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Expanding the Concept of Agency Costs in SME Lending: A Theoretical Analysis of How to Integrate Different Conceptualizations of Rationality in Agency Costs

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Abstract

Small and medium-sized enterprises' access to credit has long been a bottleneck inhibiting growth in most of the western world. The problem of accessing credit for SME's is two fold: Banks may not be willing to risk lending to small opaque firms, or their lending practices are ill suited for the requirements of the SME. Issues of communication can arise from agency problems between an SME owner-manager and a loan officer, restricting credit due to reasons that are not necessarily strictly economic in nature. therefore it is pertinent to ask how different conceptualizations of rationality can increase our understanding of agency problems, as suggested by Jensen and Meckling (1976), in SME lending relations?

In order to do so an outline of how SME financing is structured with focus on information transfer is proposed and the type of information defined as hard or soft. A framework of different conceptualizations is then used to expand the understanding of what motivates agents' behavior. Agency costs are a result of this behavior, therefore, understanding rationality from a broader perspective can give us a better understanding of how agency costs affect real choices and vice versa. Based on the reconceptualization of agency costs four hypothesis are proposed based on different cases. Finally, findings are discussed in conjunction with related research human nature, and the consequences of the analysis.

Introduction

In this thesis we undertake an investigation of rationality and lending for small and medium sized enterprises (SMEs) with focus on the relationship between the SME's owner-manager and the bank's loan officer. SMEs' access to credit has long been a concern for both for the SMEs and for financial institutions. For SMEs a lack of credit hampers their ability to grow and compete(ECB, 2019; OECD, 2018; Ferrando and Mavrakis, 2017; FSR – Danske Revisorer et al., 2018). There are significant differences in what type of SMEs face financial constraints. Some researchers points opacity of the SMEs as a problem for accessing credit (Berger et al., 2001), while others point towards size and age (Östürk and Mrkaic, 2014). Some have argued that because of the opacity of some SMEs there is a need for lending relationships based on soft information which allows the bank to evaluate the SME on a different type of information (Berger and Udell, 2006).

The research question we seek to answer is:

> How can different conceptualizations of rationality increase our understanding of agency problems, as suggested by Jensen and Meckling (1976), in SME lending relations?

Initially the goal of our investigation was to understand if and how reasoning transferred from a bank to an SME in case they engage in a relationship. Agency theory describes some issues which can emerge between a borrower and a lender. Agency Theory does not deal directly with the problem which we initially wanted to address, but it deals with a similar question of how to handle and understand behavior in business relationships. We were especially interested in Jensen and Meckling's (1976) paper which described the essential ideas of agency costs and how they relate to behavior. However, their perception of behavior is "economic" and the agents they analyse are only interested in utility maximization. Whilst our work does not necessarily challenge an assumption of utility maximizing agents we do challenge the pure economic concept of how agents maximize their behavior.

In this thesis the behavior of the agent is framed as a product of the circumstances in which the individual finds itself. In order to understand how the particular setting influences

the individual we turned to organization studies, as we initially wanted to see how organizations affect behavior. We encountered Barbara Townley's (2008) work on how rationality has been conceptualized within organizational studies. Her book provides a basic framework for understanding decision making and behavior in "organizing" action, that is, action which is carried out with some relation to other people. The relationship of concern in this thesis is between a bank and an SME. To understand these organizing actions both those actions within the bank, the SME, and between the two, should be taken into account. We focus on the external organizing actions between the two parties in their attempt to coordinate actions.

The overall argument under consideration in the thesis is as follows. We want to investigate how the inclusion of different types of rationality will modify our understanding of agency costs. In order to do so we must, firstly, know the fundamental structure of the lending situation and what "outside" influences has an effect on this structure. Secondly we must conceptualize different types of rationality. Thirdly, we must analyse the viability of these kinds of rationality in the relationship which we want to investigate. Fourthly, we have to analyse how one may perceive agency costs if one includes differentiated types of rationality in the motivation for action and what we empirical phenomena we should expect to see.

The assignment is structured into seven chapters. In chapter one and two, we investigate the background information relevant to the issue at hand. In chapter one it is argued that two different types of information are used in commercial lending. The use of the two different types of information within the relationship, between a bank and a SME, suggest that different aspects of rationality is to be considered. It is also investigated what environmental elements has an effect on the credit availability and the viability of different lending structures based on the framework developed by Berger and Udell. This provides an understanding for some of the work which has already been made to understand how the relationship between the SME and the bank unfolds. Additionally, the framework provides for some cases which we will utilize in our analysis in order to develop our hypothesis.

In chapter two, a framework of different conceptualizations of rationality is proposed. This framework is based on the work by Barbara Townley (2008) where she identifies two main traditions of rationality, namely the embedded and disembedded, she further subdivide these two main tradition into three subcategories for each major tradition. The three

subcategories for the disembedded tradition is economic-, bureaucratic-, and technocratic rationality. The three subcategories for the embedded tradition is institutional-, contextual-, and situational rationality.

In chapter three and four we present our analysis. In chapter three, it is show how rationality can provide for an analysis and an understanding of what soft and hard information can provide of interpretations to the parties engaged in a commercial lending relation. The purpose of this exercise is to show what type of reasoning is allowed by what kind of information.

In chapter four, we begin with a presentation of the essential history of agency theory which shows the broader tradition in which the conceptualization of agency costs has been developed. This is followed by a presentation of agency costs both in general terms and more specifically in debt relationships, based on Jensen and Meckling (1976) work. According to agency theory motivation for action is based on self-interested behavior in economic terms (Jensen & Meckling, 1976). Investigations into rationality from organizational theory show that economical considerations are not the only influence on actor's reasoning. We propose that an expansion of the conceptualization of motivation and interpretation of actors in principal-agent relationships can include different types of rationality and that it will broaden our understanding of agency costs. Broadening the scope of motivation has been proposed before one example is Bosse and Phillips (2016) who propose that we should understand agents' behavior from the perspective of bounded self-interest. Thus our work is related to this line of research (e.g. Bosse and Phillips, 2016) which seeks to enhance the conceptualization of how actors act in agency theory. In the final part of chapter four, we take two elements of Berger and Udell's (2006) analysis of the influence of the type of financial institution on SME lending. We analyse the impact it has on their arguments on large versus small institutions and foreign versus domestic institutions. Based on the analysis we propose four hypothesise: (1) distance is positively correlated with the costs of producing soft information and monitoring based on soft, thus distance between an owner-manager and the loan officer is negatively correlated to the use of soft information; (2) foreign organizations are less likely to conduct its business based on soft information; (3) financially opaque firms should prefer lending based on soft information; and (4) financially transparent firms should prefer lending based on hard information.

In chapter five, based on the analysis, we then discuss our findings in regards to literature on the subject. There is a discussion of other conceptualizations of rationality, of some assumptions about human nature, and of the consequences of the analysis.

In chapter six, we discuss some methodological considerations concerning the theories we have used.

Chapter seven includes our concluding remarks and recommendations for future research.

Chapter 1: What Constitutes the Creditor-Borrower Relationship?

Before we begin developing our framework we will shortly introduce the foundational concepts of the relationship between the bank and its commercial customer. We will show how information plays a central role in constituting the lender-borrower relationship. This allows us to contextualize what components of the relationship are important and how they affect the lending process.

Why is SME Lending an Area of Interest?

According to Adrian Cudby (2019) the basics of commercial lending are based on the supply and demand for capital. Friends, family or angel investors amongst others, provide the initial capital in excess of the entrepreneur's own savings. The next step, in order to satisfy capital requirements, will often be to contact a bank in order to provide more capital. Banks provide a service which is access to capital. In countries where the financial structure does not provide for a wide array of alternatives to bank loans, small and medium size business relies on banks in order to access the capital needed to fuel their expansion, competitiveness and development (OECD, 2018;. In the EU 98,8 % of all companies qualify as SMEs, they generate 60% of all privately generated value and they employ 93 million workers (Nouy, 2018). It is therefore paramount that the access to capital does not become a bottleneck that hinders SME growth and thereby competition.

The creditor-debtor relationship between banks and SMEs is a relationship that has been interpreted in economic scholarship, mainly from the perspective of the bank, we will go further into this in the next chapter. In order to provide some context a description of the

circumstances surrounding the lending relationship and why it is important is perhaps in order.

The European Commision defines SMEs as having no more than 250 employees, a turnover of no more than €50 million or a balance sheet total of no more than €43 million (ecb.europa.eu, 2019). In Denmark the definition of SMEs rely on the European Commission definition (ufm.dk, 2019). With this taken into consideration it must be mentioned, that while some banks offer access to most of their financial services to all customers, some SMEs do not fulfil the requirements to be accepted as a commercial customer and hence only has access to the same services as private customers (Cudby, 2019; Jyskebank.dk[1]). Furthermore, the ownership and legal registration puts some limits on the SME that must be considered by the bank when assessing the loan application (Cudby, 2019). Each legal category of company types limits the extent to which the lender can make the owners-/shareholder-borrower liable to repay a given loan. This must be taken into account on the individual loan in order to assess the risk involved.

From the handbook *Sådan forhandler du med din bank*[2] on how an SME should behave in order to achieve a reasonable lending contract and thereby access to capital (FSR – Danske Revisorer et al., 2018). The co-authors of this report represent both sides of the relationship of interest: both that of the SME and the Bank. The organizations behind are three lobbying organisations. Finans Danmark represents the banking sector in Denmark, thus they represent the bank side of the relationship and SMVdanmark, who represent danish SMEs, represents the SME side. Finally FSR – danske revisorer represents auditors and accountants. The latter is likely included as they are often involved to ensure an unbiased review of borrowers finances as a prerequisite for lending.

Banks are the main providers of credit for SMEs in Europe and much of the world (European Central Bank, 2019; OECD, 2019; FSR – Danske Revisorer et al., 2018; Nassr et al. 2014) and it is therefore vital, for the SME, that the relationship to a potential credit-issuer (i.e. a bank) is as good and transparent as possible. In order to develop this relationship, they encourage the SME managers and owners to engage in a good, trusting and professional relationship with their loan officer. By engaging in close collaboration with the loan officer,

[1] For an example see https://www.jyskebank.dk/erhverv/skift-bank – Jyske Bank does not engage with IVS-type companies

[2] Written by FinansDanmark in collaboration with SMVdanmark and FSR – Danske Revisorer.

the SME manager is better able to assess what services the loan officer and bank can provide. SMVdanmark suggests that the borrower chooses a lender with the best possible professional pairing of overall resources (e.g. knowledge of the local area, industry etc.), not only financial ones (FSR – Danske Revisorer et al. 2018: p. 12).

Regarding what the SME client should and can expect when choosing a bank, they list the following:

> *It should offer good "Bank products", have competent employees that provides advice to [the client's] benefit, offer competitive interest rates, operate with competitive fees, have stable/foreseeable charges, have knowledge of [the client's] industry and local environment, be reasonable when asking for security, be able to express themselves clearly, showing flexibility and not be hindered by bureaucracy, be fast at decision making and facilitate contact to higher-ups, actively following up on leads and show initiative, confirm significant agreements in writing, apply a given service according to customer needs, not the opposite, offer a recurrent loan officer, understand export needs, cover all financing requirements of the client* (FSR – Danske Revisorer et.al. 2018: p. 39-40, our own translation).

These expectations for the banks are twofold, the banks' customers should expect fair prices and good, transparent communication. Both of these aspects are fundamentally related to information transfer. And also related to how "proper" banking should be conducted. Furthermore, the above is an ideal, which may not be observable in any given lender.[3] The above quote can be seen as an indicator of the needs of SMEs when considering a lender. They are both reliant on access to capital, but also the access to networks and knowledge. Based on the above quote and the report in general (FSR – Danske Revisorer, 2018) the whole relationship seems to be constituted by two things: the transfer of capital and the transfer of information.

The above serves to line up the roles of the bank and the client in the creditor-debtor relationship and in this relationship information is at the center. The bank requires information about the SME, in order to evaluate, e.g. the riskiness of the business, which can include financial and non-financial elements. Likewise the company should require information about prices and the nature of the future relationship. In addition to this information transfer, between the two collaborators, there should also be expectations from

[3] Lender is always the bondholder i.e. the bank in this thesis.

each participator towards the other, and above we have outlined some reasonable expectations. We will not go further into these expectations as they are sufficiently presented as is, but instead focus on the informational aspect of the relationship. In order to further understand the nature of the information transfer, the following part of the thesis is dedicated to explore what types of information, the lending technologies, and the effects of these which the bank must consider when extending a loan to a company.

In the table below we presents the elements of our conceptualization of the relationship between the bank and a loan taking SME. The next section is structured according to the categories. The figure acts as an overview for the reader.

Table 1	Relational lending technologies	Transactional lending
What kind of information	Soft (contextual, personal, text etc.) E.g. corporate strategy. Subjective. Harder to quantify.	Hard (decontextualized, objective, numerical etc.) E.g. accounting numbers and credit history. Objective – de-subjectivized through quantification.
Data collection	In person, proprietary to the loan officer – increases over time. Hard to convey through hierarchical organizations (size matters).	Can be done electronically (i.e. it can be done remotely) – often based on a mix of private and public information. Credit bureaus are a possible source of data. Easy to convey.
Institutions, infrastructure, and technologies	Small banks, efficiency gains from proximity. Affected by institutional environment. Affected by culture.	Big banks, not affected by distance. Affected by institutional environment. Theoretically not affected by culture. It can be provided through a multiplicity of technologies such as asset based lending and leasing.

Who	SMEs (theoretically they would be engaged with smaller banks). Opaque SMEs have better access to credit when this lending technology is present.	Big companies (theoretically they would be engaged with bigger banks). Transparent SME have better access to credit using this lending technology.

What Kind of Information is Present in Creditor-Debtor Relationships

Inspired by the existing literature (Uzzi and Lancaster, 2003; Berger and Udell, 2006; Udell, 2006) we wish to conceptualize the relationship between creditor and debtor based on the type of information which is used for assessing potential commercial loans. Berger and Udell (2006) identify two overall categories of lending technologies: transactional lending and relationship lending. These categories differ in that the prior depends on hard information – quantitative data – while the latter depends on soft information, often in the nature of subjective, proprietary information gathered by loan agents over time. These two categories will form the basic structure of our framework.

In this chapter we seek to investigate how these two categories, in tandem with different financial structures, affect credit availability for SMEs. We outline some of the important factors influencing this relation and how these factors influence the general level of credit availability. Because of (1) these elements has an effect credit-availability and an effect on the viability of different types of relationships, between the bank and the loan seeking business, and (2) because credit-availability and the type of relationship incentivises SME organizational structures and management choice, broadly speaking, and (3) we return to some of the issues presented by Berger and Udell in order to analyse how agency costs, from the perspective of multiple rationalities, will influence these issues.

Below an outline of the nature of soft- and hard-information is presented. Based on this outline there is an elaboration on how soft- and hard-information is used in the framework proposed by Berger and Udell (2006).

Hard and Soft Information

B. Uzzi and R. Lancaster (2003) differentiates between public- and private information. Public information is "hard", it is standardized and verified by external auditors, although there can be cases where external verification is not legally required. Private information is "soft", it is not publicly available and it is not verifiable, two examples provided by Uzzi and Lancaster (2003) is company strategy and supplier dependencies. J.M. Liberti and M.A. Petersen (2018) has made a more thorough study of the development of the dichotomy between hard and soft information – in this regard it is important to notice that they argue that there's no clear cut dichotomy rather it is a continuum, although they proceed to identify how we can differentiate the two. They argue that soft information is often written in text, contextual and often collected by the same person who makes the decisions (Liberti and Petersen, 2018: p. 3-7). They further argue that hard information is often numerical data, context independent and the data collector and the decision maker is often not the same person (Liberti and Petersen, 2018: p. 3-7).

One example of how soft information can be used in creditworthiness assessment can be found in Chen et al. (2013). Chen et al. tests, in Taiwan, a home-market lender who use soft information to assess and adjust the creditworthiness of potential borrowers. The exact size of the bank is unreported but the bank has at least issued 2,682 commercial loans which indicates, that it is not a small financial institution. Later we will go into the effect of the size of the financial institution on the viability of relational- and transaction-lending. The Taiwanese lender allows for some autonomy for the individual loan officer in adjusting the hard information based credit-score using soft information, thereby achieving greater accuracy in the overall assessment (Chen et al. 2013). They give one example:

> *The loan officers' judgment on a borrower's leverage ratios can be important. For example, if a borrowing firm has low leverage ratios, this may be interpreted as meaning that it is conservative on capital structure decisions, and so is unlikely to default. However, there is another possibility: the firm is so weak that no creditor would like to lend to it. If the loan officer feels that this is the case, he or she will adjust the borrower's scores for leverage ratios downward.* (Chen et al. 2013: p. 123)

Here we can see that even a hard financial information such as capital structure can have a soft element to it (see also Grunert et al. 2005).

Chen et al. gives a list of which factors the loan officers evaluate when using soft information to adjust the credit-scoring, thereby giving a glimpse of how soft information, which by nature is qualitative and "[...] not readily transferable, verifiable, or interpretable [...]" (Agarwal and Hauswald, 2010, p. 1), is used, and how it is used in relation to hard information. This list contains elements such as employee satisfaction and loyalty which Chen et al. shows is significant in predicting default rates but not in predicting interest rates.[4] The data collection methods of the loan officer when he collects soft-information, in this Taiwanese company, is based on:

> *The loan officer's information sources include the opinions of industry experts, news updates about the borrower after the most recent financial statements are issued, and interviews with the borrowing firm's managers, suppliers, customers, and competitors.* (Chen et al. 2013, p. 118)

We note that in this case the soft information is not only obtained within a direct information channel between the bank and its customer, the loan officer is able to expand his horizon of information gathering beyond what his customer may choose to tell him. Lastly we note two things, firstly Chen et al. notes that this is also a case of how loan officers' soft information knowledge may not be obsolete even when hard information is available (Chen et al. 2013), and secondly they conclude that in their study soft information has significant predictive power in regards to default rates and contractual terms (loan rate).

What Affects SME Credit Availability?

We present the framework developed by Berger and Udell (2006) in order to understand which factors that matter for the viability of different types of lending we investigate, conceptualized according to the information type that informs them. In chapter four some of the analysis and arguments in Berger and Udell will be used to analyse how rationality may be included in that kind of work. Berger and Udell (2006) develops a framework to

[4] All the non-financial soft information categories are as follows: Employee, Leadership, Regulation, Macro factors, Competitiveness, Quality, Customer, Marketing, Public Praise. Explanations of these categories can be found in Appendix 1 of Chen et al., 2013, p. 129-131.

understand the availability of external finance to SMEs. Their framework is supposed to replace the implied framework of the existing literature on this issue which, they argue, simplifies the connection between information processing and lending technologies. This oversimplification regards the notion that transaction-based lending technologies is targeting informationally transparent SMEs whilst relationship-based lending is targeting informationally opaque SMEs. Berger and Udell specifies their framework as follows:

> *Our framework specifies a causal chain from government policies to a nation's financial institution structure and lending infrastructure. These financial structures, in turn, significantly affect the availability of funds to SMEs by determining the feasibility and profitability with which different lending technologies may be deployed.* (Berger and Udell, 2006: p. 2946)

We are interested in the last part of this chain. We are, as mentioned earlier, interested in developing a framework which can help us understand how the relationship between bank and debtor is affected by different ways of rationalization. For this reason we are interested in how institutional structures affect lending and how lending infrastructures influence this relationship as we assume that the environment of the relationship between debtor and creditor is influential on the relationship in some cases. We are not interested governmental policies as we assume they only indirectly influences the relationship and neither will we investigate the legal environment in any detail.

Berger and Udell identify four categories that affect the financial institution structure and lending technology choice in a market (the market is often nationally delimited), these are: the influence of the size of the institution, domestically-/foreign-ownership, privately-/publicly-owned, and market competition. Below there is a presentation of the transaction-based lending technologies mentioned in Berger and Udell 2006, and a description of these factors including some empirical evidence which has emerged since the framework was developed.

Transaction-Based Lending Technologies

When banks lend money to borrowers they deploy a variety of lending methods, based on risk and the available information. This is constituting for how the relationship between bank

and borrower transpires. Lending technologies are often limited by the legal environment and the availability of information as they are differentiated in how they counter risk.

Transaction-based lending is identified as six different technologies, the first being financial statement lending (Berger and Udell, 2006). This type of lending is based off the financial statement of the borrower, often done by an independent auditor. A requirement that can make credit access difficult for opaque SMEs.

The second is small business credit scoring where the credit-score is based off the owner's personal consumer data from credit bureaus and afterwards calculated into the credit-score.

The third, asset based lending consist of collateralization of assets that are primarily secured by accounts receivable and inventory, valuated on an ongoing basis to ensure that the value of the collateral exceeds the credit exposure.

Fourth type is factoring, whereby the lender purchases accounts receivable – the account then acts as the underlying asset securitizing the loan. This is based off the value of borrower's accounts receivable – the obligor, the one who owes the accounts receivable to the borrower, becomes the guarantor of the loan.

Fifth is fixed asset lending which is lending with collateralization of fixed assets which often consists of non-perishable goods or goods that lose little value over time. Often the value assessment of the underlying asset is based on market value and a amortization contract is written, whereby interest payments work as the primary monitoring system.

The sixth lending technology is leasing, whereby the lessor purchases the fixed asset and the lessee then promptly rents it off him/her. The underlying asset provides the hard information and the collateral, countering adverse selection.[5]

All of the above transaction based lending technologies are dependent on standardization of information in order to work. In order to operate under expectations, the loan officer must assume that the hard information he/she is using to calculate loan rate, collateral, time to maturity, and risk he/she is very dependent on the availability of data. This is why the bank requires applicants to undergo external revision, often with a well established firm, in order to ensure credibility, transparency and minimize any information asymmetries. This has predominantly been included to see the types of lending that exists, how it is

[5] for examples of information asymmetry and adverse selection in leasing see Chemmanur and Yan, 2010

envisioned, and why hard information can be considered the predominant way of informing banks on how to assess SME loan applications in markets dominated by bigger banks (Uchida et al., 2012).

Effects of Size of Financial Institutions

Berger and Udell (2006) cannot find empirical evidence on whether financial institutional structures, dominated by large or small lenders, affect credit availability for SMEs. The World Bank has conducted a study of SMEs and banking in Latin America, they find that SME financing relies on a variety of bank types and technologies, thus they conclude that SME finance does not depend on small or niche banks (Torre et al., 2008). One example of counterevidence can be found in a report by Cevea, Finansforbundet, and Lokale Pengeinstitutter (2016)[6] who conclude that local banks are important to growth in provincial areas.

While the size of the financial institutions may not affect overall credit availability to SMEs, it does, at least theoretically, affect the viability and availability of lending technologies. One theoretical argument is that larger organizations should be more exposed to suffer from agency problems, if using soft information, due to the proprietary nature of loan officer knowledge because there is often a greater distance between managers and loan officers (Berger and Frame, 2007). Hence, it is perceived as safer, due to the verifiability of hard information, to lend using transaction lending technologies, when the proper financial information is available (Grunert et al., 2005; Berger and Udell, 2006; Berger and Frame, 2007). When financial actors cannot rely on financial statements they can alternatively rely on credit bureaus, public and private in order to deploy transaction lending. That is, when large lenders cannot find hard information through their usual sources they can seek this information elsewhere. Relying on credit bureaus requires specific infrastructure elements and therefore it is not necessarily present in all economies, this is a similar case to "small business scoring" which Udell notes as being not universally available because this is a technology relying on a big and mature economy (Udell, 2008). All together one may note that it is possible for banks – and sometimes they do utilize this possibility – to seek hard

[6] Cevea is a think-tank, Finansforbundet is a lobbying organization for the danish banking industry and Lokale Pengeinstitutter is an organization for local banks.

information from "alternative" resources whenever they can not acquire it through the normal channels.

Based on Stein's (2002) analysis of how organizational design influences information production and capital allocation Berger and Udell (2006) argue that we could expect large banks to have a disadvantage in handling soft information (see also Uchida et al. 2012). According to Stein (2002) one example could be that for an individual loan officer in a large bank the difficulty of conveying soft information internally limits the deployment of relationship lending. One argument against the importance of this effect is that small lenders, who use relationship lending, will then enter the market or increase their market share to provide for SMEs who prefers relationship lending – simply because relationship lending is a more viable option to many opaque SMEs (Uchida et al. 2012). The arguments represented in this paragraph are analogous to a factor which is mentioned in the handbook referenced earlier (FSR – Danske Revisorer et al. 2018). Uchida et al. (2012) argue that the bank officer is typically not the decision maker and one factor of the relationship then becomes the "distance"[7] between the bank officer and his superior. The SME representative should preferably give the bank officer facts and documentation which the bank officer can use, when he has to convince the decision maker (FSR – Danske Revisorer et al. 2018). From our point of view this strengthens the importance of Stein's theory, although the danish handbook does not specify with regards to the size of the financial institution.

