iv] The market is defined empirically as the territory boundaries related to copyright. It is thus limited to the same area as that where the same entity has a monopoly on violence. Large media companies can easily acquire the rights to programmes, events and more, but have to do so for every single copyright territory. Bundling is an option for same or similar language areas.

[v].Efficient scale in small markets requires relatively high levels of market share, evident in high degrees of market concentration. Particularly in a situation where advertising and subscription revenue are garnered by international owners or investors, the distinctly domestic aspects of a TV market are correspondingly weakened. When taking into consideration digitisation, this problem may actually worsen, if not in terms of channel supply or overall content, then at least at the level of domestic content supply.

[vi] Even in cases of subscription funding, if lacking the critical mass to facilitate production, there can be no guarantee of sufficient revenue to secure the content necessary to satisfy either consumer or public interests. The greater the number of subscribers, the further the cost is spread due to the intrinsic character of broadcast properties as non-rivalry goods.

[vii] Public subsidy is a viable way of securing the level of provision of desired in media content by a particular market. But this does not necessarily mean that size will determine the level of

public subsidy because that is inherently a political decision and always hinges, to a high degree, on the agreed legitimacy of market intervention.

[viii] I argue that domestic content, while potentially non-excludable, is for the primary market audience. Culture and language almost per definition act as excluding factors which influence what and where the firm acquires productions for domestic audiences.

[ix] I will apply the following definition of a state as argued by Weber, cited by Pierson (2004: 6): "A compulsory organization with continuous operations will be called a 'state insofar as its administrative staff successfully upholds the claims to the monopoly of the legitimate use of physical force in the enforcement of its order. … [The modern state] possesses an administrative and legal order subject to change by legislation, to which the organized activities of the administrative staff, which are also controlled by regulations, are oriented. This system of orders claims binding authority, not only over members of the state, the citizens, most of whom have obtained membership by birth, but also to a very large extent over all action taking place in the area of its jurisdiction. It is thus a compulsory organization with a territorial basis. Furthermore, today, the use of force is regarded as legitimate only so far as it is either permitted by the state or prescribed by it. …The claim of the modern state to monopolize the use of force is as essential to it as its character of compulsory justification and continuous operation".

When I discuss or mention the state, I mean the entity with the potential to intervene into the market using regulatory measures in the form of restraints or benefits, and with the potential to penalise those not abiding with the set rules. This also means that it is the entity with an interest in securing the mirroring of a specific cultural and historical context to ensure cohesion of the area within its control.

[x] Homogeneity and heterogeneity

[xi] Establishing new channels targeting a wide range of nations using dubbing of native speakers to increase audiences, financed either as pay channels or through encrypting (thereby altering the public good to a club good). Advertisement is now possible and potentially profitable if the infrastructure is available.

[xii] Eastern Europe is understood as Albania, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Poland, Russia, Serbia, Montenegro, Slovakia, Slovenia, Ukraine

[xiii] One point to study is whether it is primarily the large countries that penetrate their smaller same-language neighbours or if this can also be the case for small country neighbours. Argued another way: there is no lack of foreign channels penetrating the different media markets; a simple look at the MAVISE database from EAO shows that the difference lies in the choices of the audience and the national channels available, as well as in the relative impact of the cross-viewing.

[xiv] The dependence on advertisement revenue in these small nations with large neighbours has both beneficial and adverse effects: First, it can help establish the advertisement market, but at the same time it risks crowding out domestic private commercial operators, and secondly, the PSMs become increasingly vulnerable to cross-viewing as they risk losing advertisement revenue to foreign media companies. On the other hand this probably remains the best option to lessen the financial burden of funding.

[xv] This is from a national perspective, multinational corporations from large and small nations are very well able to benefit from economies of scale and scope, for instance by increasing the number of targeted countries.

[xvi] The European Economic Area (EEA) consists of the following countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Republic of Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK. Note the Switzerland is not part of the EEA, but has similar rights in some cases.

[xvii] http://ec.europa.eu/internal_market/services/services-dir/faq/200410-faq-point06_en.htm Webpage assessed March 14th 2012.

[xviii] I will apply the US guidelines here, although there are some differences in approach

[xix] Efficient scale in small markets requires relatively high levels of market share, evident in high degrees of market concentration. In particular, in the situation where advertising and subscription revenue are garnered by international owners or investors, the distinctly domestic aspects of a TV market are correspondingly weakened. When taking into consideration digitisation, this problem may actually worsen – if not in terms of channel supply or overall content supply, then at least in the level of domestic content supply.

[xx] Even in cases of subscription funding, if lacking the critical mass to facilitate production there can be no guarantee of sufficient revenue to secure the content necessary to satisfy either consumer or public interests. The greater the number of subscribers, the further the cost is spread due to the intrinsic character of broadcast properties as non-rivalry goods.

[xxi] Public subsidy is therefore a viable way of securing the level of provision desired in media content by a particular market. But this does not necessarily mean that size will determine the level of public subsidy because that is inherently a political decision and always hinges, to a high degree, on the agreed legitimacy of market intervention.

[xxii] Note that there are also several conditions of scarcity involved in the production of creative works, such as qualified personnel, investment and resources in general. This can also have an influence on the production process as the lack of incentives relates back to the production process where the risk is an actuality. Initiation of production is without knowledge of whether or not and on which scale it will be profitable.

[xxiii] Large markets should be able to provide these goods more efficiently than small markets as the same quality cost of production is independent of size, but dependent upon the amount of potential consumers – e.g. non-rivalry and thus independent of consumption. The main reason for this is that the costs of production of these goods are similar (e.g. the cost of producing the first copy), meaning that the more people that are available, the more the cost can be spread out.

[xxiv] Public subsidy is way of securing certain provision of media content in a particular market; however, this does not necessarily mean that size impacts the level of public subsidy, as it is inherently a political decision as to how high or low a scale and scope a market intervention has.

[xxv] I argue that domestic content, while potentially non-excludable, is for the primary market audience. We can argue that culture and language almost by definition will act as excluding factors which influence what and where the firm can acquire productions for domestic audiences.

[xxvi] Computed using alpha = .05

[xxvii] The partial eta square is a nonlinear figure, with similarities to the R-square in the regressions above.

[xxviii] Computed using alpha = .05

[xxix] R Squared = .860 and Adjusted R Squared = .840

[xxx] R Squared = .765 and Adjusted R Squared = .733

[xxxi] The UK with the BBC, Channel 4 and ITV, Germany with ARD being Länder-based with a national channel and ZDF which make us identify a difference in the dual systems in the form of single/duo system difference similar to the ones in Denmark and Norway.

[xxxii] **Perfect competition: a** market characterised by having many suppliers of a homogeneous product where no single company or group is capable of dominating the market. The market thus has no barriers to entry and due to the firms being price-takers, the main means of regulation is the number of goods produced by the individual company (Albarran, 1996; Doyle, 2002; Hoskins 2004; K&W, 1997). The main difficulty here is that in order for a competitive market to exist, all companies have to be price-takers without being able to influence price. This sets up requirements for a large number of either actual or potential sellers offering a homogenous good combined with no existing barriers to entry/exist as well as perfect information.

[xxxiii] **Monopolistic competition** is a market in which there are several supplies of a similar product, without direct substitutes. The individual firm attempts to differentiate its products through various means such as advertisement, promotion, placement, service, quality and so on to ensure that its product is perceived differently to the others and thus is selected for purchase. Prices therefore become variable and the individual companies can function both as price-setters and price-takers. The information flows are thus imperfect, and the barriers of exit and entry relatively few. The market becomes characterised by a large number of companies offering heterogeneous products, consumers thus have imperfect information, and the main competition is non-price based, e.g. based on the difference between a particular good and the others' similar brand.

[xxxiv] **Oligopoly** is a market characterised by being dominated by a few, but more than one, suppliers of the same commodity type, being either homogeneous or heterogeneous. There are several different potential market structures under conditions of oligopoly and duopoly. There are thus conditions of imperfect competition; there is no monopoly but the companies have a certain market power to potentially influence the market price. The limited number of producers can lead to collusion between the companies, or usually the companies observe the competitors' conduct and strategies, e.g. their strategic behaviour. An oligopoly market structure is the most

common due to factors of economies of scale, barriers to entry and horizontal/vertical integration due to buying up and fusion of companies. The company market power and price-setting can be established in different ways; for instance as a leader-follower game or in tit-for-tat games. Depending on information flows, we can assume that the companies will either collude in order to increase profit, potentially achieving monopoly rent, or alternatively compete on price and production resulting in minimisation of the profit.

[xxxv] **Monopoly is a** market dominated by a single producer/firm and there are no immediate substitutes available. The difficulty here is that other producers cannot enter the market due to barriers, such as regulatory measures, or alternatively due to conditions of natural monopoly. In this instance, the firms become price-setters and not price-takers. The market power of the firm is dependent on the commodity type and the market, but will in the monopoly situation be high (Albarran, 1996; Doyle, 2002.; Hoskins 2004; K&W, 1997). The monopoly market structure enables the firm to utilise its market power to raise prices above the competitive level by reducing output, due to a lack of substitute suppliers and products. The monopolist can thus achieve super-normal profits, or monopoly rent because of the lack of market competition (see Von mises, 1998). Monopolies can be established and maintained by barriers to entry limiting other companies in their potential competition with the monopolist. Without such hindrance, competing companies could emerge to pursue the super-normal profit margins. This is also the reason why society has an interest in limiting traditional monopolies. In cases with natural monopoly conditions, the situation changes, as in a traditional market situation a profit-maximising monopolist would increase prices and thus create ineffectiveness and charge higher than average costs to consumers, leading to an overall loss for society. As such, states should hinder and split monopolies. The problem with natural monopolies can be solved either by establishing state-owned companies or by regulating the natural monopoly by limiting the price-level, thus ensuring that super-profit margin levels are not reached. There are different approaches to natural monopolies, namely state-oriented and market-oriented. A market-oriented approach for national monopoly involves auctioning off the authorisation or licence (Demsetz, 1968; Posner, 1972), as seen for instance with G3 frequencies.

[xxxvi] Product differentiation is understood as the differences between the existing offered products as perceived by the consumers (Albarran, 1996). This is basically a question of whether the buyers consider the products as homogeneous or if there are differences in quality, design, reputation or similar between the competing products which can establish differences in consumer preference (Bain, 1968, Albarran, 1996). For instance, whether consumers would

rather watch public broadcasting than private commercial programmes. From a producer's perspective, differentiation of products is profitable insofar as it leads to brand loyalty, meaning conditions where consumers continue to purchase a particular product even though the price is higher than that of competitors (Hoskins, 2004) – an example being Apple's IPod, IPhone and IPad.

Howard Truckman (1998) argued in the following way for non-profit organisations: "When the funders of nonprofits are well informed, the existence of substitutes competing for support puts pressure on competitors to be efficient in production and distribution. The widespread TV broadcasts of Sesame Street, for example, may have affected the type of education provided by such substitutes as early childhood education centers and producers of children's books. Similarly, the presence of competitive cable TV stations creates pressures for public TV stations to differentiate their products. Awareness of substitutes creates an incentive for nonprofit managers to monitor developments by competitors, as this serves to keep nonprofits competitive in their service offerings".

The point here is that the companies competing have to position their products in markets with differentiated goods as a contrast to their competitors. In that sense product differentiation becomes important for markets with imperfect information on the one hand, but it also remains important for those with imperfect competition. This is also what is perceived as happening in the market: when public and private domestic broadcasters established thematic channels to counter competition and provide national perspectives, what they did in effect was establish substitutable products, heterogeneous from their own original, but more or less homogeneous with the potential entrants. Product differentiation has been applied to a high degree within media to secure market share and has been driven by the development in pay-penetration.

[xxxvii] Market barriers can be divided into two categories: structural and due to regulatory regimes. This can be coupled with conditions where a particular structure faces the danger of new entrants, making it behave differently than it would otherwise. Besides this division, we can also distinguish between entry and exit barriers. Entry barriers equal the relative degree of difficulty for new entreat companies to enter a particular new markets as compared to benefits of the existing companies (Bain, 1968), and exit barriers equal the investment made to enter the market, the bound capital also called sunk-cost, which is lost when exiting the market.

From an overall perspective a distinction can be made between barriers like state regulation, economies of scale, and vertical and horizontal integration (Albarran, 1996; K&W, 1997). The

variables influence the relative strength of competition of already established companies (Bain, 1968).

State regulation is especially important in relation to the media, due to the expected potential influence on politics and culture, as well as the potential scarcity of frequencies (Hoskins, 2004). Regulation can be used to establish regulatory barriers upholding specific market conditions, such as a monopoly structure. But also in instances of patent rights and copyright, regulatory measures can secure development and innovation in society, thus limiting the opportunity for copying products and gaining profit from the one originally holding the cost of the invention. Other traditional measures are limitations on companies' potential of competing on equal terms, as the condition with public broadcasters can be (Bain, 1968; Hoskins, 2004; K&W, 1997).

Companies able to maintain and establish a position of technological superiority should be able to function as a short-term barrier to entry. Technological superiority is seldom long-term, as competitors can invest in and upgrade production facilities or technology to match the market leader. Such barriers are influenced by network externalities, meaning that more consumers using a particular commodity has an advantage in attracting new customers; such conditions can lead to a monopoly, even if the product in question is inferior to that of competitors.

Monopolists controlling resources or other input necessary for an industry can hinder access to the market and thus in principle control access if there are no alternatives to the resources or inputs in question.

Economies of scale are experienced when average costs are reduced when production increases. Factors like production technology, high fixed cost and sunk-cost explain the effect. Through production technology companies can achieve scale economies by specialisation, which results in more efficient workers.

Sunk-cost, irreversible investment when the operation is established, such as tracks or other equipment, leads to high levels of efficient scale. The markets thus have to be of a certain size, e.g. critical mass, to be able to hold more than a few competitors.

Both conditions involve explanations of why monopolies are established and maintained. Seen in relation to media, sunk-cost is an important variable, especially when perceived as continuous operations.

Vertical integration takes place when a company controls more parts of the total production and sales process. If a company owns/controls infrastructure, production, distribution and sales to consumers we talk about vertical integration. Companies using vertical integration effectively can function as an established market barrier to new entrants (Albarran, 1996; Nissen, 2006).

Horizontal integration is understood as when a company integrates different areas, such as tv, radio, music and so on (Nissen, 2006). Private commercial media companies tend to have higher degrees of horizontal integration than public, which can lead to increased concentration in the media markets. Combinations of vertical and horizontal integration can utilise the inherent potential of economies of scope and scale due to the media commodity, which in the most extreme cases makes almost equal natural monopolies (Doyle, 2002; Hoskins, 2004): this is related to the non-rival conditions and the production cost being independent of consumption, which establishes increasing returns to scale.

[xxxviii] Market cost structure is characterised by the market production price, meaning the total cost, e.g. both fixed and variable costs, dependent on raw material, workforce and so on. High fixed costs lead to concentrated markets like newspapers and cable television, where there are economies of scale, e.g. a reduction of [the cost of?] average production of the next unit (Albarran, 1996).

[xxxix] Industries such as pharmaceuticals, natural sciences requiring special lab facilities, airlines and others also operate under such conditions of high fixed costs.

[xl] The Danish case is due to state ownership of the hybrid commercial broadcasters TV2/Denmark with a total network share of 40 %.

[xli] Hybrid broadcasters are commercial television companies with public service obligations (they can be either publicly or privately owned).

[xlii] The cultural proximity thesis was a response to cultural imperialism theories by for instance Schiller (1969), as well as the economics theories on production by for instance Waterman (2005) and Wildman & Siwek, (1988) that emphasised an explanation based on superior quality as acquired by higher budgets enabled by the prospect of syndication revenue established by selling the programmes. However, as seen in chapter 4, the US market volume is such that whether or not the programme is exported, the potential is sufficient to finance production.

[xliii] Documentation of this remains highly difficult to obtain as it would require knowledge of where the actual editorial decisions were made, as well as knowledge of why the UK, for example, would be a better market for this.

[xliv] Note that this should not be understood in the same way as secondary markets within financial and capital markets where it means something different.

[xlv] Not all markets have two PSBs; therefore it is only the markets with more than one PSB within CR1-6 that are present in the other columns.

[xlvi] This is, however, not the case in the entire sample; in markets like France and Spain, all-day viewing is more concentrated than the prime-time. The incentive consideration is again in focus as what can be observed is that as the number of services offered increases, the audience becomes more diffused. This means that prime-time concentration will increase insofar as the largest broadcasters are able to retain their audience share either by increasing the number of channels or by using attractive programming.

[xlvii] Commercial interests here simply entail that the particular outlet is not inclined to stop particular programmes as a consequence of the indirect power of their advertisers. The commercial media have to make a profit, so this is not the discussion; the concern is that the owners of private commercial media dictate specific biased ways to present information to their audiences.

[xlviii] Please note that there are several specialist channels available across Europe supplied by this owner, but which have too little audience to register within the six largest media companies.

[xlix] The Walt Disney Company (2009): ”Factbook 2009”

[l] Time Warner Cable Inc was separated from Time Warner Inc in March 2009, which is the reason for the lower revenue than that reported in and before 2006.

