

## **The Fading of the State: corporate-government networks in the Netherlands**

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Abstract:

This paper contributes to an understanding of how business-state relations have evolved over the past decades by analysing elite interlocks between the corporate sector and the state over the period 1969 – 2006 in the Netherlands. These interlocks create links between the top decision centers of the largest corporations and public administration. A comparative analysis over time of the network of corporate-state interlocks for the years 1969, 1996 and 2006 reveals that ties that were very frequent in 1969 are in decline, reflecting and confirming a rapid disentanglement of the corporate sector from what was until the 1980's an example of neo-corporatist socio-economic arrangement. The disappearance of industrial policy, privatization of state owned corporations, the emergence of autonomous administrative units, and the 'hollowing out' of the state all contribute to the fading of the state. The network structure that remains in place – albeit thin – is not dominated by either the state or business but rather a partnership between separate forces. At the same time many of the previous state-business relations now are established outside the span of control of the state. The state is left out. Our study suggests that by the time the financial crisis hit in 2007, the social fabric for fruitful state-business cooperation was gone.

## 1. Big Business and the State

Business and the state have a symbiotic relationship. The state needs the corporate sector as an organizing source of investment, production and services, as well as a provider of jobs and incomes. It renders tax revenues the state needs to operate.

Moreover, big business and *haute finance* will add to the international status and to the soft power of a state (Nye Jr, 2011). In turn, corporate business needs the state not only as a dominant client, customer and business partner, but also for creating and maintaining proper market conditions. Already in his Theory of Moral Sentiments, Adam Smith (1759/2000) argued that for a market system to work properly, it must be embedded in an institutional setting that includes political and legal rules and regulations (Samuels, 1977). A minimal set of institutions and 'moral sentiments' is indispensable for any market economy, including, among others, property rights, rules of exchange and appropriate governance structures (Fligstein, 1996, p. 658). The state has the authority to create, maintain and change this institutional setting.

Across time and space, the specific relationship between business and the state has known different configurations, including different distributions of power between the two. Over the past forty years business steadily gained more power *vis-à-vis* the state in the western industrialized world (Carroll, 2010, Schmidt, 1996). Ongoing policies and practices of liberalization were based on the belief that free markets are the most optimal mechanism for the coordination of economic action. Hence, it was argued that the role of the state should be as limited as possible. Consequently, state-owned firms were sold, markets were deregulated and market-like operational designs were introduced in public sectors such as health care, public housing and education (see Barley, 2007 for a critical analysis of the rise of the

corporate society). This transformation of the state gradually but significantly altered the institutional architecture of state power.

In this article we will focus on one particular element of this changing architecture: the dynamics of the elite networks that connect big business and the state. The symbiotic relationship between business and the state is underpinned by the social structure of state-business interlocks, for instance when corporate directors become members of governmental advisory committees, or sit on the supervisory boards of state institutions. Likewise, (former) bureaucrats and politicians might hold (supervisory) board positions in corporations, semi-public pension funds, research funding agencies and the like. Such personal interlocks together form networks that bring together key political, administrative and corporate capital. Yet, studies of interlocking directorates are usually solely restricted to inter-corporate relations. Following C. Wright Mills' famous study on the power elite (Mills, 1956/2000), there were a few early studies on the relations between the business, political and military elites (for instance Hunter, 1953, Domhoff, 1967, Domhoff, 1975). More systematic work was done on the degree of elite interchange between corporate and political institutions (Freitag, 1975, Mokken and Stokman, 1978, 1979, Stark and Vedres, forthcoming), on elite integration in the non-profit, corporate and government sectors (Moore et al., 2002), on the role of corporate directors in the governance of non-corporate institutions (Useem, 1975, Useem, 1984), and on political cohesion of the business elite itself (Burris, 2005). But these studies remain exceptions in the literature that studies how corporate elite networks have been in decline over the last decades.

Perhaps the only study that fully investigates business–state elite networks is Fox and Ornstein's (1986) study of the Canadian state and the corporate elite in the

post-war period. They show how corporate presence in the state provides for effective liaison with the largest Canadian firms (Fox and Ornstein, 1986, p. 502). With this finding they corroborate Miliband's view of state-business relations as a network best characterized as a partnership between two different, separate forces having their own distinct spheres of control (ibid 502-503). Because of interlocks, business-state networks are located in the fuzzy area between public policy and corporate strategy. In this view most business-government interlocks are intended to realize and perpetuate an exchange of expertise and information. They should therefore not be interpreted as fully asymmetrical relations, showing only the traffic of influence from government to business or the other way around. They denote more often than not mutual, reciprocal relations even though these are hardly ever fully symmetrical either.

The purpose of this article is to better understand to what extent, in what way and in what pace, the reorganization of the institutional architecture of state power had an impact on the business-state networks that connect corporate boardrooms with the state bureaucracy. For this we conduct a longitudinal study in one national setting. Reliable historical data on state-business relations are rare and difficult to acquire, but these are available for the Netherlands from the late 1960s onward. The Netherlands is a small, internationally oriented country with a relatively large number of multinational corporations. It was widely considered to be a country of the 'Rhenish' variety of capitalism (Albert, 1991), with a corporatist tradition reflected in relatively strong state-business relations (Helmens et al., 1975, Stokman et al., 1985, Heemskerk, 2007, Zijlstra, 1982, Mokken and Stokman, 1979). We consider the dynamics of Dutch state-business networks over a period of nearly forty years (1969-

2006). By doing so we are able to make a longitudinal comparison between two different political-institutional settings: corporatism and liberalism.

In 1969 the case under consideration is a typical neo-corporatist society. By 2006, the Netherlands was transformed into a neo-liberal society in which the state significantly changed its form and function. We consider the Netherlands as an example of the well-established category of small European states with traditions of democratic corporatism (Katzenstein 1985). Small states are open to global pressures, such as the growing appreciation of neo-liberal policies. The growing dominance of the neo-liberal paradigm, in which arm's length distance between market actors is required, together with a more limited role for the state suggests that big business and the state have disconnected from the tight networks that existed under the corporatist tradition.

Over the course of the studied period, the public-private sphere saw a reallocation of assumed or delegated state tasks and a subsequent redefinition of the public-private playing field. The transformation of the state and the concomitant reorganization of the institutional architecture of state power is brought about by a number of parallel and sometimes mutually reinforcing processes. Inspired by Jessop (2010) we discern four of these processes: the disappearance of industrial policy; privatization of state-owned corporations, the emergence of autonomous administrative units; and the transformation of powers from the national level to supra-national ones: the 'hollowing out' of the state. In the following sections we investigate how, in the Netherlands, the configurations of state-business relations developed over the four decades up to 2006. Section 2 first discusses how the Dutch socio-economic order developed in the post-war years. This discussion helps to understand the network dynamics in the context of evolving state-business relations

during the 20<sup>th</sup> century. Subsequently we discuss how the four processes of state transformation played out in the Netherlands. From this we derive a number of expectations on how the state-business network evolved over time. The empirical networks we present are based on business-state interlocks for the years 1969, 1996 and 2006. The three points in time are spread nearly evenly over 37 years so as to grasp the dynamics of the changing political economy, as we will explain in the following section. Section 3 describes the data in more detail for the ensuing analyses. Section 4 is dedicated to the evolution of the networks covering the period 1969-2006. In order to distinguish between the several areas and domains within the state we distinguish different policy sectors. Section 5 concludes the paper with a summary and a discussion of the results from the perspective of the recent stormy global economic developments since 2008. We hope that this study which compares two distinct configurations of state-business relations can serve as a stepping-stone for further cross-country comparative research.