Another argument which supports that small lenders are better suited for relationship-based lending due to proximity is presented by Agarwal and Hauswald (2010). According to Agarwal and Hauswald (2010) small lenders are often situated in closer proximity to their borrowers. Proximity to borrower allows for better information gathering and better predictions based on proprietary information by loan officers. The study by Agarwal and Hauswald (2010), based on US data, shows that distance has an effect on the relationship as there is a higher tendency for the bank to benefit from adverse-selection when engaging with borrowers in close proximity, due to better access to information. Agarwal and Hauswald (2010) finds SMEs shows a preference for lenders that are in close proximity to them. The study finds negative correlation between distance and the loan rate for accepted loan offers. According to the authors, one explanation could be that proximity is associated

[7] The reason for the quotation mark is that distance here can be both geographical and in the social/work hierarchy.

with increased levels of soft-information which enables the banks to enjoy abnormal returns due to adverse selection. According to Agarwal and Hauswald (2010), soft information efficiency is inversely proportional to distance to borrower. The paper concludes that there are significantly lower default rates among SMEs who are granted credit based on soft information (Agarwal and Hauswald, 2010). This argument is backed by another study by Chen et al. (2013) who tested the hypothesis in Taiwan, while also disseminating the types of information and their effect on estimating creditworthiness of SMEs.

Thus, the empirical results show that credit availability for SMEs is not necessarily affected by the presence of either big or small banks. However, there are sound theoretical arguments that the viability of different lending technologies may be affected by the size of the financial institution.

Institutions, Competition, and Infrastructure

The origin of the institution, foreign or domestic, matters. Berger and Udell report on a number of empirical studies and finds that foreign institutions may have a comparative advantage in transaction lending, they may favor large corporations over SMEs and they may be comparatively disadvantaged in relationship lending (Berger and Udell, 2006: p. 2953-2954). Berger and Frame (2007) suggest bigger banks, such as the ones operating internationally, incur agency problems and increased information costs due williamson type diseconomies of scale[8] when engaging in some types of relationship lending with SMEs, therefore often preferring to engage in transaction based lending over longer distances (Berger and Frame, 2007; Agarwal and Hauswald 2010). Cultural and historical context matters when entering new markets, setting limitations to lending technologies due to legal, cultural or historical differences between the foreign bank and the locals (Stultz and Williamson, 2002).

Market competition may have an effect on the viability of transaction- and/or relationship-based lending, however, there's not agreement theoretically on the empirical predictions relating to market competition and the effect on lending technologies. Berger and Udell (2006) takes the point of view of two different economic theories and shows that they have different predictions of what will happen. The structure-conduct-performance hypothesis predicts that: "Institutions with more market power may charge high rates or fees

[8] For further explanation see Williamson, 1975.

on loans; have tight credit standards; and/or be less aggressive in finding or serving creditworthy SMEs so managers can take advantage of a ‘‘quiet life.’’ (Berger and Udell, 2006: p. 2955). This could disadvantage opaque SMEs who would prefer relationship-based lending.

In their 2006 paper, Berger and Udell found mixed evidence from empirical studies and mentions the lack of research on the effects of relationship- and transaction-based lending. While Grunert et al. (2005) found that soft information could be used for more accurate default-risk assessment by German banks, the overall observation of Berger and Udell is correct insofar that the interest for soft information, and hence relationship lending, has not grown until recent years. Agarwal and Hauswald (2010) finds that distance is inversely correlated with the efficient use of soft information in credit-scoring, while Berger et al. (2011) finds that while community banks do not refrain from credit-scoring, they do engage in relationship lending to a larger degree than bigger commercial banks. Uchida et al. (2012) finds that loan officers in smaller banks produce more soft information and smaller banks are empirically more prone to engage in relationship lending. In Taiwan Chen et al. (2013) finds that soft information can affect the success-rate of default-risk and the correct soft information can lower interest rates. In China, Song et al. (2015) finds that there are no difference in regards to bank size being correlated with the ability to engage borrowers as customers and the size of the bank. However, they also find that without pre-existing relationships, neither big or small banks have significant advantage in providing credit to the SME community, thereby suggesting that market size might only give rise to benefits regarding transaction lending due to economies of scale (Berger and Udell, 2006; Berger and Frame, 2007; Chen et al., 2013).[9]

Berger and Udell identify the lending infrastructure as encompassing: “(...) the information environment, the legal, judicial and bankruptcy environments, the social environment, and the tax and regulatory environments.” (Berger and Udell, 2006: p. 2956). Berger and Udell links infrastructure factors to SME credit availability. Each of the factors they propose as important is linked with empirical evidence of that specific element, however, the combination of these elements are not empirically backed. A.M. Mc Namara, P.

[9] Other issues regarding the overall field is that the data analyzed predominantly are based off a single study from 1998 by the Federal Reserve Bank of Atlanta (Berger et al., 2011, Frame et al., 2001). As a consequence, findings are quite harmonious – this critique is also set forth by Berger et al., 2011.

Murro and S. O'Donohoe (2017) has made an empirical study of how infrastructure affect SME lending and institutions ability to offer credit to SMEs based on the framework of Berger and Udell (2006). They also review some earlier empirical studies but they argue that these studies are "(...) confined to either indirect effects or to a limited set of institutional factors." (Mc Namara et al.. 2017: p. 122). Mc Namara et al. wants to deliver a more holistic study. They find that, controlling for country-specific factors, bankruptcy and regulatory environment matter. Furthermore if controlling is omitted then "(...) more lending infrastructure environments appear important, in addition to the bankruptcy and regulatory environments, namely the information, legal and judicial environments." (Mc Namara et al., 2017: p. 130). Mc Namara et al.'s study then supports Berger and Udell's framework on the importance of infrastructure in SME lending but it does not help us know which infrastructure factors are important for each of the categories of relationship- and transaction lending.

Concluding Remarks on Conditions that may Affect SME Lending

Overall, the theory of Berger and Udell (2006), and much of the literature on SME lending in the present thesis points towards a definite distinction between the type of information that informs bank lending. Hard information is that which may normally be identified with quantitative economics. Disconnected from context, it provides for excellent comparison of borrowers across different circumstances. It allows for standardization and control. To produce hard information that is useful, standardized procedures are necessary, the bank must have access to resources and processes that can analyse the data, and finally it must ensure a standard of interpretation regardless of who acts on it. It is therefore well suited to larger organizations that operate over great distances. Hard information depends on infrastructure to function, to be verifiable and standardized in its attempt to become objective. In the interpretation of it, it's calculability and refusal of that which cannot be measured makes it a way of countering uncertainty.

Soft information is not easily communicated, not easily standardized, and rarely is it obtainable at larger distances. Soft information is in many ways the antithesis to hard information. It is proprietary in nature. The loan officer who amasses and interprets the soft information will find that it is hard to transfer. His/her knowledge of local circumstance creates great advantage, but also provides a problem for employers, as he thereby gains

enough proprietary information to significantly increase compensation due to information asymmetry advantages. For the SME the loan officer who accepts soft information and uses it for adjustment of the credit-scoring process proprietary information is a necessity. The knowledge of local circumstance becomes an advantage, as it allows for understanding the borrowers situation beyond that which is described through hard information. It allows the loan officer to access alternative information that might affect the borrowers credit scoring or default risk.

Finally, size and information type is theoretically interconnected, as bigger banks often have to provide legitimate reasoning far beyond the initial loan officer or his immediate superiors. Information must therefore be made transferable through transformation by ways such as credit-scoring. It is only the local score that can be affected, thereby only allowing soft information to adjust the credit-score or terms of transaction-lending. We therefore, just as Berger and Udell (2011), assume that the bigger the organization, and the further away from the borrower, the less applicable soft information will be.

Chapter 2: Different Conceptualizations of Rationality in Organizations

Based on the the conceptualization of the relationship between the bank and the debtor company, we will now go through several perspectives on rationality from the perspective of individual rationality and organizational influences on this rationality. What we want to do in this chapter is to understand some different types of rationality in order to understand how they may have an effect on commercial lending in the context of agency theory. To do this we use the work of Barbara Townley (2008) which investigates the use of rationality within organization studies. Townley identifies two dominant traditions within this literature, they are the disembedded and the embedded approach − both are further subdivided – each tradition contain different motives and modes of reasoning. In this thesis we will perceive of the participants in the relationship between the bank and the loan-taking company as either embedded or disembedded in regards to how they treat information and rationality. We recognize that no individual nor any organizing action is either/or embedded/disembedded, rather any individual is both influenced by the one and the other.

Townley perceives of the disembedded individual as a socially productive fiction, this subject which is entirely emancipated from his embedded and embodied situatedness is unreal. Yet the fiction persists as it orders science and thus social action, therefore we do not argue that anyone is acting only in a disembedded sphere, yet the disembedded rationalities do influence behavior and for this reason it is important to also know about them.

Townley's work also includes analysis of embodied- and practical rationality, we do not include these types of rationality in our framework. Firstly, because these are more niche conceptualizations compared to embedded and disembedded and, secondly, because they are not as clearly presented by Townley as the two other, perhaps because there are less research on these factors.

Because our framework is constructed to include rationality into the analysis of the relationship between the bank and the loan-taking company then we must conceptualize these rationalities, thus we present the conceptualization of rationality in our framework. The information shown below is supposed to answer two questions: when does a particular category of rationality work and how does it work. This will give an idea of the probable existence of a particular rationality in the particular situation of our interest.

This part of the thesis will proceed as follows. The disembedded tradition and the three subgroups within the disembedded framework are outlined, these subcategories are economic-, bureaucratic- and technocratic rationality, and it is explained how they each relate to the specific elements of the relationship between bank and creditor. Then a combined category of all three subcategories under the heading of disembedded rationality is constructed.

Further, the essential elements of embedded rationality are described. Like disembedded rationality, embedded rationality has three subcategories, these subcategories are institutional-, contextual-, and situational-rationality.

Finally the two types of overall rationalities are compared in order to provide a framework to identify where and how coordination breaks down between two parties. These two parties and their relation is that of a bank and an SME borrower – the aforementioned creditor-debtor relationship.

Disembedded rationality

According to Townley (2008) the disembeddedness of rationality, or even the very idea of rationality, is an enlightenment idea. She traces rationality to Descartes and Kant − or to the ideas, respectively, of Descartes' mind/body split and Kant's universalism − both thinkers has the idea that "reality operates according to universal laws generalizable over time and place, (...)" (Townley, 2008: p. 22). Generalizability over time and place is fundamental to disembedded rationality.

This type of rationality was influential in academics where rationality was highly abstract and it was supposed to offer a way to order thinking, this conceptualization led to "general solutions to universal problems" (Townley, 2008: p. 22-23). When rationalizing in this disembedded fashion one will have to decontextualize the problems. For academics this was not necessarily a problem as they were not interested in specific solutions, instead they were looking for general solutions. Furthermore, within this disembedded rationality approach, rationality is viewed as being already available to the individual, before any social relationship, i.e. we are able to reason no matter our social reality (Townley, 2008: p. 24). This element of abstraction from reality and specifics is another fundamental element of disembedded rationality.

The disembedded approach is analogous to what happens to information, or knowledge, when banks issue commercial loans. We have shown that in soft information, the contextual reality of the information is essential, whereas, when banks use hard information the information is typically decontextualized.

As mentioned above Townley identifies three types of disembedded rationalities in organizational research: economic, bureaucratic and technocratic. Below they are presented in the order listed.

Economic Rationality

Townley's analysis of rationality in economic organizational studies reveals a rationality based on evaluation of actions. For action to be reasonable it must be "purposeful or intentional", there must be reasons for actions, and these reasons must "cause the action in the intended way" (Townley, 2008: p. 27-28). Economics evaluate different means to achieve the same goal with regard to the efficiency of fulfilling the agents self-interest. Within this type of rationalizing, the individual has beliefs and expectations but these are not the object

of evaluation within this tradition (Townley, 2008: p. 28). In addition to having beliefs and expectations the individual also has other attributes; The individual is also attributed with stable preferences and calculativeness. On this basis rational choice theory aims at maximizing the preferences of the individual (Townley, 2008: p. 28).

A feature of disembedded rationality is, as mentioned above, decontextualization. Within the economic rationality there are also elements of human action which are excluded from the analysis. One thing that economic analysis rarely takes into account is social interaction, Townley notes that it is only in game theory that social interaction "explicitly" affect the analysis (2008: p. 30). In addition to the exclusion of social interaction, this tradition also excludes personal development, in the sense that stable preferences are assumed, the individual is not allowed to develop his tastes. According to Townley one counter-argument from economists is that they include some of these elements on aggregate level, e.g. on the aggregate level a change in one person's preferences over time is irrelevant if it is ineffectual on the aggregate outcome.

The organizational models that are developed within the economic point-of-view are centered around two themes firstly, the collective is anthropomorphized, and secondly, the organizations are construed of means-end relationships (Townley, 2008). The anthropomorphization of the organization means that economists tend to reduce the organization to an individual acting in very human ways. The means-end relationships simply means that an organization is sometimes analyzed as a string of means and ends (Townley, 2008). One example could be: if a company wants to produce bottled water then it would set up a list of means to enable production. An organizational unit would then take one of these means as the end-goal of the unit. The unit would again create a list of means to achieve its specific ends, and so it will continue until the entire organization is included.

A modification of the economic rationality is the criticism of man's ability to reason. H. E. Simon and his behavioral insights constitute a new movement within the tradition of economic rationality (Townley, 2008: p. 34). He is attempting to bring some insights from real-world problem solving into the economic discipline. E.g. he recognize that we must consider that a part of the environment of the decision is biologically internal (Simon, 1955: p. 101). The limitations of man, and what hinders the rationality of homo oeconomicus, is not only imposed by external conditioning but is part of humanity itself. One such element could be finite computational powers of the human brain. This is the fundamental idea to behavioral

rationality. Simon notes that his theory is important to both normative and descriptive endeavours as neither can ignore actual decision-making (Simon, 1955: p. 101). Thus Simon broadens the scope of rationality, in his theory rationality depend on the human condition in contrast to the rather unconditioned "global" (from here on "universal") approach (Simon, 1955: p. 112). Though it is possible to argue that this approach does not fundamentally disagree with universal rationality but rather it ratifies it (Thaning, working paper), J.G. March (1978) views the intent of Simon's article (1955) as:

> *It started from the proposition that all intendedly rational behavior is behavior within constraints. Simon added the idea that the list of technical constraints on choice should include some properties of human beings as processors of information and as problem solvers.* (March, 1978: p. 590)

Thus the intent is not to alter the very notion of rationality but to investigate the constraints under which it is applied. Although this may be true March notes, that what has followed Simon's work could transform the very notion of rationality (March, 1978: p. 591).

Unsurprisingly Simon is also critical of the organizational impact of the theoretical concept of "economic man", which he argues, makes economics underestimate the importance of internal structures in organizations and makes economists reduce reality (Simon, 1955: p. 114).

Other than reducing reality the tradition of disembedded rationality also has other issues. Townley references March (1978) to show that these theories of global/universal/disembedded rationality rely on guesses about future outcomes of present decisions and about future preferences. We can add that March says, with reference to the relevant literature, that the guesses, about future outcomes of present decisions and about future preferences, are not easy to make and we often make errors in these efforts (March, 1978: p. 589).

Another influential element on the economic rationality, according to Townley, is the utilitarian influence. Townley presents one interpretation, of the fundamental importance of the concept of utility. This interpretation has the following basic outline: understanding utility is paramount if one conceptualize the individual as maximizing consumption of particular goods (Townley, 2008: p. 39).

Developing this line of thought, Townley includes Granovetter's work from 1985. In this article Granovetter tries to communicate his position between two, from his point of view, extremes "... illustrated by a critique of Oliver Williamson's "Markets and Hierarchies" research program." (Granovetter, 1985: p. 481). These two extremes are the over-socialised and the under-socialised traditions of understanding human decision-making. He does deliver a strong narrative of the utilitarian influence on economics, he argues that economics continues the "utilitarian tradition" (Granovetter, 1985: p. 483). This tradition carries with it some strong assumptions, he mentions that: "Much of the utilitarian tradition, including classical and neoclassical economics, assumes rational, self-interested behavior affected minimally by social relations, (...)" (Granovetter, 1985: p. 481). Granovetter sets up two contrasting positions on how the individual is influenced in action: the embeddedness position[10] and the "new institutional economics" position. The embeddedness approach is based on the idea that pre-market societies were "non-economical" and that markets and the economy developed through time and became more and more autonomous and, then, recently economic reasoning has extended its influence into other spheres of society. On the other hand the new institutional economics approaches social institutions as products of economic interactions (Granovetter, 1985: p. 482). In Granovetter's analysis several arguments are proposed, one of them are that the classical and neo-classical concept of competitive markets actually needs to exclude social interaction in order to function (Granovetter, 1985: p. 484). A final note on Granovetter's 1985 article concerns his casual naming of Gary Becker as one economist who actually does study social relations. Granovetter then argues that Becker reduces social relationships and typifies them, i.e. individual specifics are not allowed to enter the analysis. This has the following consequence: "Because the analyzed set of individuals (...) is abstracted out of social context, it is atomized in its behavior from that of other groups and from the history of its own relations." (Granovetter, 1985: p. 487). Thus, from both Granovetter's and Townley's perspective economic rationality provides provides abstractions from specificity of circumstance.

Returning to the discussion on the influence of the utilitarian influence on the economic rationality we will now go further into the behavioral researchers. Both Simon (1986) and Kahneman & Tversky (1979) are critical of the usual conceptualization of utility in economics. Kahneman and Tversky propose prospect theory in their paper in 1979, in this

[10] When Granovetter uses the phrase embeddedness it is not identical to Townley's conceptualization.

theory they work on elements of utility theory which has been challenged in their research. E.g.:

> *The substitution axiom of utility theory asserts that if B is preferred to A, then any (probability) mixture (B, p) must be preferred to the mixture (A, p). Our subjects did not obey this axiom.* (Kahneman and Tversky, 1979: p. 266)

They mention the certainty effect as one element of this violation of the substitution axiom. The certainty effect is illustrated as the extraordinary effect of something being certain rather than being probable, i.e. there's an unequal effect of lowering a probability from 1,0 to 0,99 and lowering it from 0,5 to 0,49 (Kahneman and Tversky, 1979: p. 267). By doing so, they show that man, in reality, does not behave in accordance with the previous prescriptions of economic rationality: that man behaves according to utility maximization, stable preferences and full information.

Simon (1986) also delivers a critique of the utility theory of economics. He notes that economic rationality provides a narrow interpretation, arguing that most social sciences investigate the processes employed in rationalizing whereas economics evaluate outcomes of actions (Simon, 1986: p. S210). The main argument of Simon's 1986 article is that we should move from a substantial rationality to a procedural rationality i.e. we should move from the study of outcomes of decisions to the study of the process of decision-making. Furthermore, Simon shows that on some issues procedural theories have shown to be fairly accurate in predicting behavior, and they do this without assuming utility maximizing behavior. This is one part of his critique of classical and neo-classical economics. The other part is that economists tend to rely, without empirical support, on their auxiliary assumptions and they do not seem keen to test these assumptions. Thus his critique is twofold: (1) classical and neo-classical economics do not gain anything by assuming utility maximizing behavior and (2) they should empirically test their auxiliary assumptions.

Returning to prospect theory, Kahneman and Tversky's research on explaining behavioral anomalies provides further support of Simon's critique of utility theory. They describe their 1979 paper as follows: "The present paper describes several classes of choice problems in which preferences systematically violate the axioms of expected utility theory." (Kahneman and Tversky, 1979: p. 263). Dermott et.al. (2008) argues that prospect theory is

the “apex” of the development started by Simon. Which is arguably true, as they do not merely change the utility function − as Simon warns against (1986: p. S212) − they actually provide empirical tests for the utility function.

Yet prospect theory easily perceives the self-interested utility maximizer as the benchmark for evaluating rationality, i.e. any deviation from classical economic rationality is negative. In classical economic thought Townley notes that:

> *However, from the initial formulation of self-interest, as the driving force motivating behaviour of firms and consumers, is derived the extrapolation that there will be a collective benefit from individuals following their rational interests, the archetype of which is Smith's rational hand.* (Townley, 2008: p. 39)

Thus in the economic paradigme self-interested behavior becomes socially productive. Thus, it is possible to argue that behavioral anomalies are socially inefficient.

Finally Townley also touches upon the principal-agent problem, or the problem of how to make the agent act in the best interest of the principal. In her analysis she mainly concentrate her attention on Jensen and Meckling 1976. In this theory of agency costs, she argues, the individual is also seen as being self-interested and opportunistic, thus we can structure the setting of decision-making to form the decisions of the individual in the most optimal way (Townley, 2008: p. 40-41). Furthermore this way of analysing relationships We will go much further into this discussion and into the specifics of agency theory later, for now we will only bring this teaser.

Above we have outlined some of the fundamental elements of economic rationality. In conclusion: Human action is intentional (if it is to be rational); Utility theory and utilitarian philosophy has had an influence and there has been some critique thereof; Economic rationality includes a very specific notion of homo oeconomicus who is self-interested, opportunistic and utility-optimizing; There are both normative and positive theories (substantive/procedural) within the economic literature; Economic theory does not consider social interactions

Bureaucratic Rationality

Townley (2008) starts out by describing bureaucratic rationality as "that which allows things to be known." (Townley, 2008: p. 46). One important way in which it does this is through formalization. Another initial observation is that bureaucratic rationality is distinct from bureaucratic structure, Townley frames this in the following manner: "As such, bureaucratic rationality is the underlabourer allowing bureaucratic structures to function." (Townley, 2008: p. 46). Furthermore there's a connection between efficiency and rationality (within this line of thinking) − i.e. that bureaucracy was/is the most rational organization − although Townley notes that there has been some research pointing in a different direction (Townley, 2008: p. 48-49).

According to Townley there are certain elements of the Weberian understanding of the superiority of the bureaucratic organization, amongst these elements is predictable responses (Townley, 2008: p. 61). Predictability is a part of the working habits of the bureaucrat: "It [predictability] refers to the routines, procedures, roles, and rules that allow individuals to function or operate with a degree of certainty." (Townley, 2008: p. 62). It is predictability in an input-output relationship which is the matter under consideration i.e. we can predict how the bureaucracy will react (output) to a certain situation (input). In other words "[b]ureaucratic rationality is the means through which predictability is achieved." (Townley, 2008: p. 61).

Predictability is also an element in the creditor-debtor relationship. Hard information is supposed to come in a universalised form, i.e. it should be possible to evaluate financial information from any branch of a bank without examining the specific context in which this data emerged. For SMEs we can imagine this to pose a difficulty as they are usually opaque in the sense that they do not necessarily have any available information which can meaningfully be decontextualized (Berger and Udell, 2006).

Exactly how the elements of bureaucracy combines to enable predictability is unclear from Townley's text. She quotes one study by Ritzer (1996) on the McDonaldization of the world. McDonaldization is the combination of bureaucratic rationality and elements from the fast-food industry, such as incorporating the assembly line (Ritzer, 1996: p. 292). The strength of this article is its analysis of some concrete managerial elements which enable the rationalization to happen. E.g. he analysis how predictability is enabled by giving employees

scripts to talk from when approaching customers (Ritzer, 1996: p. 294). He identifies five main categories of McDonaldization which are: efficiency, calculability, predictability, control and irrationalities of rationalities (Ritzer, 1996: p. 294). Efficiency, calculability, predictability and control are all elements identified by Townley as part of the bureaucratic rationality; the "irrationalities of rationalities" is not explicitly touched upon by Townley and the control element might have developed a bit from the historical setting of M. Weber who is the main inspiration for Townley. Ritzer defines these elements of the McDonaldization in a clear and structured way, we will here give a summary of three of them:

- Efficiency: this covers the dedication to make production ever more efficient, and many things has been designed with the intent to make processes more efficient: "Overall, a variety of norms, rules, regulations, procedures and structures have been put in place in the fast-food restaurant in order to ensure that *both* employees and customers act in an efficient manner." (Ritzer, 1996: p. 293).
- Calculability: this refers to the measurement of everything. Anything which goes into the burger is finely measured "(...) often to the detriment of quality." (Ritzer, 1996: p. 293). It is not only measurement of food but also of the employee, e.g. through timing workers speed.
- Predictability: this refers to what the customer might expect when he enters a McDonald restaurant, and here the emphasis is on the customer being able to predict how the employee will act and what food he will get no matter where in the world the food is ordered (Ritzer, 1996: p. 294).

Aside from the above, the bureaucratic organization is also an impersonal structure in its very essence. This is what makes bureaucratic rationality a part of the disembedded tradition, it is the decontextualized way of organizational action which is the modus operandi, which we have already tried to show as one of the common traits of the disembedded tradition. Importantly this is not an argument for any normative value of the decision-making process in this type of organization – for some, perhaps, the argument of the efficiency of the bureaucracy is valuable in itself. Yet the direction or the goal of the organization has to be decided beyond the bureaucratic administration (Townley, 2008: p. 65). Townley mentions the danger of the rules becoming ends in themselves, distorting their original function.

Taking this conceptualization of bureaucratic rationality and commercial lending into consideration there are some immediate similarities. Collecting information in the

relationship between bank and customer contain elements of this bureaucratic rationality. The most obvious connection is between hard information and this type of reasoning. Hard information is impersonal, it can be done remotely (in some instances, there's not even a need for any social interaction) and it is quantifiable. One example could be small business credit scoring (SBCS), in Berger and Frame's 2007 paper they present a survey made by the federal reserve bank of Atlanta from 1998 on how banks used SBCS. In this survey 41.9% of respondents answered that they use SBCS to automatically accept or reject credit applications (Berger and Frame, 2007: p. 10). Furthermore, the deployment of hard information gathering must be standardized in order for quantifiable data to be comparable.

In summary bureaucratic rationality is about enabling knowledge creation, making processes predictable, avoiding arbitrariness, and making rules and routines.

