Aalto University
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Easy as ABC? Political connections and zoning of service station stores

Finance

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Department of Finance
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Abstract
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PURPOSE OF THE STUDY

The purpose of this thesis is to analyze whether a politically connected firm that operates in a country with an established legal system and a low perceived level of corruption can benefit from its connections in the form of preferential access to land. More specifically, the thesis examines whether the political connections of Finland's largest retail trade operator S Group have been related to Finnish municipalities' zoning decisions concerning the group's ABC service station stores during the period between 1996 and 2009. I also analyze whether the hypothesized favorable treatment of S Group in zoning decisions is related to the market share of its ABC service station stores. In this thesis, a political connection is defined as a dual role of a member of an S Group governance organ as a municipal politician. As S Group consists of 21 regional cooperatives that are independent companies with their own management, it can be argued that the group has a relatively strong local presence. Due to this geographically decentralized decision making structure, the group can be expected to be particularly well connected to municipal politics.

DATA

The main dataset used in this thesis consists of S Group's political connections from the period between 1996 and 2009. The main sample includes 64 ABC service station stores that have been pure new investments, i.e. green-field projects, and that have been built between 1998 and 2010. The political connections dataset is built by cross-referencing the names of persons who have simultaneously been members of S Group's governance organs and Finnish municipal politicians from 1996 to 2010. The political connections data used in this study is unique, as it is manually combined from the annual reports of S Group's regional cooperatives, the Statistics Finland's election database, and by directly requesting data from Finnish municipalities. Additionally, data on traffic amounts from the Finnish Transport Agency's database and detailed establishment level data of small grocery stores and service stations from the Business Register of Statistics Finland are collected to assess the quality of the operating locations of service stations and their competitive situation.

RESULTS

The results show that the political connections of S Group are widespread during the entire examination period. However, the findings do not support the conclusion that the political connections of the group would have systemically affected the municipalities' zoning decisions concerning ABC service station stores. The analysis shows that ABC service station stores are located in better operating areas than their competitors, but S Group's political connections are not found to be associated with this dominance. Similarly, the findings do not support the conclusion that the political connections of S Group would have affected the market shares of its service station stores.

KEYWORDS

Corporate Governance, Political connections, Service station store, S Group, Zoning

Aalto-yliopiston kauppakorkeakoulu
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Empiirinen analyysi S-ryhmän poliittisista kytköksistä ja ABC-liikennemyymälöiden kaavoituspäätöksistä

TUTKIELMAN TAVOITTEET

Tutkimuksen tavoitteena on selvittää, voiko kehittyneen oikeusvaltion ja ei-korruptoituneeksi arvioidun hallintojärjestelmän piirissä toimiva yritys hyödyntää poliittisia kytköksiään vaikuttaakseen toimintaansa koskeviin kaavoituspäätöksiin. Tutkimus toteutetaan selvittämällä, onko S-ryhmän poliittisten kytkösten ja ABC-liikennemyymälöiden toimipaikkoja koskevien kaavoituspäätösten välillä tilastollista yhteyttä aikavälillä 1996–2009. Lisäksi pyritään selvittämään, sijaitsevatko ABC-liikennemyymälät paremmilla liikepaikoilla kuin kilpailijoiden myymälät, ja onko S-ryhmän poliittisilla kytköksillä yhteyttä näiden liikepaikkojen laatuun. Tutkimuksessa tarkastellaan myös, onko S-ryhmän mahdollinen suosiminen kaavoituspäätöksissä yhteydessä ABC-liikennemyymälöiden markkinaosuuksiin niissä kunnissa, joissa ne toimivat. Tässä tutkimuksessa termi poliittinen kytkös rajataan merkitsemään tilannetta, jossa S-ryhmän alueosuuskauppojen hallintoelimen jäsen toimii samanaikaisesti myös kunnallispoliitikkona.

LÄHDEAINEISTO

Aineisto koostuu pääosin S-ryhmän poliittisista kytköksistä ajalta 1996–2009. Pääotos käsittää 64 ABC-liikennemyymälää, jotka ovat olleet S-ryhmän alueosuuskauppojen uusinvestointeja ajalla 1998–2010. Tutkimuksessa käytetty poliittisia kytköksiä koskeva aineisto on ainutlaatuinen, sillä se on kerätty käsin vain tätä tutkimusta varten. Poliittisten kytkösten mittaamista varten kerättiin S-ryhmän edustajien sekä kunnallispoliitikkojen nimitiedot alueosuuskauppojen vuosikertomuksista ja Tilastokeskuksen vaalipalvelusta, minkä lisäksi aineistoa täydennettiin pyytämällä nimitietoja suoraan kunnilta. Liikenneasemien toimipaikkojen laatua tarkastellaan Liikenneviraston liikennemäärätilastojen avulla. Lisäksi toimialan kilpailutilannetta tarkastellaan Tilastokeskuksen yritysrekisterin toimipaikkatason aineistolla, josta analyysiin poimitaan pienet ruokakaupat ja liikennemyymälät.

