Who Listens to the Top?: Integration of the Largest Corporations across Sectoral Networks

Anton Grau Larsen and Christoph Houmann Ellersgaard

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Who listens to the top? Integration of the largest corporations across sectoral networks

Anton Grau Larsen
Department of Organization, Copenhagen Business School, DK
Email:

Christoph Houman Ellersgaard
Department of Organization, Copenhagen Business School, DK

Corresponding author:
Anton Grau Larsen, Department of Organization, Copenhagen Business School, Kilevej 14A, DK-2000 Frederiksberg, Denmark

"Anton Grau Larsen obtained a PhD from the University of Copenhagen in 2015, where he studied the Danish elite. He was recently appointed as an assistant professor at Copenhagen Business School. His current research focuses on elites, social networks, fields, stratification, power and quantitative methodology."

"Christoph Houman Ellersgaard obtained a PhD from the University of Copenhagen in 2015, where he studied the Danish elite. He was recently appointed as an assistant professor at Copenhagen Business School. His current research focuses on elites, public sociology, elite careers, classes and fields."

Abstract
Corporations use ties to other powerful organisations to influence the rules that structure their markets and the society in which they operate. The corporate interlocks created by board directors show how some corporations are more successful in integrating, not just in the corporate world, but also in other sectors. Neil Fligstein proposes that the best-organised and dominating corporations, or the incumbents, are the most successful in stabilising their markets. To explore the relationship between corporate networks and integration in other sectors in the setting of a small, open, but highly negotiated economy, we analyse the intersection between the interlocking directorates among the top 1,037 corporations in Denmark and seven other sectoral networks. We draw upon a database containing 5,079 affiliations and 56,536 positions and show that the incumbents are better integrated across all sectors. The strong correlation between sectoral integration and turnover was decomposed and an independent effect of prominence, or symbolic capital, was found. This suggests that, when creating affiliations within and outside the corporate world, it is not
only the economic size that matters but also the prestige of the firm.

**Introduction**

When a director on the board of a large corporation sits on several other boards, it is an indication not just of the personal resources of the director but also of the strength of the organisations he represents (Scott, 2003). Big corporations do not lend out their most prominent employees willy-nilly, but because the ties they make matter to the survival of the corporation. These interlocking directorates within the business elite is a social phenomenon that has been the subject of intense attention from sociologists (Scott, 1991a) and social network analysis is the preferred method for the study of corporate interlocks (Mizruchi, 1996), usually identifying a core of well-connected large firms within national economies. Recent studies have shown how interlocking directorates affect, among other things, CEO compensation programmes (Wong et al., 2015) and political donations (Burris, 2005). Studies of the relationships between the corporate elite and other sectors have found considerable linkages between CEOs of the largest corporations and NGOs (Moore et al., 2002) and between CEOs and universities (Useem, 1981), and a decline in the number of ties between states and corporations (Heemskerk et al., 2012). These ties form bridges between sectors but also increase the cohesion within the business community (Barnes, 2015). In Latin American countries, strong business organisations have been shown to correlate with dense networks of interlocking directorships (Cárdenas, 2016). Furthermore, studies of interlocking directorates have contributed to the discussion of the formation of a transnational corporate network (Heemskerk and Takes, 2016).

But studies of interlocking directorates have been criticised by economic sociologists for being blind to the way histories, laws and states affect the role and influence of the ties in the corporate network (Fligstein, 1995). From this criticism it follows that it is important to situate the ties in the institutional framework of each country. This includes the importance of ownership structures, which affect how boards interlock (Bohman, 2012). This criticism can in part be addressed by looking at some of the key institutions that

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1 Dataset and R-scripts: github.com/antongrau/eliter
influence the political economy and at the symbolic prominence of the interlocked corporations. In this way we may gain insights into the structural underpinnings of the corporate network, in its economic, organisational and symbolic forms.

Drawing on concepts from Neil Fligstein and Pierre Bourdieu and applying a social network–analytic approach, this paper gives insights into the organisational underpinnings of the networks of the Danish corporate elite. By looking at the position of corporations in their respective fields, as either incumbent or challengers, we explore how central characteristics – the symbolic and economic capital of the top 1,037 Danish corporations – affect the degree to which these corporations integrate with the networks of seven central sectors in Danish society, including the position of the corporations within the corporate network. The economic field in Denmark provides an extreme case of an economy which is highly negotiated and based on a unitary corporate culture (Ellersgaard et al., 2013). As a result, corporations must navigate a complicated political field with many well-organised interest groups to achieve field dominance. Thus we explore how the structural characteristics of a firm relates to its integration into the governing structure in a small, open and negotiated economy combining the traditions of field theory and corporate interlocks.

**A negotiated and open economy**

The structure of corporate networks also depends on the institutional particularities of the political economy (Cárdenas, 2012) – in particular, the relationship between business and other sectors – and the overall structure of the economic field. Denmark is a small affluent state (cf. Katzenstein, 2003). As a co-ordinated market economy (cf. Hall and Soskice, 2001), the Danish economy and labour market are regulated not by the state alone, but by a triumvirate of the state, unions and employer associations (Pedersen, 2006). Through institutionalised negotiations and legal institutions, this triumvirate regulates and controls not just the labour market, but other areas as well, from pensions and taxation to environmental policies. Although this system has declined since the 1980s it is still a prominent force in
Danish society (Binderkrantz and Christiansen, 2015). For example, the vast majority of pension funds are controlled by the triumvirate or directly by the unions. Having strong ties to large parts of the Danish financial market thus also entails relations with the unions.