Technocratic Rationality

Technocratic rationality is described by Townley as follows:

> *Technocratic denotes the application of technical means to areas as if cause and effect relationships are well established and technically rational action is possible. Technocratic rationality is the presumption or fabrication of means-end relationships.* (Townley, 2008: p. 66)

This aspect of rationality has a number of elements within its sphere of organizational influence.

There is contention within organizational studies on the nature of technologies' influence, the debate is on the reductive elements that modern technologies has. Within this tradition there has been discussion on whether or not technologies' reduce action to a deterministic state and whether or not technologies structure organizational action and within this structure individual organization members are unable to alter it. While this may be true Townley notes that: "(...) technology absorbs its structure from substantive historically situated factors. There is no pretence at technology following unvarying rules of logic and method." (Townley, 2008: p. 67-68). In line with this quote the other position argues, that technology is a continuation or a product of a social process.

According to Townley, there is more agreement on the creating role of technologies, technologies typify its objects, Townley puts forward the example of consumer groups, here the technology typifies consumers within certain groups. From this perspective technologies plays a constituting role in establishing reality, as anyone who sees the information will see the transformed representations of the information.

Conceptually technology is understood as a tool of translation, transformation and representation. Within organizational studies the concept is not limited to physical machines, it can be many other things: organizational charts, benefit programs etc. These technologies are fundamental tools of organizational control. In other words, technology is what allows situated knowledge to be transported in time and space, thus it enables distant decision making (Townley, 2008). Furthermore, or perhaps, within this ability to exert control over space and time, the information is decontextualized, it is made independent of its cultural and historical construction (Townley, 2008).

The technocratic rationality estimates the degree of rationality according to the rules of logic applied to the situation. In estimating rationality in this way Townley notes that some information is excluded, whenever we consider the type of information which emerges from the use of particular technologies we simultaneously exclude the type of information which cannot be represented within this technology (Townley, 2008). The belief in the correspondence between science and reality legitimize the use of technologies and thus rationality becomes the rationality of science. According to Townley this has, at least two effects, firstly it has the effect that all issues are perceived as fixable if only we knew how to fix it, and secondly, it introduces the separation of expert and lay person, where the expert is the one who is educated in the proper use of technology and thereby the one with access to the "most" rational action (Townley, 2008: p. 72). A similar movement happens with respect to the role of management:

> *What is involved in the process, however, as Zuboff notes (1988: 56), is the transfer of knowledge 'from one quality of knowing to another', from a knowing that is 'sentient, embedded and experience-based' to one that is 'explicit, subject to rational analysis and perpetual reformulation'.* (Townley, 2008: p. 73)

Thereby the role of management is established as the "rational" planning actor, the one with access to the "truth".

The applicability of technocratic rationality is also an important issue. Reading Townley's representation of this rationality one can get the idea that it is widely used in management under the heading of scientific management (Townley, 2008). Theoretically, though, there should be limits to the applicability of technocratic rationality. According to Townley this mode of reasoning is conditioned by two factors: there must be no disagreement on the ends only the means and when "(...) there is an unambiguous way of comparing means for achieving ends." (Townley, 2008: p. 78). In addition to these two criteria, we may add what D. Schön calls "indeterminate zones of practice", these zones are characterized by uncertainty, uniqueness, and value conflict (Schön, 1987). Schön notes that any of these characteristics compromises technical solutions as the practitioner cannot apply rules. Uncertainty refers to situations which lack proper problem framing, any technical solutions rely on a problem framing. Likewise uniqueness prohibits solutions based on prior knowledge as there cannot be any prior knowledge of the unique situation.

The Disembedded Position

Based on the above we describe behavior based on a reasoning from a disembedded position. With the purpose of making this category relevant two things has to be investigated: when is this sort of reasoning applicable and how does it function? These elements are presented below.

Generally we can say that the disembedded position is concerned with the exclusion of contextuality. Contextuality can be several things but the exclusion of social relations is one thing which is clear in all the disembedded rationality. One example is found in the economic tradition where there has been critique of the lack of social relations in the models and there are also examples within technocratic rationality where there has been some discussion on how technologies affect social relations and how technologies exclude information. Therefore we do expect organizations who are in the disembedded position to exclude some contextual information, especially relating to social relations.

Beside the general element above we find several particular elements for each subcategory of rationality. As mentioned before we expect each position, i.e. the disembedded and embedded, to be influential, although they may not be equally significant

under any given circumstances. We expect that individuals consider, or has access to, economic-, bureaucratic-, and technocratic-rationality, even though they are not equally significant at any given time.

Within the economic rationality the individual is conceptualized as having stable preferences and being calculative, and rational actions are actions for which one can give good reasons for, that are deliberate/intentional, and causes the desired outcome. The individual is also endowed with self-interest. One can then evaluate how one can most efficiently achieve the ends of one's particular interest, although in order to do so one cannot include all contextual information. From bounded rationality we know that there are limits to our evaluative powers, and from behavioral economics we know that we systematically violate behavioral prescriptions by orthodox theory. Luckily we can make our models fit our brain power and construct choice situations so that the behavioral biases are negated.

Economic rationality evaluates means and not ends, thus economic rationality is most useful when there is agreement on the ends. Furthermore, and this is common to all three subcategories, economic rationality does not include all factors in its reasoning, therefore we should expect it to work better when the factors which are excluded are less important.

Economic rationality enables and enhances evaluation of means to reach ends based on certain factors. These factors vary from model to model, or theory to theory, Townley (2008) states that Gary Becker is one of the few who includes social relations in his theory, in contrast to many other economic theories. However, he excludes elements of these relationships, which enables him to make an economic analysis. There is no argument here that it is a bad idea to exclude factors from one's analysis, on the other hand it might be necessary.

In bureaucratic rationality the four main themes are predictability, efficiency, calculability, and control. If any organization falls within this type of rationality we would then expect these four factors to play a role, i.e. the organization should strive towards ever more efficiency, it should make everything calculable, it should make processes calculable, and it should enable control over time and space. This is achieved by a rule based regime.

Bureaucratic rationality can exist where it is possible for the above to be functional. It should be possible to structure work in a predictable manner, it should be possible to employ measures to increase efficiency, it should be possible to meaningfully calculate measures that are a part of the organization's sphere, and finally it should be possible to introduce rules so

that predictability is promoted. These things do not describe unstable environments where everyday may bring a new challenge and where work processes are regularly disrupted

Technocratic rationality is based on technology and technologies translate, transform and represent information. Not only does these technologies enable informational processes but these processes, in turn, enables control. This rationality becomes determined by the rules of logic, in a sense rationality is determined by the inherent logic of the technology. Here distant decision making is enabled by the alteration of information so that it can be transported across time and space.

Embedded Rationality

Above we have outlined what we conceptualize as disembedded rationality, we will now turn to the other side of the coin, embedded rationality, and the three types of rationality identified by Townley (2008) as belonging to the embedded tradition. We will present a general introduction to embedded rationality based on Townley's conceptualization. However, her presentation of embedded rationality lack positive elements, thus we have included some of Stephen Lukes' work on embedded rationality.

Thomas Kuhn was, according to Barbara Townley, the first to point towards frames of reference as governing for our decision making and our reasoning (Townley, 2008). Kuhn was critical of what he saw as theoretical textbooks and teachings as disembedded from the research which procured it (Kuhn, 1970). He suggests that paradigmatic change or scientific development can occur in a multitude of ways and that what may once have been the rational scientific explanation may still stay rational, one must judge it according to "[…] the historical integrity of its own time" (Kuhn, 1970: p. 3). We should investigate the historical context and the nature of the beliefs that constituted the rationality, rather than seeing it through a disembedded looking glass which claims objectivity (Kuhn, 1970). A paradigm or a scientific discovery is, hence, evaluated and legitimized based on an embedded understanding of how it came into acceptance and being, rather than evaluated in hindsight of more modern discoveries.

Townley's focus is less concerned with scientific paradigms and more interested in the process of change of rationality in communities and organizations. Communities and organizations find themselves within various contextual settings, which enables practices of rationality. Each paradigm or rationality in turn stands on a foundation of conceptual,

theoretical and methodological assumptions (Townley, 2008). This can lead to non-translatability of reason from one context to another. If that is not possible, the rationality should be sought out in the context in which it claims legitimacy. Thereby there exists no irrational rationalities, rather different cultures have differentiated ways of dealing with their external environment.

"Cultures can be mutually understood or be rational to each other because they have foundational assumptions on truth and inference, coherence, and rational interdependence of beliefs" (Townley 2008: p. 91). By understanding and evaluating the internal workings of a given rationality through the above quote we create the foundations of why each culture or paradigm can operate with one another, even legitimate one another. However, this can only be done if the 'language' of the other can be evaluated through the references of the former. We must be able to have a measure of comparison and commensurability (Townley, 2008).

From an embedded perspective "[l]ogical conventions are defined through institutional usage and are therefore not context free." (Townley, 2008: p. 92). As a result, one cannot say whether a rationality is irrational as long as the practice it prescribes results in the wanted result. The individual is embedded in webs of beliefs that are used as selection mechanisms to limit the choices so that an appropriate belief can be acted upon. The rationality in that particular context is the only measurements of legitimacy. Hence the rationality and its evaluation are fully embedded in the context in which the practice occurs (Townley, 2008: p. 92). There is no fully autonomous self who acts in an independent reality – rather the two are fused in creating the rationality. We therefore cannot evaluate the beliefs outside of their "regime" (Townley, 2008: p. 92).

Embedded rationality presupposes that "[t]he individual lives within a specific geographic, temporal, socio-economic context, and as such has a history, an identity, a gender, and a race" (Townley, 2008: p. 92). This embedded individual cannot access the scientific value-neutral objectivity and impartiality which are prescribed as rationality criteria for disembedded rationality. The individual always experience the world from a subjective point of view. The individual's knowledge and experience can be a source of truth and any abstract, absolute truth is not to be found (Townley, 2008). The rational enquiry becomes a question of critically evaluating the context based off current knowledge. There is a continual power struggle amongst 'fields' of practitioners who each argue for the axiological truth of their actions over actions in other fields. However, rationality in its embeddedness must be

rational to more than the acting individual – it must somehow result in a mutual language of beliefs (Townley, 2008: p. 93). If a rationality does not provide a means of interpreting and gaining legitimacy of action in a given context, its field of practice become limited. It is through practitioners' abilities to use a rationality in interpreting new experiences that a rationality increases legitimacy of use.[11]

Townley does give a short positive explanation of embedded rationality but we have found it necessary to look elsewhere for a more comprehensive and general positive explanation. Stephen Lukes sets out to investigate how that which may seem irrational at face value might in fact be rational given the circumstances and the practitioners' understanding and interpretation of the surroundings (Lukes, 1967). In other words, he wants to investigate whether multiple sorts of rationalities exists for various groups of people depending on social and material circumstance.

According to Lukes, validity for some cultural practices such as religion can often not solely be understood through universal rationality. If this was the case the diversity religions would be irrational and fully nonsensical. Instead they must be judged to the degree in which they are reasonable in their localized context. There is no necessity for a "higher" form of validity to be present, it can solely be affirmed in the local community and context (Lukes, 1967). As pointed out by Townley (2008) this means that to dismiss practices as irrational, from a universalistic perspective, is fruitless. This, however, is mainly the case, when we consider that which, by many, is already considered irrational: Art, magic, and religion (Lukes, 1967).

Embedded rationality is not concerned with any "empirically ascertainable reality" (Lukes, 1967: p. 249). Instead it seeks to guide the practitioners into identifying which action is proper in the context. He points out that disembedded rationality does not hold a valuable truth in all given cases, due to disembedded rationality exclusion of local circumstances. He summarizes that observation often is the first foundation of building human knowledge, by evaluating the causal effects of what is observed (Lukes, 1967). It thereby becomes important to understand on which grounds the empirical observation is evaluated and analyzed, as that is often the source of differentiation of explanation. Lukes uses Robin Horton's work to

[11] For an example see the Pedersen, O. K., 2011, Konkurrencestaten, Hans Reitzels Forlag: København, in which the author discusses, amongst other things, how the competitive nature of economics have become the dominant logic in modern danish society.

compare, rather than contrast, the functions of the rationality between African religious systems and western scientific models. Horton argues that both systems seek to place the phenomenon in a causal context that goes beyond what is simply common sense, to simplify, unify, order and identify regularity of phenomena, compliment the rationality already existing in the context, provide for abstract analysis and reintegration of new knowledge, the use of analogy to explain that which is unfamiliar, to restrict the investigation to limited aspects of phenomena, and finally to provide for complex modelling in order to replace analogies (Lukes, 1967).

According to Lukes, any rationality seeks to use its own assumptions of the world, its causal explanations and interconnectedness of phenomena to create order in a complex world and explain the empirically observed phenomena (Lukes, 1967). However, the issue lies in the willingness to change beliefs as alternative explanations of causality are presented and tested. Lukes seeks to prove that some beliefs might not fulfill the formal rules of logicians but still maintain their coherency (Lukes, 1967). While beliefs might not be logically coherent, they can still be intellectually coherent, often having a logic of its own that is differentiated from that of formal philosophical logic. He further proposes the need for understanding the context in which apparent irrationalities are perceived as rational in order to understand why a given practice that may seem irrational is exercised.

Lukes takes this notion to the more extreme point, saying that science's claim of external objectivity is not possible without considering the context in which any given practice is enacted (Lukes, 1967). He further argues that one of the main mistakes western science commits when evaluating the truth-criterion and legitimacy of actions that originate from the irrational logic observed, is to look at the context in which it operates through the standards of their own logic, assuming that the basic operational standards coincide (Lukes, 1967). The solution is to accept the existence of different criteria of rationality in different perceived realities. He argues that the above problem can be solved by evaluating the irrational in the light of the culture in which it occurs (Lukes, 1967) but thereby he also assumes that the observer can somehow access the causal logic and interconnectedness between cultural phenomena and rationality..

Rationalities are always based off beliefs which are accepted as true in the context (Lukes, 1967). These beliefs can be inadequate due to various criteria such as inconsistency, being contradictory or relying on invalid inferences, if they are nonsensical (here we must be

careful as to what qualifies as nonsensical as we may simply not have the correct evaluative tools), if they are particular, or if they are seen as deficient in some respect (Lukes, 1967). This leads back to the argument of open or closed rationalities, in which those beliefs that are not open for critical evaluation or simply lacking evidence might be irrational, but still foundational for the particular rationality. Rationalities that can be deemed as rational exhibit reasons for actions that are means-end concise, are efficiency maximizing, locally maximized (to the best of the agent's knowledge), and teleologically long-term efficient based off a normative assumption (Lukes, 1967: p. 260). This is what remains of a universal rationality within the embedded tradition.

To understand why there is a need for a universal rationality criterion as described above, we can state that there is a need for a generalizable rationality on the societal level in order to ensure communication and critical evaluation within society. We can disagree about conclusions in society, but we must have some common ground in order to test the validity of the rationality. There must be a difference between truth and falsity (Lukes, 1967) in order to prove the hypothesis of some kind of universal, rational, foundational assumptions that all societies adhere to. If an evaluator finds a lack of existence of truth, falsity, and a logic causality system when evaluating a societal rationality, it can always be attributed to the evaluator's lack of understanding the underlying criteria of the language, this would lead to one of two conclusions: there is a lack of a rational language or the underlying criterion for the rationality are simply incomprehensible for the evaluator. Therefore, the evaluator must reevaluate until he can ensure that he has interpreted the truth-criterion correctly and evaluated it through its internal merits (Lukes, 1967).

Context is important in choosing the appropriate belief in a given situation, while the context-based action must somehow relate to a criteria concise rationality in order to have a methodology that somehow arrives at conclusions in which the assumed results do not differ from the observable results. Both criteria must be applied in order to evaluate at 1) the aggregate level and judge why a given action might, according to the criteria of rationality present, be wrong, and 2) why the validity of the individuals action must be made from the individuals interpretation of the context in order to evaluate the significance of the beliefs applied (Lukes, 1967).

Institutional Rationality

Institutional rationality is a category of rationality or "reason" that belongs to the embedded rationalities. It takes issue with universalism in that it acknowledges multiple value "spheres" where different foundational rationalities dictate rational action (Townley, 2008). The struggle between value-fields and the resulting differentiation may also cause what may have been rational in a situation at one time to be completely irrational at a latter or prior time. Understanding rationality from this perspective makes a universal rationality void and prescribes critical investigation of institutions and individuals.

The individual is conceptualized as organized within society and institutionalized. Behavior is based on what sphere the individual finds itself in (Townley, 2008). In action the individual meets the institutional rationality as "given", as it exists independently of the individual actor (Townley, 2008). Institutions can be conceptualized as the different manifestations of rationalization of experience that includes "(...) expansion of empirical knowledge and the enhancement of technically rational control over natural and social processes." (Townley, 2008: p. 95). As these value-spheres develop they increase their causal, axiological and normative autonomy, thereby increasing their complexity and efficiency as a tool for the human users who in turn use these systems independently of their personal values (Townley, 2008). This leads to incompatibility between some spheres, increasing tension, thereby forcing the individual to compartmentalize each sphere in order to act coherently when changing between legitimizing institutional rationalities (Townley, 2008). In modern society the individual has to maneuver within many different institutions, each of which has its own rules of rationalizing (Townley, 2008).

Society is organized according to institutions. Each institution is organized and situated in a system of organization which is based off normative expectations that stem from value-spheres. An action must hence be evaluated according to the specific institutional organizational context (Townley 2008, p. 97).

> *[Minimally, an institution is a convention and arises] 'when all parties have a common interest in there being a rule to insure coordination, none has a conflicting interest, and none will deviate lest the desired coordination is lost'.* (Douglas, 1987: 46 in Townley 2008, p. 97, the bracketed text is Townley's)

Thus, institutionalization depends on the need to coordinate, as prescribed by Lukes (1967) – the system must somehow lend a level of understanding and comparability to the users, so that they can coordinate actions with a minimum of conflict.

Social institutions become a foundational reference of what actions are legitimized. The development of social institutions also depend on the actors who choose to subscribe to their logics and form the interpretation of their logics through actions. Social institutions are institutions that allow us to navigate and coordinate relations and actions such as families, schools etc. – entities that prescribe a certain behavior. The basic rational principles which may form a conflict are based off an institutionalization of reason principles (Townley, 2008). People thus create new spheres of value by agreeing to a set of reasonings in a given context, admitting to a development or an incorporation of said normative principles in a higher reasoning (Townley, 2008).

According to Stinchcombe there are five characteristics which indicate the institutionalization of reason in society:

> *(...) practitioners are trained in schools where knowledge and practice are rationalized; different practitioners or experts are able to come to the same judgements in cases; reasons can be given to justify decisions to persuade other experts; there is a process for 'disinterestedness' whereby individual interests are excluded; and the criteria for information collection before judgement in practice is socially established"* (Townley, 2008: p. 98)

The institutional rationality does not have a will of its own, only in its application by practitioners. It thereby only provides legitimacy of actions and hence coherence – a methodology of standardizing coordination within a given field by prescribing behavior and how and what to interpret (Townley, 2008). This means that the styles of reasoning belonging to each sphere is distinct, allowing for social predictability (Townley, 2008).

Organizational Adaptations

Townley identifies two interpretations of the study of organizations and institutions. Above "the organizational sociology" approach is explained and now we will show the "study of organization" (Townley, 2008). Within this tradition organizations are "emerged" in their environment and they reflect the institutions which dictate rationality within the particular

environment of the organization (Townley, 2008) Organizational structures are thus developed and given legitimacy from institutions, often stemming from common sense but over time the organizational practice become institutionalized through its taken-for-grantedness (Townley, 2008). Thus, the organization is a assumed to be constituted by rational formal structures, based on their institutionalization – not based off efficiency.

The adaptation of rationality gives grounds to rationalized myths which in turn allows the organization to adapt these rationalities internally through isomorphic action (Lukes, 1967), gaining legitimacy in the process. Practices and formal structures expand, given the legitimacy of the underlying institutional rationality such as that of accounting, the scientific method etc. (Townley, 2008). The organization cannot do this from scratch but must already have internalized its environment to the point at which it can apply rationalized procedures from a given institutional rationality in which it partakes. Thus, the procedures are always already (if applied right) legitimate if evaluated through the same rationality and allows for a comparable account of causality.

Organizations whose outputs are hard to measure, where the means-end relationship is ambiguous have a tendency to subscribe to rational myths through various institutional rules that seeks to promote trust and confidence in outputs (Townley, 2008). They are therefore susceptible to organizational and managerial trends adopted in order to reduce the perceived uncertainty and risk. The problem of sustaining rationality myths, while they might lower perceived risk, is that for them to be efficient, the adapters must often turn their own perception of rationality into a closed type in which reality and certain facts must be ignored in order to keep up the internal logic of the organization (Townley, 2008). This can cause organizations to adapt rationalities which may conflict with reality. Inconsistencies and conflicts may spark from this, as the organization attempts to adapt the institutional structures through isomorphism. In adapting these structures, coupling them with technologies or other institutional structures, the institutional rationalities used may cause ineffective interpretations of events and data observed.

Effects of Isomorphism

Townley (2008) lists three types of isomorphism: coercive, mimetic, and normative isomorphism. Coercive is often a question of a simple power relation – a locked-in supplier, an investor, the state etc. Mimetic is that of ‘best’ practices where the practices and

institutional structures of similar organizations are adopted. This is often done as standardization to reduce uncertainty. And finally, normative isomorphism is caused by the normative stances of trained professionals who have learned certain paradigmatic views as part of their training. All of these serve to reduce risk and uncertainty when interpreting the environment.

This causes a process of homogenization through social diffusion. However, whether this diffusion is caused due to efficiency or whether it is caused due to one actor successfully using the institutional structure or logic to gain social legitimacy stays unknown as both forces could be at play (Townley, 2008). For this to happen, the diffusion is either adapted 'into' or 'within' a population using a variation of infrastructures, either resulting in a generalized, universalist diffusion, or a context specific adaptation through isomorphism. This also leads to some assumptions of the adaptors; Do they use isomorphism in a passive or active manner? Is it an active choice or is it solely a result of environmental pressure? Is there resistance or conflict? The question remains: is the institutional rationality at work rational or irrational?

Neo-institutionalists often focuses on how organizational structures create stability through use of institutionalized rationality, rather than looking at diffusion, conflict and change. They focus on how organizational environments create stability for the organizations and institutions (Townley, 2008). A consequence of this, Townley points towards, is that institutions, such as banks, universities etc. become embodiments of institutional rationalities which provide values, norms, methodologies for analysis and evaluation, causal explanations and teleology while actors freely drift between these,t using them to make complex and best-informed decision choices.

Organizations are pressured to isomorphism by the external environment leading to specific delimitation of boundaries and hierarchies of information interpretation. Hierarchies of information is the weight or importance different reference points have for interpreting the appropriate action according to a specific type of rationality.

Isomorphism promotes the homogeneity of appropriate value-spheres used for interpretation by actors throughout society. Institutions are often located, either physically or as a conceptualization, where the given set of beliefs reside, where their value-sphere is, and by how they delimit their knowledge-area. The analysis of diffusion and evaluative pressure on a given institutional rationality (or the institution itself) is played out through the

organizational field structure. The organizational field is "(...) a 'level' between the major institutions of social life and organizations." (Townley, 2008: p. 106), the fields structure the interplay of organizations and institutions. All actors in this network recognize one another, thereby having direct influence on diffusion and multiplicity of rationalities that provide legitimate logics and rationalities. It makes it possible to create boundaries for diffusion and therefore serves to understand interconnectedness and how the organizations and actors perceive development and evolution of rationalities (Townley, 2008: p. 107). By limiting the choice of the individual practitioner and organizations it provides guidance regarding where to look for institutional structures to adapt. Thereby any development or conflict often causes the boundary to expand or contract, creating either willingness to emulate or resistance to change.

Institutional Systems of Logic

While the above primarily identifies how and where neo-institutional and institutional theory work, what they are used to identify, and the results of their analyses, we still have not discussed or grasped the basics of the logic prescribed by institutionalization. We have already touched upon how institutions incorporate sets of logics or beliefs that can guide actions of individuals and how said individuals by using an institutionalized rationality are able to evaluate given scenarios in specific ways.

Townley points towards how, according to Scott (1995), institutions incorporate representational, constitutive, and normative rules. The representational aspect gives the tools to interpret and weigh claims, the constitutive rules are the constituting assumptions of behavior and actors, while the normative rules define what is appropriate and how something ought to be done according to the theory – including assumptions.

The question then becomes: what is the more appropriate course of action in a given situation compared to what would lead to the optimal outcome? (Townley, 2008: p. 108) This fundamental question provides for identity construction within organization as different logics compete to dominate, by provides a method of streamlining and minimizing conflict within the organization. Normative assumptions provide for a coordinative framework for those who use them. Furthermore, it reduces uncertainty, reduces complexity, and improves confidence and predictability in and off employees.

We end up with setting this type of logic (appropriate logic) up against a more universalist, consequential logic. Actors within this system do not necessarily operate in a consequential manner, but rather is identifying and understanding social cues around them within organizations. Each domain, sphere, or order of institutional logic has a central logic which governs its internal rationality, its practices and interpretations which both acts as its internal methodology and organizational principles by which organizations can organize themselves (Townley, 2008). Townley cites Friedland and Alford's definition: "institutions are symbolic systems which have non-observable, absolute, transrational referents and observable social relations which concretize them" (1991: p. 249 in Townley, 2008: p. 108). With the quote in mind, it has to be remembered that institutions are things that can be domains; capitalism, science, religion, family, the government etc.