## **2. From Neo-Corporatism to Neo-Liberalism**

### **2.1 Corporatism in the Netherlands**

The network between state and business in the Netherlands as it developed in the second half of the 20<sup>th</sup> century reflected the corporatist tradition of Dutch politics. In the aftermath of World War II, the post-war reconstruction agenda and the corresponding cooperation of labor, capital and government culminated in a corporatist landscape that was at least partly a formalization of the more informal but intricate business-state relations of the Interbellum. During the Nazi-occupation, economic coordination with the state was enforced upon Dutch business. After the Second World War, the corporatist order remained in place, although stripped of the

authoritarian elements and embedded in a liberal-democratic order. This is why post-war corporatism is labeled as neo-corporatism (Hollingsworth et al., 1994). The appreciation for state coordination of economic activities as prevalent in post-Second World War Europe should also be understood in terms of ideological perspectives. The doctrines of both the Roman Catholic Church (i.e. the principle of subsidiarity in the papal encyclicals *Rerum Novarum* (1891) and *Quadragesimo Anno* (1931)) and their equivalent in Protestant/Calvinist persuasions were favorable to a corporatist coordination of the economy and society at large. The socialist movement also developed strong corporatist ideas during the great depression (Windmuller, 1987).

Corporatist coordination of the economy found its institutional embedding in sector organizations, but also in a dense network of consultation that connected state, labor, capital and management. In the neo-corporatist landscape, corporate governance developed a stakeholder orientation. This build on the notion that there should not be one of the stakeholders within the firms whose interests dominates over the others (such as, for instance, the shareholder). During the early 1970s this was formalized in corporate law, through the so-called structure regime. As is common in a two-tier board system, executive directors convene in the executive board, and outside directors meet in a separate supervisory board. The supervisory board was defined as an independent council with the task of serving ‘the interest of the limited liability company and its enterprise’, rather than shareholder interests. The structure regime created an important and autonomous position for corporate directors. The supervisory board – not the shareholders – had to approve the annual accounts. Members of this board were not appointed by the shareholders, but recruited by cooptation. Among the corporate elite, a dense network of intercorporate interlocks strengthened this self-supporting position. At the same time, there was a

strong and institutionalized corporate presence in the state apparatus through membership of corporate directors on state advisory committees (Helmets et al., 1975).

The first year of our analysis, 1969, can be considered the apex of neo-corporatist public-corporate symbiosis that characterized the post-war reconstruction period. The following decade the Dutch social economic profile moved away from its corporatist origins. From the early 1980s on, the increasing influence of neo-liberal politics supported a move away from the corporatist 'Rhenish' model (Albert 1991) toward a more Anglo-American market-entrenched public-private practice. These developments, triggered by the ultimate failure of Dutch industrial policy in the early Eighties (Wassenberg 2011) and followed by waves of privatization of government business and services, had increasing effects on the relations between corporate business and the state. These neo-liberal politico-economic forces reached a position of dominance in the mid-Nineties.

During the 1980s and 1990s politicians increasingly questioned the neo-corporatist system of consultation and co-governance through policy networks. In the early 1990s, the sentiment against the practice of consultation was growing. Advisory committees with strong corporate presence were now considered hindrances to the policy process. Whereas the neo-corporatist system of consultation was based on representation of interests, there was now a demand for advice based on independent expertise. Finally, in 1997 a new legal framework was put in place, with the aim of cutting down and clearing up the system of government advisory committees where business found an entrance into the domain of the state, and vice versa. Although the installation of this new legal framework has not been very effective in reducing the number of advisory committees, it did signal the changing

attitude towards traditional corporatist arrangements. The year 1996 therefore marks a good point of comparison, because it helps to clarify whether institutional trends precede legal regulations or the other way around. In the following decade the trend of liberalization steadily continued. By 2001 the practice of civil servant directors at state-owned firms was renounced. The year 2006 was just before the financial crisis. It can serve as a reference year for future studies on the effect and impact of the crisis on public-private interlocks.

## **2.2 Redrawing the public-private playing field**

The role of the state started to change slowly but steadily from the mid-1970s onward. First, the state moved away from active industrial policy, and state support for (ailing) industries became politically and economically less acceptable. This process was initiated in the early 80's with the bankruptcy of the ship building company Rijn-Schelde-Verolme, in spite of generous government financial support to the tune of 2.7 billion Dutch guilders in previous years (Wassenberg, 1983). The subsequent parliamentary inquiry held in 1983 and 1984 – broadcasted live on Dutch TV - was a heavy blow for the Ministry of Economic Affairs, which seemed to have wasted the taxpayers' money. From then on state support for ailing industries became anathema, increasingly so with the rise to dominance of neo-liberal economics and the effects of regulation of the common market by the European Commission. When one decade later, in 1996, the Fokker Aircraft company went bankrupt, another national flagship and emblem of Dutch technological competence and achievement, the state didn't lift a finger. In that way the department of Economic Affairs, thus losing its influence over the economy, receded into the background. The general decline of industrial policies and planning makes it less rewarding for

corporate directors to sit on government advisory boards. We might thus expect that the previously strong corporate presence in the state vanished over time.

Second, this process was reinforced by the relocation of state-owned firms and public services to the private sector. Many of the previously state-owned enterprises, such as the railways, public utilities in the energy sector, postal services and telecommunications, are now quasi-private businesses. The public sector was reduced by the outsourcing of public services (public transport, social security, public health, utilities, etc.). From 1994 to 2006 the equity of the Dutch state account was reduced by more than 100 billion euro. More than 60 billion euro of shares in former state enterprises were sold together with additional sales of national real estate to the tune of 40 billion euro (De Kam, 2007). It has been pointed out, however, that the Dutch privatization program can be interpreted as a “curtsy to the times” rather than as the result of a positive, grand design to revitalize the economy (Hulsink and Schenk, 1998). Dutch state-owned business always had a relatively autonomous position, which made privatization a relatively easy process. Due to the privatization of state-owned corporations we expect fewer civil servants and politicians on the supervisory boards of large companies.

Third, the re-arrangement of tasks and responsibilities previously under the responsibility of the Dutch state was further facilitated by means of new types of semi-public institutions, created by the foundation of autonomous administrative units called ZBO. These quasi-autonomous non-governmental organizations or ‘quangos’ (Pollitt and Talbot, 2004) are charged with the execution of former government tasks without direct accountability to a corresponding government authority. This led to a great variety of institutions with different legal statutes, some operating more or less on the 'private control-public funding' formula. Others are privately funded monitoring

and auditing institutions that operate at arm's length from the state. In 2003 this layer of semi-public institutions already included more than 600 ZBO's. The state continuously redefined its borders, expelling sectors and tasks that had long been under state control while also adding new institutions. However, while the emergence of autonomous administrative units may weaken state power, they do not necessarily lead to less interlocks between business and these sectors that are placed at arms length from the state.