TULOKSET

Tutkimuksen tulokset osoittavat, että S-ryhmän poliittiset kytkökset kunnallispolitiikkaan ovat laajamittaisia koko tarkasteluajanjakson ajan. Tulokset eivät kuitenkaan tue näkemystä, jonka mukaan poliittiset kytkökset olisivat systemaattisesti vaikuttaneet ABC-liikennemyymälöiden kaavoituspäätöksiin. Tulokset osoittavat myös, että ABC-liikennemyymälät sijaitsevat keskimäärin paremmilla liikepaikoilla kuin kilpailevat huoltoasemat, mutta näiden liikepaikkojen laatu näyttää kuitenkin olevan riippumaton poliittisista kytköksistä. Tulokset eivät myöskään tue näkemystä, jonka mukaan S-ryhmän poliittiset kytkökset olisivat vaikuttaneet ABC-liikennemyymälöiden markkinaosuuksiin.

AVAINSANAT

Hyvä hallintotapa, Kaavoitus, Liikennemyymälä, Poliittiset kytkökset, S-ryhmä

Acknowledgements

I wrote this thesis during the academic year 2011–2012 as the final part of my master's studies in Finance at the Aalto University School of Economics.

I would like to express my appreciation for all the inspiring people who have supported and assisted me during the writing of this thesis. First, I would like to thank my instructor, Professor Matti Keloharju for his support, useful comments and expertise that he shared with me throughout this project, and for giving me the initial inspiration to approach the topic. Second, I would like to thank all the helpful people at Finnish municipalities and at the Department of Finance of the Aalto University School of Economics who assisted me in the data gathering process. Third, I would like to thank my thesis seminar group members for their useful comments and ideas that they shared with me during our seminar meetings.

Finally, I am very grateful for my family and friends for their support and encouragement throughout this year. I would like to express a special thank you to all of you great people.

Statement of conflicts of interest

This thesis has not been written in collaboration with S Group, any party directly related to S Group, or any other party outside of the Aalto University School of Economics. I have not worked for S Group or for any of its competitors before or while writing this thesis. However, I am a customer member of Osuuskauppa Hämeenmaa.

I have written this thesis without any external financing and only for my personal and academic interest on the topic. I did not approach S Group or any of its competitors during the data collection or writing process to remain as independent as possible.

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1 Introduction

1.1 Background and motivation

The potentially dubious connections between business and political actors have for long been a topic of intense public debate in various countries. However, actual evidence is often limited to anecdotes and accusations in press. In Finland, these debates and media attention have lately focused on the zoning decisions of retail trade units. The nation's largest retail operator S Group[1], which consists of several regional cooperatives, has received particular attention after having opened over 400 ABC gasoline stations between 1998 and 2010[2]. According to the anecdotes, the penetration of the gasoline station network would have been accelerated by favorable treatment of the group in the zoning decisions of municipalities, forcing smaller players to withdraw from the market (see e.g. Leivonniemi 2010; Ovaskainen 2010; Ranta 2012). These claims are mainly based on the proposition that a significant amount of the members of the regional cooperatives' governing bodies are also active in municipal politics, and would thus be able to influence land allocation and zoning decisions. However, this phenomenon has not been analyzed thoroughly, and the existence and strength of the hypothesized relationship remain to be investigated.

The potential effect of S Group's political connections on land allocation decisions relevant to the group is a vital question, since location is likely to be one of the major determinants of the profitability of operations for service stations. Thus, it can be argued that municipalities' zoning decisions directly influence the competition and market power of single units in the service station business. In the long term, the preferential treatment of a specific operator in zoning decisions may skew competition and lead to an inefficient market. The phenomenon thus seems to be of significant economic importance, and motivates an analysis of whether the political connections of S Group are one of the driving forces behind the fast penetration of the ABC service station store network. Although the topic has recently been under intense scrutiny in the public, it seems that no academic researcher has pursued to analyze the question by taking a systematic empirical approach to the topic.

[1] Nielsen Retail Trade Register, 2012: http://fi.nielsen.com, referred 30.3.2012.
[2] SOK annual report 2010.

Extant academic literature has widely recognized the importance of zoning decisions for businesses (see e.g. Fleischmann and Pierannunzi 1990; Hanushek and Quigley 1990; Blakely and Bradshaw 2002). Lubell et al. (2005) argue that businesses and developers have a substantial interest in land-use decisions, because land-use policy has consequences for the private risk and return on investments. Thus, it can be argued that the better operating locations businesses are allocated with, the better they are equipped to succeed. Due to these value creation opportunities associated with zoning decisions, zoning can be used as a mean for directing benefits to specific private interests (Denzau and Weingast 1982). The composition of zoning decision making bodies has been recognized to some extent affect the equality of these decisions and the fair distribution of benefits to different parties (see Anderson et al. 2008).

In fact, several papers argue that zoning decisions are particularly vulnerable to political capture by a single interest group due to the small size and homogenous constituency of local decision making bodies (see e.g. Ross and Smith 1994; Ostrow 2008). If a single interest party manages to obtain a dominant position in the bodies relevant to zoning decisions, the equality of these decisions may suffer. However, other researchers show that the advice of professional planners dominates in zoning decision making (see e.g. Fleischman 1989; Burby and May 1997). Additionally, citizens' interests are found to have an unambiguous effect on the outcomes of zoning decisions (Fleischmann and Pierrannunzi 1990). Despite this widely recognized importance of zoning decisions for businesses and their vulnerability to political capture, the empirical evidence on the political nature of these decisions is scarce and extant research is mostly focused on the US market.