Each domain has a fluid boundary, incorporating and disincorporating areas of life in which their logics can be applied. Practitioners only take temporary or positional interest and use of each system, thereby enacting a constant battle and social struggle between systems. This also means that hybrids can suddenly emerge, as logics from one institution diffuses or is transferred into another. This type of connectedness with its context on the macro level, the individual practice and development of institutional logics is heavily dependent on the national or local institutional context and its organizational system. This embeddedness is translated from the individual level to the more aggregate level (Townley, 2008). Contexts and structures in the society might affect institutional logics, having a profound effect on the development. Institutional logics and the embedded context provide a predictability, a reduction in risk and uncertainty, provides guidelines that increase integration and logic coherency (Townley, 2008). Thereby we can analyze rationality development in detail by looking at societal structures (as we are currently doing).

Can Rationality be Institutionalized

Rationality institutionalized might be a good way of organizing society, however some rationality myths can prove to have the opposite effect by not providing legitimacy. Rather they can create conflict, either due to inconsistencies within the internal rationality or by providing cognitive misrepresentations of the events one can observe in the local context. A consequence, as mentioned earlier, can be the focus on rational 'truths' without observing whether underlying assumptions are satisfied. This development can be prevented by

designing practices and structures which act to increase internal coherency of the institutional logic. Theoretically most rationalities are coherent, rather it is interpretation and application that often creates inconsistencies due to practitioners (Townley, 2008).

This also means that often rationalities or logics are not spread through practices solely, as these are often not fully transparent, rather the full rationalizations of object, causality etc. the effects of rationalization and idealized practices that are imitated to introduced through an isomorphic process (i.e. Integration is a practice, but how it is done chances from instance to instance). It must be possible to rationally communicate and interpret these actions due to some common field of reference. The further this rationalization spreads, the more applicable it is and the more standardized, theoretically, the societies in which it is applied will be in their ability to coordinate, understand and evaluate the legitimacy of action based on these shared beliefs, references and understandings (Townley, 2008).

A criticism of this approach is that we thereby infer that individual rationality is dependent on institutions, not solely on the free will of individuals. Free will is thereby either inherent or it is solely institutionally constituted and thereby limited. A generalizable, universal logic would explain developments or differentiation from a given course of action through a level of free will and maximization of utility. To some extent, it is also a question of whether institutions are always rational (internally coherent) or whether they can mislead the practitioner and thereby their existence causes no 'most rational' choice of institutional rationality. This also becomes a question of human nature. Do institutions provide for a deterministic understanding of individuals? How can the social understanding of institutional theory explain practices that could diverge from the economic utility maximizing theory (Townley, 2008). Individuals whose actions are utility maximizing would be evaluated under different axiological analysis (value-spheres) than that internally of an institutional rationality, as they are often rational in their internal logic. So, the individuals' actions would either not match any institution, the institutional logic applied would simply be partially unconscious, Or the individual is affected by such a level of bounded rationality and information that they are only passively evaluating utility. This would cause the utility maximization to primarily be happening on an institutional utility function adapted by the practitioner rather than for an individual utility function which would further (Townley, 2008).

The actor thereby chooses behavior and institutional logic as an active choice, but thereby is affected in their evaluation of contextual phenomena. It allows for delimitation but does not close the rationality any more than bounded rationality. Institutionalization simply improves access to systems of rationality by reducing the complexity of attainability of rationality and improving its ability to analyze appropriate contexts in the environment of the individual or group (Townley, 2008).

Contextual Rationality

The starting point for contextual rationality is the recognition that action is not based on full awareness of the "reason for action" nor "(...) does it [rational action] have to be fully informed of the causal efficacy of action for it to constitute a rational thing to do." (Townley, 2008: p. 113). Contextual rationality is often equated with culture which is posed in an antithetical relationship to "mechanistic" rationality, rather this type of rationality recognizes that the context of "collective attitudes, feelings, and social processes are influential in how an organization function." (Townley, 2008: p. 114).

The conceptualization of culture within this tradition is characterized by four dimensions, according to Townley. We will present these four dimensions below.

The first is culture as values, here values are conceptualized as the ends towards which action is directed, or, in other words, it contains the value structures, which consist of norms and beliefs, of an organization. Here culture, or contextual rationality, is not directed towards the means, as is disembedded rationality, but towards the ends. In this way values inform actions and thus they are a part of the context of rational action, although the importance of value is disputed. Values are not themselves rational rather they "encompass the irrational", i.e. it is difficult to argue rationally for or against values (Townley, 2008: p. 116).

The second is culture as shared, here the focus is on the sharing aspect of values. This is the question of how values are created and sustained within a group.

The third dimension is culture as hidden, here the focus is on the background aspect of culture, or how culture is "(...) unknown or unfathomable to the individual." (Townley, 2008: p. 117). It is based on the recognition that members of organizations may give explicit reasons for their actions in relation to values, norms or beliefs but this alone is not necessarily enough to completely cover the motivation for action. It is not enough because there may be a

hidden, or deep, level of these values, norms or beliefs, which are not immediately available to the actor.

The fourth and final dimension of culture is culture as symbolic. Here the focus is on the representation, or anchoring, and transmission of symbols, and these symbols have an influence on actions undertaken by members of an organization. Townley frames it as follows: "Actions are undertaken because they have symbolic value and are an important element of organized and organizing activity." (Townley, 2008: p. 118). She reports that a study by Feldman and March (1981) shows that information can be secondary to action, in the sense that information is often used to legitimize action. The symbolic value takes precedence over rational value. In other words, symbolic action is not based on its "cause-effect".

From the above we see that culture is a broad concept and there has been some critique of the vagueness of the concept (Townley, 2008). Yet culture remains a concept that, in one sense, enables rationality, it encompasses what is beyond rational consideration; "Culture is that which is relegated so that reason as individual, conscious, and causal can be secured and maintained." (Townley, 2008: p. 118). In other words a part of the motivation for action is left to the actors culture so that a part of the motivation can be understood and deliberated upon.

Culture in relation to community is the provider of "[...] that which is relatively settled, where there are identifiable values, beliefs, and actions in which newcomers are acculturated." (Townley, 2008: p. 119.) Organizations then become carriers and embodiments of culture within the delineation of choice, encompassing various units and through cultural understanding creating a boundary between the community and the environment. The community can be quite fluid, but the culturally determined behavior is signified by the community boundary, whether this is fluid or static. She criticizes Schein's (1991) definition of culture in communities as belonging to a group, which creates issues as group signifiers then determine culture, rather than the group being influenced by a definite community culture.

Culture creates a commonalty of thought and action for the community. In doing so, the enactment of culture creates a common framework for the members of the community in which the culture is present. This provide the common language needed to judge the rationality of a given action, however, as this is up to interpretation it does not provide

evaluative consensus (Townley, 2008). It creates a socially shared orientation but does not ensure coordination, as ambiguity can cause conflicts of interpretation. Thus, actions or signifiers must be provided a context in order to have a definite interpretation. This provides for the coordination for the community.

In workplaces the coordinative influence of commonality provides meaning and understanding of how a job is completed, the negative aspects and the positive aspects and how this relates to one another, thereby causing a possible aggregate understanding of what it encompases. This also provides sense-making of the nonsensical and coping mechanisms for the group. It "(...) informs behaviour and identity, providing the foundation for differentiation, dignity, freedom, and autonomy." (Townley, 2008: p. 121) for group members, thereby creating resistance to adverse developments.

Communities can also be expanded across groups who share a common culture, such as industrial communities, encompassing all of the sub-cultures that participate in one version of reality, with only mild variations in rationalization across subcultures. These can be within industries or across occupational communities. These encompass values, knowledge, and practice which are shared intergenerationally. These values are tied to the occupational work environment but extends beyond it into the social network of the occupation, providing a common language. This creates a self-conception for members, providing a means of acculturalisation for new members. Coordination also provides for new interpretations, deemed appropriate through evaluation by members across the community.

Occupational community cultures can be threatened by externally imposed work definitions, standards, and assessments of procedures which compromise autonomy. Those organisational communities which have close ties to institutional rationalities tend to be more robust when encountering threats to their autonomy from external sources. Professionalisation and unionisation creates a means by which autonomy can be increased or created, thereby creating common conception of environment, self and coordination. Members thereby control their orientation to their environment to a larger degree and breakdowns in coordination may be avoided. Organisations and occupational communities can either reinforce occupational communities or hinder them through co-extension. The difference between the two is that organizational culture is limited by the boundaries of the organization, why the occupational culture may extend throughout the entire occupational community, drawing on sources of legitimacy outside of the work environment. Codes that

are part of the social identity provides for meaningful interpretations, supported by self-identity that is a signifier for community participation.

> *[C]ommunit[ies] of practice [are] a collectively developed understanding of the nature and the identity of the community to which its members are held accountable, sustained through norms and relationships of mutuality and a shared repertoire of communal resources, language routines, artefacts, tools, and stories. [Townley, 2008: p. 123]*

The enterprise provides a common understanding that in turn provides legitimacy to actions and interpretations through mutual engagement. They are fluid in that they are not bound by organizational boundaries, but rather interpenetrate multiple organizations in the environments organizational structure, accepting divisions of labour as each member is orientated towards other members in their interpretation. Community and culture is therefore differentiated in that community focuses on social coordination rather than sensemaking of the environment. "The coordination of action sustains the common interpretive framework of behaviour and action that ensures actions can be performed" (Townley, 2008: p.124). Background assumptions provide for coordination in that the causality for action is already assumed by members of the community, thereby achieving legitimacy by referring to accepted truths. This means that the community provides a means of knowledge creation, sustaining the rationality in operation.

The essence of cultural importance for understanding organizational behaviour is it's enabling of competence. It enables members to create a common "language" and it enables context specific behavior, i.e. individuals rationalize about actions according to the context specific appropriateness of behavior. "The shared rules and definitions that are embedded in a culture underpin the rationality of action." (Townley, 2008: p. 125). That is, rationality is judged by the culture in which it is enacted, not solely by objective analysis of whether an action fits a certain rationality disconnected from the concrete context in which the individual is acting.

Situational Rationality

There are two central issues for situational rationality the first is the temporal dimension of rationality, which arguably lacks in universal rationality. The second issue is the social

embeddedness of rationality. The third dimension of situational rationality is the focus on everyday rationality or a "common sense" perception of the concept of rationality, i.e. the kind of rationality that people actually use, not the kind of rationality scientists can produce. In this part of this chapter we will outline how this everyday rationality has been conceptualized.

Within this line of thinking, that will be presented in more detail below, the situational aspect relies on a social, temporal, and spatial dimension. Because situational rationality has a nature based on these characteristics rationality becomes a "local" phenomenon. Although rationality is local it is not to be mistaken for an autonomous entity, rather actions has to be (at least potentially) legitimized by external rationality such as rationality within an institutional or organizational setting. Furthermore, in a scientific sense "[t]he everyday world cannot be known or understood entirely within its own scope, (...)" (Townley, 2008: p. 141).

Situational rationality is build on five basic assumptions which we will go into below:

- Locality: Rationality is based on the particular context in which experience occur, e.g. the social context. Townley brings a quote by Boden (1994) which summarizes this aspect nicely: "Meaning is constituted in the interplay of people and objects under the concrete conditions of a particular setting" (Boden, 1994: p. 35 in Townley, 2008: p. 135).
- Retrospection: We construct meaning based on an interplay of past experience.
- Precariousness: Meaning is precarious because of the social interaction and the very situatedness involved in its creation. The context in which meaning is created is complex and we do not pay attention to every element of our environment, furthermore there are epistemic issues regarding social interaction, i.e. we cannot read the minds of other people, we solve this by typification. Thus meaning is fragile and must be constantly reproduced.
- Ongoing co-construction: According to the above, meaning must be reproduced and this is achieved through social co-production.
- Its practical verification: Meaning is dependent on their practical effectiveness.

There are two sources of knowledge available for the individual according to situational rationality. The first is intersubjective knowledge and the second is common-sense knowledge. The intersubjective knowledge is associated to the element of precariousness,

mentioned above, which points towards an important division between universal rationality and situational rationality. This division has been conceptualized as the importance of being able to "take things for granted", Townley draws an analogy to an iceberg where only one tenth is visible, and as noted this taken for granted is solved by typification. This typification is conceptualized as "intersubjective knowledge" (Townley, 2008).

The common-sense knowledge is based on institutionalized experience. This type of knowledge is characterized by taken-for-grantedness (as intersubjective knowledge also is) and naturalness, but there's contention about the deliberation concerning this institutionalized knowledge. One part of the argument proposes that common sense "(...) acts as an unexamined foundation of beliefs and action." (Townley, 2008: p. 139). Whereas the other side of the argument frames this type of knowledge as more deliberate knowledge based on experience and consideration.

The study of situational rationality is divided into three groups: ethnographic, sense-making and practice-based. For now we will not go further into these studies, but simply mention these as they are also related to the methodologies used to analyse them.[12]

The Embedded Position

On the above conceptualization of the embedded rationality and its subcategories we now present how this will be incorporated into our framework.

Within this position there is a recognition that our environment or context "helps" and/or influences our decision making. What is rational in some context is not necessarily rational in another context. The actor is influenced by institutions, context (culture), and situations. This means that the actor will have to take into notice the setting in which he has to make a choice. As shown above, from the aspect of cultural influence on decision making, this is not always a conscious process. Arguably these elements has a positive influence, institutions are smart for coordination, culture is smart for decision making, and situations, are in a sense, unavoidable. Likewise it is possible to argue that they can have a negative influence.

In order to operationalize these subcategories of embedded rationality we outline how these three subgroups structure decision making:

[12] See Collin, 2015.

The institutional setting: Within this concept of rationality the individual is set in a society in which there exists multiple institutions. These institutions serve as a source of legitimacy and coordination, i.e. rationality is not independent, it is not a product of the individual actor, as action only gains legitimacy through its reference to an institution. That is another characteristic of the institution, they are reference points for actions. If one wants to put someone in prison one must seek out the appropriate institution for doing so, and, in this case, it would probably be the institution of law. Because institutions are typically cross-organizational they provide as a mechanism for coordination over organizational boundaries. Concretely the institutions provide tools, assumptions and normative input, which the actor can make use of whenever it is appropriate. Although institutions limit the actors ability to act on his own rationality, or on the basis of his own impulses, it enhances action which require coordination and it enhances the possibility for two actors to have a "meaningful" dispute because they have a common frame of reference, in other words, it creates a shared "language" for the actors to utilize.

The context: contextual rationality is a product of the combination of culture and rationality. As the culture of an organization, group, or industry develops, so does a rationality or a common structure which enables rationality. Culture has been conceptualized differently but common to these conceptualizations is that they enable the actor to act rationally in one way or another. It can provide value, the ends toward which action is directed, it can be shared, it can provide hidden knowledge, knowledge that is not immediately available to the individual and it can provide symbolic value. Culture can be varied, it can be produced under different circumstances, and it can provide different things. Common is that it provides a common factor which enables actors to rationalize about the elements which is not contained within the realm of culture.

The situation: Situational rationality describes what matters to make something rational in a local setting. Here elements such as social-relations and objects are influences decision making. We use past experiences in interpreting new ones. Meaning is precarious, e.g. we do not know how other people think, therefore, in order to maintain meaning, we must constantly reproduce it, and in reproduction it matters that rationality is effectual. Thus only effectual rationality persist.

In the context of SME lending the above rationalities describe the way in which an SME or bank interpret the environment and how they can rationalize their own actions and

the actions of others. If the SME and the bank have somewhat similar understandings of their environment, coordination is theoretically improved, as each actor understands the reasoning of the other actor. However, due to the nature of embedded rationality there is a chance that there is a mismatch in rationalities deployed and therefore a collapse of coordination between the two actors. Varying arguments and reasonings in which legitimacy is garnered from institutional rationality, such as practices etc. underpin much of the interaction between lender and borrower. An example would be that while the institution that is business prescribes value maximization as the dominant reasoning behind all actions of both lender and borrower. However, the borrower and the lender may be motivated by other concerns, such as community, obligation, loyalty etc. Analyzing an empirical situation, however, will yield different results depending on the assumptions that govern what connections to institutional rationalities and value spheres we deem lender or borrower to deploy in the given situation unless it is mentioned explicitly.

Analyzing situations using a framework of embedded rationality is useful whenever there is a need to improve social coordination, understand reasoning behind that which may at first glance seem irrational and further increase understanding of underlying logics as they disclosed through their context. While this type of analysis never provides a solution, it provides tools to understand the rationalities behind behavior, and further increases the ability to coordinate socially by understanding reasoning. However, an issues with embedded rationality is that thick descriptions in which multiple interdependent motifs for reasoning a certain way lead to different conclusions is a likely issue, as one cannot argue for 'right' interpretation or a 'true' or 'false' reasoning, rather it becomes a disclosure and ordering of the complexities underlying the subject of the analysis.

Chapter 3: How can Rationality Theory Contribute to the Understanding of the Creditor-Debtor Relationship

In figure 1 we summarize what we know about the relationship between the bank and the debtor. In this figure we portray how the relationship can be based primarily on soft or on hard information and some of the characteristics of both. Furthermore we have shown how relationship lending is primarily based on soft information in comparison to transaction lending which is primarily based on hard information.

In the previous part of the assignment the conceptualization of embedded and disembedded rationality has been presented. Here it has been shown that disembedded rationality relies on abstract reasoning. This means that rationality is enabled by excluding parts of reality so that we can calculate and reason about the specific elements that we wish to consider. Embedded rationality, on the other hand, explain how decision making is facilitated by the context in which it appears. The essence of the framework with respect to rationality is as follows:

Figure 2

Disembedded rationality	● Excludes information and in turn enables rationalizing about the included information – allows limitations which in turn provides a more precise analysis. ● Rational actors with stable. preferences, limited cognitive ability, and it acts in a rule based. ● Technologies are applied to gather and evaluate information to structure rationality. ● Disembeds action and individuals through assumed universal rationality or rationalizing ordering.
Embedded rationality	● Includes contextual information in decision making – this enables the individual in decision making. ● Decision making is set in an institutional, cultural, and situational setting. ● There are multiple institutions which provide reference points and thus legitimacy for actions. ● Culture provides information of which

	we are not immediately aware, it enables coordinated action as different actors can share cultural elements. ● Meaning must constantly be reproduced and social relationships matter in this process as meaning is also a product of how actors interpret each other. ● Actors use past experience when evaluating new experience.

In the lending relationship there is a transfer of information between the lender and the borrower. Based on the nature of this information different forms of rationality are enabled. Below we will present arguments for how the different conceptualizations of rationality, outlined above, relates to hard and soft information. The purpose of this exercise is to understand what sources of information enables rationalization and thinking within the different aspects of rationality. In the next part of the assignment we will use the results of the work presented below to provide a deeper understanding of agency problems in commercial lending.

Below we argue that hard information allows and enables economic- and bureaucratic rationality, and that the production of hard information allows technocratic rationality which strengthens the viability of economic and bureaucratic rationality. With regard to the embedded rationality we show that, from an institutional rationality point of view, interpretation of hard information relies on legitimacy provided by institutions. Concerning contextual rationality, the use of hard information is not necessarily inconsequential on cultural aspects of the relationship between the bank and company, but these factors are not embedded in the hard information. Furthermore, we argue that situational rationality is not especially useful when evaluating behavior based on hard information. After analyzing hard information using the embedded and disembedded rationality theories, we analyze how each theory deals with soft information.

It is argued that soft information allows for actors to gain knowledge about other actors' institutional, contextual, and situational motives. Institutional rationality can make sense of what local references or circumstance that gives access or hints to the actor in regards to what institutional rationality and value-sphere he must rely on to legitimize his actions. Soft information allows us to understand how communities and social webs of meaning provides for a binding of rationality and culture which, in turn, allows for contextual rationality. Regarding situational rationality, we argue that producing soft information can allow for co-construction of meaning within the relationship, thus soft information enables situational rationality between the parties. The more soft information available the deeper and better understanding of the rationality of the analysand is possible.

How Hard Information Enables and Allows for Disembedded Rationality

As previously mentioned hard information is based on financial ratios, measurements of age, debt, equity, sales, etc. It is quantifiable information that, if not already quantified, can easily be quantified using technologies. Based on the literature on the topic of lending to SMEs, the most common method of lending is based on financial statements of the borrowing SME (Chen et al. 2015, Berger et al., 2007, Grünert et al., 2005). This data is often abstracted in that it describe the financial landscape and environment in which the firm is situated, disregarding unquantifiable information.

In many ways hard information enables aspects of economic rationality, as many of the foundational assumptions are the same. Assumptions such as financial records being indicators of overall financial health, abstraction from the particular without loss of information, reduction of complexity in order to achieve specific knowledge, and a general reliance on economic sciences as a legitimator of the information that can qualify as hard information (Cudby, 2019). The only issue that might cause divergence would be the differences in classifications of assets and liabilities that come from diversification of accounting techniques.

Use of hard information relies on the assumption that by looking at current, previous, and projected expectations in a quantified manner, we can reduce uncertainty to risk (Liberti and Peterson, 2018). Hard information does not provide for an understanding of preferences and motives, rather focusing on communicating the 'facts' through numbers. Quantifiable data is needed in economic models and within finance, a discipline which we may reasonably

expect to have some connection to lending decisions. One example can be found in Cudby (2019) he states some financial ratios that are important indicators of financial health.[13] These ratios are determined and based on economic theory, which again underpins the assumptions and beliefs of economic rationality. Therefore hard information can be interpreted through economic rationality and actions based on hard information can be interpreted.

Disembedded rationality does provide for a cost efficient understanding and analysis of underlying information, the proposed aggregated behavior of those subjected to the information, and a way in which information, by simplification, can be interpreted across differences in environment.

As argued above economic rationality can be deployed when acting on hard information. There does not seem to be any discongruence regarding the way that hard information describes the economic reality of the company and how economic rationality would interpret it. Economic rationality seeks the same universal truth as the numbers in a financial statement seek to represent. Economic rationality is thus enabled by hard information.

One strand of disembedded rationality, the bureaucratic rationality, would have a different way of understanding and ordering aspects of hard information. Bureaucratic rationality is less concerned with the ends and more concerned with the means (Townley, 2008). The structures of organizations allow certain behavior which should always, no matter the specific circumstance be standardized. Bureaucratic rationality when applied to hard information serves two purposes: First, it applies a hierarchy of knowledge and decisions. Second, it is procedural and thereby seeks to remove the individual loan officer's personal views from the data – it objectifies as the employee enacts a role suggested by the organization's structure.

The internal hierarchy of employees, divisions, groups etc. of big organizations can provide for a centralized decision-making structure in which information must be disembedded from the local circumstances in order to make it intelligible and communicable to groups further up in the hierarchy (Townley, 2008). Hard information is transferable/communicable and bureaucratic structures are thus enabled by hard information as there is not necessarily an information loss in transporting knowledge within the hierarchy.

[13] Examples are current asset ratios, liquidity ratios, inventory turnover, trade receivables, trade payable days, gross profit margin, operating profit margin, net profit margin, etc.

The individual who executes the decisions determined by the hierarchy has a personal input on the execution, but the influence of this is limited by the bureaucratic structure and rationality. The problem can be to justify behavior according to what is the logical choice of action in the local environment in which an action is enacted, especially when it does not agree with the beliefs and assumptions of the internal rationality of the overall organization. Formalization of rules, hierarchies, procedures, structures, and environment can have an effect on interpretation, the individual is not allowed to make her own interpretations but should behave according to prescriptions. This allows, in theory, for hard information to do its utmost under bureaucratic rationality, as all interpretations are prescribed, calculable, abstracted from local circumstance, and, the most important, unambiguous. All of these characteristics are shared by hard information, making the two integratable. Individuals who question this rationality should be able to access the rationality of the organization, both formal through rules and informally through language, thereby ordering the world (information wise) accordingly (Townley, 2008).

One problem is that each process is non-customizable and hence does not take concern with any specific requirements (Townley, 2008). This means that, according to bureaucratic rationality, relationships such as that between creditor and borrower should not change due to familiarity, but only according to procedure. This could disadvantage many SMEs when applying for a loan as the procedure might require information that is expensive and difficult to gather. However, it can also provide a benefit as it makes the entire process of loan-application more predictable. For the bank the benefit depends on the size of the operation. One example provided by Stultz and Williamson (2003) is of the bigger, more geographically spread out banks, such as foreign banks, who has a bigger reliance on a bureaucratic model as standardization decreases risk and misunderstandings. Smaller banks, however, might find it disadvantageous as the collection and archiving of procedural information makes the organization slow and cumbersome – increasing costs when attempting to adapt to environmental change.

From a technocratic point of view technologies are the nexus of rational action, technologies can transform and filter knowledge and information (Townley, 2008). The financial statement and its formulas can be interpreted as technologies that filter reality, transform information, and reduces inputs/outputs – thereby also reducing uncertainty in the environment. Hines (1988) puts it very quaint in that "(...) in communicating reality, you

construct reality" (p. 257). By describing the financial reality through accounting methods (hard information) the reality is also construed in a specific manner, where the description becomes 'objective'. Technocratic rationality stems from using these technologies in the process of rationalization by understanding their inputs and outputs as significant and rational, while disregarding that which the technology deems irrelevant. Diffusion of technology allows for the diffusion of rationality. This is perhaps the strength of hard information: that the method for gathering information can be standardized through technologies, providing for uniform interpretation as the rationality and technology are linked.