[li] The drop in revenue can be seen as a consequence of the [financial?]crisis, but they also positively mention the hybrid model for commercial broadcasters consisting of both distribution and advertising revenue, thereby reducing the effect of the crisis. It is a similar argument to the one supplied by Discovery in this context: *“Over the past few years, stations in the Danish TV market have significantly reduced their dependence on the advertising market by establishing what is known as a “hybrid” revenue model: stations finance themselves with cable fees in*

addition to TV advertising revenues. …"Digital television [in Denmark] led to the establishment of a hybrid revenue model there, based on revenues from both TV advertising and distribution fees. Depending on the station, distributors pay from EUR 0.50 to EUR 3 per month for the right to distribute and market the channel." This change in revenue is not only happening in Denmark, but may very well be one of the drivers of both audience fragmentation as well as a potential for decline in market concentration, but it also indicates that as the markets continue to mature internationally, we will see an increase in audience fragmentation; the question is what if any effect it could have on market concentration.

[lii] In a similar vein, Hjarvard (1999) showed that competition had not improved the quality of news broadcasts; instead, the consequences were more sensationalism and less informative news. The same was demonstrated by OSI (2005), concluding that increasing commercialisation has led to decreases in overall programming quality (transition markets), the so defined *dumbing-down effect*.

[liii] EurActiv (2009): "State TV pushing for Reding input on broadcast rules", 9 March, 2009

[liv] Maturation is also occurring as a consequence of increasing pay-penetration, which enables a more profitable business either by relying solely on pay as funding, or by combining pay and advertising. Paradoxically, the subscription model known from the newspapers' glorious past has shown a way out for the economically pressed advertising-funded commercial broadcasters, especially following the implementation of digital standards, where encryption and inclusion in pay-tv packages has shown the way forward. While this is a solution for now, which should generate some envy taking into consideration the current challenges facing the newspapers, the funding model will be faced with challenges in times to come - not immediately, but there are both regulatory and content perspectives. Related to regulatory processes, we could ask the question: why should consumers pay for more channels than they actually use? More pointedly, we could ask why consumers should pay for an increasing number of channels with little or no domestic content, which they either never view or only watch for a miniscule amount of time? Secondly, most new TVs available in 2012 are either internet-ready or wifi-ready or simply have integrated wifi and thus potential online access. Copyright continues to bar the use of content to some degree based on borders, but many options remain for viewing content online using a TV, so why should I wait to see a series on a national/international channel when it can be viewed in for instance the US almost as soon as it has been broadcast?

[lv] This is also where the dependency hypothesis becomes interesting, as the acquisitioned content will have to make sense for the audience, i.e. cultural background, history and more. This is also why larger cultures can have benefits in their exports through proximity or for cultural identification reasons.

[lvi] In principle the pressure mostly concerns the AV area, as the broadcasting areas of TV and radio have been subject to stricter regulation than for instance the press and magazines. As such there has been a greater acceptance of state intervention in broadcasting.

[lvii] Interestingly enough, change is one of the reasons behind discussions of the legitimacy crisis for public broadcasters based on changing conditions of broadcasting due to technological development, which also reduces the original logic of the argument legitimising public broadcasting. As put by Dyson & Humphreys (1990: 21): *"... [T]echnological change ... removed another major rationale for public regulation – the scarcity of frequencies. In this respect broadcasting no longer appeared to be a natural monopoly whose supply must be regulated. With so many possibilities for delivering broadcasting … the regulatory issues shifted to competition, efficiency and consumer preference. Broadcasting lost its distinctiveness … and became subsumed in a wider consideration of the future information economy"*. The discussion of the media shifted due to technological development and continues to change in the process of new media; in that respect the understanding of what is in the interest of the state, market and civil society shifts, leaving great difficulty in perceiving consequences. The point here is that yes, technology is not really as effective an argument as it once was. But this does not really change the fact that the technological debate is no longer the real argument on behalf of PSBs.

APPENDIX:

AS A MATTER OF SIZE

THE IMPORTANCE OF CRITICAL MASS AND THE CONSEQUENCES OF SCARCITY FOR TELEVISION MARKETS

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Department for Business & Politics
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This appendix is a supplementary document containing information relevant to the doctoral process and the thesis: "As a matter of Size - THE IMPORTANCE OF CRITICAL MASS AND THE CONSEQUENCES OF SCARCITY FOR TELEVISION MARKETS".

The purpose of the appendix is to allow scrutiny of the information and statistics in the thesis, as well as to present some of the work done during the doctoral process.

In this appendix the following information is available:

A. Categorical variable overview
B. Published articles:
    i. B.1: Denmark, Sweden and Norway : Television Diversity by Duopolistic Competition and Co-Regulation (co-author)
    ii. B.2: Financing Public service broadcasting: A Comparative Perspective (main author)
C. Multiple regression statistics
    i. C.1: Multiple regression statistics for TV market volume
    ii. C.2: Multiple regression statistics for original domestic content
    iii. C.3: Multiple regression statistics for public and private competition
    iv. C.4: Multiple regression statistics for market concentration
D. Market concentration: Company individual share and combined share (concentration ratio (CR)) of the 6 largest companies (ordered alphabetically) in each sample market

Ad.1. The categorical variable overview section contains the categorical information on which countries are small and large based on the applied variables of population, economy and language.

Ad.2. The two published articles, not related directly to the dissertation, but based on work in the doctoral work period, to which I have contributed. This is not the only published material, but the part unrelated to the thesis.

Ad.3. The multiple regression statistics have been made available in their entirety for scrutiny.

Ad.4. The more original contribution used in the study of market concentration is made available, as this is not available for purchase, but constructed specifically for the analysis in chapter 5.

Appendix A: Categorical variable overview

Markets	Economy	Population	Large same-language neighbour	
Austria	Large	Small	YES	Germany
Belgium	Large	Small	YES	France
Bulgaria	Small	Small	NO	
Croatia	Small	Small	NO	
Cyprus	Large	Small	NO	
Czech Republic	Large	Small	NO	
Denmark	Large	Small	NO	
Estonia	Small	Small	NO	
Finland	Large	Small	NO	
France	Large	Large	NO	
Germany	Large	Large	NO	
Greece	Large	Small	NO	
Hungary	Small	Small	NO	
Iceland	Large	Small	NO	
Ireland	Large	Small	YES	UK
Italy	Large	Large	NO	
Latvia	Small	Small	NO	

Lithuania	Small	Small	NO	
Luxembourg	Large	Small	YES	France, Germany
Netherlands	Large	Small	NO	
Poland	Small	Large	NO	
Portugal	Small	Small	NO	
Romania	Small	Large	NO	
Slovakia	Small	Small	NO	
Slovenia	Large	Small	NO	
Spain	Large	Large	NO	
Sweden	Large	Small	NO	
Switzerland	Large	Small	YES	Italy, France, Germany
Ukraine	Small	Small	NO	
United Kingdom	Large	Large	NO	

Source: Own depiction based on IMF & EUROMONITOR

Appendix B: Published articles

During the doctoral process I contributed to two published articles not included in the dissertation. These articles are based on work done during the process and material which was not related directly to the research question in the thesis.

The two articles are:

Lund, Anker Brink & Christian E. Berg (2009): "Denmark, Sweden and Norway: Television Diversity by Duopolistic Competition and Co-Regulation", International Communication Gazette, 71(1-2), pp.19-37

Berg, Christian Edelvold & Anker B. Lund (2012): "Financing Public Service Broadcasting: A Comparative Perspective", Journal of Media Business Studies, 9(1), pp.7-22

The articles are included below.

Appendix B.1: Denmark, Sweden and Norway: Television Diversity by Duopolistic Competition and Co-Regulation

Appendix B.2: Financing Public Service Broadcasting: A Comparative Perspective

Appendix C: Multiple regression statistics

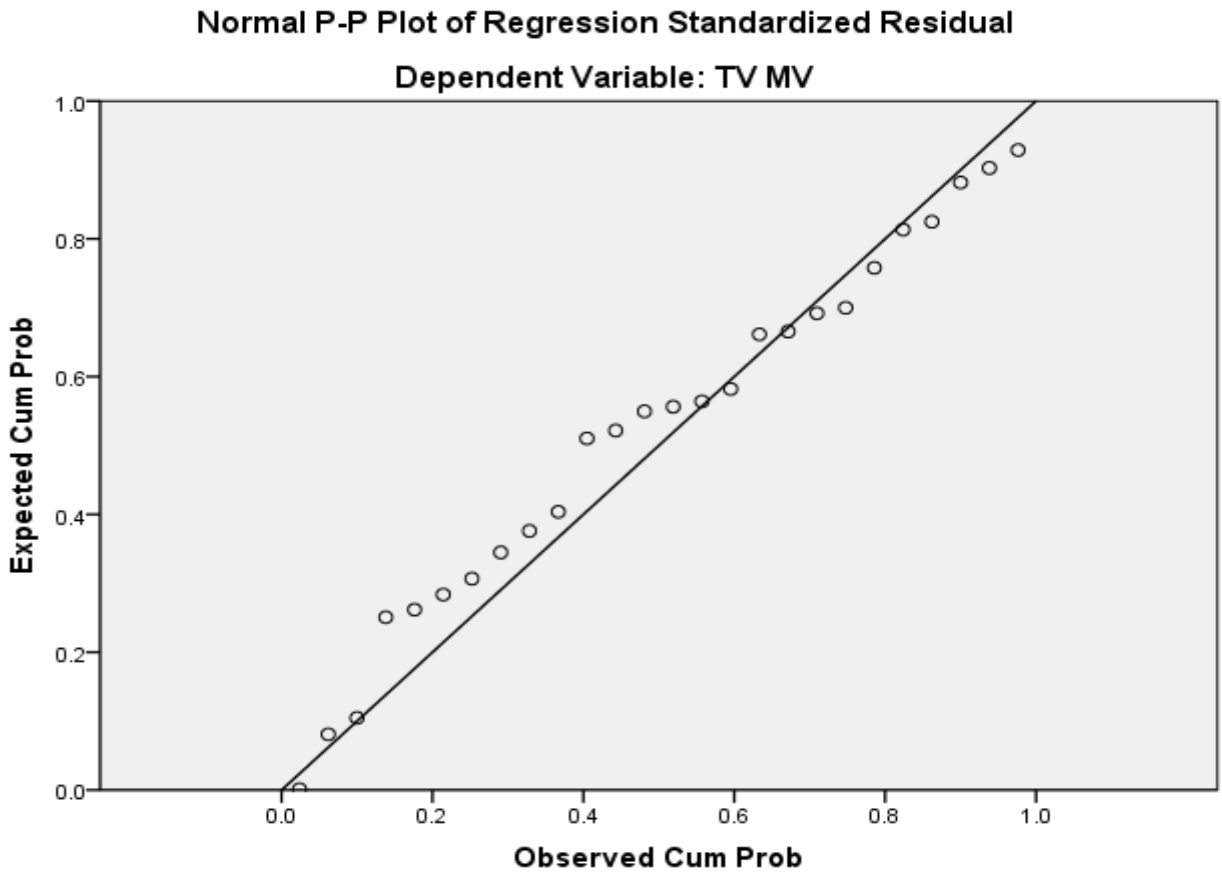
The primary statistic technique applied is multiple regression. The technique is used to predict the variance in a dependent variable based on independent variables. The multiple regressions will establish the proportion of the variance in the dependent variable that the set of independent variables explain (size of economy and population). This is done at a specific level of significance, i.e. by a significance test of R^2. The multiple regressions on the hypothesised relationships are tested using a significance level of 5%.

These settings are used when the multiple regression are conducted in each of research questions A, B, D and E, which specify a linear relation of the independent size variables and the dependent. Note that all regressions are tested for multicollinearity using VIF with an acceptance criterion of VIF < 5 (Belsey, Kuh and Welsh, 1980) and for serial correlation using the Durbin–Watson test with an acceptance criterion of equal to or below 3 (Field, 2005).

Appendix C.1: Multiple regression statistics for TV market volume

Descriptive Statistics

		GDP measured at Purchasing Power Parity	Population in mn's	TV MV
N	Valid	26	26	26
	Missing	0	0	0
Mean		28645.38	19.112	2834.631
Std. Deviation		10374.775	23.0741	3784.3133
Minimum		11489	.9	62.3
Maximum		52479	82.3	14126.3



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: TV MV

.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.969[a]	.938	.933	979.9005	1.883

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: TV MV

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.359E8	2	1.680E8	174.932	.000[a]
	Residual	22084714.710	23	960204.987		
	Total	3.580E8	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: TV MV

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1(Constant)	-1853.402	581.526		-3.187	.004		
GDP measured at Purchasing Power Parity	.062	.019	.169	3.238	.004	.983	1.018
Population in mn's	152.816	8.568	.932	17.835	.000	.983	1.018

Coefficients[a]

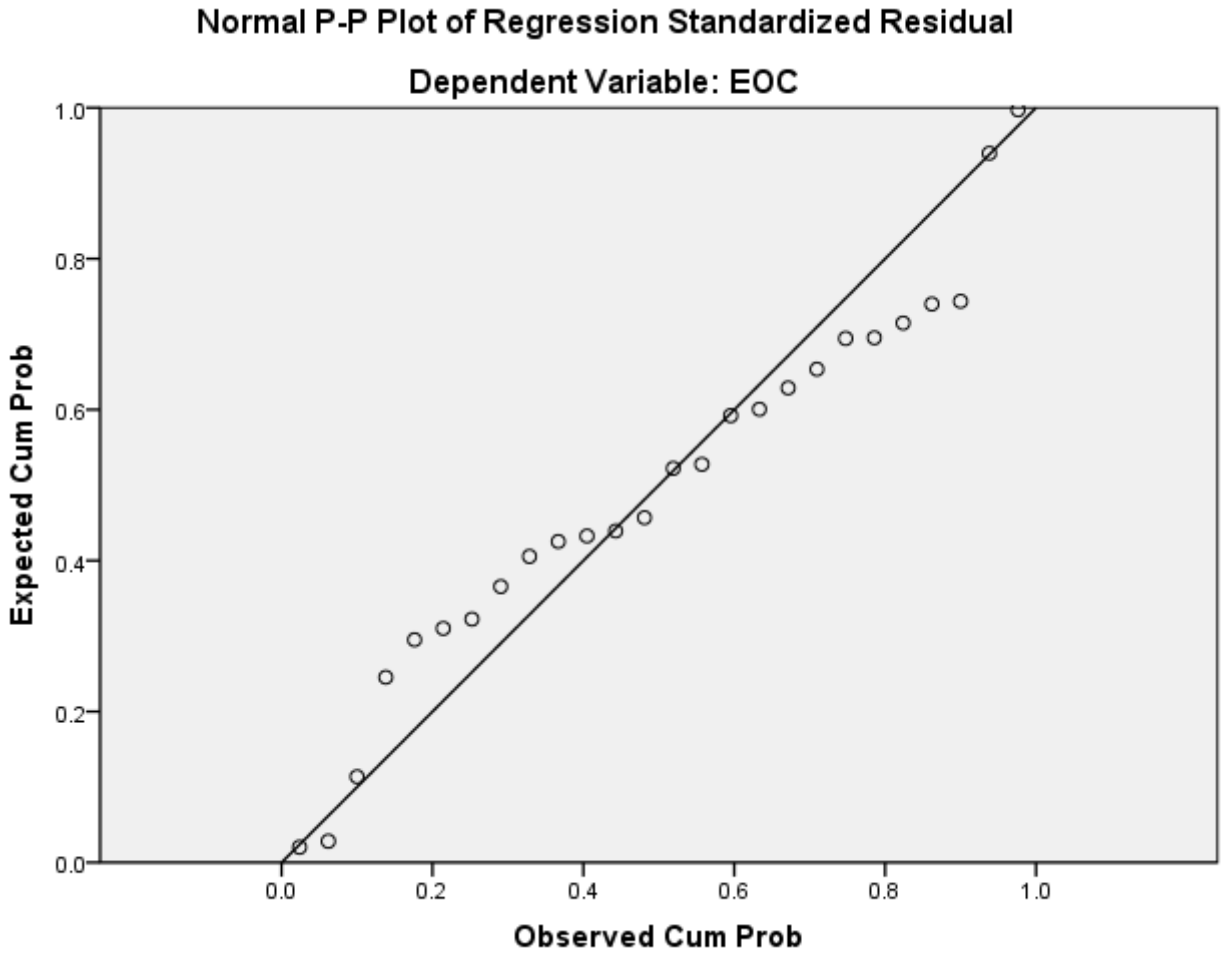
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1(Constant)	-1853.402	581.526		-3.187	.004		
GDP measured at Purchasing Power Parity	.062	.019	.169	3.238	.004	.983	1.018
Population in mn's	152.816	8.568	.932	17.835	.000	.983	1.018

a. Dependent Variable: TV MV

Appendix C.2: Multiple regression statistics for original domestic content

Statistics

		GDP measured at Purchasing Power Parity	Population in mn's	EOC
N	Valid	26	26	26
	Missing	0	0	0
Mean		28645.38	19.112	721.65
Std. Deviation		10374.775	23.0741	1208.355
Minimum		11489	.9	11
Maximum		52479	82.3	4512



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: EOC

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.923[a]	.853	.840	483.826	.853	66.469	2	23	.000	1.914

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: EOC

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31119025.070	2	15559512.535	66.469	.000[a]
	Residual	5384022.814	23	234087.948		
	Total	36503047.885	25			

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.923[a]	.853	.840	483.826	.853	66.469	2	23	.000	1.914

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: EOC

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	-789.041	287.129		-2.748	.011	-1383.013	-195.070		
GDP measured at Purchasing Power Parity	.022	.009	.189	2.340	.028	.003	.041	.983	1.018
Population in mn's	46.042	4.231	.879	10.883	.000	37.291	54.794	.983	1.018