Although the literature on the effect of political connections of a firm on zoning decisions is limited, a growing amount of academic literature has pointed out that firms can gain from having political connections in several ways. Findings by Johnson and Mitton (2003), Sapienza (2004) and Faccio et al. (2006) suggest politicians often use their political power to grant economic favors to connected firms. However, research has mainly focused only on few sources of value, such as preferential access to credit (Dinc 2005; Charumilind et al. 2006; Claessens et al. 2008) and government aid to financially troubled firms (Johnson and Mitton 2003). Research on political connections

has also mostly concentrated on publicly listed companies (see e.g. Jayachandran 2006) and on developing economies (see e.g. Fisman 2001; Khwaja and Mian 2005), where the overall political situation is often significantly different from those of more developed countries. Since there is only a limited amount of existing literature on the sources of value of political connections and on developed economies with established legal systems, there is a lot of room for further research.

The fast penetration of ABC service station stores offers a unique research setting for studying the link between business and politics in Finland. S Group consists of 21 regional cooperatives, whose combined operating area covers almost all Finnish municipalities[3]. The regional cooperatives are governed by independent regional organizations[4], being therefore more local than national or international companies. Due to the characteristically local presence of the regional cooperatives, their representatives can be expected to be more likely active in municipal politics. Political favors can also come in many forms, but given the significant effect of zoning decisions on the competitive landscape of the service station business, preferential access to land is a likely candidate. Of the potential channels through which political connections can pay off, access to land has been empirically analyzed only to a limited extent. So far, only anecdotal claims have hinted at the possibility of S Group's preferential access to land. This thesis evaluates these claims empirically.

1.2 Research questions and contribution of the thesis

The purpose of my thesis is to study how the political connections of a firm are related to (1) the zoning and land allocation decisions concerning its units and to (2) its market power. Specifically, I aim to examine the political connections of S Group and the expansion of its ABC service station store network. My research question is two-fold and is summarized as follows:

> (1) Can politically connected firms benefit from their political connections by receiving preferential access to land?

[3] S Group, 2012: www.sok.fi, referred 1.4.2012.
[4] S Group, 2012: www.sok.fi, referred 1.4.2012.

(2) Do politically connected firms have higher market shares in municipalities where the political connections are stronger?

In Section 4, these two research questions are discussed more comprehensively and divided into four more specific sub-questions to analyze the presented topic from various standpoints.

My thesis contributes to the existing body of corporate governance related research by focusing on the value creation effects of firms' political connections. Specifically, it contributes to the literature on the relationship between firms' political connections and zoning decisions relevant to its operations. This thesis also adds to the relatively small amount of literature on the political connections of firms that focuses on developed markets with established legal systems. Moreover, my thesis explores the quality of corporate governance in Finland from a previously unexplored standpoint and focuses on a specific subject that has important economic implications on its own. Regarding the methodology of this thesis, I believe I am the first researcher to conduct a comprehensive empirical investigation of the relationship between S Group's political connections and zoning decisions concerning its ABC service station stores.

The findings of this thesis do not support the conclusion that the political connections of S Group's regional cooperatives would have systematically affected the expansion of the group's ABC service station store network. The group's connections to municipal councils, municipal boards and committees relevant to construction and zoning decisions are not found to be related to municipalities' zoning decisions concerning ABC service station stores. The service station stores of the group are located in better operating areas than their competitors on average, but the political connections of the group are not statistically significantly associated with this dominance. Moreover, the market share of ABC service station stores is not found to be related to the group's political connections. Overall, the findings of my thesis do not support the claims of the causality between S Group's political connections and zoning decisions concerning the group's service station stores.

1.3 Research scope, methods and limitations

I undertake a systematic examination of the link between S Group's political connections and zoning decisions of ABC service station stores. Additionally, I analyze the relationship between S Group's political connections and the market power of ABC service station stores. I pursue to analyze the political connections of the group using data of the Finnish municipal politicians and S Group representatives during the period between 1996 and 2009. My sample covers 64 ABC service station stores that are pure new investments[5]. With some limitations the sample includes all pure new investment ABC service station stores that were opened by regional cooperatives by the end of 2010.

To analyze the political connections of S Group, I compile a unique panel dataset by collecting the names of S Group representatives and municipal politicians. To identify the group of individuals that are politically connected, I cross-reference the names of municipal politicians with the names of S Group representatives. Several measurements are employed to assess the strength of political connections in a certain area, such as the relative number of connected municipal councilors and the share of votes received by S Group's representatives in municipal elections. The relationship between zoning decisions and political connections is analyzed by using Probit regression analysis and cross-tabulation. The association between political connections and market power is analyzed by using OLS regression analysis.

The first limitation of my thesis relates to the identification of political connections. I cross-reference the names of S Group and municipal representatives based on the first and last name seeking exact match. As discussed in Khwaja and Mian (2005), it should be noted that this literal matching of names can lead to two types of errors: (I) incorrect exclusion and (II) false inclusion. The first type of error arises when an S Group representative is politically connected, but my algorithm is unable to match him/her to a name in my dataset of municipal politicians. For example, different spellings of names or name changes due to e.g. marriage may lead to that a representative will not be matched. The second type of error occurs when my algorithm matches an S Group

[5] In this thesis, the expression *pure new investment* is used to refer to a green-field service station store investment as opposed to acquired and previously owned units, which have been renovated and transferred under the ABC brand.

representative to a municipal politician, but the match is incorrect. For example, different people may share the same first and last names. However, Aigner (1973) shows that this measurement error produces lower estimates of the true effect when the independent variable is binary. As my main measures for political connections are constructed as binary variables, the results of this thesis are likely to underestimate the true relationship between political connections, zoning decisions, and market share. Another limitation related to the identification of political connections is that I am unable to track all the changes in the composition of S Group and municipal decision making organs during official office terms. These changes increase noise in regressions and cause attenuation bias to my results. Similar to the limitations in the matching process of names, the attenuation bias should affect the results so that the true relationship between the analyzed factors is underestimated.