Hard information and a technological rationality as interpretation causes a limited environment that seeks to reduce the outcomes and decisions available, but this can also mean that certain information that could be important is left out.

Through the production of hard information a technocratic rationality can be produced. Technocratic rationality can provide uniform interpretation of reality if it diffuses over branches which also strengthens economic and bureaucratic rationalities as they rely on uniformity of interpretation.

The conclusion of the use of disembedded rationality when interpreting hard information is not controversial: the use of hard information and how it is constructed and ordered relies on all three disembedded types of rationality; Hard information presents a simplified reality with regard to action and motives, it is a communicable and standardized carrier of information, and technologies of interpretation allowing for coordination.

Embedded Rationality and Hard Information

Institutional rationality analysis focus on what and how hard information relates to specific institutional rationalities as it is used by actors. From an institutional point of view nothing is rational without a frame of reference, therefore the institutional environment matters. By accessing institutional rationalities, such as that of economy, religion or politics, the actor gains legitimacy of action and behavior – whether this is done deliberately or not. In the same manner, the organization itself is encompassed in an organizational landscape, that signifies which institutions are available for rationalization. Hard information as a concept can be understood and analyzed using a variety of institutional rationalities depending on the context in which it is interpreted.

Diversification of value-spheres is a natural part of institutional rationality. As one value-sphere's internal logic and assumptions clashes with another, diversification of value-spheres and institutional rationalities occurs over time. As society progresses there will be further specialization of institutions and thereby also the rationalities that are institutionalized. This allows higher complexity of analysis, meaning that the ways we analyze hard information may change over time, even if the information does not. Just as the concept 'hard information' is a consequence of a development of a given context at a given time, so was the analysis and legitimacy of the actions that were warranted by the contained information. Therefore, we cannot expect that hard information will be interpreted universally.

Institutionalization, which in our context can provide a coordination advantage or problem, may arise from professionalization and training of employees. This can create normative assumptions about how to interpret hard information amongst similarly trained professionals which allows for common practices, reasoning, and behavior. On the other hand institutions can be so firmly set that they hamper change. The different types of information within hard information is often produced by trained professionals, e.g. an accountant, this makes the information collection embedded with the formal training which supports an institutional influence. This allows the auditors and bankers to acknowledge both information collection and legitimacy of conclusions or actions based off the data. The SME, however, might not access the institutional rationality as easily, providing a disadvantage in understanding the behavior.

One way of increasing coordination is adaption of structures and practices, allowing for diffusion of rationalities and values. Adaptation by isomorphism is an important part of an institutional analysis of hard informations legitimacy in providing the background information for transaction lending. Isomorphism is the diffusion of similar organizational structures that provide contexts in which specific institutional rationalities become appropriate. As such, hard information based lending is a technology or organizational structure, such as a finance department or even an accountant, has diffused over time. The structures surrounding these practices are internally rational, and these practices grant access to institutional rationalities, and institutionalization of rationality. Whenever diffusion occurs, specific circumstances means that adaptation of structure and rationality are embedded.

For the reasons mentioned above, when analyzing the effects of interpreting hard information and how these can be rationalized the interpretation becomes embedded in the surrounding organizations and structures, just as the actors who uses it. The center of the analysis becomes the interpretation, as the institutional rationality and the value-sphere it is coupled with determines what understanding the individual might have of the information and why actions and behavior are structured as they are.

In the case of contextual rationality and hard information there are several aspects of the relationship between the bank and the SME which can be enlightened. Contextual rationality is concerned with the interaction of rationality and culture, and one important setting in which culture develops is in communities. Above it is argued that, from an institutional point of view, the legitimization of the use and interpretation of hard information depend on institutionalization of rationality. Below we will present a contextual rationality analysis of hard information in which communities and culture take center stage.

For contextual rationality communities constitute both culture and rationalities that in turn underpin and support one another. These communities can be professional, geographic, occupational, interest-based etc. A community may provide the individual actor with values, hidden knowledge, and symbolic values. Actors are embedded in communities and their understanding of the world, both through local circumstance of their actions and through shared culture that affects them beyond the 'border' or delineation of a particular community. This allows actors to behave and rationalize based on specific cultures and rationalities even if they acting on information outside the limits the community. Communities thereby allow for context specific analysis of behavior that is socially constituted and depends on social contexts in order to be rationalized.

A community has a shared 'language' that allows members to coordinate. In the case of hard information, the 'language' can extend to both parties in the relationship between the bank and the loan taking company. If they do not share culture they can lack a "shared language" which facilitates communication, hindering coordination. If they do share a 'language' it may be easier for them to coordinate and evaluate each others behavior. The need for a 'shared language' may be limited if the contact between the bank is simple, i.e. it is independent of the SME's social reality. Practically we can imagine that the problem is alleviated by third party actors who can act as intermediaries such as external auditors, providing a shared language through a common professional background.

Hard information contains quantified data which is exchanged in the relationship between the bank and the company, and the values of this data is a part of the motivation for the bank's action, and the bank's action delimit the action-range of the company – naturally alternative financing opportunities matters in this context, as they may alleviate the effects of credit constraints. If there is a culture in place within the loan taking company which is not shared with the bank then there is a possibility that the actions of the bank will compromise the autonomy of the company, as its range of possible actions is limited. This is a threat to the existing culture. The influence of this "threat" is unknown, but in the short run it may pose a difficulty to the cooperation in the relationship, on a longer run this difficulty, if it exists in the first place, may be alleviated due to changes in culture. One aspect of this alleviation could be that the reaction of the bank is incorporated into the hidden knowledge of the culture.

Different professional groups will behave differently and interpret information differently due to the circumstances the information is used in their community. Hard information may therefore be interpreted according to culture, making interpretation vary across groups. Actors engaging in similar or interacting communities may have similar but not identical understandings, and therefore their behavior must be understood through the social connections and contexts that structure interpretation and behavior when analyzing hard information. With that said, we must admit that a full understanding of behavior and actions cannot solely be provided by the hard information.

The consideration of contextual rationality in connection to hard information shows how hard information may not be inconsequential on cultural aspects, but it fails to provide any information as to how it may affect it due to its disembedded nature. Contextual rationality needs context in order to understand the behavior surrounding hard information, but as seen in this analysis, we cannot do so purely with hard information at hand.

Situational rationality relies on social, spatial, and temporal dimensions in how it analyses the environment and grants legitimacy. Furthermore there are five elements in this aspect of rationality, which are as follows: locality, retrospection, precariousness, ongoing co-construction, and practical verification. This type of rationality depends on some interaction which allows for meaning to be constructed within the relationship between the bank and the loan taking company. The meaning which exist in the interaction between bank and SME, or in the bank or the SME respectively, changes as the relationship develops and

the significance of the hard information can change. However, production and interpretation of hard information does not necessitate the kind of interaction needed for situational rationality. For this reason hard information does not directly allow for situational rationality in the relation. On the other hand, one could argue that the actions of the bank can affect the situational rationality within the company by being a part of the environment and being a part of the past experience. Within situational rationality past experience and outcomes are used to evaluate current experiences. In the case of hard information, a lending-relationship in which parties are interpreting the hard information they would undoubtedly connect their interpretations to previous experiences.

In the bureaucracy the actor reproduce the meaning by which information is read, used, and interpreted thereby continuously sustaining the meaning in which the common sense originates. Treating hard information, this means that by doing the same process over and over, the rationality of actions across individuals is sustained and legitimized. This fulfills the demand of self-fulfilling and localized reason for action demanded by situational rationality.

Based on the arguments above we see that situational rationality depends on specific information and hence it is opposed to the disembeddedness of hard information. However, the analysis makes sense of the hard information and the signifiers which are to be translated or understood depending on the specific situation. As such, the social coordination creates a common language that is established by institutionalization of rationality and thereby legitimizing certain behavior, however, the actor should always be aware that they cannot penetrate deep enough to have or give a full explanation of their reasoning, as they are affected by exogenous, unknown variables. For hard information this would typically not be the case as certain structures and social signifiers limits the amount of interpretations drastically, but at the same time this rationalization would explain the need for soft information to contextualize hard information and thereby make it more interpretable.

How Soft Information Enables and Allows Embedded Rationality

As shown earlier soft information can be many things, e.g. company strategy or supplier dependencies (Uzzi and Lancaster, 2003), common for all categories of soft information is that it is personal, i.e. it is not easily transferable. Using soft information is a way of incorporating information in decision making which is not easily turned into hard

information. Collecting soft information is based on social interaction. In collecting soft information the embeddedness of the production of the information can be important and soft information production allows the loan officer to learn about the context, community, or social relations of the loan-taking company and vice versa. Below we will show how soft information enables different aspects of embedded rationality and disembedded rationality.

From an institutional point of view, collecting information depends on the parties involved in the exchange. Institutiones provide coordination and legitimacy to behavior, therefore the institutional reality of the actors involved in the exchange of information matters. Different value-spheres inform social action which leads to 'battles' as to which value-sphere inform what action, and these value-spheres are developed independently of each other. Institutions can be many things, banking could be an institution and within this institution we may expect an autonomous way of rationalizing and an autonomous normative system. The SME may be conducting most of its social action outside the sphere of the banking institution. The SME, and the people within this organization, may partake in a multitude of value-spheres in different contexts. All these spheres inform social action and thus coordinates action. Soft information can include information on which spheres the SME acts, or should act, within. By observing the behavior of the SME the bank can gain knowledge of the motives, behavior, and environment of the SME. Likewise, the SME can gain some of the same knowledge on the bank's motives and behavior by observing how it reacts to the soft information in the environment.

The interaction between a bank and an SME may span several spheres. This depends on the particular case, but the existence of a multifaceted view of institutions opens up the possibility for miscommunication and miscoordination if actions within the relationship is not carried out within the same value-sphere by both parties.

The relationship between the bank and the SME allows for isomorphic adaptation of rationality in specific situations and contexts, this happens as organizations mimic each other's internal structures and through this process rationality diffuses. However, this does not necessarily lead to the spread of institutional rationalities as such, but it allows for diffusion of rationalizing specific situations and contexts.

In the previous subsection, when we described the interplay of institutional rationality and hard information, we argue that institutions inform action and that institutions inform the processes involved in collecting and interpreting hard information. Likewise, the collection

and interpretation of soft information actions is informed by its institutional reality. The essential difference is that information about institutional spheres and the more contextual and situational aspects of rationality is difficult to describe in terms of hard information and can more adequately be captured through soft information. This is due to the nature of institutions. Institutions contain specific elements such as practices, myths, rules, etc. and these elements are described in terms of soft information.

From a contextual point of view, we may expect decision making to be influenced by culture, and if culture influences decision making then culture matters. Culture can form some of the beliefs of a rationality. Culture can be developed under different circumstances and culture can diffuse over time and space, and it creates a shared 'language' and a shared knowledge. Here temporal and spatial factors may influence the relationship and the decision making between the bank and the company. Already before the bank and the company ever meet they may share some cultural elements as they may share culture developed through their community, this relies on some spatial commonality between the two parties. The spatial dimension is not only physical distance but should be more broadly understood, the creation of culture also depends on sharing occupation or workplace.

Contextual rationality refers to competence, or to what it takes for action to be deemed rational, and this is things such as "(...) how to speak, act, understand, and function in ways that are recognizably intelligible and rational." (Townley, 2008: p. 125). As argued earlier a shared 'language', which is build on these factors, is important for communication. It is reasonable to expect that both the bank and the SME has a culture which is specific to the occupation and/or workplace in which action takes place. It is also possible that, as individuals can partake in several cultural settings, the SME and the bank share some cultural aspects. In this case it would increase the communicability between the parties as they would know how to speak, act, understand, and function in a way which the other part can understand. However, this may also not be the case.

Considering the elements which is a part of the contextual rationality, it is impossible to understand contextual rationality in a quantifiable manner, it is soft information. Thus if anyone wants to learn about the contextual aspects which guide anyone else in his action it must be experienced in its specificity and not in abstract terms. In other words, a financial statement does not contain information on the contextual setting of decision making, but soft

information can provide for the communication and knowledge creation in the relationship between the bank and the SME to learn about the contextual setting.

Situational rationality is the inclusion of locality, retrospection, precariousness, ongoing co-construction, and practical verification. In the case of soft information production all of these elements enter the relationship between the bank and the company. The particular circumstances of the setting in which rational action has to take place influences what is rational. It matters who is involved in the action as actors act in accordance with the environment with both a social and material aspect. Rationality of action is accumulated within the context it happens. The bank and the company has to constantly co-produce the rationality of their actions within their relationship if one wants to sustain the common rationality in the relation. Soft information production can be expected to facilitate this co-productive element as interaction promotes 'learning', in the sense that both parties gain information on the other's evaluation of rationality of actions. As Townley notes rationality is an "(...) interactively bounded phenomenon." (Townley, 2008: p. 134). As shown earlier this aspect of rationality is not independent of other aspects of rationality, this means that what is rational in the context of the specific relationship between the bank and the company cannot be contradictory to the rationality otherwise present in either organizational- or the institutional setting. In other words the rationality developed here may not be seen as irrational by, e.g. the loan officer's manager, if the culture is to develop.

Disembedded Rationality and Soft Information

Above it is shown how soft information production enables different aspects of the embedded rationalities. When investigating the enabling of disembedded rationalities through soft information the link is more abstract. Generally speaking disembedded rationality deals with abstracted information, information which is not a holistic representation of the particular situation. This is not the type of information which soft information is. However, soft information can be indirectly linked to disembedded rationality, below we will investigate if and how this is the case with respect to the three subgroups of disembedded rationality.

In the case of economic rationality soft information can be transformed into hard information in order to enable calculation. This can involve adjusting the credit score manually, which is one way of transforming soft information into hard information and enable calculation based on the credit score This is one case in which economic rationality

can deal with soft information. However, soft information can inform rationality based on economic rationality, evaluating soft information of a heuristic might give us an idea of how it developed. On the other hand our interpretation of the heuristic rests on an ideal economic model, which might exclude certain particular elements. This means that economic analysis can interpret soft information in relation to economic factors, it can evaluate the utility-maximising effects of some states of reality informed by soft information. This does not lead to an enhanced understanding of any reasoning beyond oneself which is not based on only economic rationality, actions are evaluated within the economic rationality itself.

On the other hand by using soft information the bank can become better able to advise the company on how it can improve its hard information, e.g. its cash flow. One case is presented in Flögel's (2018) ethnographic study on lending practices at two banks in Germany, he reports that on one occasion the loan officer knew that the managing owner of a SME had extravagant spending habits which hurt the liquidity of the business. For this reason, the loan officer decided to refuse an extension of a credit-line and instead she made an agreement with the manager on cutting expenses. In this case it is soft information which informs a decision which improves the hard information of the company which, in turn, can be evaluated within economic rationality. The soft information did not provide any legitimacy to action without the hard information as a reference.

Concerning the connection between soft information and bureaucratic rationality the link is very difficult. The bureaucratic rationality relies on the uniform discipline of decision making and rationalization of its members. As Townley (2008) writes: "Bureaucracy functions according to 'calculable rules' and as such must eliminate that which cannot be made calculable, namely, the individual, the personal, and the idiosyncratic." (p. 63). Soft information does not fit very well into this system of rules and documents, where organizational success depends on objects unambiguously fitting classification.

From the perspective of soft information the connection to technocratic rationality is also indirect. As soft information is already proprietary and only transferable by much difficulty it is not appropriate to gather it through technological devices as they transform the information, thus the soft information loses the qualities which makes it soft. Within technocratic rationality the input output relation is seen as standardized and thus objective, output is verifiable, uniform in its nature, and its meaning is perceived accordingly by all actors. Soft information is non-verifiable and personal therefore it does not allow for

technocratic rationality. Yet technocratic rationality can deal with soft information by transforming it to hard information, all actors, thereby, through the technology, have access to an 'objective' truth on which they can evaluate and structure decisions. Actors construct meaning based on the output of technologies, on the social level familiarity of technology provides legitimacy for actions.

Concluding Remarks on the Interplay of Rationality and Soft- and Hard Information

Above it is argued that hard information allows and enables a disembedded interpretation and soft information, to some extent, allows information about the embedded nature of any actor and diffusion of rationality. However, hard information does not allow for transferring information about the embedded situation of other actors, yet we argue that the use and interpretation of hard information depends partly on its embeddedness. Soft information does not fit well into the disembedded approaches as they all seek to remove the subjective and personal aspects which is the essential element of soft information, on the other hand we argue that soft information can inform certain parts of the disembedded approaches with emphasis on the economic rationality. Below we shortly present the arguments presented above according to the rationality it relates to, first concerning hard information then soft information.

Due to the universality of hard information economic rationality provides an analysis that underpins and supports the reasoning behind use of hard information in the first place – as it seeks to universalize rationality. Economic rationality, just as hard information, sees the environment as calculable and thereby also formally or informally, seeks to quantify all important information to make it disembedded but also easier to transfer.

Bureaucratic rationality strives to process information in an objective and predictable manner thereby removing all subjective information. Hard information is suited to this process as it does not contain private information which cannot be transported and predictably produced.

Collecting hard information is a process creating quantitative information, the technocratic rationality provides an understanding of how the reliance on technologies constitutes the rationality used to evaluate the environment amongst actors.

Institutional rationality can give legitimacy to the use and interpretation of hard information in relation to an institutional rationality and a value-sphere. Thereby the process of understanding the hard information and gathering and presenting it in its current form is tied to how actors access and use specific, changing institutional rationalities.

Contextual rationality becomes focused on community and culture as drivers of the rationality, but as hard information is fully disembedded, analysis must rely on assumptions.

Situational rationality cannot make sense of hard information without a context. As a consequence it provides for little to no understanding of the use of hard information

Soft information provides context for lending. In that regard, the embedded rationalities are better clad to provide for an analysis. Institutional rationality is here able to make sense of the individual choice of action and any behavioral adaptations of an organization by looking at the organization and the organizational landscape, how institutions are connected to the actor and how the local institutions provide rationality.

Contextual rationality is here provided the context needed to understand the individuals connection to communities and how these communities provide rationalities through culture and language, that may determine what is rational behavior beyond the limits of the community.

Situational rationality is provided enough specific, local knowledge to be able to understand the actors specific circumstances and perhaps how he/she is affected by endogenous and exogenous factors.

The disembedded rationalities make little to no sense of the soft information without first transforming it into hard information. By relying on a universally shared sub-rationality that structures all behavior, it becomes impossible to look into information that is almost purely proprietary and therefore not possible to communicate.

The analysis presented above provides some knowledge of what rationalities may be behind and grant legitimacy to the two types of information based lending. The practical consequences will be more apparent once we can understand behavior in accordance to agency theory, as agency theory warrants action.

Above we argue that some type of information does not allow for parties in the relation to learn about e.g. each other's culture. This is not an argument for saying that some situations are devoid of information, be that soft information or hard information. Rather this

argument show the particular importance of using hard and soft information, as they can transfer different insights and thus one should always consider the relevance of both.

Chapter 4: The Relationship Between Rationality, Information, and Agency Costs

In this part of the thesis the fundamental elements of agency theory are outlined, and a short exposition of the history of agency theory is presented. In 1976 Jensen and Meckling's seminal paper "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure" is published. In this paper they develop a conceptualization of agency costs in both general terms and specifically within debt relationships. The two elements of monitoring- and bonding costs in agency costs in debt relationships is analyzed from a perspective of hard- and soft information and embedded- and disembedded rationality. In doing so, the understanding of what motivates the individual in agency theory is broadened by including different types of rationality in the analysis of how agents act.

The next part of the analysis will investigate how these general findings can be used in four cases. The first two cases are analyses of the effects of different types of financial institutions (institutions is the terminology used by Berger and Udell (2006), in our assignment, it would be more proper to use "organizations") from Berger and Udell (2006). The first case is an analysis of large versus small organizations leading to the hypothesis that distance is positively correlated with the costs of producing soft information and thereby monitoring based on soft information, making distance between an owner-manager and the loan officer negatively correlated with the use of soft information. The second case is an analysis of information and monitoring costs related to foreign- or domestic owned banks leads to the hypothesis that foreign organizations are less likely to conduct its business based on soft information. Finally, the third case concerns the fit between type of firm and type of lending relationship. This part of the chapter concerns opaque firms, transparent firms, and what type of banking relationship they should prefer. This leads to two hypotheses. In the case of the opaque firm, we hypothesise that a banking relationship based on soft information should be prefered. In the case of the transparent firm, we hypothesise that the firm should prefer a banking relationship based on hard information.

A Short Exposition of the Essentials of Agency Theory

Agency theory is concerned with the problems that emerge from the relation between a principal and an agent. Principal-agent relationships are widespread and are not limited to owner-manager relations, although these relations are a common object of analysis. Kathleen Eisenhardt identifies two sources of problems in the principal-agent relationship which the agency theory tries to solve in her review of the development from 1989. She states that these problems occur when "(...)(a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify the what the agent is actually doing." (Eisenhardt, 1989: p. 58). One example of differing desires is risk preferences. Differences in risk preferences of equity- and debt holder is considered in Jensen & Meckling (1976). Amongst others Eisenhardt states that agency theory can be traced back to the 1930's, the theory has since received recognition and developed in multiple directions (Jensen & Meckling, 1976; Eisenhardt, 1989; Simmerly & Li, 2000; Hart, 2016).

Agency theory has two main lines of thought: one is the positive agency theory and the other is the principal-agent theory. Eisenhardt describes the positivist theory as follows: "... hav[ing] focused on identifying situations in which the principal and agent are likely to have conflicting goals and then describing the governance mechanisms that limit the agent's self-serving behavior." (Eisenhardt, 1989: p. 59). She argues that there are three main papers which makes up the backbone of this literature. The first is Jensen and Meckling's (1976) which we will explain in more detail later. The second is Fama (1980) arguing that managerial markets can discipline managers and are thus monitoring devices due to the revision of wages. The third paper mentioned, Fama and Jensen (1983), theorizes that smaller firms regardless of complexity deal efficiently with agency issues by combining decision management (initialization and implementation) and decision control (ratification and monitoring) in residual claiming agents. For large, complex firms, separation of risk bearing from decision management is the efficient way of dealing with complex, role specific knowledge. Delegation of decision management and control, mutual monitoring, and rewarding empirically seems to lead to efficiency. This research-tradition focus on observing empirical practices and explain them using agency theory.

The other stream of research, the principal-agent theory is more mathematical in its approach. Scholars of this school are interested in developing a general, formal theory for principal-agent relationships (Eisenhardt, 1989). Within this tradition Eisenhardt identifies

two main problems: moral hazard and adverse selection. Moral hazard is a problem as "(...) the agent may simply not put forth the agreed-upon effort." (Eisenhardt, 1989: p. 61). Adverse selection refers to the argument "(...) that the agent may claim to have certain skills or abilities when he or she is hired. Adverse selection arises because the principal cannot completely verify these skills or abilities either at the time of hiring or while the agent is working." (Eisenhardt, 1989: p. 61). These problems can arise in many situations and they show how principal-agent theory has a broad scope, predominantly concerned with solving issues of information asymmetry through economic theorizing, leading to real world descriptions based on theoretical assumptions rather than empirical observations.

According to Eisenhardt (1989) one should not view positive agency theory and principal-agent theory as opposing one another as they are symbiotic: positive agency theory finds alternative contracting opportunities and principal-agent theory investigates the optimality of contracts. Thus one can compliment the other.

Agency Costs in Jensen & Meckling (1976)

In Jensen and Meckling's 1976 paper on theory of the firm they explain a range of things related to capital structure of the firm and the related costs considering conflicts of interest between the agents involved. The agents are framed as being in a principal-agent relationship which means that one individual (the principal) delegates authority to another individual (the agent) enabling the latter to act in the place of the principal.

Eisenhardt (1989) argues that ther paper belongs in the positive agency theory, placing it as the first monumental paper of this tradition. Jensen and Meckling acknowledges that their theory diverges from the existing literature on the subject. This is evident from the following quote:

> *We focus almost entirely on the positive aspects of the theory. That is, we assume individuals solve these normative problems and given that only stocks and bonds can be issued as claims, we investigate the incentives faced by each of the parties and the elements entering into the determination of the equilibrium contractual form characterizing the relationship between the manager (i.e., agent) of the firm and the outside equity and debt holders (i.e., principals).* (Jensen & Meckling, 1976: p. 310)

Their method is within the description of positive agency theory provided by Eisenhardt (1989), that is, they investigate cases of agency relationships empirically and explain which elements drives the relationship towards an equilibrium.

Jensen and Meckling are critical of the anthropomorphization (using Townley's (2008) vocabulary) of organizations. The firm should not be conceived as being able to act as an individual with an independent will. Rather, the firm is a nexus of contracts – it is a "legal fiction" (Jensen & Meckling, 1976: p. 310). This legal fiction is constituted as a nexus of contracts between different actors. The actors have bilateral implicit and explicit contractual relations with one another and unilateral relations to the legal fiction. All actors are motivated to engage with the firm in order to earn their share of the "(...) divisible residual claims on the assets and cash flows of the organization which can generally be sold without permission of the other contracting individuals." (1976: p. 311). The actions of this legal fiction is the aggregate of complex equilibrium processes as the actors behave in their own interest according to explicit and implicit contracts.

As a consequence the delineation of the firm is not something concrete but rather a social construct based of contracting relations as vehicles for voluntary engagement. The organization can encompass suppliers, customers, service providers etc. The theory is not concerned with the placement of the costs inside or outside the organization, as the organization's boundaries are fluid.