The ownership of the largest corporations in Denmark is still far from the Anglo-Saxon model of dispersed ownership. Of the mere 170 corporations registered on the Danish stock exchange, only 88 were among the top 1,037 Danish corporations and included in this study. Furthermore, are Danish corporations often owned by a small set of families, who organise inheritance and control through family foundations. These tax-subsidised foundations effectively reproduce control and prevent foreign ownership. The state is fairly absent compared to other co-ordinated market economies, with the Danish government owning a dominant share in only 13.2 per cent of top 100 corporations in 1990 (Pedersen and Thomsen 1997). However, the strong co-op movement has a strong presence in Denmark, reaching beyond its origins in the agricultural industry to a substantial part of the financial market in Denmark.

The co-operative movement, the importance of business dynasties and the widespread use of foundations all account for the modest financialisation (Binda and Iversen, 2007). Furthermore, legislation prevents executive directors in the banking sector from sitting on the boards of other corporations (Edling et al., 2012). The role of Danish financial institutions in corporate networks is evidently quite different and less dominating than you would find in other countries, such as the UK. Thus, you would expect relationships to have a greater importance to other sectors such as the state, unions and co-ops in the Danish corporate network.

The Danish economy is open (Binda and Iversen, 2007; Iversen and Andersen, 2008) with a strong presence of the largest global corporate players. However, the recruitment of Danish top management is nevertheless national and tied to the established, national business culture (van Veen and Marsman, 2008; Ellersgaard et al., 2013). This nationalism is also reflected in the peripheral position of Danish firms in the
European network of interlocks (Heemskerk, 2013). The exclusion from international networks might in part be because of the relatively small size of the Danish economy.

The Danish economy is dominated by a few large corporations that focus on shipping, technology, banking and food production. The largest corporation in Denmark in 2012 was the conglomerate A. P. Møller - Mærsk, with a turnover of 315 billion kroner. In that year, it ranked 154 on the Fortune Global 500 and was the only Danish company on the list. Few Danish corporations are global players, but within certain markets there are several large Danish exporters, such as ISS (the largest employer), Novo Nordisk, Danfoss, Grundfos, Lego, Carlsberg, Arla, Danish Crown and Vestas. These exporters have the majority of their sales outside of Denmark. As holders of the highest level of economic and symbolic capital, these incumbents within the Danish corporations can use potential ties to the sectors of business organisations, interest groups, science and education, and state to influence the governing structures, at a level which subsidiaries of multinationals and local, less-established challengers cannot. Furthermore these corporations may strengthen their ties to the Danish power elite by virtue of ties to cultural affiliations and participation in royal events and leadership groups and through positions in the inner circle of corporate interlocks (Useem 1984).

The institutional framework of the Danish state, along with a negotiated and open economy, makes an interesting case for investigating the relationship between economic and symbolic resources of incumbents and their global and local challengers and ties between the corporate sector and other sectors.

In brief, this paper uses the Danish case to investigate:

1. The nature of corporate interlocks in a small and open negotiated economy

2. Which corporations are able to extend their network to other sectors, such as business associations, foundations, state institutions, interest groups, institutions of science and education, cultural networks and symbolic gatherings (e.g. royal events)
3. The relationship between symbolic and economic resources and network integration with the different sectors.

**Fields, incumbents and symbolic capital**
In economies with considerable volatility and frequent state intervention, it is paramount for incumbent corporations to be ‘in the know’, because knowledge held by the powerful is power in its own right (Bourdieu, 1996: 386). Ties with state officials, top bankers and editors of national newspapers all facilitate the necessary ‘business scan’ of a quality and a speed that surpass those of hired consultants and experts (Useem, 1984: 46). The networking practices of a corporation are thus the result of active decisions and strategies from the top of the corporation. The best-organised corporations are able to use these ties and other channels to form the regulations and the institutions that shape the rules around their most important markets (Fligstein, 1996: 662).

To understand these dynamics, this study draws on the notion of the economic field coined by Pierre Bourdieu (2005) and the strategic action field framework restated by Neil Fligstein and Doug McAdam (2011). Although inspired by field theory, the present analysis is not a fully-fledged field analysis that identifies the dominant forms of capital and divisions within the Danish economic field. Instead, this study zooms in on the characteristics of the corporations and the relationships of those characteristics to ties between corporations and other sectors in order to understand the network strategies of incumbents and challengers in relation to both the corporate world and other sectors.

In Neil Fligstein's (1996, 2002) economic sociology, markets are not defined by their product, but are best understood as socially constructed fields. These strategic action fields have a governing structure and rules of exchange. The governing structure consists of the institutions and legal framework that define the rules for competition between the corporations within the field. The rules of exchange and the governing structure, along with the distribution of power and resources within the field, set the space in which
leaders within the top corporations struggle over the strategy and tool set used to navigate the field. The leaders who define the best strategy are those who, using Fligstein's (1996) conception-of-control terminology, avoid damaging price competition, stabilise the field and ensure the survival of the corporation.

In a stable market (or strategic action field), the dominant firms, the incumbent firms and the challenger firms form a clear status hierarchy. The challengers may slowly renegotiate the governing structure of the strategic action field, but according to Fligstein (1996), they are unable to fundamentally challenge the position of the incumbents. Fligstein observed that radical change within the field primarily happens as a result of exogenous shock. The state plays a central role in defining the governing structure of the field because it enforces laws and sets rules. These rules are never ‘neutral’ but give advantages to certain sets of actors, most often the incumbent corporations. As Fligstein argues (1996: 662, our italics): ‘Laws and accepted practices often reflect the interests of the most organized forces in society.’

Corporations that, as a part of their conception of control, organise support for and formulate policies that may turn into regulation, have a greater chance of forming the rules of the field and thereby stabilising the field in a state that is beneficial to them. This resembles the directors whom form the inner circle in the corporate network (Useem 1984). The inner circle formulate the class-wide rationality of the organised capitalist class. Likewise corporations in a position to potentially influence state policies, and which have such intentions within their conception of control, will form ties to the state in order to influence the rules that govern their field. These corporations are, according to Fligstein (1996), the incumbent corporations.