The second limitation stems from the relatively small number of ABC service station stores that have been pure new investments. To obtain reliable results from the cross-tabulations and Probit regression analyses where the dependent variable is binary, the sample needs to include enough of both types of observations. The value of the binary variable mostly used in the empirical tests of this thesis depends on whether an ABC service station store has been opened in a municipality during the observation year or not. The amount of observation years of the former type is relatively low in some of my regression specifications, which complicates the interpretation of the results. I am also unable to determine the exact plan approval dates for all ABC service station stores, and thus assume that all units are planned in same timeframe as the units for whom I am able to detect the correct plan approval date.

1.4 Structure of the thesis

I have organized the rest of the thesis as follows. Section 2 presents the institutional setting of the thesis giving an overview of S Group and its service station business, as well as describes the Finnish municipal administrative system. I conclude the section by discussing different ways through which political connections may create value in zoning and land allocation decisions. Section 3 presents the main findings of previous research on firms' political connections and zoning decision making. The section also sheds light on the limited body of existing research on the expansion of the ABC service

station store network. Section 4 presents the research questions of this thesis. After that, the methods and data used in the empirical part of the thesis are described in Section 5. I present and analyze the results from the empirical part in Section 6. Finally, I conclude by summarizing the main findings of the thesis and providing suggestions for further research in Section 7.

2 Institutional setting

This section provides an overview of the institutional setting of my study. First, I give an overview of S Group's operations, administration, and decision making structure. This overview section is directly based on information published on S Group's website[6] unless indicated otherwise. After that, I briefly describe the political organization of Finnish municipalities. Finally, I discuss the zoning process to illustrate the ways through which municipal politicians could affect the outcomes of the zoning decision making.

2.1 Overview of S Group

S Group is a Finnish network of companies in the retail and service trades with a total of 1,600 outlets in Finland. The group consists of regional cooperatives, local cooperatives, the central firm SOK and its subsidiaries. The regional cooperative structure was established in the 1980s, when many smaller locally operating cooperatives merged into larger cooperatives, which are today referred to as regional cooperatives. In 2012, the group's cooperative network consists of 21 regional cooperatives and eight smaller local cooperatives, which together cover the whole of Finland. S Group provides services in the trades of grocery and consumer goods, service stations and fuels, tourism and hospitality, automobile and auto accessories and in the agricultural trade. In 2010, S Group had 39,646 employees and generated net retail sales of 10,465 million euros[7]. The group is one of the two major retail trade operators in Finland. In 2010, the group's market share in the Finnish retail trade market amounted to 44% whereas the market share of the second largest operator was 35%[8].

Founded in 1904, SOK operates as the central firm for the cooperatives and produces procurement, expert and support services for them. SOK is also in charge of S Group's strategic steering and the development of the group's chains. SOK operates in the supermarket, tourism and hospitality trades in Finland as well as in the Baltic area and St. Petersburg. SOK is owned by the cooperatives: the ownership stake in SOK held by

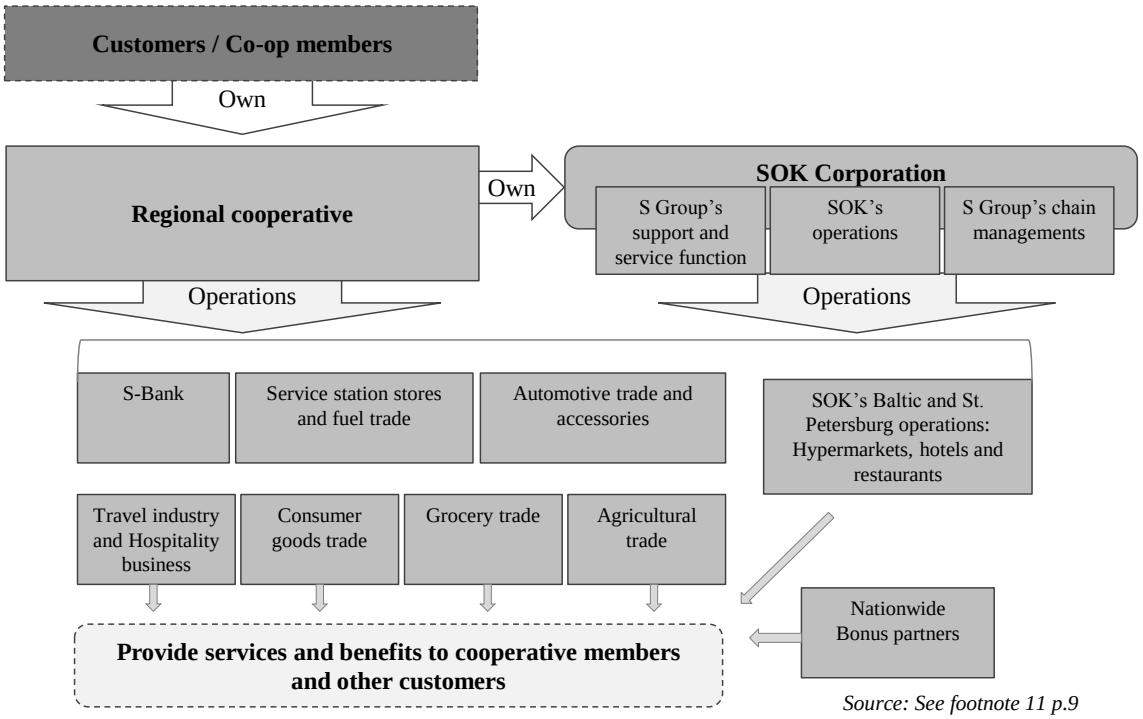
[6] S Group, 2012: www.sok.fi. All the references were done 1.3.2012.
[7] SOK annual report 2010. VAT not included in the net retail sales.
[8] Nielsen Retail Trade Register, 2012: http://fi.nielsen.com, referred 30.3.2012.