In the nexus of contract conceptualization of the organization a unilateral contract occurs inside the firm, informing the firm's immediate agents of "(...) the rules of the game within the organization, including (...): the performance evaluating system, the reward system, and the assignment of decision rights." (Jensen, 1983: 326). These contracts are of a formal and informal nature, either explicit or implicit. They support and affect the multilateral (and in our case bilateral) relations between agents that occur as the organization is engaged in situations in which equilibria occur, both with actors 'inside' and 'outside' the organization, though the theory does not distinguish between the two (Jensen and Meckling, 1976, Jensen, 1983).

In the previous chapter the analysis of hard and soft information explored how and what information can be used to legitimize behavior depending on the rationality deployed. By combining this with agency theory's nexus of contracts these sources of information inform the behavioral outcome of contracts between two parties. It is assumed that the loan

officer is engaged in a unilateral and legal manner to the bank while the owner-manager of the SME is engaged by a unilateral contract(s) to the SME. Both individuals are connected in a web of bilateral contractual relations to all other agents who are engaged by the respective firms, but each contracting relation is specific. In this thesis, focus is mainly placed on the relation between the two.

The loan officer and SME owner-manager are both engaged in a contracting relation which signifies their role as either principal or agent depending on who receives the control rights. In order to coordinate their actions and minimize the information costs that governs behavior, we envision that they seek information; soft or hard. Information will give them certain knowledge of the actions, or at least possible reasonable actions, used by the opposing party depending on the conceptualization rationality.

Agency costs are generally the costs created by having a principal-agent relationship. For shareholders the purpose of the firm is shareholder value-maximization but this can be foiled by uncooperative agents whose interests do not align with those of the shareholders.[14] Agency costs are incurred in attempts to mitigate and align the interests of the agent with those of the principal, whether the principal is a shareholder, a creditor, or a manager. Jensen and Meckling's theory comprise agency costs as the sum of the costs of three types of activities: monitoring expenditures by the principal, bonding expenditures by the agent, and the residual loss (1976).

Monitoring is done by the principal and it is any measurement undertaken in order to reduce divergent behavior of the agent with respect to the interests of the principal. Bonding costs are expenses on the side of the agent in order to "guarantee" that he will not act unfavourably towards the principal and/or that the principal will be compensated if it happens (Jensen & Meckling, 1976). The remaining category of agency costs are the "residual" loss which remains after optimization of monitoring and bonding which Jensen and Meckling defines in terms of its dollar equivalent to the loss of welfare of the principal.

The theory predicts that agency costs are non-zero for outside equity owners, hence it should make sense for outside equity owners to sell their ownership to the manager of the company, this maneuver could be financed by debt and/or by the personal wealth of the manager. Jensen & Meckling then asks the question of why this is almost never the case. This leads to an analysis of the agency costs of debt. There are three types of debt costs: "(1) the

[14] This is because nexus of contract theory removes any agency or purpose from the organization.

incentive effects associated with highly leveraged firms, (2) the monitoring costs these incentives engender, and (3) bankruptcy costs." (Jensen & Meckling, 1976: p. 334). Furthermore, they note that these costs are "(...) aspects of the agency costs associated with the existence of debt claims on the firm." (Jensen & Meckling, 1976: p. 334). They explain how an owner-manager should prefer debt financing in cases of the following type: the owner-manager has to finance one of two projects with different variance (risk) and the bondholder cannot prohibit that the owner-manager can change projects after the debt has been issued. Knowing this, the debt buyer[15] will only agree to buy the bonds on one of two conditions: either if the bonds are priced according to the most risky project (in which case it wouldn't matter if the owner-manager changes project) or if monitoring devices can limit the actions of the owner-manager.

An example of monitoring in debt agency relations is covenants which prohibits certain action or create discouragement from pursuing them (for an example, see Chodorow-Reich and Falato, Working paper). However, costs for both parties can also arise whenever the manager of a company is constrained, e.g. a covenant could potentially stop the manager from investing in profitable projects in the future. There may be practical limitations to the viability of contractual limitations on behavior (Jensen & Meckling, 1976).

It pays for the debt buyerto engage in monitoring e.g. covenant writing, even though it is costly, to the point where the costs outstrip the gain. Jensen & Meckling (1976) argue that the cost of monitoring is not carried by the debt buyer but is transferred to the agent in terms of pricing. This has an effect on the owner-manager as, as he recognizes that monitoring costs are transferred to him, he will have an interest in lowering the monitoring costs. What he then does to lower the monitoring costs by e.g. having external auditing, accepting covenants on management, etc. is termed as bonding costs.

The third and final type of agency costs in the specific case of debt is bankruptcy costs. These costs are the potential loss resulting from a bankruptcy. Jensen & Meckling (1976) expects this to be a minor factor and they quote some empirical evidence which support the relatively small costs associated with bankruptcy, although they note that there's not much evidence at the time of writing. This cost is associated with the impossibility of writing contracts which specifies the right to assets under any given circumstances. As a company continuously incur demands from different agents (these agents can be diverse: it

[15] The bank by proxy through the loan officer – this was previously known as the lender in this thesis.

can be buyers, stockowners, bondholders, employees, governmental authorities, etc.) it becomes difficult to write precise contracts (Jensen & Meckling, 1976). In the case of bankruptcy costs Jensen and Meckling argue that, as with the monitoring costs, the bankruptcy costs are transferred to the agent. Because agency costs are transferred to the agent it is in the interest of the agent to minimize bankruptcy costs because the agent will "capture" this increased value (Jensen & Meckling, 1976).

The above leaves the theory in a bit of a conundrum as this argument would, ceteris paribus, discourage the use of debt because it is costly. However, there are "mitigating" factors. Jensen and Meckling mentions two: tax subsidies and wealth constraints. Based on this they make the following argument:

> *Thus even though he [the agent] will bear the agency costs from selling debt, he will find it desirable to incur them to obtain additional capital as long as the marginal wealth increments from the new investments projects are greater than the marginal agency costs of debt, and these agency costs are in turn less than those caused by the sale of additional equity (...).* (Jensen & Meckling, 1976: p. 343)

The difference between the agency costs mentioned in the beginning – monitoring, bonding, and residual – and those mentioned in the case of debt, above, is that the latter is "(...) simply particular aspects of the agency costs associated with the existence of debt claims on the firm." (Jensen & Meckling, 1976: p. 334). In our analysis we address monitoring costs and through these bonding costs in the case of debt claims. We do not investigate incentive effects separately as it is a part of what makes monitoring relevant, in this way we indirectly deal with incentive effect. We do not deal with bankruptcy, the reason for this decision being, that we do not expect our framework to be particularly well suited to deal with bankruptcy costs, as these do not occur before after the lending relation is concluded.

Based on the presentation of agency theory above, we analyze how hard- and soft information affect agency costs. The analysis presented in the previous chapter on how hard- and soft information facilitate and relates to rationality is included. In the context of our conceptualization of the organization, with respect to the individuals involved the relationship between the bank and the SME, it is conceptualized as a relationship between a loan officer

(principal) and an owner-manager (agent). This is done to stay as close to the original conceptualization of agency problems in lending relations, as described by Jensen and Meckling (1976).

An Analysis of Agency Costs and Rationality in the Relationship Between a Loan Officer and an Owner-Manager

In this part we argue for the effect of conceptualizing the owner-manager's incentives indifferent types of rationality. Jensen and Meckling's (1976) analysis is based on the introduction of agency costs in the relationship which is created between the owner-manager and the bondholder. The bondholder enters the equation as he provides finance. This relationship analogous to the SME representative's (the owner-manager) meeting with the bank's representative in the form of a loan officer (the bond-holder by proxy). The conflict of interest in this scenario lies in the owner-manager's opportunity to transfer wealth from the bond-holder to himself by choosing high risk projects, thereby increasing his own earnings while making the loan-officer and his organization carry the risk. Thus, the loan-officer will be interested in monitoring the owner-manager to prevent this. We choose the owner-manager as representative for the SME in the relationship. There are no other agency costs other than those associated with the relationship between the debt holder and the owner-manager, the owner-manager case is the zero agency-cost base case (Ang et al., 2000). It is also the case investigated by Jensen and Meckling (1976), and in order to not alienate this investigation from their analysis we choose the same agent as they analyse. The interest of the owner-manager in this example is to acquire capital, maintaining autonomy, and reduce monitoring costs, as he captures the reduction of the monitoring costs even though the bank incurs the expenses. The interest to maintain autonomy is not only related to this isolated investment decision. The owner-manager has to anticipate investment opportunities in the future and some monitoring activities could potentially prohibit engagement in these future opportunities even though they represent economically positive actions currently, as contracts cannot be written perfectly. According to Jensen and Meckling this is due to the near-impossibility of writing perfect contracts, as it would simply be too costly to consider all potential variables affecting the contract.

Below it is argued, that in some cases monitoring and bonding costs are affected by embedded rationality. By utilizing soft information the loan-officer can gain information

about the institutional, contextual, and situational reality of the owner-manager, which will enable him to discover the reasoning behind the behavior of the owner-manager. By using soft information the loan officer can evaluate the level of divergence of their respective interests not only on an economic basis but also according to the embedded setting of the owner-manager. It is argued that the activities which carry agency costs relating to embedded rationality depends on the specific circumstances, and that generally the costs of collecting information about institutional circumstances are lower, contextual are medium, and situational are higher.

Disembedded rationality provides insights in how hard information sources can be used to legitimate action and garner insights on how hard information contribute to monitoring costs and bonding costs, often through contractual obligations. The disembedded rationalities provide means of coordination through their simplification of each actor as the disembeddedness have clear-cut methods on how to evaluate and decide on legitimate action for either party in the creditor-debtor relation.

The disembedded rationality theories are limited in what they contribute to the concept of bonding costs, as the economic rationality does not add anything beyond what Jensen and Meckling (1976) argued. According to the bureaucratic rationality bonding activities will have to be adjusted to the bureaucratic setting of the loan officer as he will make sense of the bonding activities within his bureaucratic setting. Technocratic rationality is more circumstantial but the information that the owner-manager can give to the loan officer will have to be transformed through technology, thus his input should optimally consider that process to ensure the best outcome. It is unlikely that an owner-manager would have that level of expertise though.

What do Disembedded Rationalities add to Hard Information Based Monitoring costs?

Monitoring costs are incurred as the loan officer, tries to gain information on how the owner-manager is keeping up with the contract. In Jensen and Meckling's (1976) monitoring costs consists of two types of expenses: those that are incurred as a result of ratifying the agent's behavior and those that are incurred due to the implementation of information mechanisms. These information mechanisms that produce hard information as interpretations

of agent behavior are analyzed using the disembedded rationalities, starting with economic rationality, then the bureaucratic rationality, and finally the technocratic rationality.

Examples of monitoring costs based on hard information can be seen in the use of KPIs, debt-covenants, financial ratios, financial reports, and credit-scoring, writing complete contracts is also a monitoring tool. All of these are costly to produce, so the question of who will carry the costs remains.

This section will proceed as follows: we expand on how monitoring and bonding costs can be interpreted using disembedded rationality types if they are informed by hard information. We begin with assessing what economic rationality informed by hard information adds to our understanding of monitoring and bondings costs, then we do the same with bureaucratic rationality, finishing by assessing the contribution of technocratic rationality.

Economic rationality, Hard Information, and Monitoring Costs

Economic rationality and the interpretation of hard information contributing to monitoring costs does not grant much new knowledge of agency theory. It does not provide for a model in which there is social interaction and it can only state that the agency issue arises due to certain problems such as information asymmetry.

Technologies which generates hard information are a common source of monitoring costs in a commercial banking creditor-debtor relation. The output of these technologies is disembedded data which allows for comparability, universality of interpretation, it removes the issues of proprietary advantage to employees, and it allows for quantitative analysis. This is sensible from a positive agency point of view as the information asymmetry is diminished, thereby allowing the principal to create better incentives that align the agent's preferences with his/her own. Relying on technologies that transforms soft information into hard information makes calculation possible, thereby making estimates and decisions based off said information more efficient.

The issue that remains are two fold. The agents who have to carry the monitoring costs (as principals ensure they do not carry the costs of monitoring) may still hamper the data going into the monitoring mechanisms, thereby making the objectivity of the data output questionable. The other side of the problem is that incentivising can never be done perfectly

as it has diminishing effects on contractual malfeasance, never being fully able to rule out all sources of self-interested behavior on the agent side.

As agency theory is a product of economics, it comes as no surprise that this method of evaluating its use of information grants no new insights on bonding or monitoring costs. The above analysis has expanded on some of the mechanisms on which agency theory relies.

Bureaucratic Rationality, Hard Information, and Monitoring Costs

Hard information has the benefit of being 'objectively' verifiable and hence it is useful in conveying information in organizational hierarchies. Within the bureaucratic rationality both this organizational hierarchy and the organization's processes have a fundamental function, they ensure order, control, and efficiency; processes may even be so important that they become an end-goal in themselves thereby becoming objectively 'true'.

Monitoring costs arise from information mechanisms generates hard information as they measure performance in order to make behavior verifiable and thereby minimize and penalize moral hazard. Within the bureaucratic rationality the individual is set in an organization of instructions, rules, a specific relation to the hierarchy, structured division of labour, and the workers' sole focus is on performing a process to precision. Bureaucratic rationality can eliminate aspects of moral hazard by having standardized, predictable, and transparent processes at the core of its operations. These interactions between agents allow for low-cost information transfer between them, that can ensure mutual monitoring of behavior, lowering overall monitoring costs (Fama and Jensen, 1983). Theoretically this is tolerated by agents because it over time fine tunes the reward system, lowering uncertainty of payoffs from efforts and skill allowing for a higher return on human capital (Fama and Jensen, 1983). This mutual monitoring has a downside which is proprietary information as much of the low-cost informal information is hard to transfer to agents further removed due to its soft nature.

By ensuring that all tasks are done as described by rules of practice, bureaucracy ensures internal transparency. However, it does not provide explanation of the overall interconnectedness of tasks or structures inside the organization. The detailed division of labour and precise description of individual tasks seeks to ensure that each worker is disembedded from personal circumstance and thereby they are more replaceable, less likely

to actions of moral hazard, and finally each step of the production chain knows the needed input well enough to be able to ensure that it is of appropriate standards.

While monitoring costs might be lowered by the structures needed to legitimize bureaucratic rationality, there is still an issue regarding the informality of the information. Jensen and Fama (1983) are not especially precise when describing this distinction, so it can either mean informal as in qualitative or informal as in that it does not match the usual procedures for obtaining information in systems such as bureaucracies. Should the former be the case, the bureaucracy cannot immediately deal with the information without first establishing a chain of transformation and analysis between various workers. As such this means that the bureaucratic rationality may, while providing an excellent environment for mutual monitoring, not be able to create the appropriate process of interpreting the information. The reasoning behind that would be that the hierarchy of tasks and its ability to disembed the worker are good enough at ensuring task-loyalty and interest convergence between agent and principal.

For the outsider, such as the owner-manager, the bureaucratic system and internal rationality may not be sensible. The owner-manager may face a situation in which there is little to no transparency regarding processes, thereby giving the loan officer an informational advantage. There might, however, be a chance that the loan officer does not fully understand the tools used to gather information, mainly because they solely potentially only deal with input or output. This might be an advantage for the organization, but not a source of advantage in the relation between loan officer and owner-manager.

Because the bureaucratic organization often has an internal logic, observing behavior of the loan officer and trying to understand internal logics might be very hard for the owner-manager, preventing coordination and giving the loan officer and advantage. As the legitimacy of the loan officer's tasks lie in the repetition of tasks and coordination throughout the organization, the bureaucratic structure becomes very hard to question and more resistant to change, further preventing outsider/insider coordination.

Generally bureaucratic rationality may create mutual monitoring or simply reduce monitoring costs within organizations because processes and reasoning is structured around measurability, predictability, and transporting information within the internal hierarchy. However, this relates to the internal mechanisms of an organization and these arguments hardly hold if one consider the relationship between a loan officer and an owner-manager. In

this case the bureaucratic setting of the loan officer may make the reasoning of this loan officer unreasonable to an outsider such as the owner-manager. Therefore the bureaucratic rationality should be expected to be better able to deal with hard information. If a bureaucratic rationality were to be applied to soft information the monitoring costs should be expected to increase as this reasoning would be unable to utilize all aspects of the information available in soft information, because soft information is proprietary, untransformable, and opaque.

Technocratic Rationality, Hard information, and Monitoring Costs

As seen above the universalism of the disembedded rationalities are well suited to interpret the use of hard information in agency relations of creditors and debtors. This is also the case with technocratic rationality. Technocratic rationality is built around the perceived objectivity of technology.

Technologies often ignore certain factors of the entity which it measures, or simply qualifies them as negligible. Most users of technologies will not have a thorough understanding of the internal workings of it. Therefore, there is a tendency to observe the technology as a black box. Instead of understanding the underlying technology, the conceptualization of the technology is judged based primarily on the output. To each output there will be a limited amount of reasonable decisions and actions. The actors who are the most experienced with the technology will often transfer their understandings, and often explain it through the technology's input-output relation as a way of legitimizing it.

In relation to the creditor-debtor agency problem regarding monitoring costs, the loan officer (creditor) will have a predetermined understanding of what information one can gather with the use of a given technology and a predetermined authority based on experience with the technology. The arguments based off the technology will therefore be more transparent and easily evaluated by him, while an outsider with little to no understanding of the underlying tech might be severely disadvantaged.

A technocratic rationality may be a disadvantage when communicating, as certain underlying causality assumptions may not be obvious to outsiders unfamiliar with the technology. This means that interpreting the technology must be taught by the most familiar users – the loan officers in the case of credit-scoring. Should this be the case, outsiders only get a limited understanding, minimizing the validity of any other reasoning. Technocratic

rationality can provide legitimacy to monitoring technologies, but the meaning created through technocratic rationality overrules cost considerations. Rather, the technologies exist as transformers of information. They therefore grant legitimacy to the actions to which they are in sound causal relations with, whether these actions are based on are rational on a more aggregate level.

For the owner-manager there will likely be little to no understanding of many of the technologies deployed in credit-scoring on hard information. This may also apply to the loan officer, especially if the credit-scoring system is bought rather than developed, as might be the case for smaller banks. Even though the data is transformed and allows for comparison, the understanding becomes superficial, limiting the ability to understand possible errors in the internal logic.

Hard information based lending is heavily dependent on a number of technologies, thereby making it highly likely that certain processes of the lending procedure are governed and legitimized by technocratic inputs. This is a great solution to minimize risk and error, but not uncertainty, as the technology cannot deal with information it is not built to deal with. Some uncertainty will persist always. Limiting uncertainty, it does not remove it, rather it makes calculation as if the sources of uncertainty are negligible. This means that the technology, or technocratic rationality rarely operates with preemptive efforts that deal with sources of uncertainty, rather relying on ignoring them or transforming them into systematic risk which can be dealt with at a statistical level.

Technology implementation might warrant specific behavior, that may cause a breakdown in coordination between the parties, leading to inefficient communication. Furthermore, the technology is biased regarding who it grants the most authority and legitimacy, as one actor always will have more experience using it (the loan officer).

Finally, technocratic rationality allows a certain simplification of the environment, thereby making decision-making easier, thus reducing costs. It allows for transparency of processes, but not necessarily a thorough understanding of overall motives or preferences. Monitoring costs may arise from the use of technologies, but technocratic rationality in and for itself does not cause issues if the relationship between the loan officer and the owner-manager is based on hard information.

What do Embedded Rationalities add to Soft Information Based Monitoring Costs?

Above the monitoring costs are analysed from the perspective of the disembedded rationality. As argued earlier, disembedded rationality works well within a domain of hard information, this is not true for the embedded rationalities as they are only communicated or experienced through of soft information, in a sense, the embedded setting of behavior and decision making is soft information. Thus, the information systems, which are based on hard information, implemented in order to control the behavior of the agent, as described above, is not under consideration in this section. These monitoring activities based on hard information may coexist with and enhance monitoring activities based on soft information, however, they are not the same.

The argument above is primarily concerned with information systems, below, the framing will be different. Embedded rationality can enhance the loan officer's understanding of the owner-manager and thus reduce the need for other monitoring activities as the loan officer can gain a better understanding of the motivation and behavior of the owner-manager. Building on the example by Jensen and Meckling (1976) including the embedded rationalities makes it possible to conceptualize how the owner-managers motivation as not solely determined by an economic aspect. The motivational aspect of the owner-manager's behavior is also a product of the embedded setting in which it is performed. Therefore a monitoring activity can include gathering information on the embedded setting of the owner-manager by the loan officer. Below it is shown how institutional-, contextual-, and situational aspects affect monitoring from this perspective.

Institutional Rationality, Soft Information, and Monitoring Costs

Institutional rationality is informed by the institutional environment. The reasoning of the individual is a product of its institutional setting and the institutional setting is ordered in a hierarchy of relevance this means that actions are informed by the relevant institution in different situations.

The owner-manager's access to institutional rationality, his understanding of the underlying value-coupling, and the structures of his immediate and extended environment supports his reasoning and are important in granting legitimacy to his actions. Understanding

this environment will provide the loan officer with insights into the behavior of the owner-manager.

The institutional setting of the owner-manager varies depending on a range of circumstances, however, the institutional setting varies less than the contextual and situational as institutions are macro structures that can span entire societies. Thus, the cost of acquiring information about the institutional setting of the owner-manager may be relatively low comparing to the more circumstantial aspects of contextual and situational embeddedness.

Another argument supporting this position is that the loan officer can have knowledge about the institutional setting of the owner-manager from other contexts than that resulting from the financing of any specific project. E.g. knowing the nationality or ethnicity of the owner-manager may give the loan officer an idea of the institutions with reference to which the owner-manager acts. Concerning the loan officer, his institutional setting is arguably more static than the owner-manager because his institutional embeddedness is also a product of his role as loan officer.

Contextual Rationality, Soft Information and Monitoring Costs

Contextual rationality is the meeting of rationality and culture. Below it is argued that the costs associated with understand the contextual aspects of an individual requires some effort and, in the relationship under consideration here, this effort is a monitoring cost. This effort relies on several circumstantial aspects one of which is, how much information the loan-officer wishes to have. Learning that someone is operating within a contextual setting, delimited by, e.g. a professional community, does not require the same effort as learning about the content of this contextual setting.

The contextual setting for rationality can emerge from a variety of circumstances as any specific context may contain a number of elements contributing to the particular reasoning of individuals in that particular context. We have previously presented different circumstances under which culture may develop leading to different interpretations of different context. These different circumstances present factors which affect the monitoring costs with reference to the contextual rationality. In some cases the owner-manager and the loan officer may share some contextual elements, as they may both participate in the same community which may facilitate coordination or meaning between the two.

Just as culture develops within professional communities, a lending relationship between an owner-manager and a loan officer may profit from the earlier experience of either participants. The loan officer may be particularly experienced in dealing with a specific profession and he has perhaps learned about the more intimate details of how a particularly culture has influenced behavior previously. Thus monitoring costs, related to contextual rationality, are not static but depend on the particular situation. Due to their often proprietary nature, the monitoring costs are relatively higher compared to institutional rationality, as the contextual setting is more specific than the institutional setting.

Situational Rationality, Soft Information, and Monitoring Costs

Situational rationality is the incorporation of time and social relations in the conceptualization of rationality. Within this tradition rationality is 'build' on five assumptions: locality, retrospection, precariousness, ongoing co-construction, and its practical verification. Not only is this synonymous with soft information but situational rationality also requires continuous interaction and thus carries relatively higher monitoring costs compared with the institutional- and contextual aspects outlined above.

There are several elements which differentiates situational rationality from institutional- and contextual rationality. One of the important elements, which has an impact on monitoring and bonding costs within the relationship between the loan officer and the owner-manager, is the uniqueness of the situational rationality. This uniqueness is related to its precariousness and the meaning provided by common-sense. These two factors cause the need for everyday knowledge to be created and recreated in order to stay legitimate. The loan officer and the owner-manager has to learn about each other. Hence it is difficult to carry information acquired in a different relationship or, more generally, from a different context into this relationship.

Due to the requirement for constant interaction and because situational rationality is unique in every relationship, monitoring costs related to situational rationality should be high compared to contextual- and institutional rationality.

If one incur monitoring costs in order to gain information and produce meaning considering institutional-, contextual-, and situational rationality then why would one undertake such activities? We propose two arguments for mitigating factors concerning these monitoring costs.

First, as argued above, in the cases of institutional and contextual rationality, the costs are not necessarily unique to any specific relationship. Furthermore, in some cases the activities needed in order to acquire the needed information about the institutional- or contextual aspects of the owner-manager may be activities which the loan manager has already done or was going to undertake regardless. For these reasons the monitoring costs may be rather small.

Second, we know from Jensen and Meckling's (1976) analysis that other monitoring activities can be costly as well. They argue that writing contractual covenants carries the costs of the writing process itself and a potential future opportunity cost for the owner-manager as the covenant could unintentionally limit the actions of the owner-manager. If the monitoring costs related to gathering information on the rationalities, as proposed above, can reduce the need for contractual covenants because coordination can be ensured through understanding of the embeddedness of the counterpart, then the costs of gathering information should be evaluated according to the potential costs of alternative action. If Jensen and Meckling's (1976) argument is assumed to be true then it may be profitable to commit to monitoring activities related to gathering information on the embeddedness of the owner manager in some situations.