Fligstein and McAdam (2011) give specific prominence to the fields that make up the state, but in a Danish context this perspective is too narrow. As noted earlier, there is a substantial part of the governing structure of all markets that is not controlled by the state but by employers’ associations, business
organisations and unions. Some markets are so strictly regulated by these institutions that competition has been removed almost completely, most notably the pension funds.

To properly describe the relationship between incumbent corporations and the governing institutions, we broaden the perspective away from the state to an elite-wide integration. Or to stay in field terminology but from the French tradition, incumbent corporations within the economic field integrate with agents across the entire field of power (Bourdieu, 1996: 267). We thus look at how incumbent and challenging corporations integrate with the sectors that most likely shape the governing structures of their fields.

**Symbolic resources**
The relative number of resources held by a corporation is what determines its position within the field and thus separates incumbents from challengers. Initially you would think the status position of a corporation should be a result of economic strength, measured in variables such as turnover, equity and number of employees. However, this is too simplistic. As Bourdieu (2005) shows, there is a central symbolic component to economic rationality and to the distribution of status among top corporations. The symbolic form of capital for corporations is, for example, brand value, honour, goodwill investments, reputation and favours, and thus, ‘a form of credit, it presupposes the trust or belief of those upon whom it bears’ (Bourdieu, 2005: 195). But Bourdieu notes that these symbolic forms of capital are, in the end, disguised forms of economic capital (Bourdieu, 2007: 183). We would therefore expect symbolic forms of capital to correlate strongly with the economic measures of capital. But measuring these symbolic forms of capital is difficult if the analysis is not part of a full mapping of the field. In the following analysis, the number of books about the firm and its media presence are used as indicators of symbolic forms of capital. The number of books about a firm indicates the extent to which people, often within the cultural field, have expended a considerable amount of energy on producing often positive descriptions of the corporation. It signals that the corporation should be noted and that it is worthy of praise, or at least
attention. Because this is the total number of books written about a corporation, it is also a measure of how long the corporation has been a notable player in the field, because older corporations have had a longer time to accumulate attention. It is not a measure of how much attention and praise the corporation receives now; this is captured by its presence on TV and radio. While presence on TV and radio may also be achieved through scandals, coverage in general appears to be closely tied to the overall fame and status of the firm. While measures are, of course, very crude and mostly quantify overall public attention on corporations, they offer a useful indicator of the non-pecuniary status of a corporation. For instance, toy manufacturer Lego, probably Denmark’s leading global brand, is only ranked 33rd in turnover, but is 6th in books and 17th in TV and radio coverage.

Based on field theory, we can understand how the corporations’ position within a field and the larger economic field in which these smaller fields are embedded shape the conceptions of control that guide the role played by ties between corporations and other sectors. The most prominent firms at the top of the status hierarchy, the incumbents, will try to stabilise the field in a form that benefits them. The corporations with the most status will therefore try to make ties more frequently than others. Because they are more prominent, they will also more often succeed. When analysing the ties of incumbent and challenging firms, we do not analyse the structure of the respective strategic action fields in which these corporations are engaged. Rather we see how the strategies on these fields are reflected in the network resources of different corporations. Thus from adding field theory to the tradition of corporate interlock studies in the open, negotiated Danish economy we expect to find a core of well-connected firms, who’s ties extend to other sectorial networks. This core not only consists of the largest firms but also incumbents and prestigious firms.

**Network data**
The data on the corporate network was taken from the boards of the largest 1,037 companies registered in
Denmark, on which there are a total of 6,154 directors. The data was kindly donated by the private firm BIQ and originate from the Central Corporate Register of Denmark. The largest corporations were chosen according to turnover. Subsidiaries were excluded if their boards comprised only members from the parent companies. The board of each corporation included the chair, ordinary members, the CEO and other senior managers and members representing the employees. With this sample size, it is possible to describe the differences between the largest corporations and the rest, while avoiding the inclusion of corporations in which board interlocks are governed by very different principles. In small corporations, boards often include lawyers, who may hold as many as 100 board positions.

**Table 1: Properties of different sectorial networks**

<table>
<thead>
<tr>
<th>Sectorial Networks</th>
<th>Affiliations</th>
<th>Positions</th>
<th>Individuals</th>
<th>Affiliations in largest component</th>
<th>Per cent in largest component</th>
<th>Diameter of largest component</th>
<th>Highest degree of affiliations within network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporations</td>
<td>1,037</td>
<td>7,065</td>
<td>6,154</td>
<td>475</td>
<td>45.8%</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Business organisations</td>
<td>487</td>
<td>5,188</td>
<td>4,180</td>
<td>343</td>
<td>70.4%</td>
<td>10</td>
<td>49</td>
</tr>
<tr>
<td>Interest groups</td>
<td>614</td>
<td>6,070</td>
<td>5,173</td>
<td>288</td>
<td>46.9%</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Science and education</td>
<td>853</td>
<td>8,269</td>
<td>6,611</td>
<td>625</td>
<td>73.3%</td>
<td>12</td>
<td>69</td>
</tr>
<tr>
<td>State</td>
<td>457</td>
<td>5,828</td>
<td>4,461</td>
<td>392</td>
<td>85.8%</td>
<td>11</td>
<td>82</td>
</tr>
<tr>
<td>Culture</td>
<td>490</td>
<td>3,830</td>
<td>3,198</td>
<td>305</td>
<td>62.2%</td>
<td>10</td>
<td>51</td>
</tr>
<tr>
<td>Royal</td>
<td>91</td>
<td>8,343</td>
<td>5,311</td>
<td>63</td>
<td>69.2%</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>Leadership</td>
<td>122</td>
<td>3,888</td>
<td>3,856</td>
<td>18</td>
<td>14.8%</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>All non-corporate sectors</td>
<td>2,856</td>
<td>39,604</td>
<td>26,879</td>
<td>2,449</td>
<td>85.7%</td>
<td>11</td>
<td>1,342</td>
</tr>
</tbody>
</table>

Sectorial networks are identified through tags in the 5,039 affiliations in the Danish elite Network Dataset (Ellersgaard and Larsen, 2015).