a cooperative is based on the number of members of a cooperative and the amount of its purchases from SOK's subsidiaries.

In addition to SOK, S Group consists of two types of cooperatives: regional and local cooperatives. The local cooperatives operate locally and are smaller than the regional ones, whose operating areas cover several municipalities. S Group's cooperatives are independent companies that operate on a cooperative basis. According to the Finnish law, the purpose of cooperatives is to support the members' economy by producing benefits and services for them[9]. In the organization structure of S Group the function of the group's cooperatives is to produce services and benefits for their customer owners within their own operational region, mainly in outlets belonging to national chains of the group. Most of S Group's business operations are conducted by the group's regional cooperatives that are independently in charge of their business operations. Both types of cooperatives are independent companies with their own management; therefore the operations of S Group's cooperatives have a particularly strong regional emphasis. The cooperatives are owned by their customer members: S Group had 1.9 million customer members in 2010, which represents 77% of Finnish households[10]. Figure 1 describes S Group's administration and group structure[11].

[9] Co-operatives Act (1488/2001), Chapter 1 Section 2.
[10] SOK annual report 2010.
[11] Figure 1 is adapted from the S Group website: www.sok.fi, referred 1.3.2012.

Figure 1 S Group's organisation structure



Source: See footnote 11 p.9

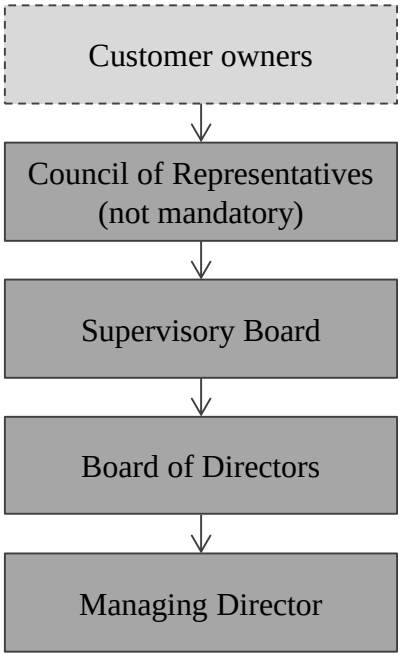
2.1.1 Administration and decision making in S Group

According to S Group, the administrative and control systems of the regional cooperatives are based on the Finnish Cooperative Act, other relevant legislation, cooperative rules and regulations as well as general corporate governance codes. The central administrative bodies of the regional cooperatives are their council of representatives, supervisory board, board of directors and managing director. The highest decision making body is the council of representatives. Figure 2 illustrates the administration and management structure of the regional cooperatives[12]. The following discussion focuses on the functions and roles of each of these decision making bodies in the organization structure of regional cooperatives, and is based on the information provided by the corporate governance statements of the regional cooperatives[13] and S Group website unless indicated otherwise.

[12] Figure 2 is adapted from Osuuskauppa Hämeenmaa corporate governance statement 2012.

[13] Note: Not all regional cooperatives publish their corporate governance statements and therefore, the practices between regional cooperatives and the description presented here may differ in some details. The main governance structure still is harmonized between the regional cooperatives.

Figure 2 Administration structure of regional cooperatives



Source: See footnote 12 p.10

Council of representatives

The council of representatives uses the owner's highest decision making power. Of the individual matters under the council's power of decision, the most important ones include changes in the rules and any possible decisions concerning mergers or the closing down of the cooperative's operations. The council of representatives assembles according to what is defined in the cooperative's rules. Typically, the council holds two assemblies per year, one in spring and one in autumn.

The council of representatives is not a mandatory body in a cooperative. In large cooperatives it replaces the cooperative meeting. In 2012, only Jukolan Osuuskauppa does not have a council of representatives[14]. The council of representatives is chosen through an election every four years. Every cooperative member who is over 15 years old has the right to vote in the election. Any customer member of a cooperative who is over 18 years old can in turn run for election. The number of members in the council of representatives varies between regional cooperatives. The largest representative council comprises 100 members whereas the smallest councils consist of a couple of dozen members[15]. The members of council of representatives are entitled to compensation. For

[14] S Group, 2012: www.sok.fi, referred 10.3.2012.
[15] Annual reports of the regional cooperatives 2009.

instance, the members of the council of representatives of Helsingin Osuuskauppa Elanto, the largest regional cooperative, are compensated with 425 euros for each meeting they attend[16].