In conclusion it is argued that: (1) acquiring information about the embeddedness of the owner-manager can reduce the need for costly monitoring because the loan officer can gain information about the behavior of the owner-manager, (2) we should expect it to be less costly to acquire information about the institutional embeddedness, more costly about the contextual embeddedness, and even more costly about the situational embeddedness, (3) these costs are circumstantial, and (4) these costs should not necessarily be evaluated isolated in every relationship.

General Remarks on the Effect of Including Embedded- and Disembedded Rationality in the Analysis of Bonding Costs

Generally speaking bonding costs are related to activities undertaken in order to minimize monitoring costs. Above it is argued that monitoring activities with regard to institutional- and contextual rationality is concerned with understanding the setting in which an individual makes decisions. In the case of situational rationality it is also about developing behavior and meaning which makes sense to both parties and this is particular to the relationship and the

interaction and history of that relationship. Thus, bonding costs in the case of institutional rationality can be the act of showing that one understands and is able to utilize the proper institutions for certain action. In the case of contextual rationality it is about showing that one understands or belong to some culture, this includes e.g. symbolic action or being able to use a specific "language". If the loan officer wishes to learn about the specific contextual setting of the owner-manager then a bonding cost could be the extra time and effort required to make it easier for the "principal" to get the information he wants.

Concerning situational rationality and how the owner-manager may act in order to reduce monitoring costs is, again, circumstantial. There are some simple ways in which this can be achieved, he could, for example, reduce the travelling time of the loan officer, perhaps this travelling cost could be mitigated if the owner-manager can combine these travels with other activities. Another example could be to attend the same social events in order to increase the amount of interaction. Generally the owner manager should undertake action in order to minimize monitoring costs by facilitating the continuous recreation of meaning.

Concerning the effect of including the disembedded rationalities in the reasoning of the two agents in the relationship between the owner-manager and the loan officer we will consider the three subcategories of rationality one by one. Once again these arguments will concern lending relationships based on hard information as these types of rationality has a difficulties in dealing with soft information.

With respect to the economic rationality there is not much to add, the considerations of the legitimacy of actions in the relationship from this perspective has been proposed. Jensen and Meckling (1976) has already made the analysis based on this type of rationality and so bonding costs from this perspective has been analyzed.

Considering bureaucratic rationality we will propose one argument which does not necessarily alter bonding costs but which could change the nature of bonding activities. If the loan officer is influenced by a particular bureaucratic rationality in which certain processes and hierarchical information channels has an influence on his decision making then the activities which the owner-manager can undertake should be sensible according to the bureaucratic setting of the loan officer otherwise they may risk being ineffectual.

Technocratic rationality is influenced by the output of technological tools which makes the specific technocratic rationality circumstantial. The argument for how this could potentially have an effect on the relationship between the owner-manager and the loan officer

is closely related to the argument presented above, concerning the bureaucratic rationality. The bonding activities of the agent should be understood in relation to the technologies in use by the loan officer. The activities of the owner-manager might make sense from his own point of view, but if his actions or arguments cannot be interpreted with the technology in assessing his credit, he risks that these inputs have little legitimacy when interacting with the loan officer and bank.

Remarks on the Specific Cases of "Financial Institutions" and "the Lending Infrastructure" Presented by Berger and Udell (2006)

In this part of the thesis we interpret our findings and their relation to Berger and Udell's (2006) framework proposing four hypotheses for empirical investigation. First, we investigate whether size of the organization could affect SME lending and how this fits with the theory we have developed ending in the first hypothesis. Second, we then assess whether the ownership of the bank can affect SME lending, as suggested by Berger and Udell, when considering our theory resulting in the second hypothesis. Third, we make an assessment of the fit between firm type and bank type proposing two different hypotheses. Finally, we round the chapter off with concluding remarks and a small summary.

Berger and Udell (2006) have developed a framework in order to better understand SME financing – in chapter one there is a more encompassing presentation of their framework. Their framework is used to structure this part of the analysis. Here we analyse the relationship between an SME and a bank with reference to some of the important factors in relation to SME financing. Berger and Udell investigate three types of factors: technologies, financial institutions, and lending infrastructure. We analyse the relationship between the bank and a loan-seeking SME in relation to the predictions made in the context of what they call "financial institutions". Once again we reiterate that these "institutions" are not institutions in the sense that it has been used in connection to rationality, what Berger and Udell describe by "financial institutions" is the type of organizations which provide the financial services.

The four different dimensions of financial organizations, which Berger and Udell focus on, are: large versus small, foreign owned versus domestically owned, state owned versus privately owned, and market competition. Below we analyse how the inclusion of rationality on the agency relation, as described above, can be understood in the context of

large versus small organizations and foreign- versus domestically owned organizations as proscribed by Berger and Udell.

Large Versus Small Financial Organizations

On the issue of the type of information used by different types of financial organizations according to the size, here understood in a binary fashion large or small, Berger and Udell proposes three arguments for the appropriateness of information type according to organization size. The first argument is that large organizations are advantaged in hard information as they can better exploit economies of scale. On the other hand they might be worse at dealing with soft information as large organizations, according to Stein (2002) create incentive structures which discourages the loan officer from using soft information. The second argument is that using soft information creates internal agency problems. The problem is that the loan officer acquires soft information which is personal and cannot be transmitted which makes it costly to discharge him. Due to the small organization usually having fewer layers of management this is less of a problem for small banks compared to larger organizations. The third argument is that "(...) large organizations may be disadvantaged in relationship lending because of Williamson-type (See Williamson, 1975) organizational diseconomies associated with also providing transaction loans and other wholesale services." (Berger & Udell, 2006: p. 2952). All three arguments propose that small organizations are better able to deal with soft information and thus they are better able at providing relationship lending. Also, all three arguments are based on economic reasoning, below we investigate how disembedded and embedded rationalities may approach this issue.

From a bureaucratic point of view it can be expected that standardization of procedures and their subsequent ability to disembed and prevent proprietary information will be more common in larger institutions due to bureaucratic structures usually being implemented in larger organizations. Delegation of authority and making sense of the resulting organizational structure of delegation is easier when there are strict social hierarchies, a clear command structure that is apparent to each and every worker, and where each department might serve a specialized purpose. This is not likely to occur in small organizations which means that they are more open to outside influences and likely do not have an isolated internal rationality.

From a technocratic point of view it may be argued that larger organizations are better able to adopt technologies needed to produce hard information. If they indeed adopt such technologies then the organization will overtime rely more on the hard information to transfer data between internal departments and agents, potentially resulting in worse handling of soft information. Technocratic rationality is, at least partially, the rule of the expert and it allows for transformation of information.

From an embedded point of view we may expect the large organization to be equally able to produce and use soft information as this is something which happens in the relationship between two actors, in our case the loan officer and the owner-manager. The larger bank could potentially set up the same local structure as the smaller bank thus creating the same circumstances. However, if this does not happen then we expect the following arguments to be valid.

Larger organisations will likely have a higher resistance to environmental influences that try to affect the internally accepted institutional rationality (Townley, 2008). The loan officer from such an institution might not use the same institutional logic as that which is slowly becoming common in the environment in which the larger institution is situated.

In smaller organizations there will be more decision control and management embedded in the individual actor, as there will be more dependence on proprietary information. The division of labor in large institutions allows for more specific tasks and specialization of workers than in smaller due to sheer size. Loan officers in smaller institutions cannot delegate information gathering or use to other divisions as the decision control might be instilled in their particular department. Thus they may have to gather, analyse, and use the information for credit-scoring. As a consequence they become better at dealing with soft information, as they often have proprietary information of their clients.

For the owner-manager the latter might contribute to the myth that smaller banks are better at providing credit to SME's. As it larger banks are less likely to engage with opaque SMEs. This means that smaller banks are better coupled with opaque SMEs, the latter of whom are often too young to produce meaningful financial statements.

Institutional rationality can inform behavior and be a useful tool for evaluating legitimacy or determining course of rational action. However, it does not seem to be that size in and of itself can signify anything specific in relation to institutional rationality. Rather, it is safe to assume that institutional rationality, while being more diverse in larger organization,

is informed by such a nuanced view of the actor/environment that it cannot be used to identify anything specific using solely a single variable.

Contextual- and situational rationality has some of the same issues as the institutional rationality. The large organisation could, in principle, mimic the organizational structure of the small organization by giving loan officers more autonomy. However, the large organization may not be interested in doing so as it has a comparative advantage in hard information and if it specializes in hard information it does not need to delegate authority. In the latter case it would seem infeasible for the large organization to rely on soft lending as their organization is not directed towards utilizing this kind of information.

From another aspect, though, namely the distance between the loan officer and the owner-manager, which may be associated with the size of the bank, the monitoring costs related to contextual rationality may vary. Distance between the loan officer and the owner-manager would increase the costs of gathering information within both the contextual rationality and even more with respect to situational rationality. We propose three arguments for why the information costs should be expected to be correlated to distance, argument one and two is related to contextual rationality, argument three is common but it is most important within a situational perspective, as situational rationality requires the most interaction. Thus information costs is related to greater distance in the following manner: (1) the loan officer should be less likely to hold contextual information on the owner-manager, (2) the loan officer is less likely to share any cultural community with the owner-manager and (3) travelling time increases, increasing soft information costs. This leads to **hypothesis one**: distance is positively correlated with the costs of producing soft information and monitoring based on soft, thus distance between an owner-manager and the loan officer is negatively correlated to the use of soft information.

Foreign- versus Domestic-Owned Organizations

Berger and Udell (2006) argue that foreign organizations have a comparative advantage in transaction lending and in dealing with hard information. They propose two arguments, the first argument is that they may have access to better technologies through their ‘homeland’, and, second, they may be comparatively disadvantage in dealing with soft information because they are not familiar with the local institutions, culture, and language.

From the perspective of the disembedded rationality there should be no differences based on culture or nationality. Actors should solely be informed by the universal logic, thereby making culture or community an insignificant variable. Furthermore, as they primarily depend on hard information to assess the environment and its actors, they have little to no ability to fully understand the mechanisms at work when culture affects their ability to do business.

Due to the non-interactiveness of the theory – actors do not deal with one another through anything but the market – if there is full information there is no need to communicate beyond the transaction. Bounded rationality[16] gives reason to why actors spend resources to gather information, thereby allowing for further understanding of the basic cost structures of agency theory.

Economic rationality can still evaluate rational action but it cannot consider the differences arising from foreign or domestic ownership as significant for the rationality used.

Theoretically, a bureaucratic rationality should not differentiate when operating in one environment or another. The loan officer will know what hard information is relevant for his work process, while the bureaucracy in its processes legitimizes itself by eliminating individual pursuit of interests. Foreign or domestic only makes a difference from the owner-manager's point of view, as there may be lack of transparency that leaves blind-spots in the understanding of the bureaucracy, though this is not necessarily dependent on whether the bank is foreign or not.

Berger and Udell (2006) asserts that foreign banks often relies more on hard information that allows comparison of loan data across national boundaries. This is likely because commercial banks operating internationally are of a certain size thereby gaining benefits from economies of scale. This suites universal logics, as disembedded rationalities increase internal coordination across distances (by disembedding the individual). Though economic rationality is more a theoretical stance, the bureaucratic rationality is prescriptive in how to achieve disembeddedness, thereby making long-distance/inter-temporal communication easier and easing coordination within the organization.

Bureaucratic rationality cannot deal with soft information without transforming it into hard information. Surveys, credit history, local economic data, etc. are all significant hard information that is used for understanding the condition of owner-manager. It is not affected

[16] See H. E. Simon (1955)

by the foreign-domestic difference, as it only takes disembedded information into account that cannot be affected by the specificity of the interaction.

Technocratic rationality can identify technologies and underlying rationalities, but are unable to evaluate foreign/domestic differences. Rather, it grants legitimacy based on causality between actions and technology, thereby allowing it to make full sense of what is reasonable or not, independent on the foreign or domestic distinction. This allows for evaluating both owner-manager's reasoning and that of the loan officers. Technology as such does not legitimize the claims or actions of either actor, but is rather dependent on who has the more intimate knowledge of the technology, thereby having more authority when interpreting its outputs.

Berger and Udell (2006) mentions how financial institutions sometimes hire the services of independent credit bureaus when determining whether to grant loans to SMEs. This can be interpreted as a way of ensuring that the information used to assess the credit-score is standardized – at least to the point where it is formatted correctly as inputs to the internal processes of the bank. However, often the credit bureau is dependent on local knowledge to assess their credit-scoring, so their service is to transform important soft information into hard information, disembedding it along the way.

It can be said that relying solely on hard information is a way of getting around coordination problems that may arise from the foreign/domestic distinction. By ignoring or transforming culture there are less sources of uncertainty, making the creditor-debtor relation more stable. From the owner-manager point of view, it also ensures that the loan officer interprets the information the same way as he/she themselves do. The disembedded rationalities are therefore paramount in understanding reasoning in quantifiable reports etc. but may be less easy to coordinate should they be face with information which is not easily quantifiable. On their own, these rationalities are not able to assess critically whether a process of soft to hard information is adequate, unless they can consider the output of the process. As a consequence, when many sources of data are used, it becomes hard to assess which source of data might have been wrong in how it transformed the information.

From the perspective of institutional rationality Berger and Udell (2006) specifically argue that, as foreign organizations are not familiar with the institutional environment in the country they are deployed in, it is difficult for them to deal with relationship lending. Within our framework we would frame this effect as a rise of information costs and thus a rise in

monitoring costs. Much the same argument can be made with respect to contextual aspects. The loan officer within the foreign organization may not speak the same language or know the social etiquette or have any idea of the specifics of the culture in the local environment. All of this increases monitoring costs as it would require more effort for the loan officer to acquire the information he would need on both the institutional- and contextual setting of the owner-manager. With respect to situational rationality where the ongoing co-construction of meaning is an important aspect of understanding behavior the issue of being foreign and not having much information about the institutional- and contextual reality of the owner-manager should increase the needed effort in order to cocreate meaning. Situational rationality is not independent of its cultural and institutional setting and therefore we may expect that if two parties should engage in the interactive efforts required in order to facilitate situational rationality then they would be better able to do so if they already share contextual- and institutional environment. These arguments may be enlightened by practical examples, e.g. if the loan officer and the owner manager does not share a common first language then communication would expectedly be more cumbersome compared to the alternative situation. Based on these arguments we propose **hypothesis two**: foreign organizations are less likely to conduct its business based on soft information.

Fit Between Firm Type and Banking Type

In this section we investigate the relationship between the firmed conceived of as opaque or transparent and what kind of lending relationship these types of firms should prefer.

An opaque firm could risk exposure to high monitoring costs due to its opaque nature. It is more difficult to monitor a company with opaque information, this is even within the definition of what it means to be opaque. A company can be opaque in many ways. One example could be, that the company is young and therefore it could be difficult to estimate future earnings or it could be difficult to estimate the value of the assets of a company. In any case the opacity of the company makes it more difficult to monitor behavior based on hard information. Opacity in this sense concerns the financial data of the firm and it does not necessarily affect the soft information of the firm. The kind of soft information which is investigated in this assignment related to the institutional, contextual, and situational setting of the individual. Involving these informations in the evaluation of the owner-manager is

unaffected by the otherwise opaque financial data. Therefore lending based on soft information is comparatively cheaper than lending based on hard information for the opaque firm. There are certain types of hard information which can be useful even in the case of an opaque company, Berger and Udell (2006) states that e.g. the personal credit score of the loan seeker can be used as an argument for acceptance or rejection. This type of information requires certain economic infrastructure elements such as established credit bureau who collect personal credit data on large segments of people. In a Danish setting we would expect this to have little effect. Based on these arguments we propose **hypothesis three**: financially opaque firms should prefer lending based on soft information.

The transparent firm does not face the same difficulties in dealing with monitoring through hard information. The monitoring costs involved with monitoring should not be affected by a low quality of financial data, rather the transparent firm should be better able at providing the loan officer with data thereby facilitating monitoring. For this reason **hypothesis four** is: financially transparent firms should prefer lending based on hard information.

Concluding Remarks

In this chapter a short exposition of the essentials of agency theory is presented, which gives an idea of the context in which positive agency theory and specifically the conceptualization of monitoring and bonding costs are developed in Jensen and Meckling (1976) which is also presented.

It is analysed how disembedded rationalities can provide legitimacy to the actions associated with the principal-agent relationship and specifically monitoring and bonding costs. Concerning economic rationality we argue that agency theory is already within an economic rationality therefore economic rationality does not yield new knowledge of monitoring- or bonding costs. It is argued that bureaucratic rationality does not cope well with soft information as the bureaucratic rationality is framed by hierarchical decision making and generally it is based on generic measurements which does not fit well with soft information. However, bureaucratic rationality may reduce monitoring costs internally in an organization by setting up transparent and predictable structures which allows for mutual monitoring. Considering the relationship between a loan officer and an owner-manager the effect of bureaucratic rationality if the relationship is based on hard information is perhaps

not very considerable, but if the relationship is based on soft information then in a bureaucratic rationality both participant should be expected to increase monitoring costs as bureaucratic rationality has difficulties in dealing with this type of information due to its proprietary nature. Regarding technocratic rationality it is argued that the use of technologies also has difficulties in dealing with soft information, that technocratic rationality frames what information the user of the technology receives, and that outsiders may have difficulties in making sense of behavior based on the technologies as they do not perceive the world through this technology. Yet, technocratic rationality may facilitate decision making thus reducing monitoring costs. Generally all of the disembedded rationalities can provide legitimacy to actions and processes related to hard information thus enabling and facilitating monitoring based on hard information. They are inept at dealing with soft information in the agency relation as they cannot use it for understanding incentives unless the soft information is transformed into hard, shaving off its embeddedness.

In the second part of the analysis four hypothesise are proposed based on three different cases. We have investigated the different arguments proposed by Berger and Udell (2006) in connection to large versus small financial organizations, where we propose hypothesis one, and in connection to foreign versus domestic organization, where we propose hypothesis two. The final two hypothesise are proposed with regard to the fit between the type of firm and the type of information the firm should prefer their banking relationship to be based on.

Chapter 5: Discussion

In this part of the assignment a discussion of (1) rationality with focus on embodied- and practical rationality, (2) assumptions about human nature with emphasis on Jensen and Meckling's work on how they perceive human nature (Meckling 1976; Jensen and Meckling, 1994), and (3) the consequences of the analysis.

In this thesis we have argued that it is not always correct to assume that humans act according to economic rationality. There are different ways to frame how individuals reason, behavior, and what influences human reasoning. Within the part of Townley's (2008) framework which has been used in this thesis, reasoning has been framed as embedded/disembedded with three subcategories in each. This framework has been useful

because it orders the factors which influence our behavior, allowing an analysis of the difference between perceiving behavior from a disembedded and embedded point of view. In other words, the framework is used to facilitate an analysis of what motivates action beyond short sighted economic incentives.

The framework is broad. It encompasses six different subcategories of rationality and each subcategory contains a number of elements and within some of them the more detailed specifics are heavily debated. There is always an evaluation on how much detail is needed to provide the reader with an understanding of what a specific concept is. It has been a priority to provide a broad understanding of the field of different types of rationality, insights on both the embedded and disembedded rationalities. One argument for including the subcategories is that the disembedded rationalities are all intertwined. For example, the contextual and situational rationalities are not independent of the institutional rationality. likewise, institutions do not form the behavior of individuals alone. Instead, the application of institutions are partly a product of the situational and contextual setting, e.g., when individuals has to evaluate the appropriateness of different institutions. In addition all the different types of rationalities are unique and are therefore all potentially relevant in an analysis of agency costs in lending relationships. The most unlikely candidate for expanding our understanding of agency problems in SME lending, from our point of view, is the situational rationality. An investigation to understand this type of reasoningt would require quite an investment from both parties, as they would have to engage in ongoing cooperation in order to create meaning and the coordination and meaning gained would be unique to that particular relationship.

It was necessary to limit the information and categories enough to pursue a viable analysis and make a reasonably understandable and practical framework that was not completely arcane to the reader. In doing so the goal has been to show how organizational rationality could be combined with agency theory, especially positive agency theory. It was necessary to make this limitation, as it makes little sense to expand the analysis over an unlimited number of different conceptualizations of rationality as this would go on ad infinitum.

The framing of rationality in Townley is inspired by Foucault and is related to how she conceptualizes human nature. As noted earlier, Townley is concerned with more than embedded and disembedded rationality types. She also reviews and develops embodied

rationality, which provides the inclusion of such things as psychoanalytics and emotions in rationality (2008: p. 15). As we wanted to refrain from being too specific regarding circumstances of bodily experience we chose to disregard this category of rationality, as they would be too abstracted from what current commercial lending practices warrant in regards to how the actors understand their relation.

Townley concludes her paper with what she terms practical rationality. In her analysis she states: "(...) that practical reason is the ability to retain the disembedded, embedded, and embodied dimensions of rationality and to incorporate or distil them into a unified understanding or picture." (Townley, 2008: p. 206). The argument within this perception of rationality is that practically any individual should be able to access all the before mentioned rationalities, both the abstract, the particular, and the embodied; only by seeing the entire picture are we capable of making good decisions. Therefore, we must infer that Townley ultimately argues that neither type of rationality can describe the entire process behind behavior and decision making in practice. We have refrained from using her practical rationality in this thesis, as it would prevent us from doing the slightly binary distinction between hard-soft information and disembedded-embedded rationality. This distinction was chosen as bank-lending is done using methods based on either disembedded reasoning (transaction cost lending types is an example) and embedded reasoning (relationship lending, particular local circumstance etc.). Therefore, we tried to avoid Townley's ultimative argument, that rationality in practice often is a mix of a variety of paradigms of rationality. However, her argument provides for the opportunity to discuss how to determine the rational, i.e. does this convergence of the different types of rationality move towards a relativistic position or towards a more deterministic interpretation, and in general, what is human nature and how do humans coordinate action and understanding?

The discussion of the relativist position is extremely complex and Townley does mention several times that she is not supporting the relativist position, yet, no outsider seems to be able to determine the proper action in a setting unless this individual is "inside" the situation. The evaluation of what is rational and what is not becomes context dependent, however, the people involved in the decision making can discuss and evaluate the reasonableness of certain action on their own terms, thereby creating consensus should the need arise.

In this thesis the embedded and disembedded rationalities has been treated as an either/or and the same distinction has been made for hard and soft information. In practice, it is unlikely that it is an either/or situation when deciding the rationality deployed in a lending situation. If the SME is somewhat informationally opaque the bank can acquire soft information in order to asses the firm, as there are limits to the hard information available. However, in this situation it would still make sense for a loan officer to investigate the hard information available. It would not be sensible for the loan officer to exclude any information as long as the costs of acquiring this information are not too steep. Thus in practice, our SME lending relationship is likely operated by agents using a mix of embedded and disembedded rationality. Therefore, the loan officer is likely to assess both his knowledge based of soft and on hard information, when he makes a decision related to a loan applicant (owner-manager). It is not easy to come up with a scenario where absolutely no soft information would enter the decision making process, unless one actively seeks to eliminate soft information entirely. There are examples of situations where it has been the case that interaction has been structured with the purpose of excluding social action and thus soft information from a market interaction. One such example can be found in the sociological study by MF. Garcia-Parpet (2007) of a strawberry market in Fontaines-en-Sologne. This study investigates a type of market which is perceived as a "(...) realization of the model of pure competition, (...)" (Garcia-Parpet, 2007: p. 22). The author then aims at describing the difference between the outcomes that theory predicts and the realised outcomes by social factors. Amongst other results this study shows how the act of trying to exclude social factors actually encouraged local strawberry producers to engage in social interaction. This social interaction was not structured solely on the structuring of the strawberry auction, but rather a combination of the history and culture of the strawberry farmers in combination with the new attempt to create a perfect market. In this study social interaction persisted to influence the outcomes even if the structures surrounding the strawberry auction were created to ensure that actors would act according to economic theory. The findings that soft information and embedded reasoning for social interaction surrounding the market suggests that it can be difficult to eliminate the importance of interpreting social factors if one wants to investigate behavior.

Our contribution to scholarship is to open up the theoretical conceptualization of monitoring- and bonding costs within agency theory using organizational rationalities to understand what might contribute or mitigate them. The models developed in Jensen and

Meckling (1976) are unable to capture the influence of social factors which is a problem if social factors do indeed influence any practical realisation of the situations which the models describe. Jensen and Meckling are aware that their models does not include all possible factors, they write: "(...) we are far from understanding the many conceptual subtleties of the problem." (Jensen and Meckling, 1976: p. 346). One important factor which they recognize as something which may reduce agency costs is to eliminate the assumption of one period interaction. They state that if the theory did include agency problems with multi-period models, then one could reasonably incorporate factors such as reputation and "sainthood" behavior. However, it seems that these factors should be incorporated in the extent that this sort of behavior makes economic sense, i.e. there's no moral imperative incentivizing this kind of behavior – it is still based on economic motives. In the light of the conceptualization of rationality presented in this assignment it is not enough to merely expand the behavioral appetite of the agents by extending the models into several periods with multiple interactions. This extension would not capture what is argued in this thesis – that we should expand our conceptualizations of incentives to not only include strictly economic ones.