Fourth, by the turn of the century, globalization increasingly undermined the position of the Dutch nation state *vis-a-vis* the large corporations that operated in international markets. Globalization had rendered corporate governance an international affair. By 2002 all but one of the 25 largest listed firms (AEX) had at least two foreign directors, and by 2007 half of all directors were of non-Dutch nationality. Foreign directors replaced Dutch directors in both the executive and supervisory boards of the largest firms (Heemskerk, 2007). Very recently corporate networks have become denser at the European level (Carroll, Fennema and Heemskerk, 2009; Heemskerk 2011), at a time when 'Brussels' has evolved more into a European 'Washington'. Corporate presence in the state was possibly rerouted from 'The Hague' to 'Brussels'. Moreover, the rise of meeting points such as the European Round Table of Industrials, where CEOs of the largest European corporations gather, can be viewed as an indication of the shift of the (informal) national Dutch corporate networks toward the larger European ones. At the same time, the shift from neo-corporatism to neo-liberalism in the Netherlands is strongly influenced by the project of European unification. European common policies steered national governments and state institutions away from business and corporations (Van Apeldoorn, 1998, 2002). European integration decreased the independence of

national governments which can no longer formulate policies unilaterally, while it increased that of business (Schmidt 1996). This led to the redrawing of the public-private playing field away from the previous neo-corporatist settings. As a result one would expect this growth of state-corporation linkages at the European level to be at the expense of the state-business networks at the national level.

To sum up, the Netherlands was a prime example of a neo-corporatist state in the decades following WWII. By 1969 the institutional configuration of the state *vis-à-vis* other stakeholders such as labor, capital and management came close to the ideal model of neo-corporatism. Following 1969, the Netherlands moved away from this corporatist institutional architecture. In the remainder of this paper we will analyze how these changes affect the network relations between big business and the state. In order to investigate these issues we conduct a network analysis of the relations between the state and the 86 largest companies in the Netherlands. We will map the general dynamics, isolate the central players in the network, and investigate how the state-business elite is composed. In addition we will compare these dynamics with the changes in the corporate elite network itself. Finally, we look at how business ties with universities developed over the period universities moved from the state domain to the private domain. Together this set of investigations into the network dynamic allows us to understand how the four processes reshaped the state-business relations in three qualitatively different periods within the Netherlands. But first, the next section introduces the data we collected for this study.

### **3. Data: corporate networks and state affiliations**

In 1969 Mokken and Stokman initiated a series of studies on interlocking directorates among the largest corporations in the Netherlands (Helmerts et al., 1975, Mokken and Stokman, 1978). This 1969 study also analyzed the personal interlocks connecting the 86 largest corporations with the state. The dataset comprised the 64 largest industrial and commercial corporations, together with the 22 largest financial enterprises. Using the same selection criteria, we built similar datasets for the years 1996 and 2006. We restricted the analysis for 1996 and 2006 to the same number of largest corporations, to be referred to as the top-86 of the corresponding year. Together, these 86 firms constitute a dominant part of the Dutch economy. We do not restrict the top-86 to stock listed firms, although all top AEX traded firms are in the sample. Throughout the paper we use the 1969 data on state-business interlocks as reported in the original studies (Helmerts et al., 1975, Mokken and Stokman, 1979). On the basis of an appendix in the original study we were able to reconstruct the 1969 network dataset.

For the identification of the state structure and public-private access points we referred to the directories, Staatsalmanak, editions 1968/1969, 1996/97 and 2007. The annual directory Staatsalmanak systematically reports the affiliation of individuals with state institutions in the Netherlands. This directory primarily registers the identity and composition of ministerial directorates and institutions (bureaus, offices, agencies, advisory committees, etc.) within the framework of various departments to which they are affiliated. It lists the top civil servants of these departments, according to the different directorates. Then the main advisory committees which fall under these departments are also listed, as well as affiliated institutions taking part in the implementation or administration of specific policies. All

organizations and bodies that are included in the Staatsalmanak are considered to be part of the state apparatus, except for the tripartite sector organizations and the tripartite Social Economic Council. These are not included because of their particular (tripartite) public-private character. Also, the judiciary system will not be considered here. For all persons, we manually compared names and (corporate and state) affiliations, combining the records of unique persons. For each potential match of two records we checked if the records could indeed be traced back to the same person. Through this process we created new network datasets, which we analyze in the subsequent section.

## **4. Empirical Results**

### **4.1. Three decades of network change: 1969-1996**

At the height of neo-corporatism a dense network existed between the state and private enterprise in the Netherlands. In 1969, a total of 676 interlocks between state sectors and the largest 86 corporations were in place. On average, each of the largest 86 corporations had eight interlocks with the state. All these connections were created by corporate board members. Interlocks were predominantly maintained with the Ministry of Education (including the universities), with the Ministry of Economic Affairs and the Ministry of Finance. The business sectors that were most connected with the Dutch state were the financial sector, chemical industry and metal/shipbuilding. Table 1 illustrates the strong presence of state-business interlocks in 1969 and its subsequent decline.

Of the top-86 corporations in 1969, 80 had at least one interlock with the government administration against 66 in 1996. The total number of interlocks decreased much more: from 676 in 1969 to 260 in 1996. Similarly we see a reduction

in the number of corporate directors that connect the business sector with the public sector. In 1969 191 corporate directors carried at least one link with the Dutch state, in 1996 135 persons carried the business-state network. Figures 1 and 2 graphically display the networks in 1969 and 1996.

[Insert Table 1 about here]

Despite the overall decline in business-state relations between 1969 and 1996, some departments and other state institutions proved to be relatively stable over time. The departments of Finance, Domestic Affairs, and the Prime Minister's department of General Affairs show only modest changes. Against the general trend of sharply decreasing relationships between state and business a few departments saw a small increase in interlocks with business. These are the departments of Agriculture and Fisheries and Housing, Regional Planning and Environment, but also the Senate and the provinces. There is an increase at the level of municipalities, with 8 interlocks in 1969 and 22 interlocks in 1996. A closer look at these local networks reveals that among the firms connected to the municipalities in 1996 are three agro-cooperatives, five financial firms, and the coordinating body of electrical companies. Municipalities are connected to financial institutions specifically geared towards them: Bank of Dutch Municipalities (BNG) and Bouwfonds. The Ministry of Finance sees its network growing smaller from 1969 to 1996, but does climb up the ladder of well-connected state sectors in relative terms. By 1996 the 23 interlocks the department of Finance has with 20 corporations makes it the second best connected department. This position may reflect the financial orientation of the top executive boards of large

corporations, as well as the importance of the financial-economic portfolios in cabinet decisions.

Economic affairs, despite its huge loss of numbers of interlocks from 1969 to 1996, moved from second to the best-connected ministry. In 1969 economic affairs had personal interlocks with 61 corporations of the top 86. By the mid-1990s, only 32 corporations remain in the interlock network of economic affairs. This reduction of interlocks underscores the changing position of the department. Until the end of the 1960s the department played a crucial role in Dutch industry. With 24 interlocks in 1969, heavy industry and shipbuilding had more access to the Ministry than any other industrial or financial sector. But there were other hubs as well. The Foundation for Nuclear Energy RCN was set up in 1955 to unite businesses, research institutes and governmental agencies to foster nuclear energy in the Netherlands. The first chairman of the RCN, Dr. H.M. Hirschfeld was a top civil servant until his early retirement in 1952. By 1955 he was outside director of at least 15 of the largest Dutch firms (Fennema and Rhijnsburger, 2007, Uitham et al., 1977, Zijlstra, 1982). The number of government representatives on the supervisory boards of state-owned corporations were substantial in the first post-war years. However, by the time Hirschfeld died in 1962, the relation between economic affairs and big business was transforming into a more reciprocal nature.