Supervisory board

The Finnish Cooperatives Act does not require a cooperative to have a supervisory board. However, in S Group the cooperatives' rules define it as part of the administrative model. According to the corporate governance statements of the regional cooperatives, the supervisory board is granted with a significantly higher level of power in regional cooperatives than in publicly listed companies[17]. The supervisory board focuses on supervision-related questions and selects the members of the board of directors. The central responsibilities of a supervisory board typically consist of supervision of business operations, election of the board of directors and managing directors, confirmation of the strategy and annual financial objectives as well as decisions regarding significant mergers or demerger of a cooperative.

The number of members in the supervisory boards of the cooperatives varies around 20 persons. In addition to the members elected by the representative council, representatives of employees also have seats on the supervisory board. The corporate governance statements of regional cooperatives set several requirements for the members of supervisory boards[18]. First, a member of a board of directors cannot be a member in a supervisory board. Second, members of a supervisory board are required to have appropriate knowledge of business and administrative procedures. The entire operating area of a regional cooperative should also be represented as equally as possible by the supervisory board members. Additionally, the members are required to live in the operating area of the regional cooperative. The supervisory board assembles when the chairman summons a meeting. The members of supervisory boards are entitled to a compensation, which varies between different positions on the board. For instance, the members of the supervisory board of Helsingin Osuuskauppa Elanto were

[16] Helsingin Osuuskauppa Elanto corporate governance statement 2012.
[17] See e.g Helsingin Osuuskauppa Elanto corporate governance statement 2012.
[18] See e.g Helsingin Osuuskauppa Elanto corporate governance statement 2012.

compensated with approximately 2,000 to 3,000 euros in 2011, whereas the Chairman of the supervisory board was compensated with 32,680 euros[19].

Board of directors

In the regional cooperatives, the board of directors is responsible for the success of the cooperative's business operations. The board of directors decides the central strategy and objectives, makes investment decisions, sets annual financial objectives and operation plans as well as leads and supervises operational activities. In the regional cooperatives, the managing director is also a member of board of directors. The managing director is responsible for managing the operations of the cooperative in accordance with the decisions and instructions of the administrative bodies.

The board of directors consists of a cooperative-specific number of members elected for a period of one calendar year. The amount of board members typically varies between four and six. Differently to publicly listed companies, the board of directors is selected by the supervisory board, not by the annual general meeting. According to the corporate governance statements of the regional cooperatives, the members of boards of directors should have appropriate business and administrative knowledge and live in the operating area of the regional cooperative when possible. The board of directors meeting is called together when necessary, but a specified minimum amount of meetings must be held. The members of boards of directors are also entitled to compensation. For instance, in 2011 the members of Helsingin Osuuskauppa Elanto's board of directors, excluding the managing director who is the chairman of the board, received compensations that varied between 18,715 and 27,080 euros[20].

2.1.2 Service station and fuel trade

In 2010, S Group's service station and fuel trade network consisted of 108 ABC service stations stores, 280 ABC unmanned stations and 17 ABC-Delis and 12 other gasoline stations[21]. Before establishing the ABC service station chain in 1998, S Group was already active in the fuel and service station business. The regional cooperatives had

[19] Helsingin Osuuskauppa Elanto corporate governance statement 2012.
[20] Helsingin Osuuskauppa Elanto corporate governance statement 2012.
[21] SOK annual report 2010.

gasoline stations which operated under the brands of oil companies. In 1996, Shell was the most significant partner whose share of the partner units was 62%[22].

At the end of 1990s, S Group decided to establish the ABC service and gasoline station chain that would operate under the group's own logo. The first ABC service station store was opened in Utti, Valkeala in December 1998. Currently, all of the service station stores belong to the regional cooperatives, although a few of them were originally opened by local cooperatives. These stations have become part of the regional cooperatives through mergers between local and regional cooperatives[23].

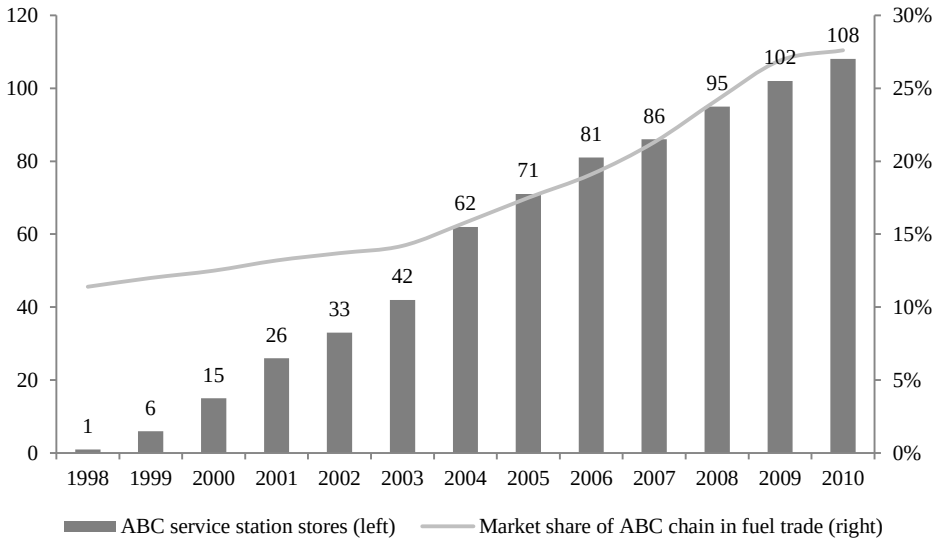
The ABC service station stores are often large service station units that in addition to selling fuel, have a supermarket store, a restaurant and often also other services, such as a pharmacy and an Alko liquor store[24]. In Finland, the latter is a regulated type of retail store operated by the state alcohol monopoly. One of the largest ABC service station stores is ABC Kuortti located in Pertunmaa. Its total surface consists of 3,200m^2 of which 2,700m^2 belongs to restaurant and grocery stores of ABC, and the rest is divided between an Alko store, a pharmacy, souvenir and leather stores. (Mäntylä et al. 2011.) In 2009, 1.2 billion euros of the net sales of S Group's service station and fuel trade was generated through fuel trade, and 500 million euros from restaurant and grocery store services (Alkio 2010).