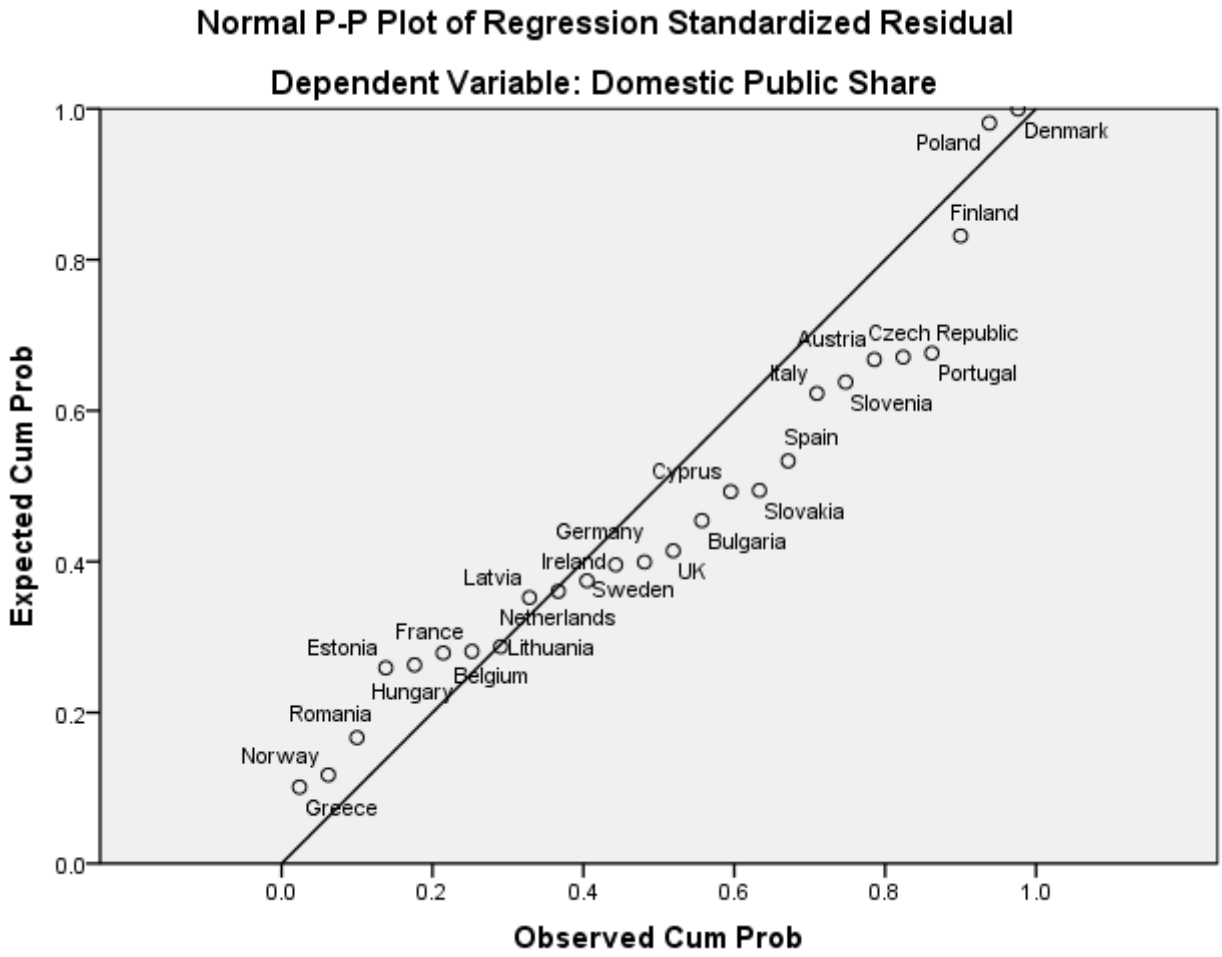
a. Dependent Variable: EOC

Appendix C.3: Multiple regression statistics for Public and private competition

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
GDP measured at Purchasing Power Parity	26	11489	52479	28645.38	10374.775
Population in mn's	26	.9	82.3	19.112	23.0741
Domestic Public Share	26	7.4	68.9	31.288	13.8225
Total Public	26	7.4	68.9	33.133	14.9681
Private share	26	1.6	73.0	44.817	18.6742
Total Private	26	23.7	78.7	54.971	12.5893
Valid N (listwise)	26				

Appendix C.3.1: Public domestic



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: Domestic Public Share

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.721[a]	.520	.479	9.9808	.520	12.475	2	23	.000	1.792

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: Domestic Public Share

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2485.391	2	1242.695	12.475	.000[a]
	Residual	2291.156	23	99.615		
	Total	4776.547	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

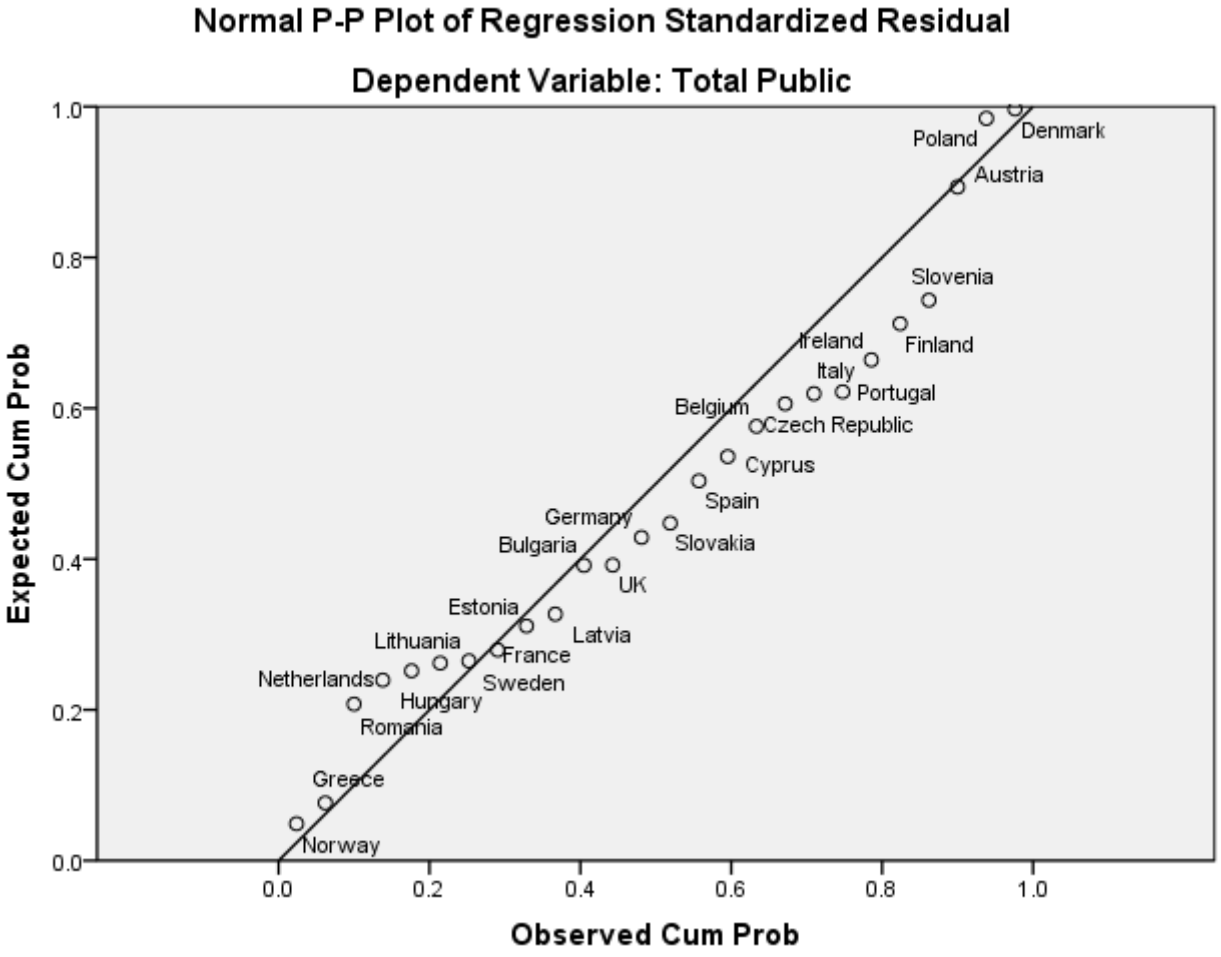
b. Dependent Variable: Domestic Public Share

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1(Constant)	3.903	5.923		.659	.516		
GDP measured at Purchasing Power Parity	.001	.000	.640	4.391	.000	.983	1.018
Population in mn's	.156	.087	.260	1.782	.088	.983	1.018

a. Dependent Variable: Domestic Public Share

Appendix C.3.2: Public total



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: Total Public

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.742[a]	.550	.511	10.4677	.550	14.059	2	23	.000	1.906

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: Total Public

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3080.900	2	1540.450	14.059	.000[a]
	Residual	2520.174	23	109.573		
	Total	5601.075	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

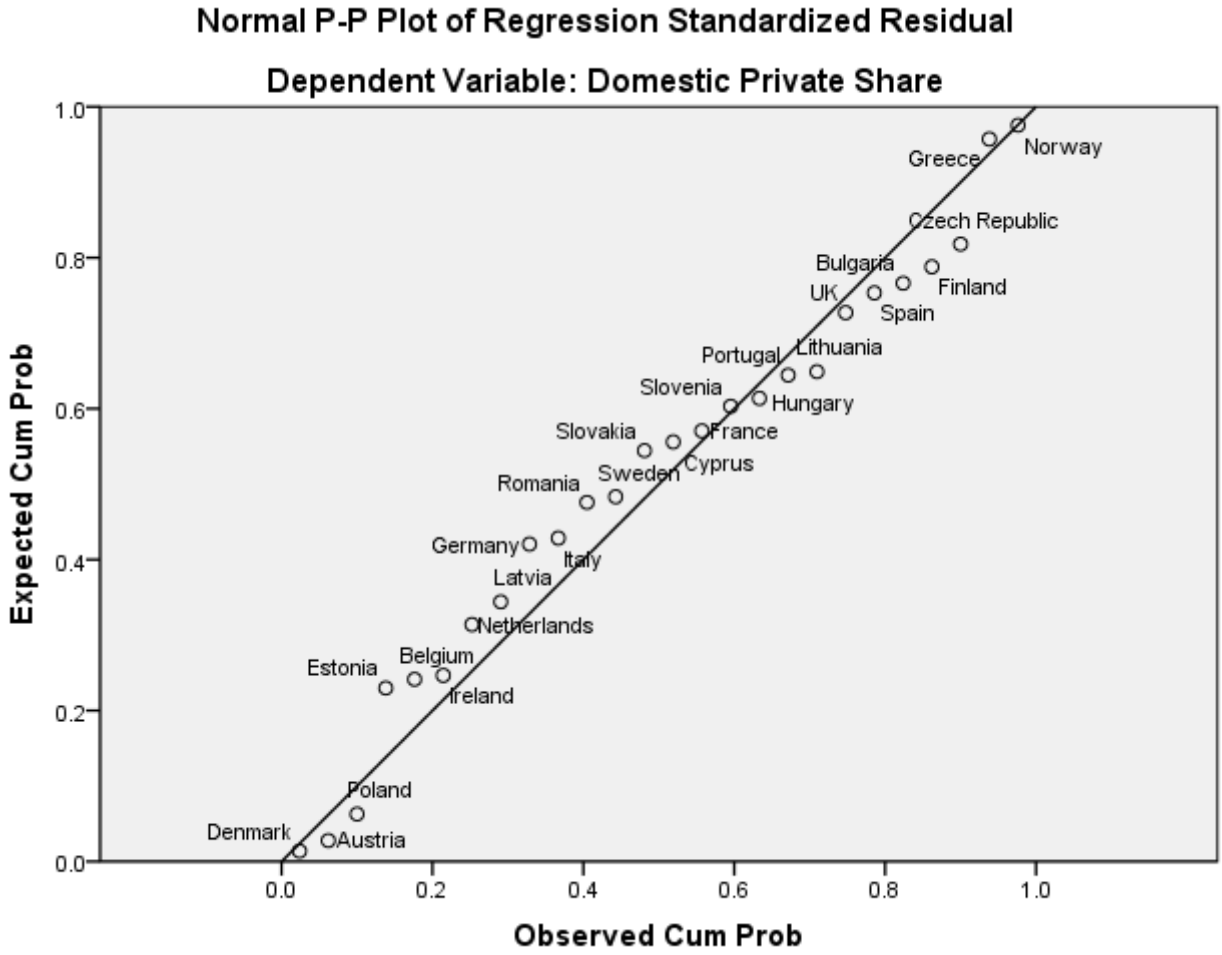
b. Dependent Variable: Total Public

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2.068	6.212		.333	.742		
GDP measured at Purchasing Power Parity	.001	.000	.705	4.998	.000	.983	1.018
Population in mn's	.100	.092	.155	1.098	.284	.983	1.018

a. Dependent Variable: Total Public

Appendix C.3.3: Private domestic



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: Domestic Private Share

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.737[a]	.543	.503	13.1589	.543	13.674	2	23	.000	2.200

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: Domestic Private Share

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4735.525	2	2367.762	13.674	.000[a]
	Residual	3982.620	23	173.157		
	Total	8718.145	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

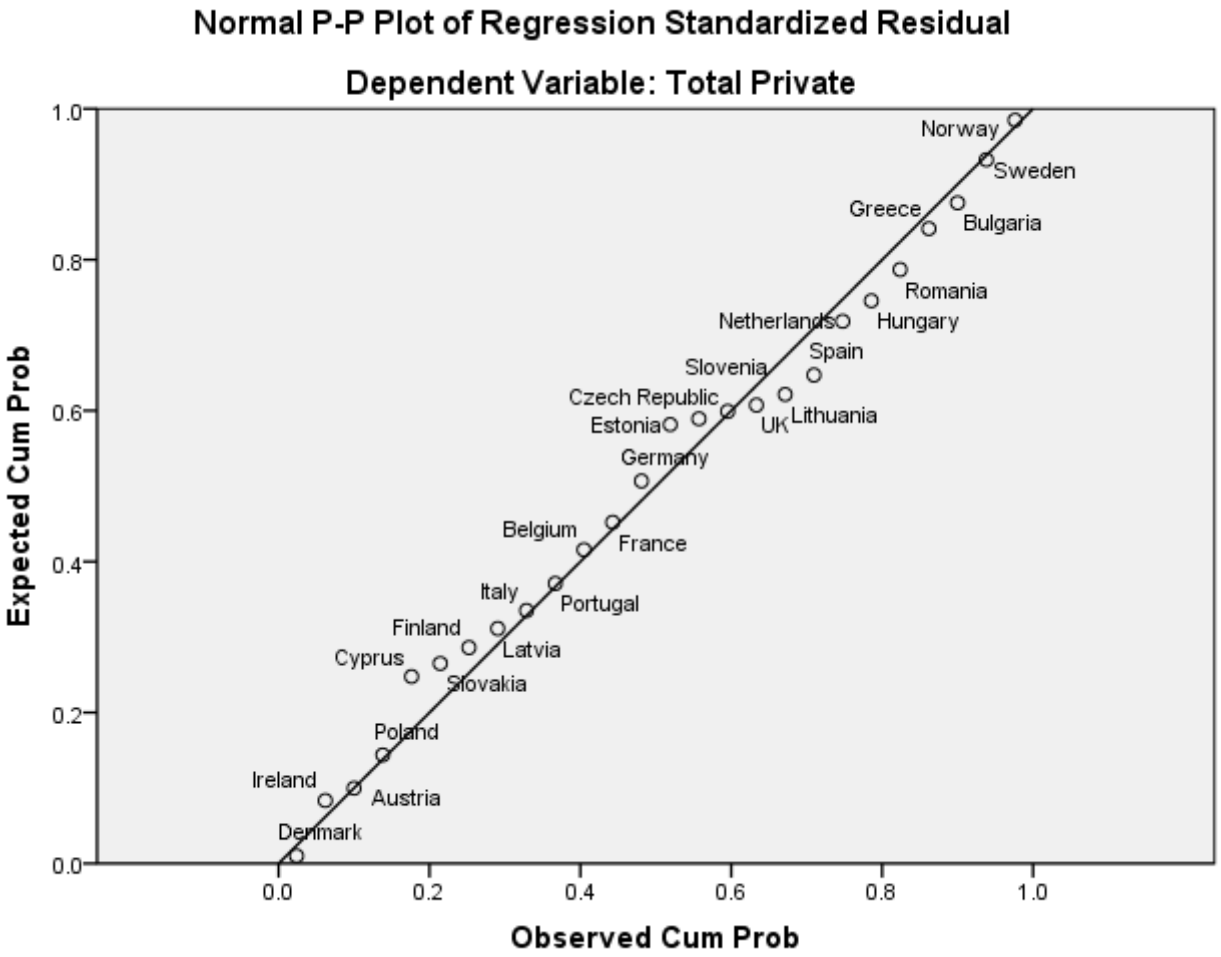
b. Dependent Variable: Domestic Private Share

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1(Constant)	77.120	7.809		9.875	.000		
GDP measured at Purchasing Power Parity	-.001	.000	-.715	-5.030	.000	.983	1.018
Population in mn's	.239	.115	.296	2.079	.049	.983	1.018

a. Dependent Variable: Domestic Private Share

Appendix C.3.4: Total Private



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: Total Private

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.562[a]	.315	.256	10.8593	.315	5.300	2	23	.013	2.134

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: Total Private

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1249.998	2	624.999	5.300	.013[a]
	Residual	2712.263	23	117.924		
	Total	3962.261	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: Total Private