Data on the other sectors was drawn from and matched with the Danish Elite Network (DEN) from a 2013 dataset (Ellersgaard and Larsen, 2015) with a near-complete set of public affiliations at the national or regional level. The dataset includes all NGOs with a hearing right, all commissions and cross-organisational affiliations in the state, all foundation boards, the leadership network Danish Management Society (VL), and all subcommittees in parliament. Furthermore, the data include several events, most prominently all publicly listed royal events from 2009 to 2013. In addition to the set of corporations described above, the
dataset includes structurally important corporations, such as the media and law firms. In total, the data from the DEN consists of 5,079 affiliations with 56,536 positions.

Each affiliation in DEN is tagged with up to seven tags. The affiliations are tagged according to type and the sector and the subject of their operation. By constructing lists of tags, it is possible to split the network data into sectoral networks that are not mutually exclusive. Table 1 lists the different sectoral networks, along with their size.

The ‘Business organisations’ sector includes business interest organisations and employers’ associations. It consists primarily of boards and committees in smaller business interest organisations (e.g. the organisation of Danish harbours), but also larger employers’ organisations like the Danish Confederation of Industry. Together with the corporate boards, the business associations provide insight on a corporation’s ties to the economic field. The ‘Interest groups’ sector comprises groups that are not present in the other categories and includes organisations such as national sports associations, environmental protection organisations and charitable foundations. The ‘Science and education’ sector contains not only scientific institutions such as university departments, research institutions and foundations supporting science, but also state committees on science and education. The ‘State’ sector includes commissions, leading affiliations in the military, state-owned corporations, committees within the state administration, and ministry and leadership networks among leaders of the public sector. Ties to interest groups, science and education and state affiliations can be seen as indication of a corporation’s relationship with the political fields. ‘Culture’ is mainly made up of cultural foundations, museums, art galleries, theatres and design institutions. The ‘Royal’ network comprises primarily royal events such as dances and dinners with official dignitaries such as the premier of China. The ‘Leadership’ sector focuses on networks that allow leaders to exchange ideas and contacts, working as social clubs to enhance elite cohesiveness (cf. Domhoff, 1975). The most prominent of these are the VL Groups, which gather corporate CEOs, high-ranking public officials, newspaper editors, architects and
politicians. A corporations ties to the social field is reflected in connections to culture, royalty and leadership groups. ‘All noncorporate sectors’ is the sum of all the networks except the corporate sector.

**Measures of economic and symbolic capital**

Data on turnover, equity and number of employees originate from the 2011 yearly reports, which means the data give the size of the corporation in 2010. This means that the three different data sources are from three different time periods. Corporate board memberships were taken from 2011 and sectoral networks from 2013. Although there has been some change in the size of the corporations and especially in the turbulent years following the global financial crisis in 2008, there is no reason to expect substantial changes in the size of a corporation or in the composition of its board.

The data on corporate size are fairly reliable, but there are substantial differences in accounting practices, especially when it comes to holding corporations with several subsidiaries. Some corporations aggregate the turnover and equity of the subsidiaries in their holding corporations, and others transfer only the profits of their subsidiaries. This means that the size of some corporations was underestimated and may have been excluded from the sample or positioned relatively lower in the turnover distribution.

Measures of the prominence of a corporation to the general public were based on the number of books about the firm and the extent of media presence. The National Bibliographic Database has an almost complete list of books published in Danish or concerning Denmark. This database also includes most of the master’s degree theses written at the largest business schools in Denmark; these accounted for a large proportion of the relevant publications for each firm. The number of media mentions for each firm was collected from the Infomedia database, which covers the media in Denmark. The number of entries was based on a five-year period. Many of the measures used in this analysis are prone to some measurement error as the name of a corporation may not be widely known or may be used differently; for instance, the
large conglomerate, Scandinavian Holding, owns several prominent companies but Scandinavian Holding is rarely mentioned.

**Analysis: Integration with sectoral networks**
The following analysis is presented in four steps. The first step presents a descriptive analysis of the network of corporate interlocks in Denmark, in order to understand the structure of the corporate networks. The second step examines the integration between the corporate network and seven other important sectoral networks, to understand which are able to integrate with other parts of the field power and thus establish or strengthen an incumbent position. The third step investigates the correlations between turnover and inclusion in the sectoral networks and identifies the size of the class of corporations that are able to integrate. The fourth and final step presents a regression analysis describing central properties of corporations included in the sectoral network to understand the role played by economic and symbolic capital.

As seen in Table 1, the largest component of the corporate network integrates approximately half (475) of all corporations. This finding is consistent with previous research on corporate interlocks in Denmark (Sinani et al. 2008). Parts of the network are fairly unconnected, as the diameter is 12 degrees, which in network terms is a very long distance (Grannis 2010). The other sectoral networks in Table 1 are fairly similar in structure, but the relative size of the largest component is often larger than in the corporate network. This tells us that the corporate network is fairly exclusive in character. Being a board member of a top corporation is a larger investment for both firm and director than most other affiliations. But even if the largest distances in the corporate network are large, there is nonetheless a core of very well-connected corporations. The most connected corporation, the large financial co-op, Nykredit, has ties to 19 other corporations and 202 corporations are connected to at least 5 other corporations. This shows that, inside the largest component, we find a dense core, which consists of corporations that are leaders within their
markets, as can be seen in Figure 1. The largest corporations inside and outside the large component can be seen in the Appendix.
The size of each point (vertex) in Figure 1 equals the total number of non-corporate memberships of the corporation board members. The closer to the core, the more memberships the companies have. Among the isolates in the crescent-shaped cloud, there are only a few larger points. The central incumbents are very well connected, both to each other and to other sectors. These are the corporations that form the organisational underpinnings of Useem’s (1984) inner circle.
The inner circle of the corporate world

If we look at the individuals who make up the corporate network, we find that it is connected by 514 individuals with more than one directorship. This is the group of individuals who fit the methodological definition of Michael Useem's inner circle (1984: 63), in which inner circle affinity is defined as the directors with two or more directorships. Of these, 121 are CEOs and 209 are chairs in top corporations.