In 1969 only eight out of the 151 interlocks economic affairs had with business were created by top civil servants through government appointed board members. Top civil servants of the department of Economic Affairs held government appointed board positions with only a few corporations of key strategic interest from an employment (DSM, Netherlands Railways NS), industry (Hoogovens) or finance (Gasunie, Nationale Investeringsbank) perspective. Only a very small fraction of the

networking between state and big business was carried out by government appointed directors. In 1996, these few government directors were also more dispersed over departments. Economic affairs still had government directors at DSM, Hoogovens, Netherlands Car (DAF) and Gasunie. But other departments played a role as well, most notably the department of finance with government directors at Hoogovens, Gasunie, Nationale Investeringsbank, KLM and BNG. A top civil servant of the department of Transport sat on the board of Royal Dutch Airways KLM and the National Railroad NS. So by 1996 there was still a minority of government appointed directors in the network. By 2006 these had all disappeared.

The most spectacular downward trend in state-business interlocks between 1969 and 1996 is observed in the policy sector of education and science. In 1969 this sector ranked first in business-state contacts with a coverage of 62% (53 companies) and 176 interlocks. The mean number of interlocks per company with education and science was then by far the highest with 3.3 per company. This number of corporate interlocks with education and science has declined dramatically. In 1996 just 13 companies maintained 16 interlocks, accounting for a mean per company of 1.23, a third of that for 1969. The drastic reduction of corporate interlocks with education and science echoes the process of decentralization of the universities and the research infrastructure since 1969. While universities were still considered part of the state domain up until 1990, they lost that position during the 1990s. New laws on higher education positioned universities at arm's length from the state, similar to many other semi-public quango's. In section 4 we shall study in more detail the changing position of the universities. Here it suffices to note that even without the universities, we find 71 interlocks for education in 1969, which is still almost six times as much as the number found for 1996, while in 2006 only three personal interlocks are left.

In sum, we have established that there was a relatively well developed state-business network in the days of neo-corporatism. The network seems to be best understood as corporate presence in the state. That is, the ties are only to a very limited extent the result of the actions of a state appointed director. Also, as we expected, the network thinned considerably in concert with the growing attention to neo-liberal policies.

[Insert Figure 1, 2 and 3 about here]

#### **4.2 At the dawn of the new century: 1996-2006**

From the mid-1990s onward, the decline of business-state relations continued. Figure 2 shows a graphical representation of the network structure in 1996. Ten years later, the network was severely reduced, as Figure 3 illustrates. By 2006, only 86 interlocks between the state and the 86 largest firms in the Netherlands were left; a mere 13% of the interlocks in 1969. The few official government directors that were in place before are now gone. Overall, the number of interlocks with education and sciences as well as economic affairs show a substantial and further decline. But economic affairs is still leading the ranking with 29 interlocks. In fact, the relative importance of economic affairs has actually increased, as they now account for 32% of all state-business interlocks as opposed to 19% in 1996, and 22% in 1969. The decline of foreign affairs and finance is most dramatic. Both sectors seem to have severed all previously existing interlocks. So, whereas finance remained a network partner in the mid-1990s, it had done away with all network ties by 2006. This is a telling illustration of the accelerated disconnection between business and the state around the turn of the century. By 2006, six policy sectors have no registered interlocks with top business firms.

### 4.3 The core of the network

Some firms are more central in the network than others. The state-business network is a particular network, because it consists of two sets of nodes: state organizations and private firms. It is a bipartite network (Breiger, 1974, Harary, 1972, Wasserman and Faust, 1994). This has implications for the way we calculate network centrality. Here we use the bipartite centrality measures as implemented in UCINET (Everett and Borgatti, 2005). Two measures are used. Bipartite degree indicates the extent to which a firm is connected to the group of state institutions. The second measure is bipartite betweenness, and calculates the extent to which a firm is strategically positioned in-between all nodes in the network. Table 2 shows the most central firms in the three years. We should emphasize the following point. We have noted in Table 1 the vast fragmentation of the bipartite state-business network. Hence the figures in Table 2 give only relative indices referring to a denser network in earlier years as compared with the thinner remnants in later years.

[Insert Table 2 about here]

The list of the most central firms in the three years indicates both stability and change. Four firms are consistently dominant and rank among the most central firms across the period. Except for steel producer Hoogovens (part of Corus by 2006), these persistently central firms are financial institutions. Bank centrality has been a consistent finding in networks of corporate interlocking directorates throughout the 20<sup>th</sup> century. But over the past two decades financial institutions disconnected themselves from these networks (Davis and Mizruchi, 1999, Heemskerk and Schnyder, 2008). Yet, if we consider the network with the state, banks still play a dominant role. In 1996 and in 2006, six financials are found among the best-

connected firms, in 1969, five. For most of the financials solid connections with the state are not so unexpected because they are closely aligned with the state domain. The Bank Nederlandse Gemeenten (BNG) has local authorities such as municipalities as its clients, and a number of mayors and aldermen on its board. The Nederlandse Waterschapsbank (NWB) finances the regional water authorities, the oldest democratic institution in the Netherlands. Not surprising, we find the Dutch Central Bank (De Nederlandsche Bank: DNB) among the most central firms in both years. The Bouwfonds Nederlandse Gemeenten used to be fully owned by municipalities before it was sold to ABN AMRO, and the bank-insurance company ING Group is partly built on the formerly state-owned Rijkspostspaarbank and the small and medium enterprise oriented Nederlandsche Middenstandsbank NMB (among the central firms in 1969). ABP, the Dutch civil servants and teachers' pension fund, has become the second largest pension fund in the world. It was privatized during 1996 in order to remedy a 30 billion deficit and remains well connected with the state. On the other hand, Rabobank (1969, 1996 and 2006), Generale Bank Nederland (1996) and Eureko (2006) are fully privately owned financial institutions, without a tradition of corporatist connections with the state. These findings suggest that there is a financial cluster geared towards the state. The enduring position of financials in the state-business network suggests that, although the financial institutions retreated from the corporate networks, interlocks with the state sector are still found to be beneficial.

During the entire period, ties with formerly state-owned firms remain strong. In 1996, privatized yet still state-owned KLM still ranks second, and in both 1996 and 2006 former state owned energy firms, such as Eneco, Nuon, and SEP, are among the most central. Missing from the rankings after 1969 however are the largest stock

listed Dutch firms. Large stock listed firms such as ABN, Philips, Heineken and DSM were among the most central firms in 1969 but are no longer central by the mid-1990s onward. In 1996 only bank-insurance firm ING and Hoogovens are part of the AEX index of large listed firms. By 2006 Getronics (which includes the previous state owned national computer center RCC) is the last of the blue chip corporations within the center of the corporate-state network. But not for long: in 2007 Getronics merged with KPN. Thus, already by 1996 the largest Dutch firms have by and large retreated from the network of interlocks with the state and by 2006 this retreat is effectively complete.