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	74.325	6.445		11.533	.000		
GDP measured at Purchasing Power Parity	-.001	.000	-.564	-3.244	.004	.983	1.018
Population in mn's	.014	.095	.026	.147	.884	.983	1.018

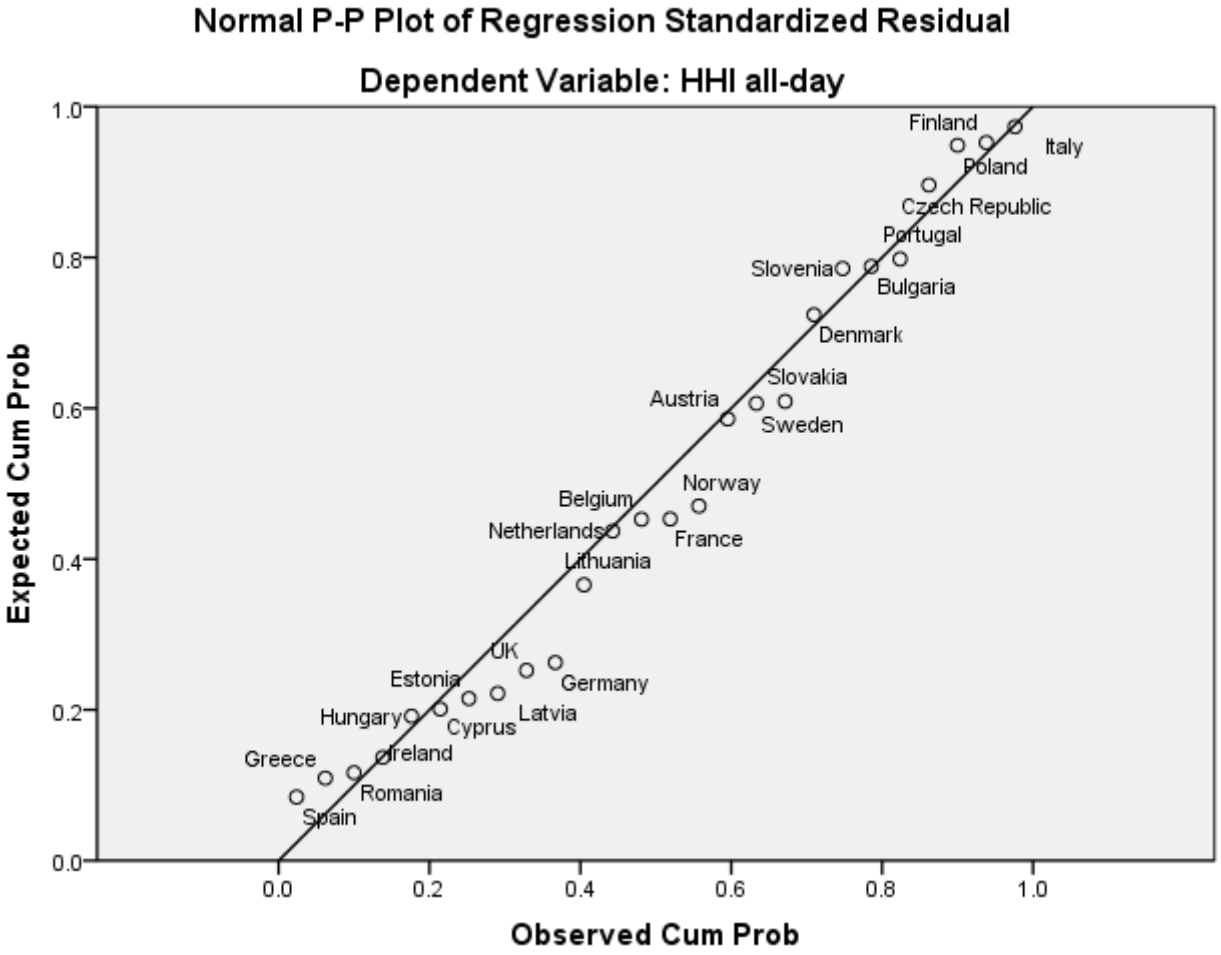
a. Dependent Variable: Total Private

Appendix C.4: Multiple regression statistics for Market concentration

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
GDP measured at Purchasing Power Parity	26	11489	52479	28645.38	10374.775
Population in mn's	26	.9	82.3	19.112	23.0741
HHI all-day	26	995	3388	2066.35	628.418
HHI primetime	26	1176	3563	2326.31	670.423
CR1	26	18.3	44.7	32.769	7.7424
CR2	26	35.4	81.8	56.392	12.2018
CR3	26	46.3	90.1	70.719	11.8515
CR4	23	51.1	90.9	76.761	10.3529
CR5	23	55.7	91.9	80.478	9.2354
CR6	23	59.7	93.8	82.965	8.6424
Valid N (listwise)	23				

Appendix C.4.1: Market concentration measured by HHI all-day



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: HHI all-day

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.363[a]	.132	.056	610.499	.132	1.745	2	23	.197	1.266

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: HHI all-day

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1300426.784	2	650213.392	1.745	.197[a]
	Residual	8572317.101	23	372709.439		
	Total	9872743.885	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

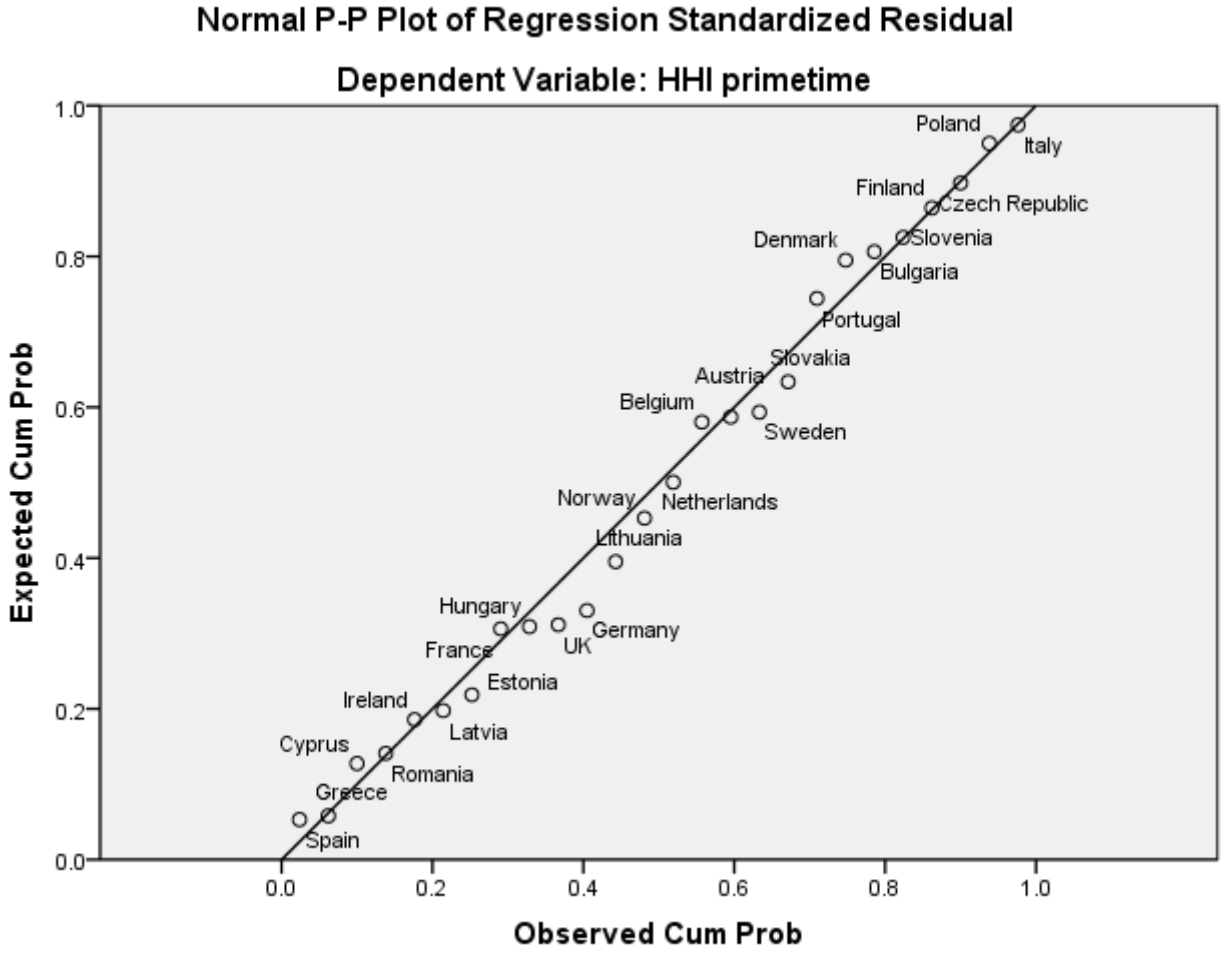
b. Dependent Variable: HHI all-day

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1430.906	362.304		3.949	.001		
GDP measured at Purchasing Power Parity	.020	.012	.337	1.719	.099	.983	1.018
Population in mn's	2.657	5.338	.098	.498	.623	.983	1.018

a. Dependent Variable: HHI all-day

Appendix C.4.2: Market concentration measured by HHI primetime



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: HHI primetime

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.413[a]	.171	.099	636.429	.171	2.371	2	23	.116	1.328

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: HHI primetime

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1920693.834	2	960346.917	2.371	.116[a]
	Residual	9315967.705	23	405042.074		
	Total	11236661.538	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

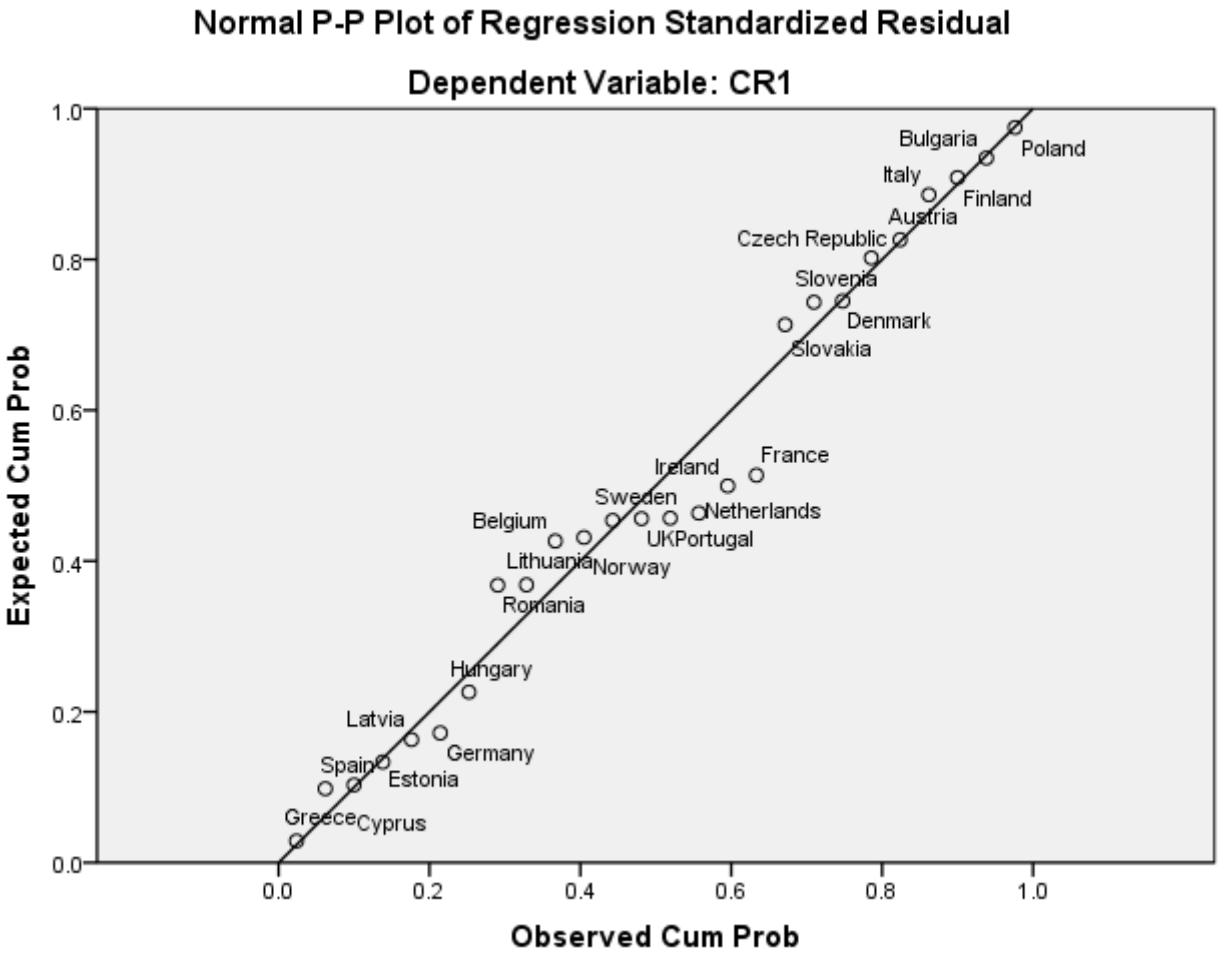
b. Dependent Variable: HHI primetime

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1579.598	377.692		4.182	.000		
GDP measured at Purchasing Power Parity	.027	.012	.417	2.177	.040	.983	1.018
Population in mn's	-1.314	5.565	-.045	-.236	.815	.983	1.018

a. Dependent Variable: HHI primetime

Appendix C.4.3: Market concentration measured by CR1



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: CR1

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.332[a]	.111	.033	7.6128	.111	1.429	2	23	.260	1.460

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: CR1

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	165.650	2	82.825	1.429	.260[a]
	Residual	1332.965	23	57.955		
	Total	1498.615	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

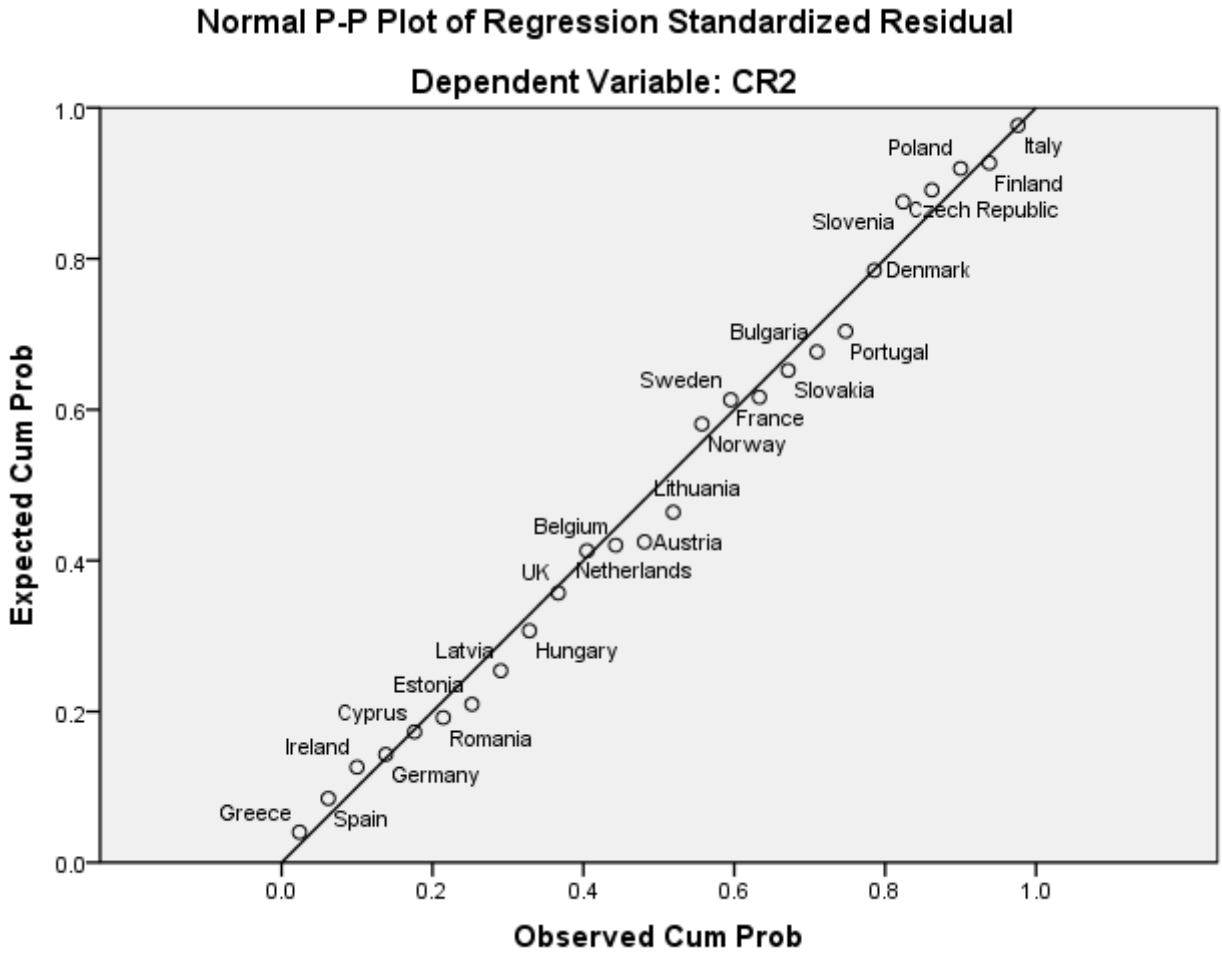
b. Dependent Variable: CR1

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	25.749	4.518		5.699	.000		
GDP measured at Purchasing Power Parity	.000	.000	.335	1.686	.105	.983	1.018
Population in mn's	-.007	.067	-.021	-.104	.918	.983	1.018

a. Dependent Variable: CR1

Appendix C.4.4: Market concentration measured by CR2



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: CR2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.373[a]	.139	.064	11.8037	.139	1.857	2	23	.179	1.465