If we remove from the network all 3,628 directors who hold only ordinary memberships, the largest component goes from comprising 475 corporations to one with 420 corporations. Thus, by removing half of all directors, only 55 corporations are disconnected from the largest component. Thus, the network is connected primarily by the extraordinary board members, chairs and executive directors, who are at the heart of corporate governance. Furthermore, the network is dependent on ‘big linkers’ – directors with three or more memberships.

Figure 2: Number of sectoral memberships ranked by turnover
We turn now to the characteristics of the corporation and how they correlate with sector memberships. In Figure 2, we see the correlations between the number of memberships within each sector and the rank of the corporation’s turnover. The rank value reduces the differences in turnover to their purely relational character and ignores the actual differences in turnover. The correlations in Figure 2 have a very similar structure across the sectoral networks. There is a fairly flat line of equal integration with other networks until around the top 250. From this point on we see a clear rise in the number of memberships. In other words, there is a local correlation between turnover and memberships. The point where the correlation kicks in is almost identical across sectors, which indicates a discrete class-like structure. In the eyes of the
other sectors, there may only be the ‘top 250’ and ‘the rest’. It is important to note that these correlations underestimate how much easier the top 250 corporations get memberships. If a director who is a member of both a small and a large corporation is invited onto a state commission, he adds memberships to both. In this way, it may not be the particular attributes of the small corporation but those of the large corporation that get them the state connection.

The high level of institutionalisation of the Danish economy is seen when on average corporations are tied to more than one business organisation through their board members. Furthermore, the negotiated nature of the Danish economy is reflected by the average number of ties to state institutions (0.7) or science and education networks (0.9). In this way the Danish case is similar to other organised corporate communities with dense corporate interlocks (Cárdenas, 2016).

**Table 2: Mean number (and standard error) of memberships within sectors, per corporate board**

<table>
<thead>
<tr>
<th>Sector network</th>
<th>Incumbents¹</th>
<th>Financial</th>
<th>Co-op</th>
<th>Global 500²</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporations</td>
<td>4.6 (5.4)</td>
<td>5.9 (6.0)</td>
<td>4 (4.6)</td>
<td>0.3 (1)</td>
<td>2.8 (4.2)</td>
</tr>
<tr>
<td>Business organisations</td>
<td>2.3 (3.5)</td>
<td>2.4 (3.8)</td>
<td>3.3 (5.1)</td>
<td>0.6 (1.2)</td>
<td>1.2 (2.4)</td>
</tr>
<tr>
<td>Interest groups</td>
<td>1.4 (2.4)</td>
<td>1.8 (2.9)</td>
<td>1.5 (3.5)</td>
<td>0.1 (0.5)</td>
<td>0.6 (1.6)</td>
</tr>
<tr>
<td>Science and education</td>
<td>1.9 (3.1)</td>
<td>2.2 (3.2)</td>
<td>2 (4.9)</td>
<td>0.3 (1.3)</td>
<td>0.9 (2.3)</td>
</tr>
<tr>
<td>Culture</td>
<td>0.9 (2.1)</td>
<td>0.9 (1.5)</td>
<td>0.6 (2.1)</td>
<td>0.1 (0.4)</td>
<td>0.5 (1.3)</td>
</tr>
<tr>
<td>State</td>
<td>1.2 (2.8)</td>
<td>2.5 (5.2)</td>
<td>1.4 (3.5)</td>
<td>0.1 (0.5)</td>
<td>0.6 (2.1)</td>
</tr>
<tr>
<td>Royal</td>
<td>1.7 (3.4)</td>
<td>1.4 (2.5)</td>
<td>1.3 (3.2)</td>
<td>0.1 (0.4)</td>
<td>0.7 (2.1)</td>
</tr>
<tr>
<td>Leadership</td>
<td>1.5 (1.7)</td>
<td>1.5 (1.8)</td>
<td>1.2 (1.5)</td>
<td>0.3 (0.7)</td>
<td>0.9 (1.3)</td>
</tr>
<tr>
<td>All noncorporate sectors</td>
<td>9.3 (12.3)</td>
<td>11.2 (14.3)</td>
<td>9.9 (14.2)</td>
<td>1.2 (3.2)</td>
<td>4.6 (8.5)</td>
</tr>
<tr>
<td>N</td>
<td>252</td>
<td>105</td>
<td>49</td>
<td>75</td>
<td>1,037</td>
</tr>
</tbody>
</table>

¹ Incumbent firms are in the top 20 per cent of their market according to turnover.
² Global 500 corporations are subsidiaries of foreign-owned Global 500 corporations from the Fortune Global 500 in 2012.

If a corporation is among those with the highest turnover within their business sector, they are deemed to
be incumbents, at least within the Danish economy. So the top 20 per cent of corporations within, for example, banking or fashion may vary considerably in size as a result of the magnitude of their markets, but they hold similar positions within their strategic action fields. This is reflected in Table 2, where the 25 per cent of firms who are incumbent are above-average in all sectoral networks and have a mean number of memberships in all non-corporate sectors that is twice the average of all corporations. These findings underline the importance of the relative position of an organisation within its own field, in addition to its absolute size.