This idea is not foreign to the discipline of economics, at least Jensen and Meckling are aware of this. They develop a model of human behavior which they term REMM, which is short for Resourceful, Evaluative, Maximizing, Man. The groundwork for this model is already proposed in Meckling's (1976) article "Values and the Choice of the Model of the Individual in the Social Sciences", in which he argues in favor of REMM and critically review the "sociological", "psychological", and "political" models of the individual. This work is further developed in Jensen and Meckling in the paper "The Nature of Man" (1994). In these two articles there are four main arguments: (1) economics has a fairly unified model of human behavior contrary to most other social sciences, (2) human behavior can approximately be described by REMM, (3) economics describe a reductive model of REMM, and (4) economics do not describe the totality of what motivates human behavior. Furthermore, they describe a simplified version of the economic model of man, where man is a utility maximizer and an evaluator who is only interested in money. This description of economics is closely related to what we term as the economic rationality although it is maybe a simplified version, and it suggests that their work in 1976 on agency costs is within this tradition. In Jensen and Meckling (1994) there is some reflection on the difference between behavior described by economics and real behavior:

> *The economic model is, of course, not very interesting as a model of human behavior. People do not behave this way. In most cases, use of this model reflects economists' desire for simplicity in modeling; the exclusive pursuit of wealth or money income is easier to model than the complexity of the actual preferences of individuals. As a consequence, however, noneconomists often use this model as a foil to discredit economics, that is, to argue that economics is of limited use because economists focus only on a single characteristic of behavior—and one of the least attractive at that, the selfish desire for money.* (Jensen and Meckling, 1994: p. 10)

From the quote it is evident that they recognize that we should not necessarily expect economic models to describe actual behavior but rather they describe one aspect of what motivates action and choices. Interestingly they are very critical of the different models of human nature which they investigate (Jensen and Meckling, 1994; Meckling, 1976).

What is done in this assignment is to include several other aspects of what motivates action each type of rationality represents an aspect of these motivations. To reiterate, the argument is that these incentives can change how we perceive agency costs, if we want a more comprehensive understanding of actual behavior then agency costs should not only be conceptualized according to economic incentives, rather we should try to include how different incentives effects agency costs.

Economic rationality such as that used to explain how actors behave and legitimize action in Jensen and Meckling's paper, is often criticized as being removed from how 'real' humans behave by many scholars, both outside and inside the field of economics. As described earlier, H.E. Simon is one of the early critics who argued that we should understand rationality as bounded, rather than infinite(1955). This line of thought does not necessarily challenge the essential elements of rationality. Rather, bounded rationality includes calculation of the costs of being rational which gives rise to a range of different decision making strategies which incorporate and seek to minimize these costs. Bounded rationality is simply a step towards a more likely way of conceptualizing human nature and understanding, but it still relies on the disembedded dogmas of orthodox economic theory.

In his nobel prize lecture Oliver Hart (2016) also advocates that we discard the notion of rationality altogether. This should not be understood as if he takes a radical standpoint in

the discussion of rationality, as he argues that "(...) there is one way to model rationality there are many ways, perhaps infinitely many, to model irrationality." (Hart, 2016: p. 385). That there is only one way to model rationality is closely aligned with the universalist position. The way he presents this one model of rationality is, unsurprisingly, economic rationality. He argues that economists tend to hold on to rationality "at all cost" because it offers a discipline which the irrational models do not. Economics investigate and calculate, thereby ordering the world in order to enable a, at times, normative analysis bound to theoretical, normative assumptions. In other words it offers the assumptions necessary to do formal modeling.

As argued earlier, the method of this thesis excludes the notion of one rationality, rather there are multiple rationalities, but they are not all equally legitimate at all times, and all individuals do not subscribe or accept the existence of multiple rationalities. Although we reject the notion of one rationality there is one consideration expressed by Hart which is relevant when this position is adopted, namely that it becomes difficult to model behavior. In the present assignment there is focus on the circumstantial aspects of rationalities which are intuitively difficult to formally model. Thus there is some trade-off between formal modeling which includes a simplification of actual behavior and can be described in more useful ways to make stronger predictions – and more holistic models which, perhaps, more accurately describe the decision making process but less precise in its predictions.

Within the framework developed here and the situations which we aim to describe, this trade-off is analogous to the problem of type one and type two errors, as they are called in statistics. A type one error is the false positive and type two error is the false negative. In a loan seeking situation the false positive describes the situation of rejecting a loan application when the loan really presents a positive economic opportunity and the false negative describes the situation where the loan officer fails to decline a loan application which should have been rejected[17]. To a certain degree Jensen and Meckling's work (1976) portrays a situation where the social circumstances become irrelevant, as the models assumes what can be conceived of as a worst case scenario captured in the asset substitution problem and then describes how the capital structure can be optimized. Thus, the loan officer does not risk problematic behavior from the owner-manager because this behavior is already included in the model. This approach presents a drawback: in situations where the owner-manager does

[17] The true positive would be the case where the loan officer "correctly" identifies a loan application as a bad investment.

not wish to utilize the wealth shifting opportunities which might occur and where the loan becomes overly expensive or obtrusive (in the case of covenants), the loan officer can end up rejecting a positive net value investment opportunity. On the other hand if the loan officer, through the use of soft information, is able to identify the motivation of the owner-manager with greater precision, then the number of type one errors could be reduced.

Arguably this situation carries some problems. Primarily that one would encounter the risk of making type two errors where the loan officer would falsely identify the probable behavior of the owner-manager as unproblematic. Another problem could be that the loan officer allows his personal liking of the loan seeking individual to influence the decision making. For the loan officer who is concerned with not making type one errors it might be interesting to more accurately understand what motivates human behavior beyond economic rationality in order to not decline loan applicants on the grounds that if the owner-manager acts only on economic incentives there is a risk of e.g. asset substitution which is unfavorable for the bank.

Chapter 6: Methodological Considerations

The purpose of this thesis to show how different conceptualizations of rationality can increase our understanding of agency problems, as suggested by Jensen and Meckling (1976), in SME lending relations. In order to answer the research question we included existing theory from economic agency theory, theories on SME lending, and rationality theory. The methods and conceptualizations of these theories naturally limit and frame the approach adopted in the thesis. The thesis at hand is a product of a concern regarding the practical relevance for a theoretical concept within the positive agency theory, namely the concept of agency costs as proposed by Jensen and Meckling (1976). This concept perceives human motivation as being determined by a "simple" money optimizing behavioral strategy. The simplification is a consequence of the models in which this behavior is played out. One element which this concept does not include is the variety of inputs which also determine human behavior. With the purpose of developing the rationality employed in this theory beyond economic rationality one could incorporate a range of different methods. In this assignment an existing framework of rationality is utilized. This framework provides what is needed and it is build around research within organizational studies thus it is, at least,

indirectly inspired by practical reasoning. In chapter five we return to this practical aspect of reasoning.

The two theoretical works which is most important for the project presented in this assignment is Townley's (2008) work on the different conceptualizations of rationality in organizational studies and the positive agency theory, represented mainly by Jensen and Meckling's (1976) work on agency costs. These two traditions of research are constitutive of the reframing of the concept of agency costs by including different types of rationality into the relation between the principal and the agent. The method of positive agency theory is to look at a situation which they then assume is in equilibrium and they then find explanations of how this situation can be in equilibrium (Meckling, 1976; Eisenhardt, 1988). The method of Townley is to conduct a meta-study of the organizational literature with focus on how rationality is conceptualized, the approach is inspired by Foucault (Townley, 2008). According to Townley (2008) Foucault's method is to focus on three "axis": "the field of knowledge (savoir), relations of practice (connaissance), and individuals' understandings of themselves." (Townley, 2008: p. 14). Different rationalities then informs each of these areas, Townley transforms these categories into a framework for approaching the organization literature: "(...) the 'science' or knowledge of the subject, the position informed by the power relations, and the understanding of the self." (p. 14). This again translates to the disembedded, the embedded, and the embodied.

The method of this assignment reflects the two approaches described above. In this assignment the ontological standpoint in Townley's work that there is not one rationality but "rationalities" is also the standpoint exhibited in this assignment. Furthermore, the method of positive agency theory also serves a role as a structuring guide for the analysis in chapter four. This analysis is in a certain sense delimited by the work in Jensen and Meckling (1976). We chose to adopt the owner-manager as one of the actors of the relationship between the bank and the SME because Jensen and Meckling's (1976) analysis is build around this type of actor. By combining the roles of manager and owner in the same individual we reduce some levels of complexity from the analysis by excluding possible agency problems between the manager and the owner.

The ontological assumptions of our analysis are radically different from Jensen and Meckling's (1976). Jensen and Meckling deals with agency as a question of information and reaction to this information based on self-interest. We have sought to add a social dimension

to agency theory, that attempts to order both what and how this information is processed. In that regard, we are closer aligned with Townley's approach. In order to maintain a degree of simplicity we have attempted to keep each main category of rationality, embedded and disembedded, separate. In fact, all types of information can be used in all the presented types of rationality, the issue only becomes what they may make of it, and whether this is particularly insightful or useful to either the loan officer or the owner-manager. From Jensen and Meckling's (1994)[18] paper we can assume that they are open to an expansion of their ontological assumptions, thus their theory allows for the argument of this thesis, that agency theory should and can be expanded to include social aspects.

Our ontology has elements from multiple different rationality paradigms. To make these paradigms less complex, we use the aforementioned binary coupling between hard information – disembedded rationality and soft information – embedded rationality. This is done to narrow the scope of investigation in this assignment, but it can easily be expanded by choosing to understand the information categories in a less binary fashion.

Our hypothesis must be tested using an epistemology based on the ontology provided. We thus arrive at a crossroad. Either we accept that our inductive method needs a phenomenological approach to investigate the validity of the proposed hypotheses, or we approach the subject with a double epistemology in mind – one in which the deductive data of a SME lending agency relation, such as financial statements, credit-scores etc. are underpinned by a inductive phenomenological investigation in order to compliment one another. In many ways, this would be the appropriate approach as it would lead to an analogous approach as that of the loan officers who use both hard and soft information in credit-scoring.

The validity of our research and hypotheses lie in our attempt at creating something new, by accepting the agency problems as being predominantly concerned with costs, as suggested by Jensen and Meckling, and in combination with Townley's work we attempt to create a framework for understanding both qualitative and quantitative data in lending situations. Therefore, our attempt at expanding the theory lies in the crossroads between economic theory, organizational theory, and philosophy.

[18] In Jensen and Meckling (1994) they are open to an expansion of the economic model of human nature which dominates their 1976 paper.

Chapter 6: Conclusion

In this thesis we have attempted to answer: How can different conceptualizations of rationality increase our understanding of agency problems, as suggested by Jensen and Meckling (1976), in SME lending relations? We have done so by first providing some context regarding why SME lending is an area of concern within economics, as lack of credit is an inhibitor to growth.

We then reviewed a variety of theoretical and empirical papers relating to SME lending in order to justify our use of Berger and Udell's (2006) proposal to a framework for understanding variables that can hamper SME lending. In this framework we have focused on hard and soft information in order to create a dichotomy in how loans are evaluated and legitimized.

We then reviewed and adapted Barbara Townley's presentations of disembedded and embedded rationalities, a dichotomy that fit well with the dichotomy of hard and soft information, respectively.

Our analysis proceeded by analysing how the disembedded and embedded rationalities can be informed and used in conjunction with hard and soft information i SME lending. This is concluded by finding an affinity between disembedded rationality and hard information and embedded rationality and soft information.

A review of agency theory is then presented in order to give some context for our review and summary of Jensen and Meckling's (1976) paper. This is used to give some context on the relevance of agency theory. In Jensen and Meckling's (1976) paper we focus on the relation between two types of agents, the owner-manager and the loan officer. To investigate the relation between the two, Jensen and Meckling's suggested categories of monitoring, bonding, and bankruptcy costs were used in the analysis, focusing mainly on monitoring costs. By conceptualizing monitoring costs as the costs of interpreting and reacting to agency behavior, the theory becomes many fold and garners a different focus depending on the rationality considered active in the agency relation. Each rationality thus adds a new conceptual interpretation of monitoring costs.

The previous analysis of rationality types and information types is then integrated into the agency theory of Jensen and Meckling in order to propose how an expansion of the assumptions on human nature could be framed. Once the structures were connected, aspects

of Berger and Udell's (2006) framework were analyzed in order to establish four hypotheses for further empirical research and testing.

Next, a discussion of the findings of the framework were discussed in relation to other literature concerned with agency theory and rationality. This lead to a discussion of methodological choices within the paper and the consequences of these.

The previous combination of theory, analysis and discussion has allowed for the creation of a framework that, while it may not be a substitute for conventional economic agency theory, may be a very good complimentary framework of analysis. By combining the theories of such different disciplines as finance, organizational theory, and philosophy we have shown how rationality theories can provide insight on agency problems in SME lending. The framework integrates rationality theory into positive agency theory in an attempt to offer new ways of understanding agency problems in SME lending.

In the analysis we distinguished between lending based on hard and soft information because it matters to how a loan officer can evaluate the behavior of the loan seeker. In the framework developed but it must now be empirically tested in order to assess whether it adds anything to the existing theory

We therefore propose four hypotheses: 1) distance is positively correlated with the costs of producing soft information and monitoring based on soft, thus distance between an owner-manager and the loan officer is negatively correlated to the use of soft information; 2) foreign organizations are less likely to conduct its business based on soft information; 3) financially opaque firms should prefer lending based on soft information; 4) financially transparent firms should prefer lending based on hard information.

All of the above hypothesis are obviously not directly related to our framework. Rather, they are examples of hypotheses we would like to see investigated with the framework, as they have previously been investigated using agency theory without rationality theory and, as argued previously, holds aspects which have hitherto been left ignored in the current paradigms. We expect that any analysis using our framework will contribute to a less orthodox economic understanding of agency theory. We suggest that the qualitative aspects from Townley's rationality theories serve to complement the quantitative aspects of agency theory. This will also allow for a deeper understanding of the social aspects that are inherent in agency problems.

We hope that our attempt at a contribution can provide for further forays in combining awkward bedfellows such as the rationality and agency theory within scholarship, perhaps granting unorthodox solutions to problems, such as SME lending relations, that the existing scholarly tradition may previously have been unaware of.

References

Agarwal, S. and Hauswald R. (2010). Distance and Private Information in Lending, *The Review of Financial Studies,* V. 23, n. 7, p. 2758-2788

Ang, J.S., Cole, R.A., & James, W.L. (2000). Agency Costs and Ownership Structure, *The Journal of Finance* vol. LV, no., 1, p. 81-106

Berger, A.N., Cowan, A.M. & Frame, W.S. (2011). The Surprising Use of Credit Scoring and Small Business Lending by Community Banks and the Attendant Effects on Credit Availability, Risk, and Profitability, *Journal of Financial Service Research,* Vol. 39, p. 1-17

Berger, A.N. & Frame, W.S. (2007). Small Business Credit Scoring and Credit Availability, *Journal of Small Business Management v. 45(1),* p. 5-22

Berger, A.N. & Udell, G.F., (2006). A More Complete Conceptual Framework for SME finance, *Journal of Banking and Finance* 30, p. 2945-2966

Berger, A.N., Klapper, L. F. & Udell, G.F. (2001). The ability of banks to lend to informationally opaque small businesses, *Journal of Banking and Finance* 25, p. 2127-2167

Bosse, D.A. & Phillips, R.A. (2016). Agency Theory and Bounded Self-Interest, *Academy of Management Review,* vol. 41, no. 2, 276-297

Cevea, Finansforbundet, & Lokale Pengeinstituttter (2016). *De lokalt forankrede pengeinstitutters betydning for væksten i Danmark.* Published online: https://www.finansforbundet.dk/Publikationer/Delokaltforankredepengeinstituttersbetdningforvaekst.pdf [Accessed: 15-09-2019]

Chemmanur, T., Jiao, Y. & Yan. A. (2010). A theory of contractual provisions in leasing, *Journal of Financial Intermediation,* v. 19, p. 116-142

Chen, Y, Huang, R.J. & Tsai, J. (2013). Soft Information and Small Business Lending, *Journal of Financial Services Research,* 47, p. 115-133

Chodorow-Reich, G. & Falato, A. Working Paper. The Loan Covenant Channel: How Bank

Health Transmits To the Real Economy [online]. Scholar.Havard.edu, Available at: https://scholar.harvard.edu/chodorow-reich/publications/loan-covenant-channel-how-bank-health-transmits-real-economy. [Accessed: 02-09-2019]

Collin, F. (2015). 'Socialkonstruktivisme' in Jacobsen, M. H., Lippert-Rasmussen, K., Nedergaard, P. [Ed], *Videnskabsteori – i statskundskab, sociologi og forvaltning*. Hans Reitzels forlag: København, 2. ed.

Cudby, A. (2019). *Commercial Lending: Principles and Practice*, UK: Kogan Page Limited

Dermott, R., Fowler, J.H. & Smirnov, O. (2008). On the Evolutionary Origin of Prospect Theory Preferences, *The Journal of Politics*, vol. 70, no. 2, p. 335-350

Eisenhardt, K.M. (1989). Agency Theory: An Assessment and Review, *The Academy of Management Review*, vol. 14, no. 1, p. 57-74

European Central Bank (2019). *Survey on the Access to Finance of Enterprises in the euro area − October 2018 to March 2019 (SAFE)*. [online] European Central Bank. Available at: https://www.ecb.europa.eu/stats/ecb_surveys/safe/html/ecb.safe201905~082335a41.en.html#toc1 [Accessed: 08-09-2019].

Fama E. F. & Jensen M.C. (1983). Separation of Ownership and Control, *Journal of Law and Economics*, vol. 26, No. 2, p. 301-325

Ferrando, A. & Mavrakis, E. (2017). Non-Bank Financing for Euro Area Companies During the Crisis, in Rossi, S. P. S. (Ed.) *Access to Bank Credit and SME Financing*. Switzerland: Springer International Publishing AG

Finans Danmark, FSR- danske revisorer & SMVdanmark. (2018). *Sådan forhandler du med din bank*. [online] SMVdanmark. Available at: https://www.epaper.dk/finansdanmark/s%C3%A5dan-forhandler-du-med-din-bank/ [Accessed: 11-09-2019].

Flögel, F. (2018). Distance and Modern Banks' Lending to SMEs: Ethnographic Insights from a Comparison of Regional and Large Banks in Germany, *Journal of Economic Geography*, 18, 35-57

Frame, W.S., Srinivasan, A. & Wosley, L. (2001). The Effect of Credit Scoring on Small-Business Lending, *Journal of Money, Credit and Banking*, Vol. 33, No. 3, p. 813-825

Garcia-Parpet, M.F. (2007). 'Social Construction of a Perfect Market: The Strawberry Action at Fontaines-en-Sologne' in Mackenzie, D. , Muniesa, F. & Siu, L. [Ed], *Do Economists Make Markets?: On the Performativity of Economics*. Princeton, New Jersey: Princeton University press, p. 20-537

Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness, *American Journal of Sociology*, vol. 91, no. 3, p. 481-510

Grunert, J., Norden, L. & Weber, M. (2005). The role of non-financial factors in internal credit ratings, *Journal of Banking & Finance,* v. 29, p. 509-531

Guiso, L., Sapienza, P., & Zingales, L. (2004). Does Local Financial Development Matter?, *The Quarterly Journal of Economics*, p. 930-969

Hart, O. D. (2016). *Incomplete Contracts and Control*, The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel lecture [online]. Stockholm University, 8th of December. Nobelprize.org. Available at: https://www.nobelprize.org/uploads/2018/06/hart-lecture.pdf [Accessed: 11-09-2019].

Hines, R.D. (1988). Financial Accounting: In Communicating Reality, We Construct Reality, *Accounting, Organizations and Society*, vol. 13, issue 3, p. 251-261

Jensen, M.C. & Meckling, W.H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure, *Journal of Financial Economics* 3, p. 305-360

Jensen, M.C. (1983). Organization Theory and Methodology, *The Accounting Review*, vol. LLVII, No. 2, p. 319-339

Jensen, M.C. & Smith, C.W. (2000). Stockholder, Manager, and Credit Interests: Applications of Agency Theory, in Jensen, M.C. (Ed.) *A Theory of the Firm: Governance, Residual Claims, and Organizational Forms,* Massachusetts: Harvard University Press

Jyskebank.dk. (2019). *Bliv erhvervskunde i Jyske Bank*. [online] Available at: https://www.jyskebank.dk/erhverv/skift-bank [Accessed: 08-09-2019].

Kahnemann, D. & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk, *Econometrica*, vol. 47, no. 2, 263-292

Kuhn, T. S. (1970). *The Structure of Scientific Revolutions*. Second ed. Enlarged. Chicago: The University of Chicago Press

Liberti, J.M. & Peterson, M.A. (2018). *Information: Hard and Soft,* unpublished working paper

Lukes, S. (1967). Some Problems about Rationality, *European Journal of Sociology,* 8(2), p. 247-264

March, J.G. (1978). Bounded Rationality, Ambiguity, and the Engineering of Choice, *The Bell Journal of Economics*, vol. 9, no. 2, p. 587-608

Mc Namara, A., Murro, P. & O'Donohoe, S. (2017). Countries lending infrastructure and capital structure determination: The case of European SMEs, *Journal of Corporate Finance,* 43, p. 122-138

Meckling, W.H. (1976). Values and the Choice of the Model of the Individual in the Social

Sciences, *Zeitschrift für Volkswirtschaft und Statistik*, heft. 4, p. 545-560

Nassr, I. K, Wehinger, G. (2014). Non-bank debt financing for SMEs: The role of securitisation, private placements and bonds, *OECD Journal: Financial Market Trends,* vol. 1

Nouy, D. (2019). 'Financing the economy – SMEs, banks and capital markets', *Economic and Monetary Union Deepening and Convergence conference* [online]. Linz, 6th of July. European Central Bank – Banking Supervision, Available at: https://www.bankingsupervision.europa.eu/press/speeches/date/2018/html/ssm.sp10706.en.html [Accessed: 08-09-2019].

OECD. (2019). '1. Recent trends in SME and Entrepreneurship Finance', *Financing SMEs and Entrepreneurs 2019* [online]. OECD. Available: https://www-oecd-ilibrary-org.esc-web.lib.cbs.dk:8443/sites/fin_sme_ent-2019-en/1/1/3/index.html?itemId=/content/publication/fin_sme_ent-2019-en&_csp_=d95445dab35fcd2d4b065dd056316ffa&itemIGO=oecd&itemContentType=book [Accessed: 08-09-2019]

Östürk, B. & Mrkaic, M. (2014). Access to Finance by SMEs in the Euro Area – What Helps or Hampers?, *International Monetary foundation,* Working paper: WP/14/78

Pedersen, O. K. (2011). *Konkurrencestaten*, København: Hans Reitzels Forlag

Ritzer, G. (1996). The McDonaldization Thesis: Is Expansion inevitable, *International Sociology*, vol. 11(3), p. 291-308

Scott, J.A. (2004). Small Business and the Value of Community Financial Institutions, *Journal of Financial Services Research*, 25:⅔, p. 207-230

Schön, D. A. (1987). *Jossey-Bass higher education series. Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*, San Francisco, CA, US: Jossey-Bass

Simerly, R. L., & Li, M. (2000). Environmental Dynamism, Capital Structure and Performance: A Theoretical Integration and an Empirical Test, *Strategic Management Journal*, vol. 21, no. 1, p. 31-49

Simon, H.E. (1955). A Behavioral Model of Rational Choice, *The Quarterly Journal of Economics*, vol. 69, no. 1, p. 99-118

Simon, H.E. (1986). Rationality in Psychology and Economics, *The Journal of Business*, vol. 59, no. 4, part 2: The Behavioral Foundations of Economic Theory, S209-S224

Stein, J.C. (2002). Information Production and Capital Allocation: Decentralized versus Hierarchical Firms, *The Journal of Finance*, vol. LVII, no. 5, p. 1891-1921

Stultz, M.R. & Williamson, R. (2003). Culture, Openness, and Finance, *Journal of Financial*

Economics 70, p. 313-349

Thaning, M.S. (2019). Expanding the Idea of Rationality in Management Theory, Forthcoming.

Torre, A. de la, Peria, M.S.L., & Schmukler, S. L. (2008). *Bank Involvement with SMEs: Beyond Relationship Lending*, Policy Working Paper 4649, The World Bank, Development Economics Research Group & Latin America and the Caribbean Region

Townley, B. (2008). *Reason's Neglect: Rationality and Organization*, Oxford: Oxford University Press

Uchida, H., Udell, G.F. & Yamori, N. (2012). Loan Officers and Relationship Lending to SMEs, *Journal of Financial Intermediation*, 21*,* p. 97-122

Udell, G.F. (2008). What's in a Relationship? The Case of Commercial Lending, *Business Horizons*, Vol. 51, Issue 2, p. 93-103

Ufm.dk (2019). *Hvordan finder man ud af, om ens virksomhed er en SMV? — Uddannelses- og Forskningsministeriet*. [online] Ufm.dk. Available at: https://ufm.dk/forskning-og-innovation/tilskud-til-forskning-og-innovation/typiske-spogsmal/horizon-2020-typiske-sporgsmal/faq-smv-instrumentet/spoergsmael-og-svar-m-ansoegninger-til-SMV-instrumentet/hvordan-finder-man-ud-af-om-ens-virksomheder-en-smv8d8d16b216494d58bf6eb00dd03468f4 [Accessed: 08-09-2019].

Uzzi, B. & Lancaster, R. (2003). Relational Embeddedness and Learning: The Case of Bank Loan Managers and Their Clients, *Management Science,* Vol. 49, Issue 4, p. 383-399

Williamson, O. E. (1975). 'Limits of Vertical Integration and Firm Size' in *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: The Free Press, p. 117-131