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: CR2

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	517.575	2	258.788	1.857	.179[a]
	Residual	3204.523	23	139.327		
	Total	3722.098	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

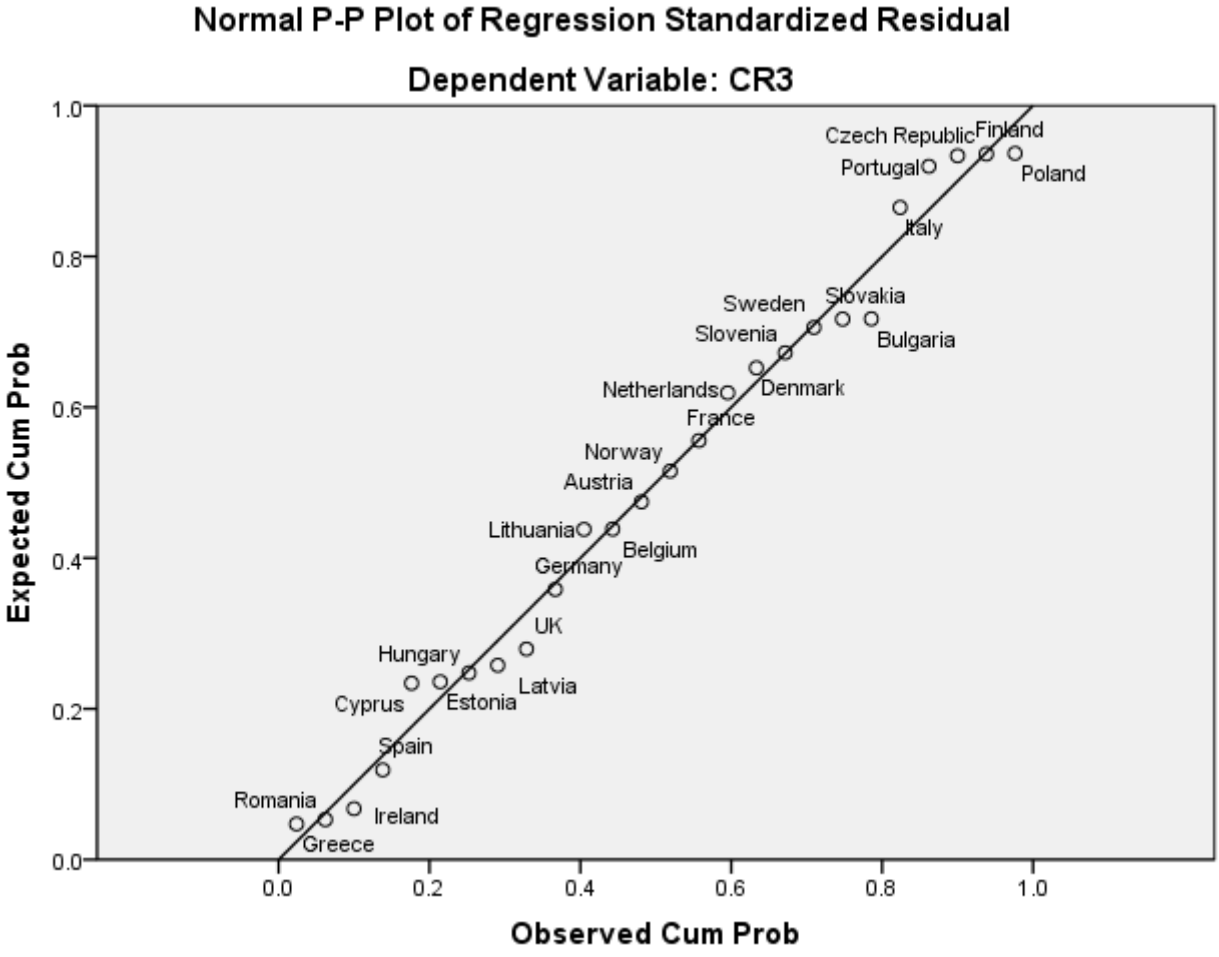
b. Dependent Variable: CR2

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	43.652	7.005		6.232	.000		
GDP measured at Purchasing Power Parity	.000	.000	.361	1.851	.077	.983	1.018
Population in mn's	.030	.103	.056	.289	.775	.983	1.018

a. Dependent Variable: CR2

Appendix C.4.5: Market concentration measured by CR3



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: CR3

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.312[a]	.097	.019	11.7389	.097	1.241	2	23	.308	1.600

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: CR3

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	342.038	2	171.019	1.241	.308[a]
	Residual	3169.443	23	137.802		
	Total	3511.480	25			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

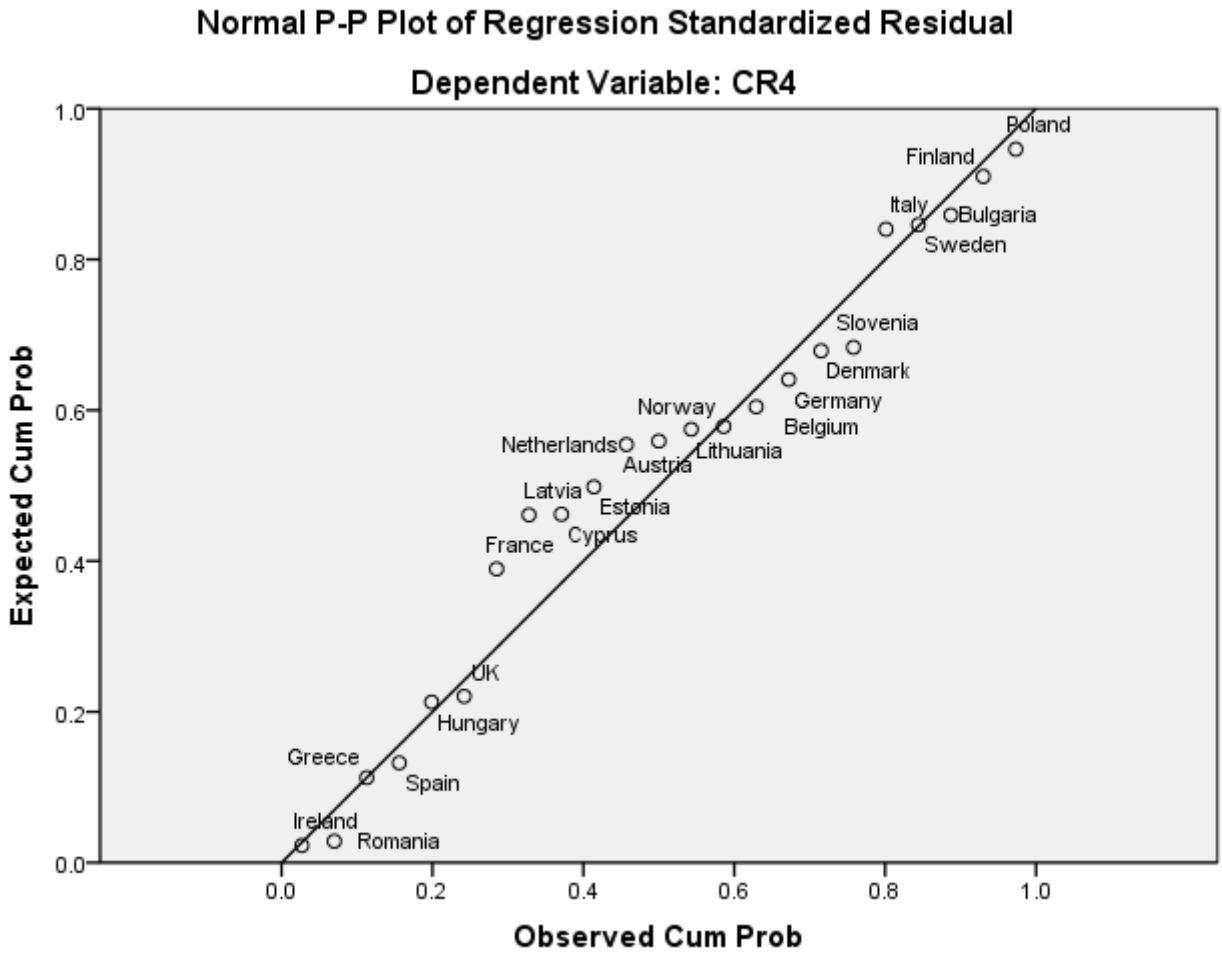
b. Dependent Variable: CR3

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	60.465	6.967		8.679	.000		
GDP measured at Purchasing Power Parity	.000	.000	.284	1.424	.168	.983	1.018
Population in mn's	.049	.103	.096	.482	.635	.983	1.018

a. Dependent Variable: CR3

Appendix C.4.6: Market concentration measured by CR4



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: CR4

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.497[a]	.247	.172	9.4201	.247	3.287	2	20	.058	1.847

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: CR4

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	583.275	2	291.638	3.287	.058[a]
	Residual	1774.759	20	88.738		
	Total	2358.035	22			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

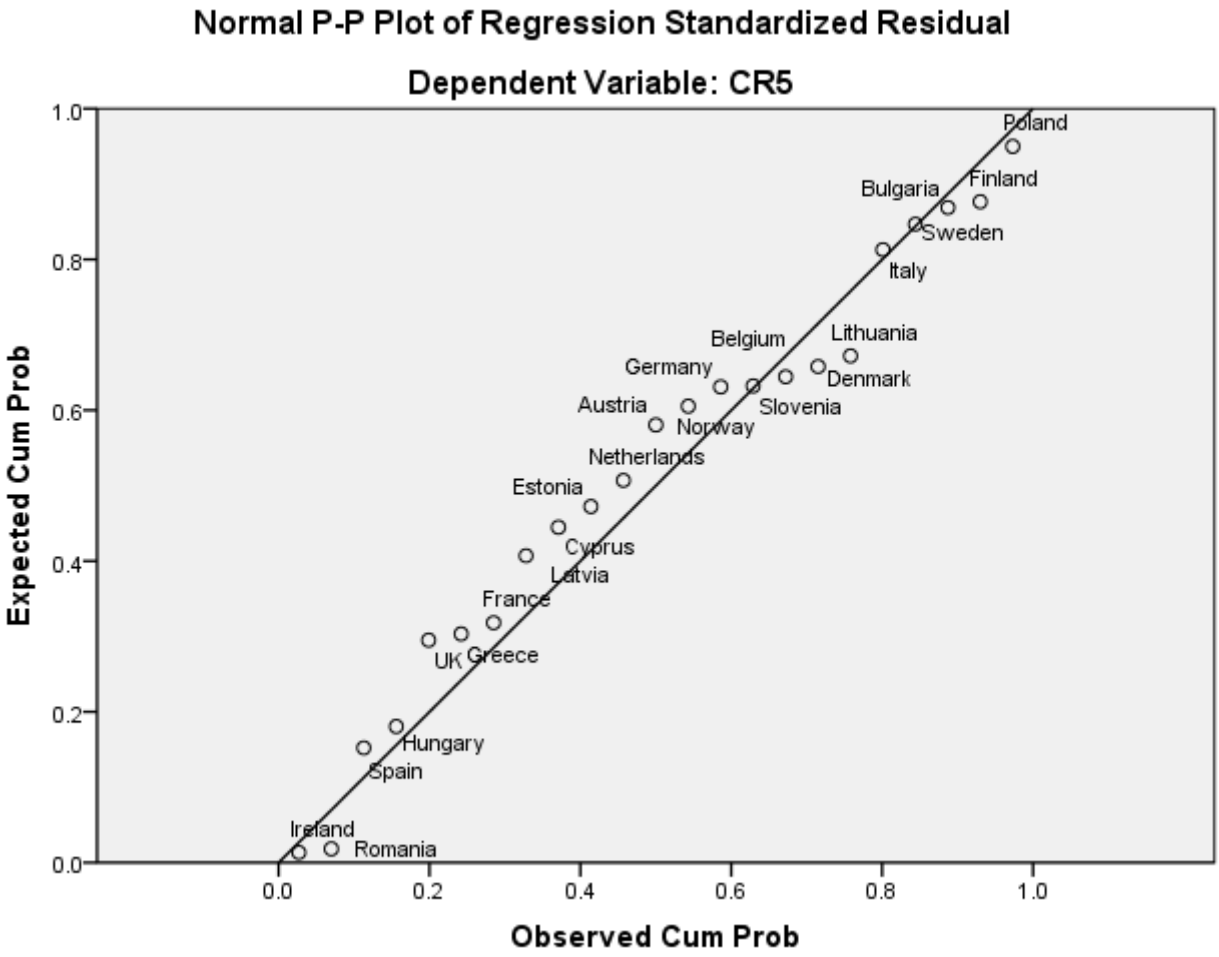
b. Dependent Variable: CR4

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	62.496	5.948		10.507	.000		
GDP measured at Purchasing Power Parity	.000	.000	.452	2.319	.031	.990	1.010
Population in mn's	.072	.083	.168	.861	.399	.990	1.010

a. Dependent Variable: CR4

Appendix C.4.7: Market concentration measured by CR5



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: CR5

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.551[a]	.304	.234	8.0823	.304	4.363	2	20	.027	1.720

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: CR5

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	569.981	2	284.991	4.363	.027[a]
	Residual	1306.458	20	65.323		
	Total	1876.439	22			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

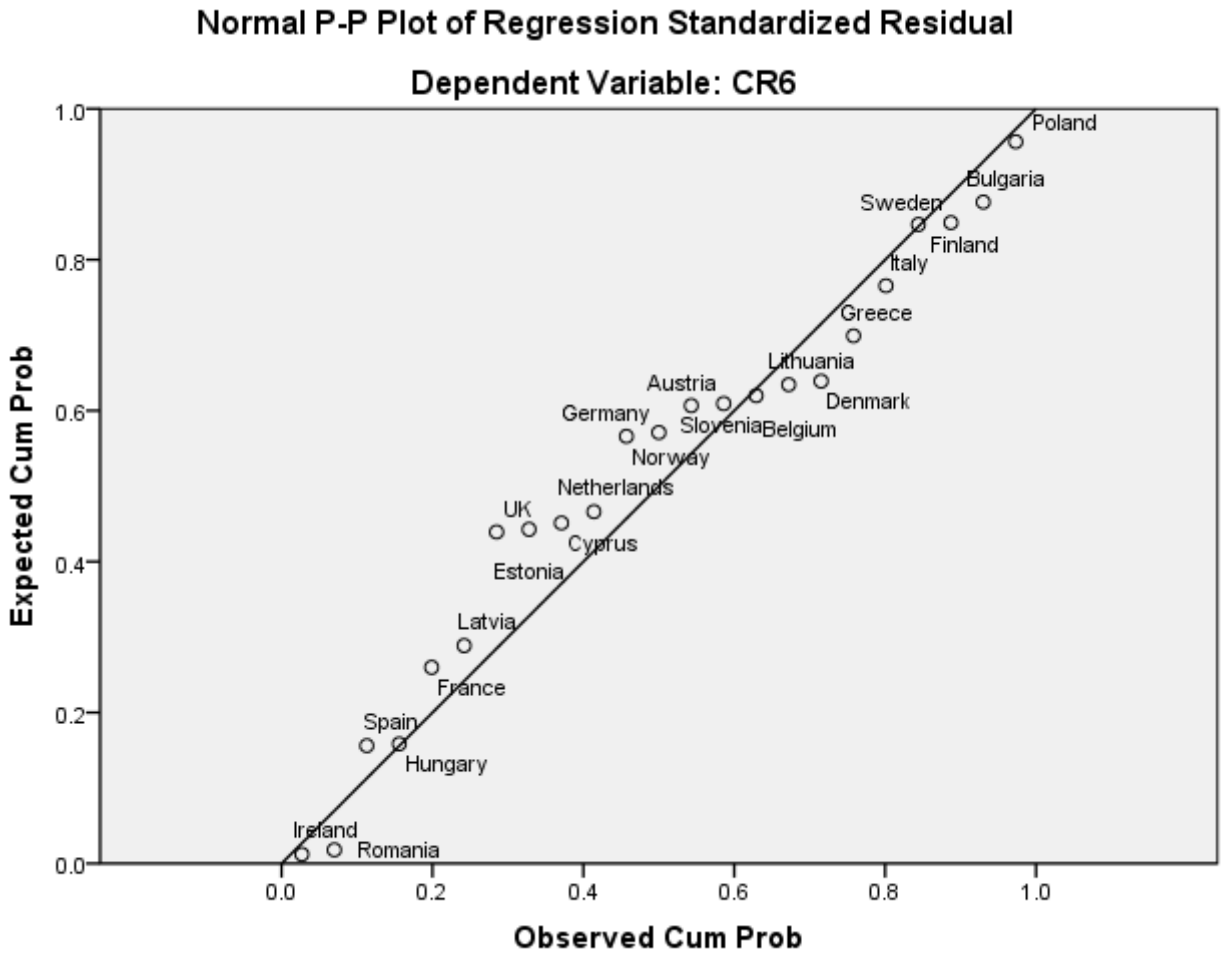
b. Dependent Variable: CR5

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	66.283	5.103		12.989	.000		
GDP measured at Purchasing Power Parity	.000	.000	.515	2.749	.012	.990	1.010
Population in mn's	.058	.071	.152	.809	.428	.990	1.010

a. Dependent Variable: CR5

Appendix C.4.8: Market concentration measured by CR6



Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Population in mn's, GDP measured at Purchasing Power Parity	.	Enter

a. All requested variables entered.