Although incumbents have a clear networking advantage, corporations that are tied to social movements (e.g. the co-ops) and those positioned prominently within the economy (e.g. in the financial sector) have some of the same advantages. The Global 500 corporations are not tied into the institutional structure that governs the Danish economy. They are peripheral in all networks, with a mean number of memberships well below average in all sectors. Although they may be important players in the Danish economy, their leadership is not embedded in the Danish economic field. Global 500 subsidiaries are often led by a Danish CEO but have a foreign-controlled board, or they may have a small, low-profile board. This reflects reduced decisional power in the Danish subsidiary, as most of the influence is at the global level. This may also be a barrier for inclusion in other sectoral networks, as the leaders of the Danish subsidiary cannot represent the corporation directly. This barrier is amplified when considering that the majority of directors with multiple directorships are either chairs or CEOs. Ties between corporations and other institutions occur mostly at the top of the organisation, and that level excludes foreign subsidiaries.

In clear contrast to the Global 500, the financial corporations and the co-ops are much better integrated and have considerably more memberships than the average corporation. The financial corporations are particularly well connected to the state networks. This could be explained by the fact that pension funds and the largest investment funds in Denmark are owned or controlled by unions and the employers’
associations. Union leaders and the leaders of the employers’ associations are strongly positioned across all sectors and that gives the financial institutions some of their prominence. But the largest banks are also very well connected, not just to the rest of the corporate sector but also to politics and science. The co-ops are particularly well connected to the business associations and interest groups, which represents the close ties between the co-op-controlled corporations and the much broader co-op movement.

**Symbolic components of sectoral integration**
The descriptive analysis presented above provided insights into the correlations between turnover and inclusion in networks across the different sectors. It also showed the relative centrality of incumbent firms, co-ops and finance. Turnover has been used as the main measurement of size, but this measure does not capture the symbolic component of the dominance of the incumbent firms. The following regression analysis will look into the particular role played by two measures of symbolic resources in the general public: (a) the total number of books written about a corporation; and (b) its TV and radio presence. Using linear least square regressions, we estimate the number of affiliation memberships in the different sectorial networks based on the above mentioned symbolic resources. We control for corporation size – ranked turnover, ranked equity and ranked number of employees – and field properties: being incumbent (in the top 20 per cent of their market according to turnover), being a financial firm, being owned by a co-op and being a subsidiary of a *Fortune* Global 500 corporation – to explore whether these indicators of symbolic capital are related to sectorial integration net of these other firm attributes. As integration in the sectorial networks also aides the firm in struggles on the economic field, the regression presented in table 3 should not be read as an analysis of causal, but rather self-reinforcing relationships.
### Table 3: Linear Least Square Regression Results of Estimated Number of Memberships in Sectoral Networks

Parameter estimates with standard errors are in parentheses.

<table>
<thead>
<tr>
<th>Sectoral network</th>
<th>Corporations</th>
<th>Business organisations</th>
<th>Interest groups</th>
<th>Science and education</th>
<th>Culture</th>
<th>State</th>
<th>Royal</th>
<th>Leadership</th>
<th>All non-corporate sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean number of memberships</td>
<td>2.8</td>
<td>1.2</td>
<td>0.6</td>
<td>0.9</td>
<td>0.5</td>
<td>0.7</td>
<td>0.7</td>
<td>0.9</td>
<td>5.1</td>
</tr>
<tr>
<td>Max number of memberships</td>
<td>24</td>
<td>25</td>
<td>15</td>
<td>31</td>
<td>27</td>
<td>22</td>
<td>9</td>
<td>72</td>
<td></td>
</tr>
</tbody>
</table>

**Corporation size**

- **Turnover, ranked**
  - [1:1007] 2.72 (0.64) 0.46 (0.41) 0.14 (0.27) 0.31 (0.39) -0.12 (0.24) 0.60 (0.39) 0.09 (0.37) 0.19 (0.22) 1.60 (1.46)
- **Employees, ranked**
  - [1:987] 1.82 (0.53) 0.93 (0.34) 0.33 (0.23) 0.91 (0.32) 0.40 (0.19) -0.16 (0.32) 0.43 (0.30) 0.90 (0.18) 3.44 (1.21)
- **Equity, ranked**
  - [1:1007] 1.77 1.88 (0.52) 0.82 (0.33) 0.67 (0.22) 0.95 (0.32) 0.37 (0.19) 0.61 (0.31) 0.87 (0.30) 0.62 (0.18) 4.63 (1.18)

**Field properties**

- **Incumbent**
  - [0:1] 2.31 0.95 (0.38) 0.55 (0.24) 0.37 (0.16) 0.24 (0.23) 0.24 (0.14) 0.15 (0.23) 0.61 (0.22) 0.15 (0.13) 2.34 (0.87)
- **Finance**
  - [0:1] 1.14 2.34 (0.49) 1.55 (0.29) 1.15 (0.19) 1.04 (0.28) 0.24 (0.17) 2.17 (0.27) 0.45 (0.26) 0.27 (0.15) 6.48 (1.03)
- **Co-op**
  - [0:1] 1.05 0.38 (0.57) 2.24 (0.36) 0.34 (0.24) 0.84 (0.35) -0.10 (0.21) 0.10 (0.34) 0.13 (0.33) -0.02 (0.19) 3.24 (1.29)
- **Global 500**
  - [0:1] 1.05 -1.86 (0.43) -0.26 (0.28) -0.48 (0.18) -0.54 (0.26) -0.38 (0.16) -0.48 (0.26) -0.70 (0.25) -0.47 (0.15) -3.11 (0.98)