#### **4.4 The State-Business Elite**

In the closing decades of the 20<sup>th</sup> century, the group of corporate directors that create ties with the state grew smaller. In 1969 the network between corporate sector and the state was created by a group of over 200 people. Table 3 presents more detail and lists the main affiliations of the largest networkers in 1969, 1996 and 2006 (those who create at least six, three, and two interlocks, respectively). In 1969 there was still a substantial group among the largest networks that shift between the realms of academia, civil service, politics and business during their career. By the mid-1990s, this is no longer the case. The group of interlockers had already gone down to 135, 62 of which carried at least two interlocks between business and the state. Ten years later, only 50 members of the corporate elite had ties with the state, and a mere 27 directors created more than two interlocks. The career switches from politics and civil service to business came to a near stand still. By 2006, the state-business network became much more concentrated in a small section of the corporate elite. The

busiest networkers are responsible for 75% of the entire network in 2006, whereas ten years earlier this group created less than half of the network.

[insert table 3 about here]

While the practice of government appointed directors at state-owned firms remains fairly limited in the Netherlands (as argued above), there is in fact a larger group among the state-business elite that has a non-corporate background. About 60 percent of the hard core of the state-business elite consists of either (former) high-ranking civil servants, or politicians (members of national or provincial parliament, (former) ministers). The centre of the state-business network is not dominated by either the state elite or the business elite. Similarly, among the politicians in this elite are liberal conservatives (VVD), but also from labor party (PvdA), Christian Democrats (CDA) and – only in 1996 – the Liberal Democrats (D'66). Apparently all major political parties who form coalition governments in the Netherlands have their representatives in the state-business elite. The picture that emerges is one of a meeting place of members of the state elite and members of the business elite. There is no indication that we can speak of the domination of one group over the other. In line with the earlier findings of Fox and Ornstein discussed above, the state-business network can be best described as a meeting place of state and capital. This group of liaison officers upholds the social infrastructure on which the different spheres of influence can interact. But by 2006, only a small group of 24 people created three quarters of the network. So, by the time when the financial crisis hit the country, this social infrastructure between business and the state became vulnerable.

#### **4.5 The decline of the corporate network**

Until now we considered the dynamics of the state-business network irrespective of the changes that took place in the network among corporations in the period under study. A general decline in national networks of corporate interlocking directorates was registered across the globe (see for instance Heemskerk and Schnyder, 2008, Carroll and Klassen, 2010, Windolf, 2002, Davis et al., 2003). At the same time, there are some indications that there is a shift away from the national towards the international level. At the European level a corporate network of interlocking directorates is now in place (Carroll et al., 2010), albeit on a thin foundation of only a handful of corporate elite members (Heemskerk, 2011). The question is how the decrease in state–business interlocks relates to the dynamics of the corporate network in itself.

In order to compare the results with the changes in the corporate network we separately analyzed the network of interlocking directorates between the largest 86 firms in 1969, 1996 and 2006. The top rows of Table 4 give some key figures on the corporate networks. As expected, the number of board interlocks between big business declined from 1969 onward. By 2006 only 54 of the largest 86 firms shared board members with each other. The total number of board interlocks decreased from 866 in 1969 to 143 in 2006. Although there is already a small drop in board interlocks during the 27-year period between 1969 and 1996, a dramatic decline of the corporate network took place only during the years following 1996. This suggests that liberalization and marketization in the 1980s initially did not affect the corporate networks so much. Only after the mid-1990s, when internationalization of (capital) markets and globalization in general took off, did the national network of board interlocks show considerable decline.

Quite to the contrary, the network between big business and the state already thinned before the mid-1990s, as the middle section of Table 4 illustrates. By 1996 the number of state business interlocks dropped from 676 to 260. Hence the separation of business and state preceded the legal framework set up in 1997 designed to diminish the number of government advisory boards. During the next decade, another two-thirds of the state business ties vanished. These figures suggest that changes in state-business relations were well underway by the mid-1990s, while interlocks were still relatively common within the corporate community.

[insert table 4 about here]

#### **4.6. Business ties with universities: from state universities to autonomous non-profit corporations.**

The findings presented above underscore the shift in state-business relations over the past decades. However, this disconnection is due, in part, to a redefinition of state boundaries and the public domain by the state itself. The redrawing of the public – private boundary presents us with a methodological challenge. However, there is one sector that moved from the state to the private sector that falls within the scope of this research: universities. Previous studies showed that universities are well connected to business (Fox and Ornstein, 1986, Carroll, 2004). And as the knowledge and innovation infrastructure in a country is an important asset for business and higher education a pivot for ‘national competitiveness’, ongoing relations between business and universities might well be expected.

For the Ministry of Education we observed the most spectacular decline in business-state interlocks. This reduction was for a large part a result of the institutional changes that have taken place in the Dutch universities over the two

decades following 1969. In 1969, 106 out of 177 of the interlocks between the Ministry of Education and business were generated by the universities. With the exception of three denominational universities (Catholic University of Nijmegen, Catholic University of Tilburg and the Free University of Amsterdam) these were all state universities. They were governed by a supervisory board (College van Curatoren) of 5-7 persons, largely filled with persons selected from the business elite and appointed by the government. The overwhelming part (97 out of 106) of the interlocks between universities and Dutch business in 1969 was due to the presence of the business elite in these boards of curators. These served as an interface between industry and scientific research. In 1971, a new experimental law on university reform was installed which introduced drastic changes. The supervisory board was abolished in favor of a three-tier system of governance, to be effected by a board of directors, together with a board of deans and a University Council elected by the university staff, students and personnel. The board of directors was partly appointed by the Minister of Education and partly elected by the faculty (De Boer, 2003). This three-tier system eliminated most of the existing personal interlocks between the universities.

In 1997, at the apex of privatization, another series of legal reforms of the Dutch university system was initiated by which the universities were moved out of the state sector. Conforming to the reigning corporate market paradigm, their governance structure began to reflect that of the modern corporation. The University Council was abolished. Instead a supervisory board was re-installed. The role of the executive board was strengthened and their members were to be appointed by the supervisory board, instead of by the minister. The supervisory board thus became the highest authority in the university, although the executive tasks and responsibilities

rested with the executive board. This governance structure mirrors the Dutch two-tier corporate governance system. The supervisory boards cleared the path for renewed interlocks with business. Thus, the Erasmus University Rotterdam and Delft University of Technology invited directors from Shell to their board, and Philips CEO Boonstra sat on the board of the University of Technology Eindhoven. By positioning the universities at a distance from the state, it became possible for business leaders to reconnect at the upper echelons of the Dutch universities.

The three denominational universities were not obliged to introduce the supervisory board structure. Nevertheless, the Free University had non-academic outside members on its university council already in 1996 and by 2006 all three universities have a supervisory board. Table 5 shows the results, as well as the initial findings of 1969. Clearly, the university governance structure in the late 1960s was geared more towards strong relations with business, with no less than 46 members of the corporate elite directly affiliated with one of the universities. As explained above, these ties were severed by the new governance structures. But by 1996, interlocks with business are reaffirmed through the new supervisory boards. In 1996 thirteen board members of the largest Dutch firms sit on a university board. Due to their multiple corporate board positions, these interlockers create network ties with 20 of the top-86 firms. And ten years later 17 of the university board members connect academia with 30 of the largest Dutch firms.