b. Dependent Variable: CR6

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.607[a]	.368	.305	7.2042	.368	5.830	2	20	.010	1.626

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: CR6

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	605.204	2	302.602	5.830	.010[a]
	Residual	1038.009	20	51.900		
	Total	1643.212	22			

a. Predictors: (Constant), Population in mn's, GDP measured at Purchasing Power Parity

b. Dependent Variable: CR6

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	68.326	4.549		15.021	.000		
GDP measured at Purchasing Power Parity	.000	.000	.570	3.193	.005	.990	1.010
Population in mn's	.057	.064	.159	.893	.382	.990	1.010

a. Dependent Variable: CR6

Appendix D.: Market concentration: Company individual share and combined share (concentration ratio (CR)) of the 6 largest companies (ordered alphabetically) in each sample market

Market concentration: Company combined share (concentration ratio (CR)) of the 6 largest companies (ordered alphabetically)							
2008	**CR**	**CR1: Player1**	**CR2: Player 2**	**CR3: Player 3**	**CR4: Player 4**	**CR5: Player 5**	**CR6: Player 6**
Austria	**Name**	**ORF -**	**Pro7.Sat1 Media**	**RTL GROUP SA**	**ARD**	**ZDF**	**ATV PRIVATFERNSEH-GMBH**
	Channels	ORF 1, ORF 2, 3SAT	Pro7, Sat.1., Kabel 1, Puls 4 (SEVENONE MEDIA AUSTRIA GMBH)	RTL , VOX RTL2* & Super RTL* (*with TELE-MÜNCHEN FERNSEH-GMBH & CO. MEDIENBETEILIGUNG KG/ Walt Disney),	ARD, ARD3	ZDF	ATV
	Type	public	private	private	Public	Public	private
	Share	42,5	15,6	14,6	8,6	4,2	3
	Share Prime	48	12,4	13,4	8,4	4,6	3,5
	CR (X)	42,5	58,1	72,7	81,3	85,5	88,5
	CR Prime (x)	48	60,4	73,8	82,2	86,8	90,3
	Ownership	Austria	Pro7.Sat1 Media	BERTELSMANN AG	Germany	Germany	ATV PRIVAT-TV SERVICES AG
Australia - regional	**Name**	**Seven Network**	**National broadcasting network Nine Network**	**Southern Cross Television**	**ABC – Australian broadcasting corporation**	**Foxtel[1]**	**SBS TV – Special Broadcasting Service**
	Channels	Prime/7 QLD	WIN/NBN	SOUTHERN CROSS TAS, SOUTHERN CROSS TEN	ABC 1	Arena, Arena+2, BIO., Comedy channel, comedy channel+2, crime & investigation, Fox Classics, Fox classics +2, Fox8, fox8+2, history channel, W.	SBS
	Type	Private	Private	Private	Public	Private	Public
	Share	21,9	20,8	17,3	13,5	5,3	4,3
	Share Prime	21,9	23,6	18,1	15,4	3,9	5,6

[1] This does not include the channels owned and operated by XYZnetworks of which Foxtel is a co-owner

	CR (X)	21,9	42,7	60	73,5	78,8	83,1
	CR Prime (x)	21,9	45,5	63,6	79	82,9	88,5
	Ownership	Seven Media Group	PBL Media	Southern Cross Media Group (*Macquarie Media Group)	Australia	Proprietary ltd. Joint venture, btw, Telstra (50 pct.), News corporation (25 pct.) & CMH - Consolidated Media holding (25 pct.=	Australia
		Joint venture between Seven Network Ltd. & Kohlberg Kravis Robers & Co	CVC Asia Pacific				
BE FL	**Name**	**VRT**	**VLAAMSE MEDIA MAATSCHAPPIJ**	**SBS**	**NPO**	**MEDIA AD INFINITUM**	**MTV NETWORKS**
	Channels	EEN, KETNET/ CANVAS	VTM, 2BE	VIJFTV, VT4	Nederland 1+2+3	Vitaya	Nickelodeon/ MTV NL
	Type	Public	Private	Private	Public	Private	Private
	Share	40,3	27,2	10,9	3,9	3,5	1,5
	Share Prime	41,8	33,3	11	3,3	1,8	0,5
	CR (X)	40,3	67,5	78,4	82,3	85,8	87,3
	CR Prime (x)	41,8	75,1	86,1	89,4	91,2	91,7
	Ownership	Belgium State	VLAAMSE MEDIA MAATSCHAPPIJ	PRO7Sat.1	Netherlands	MEDIA AD INFINITUM	
BE FR	**Name**	**CLT-UFA SA**	**RTBF**	**TELEVISION FRANCAISE 1 (TF1)**	**France Televisions**	**Belgium Television**	**MTV NETWORKS EUROPE**
	Channels	Club RTL, RTL-TVI, PLUG RTL	LA UNE, LA DEUX	TF1	France 2+3+5/Arte	AB3, AB4	Nickelodeon/ MTV (FR)[2]
	Type	Private	Public	Private	Public	Private	Private
	Share	26	20,1	17,1	17,1	5,3	2
	Share Prime	37,9	24,2	11,8	11	5	0,7
	CR (X)	26	46,1	63,2	80,3	85,6	87,6
	CR Prime (x)	37,9	62,1	73,9	84,9	89,9	90,6
	Ownership	RTL Group SA	Belgium	BOUYGUES	France	MEDIA AD INFINITUM	MTV NETWORKS EUROPE

[2] TV% has a share of 1,7 of the whole day and 1,1 In prime time and thus surpass MTW networks on share in primetime, but we keep MTV as primary due to the whole day perspective needed when including children's channels

Bulgaria	**Name**	**News Corp**	**NOVA TELEVISION EAD**	**BNT**	**DIEMA VISION EAD**	**CENTRAL EUROPEAN MEDIA ENTERPRISES**	**PLANETA TV**
	Channels	bTV, GTV (now named bTV comedy) Fox Crime, FOXLife	Nova TV	BNT 1, BNT SAT	DIEMA, DIEMA 2, DIEMA FAMILY	RING (Enterprises - TIMEWARNER) TV2, BGTV (CEM), Cartoon Network (Turner – Time warner)	Planeta TV
	Type	Private	Private	Public	Private	Private	Private
	Share	40,2	17,1	14,2	6,9	2,7	1,5
	Share Prime	42,4	19,3	14,4	6,7	2,6	0,8
	CR (X)	40,2	71,5	54,4	78,4	81,1	82,6
	CR Prime (x)	42,4	76,1	56,8	82,8	85,4	86,2
	Ownership	Balkan News Corp.	MTG	Bulgaria		TIME WARNER	
Canada	**Name**	**CTV Globemedia Inc**[i]	**Canwest Global Communications Corporation**[ii]	**Corus Entertainment Inc**	**CBC/SRC**	**Astral Media Inc**[iii]	**Rogers Communications Inc**
	Channels	A, Animal planet, BNN Bravo!, Business News network, TV Land, TSN, Star!, Space, RDS, MTV, Muchmoremusic, muchmusic, Discovery, Discovery civilization, CTV, CTV Newsnet, couttv Canada, comedy+,	BBC Canada, BBC kids, DEJA view, Discovery health, E! Canada com, Global, IFC, MEN TV, Movietime, Mystery HG TV, History+, Showcase action, showcase diva, showcase+, slice	VIVA, W-network +Treehouse, Telelatino+, Movie central 1, Movie central 2, Movie central 3, HBO Canada East, HBO Canada West, HBO+, Discovery kids, Drive-in-class, Encore, Cosmo TV[iv], CMT, Peachtree, Scream	CBS, SRC, Newsworld	Canal d, family+, M (TMN1), M EXCESS (TMN3), M Fest (TMN5), M Fun (TMN4), MOREPIX, MPIX, Teletoon ENG+, TELETOON Retro ENG	BIO, City TV, CP24, G4techTV, OLN, SportsNet East+, , SportsNet ont+, , SportsNet PAC+, , SportsNet West+
	Type	private	private	private	public	private	private
	Share	22,3	14,1	7,8	7,1	5,5	5
	Share Prime	23,4	13,7	6,5	9,4	3,9	5,5
	CR (X)	22,3	36,4	44,2	51,3	56,8	61,8
	CR Prime (x)	23,4	37,1	43,6	53	56,9	62,4

	Ownership				Canada		
Canada - quebec	**Name**	**Groupe TVA**	**Astral Media Inc.**	**SRC/CBC**	**CTV Globemedia Inc ˅**	**Remstar Corporation**	**Société de télédiffusion du Québec**
	Channels	TVA, Prise 2, Mystere, LCN, LES IDEES DE MA MAISON, ARGENT	Z-tele, VRAK, Teletoon ENG, Teletoon FR, Series+, SUPER ECRAN 1, SUPER ECRAN 2, SUPER ECRAN 3, SUPER ECRAN 4, MPIX, Musicmax, Musiqueplus, Historia, Cinepop, Canal D, Canal Vie,	SRC, Newsworld, CBC, ARTV	CTV, TSN, Muchmusic, RDS, RIS, Space, Discovery	TQC	Tele-Quebec
	Type	Private	Private	Public	Private	Private	Public
	Share	31	25,9	15,8	8,3	7,3	3,6
	Share Prime	28,5	20,6	20,8	12,3	7,8	2,6
	CR (X)	31	56,9	72,7	81	88,3	91,9
	CR Prime (x)	28,5	49,1	69,9	82,2	90	92,6
	Ownership	Quebecor Media		Canada			Government of Quebec (i.e. Provincial crown corp)
		Quebecor Inc					
Croatia	**Name**	**HRT**	**RTL HRVATSKA D.O.O.**	**NOVA TV D.D.**	**N.A.**	**N.A.**	**N.A.**
	Channels	HTV1, HTV2	RTL Televizija	NOVA TV	N.A.	N.A.	N.A.
	Type	Public	Private	Private	N.A.	N.A.	N.A.
	Share	46,6	22,9	19,5	N.A.	N.A.	N.A.
	Share Prime	44,7	22,8	23,3	N.A.	N.A.	N.A.
	CR (X)	46,6	69,5	89	N.A.	N.A.	N.A.
	CR Prime (x)	44,7	67,5	90,8	N.A.	N.A.	N.A.
	Ownership	Croatia	RTL Group	CENTRAL EUROPEAN MEDIA ENTERPRISES	N.A.	N.A.	N.A.
			Bertelsmann	Time Warner	N.A.	N.A.	N.A.
Czech Republic	**Name**	**CET 21, S.R.O**	**CT CESKA TELEVIZIE**	**FTV PRIMA, S.R.O.**	**N.A.**	**N.A.**	**N.A.**
	Channels	NOVA TV, NOVA Cinema	CT1, CT2, CT24, CT4	Prima	N.A.	N.A.	N.A.
	Type	Private	Public	Private	N.A.	N.A.	N.A.
	Share	38,2	30,6	17,7	N.A.	N.A.	N.A.
	Share Prime	42,6	29,8	17,7	N.A.	N.A.	N.A.
	CR (X)	38,2	68,8	86,5	N.A.	N.A.	N.A.

	CR Prime (x)	42,6	72,4	90,1	N.A.	N.A.	N.A.
	Ownership	CENTRAL EUROPEAN MEDIA ENTERPRISES	Czech Republic	MODERN TIMES GROUP MTG AB	N.A.	N.A.	N.A.
Cyprus	**Name**	**CYPRUS BROADCASTING CORPORATION**	**SIGMA RADIO T.V. PUBLIC LIMITED**	**ANTENNA TV**	**TELETYPOS CYPRUS LIMITED**	**C.N.C. (CYPRUS NEW CHANNEL) PLUS T.V.**	**GREEK RADIO TELEVISION (ERT) S.A.**
	Channels	CYBC1, CYBC2	SIGMA	ANT1	MEGA	Plus TV	ERT World
	Type	Public	Private	Private	Private	Private	Public
	Share	21,2	20	17,4	11,9	3,7	2,6
	Share Prime	18,1	22,3	19,8	12,1	3,5	2
	CR (X)	21,2	41,2	58,6	70,5	74,2	76,8
	CR Prime (x)	18,1	40,4	60,2	72,3	75,8	77,8
	Ownership	Cyprus	DIAS PUBLISHING HOUSE	ANTENNA TV S.A.	TELETYPOS S.A.		Greece
Denmark	**Name**	**TV2/ Denmark**	**DR**	**TV 3**	**SBS**	**Walt Disney**	**Discovery**
	Channels[3]	TV2, TV2 Zulu, TV2 Charlie, TV2 Film, TV2 News, TV2 Sport (split)	DR1, DR2, DR Update	TV3, TV3+	Kanal 4, Kanal 5, SBS NET, The voice	Disney, Toon Disney, Playhouse Disney, Jetix	Discovery, Animal Planet
	Type	Public	Public	Private	Private	Private	Private
	Share	40	28,9	8,5	6	2,9	1,9
	Share Prime	41,9	35,4	7,4	4,8	1,6	1
	CR (X)	40	68,9	77,4	83,4	86,3	88,2
	CR Prime (x)	41,9	77,3	84,7	89,5	91,1	92,1
	Ownership	Danish State	Danish State	MTG	Pro7Sat1	Walt Disney company	Discovery communications Europe Ltd
Estonia	**Name**	**MTG**	**KANAL 2 AS**	**ERR - EESTI RAHVURSRINGHÄÄLING (Estonian public broadcasting)**	**PIRMAIS BALTIJAS KANALS SIA**	**All-Russian State Television and Radio Broadcasting Company (VGTR)**	**BALTIC MEDIA ALLIANCE LTD**

[3] Please note, that this represent only the channels included in the CR, as I do not have share figures below 0,1 it would be misleading to include all the networks channels. The picture established is a minimum CR based on the channels included.

	Channels	TV 6 (TV 3 AS), 3+ (3,6; 3,7) (VIASAT)	Kanal 2, Kanal 11	ETV, ETV 2	PBK	RTR PLANETA	REN TV Estonia
	Type	Private	Private	Public	Private	Public – Russian	Private
	Share	22,6	20,6	15,8	12,8	3,4	1,9
	Share Prime	24,7	24,1	16,4	12,9	2,7	2,7
	CR (X)	22,6	43,2	59	71,8	75,2	77,1
	CR Prime (x)	24,7	48,8	65,2	78,1	80,8	83,5
	Ownership		SCHIBSTED ASA	Estonia		Russian State	RTL group SA
							Bertelsmann AG
Finland[vi]	**Name**	**YLE**	**MTV Media**	**Nelonen Media**	**SBS**	**MTV**	**Discovery EU**
	Channels	YLE1, YLE2, YLE TEEMA, YLE FST5	MTV3, MTV Oy Pay TV, Sub	JIM, NELONEN, URHEILUKANAVA, Nelonen pay TV	The Voice/TV Viisi	Music TV (MTV)	Discovery
	Type	Public	Private	Private	Private	Private	Private
	Share	44,7	31,3	14,1	0,8	0,7	0,6
	Share Prime	41,7	35,4	15,1	0,6	0,6	0,4
	CR (X)	44,7	76	90,1	90,9	91,6	92,2
	CR Prime (x)	41,7	77,1	92,2	92,8	93,4	93,8
	Ownership	Finish State	Bonnier	Sanoma	Pro7Sat1	MTV Networks	Discovery communications Europe Ltd
France	**Name**	**FRANCE TELEVISIONS**	**Television Francaise 1 (TF1)**	**Metropole Television**	**Largardere**[4]	**Canal Plus France**	**ARTE**
	Channels	France 2, France 3, France 4, France 5, GULLI (with lagardere as secondary)	TF1, TMC	M6, W9	MCM, Canal+ (1,6 rest split with Canal Plus France) GULLI (split ownership with France TV, 0,7 count here)	Canal +(1,7, rest counted in lagardere), i>TELE,	ARTE

[4] Lagardere pose a particular difficulty as it has co-ownership of channels with France Television of the children's channel GULLI; as well as Canal + with Group Canal + SA, the other channel included is Virgin 17 (MCM). I have decided to split the share figure between the groups to ensure that Largardere has a place in the CR rating, otherwise the CR positions would be ARTE in 5 and either NRJ Group or Groupe AB in 6.