**Symbolic capital**

- **No. of books**
  - [0:262] 1.11 3.05 (0.77) 0.81 (0.50) 2.48 (0.33) 3.45 (0.48) 3.84 (0.28) 3.04 (0.47) 3.77 (0.45) 1.60 (0.27) 16.55 (1.77)
- **Radio and TV, ranked**
  - [0:983] 1.18 3.00 (0.95) 3.06 (0.61) 1.50 (0.40) 2.85 (0.58) -0.19 (0.35) 1.49 (0.57) 1.77 (0.55) 0.74 (0.33) 11.11 (2.16)
- **Intercept**
  - -0.56 (0.30) -0.49 (0.19) -0.28 (0.13) -0.59 (0.19) -0.04 (0.11) -0.27 (0.18) -0.34 (0.17) -0.12 (0.10) -1.70 (0.63)

| R squared | 0.29 | 0.25 | 0.25 | 0.24 | 0.20 | 0.23 | 0.24 | 0.37 |

N = 857 (180 cases omitted due to missing data), ***: p < 0.001, **: p < 0.01, *: p < 0.05; (): p < 0.10;

- a: Parameter estimate and standard error multiplied by 1000;
- b: Parameter estimate and standard error multiplied by 100.
As seen by the regression analysis in Table 3, turnover – one of the most common measures of corporation size – has no significant explanatory power on inclusion in the sectoral networks. This does not mean that turnover is unimportant, but that it can in some degree be decomposed into these other variables. Even when controlling for key indicators of corporation size, the symbolic forms of capital – books, and radio and TV presence – consistently have more importance. These two forms of capital have a strong relationship to integration in all sectoral networks, even within business organisations and corporate networks. Thus, there is an independent symbolic component to network inclusion across all sectors. In the network of corporations, the estimates for equity, number of employees, and radio and TV presence are all fairly equal. The relative centrality of co-ops, incumbents, and finance shown in Table 2 is still present in Table 3. The same is true for the Global 500 corporations, which have fewer memberships across most sectoral networks.

The two types of capital influence the number of memberships across the different sectors differently. The cultural, royal and state sectors have preference for ties with corporations with a high volume of books written about them. This suggests that prominent corporations with a long history in Danish society are more likely to gain memberships within these fields. Some of these prominent firms – e.g. Mærsk, Scandinavian Tobacco, Novo Nordisk, Rockwool and Carlsberg – are owned by old families controlling charity foundations that support cultural institutions and artists. The Queen and the royal court also appear to have a preference for the corporations rich in symbolic capital, with only small effects from equity. The royal court is also connected to the old dynasties. Several of the dynasties have members who have received decorations, titles and positions from the royal family.

The state has a profile very like the royal family, which might not be surprising as the guest lists of many royal events are written in collaboration with relevant ministries and the royal court. But unlike the state,
the royal family has a specific preference for incumbents. What is interesting is that co-op ownership does not have an effect in these three sectors. This indicates that strong ties to the co-op movement, and thereby the unions and the farmers’ movement, are not important by themselves, although it may also indicate that board members from co-ops are more likely to be integrated more closely with their respective movements than with the haute bourgeoisie and the state. The sectors where pure economic capital is most prominent are the corporate networks and business organisations, and the science and education and the leadership networks.

**Discussion and conclusions**

As argued by scholars of corporate interlocks (see e.g. Useem, 1984) a connected corporation is an influential firm. The influential corporations form the environment of competition. They are, following Fligstein’s (1996) theory of strategic action fields, trying to stabilise the market in a state that benefits them. In line with the comparative studies Stokman and Wasseur (1985) a fairlyexclusive corporate network in Denmark is seen, with only half of the corporations taking part in the single large component connecting the large Danish businesses. The exclusive character of the network of interlocking directorates is underlined by that fact that a substantial part of the network is connected by CEOs and board chairs. The ordinary members play a minor role in the integration of the network. But even if this component is exclusive and ties are globally rare, there is a highly connected core. In this core, the incumbent corporations are densely connected with each other and also to other sectors. The incumbent corporations are, of course, also the largest in terms of turnover, therefore there are also clear correlations between the number of memberships in the different sectoral networks and turnover. This correlation is not a global one, however; it is only at the top of the distribution. A clear break in the correlations around the top 250 corporations is found. It could be argued that there are two classes of corporations: the top 250 largest corporations and the rest.
Although in economic terms, corporate size is of substantial importance to corporate network integration, it is only a part of the picture. Symbolic forms of capital – the recognition that a corporation is honourable, prestigious and prominent – have an independent impact on the degree to which a corporation is able to create cross-sectoral ties. Centrality in the economic field leads to central positions on the political and social field. The relationship between indicators of symbolic capital and cross-sectoral network integration varies across the different networks. The state, the royal court and culture connect primarily with corporations strong in symbolic capital. However, the influence of symbolic capital is a substantial factor towards the corporation’s inclusion in all sectoral networks. Hence, incumbent firms get the lion's share of the network access, showing how corporate interlocks also reflect a hierarchy of economic and symbolical status in the eyes of both the rest of the corporate world and of other key sectors in the political economy.

However, it is not only the position of each corporation within the economic field or the market that influences the degree of integration. If a corporation is positioned or owned by those with a particular affinity to the Danish elite, it will tend to be better integrated. Co-ops and financial corporations are vastly better integrated than other corporations. Thus understanding the relationship between integration in sectorial networks and position in the economic field requires that researchers also look beyond the economic field and analyse how positions in the economic field are related to position in the national field of power.

The importance of understanding the particular national setting of field struggles is also seen when looking at the subsidiaries of Global 500 corporations. While these may be strong in both economic and symbolic forms of capital, they are less central than could be expected, probably because of their weaker ties to the Danish elite. The corporations who have foreign ownership and foreign board members are more often isolates, and this may be a reflection of the destabilising effect foreign take-overs have on the
network. The Danish business community may be guarded from foreign influence by the extent of protective forms of ownership in Denmark. But it may also be the case that only the very largest of Danish corporations are able to play a successful part in the emerging global field of power, and therefore most companies stay within the nation-state. Thus this study suggest that, despite recent declines in the cohesion of nationally embedded corporate networks (Bühlmann et al., 2012; Heemskerk, 2007; Mizruchi, 2013), in Denmark these networks not only matter but also help national incumbent firms have stronger ties to other sectors than challengers from multinational corporations and from minor local corporations. This highlights the need to understand the complex relationship of dominance between global and local incumbents within the theory of fields and thus distinguish between strategies of incumbents on a global, national and local level.