A closer look at the composition of the university boards shows that business is also represented by corporate directors from outside the top 86 firms, or from lower echelons of the largest multinationals. For instance, whereas Shell Netherlands is not part of the top 86 firms because it is a subsidiary of Royal Dutch Shell, its CEO sits on a university board.

[Insert Table 5 about here]

In 1996 business interests are firmly represented with about 40 percent of all seats. Second comes the state with a quarter of the seats. The remaining seats are spread over finance, academic, and semipublic sectors. During the decade spanning 1996 – 2006, the university boards invited more members from finance, while members with a general business background diminished. A similar increase is seen for seats occupied by people with a clear academic affiliation. Also, the semi-public representation on university boards grows from 14 to almost 20 percent.

The closer inspection of the ties between universities and the corporate sector reveals that although the state reorganizes its boundaries, business and finance remains strongly affiliated with sectors that are relocated. In fact, placing the universities at arm's length distance from the state paved the way for a renewed interlocking between corporations and universities at the new levels. Thus, whereas state-business relations seem to decline, we see that there is in fact a rewiring of networks and interlocks in line with the neo-liberal consensus that the state and business should be set apart. The concomitant appraisal for markets, entrepreneurship and business in general opens the door for business representation in university boards, transforming the universities into entrepreneurial entities. It is likely that similar processes occurred in other sectors, such as energy and health care, that also used to be firmly within the domains of the state but gradually moved out into the private or public/private domain.

## **5. Conclusions: the fading relations between state and business in The Netherlands**

In this article we analyzed the institutional links between the state and big business in the Netherlands. The analysis of the state-business networks in 1969, 1996 and 2006 revealed how the previously dense networks of governance did decline, reflecting and confirming a rapid disentanglement of the corporate sector from the state. This development is in line with now prevailing neo-liberal policy objectives and political consensus concerning a reduced role of the state in the economy. However, although the state-business network thinned considerably, it did not vanish all together. In section 2 we discussed four processes that shaped the reorganization of the state-public boundaries. As parallel and mutually reinforcing processes it is difficult to precisely assess where one process stops and another begins. Yet we found indications for change in all four processes.

First, we expected that the disappearance of industrial policy would decrease the attractiveness of state-business ties. In general, the decline of the state-business network underscores this overall trend. However, the retreat of corporate directors from the state apparatus is not an isolated process. Corporate directors are also less prone to create board interlocks with other corporations. This raises the question to what extent the retreat of corporate directors from the state bureaucracy is different from the decline in corporate board interlocks. We found that the decline in state-business ties precedes the decline in the corporate network. Whereas the inter-corporate network between the top-86 firms started to decrease sharply only after 1996, the network relations of business and state were already sharply reduced before that year. This suggests that in moving from a neo-corporatist towards a neo-liberal political economy, the first step for corporations is to create distance with the

state. This is subsequently followed by a growing disintegration of the corporate elite networks themselves. While there might not be many incentives anymore for business to maintain strong interlocks with government, we found that a specific part of the financial sector form central hubs in the network. Banks do remain interlocked with the state and are still important supporting institutions of the state-business network. This is somewhat unexpected because the retreat of banks and bankers from networks of inter-corporate interlocks since the 1980s has been a main driver of its decline (Heemskerk 2007; Davis and Mizruchi 1999). In sum, the decline of the corporate network and the weakening of the state-business network may be seen as related but distinct developments. Our findings suggest that the state-business network transformed when the state redefined its tasks and responsibilities, while the corporate network started to change when corporate governance increasingly moved towards a shareholder orientation from the mid-1990s onward.

Second, the privatization of state owned corporations was thought to impact the network structures between the corporate sector and the state. We found that, on the one hand, the effects of privatization were somewhat limited because Dutch state owned firms already enjoyed a relatively large amount of autonomy. The practice of government appointed directors remained limited to only a handful of key corporations such as in transportation and heavy industry. Of all interlocks between business and the state, a very small minority show the state to be in a position of control. At the same time, we also found that the set of directors that occupy the most central positions in the network have a mixed professional background. The business-state network structure in the early 21<sup>st</sup> century – albeit sparse – is not dominated by either the state or corporate elite but rather expresses a mutual partnership. The leading individuals who create the network stem from both business

and the state elite. They are a group of liaison officers between the two separate domains. Fox and Ornstein's finding on the nature of state-business networks in Canada more than thirty years ago still stands: the network brings together business and the state without one dominating the other.

Third, in redrawing the public-private playing field, government changed the definition of the state by making some former state institutions more autonomous. We highlighted this by investigating the way in which the network between business and universities developed as universities were gradually put at arm's length from the state. The policy of the state to explicitly position the university sector outside the boundaries of the state apparatus, in fact, made it possible to relocate the ties between state universities and business in a neo-liberal environment. During the neo-corporatist era, business presence in university governance was common practice. But as part of the institutional changes that accompanied the process of making the universities more independent, the boards that used to host business leaders were removed from university boards. When universities were fully positioned outside the direct influence of the department, the former relations with business were quickly re-established. In the neo-liberal landscape, business still relates to the relevant sectors. But unlike before, the state is left out. As a result, the state as an organizing element of economic elite networks fades away.

Fourth, the fading away of the state is further bolstered by its 'hollowing out'. Already by 1996 the largest stock listed firms of the Netherlands were hardly represented in the remaining business-state network at all and by 2006 they were virtually gone. The formation and growth of internationalized corporate holdings by means of the processes of consolidation (strategic takeover, merger, acquisition, etc.) also reduced the number of purely Dutch corporations. This may well contribute

to the lack of impetus to engage in top-level interlocks with the Dutch state. Interlocks with government bodies moved from the corporate decision center downwards in the corporate hierarchy. We noted that universities invite corporate directors on their boards who are at the sub-top level in the corporate hierarchy, most notably CEOs of the Dutch subsidiaries of the largest Dutch-based multinationals. All in all, the transformation of the Dutch society from a neo-corporatist towards a neo-liberal one has strong implications for the way in which state and business are entrenched in social networks. The overall picture that emerges is that the state fades away, while business remains linked with those sectors that are seen as strategic partners.

This comparative analysis of state-business relations during three different time periods in Dutch history represents an unprecedented study as the relations between business and the state have nowhere been studied in a systematic way over such a long period of time. But this study can serve as a first step in a cross-national comparison of the networks of state and business relations. We know that in continental Europe personal interlocks between business and the state have always been frequent, both in corporatist economies like Austria, Belgium and Germany, as well as in France where indicative planning was traditionally strong. We assume the processes of disentanglement that operated in the Netherlands can also be seen in other continental European countries. Whether similar tendencies can be shown in Anglo-Saxon economies is still to be seen. One of the few comparative studies on corporate governance in France and Britain concludes that there is no evidence for a convergence between the French and British business systems, but rather persistence and preservation of national distinctiveness and the strength of cultural reproduction, despite globalization (Maclean et al, 2002; see also Carroll and Fennema, 2002).