	Type	Public	Private	Private	Private	Private	Public
	Funding	Licence fee, ads	Ads, sub	Ads, sub	Ads, sub	Ads, sub	State
	Share	34	29,3	12,8	2,8	2	1,7
	Share Prime[5]	31,8	29,6	12,7	2	2	2,9
	CR (X)	34	63,3	76,1	78,9	80,9	82,6
	CR Prime (x)	31,8	61,4	74,1	76,1	78,1	81
	Ownership	France	Bouygues	RTL Group	Largardere	Group Canal+ SA (VIVIENDI) / Lagardere	ASSOCIATION RELATIVE A LA TELEVISION EUROPEENNE
Germany Germany	**Name**	**ARD**	**Pro7Sat1**	**RTL Group SA**	**ZDF**	**VIACOM/MTV Networks**	**3SAT**
	Channels	ARD, ARD3 (BFS, HESSEN FERNSEHEN, MDR FERNSEHEN, NDR FERNSEHEN, RBB FERNSEHEN, SUDWEST FERNSEHEN, WDR FERNSEHEN)	Kabel 1, RTL, Pro 7, Sat.1, N24	RTL, RTL II, Super RTL, VOX	ZDF, [6]Phoenix, KIKA	Comedy central, MTV, Nick, VIVA	3SAT
	Type	Public	Private	Private	Public	Private	Public
	Share	26,6	21,6	23,3	15,3	2,2	1,1
	Share Prime	30,4	18,6	24	16,3	1,4	1
	CR (X)	26,6	48,2	71,5	86,8	89	90,1
	CR Prime (x)	30,4	49	73	89,3	90,7	91,7
	Ownership	German state	PROSIEBENSAT.1 MEDIA AG	Bertelsmann AG	German state	VIACOM	Jointly operated by ARD, ZDF, ORF and SRG
Greece Greece	**Name**	**TELETYPOS S.A.**	**ERT - GREEK RADIO TELEVISION S.A.**	**ANTENNA TV S.A**	**ALPHA SATELLITE TELEVISION S.A. -**	**ELEFTHERITILEORASSI S.A.**	**NEW TELEVISION S.A.**

[5] Prime time viewing is based on terrestrial viewing

[6] Phoenix and KIKA are both channels jointly operated by ARD and ZDF, i've chosen to place them at ZDF. The respective share is 1,3 for all day and 0,7 for prime time for KIKA and 0,9 and 0,7 for phoenix.

	Channels	MEGA	NET, ET1, ET3	Antenna	Alpha	Alter	Star
	Type	Private	Public	Private	Private	Private	Private
	Share	18,3	17,1	15,2	13,6	11,1	10,4
	Share Prime	20	18,1	13,7	15,5	8	9,7
	CR (X)	18,3	35,4	50,6	64,2	75,3	85,7
	CR Prime (x)	20	38,1	51,8	67,3	75,3	85
	Ownership		Greece		RTL group SA		
					Bertelsmann		
Hungary	**Name**	**MAGYAR RTL TELEVÍZIÓ RT.**	**MTM-SBS TELEVÍZIÓ ZRT.**	**MAGYAR TELEVÍZIÓ RT.**	**VIASAT**	**IKO ROMANIA SRL**	**CHELLO MEDIA PROGRAMMING BV**
	Channels	RTL Klub	TV2	M1, M2	TV6, VIASAT3	COOL, F+, Sport Klub	MINIMAX/A+, TV Paprika (Chello Central Europe), Spektrum (CESKA PROGRAMOVA SPOLECNOST, S.R.O.), MGM (MGM CHANNEL NLF Ltd owned by Sony and Liberty Global)
	Type	Private	Private	Public	Private	Private	Private
	Share	24,6	21,3	13,1	4,8	3,9	2,5
	Share Prime	30,8	23,7	13,5	4,3	3,9	1,2
	CR (X)	24,6	45,9	59	63,8	67,7	70,2
	CR Prime (x)	30,8	54,5	68	72,3	76,2	77,4
	Ownership	RTL Group SA	Pro7Sat.1. Media AG	Hungary	MTG	IKO ROMANIA SRL	Liberty Global
		Bertelsmann					
Italy	**Name**	**RAI**	**MEDIA Set**	**NEWSCORP**	**TELECOM ITALIA SPA**	**DISNEY**	
	Channels	RAI DUE, RAI GULP, RAI SPORT PIU, RAI TRE, RAI UNO, RAISAT	BOING (BOING S.P.A.); Canale 5, ITALIA 1, RETE 4, (RETI TELEVISIVE ITALIANE S.P.A. (R.T.I.))	CULT, FOX, FOX +1, FOX CRIME, FOX CRIME +1, FOX LIFE, FOX LIFE +1, FX, National geographic, NATIONAL GEO. WILD, (1,8 (1,1) FOX international),	La 7	Disney channel, Disney channel +1, Jetix, Jetix+1, Playhouse Disney, Toon Disney	7 Gold (Puglia, Lazio & Calabria)

		CINEMA, RAISAT EXTRA, , RAISAT PREMIUM, , RAISAT YOYO		SKY Calcio, SKY cinema 1, sky cinema +1, Sky cinema family, sky cinema hits, sky cinema mania, sky cinema max, sky show, sky sport 1, sky sport 2, ky sport 3, sky supercalcio, sky tg24, sky vivo (SKY 2,6 (3,2))			
	Type	Public	Private	Private	Private	Private	Private
	Share	42,1	39,7	4,4	3,1	1	0,5
	Share Prime	44,1	39,8	4,3	2,6	0,6	0,7
	CR (X)	42,1	81,8	86,2	89,3	90,3	90,8
	CR Prime (x)	44,1	83,9	88,2	90,8	91,4	92,1
	Ownership	ITALY	Mediaset S.P.A.	(FOX international, SKY)	(LA7 TELEVISIONI)	Disney	Regional channels
Ireland	**Name**	**RTE - RADIO TELEFIS EIREANN**	**TV3 TELEVISION NETWORK LIMITED**	**BBC**	**BRITISH SKY BROADCASTING LIMITED ("BSkyB")**	**CHANNEL 4 GROUP**	**ULSTER TELEVISION PLC**
	Channels	RTÉ1, RTÉ2,	TV3, Channel6 (now 3e) (CHANNEL 6 BROADCASTING LIMITED)	BBC1, BBC2	SKY 1 SKY NEWS SKY SPORTS 1 SKY SPORTS 2 SKY SPORTS NEWS	CHANNEL 4, E4 (4 ventures limited)	UTV
	Type	Public	Private	Public	Private	Public	Private
	Share	36,6	12,2	8,5	5,6	5	4,4
	Share Prime	43,1	13,1	8	4,7	4,7	4,5
	CR (X)	36,6	48,8	57,3	62,9	67,9	72,3
	CR Prime (x)	43,1	56,2	64,2	68,9	73,6	78,1
	Ownership	Ireland	TULLAMORE BETA LIMITED	UK	BRITISH SKY BROADCASTING GROUP PLC	UK	ITV family
					News Corp		
Japan - Kanto	**Name**	**NHK**	**Fuji News Network INC**	**Nippon Television Network (NNN)**	**All-Nippon News Network (ANN)**	**Japan News Network**	**TV Tokyo Network**
	Channels	NHK1, NHK2, NHKBS1, NHKBS2	FUJI TV	NTV (Nippon Television)	TV ASAHI	TBS	TV Tokyo
	Type	public	Private	Private	Private	Private	Private
	Share	18,8	18,2	18	16,2	15,5	7,7
	Share Prime	17,8	18,8	17,7	15,9	15,4	10,2
	CR (X)	18,8	37	55	71,2	86,7	94,4
	CR Prime (x)	17,8	36,6	54,3	70,2	85,6	95,8
	Ownership	Japan	Fuji Media Holdings	Nippon Television Network Corporation	TV Asahi Corporation	Tokyo Broadcasting System Holdings	TV Tokyo Corporation
			Sankei Shimbun	Yomiuri Shimbun	Asahi Shimbun	Mainichi	Co-owned

						shimbun	by: (majority) Nihon Keizai Shimbun & Mainichi Broadcasting System
Latvia	**Name**	**NEWS Corporation**	**MTG**	**LATVIJAS TELEVIZIJA SIA**	**PIRMAIS BALTIJAS KANALS SIA**	**BALTIC MEDIA ALLIANCE LTD**	**MTV NETWORKS**
	Channels	LNT (19,3; 19,6) (LATVIJAS NEATKARIGA TELEVIZIJA AS), TV5 (3,3; 3,5) (BETE SIA)	TV3, TV6 (TV3 Latvia), 3+ (Viasat)	LTV 1, LTV7	PBK	REN TV BALTIJA (2,5; 2,4), Perviy Baltijskyi Muzykalnyi Kanal	MTV Latvija
	Type	Private	Private	Public	Private	Private	Private
	Share	22,6	20,7	15,3	10,7	2,9	0,2
	Share Prime	23,1	21,3	18,9	11,4	2,6	0,1
	CR (X)	22,6	43,3	58,6	69,3	72,2	72,4
	CR Prime (x)	23,1	44,4	63,3	74,7	77,3	77,4
	Ownership	**News Corp**	**MTG**	**Latvia**		RTL group SA	VIACOM
						Bertelsmann AG	
Lithuania	**Name**	**UAB TELE - 3**	**UAB LAISVAS IR NEPRIKLAUSOMAS KANALAS**	**LRT LIETUVOS RADIJAS IR TELEVIZIJA**	**UAB BALTIJOS TV**	**PIRMAIS BALTIJAS KANALS SIA**	**UAB LIETUVOS RYTO TELEVIZIJA**
	Channels	TV3, TV6	LNK, TV1	LTV, LTV2	BTV	PBK	LIETUVOS RYTAS TV
	Type	Private	Private	Public	Private	Private	Private
	Share	27,7	22,7	14,3	7,7	5,7	1,2
	Share Prime	27,9	28,5	14,2	7,3	5,7	1,1
	CR (X)	27,7	50,4	64,7	72,4	78,1	79,3
	CR Prime (x)	27,9	56,4	70,6	77,9	83,6	84,7
	Ownership	MTG	AMBER TRUST S.C.A (primary)	Lithuania	UAB KONCERNAS ACHEMOS GRUPE		UAB LIETUVOS RYTAS
			UAB KONCERNAS MG BALTIC (secondary)				
Netherlands	**Name**	**NPO - Netherlands Public Broadcasting**	**CLT-UFA SA (RTL)**	**SBS Broadcasting /ProSiebenSat.1**	**MTV Networks**	**Discovery**	**Omroep Reclame Nederland (ORN TV)**
	Channels	Nederlan	RTL 4, RTL 5,	NET5, SBS6,	Comedy	Animal	Omrop

		d 1, Nederland 2, Nederland 3	RTL 7, RTL 8	Veronica	Central, MTV, Nickelodeon, TMF	planet, Discovery channel,	Fryslân, RTV Noord, RTV Drenthe, RTV Oost, Omroep Gelderland, RTV Utrecht, Omroep Flevoland, RTV Noord Holland, West, RTV Rijnmond, Omroep Zeeland, Omroep Brabant
	Type	public	Private	Private	Private	Private	Public
	Share	34,9	23,6	19,3	4,5	2,7	1,9
	Share Prime	37,3	26,9	22,4	2,2	1,4	1,5
	CR (X)	34,9	58,5	77,8	82,3	85	86,9
	CR Prime (x)	37,3	64,2	86,6	88,8	90,2	91,7
	Ownership	Netherlands	RTL GROUP	Pro7Sat1 Media	VIACOM	Discovery Communications Europe Limited	
			Bertelsmann				
New Zealand	**Name**	**TVNZ**	**MediaWorks New Zealand**	**Sky Network Television Limited**	**Discovery Communications, Inc.**	**Turner broadcasting System**	**Maori TV**
	Channels	TV ONE, TV2	C4, TV3	Prime, Sky Movies 1, Sky movies great, Sky sport 1, Sky sport 2, The Box	Discovery channel (sat), Discovery Channel (terr.), Animal planet	Cartoon Network	Maori TV
	Type	Public	Private	Private	Private	Private	Public
	Share	45,8	18,8	14,2	2,2	0,7	0,5
	Share Prime	51,9	21,7	12,9	1,1	0,3	0,7
	CR (X)	45,8	64,6	78,8	81	81,7	82,2
	CR Prime (x)	51,9	73,6	86,5	87,6	87,9	88,6
	Ownership	New Zealand	majority Ironbridge Capital (70 pct)	Majority Nationwide News Pty Limited (43,65 pct.)	Discovery Communications, Inc.	Time Warner	Maori / NWZ
Norway	**Name**	**NRK**	**TV2/Norge**	**SBS**	**TV3/Viasat**	**Disney**	**Discovery**
	Channels	NRK1, NRK2, NRK3/Super,	TV2, TV2 Sport TV2 Nyhetskanalen, TV2 Zebra, TV2 Film kanalen	Kanal 5, Kanal 9, Fem, The voice,	TV3, 3+, TV3 Danmark (0,1), TV3 Sverige (0,1), Viasat 4, Viasat History, TV1000 Nordic, TV1000, TV1000 +1, TV1000 action, TV1000	Disney channel, Playhouse Disney, Toon Disney, Jetix	Discovery, Discovery Civilization, Discovery Science, discovery travel and living, Animal planet

					Classics, TV1000 Family, TV6 action /nature world (0,1), Action 6/nature 6 world (0,1)		
	Type	Public	Private	Private	Private	Private	Private
	Share	37,5	29,1	9,7	9,3	4,4	2,9
	Share Prime	42	31	10,1	8,6	1,7	1,9
	CR (X)	37,5	68,5	78,2	87,5	91,9	93,8
	CR Prime (x)	42	73	83,1	91,7	93,4	95,3
	Ownership	Norwegian State	Apressen & Egmont	Pro7Sat1	MTG	Walt Disney company	Discovery communications Europe Ltd
Poland[7]	**Name**	**TVP**	**TVN SA**	**TELEWIZJA POLSAT S.A.**	**CANAL+ CYFROWY SP. Z O.O.**	**VIACOM**	**Discovery**
	Channels	TVP1, TVP2, TVP INFO, TVP KULTURA, TVP Sport, TVPOLONIA	ITVN, TVN, TVN24m TVN, TVN METEO, TVN Style, TVN Turbo, TVN24, TVN7, TV4(POLSKIE MEDIA S.A.)	POLSAT, POLSAT CAFE, POLSAT NEWS, POLSAT PLAY, POLSAT SPORT, POLSAT SPORT EXTRA, POLSAT2, SUPERSTACJA	ALE KINO, CANAL+, CANAL+ SPORT, MINIMINI, ZIGZAP/HYPER, KUCHNIA.TV, PLANETE	COMEDY CENTRAL, MTV POLSKA, VH POLSKA, VIVA POLSKA, (MTV NETWORKS, PARAMOUNT)	Discovery, Discovery Science, Discovery Civilization, Discovery World, Animal Planet
	Ownership A	Public	Private	Private	Private	Private	Private
	Funding						
	Share	44,5	23,8	17,3	1,9	1,5	1,3
	Share Prime	43,9	26,8	19	1,2	1	0,8
	CR (X)	44,5	68,3	85,6	87,5	89	90,3
	CR Prime (x)	43,9	70,7	89,7	90,9	91,9	92,7
	Ownership	Poland	ITI HOLDINGS SA, INTERNATIONAL TRADING AND INVESTMENTS HOLDINGS SA	POLSAT CYFROWY S.A / POLARIS FINANCE B.V.	CANAL OVERSEAS (CANAL+ FRANCE) – LAGARDERE/GROUPE CANAL+ SA(VIVIENDI)	VIACOM	DISCOVERY COMMUNICATIONS EUROPE LIMITED
Portugal[vii]	**Name**	**TVI-TELEVISAO INDEPENDENTE, S.A.**	**RADIO E TELEVISAO DE PORTUGAL, SGPS, S.A. (RTP)**	**SOCIEDADE INDEPENDENTE DE COMUNICAÇAO, S.A. (SIC)**	**N.A.**	**N.A.**	**N.A.**
	Channels	TVI	RTP1, RTP2	SIC	N.A.	N.A.	N.A.
	Type	Private	Public	Private	N.A.	N.A.	N.A.
	Share	30,5	29,4	24,9	N.A.	N.A.	N.A.

[7] Disney has a share of 1,3 all day and 0,6 in prime time based on Disney channel, Jetix and Jetix play

	Share Prime	35,8	26,7	24,2	N.A.	N.A.	N.A.
	CR (X)	30,5	59,9	84,8	N.A.	N.A.	N.A.
	CR Prime (x)	35,8	62,5	86,7	N.A.	N.A.	N.A.
	Ownership /group	GRUPO MÉDIA CAPITAL SGPS S.A.	Portugal	IMPRESA-SOCIEDADE GESTORA DE PARTICIPAÇOES SOCIAIS, S.A.	N.A.	N.A.	N.A.
		PROMOTORA DE INFORMACIONES SA ("Prisa")			N.A.	N.A.	N.A.
Romania	**Name**	**PRO TV SA**	**Intact Media Group**	**TVR - TELEVIZUNEA ROMANIA**	**AMEROM TELEVISION SRL**	**REALITATEA MEDIA SA**	**OCRAM TELEVIZIUNE SRL**
	Channels	ACASA, MTV Romania, Sport.ro, PRO TV, PRO Cinema /+Turner/Timewarner Cartoon network (2,4 / 1,5)	ANTENA 1, ANTENA 2, ANTENA 3, EUFORIA	TVR 1, TVR 2, TVR CULTURAL	KISS TV, PRIMA TV,	REALITATEA TV	Oglinda TV (OTV)
	Type	Private	Private	Public	Private	Private	Private
	Share	25,9	13	7,4	4,8	4,6	4
	Share Prime	28,1	15,2	8	5,3	3,3	4
	CR (X)	25,9	38,9	46,3	51,1	55,7	59,7
	CR Prime (x)	28,1	43,3	51,3	56,6	59,9	63,9
	Ownership	CENTRAL EUROPEAN MEDIA ENTERPRISES	Intact Media Group	Romania	Pro7Sat.1	REALITATEA MEDIA SA	OCRAM TELEVIZIUNE SRL
		TIME WARNER					
Slovakia	**Name**	**MARKIZA - SLOVAKIA, SPOL. S R.O.**	**STV - SLOVENSKA TELEVIZIA**	**MAC TV s.r.o.**	**N.A.**	**N.A.**	**N.A.**
	Channels	TV MARKIZA	STV 1, STV 2, STV 3[viii]	TV JOJ, TV JOJ plus[ix]	N.A.	N.A.	N.A.
	Type	Private	Public	Private	N.A.	N.A.	N.A.
	Share	35,1	22	17	N.A.	N.A.	N.A.
	Share Prime	37,7	22,6	19,7	N.A.	N.A.	N.A.
	CR (X)	35,1	57,1	74,1	N.A.	N.A.	N.A.