The network strategies of corporations – in particular, how they interlock with other key sectors of society – offer a new perspective on the role of business elites in varieties of capitalism. The relationship between positions in strategic action fields and network ties to key sectors can help us understand the question how elites are structured under different varieties of capitalism (cf. Morgan, 2015). The extent to which incumbent firms maintain strong ties to other corporations, the state, interest groups – particularly unions – or the academic world is indicative of the institutional infrastructure under which market economies are organised. As Cárdenas (2012) shows different varieties of capitalism results in differently structured national corporate communities. This study provides a further exploration on how positions in corporate interlocks, and position the economic field vis-à-vis other sectorial networks reflect the underlying political and social coalitions structuring the institutions of the political economy (Hall and Thelen, 2009). The strong access to other sectors at the top of the corporate hierarchy confirm that the core of Danish capitalism is closely linked to labour, non-profits, and the state and thus is a highly organised variety of capitalism.
References


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van Veen K and Marsman I (2008) How international are executive boards of European MNCs?

Wong LHH, Gygax AF and Wang P (2015) Board interlocking network and the design of executive compensation packages. *Social Networks*
### APPENDIKS: Top 20 corporations in and outside the large component in the Danish corporate network ranked by 2010 turnover

<table>
<thead>
<tr>
<th>Name</th>
<th>Non-corporate memberships</th>
<th>Degree in corporate network</th>
<th>Turnover (million DKK)</th>
<th>Name</th>
<th>Non-corporate memberships</th>
<th>Degree in corporate network</th>
<th>Turnover (million DKK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.P. Møller-Mærsk</td>
<td>33</td>
<td>28</td>
<td>315,395</td>
<td>Statoil Refining</td>
<td>0</td>
<td>0</td>
<td>14,142</td>
</tr>
<tr>
<td>Danske Bank</td>
<td>27</td>
<td>32</td>
<td>120,463</td>
<td>Dupont (Danisco)</td>
<td>0</td>
<td>0</td>
<td>13,706</td>
</tr>
<tr>
<td>ISS</td>
<td>5</td>
<td>10</td>
<td>74,073</td>
<td>Dansk Shell</td>
<td>7</td>
<td>0</td>
<td>13,583</td>
</tr>
<tr>
<td>Novo Nordisk</td>
<td>27</td>
<td>26</td>
<td>60,776</td>
<td>Rema 1000</td>
<td>2</td>
<td>0</td>
<td>9,458</td>
</tr>
<tr>
<td>Carlsberg</td>
<td>30</td>
<td>4</td>
<td>60,054</td>
<td>DT Group</td>
<td>2</td>
<td>0</td>
<td>8,220</td>
</tr>
<tr>
<td>DONG Energy</td>
<td>47</td>
<td>38</td>
<td>54,598</td>
<td>Sonepar Nordic</td>
<td>1</td>
<td>0</td>
<td>8,094</td>
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<tr>
<td>USTC</td>
<td>4</td>
<td>14</td>
<td>51,629</td>
<td>Telenor</td>
<td>1</td>
<td>2</td>
<td>6,635</td>
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<td>Vestas</td>
<td>28</td>
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<td>51,534</td>
<td>Vattenfall</td>
<td>3</td>
<td>0</td>
<td>6,196</td>
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<tr>
<td>Arla Foods</td>
<td>32</td>
<td>6</td>
<td>49,030</td>
<td>Actebis Computer</td>
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<td>0</td>
<td>6,126</td>
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<tr>
<td>Nykredit</td>
<td>56</td>
<td>38</td>
<td>46,695</td>
<td>D.F.N. Olie</td>
<td>1</td>
<td>0</td>
<td>6,053</td>
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<tr>
<td>Wrist Group</td>
<td>4</td>
<td>8</td>
<td>45,230</td>
<td>Scan Group</td>
<td>0</td>
<td>4</td>
<td>6,008</td>
</tr>
<tr>
<td>Danish Crown</td>
<td>44</td>
<td>24</td>
<td>45,211</td>
<td>Telia</td>
<td>0</td>
<td>0</td>
<td>5,700</td>
</tr>
<tr>
<td>DSV</td>
<td>22</td>
<td>20</td>
<td>42,562</td>
<td>Kuwait</td>
<td>4</td>
<td>0</td>
<td>5,573</td>
</tr>
<tr>
<td>DLG</td>
<td>14</td>
<td>14</td>
<td>39,506</td>
<td>MSC Scandinavia</td>
<td>1</td>
<td>4</td>
<td>5,534</td>
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<tr>
<td>Coop</td>
<td>11</td>
<td>2</td>
<td>39,364</td>
<td>LM Wind Power</td>
<td>0</td>
<td>0</td>
<td>5,417</td>
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<tr>
<td>Nordea</td>
<td>55</td>
<td>26</td>
<td>38,290</td>
<td>Euro Cater</td>
<td>0</td>
<td>2</td>
<td>5,253</td>
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<td>Danfoss</td>
<td>33</td>
<td>18</td>
<td>37,795</td>
<td>HMN Naturgas</td>
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<td>Skandinavisk</td>
<td>24</td>
<td>32</td>
<td>34,217</td>
<td>Pen-Sam</td>
<td>2</td>
<td>2</td>
<td>5,193</td>
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<tr>
<td>TDC</td>
<td>30</td>
<td>28</td>
<td>31,550</td>
<td>Lemvigh-Müller</td>
<td>2</td>
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<td>4,498</td>
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<td>FLSmidth</td>
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<td>16</td>
<td>28,407</td>
<td>SAS Institute</td>
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