Our analysis stops in 2006, just before the crisis unfolded. As such, it serves as a benchmark with which we can assess the impact of the crisis on state-business networks. Recent events already suggest a number of interesting issues that can be discussed and further explored by empirical research. The impact of the financial crisis of the Western banking system showed how far the state and (financial) business elites were set apart. The largest Dutch system bank, ABN AMRO, failed to obtain state support against the hostile takeover by Royal Bank of Scotland, Santander and the Dutch-Belgian system bank Fortis Bank. This takeover failed miserably and then the Dutch state had to save its financial system by nationalizing the remnants of this fallen financial empire, together with those of the equally shipwrecked Fortis Bank. The research presented above shows how separated the state and business elites already were by the time the crisis hit. The network that traditionally connected the state with business was already largely gone by 2006. As a result, the social underpinnings of interaction between business and the state were no longer in place. Only very scarce network resources are available to facilitate state-business interaction.

The evolution of state-business relations over the decades, up to the upheavals at the end of the first decade of the 21<sup>st</sup> century, raises a number of theoretical questions. How far can the state be brought back into the private sector on a durable basis? Can the state still rely on formerly effective means of regulation such as national(ized) banks, civil servants in the board of directors of large corporations, financial authorities and the like? In short, how can we assess the renewed role of the state in the coordination of markets? On the one hand, we might witness a renewed understanding of the intrinsic connection between markets, business and the welfare state. This might give the state a renewed legitimacy to act

as a steward for society. On the other hand, it might very well be the case that both state and business have become so accustomed to business behaving as independently as possible from the nation state that the current role of the state is considered to be a necessary but basically unwanted intervention, to be withdrawn as soon as markets function properly again.

The aim of this paper has been to develop an empirical base on which to assess the changing relations between business and the state. Many questions still remain unanswered. A next step would be to assess the impact of the financial crisis on corporate interlocks with the state. The state is back as an owner of large corporations. There are signs that after years of outsourcing public tasks and authority, the fading state now reclaims direct authority over domains placed at arm's length, such as welfare and health care. The state thus proves to be a fluid and dynamic entity, and so are the networks between the corporate sector and the state.

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Table 1: Corporate - State Interlocks in 1969, 1996 and 2006

Policy sector	1969			1996			2006		
	Ranking # Interlocks	# of interlocks	# of firms	Ranking # Interlocks	# of interlocks	# of firms	Ranking # Interlocks	# of interlocks	# of firms
Education and science	1	176	53	7	16	13	9	3	2
Economic affairs	2	151	61	1	49	32	1	29	18
Other	2	70		12	8	-	-	0	0
Foreign affairs	4	31	26	4	21	13	-	0	0
Transport, public works and water management	5	29	21	9	12	11	11	2	2
Finance	6	28	27	2	23	20	-	0	0
Royal Household	7	24	13	15	7	7	6	5	4
Social affairs and public health	8	22	16	17	4	4	-	0	0
Culture, recreation and social work	9	19	18	13	8	6	-	0	0
Defense	10	18	6	21	0	0	13	1	1
Domestic affairs	11	18	14	5	17	10	4	7	5
Senate	12	16	14	6	17	15	7	5	3
Justice	13	15	14	14	8	8	2	9	9
Provinces	14	15	12	8	16	8	3	8	3
Council of State	15	12	11	18	2	2	12	2	2
Second Chamber	16	9	8	16	6	4	-	0	0
Agriculture and fisheries	17	8	4	11	10	5	8	4	4
Municipalities	18	8	4	3	22	13	5	7	4
Housing, spatial planning and environment	19	4	3	10	11	6	10	3	3
General affairs (prime minister)	20	3	3	19	2	2	14	1	1
Court of Audit	-	0	0	20	1	1	-	0	0
Total		676	80		260	66		86	38

Table 2: Most central firms in the network

	Firm Name	Degree	Betweenness
1969			
1	Koninklijke Luchtvaart Maatschappij	0.600	0.033
2	KN Heide Mij	0.550	0.038
3	Middenstandsbank *	0.450	0.021
4	Heineken	0.450	0.014
5	Bank Nederlandse Gemeenten	0.400	0.035
6	Hoogovens	0.400	0.016
7	ABN *	0.400	0.014
8	Nationale Investeringsbank *	0.400	0.014
9	OGEM	0.400	0.012
10	Philips	0.400	0.011
11	Rabobank *	0.350	0.015
12	Nederlandse Bank *	0.350	0.009
13	DSM	0.350	0.008
1996			
1	Bank Nederlandse Gemeenten *	0.524	0.125
2	Koninklijke Luchtvaart Maatschappij	0.381	0.097
3	De Nederlandsche Bank *	0.381	0.079
4	Nederlandse Waterschapsbank *	0.381	0.079
5	Rabobank *	0.333	0.048
6	Generale Bank Nederland *	0.190	0.029
7	Koninklijke Hoogovens	0.190	0.021
8	Samenwerkende Elektriciteits- produktiebedrijven	0.190	0.021
9	Bouwfonds Nederlandse Gemeenten *	0.286	0.020
10	Nederlandse Gasunie	0.238	0.018
11	Internatio-Muller	0.238	0.017
12	ING Group *	0.143	0.017
13	Sara Lee/DE	0.143	0.016
2006			
1	Stichting Pensioenfonds ABP	0.361	0.429
2	Bank Nederlandse Gemeenten	0.156	0.357
3	De Nederlandsche Bank	0.144	0.357
4	Nuon	0.092	0.214
5	Corus Nederland (formerly Hoogovens)	0.049	0.143
6	Koninklijke Friesland Foods	0.042	0.143
7	Rabobank	0.024	0.143
8	Essent	0.023	0.143
9	Getronics	0.023	0.143
10	Nutreco Holding	0.023	0.143
11	Eureko	0.021	0.143
12	Koninklijke Volker Wessels Stevin	0.016	0.143
13	Nederlandse Waterschapsbank	0.004	0.143

*Firms are sorted on degree centrality. Firms in bold are amongst the most central firms in all three years. The firms with an asterisk are financials*

Table 3: Main Affiliations of most central directors in State-Business network

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	1969	1996	2006
Business	44%	36%	42%
Politics	22%	36%	38%
Civil Service	4%	21%	4%
Lawyer	7%	-	-
Academia	-	4%	4%
Royalty	4%	-	4%
Business / Politics	7%	-	4%
Academia / Politics	7%	-	-
Civil Service / Business	4%	4%	-
Business / Academia	-	-	4%
Total nr of directors	27	28	24
Minimal nr of interlocks	6	3	2
Maximum nr of interlocks	24	8	6

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Table 4: Corporate and Corporate - State Networks of the top-86 in 1969, 1996 and 2001