	CR Prime (x)	37,7	60,3	80	N.A.	N.A.	N.A.
	Ownership	CENTRAL EUROPEAN MEDIA ENTERPRISES	Slovakia	HRVATSKA RADIOTELEVIZIJA	N.A.	N.A.	N.A.
		Time Warner			N.A.	N.A.	N.A.
Slovenia	**Name**	**CME**	**RTV - RADIOTELEVIZIJA SLOVENIJA, LJUBLJANA**	**MTG**	**HRT**	**RTL**	**Discovery Communications ltd.**
	Channels	Kanal A (11,9; 11,5) (KANAL A, d.o.o.), POP TV (POP TV (24,6; 31,4)DRUZBA ZA), TV PIKA (CME, foreign, (summer 2009), TV NOVA (CME,foreign)	Slovenija 1, Slovenija 2, Slovenija 3, TV Koper CAPODISTRIA, Tele M	TV3 (5,2;4,8)(PRVA TV, d.o.o.), TV 1000 (0,5; 0,3)	HRT 1, HRT 2,	RTL, RTL 2, RTL Croatia, RTL Madzzarski, VOX (0,3; 0,2) (VOX FILM- UND FERNSEH GMBH & CO. KG)	Animal planet, Discovery
	Type	Private	Public	Private	Public	Private	Private
	Share	37,7	31,5	5,7	4,4	2,2	1,7
	Share Prime	42,2	33,0	5,1	3,6	2	0,8
	CR (X)	37,7	69,2	74,9	79,3	81,5	83,2
	CR Prime (x)	42,2	75,2	80,3	83,9	85,9	86,7
	Ownership	TIME WARNER	Slovenia	MTG	Croatia	RTL Group	Discovery communication Europe
						Bertelsmann	
Spain	**Name**	**RTVE**	**GESTEVISION TELECINCO SA**	**ANTENA 3 DE TELEVISION SA**	**SOGECABLE**	**La Sexta**	**CANAL SUR TELEVISION SA**
	Channels	24 horas, ClanTVE, TVE 1, Teledeporte, Castilla La Mancha Televisión (CMT), La 2	FDF, Tele 5, TELECINCO 2	ANTENA 3, ANTENA.NEOX, ANTENA.NOVA	CANAL PLUS, CANAL PLUS 2, CANAL PLUS 30, CANAL PLUS ACCION, CANAL PLUS ACCION...30, CANAL PLUS COMEDIA, CANAL PLUS COMEDIA...30, CANAL PLUS DCINE, CANAL PLUS DEPORTES, CANAL PLUS	La Sexta, Hogar10,	Canal Sur, ANDALUCIA TV

					EVENTOS, CANAL PLUS FUTBOL, CNN+, CUATRO, VIAJAR		
	Type	Public	Private	Private	Private	Private	Public
	Share	23,2	18,5	17	9,7	5,6	3,5
	Share Prime	21,3	20,4	16,3	10,6	5,6	3,3
	CR (X)	23,2	41,7	58,7	68,4	74	77,5
	CR Prime (x)	21,3	41,7	58	68,6	74,2	77,5
	Ownership	Spain, CORPORACION DE RADIO Y TELEVISION ESPANOLA S.A	MEDIASET S.P.A.	GRUPO PLANETA DE AGOSTINI SL./ RTL Group	PROMOTORA DE INFORMACIONES SA (\Prisa\)	GESTORA DE INVERSIONES AUDIOVISUALES LA SEXTA S.A (GAMP)	RTVA - RADIO Y TELEVISION DE ANDALUCIA
Sweden	**Name**	**SVT**	**TV4[8]**	**TV3/VIASAT**	**SBS**	**Discovery EU**	**Disney**
	Channels	SVT1, SVT2, SVT24, Barn/ Kundskapskanalen	TV4, TV4 Guld, TV400, TV4 +, TV4 Film, TV4 Fakta, TV4 Science fiction, TV4 Komedi, C+ Action, C+ comedy, C+ Drama, C+ First, C+ Hits, C+ Sport 1, C+ Sport 2	TV3, TV6, TV8, ZTV, Viasat Explorer, Viasat Nature/crime, Viasat Sport, TV1000, TV1000 Action, TV1000 Classic, TV1000 Family, TV1000 Nordic (TV3 Denmark 0,1)	Kanal 5, Kanal 9, The Voice,	Animal Planet, Discovery, Discovery science, Discovery travel and living, discovery world	Disney channel, Playhouse Disney, Toon Disney, Jetix
	Type	Public	Private	Private	Private	private	Private
	Share	34,2	29,1	16,2	9,6	2,6	1,8
	Share Prime	38,9	29,8	15,2	9,6	1,5	0,9
	CR (X)	34,2	63,3	79,5	89,1	91,7	93,5
	CR Prime (x)	38,9	68,7	83,9	93,5	95	95,9
	Ownership	Swedish State	Bonnier AB	MTG	Pro7Sat1	Discovery communications Europe Ltd	Walt Disney company
Switzerland	**Name**	**SRG SSR idée Suisse**	**RTL GROUP AB**	**Pro7.Sat1**	**TELEVISION FRANCAISE 1 (TF1)**	**ARD[x]**	**FRANCE TELEVISIONS**
	Channels	SF1, SF2, TSI1, TSI2, TSR1, TSR2	M6 (Metropole television), RTL, RTL 2, RTL 9, Super RTL (with Disney), VOX	Pro 7, Sat.1., Kabel 1,	TF1, Eurosport	ARD, SWR	France 2, France 3
	Type	Public	Private	Private	Private	Public	Public
	Share	33,1	14,2	8,9	5	4,9	4

[8] TV4 purchased the C More Entertainment Group in December 2008, these channels are thus placed under TV4 instead of the former owner Pro7Sat1, the c+ channels combined share is 1,2 and in primetime 1

	Share Prime	40,6	13,3	7,1	4,2	5,2	3,5
	CR (X)	33,1	47,3	56,2	61,2	66,1	70,1
	CR Prime (x)	40,6	53,9	61	65,2	70,4	73,9
	Ownership B	Switzerland	Bertelsmann		BOUYGUES	Germany	France
Switzerland DE	**Name**	**SRG SSR idée suisse**[xi]	**RTL**	**Pro7.Sat1**	**ARD**[xii]	**ZDF**	**ORF**
	Channels	SF1, SF 2	RTL, RTL 2, Super RTL (with Disney) & VOX (VOX FILM & Fernsehn)	PRO7, SAT.1, Kabel 1,	ARD, SWR	ZDF	ORF1, ORF2
	Type	Public	Private	Private	Public	Public	Public
	Share	32,8	16,2	13	7,1	5	4,9
	Share Prime	40,8	14,2	10,1	7,1	4,9	3,8
	CR (X)	32,8	49	62	69,1	74,1	79
	CR Prime (x)	40,8	55	65,1	72,2	77,1	80,9
	Ownership	Switzerland	Bertelsmann	Pro7.Sat.1	Germany	Germany	Austria
Switzerland FR	**Name**	**SRG SSR idée suisse**	**TELEVISION FRANCAISE 1 (TF1)**	**FRANCE TELEVISIONS**	**RTL group AB**	**ARTE**	**Tuner**
	Channels	TSR1, TSR2	TF1, TMC, Eurosport	France 2, France 3	M6 (Metropole Television), RTL9 (CLT-UFA SA)	ARTE	TNT , CNN
	Type	Public	Private	Public	Private	Public	Private
	Share	30,6	18,1	13,2	12,1	2,7	2,2
	Share Prime	36,5	16,5	13,6	12,6	2,3	1,4
	CR (X)	30,6	48,7	61,9	74	76,7	78,9
	CR Prime (x)	36,5	53	66,6	79,2	81,5	82,9
	Ownership B	Switzerland	BOUYGUES	France	Bertelsmann	ASSOCIATION RELATIVE A LA TELEVISION EUROPEENNE (ARTE G.E.I.E.)	Time Warner
Switzerland IT	**Name**	**SRG SSR idée Suisse (IT)**	**RETI TELEVISIVE ITALIANE S.P.A. (R.T.I.)**	**RAI**	**Time Warner**	**TeleTicino SA**	**LA7 Televisioni**
	Channels	TSI 1, TSI 2	Canale 5, Italia 1, RETE 4	RAI UNO, RAI DUO, RAI TRE	TNT	Tele Ticino	La7
	Type	Public	Private	Public	Private	Private	Private
	Share	32	25,6	22	2,5	1,8	1,3
	Share	39,4	23,2	19,6	1,5	1,7	1

	Prime						
	CR (X)	32	57,6	79,6	82,1	83,9	85,2
	CR Prime (x)	39,4	62,6	82,2	83,7	85,4	86,4
	Ownership	Switzerland	Media Set	Italy			TELECOM ITALIA MEDIA SPA
Turkey	**Name**	**DOĞAN GROUP**	**AKS TELEVİZYON REK. VE FİLM. SAN. VE TİC. A.Ş.**	**TURKUVAZ RADYO TELEVIZYON GAZETECILIK VE YAYINCILIK A.Ş.**	**HUZUR RADYO TELEVİZYON A.Ş.**	**DÜNYA İLETİŞİM YAYINCILIK HİZMETLERİ A.Ş.**	**MERKEZ TELEVİZYON AŞ.**
	Channels	Kanal D (DTV HABER VE GÖRSEL YAYINCILIK A.Ş), Show TV (IŞIL TELEVİZYON YAYINCILIK YAP. SAN. VE TİC. A.Ş)	Show TV	ATV	FOX	SAMANYOLU TV	Kanal 1
	Type	Private	Private	Private	Private	Private	Private
	Share	22	11,4	8,9	8	5,5	3,5
	Share Prime	26,2	15,3	10,1	6,8	7,1	3,8
	CR (X)	22	33,4	42,3	50,3	55,8	59,3
	CR Prime (x)	26,2	41,5	51,6	58,4	65,5	69,3
	Ownership				News Corp		
UK	**Name**	**BBC**	**ITV PLC**	**Channel 4 Group**	**Newscorp**	**Channel 5 Broadcasting/ RTL Group SA**	**VIRGIN MEDIA INC**
	Channels	BBC1, BBC2, BBC3, BBC4, BBC News, CBBC, CBEEBIES	ITV1, ITV2, ITV2+1, ITV3, ITV3+1, ITV4, ITV4+1	Channel4+S4C, Channel 4 +1, 4Music, More4, More4+1, Film4, film4+1, E4, E4+1, 4Music	SKY 1, SKY 2, SKY 3, SKY MOVIES ACTION/THRILLER, SKY MOVIES CLASSICS, SKY MOVIES COMEDY, SKY MOVIES DRAMA, SKY MOVIES FAMILY, SKY MOVIES, MODERN GREATS, SKY MOVIES PREMIERE, SKY MOVIES PREMIERE +1,	FIVE, FIVE US, FIVE US+1, FIVER, FIVER +1	[9]ALIBI, ALIBI+1, BRAVO, BRAVO +1, BRAVO 2, CHALLENGE TV, CHALLENGE TV +1, DAVE, DAVE +1, G.O.L.D., G.O.L.D. +1, LIVING, LIVING +1, LIVING TV 2, UKTV FOOD, UKTV FOOD +1, UKTV GARDENS, UKTV

[9] BBC WW and Virgin MEDIA TELEVISON LDT have three joint ventures which channels have been placed under Virgin, those are UK GOLD BROADCASTING LTD, UK CHANNEL MANAGEMENT LTD and UK NEW VENTURES LDT, see MAVISE DB for further information see www.Virginmedia.com.

					SKY MOVIES SCIFI/HORRO R, SKY MOVIES SCREEN 1, SKY MOVIES SCREEN 2, SKY NEWS SKY SPORTS 1, SKY SPORTS 2 SKY SPORTS 3, SKY SPORTS EXTRA, SKY SPORTS NEWS, SKY TRAVEL, CRIME AND INVESTIGATIO N NW, FX, FX+ NAT GEO, NAT GEO +1, THE HISTORY CHANNEL, THE HISTORY CHANNEL +1		HISTORY, UKTV PEOPLE, UKTV STYLE, UKTV STYLE PLUS, VIRGIN1, VIRGIN1 +1, WATCH
	Type	Public	Private	Public	Private	Private	Private
	Share	33,4	22,9	11,9	6,9	6,1	5,8
	Share Prime	34,1	26,9	12,1	6,2	6,5	5
	CR (X)	33,4	56,3	68,2	75,1	81,2	87
	CR Prime (x)	34,1	61	73,1	79,3	85,8	90,8
	Ownership	British State	ITV PLC(main)	British State	Newscorp	BERTELSMA NN	VIRGINMEDI A
USA	**Name**	**NBC UNIVER SAL**	**Disney ABC Television Group**[xiii]	**TIMEWARNER**[xiv]	**VIACOM**	**FOX BROADCAS TING COMPANY**	**CBS**
	Channels	USA Network, The SciFi Channel (syfy), The Weather Channel, Telemun do, Oxygen, NBC, MSNBC, CNBC, Bravo,	ABC, ABC Family, Disney, Toon Disney, Soapnet, ESPN[xv], ESPN 2, ESPN Classic,	Turner Broadcasting system inc. (10,8; 9,4) (TRU TV, TURNER TV NETWORK, TBS, HEADLINE NEWS, CNN, CARTOON NETWORK, ADULT SWIM), HOME BOX OFFICE (2,3; 2,1) (CINEMAX, HBO, HBO PRIME)	TV Land, The N, Spike TV, Nickelodeon, Nick at Nite, Nick Toons, MTV, MTV2, Comedy Central, Country Music TV, BET (Betnetworks),	Speed Channel, My Network TV, National Geographic [xvi], FOX, Fox Nets, FX,	CBS, Show Time Networks (SHOW TIME PRIME, SHOWTIME)
	Type	Private	Private	Private	Private	Private	Private
	Share	13,6	13,4	13,1	12,2	10,3	7,5
	Share Prime	14,6	13,6	11,5	8,9	12,6	9
	CR (X)	13,6	27	40,1	52,3	62,6	70,1
	CR Prime (x)	14,6	28,2	39,7	48,6	61,2	70,2
	Ownership					News Corp.	

[i] This includes the CTV Specially television inc. where 80 pct. is owned by CTW and 20 pct. by ESPN. Included is also the discovery channels + animal planet, where 20 pct. remains under the control of discovery communications.

[ii] CW media inc. is a partnership between CanWest and Goldman sachs where the majority remains in the hands of CanWest

[iii] Teletoon & Teletoon Retro is an joint venture between Corus & Astral media with a 50/50 split, here they have been placed under Astral media

[iv] Cosmo TV is under Corus majority, where a minority share is with the hearst corporations

[v] This includes the CTV Specially television inc. where 80 pct. is owend by CTW and 20 pct. by ESPN. Included is also the discovery channels + animal planet, where 20 pct. remains under the control of discovery communications.

[vi] Finnpanel – TV audience measurement

[vii] Portugal was decided retained as a CR3 as this was based on the Total universe consisting of 9,459,000 individuals. The TV companies had other channels, but these were primarily cable or satellite based, the other reporting part consisted of the cable universe numbering 4,483,000 individuals, but an aggregation of the total with the separate cable universe would entail a total share figure of around 115 pct., making it relatively difficult to ensure a reasonable degree of comparability with the figures reported in the other included markets, therefore we decided to limit it to the total universe reporting, where the main channels represented 84,8 pct. of all-day share and 86,7 prime-time share. This way, while not having CR4-6, still meant the potential to establish a comparable HHI index as well as to secure the statistical analysis of competition and market concentration.

[viii] STV3 has startup 08/2008 and had a 0,2 all-day share measured annually, but 0,5 in the period, we have used the annual figure.

[ix] TV JOJ Plus had startup from 11/2008 and had an annual share of 0,2, but a period share of 1,2 all day. We have applied the annual figure

[x] Please note, that KIKA with 0,6 daytime and 0,4 prime time has not been included as it is operated jointly by ARD & ZDF, however if included by 50 pct. it would mean that ARD has higher cumulative share than TF1. On the same not 3sat is not included in the public broadcasters.

[xi] 3SAT is a Pan-European television channel carrying primarily cultural programming – it is operated jointly by ARD, ZDF, ORF and SRG and is not included in the calculation, the channel represent 1,1 (all-day) and 1 (prime-time) share.

[xii] KIKA operated jointly by ZDF and ARD is not included in the calculation, ARTE/KIKA represent 1,7 all-day and 1,4 prime-time share.

[xiii] A&E TV Networks is owned by the Hearst Corporation (42,5 pct.), Disney-ABC Television Group (42,5 pct.) and NBC Universal (15 pct.). The network represent 4,7 day time share, and 4,4 prime time share (compiled of following channels: The History channel, The Biography channel, Lifetime, Lifetime Movie Network, A&E). I have not included the share of these in the aggregated CR figures.

[xiv] CW television Network is owned by CBS (50 pct.) & Time Warner (50 pct.). The CW channel represent 2,1 daytime share and 1,9 primetime share. These figures are not included in the aggregated CR figures.

[xv] ESPN INC is split between Disney ABC (80 pct.) and Hearst corp. (20 pct.), the figures have been included under ABC-Disney due to the holding of majority.

[xvi] With National geographic society (50 – 50 split).

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