The number of ABC service stations stores grew at a compounded annual growth rate of 30% between 1999 and 2010[25]. The fastest growth year was 2004 during which S Group opened 21 ABC service stations stores. However, all ABC service stations stores were not pure new investments since several of the group's existing fuel and service stations were renovated to fit into the ABC concept. The regional cooperatives also acquired competing service stations, which were then turned into ABC stations. In 2006, S Group acquired ExxonMobil's fuel marketing affiliate Esso Finland (SOK 2006a). As a result of the transaction, part of the existing Esso stations joined to the ABC chain and the rest were sold to the St1-chain (SOK 2006b). The deal increased the amount of S Group's ABC gasoline stations particularly in the Greater Helsinki area and in Southern

[22] SOK annual report 1996.
[23] See e.g. Osuuskauppa Hämeenmaa press release 18.2.2011.
[24] SOK annual report 2010.
[25] Calculation is based on SOK annual reports 1999-2010.

Finland[26]. The goal of the ABC chain is to continue to implement a growth strategy, although the approach will be a bit more moderate than in the previous years. New service station stores will likely be established at a rate of five to eight units per year. [27] Figure 3 illustrates the growth of the ABC service station store network[28].

Figure 3 Number of ABC service station stores and the chain's market share



Source: See footnote 28 p.15

As Figure 3 illustrates, ABC's market share in fuel trade has grown steadily with the expansion of the service station store network. In 1999, the group's market share in fuel trade was 12%. By the end of 2010 the chain's market share had already reached 27%[29]. In 2010, ABC chain was the market leader in the gasoline trade, leaving the former market leader Neste Oil to the second place. Table 1 provides an overview of the most important operators in the Finnish gasoline station market[30]. Measured by the share of gasoline sales, ABC chain was the market leader in the Finnish gasoline station market in 2010. The second largest gasoline seller Neste Oil had the most extensive gasoline station network with its 515 stations.

[26] SOK annual report 2006.
[27] SOK annual report 2010.
[28] Figure 3: The number of ABC service station stores is based on the year-end number reported in SOK annual reports for the years 2001-2010. For the years 1998-2000 the number is based on the sum of new stations opened, as the year-end number is not reported. Thus, I make the assumption that no service stations were closed in 1999-2000.
[29] SOK annual report 2010.
[30] Finnish Petroleum Federation, 2012: www.oil.fi/eng, referred 10.3.2012. Note: The definition of service station includes also other units that S Group reports as service station stores thus, the number is higher than the number reported by S Group in 2010.

Table 1 Operators in the Finnish gasoline station market

This table describes the distribution of service stations and unmanned fuel stations in Finland on 31st December 2010 by operator / chain. The table also describes the market shares in gasoline and diesel trade in 2010.

Note: St1 acquired Shell's operations in Finland in 2010. Starting from 1st December 2010, Shell units have operated under St1 Energy Oy.

Operator / Chain	Service stations	Unmanned stations	Total	Share of gasoline sales	Share of diesel sales
ABC	125	280	405	28%	11%
Neste Oil	310	205	515	25%	39%
Seo	94	83	177	3%	2%
Shell / St1 Energy	158	50	208	13%	12%
St1	89	256	345	14%	9%
Teboil	139	196	335	18%	27%
Others				0%	0%
Total	915	1,070	1,985	100%	100%

2.2 Finnish municipal administrative system

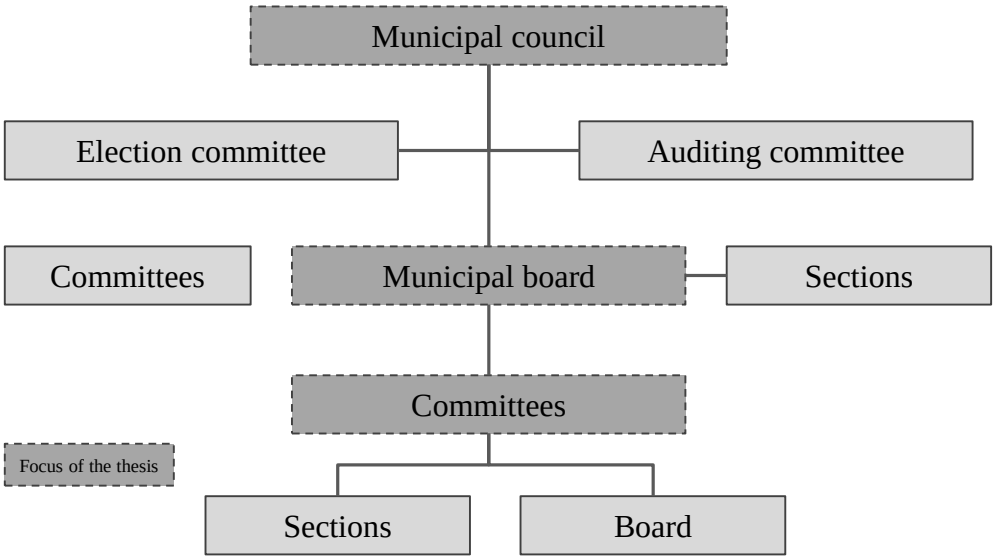
Next, I describe the Finnish municipal administrative system and review the functions of the municipal decision making bodies. The Finnish local authorities are responsible for a particularly wide variety of duties. In fact, Finnish municipalities are responsible for organising the majority of public services provided to citizens. The statutory duties of the municipalities are laid down by the Local Government Act. The most important statutory functions are social welfare, healthcare, education, environmental protection and technical infrastructure. (Sjöblom 2010.)