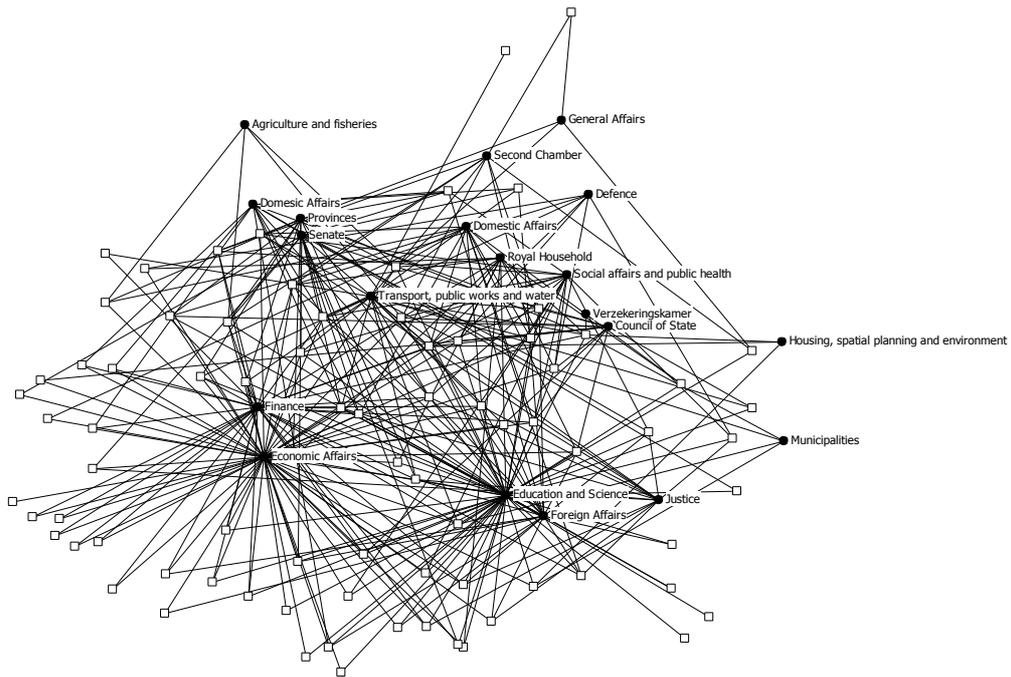
	1969	1996	2006	$\Delta$ 1969- 1996	$\Delta$ 1996- 2006
<b>Corporate Network</b>					
# of Connected firms	84	75	54	-10.7%	-28.0%
# of interlocks	866	680	143	-21.5%	-79.0%
# of interlockers	192	116	75	-39.6%	-35.3%
<b>Corporate - State Network</b>					
# of Connected firms	80	66	38	-17.5%	-42.4%
# of interlocks	676	260	86	-61.5%	-66.9%
# of interlockers	203	135	50	-33.5%	-63.0%

Table 5: Network ties between Universities and Business

	1969	1996	2006
Nr of Universities	11	12	12
Nr of Supervisory Board Members		49	63
University board members with board position at the top 86	34	13	17
Number of connected top 86 firms	46	20	30
Supervisory boards composition	%	%	
Business -		40.8	31.7
Finance -		6.1	12.7
Academic -		6.1	14.3
Politics / Government -		24.5	22.2
Semi-Public -		14.3	19.0
Other -		8.2	0.0

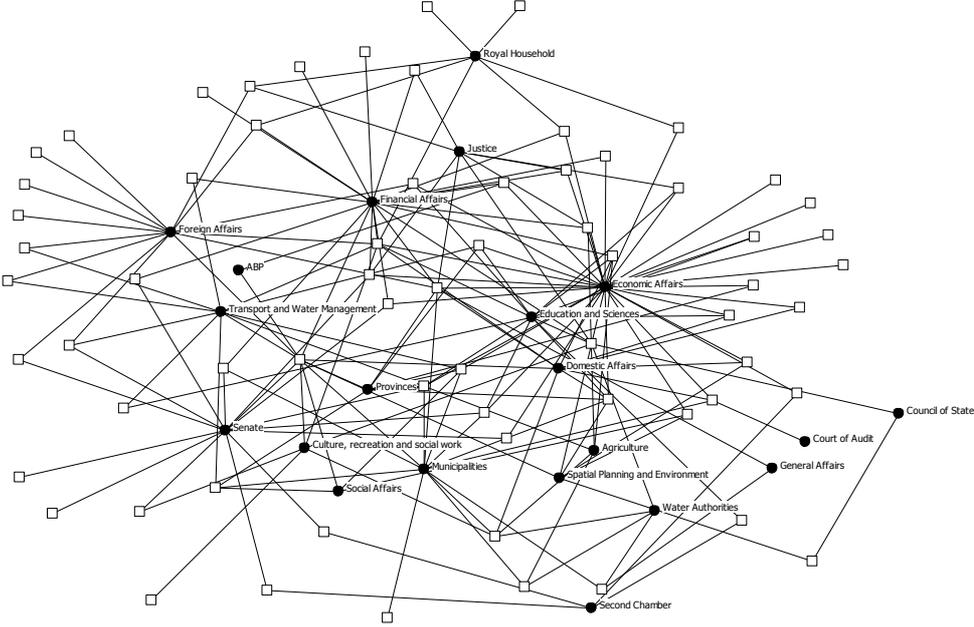
*The 1969 data includes the Colleges van Curatoren as well as the deans of the faculties.*

**Figure 1: Network of state-business interlocks in 1969**



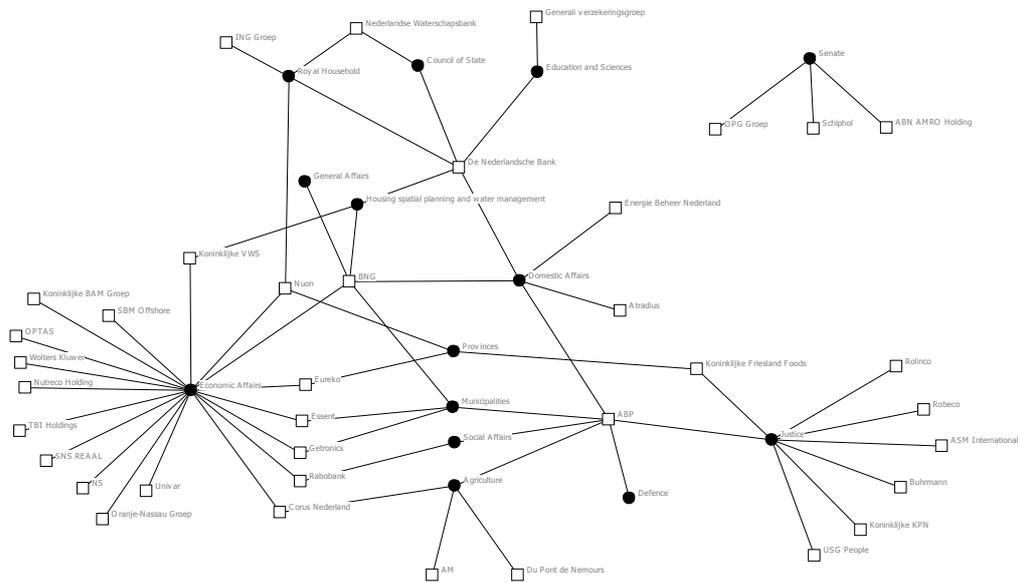
State sectors are closed circles, the open squares represent corporations.

**Figure 2: Network of state-business interlocks in 1996**



State sectors are closed circles, the open squares represent corporations.

**Figure 3: Network of state-business interlocks in 2006**



State sectors are closed circles, the open squares represent corporations.