The administration of municipalities is based on the self-government of their residents, and therefore municipalities can organise their administration relatively freely. In Finland each municipality must have a municipal council, which is the main decision making body, a municipal board, an auditing committee for auditing municipal administration and finance, and an election committee, which is responsible for organizing elections. Other committees elected by municipal council such as education, zoning and social committees are optional and the structure of the committee organization varies greatly between municipalities. (Sjöblom 2010.) Municipalities must also have a municipal manager, elected by the municipal council[31]. Figure 4

[31] Local Government Act (365/1995), Chapter 3 Section 24.

illustrates the administration structure of Finnish municipalities as laid down by the Local Government Act[32].

Figure 4 The Finnish municipal administrative system



Source: See footnote 32 p.17

Municipal council

Municipal council is the main decision making body in the Finnish municipal administrative system. According to the Finnish Local Government Act, the municipal council is responsible for municipal operations and finance. The duties of municipal council laid down by the act are illustrated in Table 2. [33]

[32] Figure 4 is adapted from the website of the Association of Finnish Local and Regional Authorities: www.localfinland.fi, referred 1.3.2012.
[33] Local Government Act (365/1995), Chapter 2 Section 13.

Table 2 Duties of municipal council

Duties of municipal council
(1) Decides on the main operational and financial objectives
(2) Decides on the principles for arranging the administration
(3) Decides on financial principles, financing and investment, and approves the budget
(4) Decides on the general principles for the charges to be collected for services and other performances
(5) Decides on the operational and financial targets to be set for a municipal enterprise
(6) Decides whether to provide a guarantee or other security for another party's debt
(7) Elects members to municipal organs, unless otherwise provided
(8) Decides on the principles for the financial remunerations of elected officials
(9) Elects auditors
(10) Approves the financial statements and decides whether to grant release from liability
(11) Decides on other matters provided and appointed for decision by the council

The municipal council is elected by the municipality's residents for the four calendar years following the election year[34]. In the municipal elections of 2008, in total 10,412 municipal councilors were elected[35]. The number of elected municipal councilors is proportional to the population of the municipality, varying from 17 to 85 councilors with exceptions allowed for smaller municipalities[36]. For the office term 2009-2012, the most common municipal council size is 27 members, and on average municipalities have 31 councilors. Approximately 35% of the elected councilors had not been members of the municipal councils in the terms 2005-2008 and 2009-2012.[37]

Other organs under municipal council

In addition to the municipal council, the Finnish Local Government Act requires municipalities to have a municipal board appointed by the municipal council[38]. The members of the municipal board are not required to be elected councilors[39]. The municipal board is responsible for municipality's day-to-day administration, financial management, and for preparing, executing and watching over the legality of council

[34] Local Government Act (365/1995), Chapter 2 Section 9.
[35] The Association of Finnish Local and Regional Authorities, 2012: www.localfinland.fi, referred 14.4.2012.
[36] Local Government Act (365/1995), Chapter 2 Section 10.
[37] The Association of Finnish Local and Regional Authorities, 2012: www.localfinland.fi, referred 14.4.2012.
[38] Local Government Act (365/1995), Chapter 3 Section 17.
[39] Local Government Act (365/1995), Chapter 3 Section 18.

decisions[40]. The responsibilities of the municipal board are more practical than those of the council. Municipalities are also required to have a municipal manager who works under the municipal board as the head of municipal administration, financial management and other operations[41].

Moreover, the municipal management system features committees, which operate under the municipal board. The municipal council selects the committees, which oversee the provision of public services in the municipality and perform the permanent duties assigned by the municipal council.[42] The most common committees are the education committee, social welfare and health committee and zoning committee. The number and responsibilities of the committees vary between municipalities.[43] Similar to the municipal board the members are not required to be elected councilors[44].

2.3 Zoning process

In Finland, municipalities have a central role in zoning since they draft their own local land use plans, which must be approved by the municipal council[45]. Thus local authorities and municipal politicians act as decision-makers and coordinators in the zoning processes. They have a significant amount of control over the building and zoning decisions in their municipalities. The main instruments for the local authorities are the local master plan, the local detailed plan, and the permitting system of the building legislation. In this section I give an overview of the zoning process to illustrate how political connections may increase value in zoning and permit decisions.

2.3.1 Process description

The provisions of the Land Use and Building Act are applied in the zoning, building development and use of land and water areas[46]. The Land Use and Building Act gives local authorities significant responsibility for zoning and building control within their area. In fact, Finland's land use planning system provides municipalities with a high

[40] Local Government Act (365/1995), Chapter 3 Section 23.
[41] Local Government Act (365/1995), Chapter 3 Section 24.
[42] Local Government Act (365/1995), Chapter 3 Section 17.
[43] Finland's Ministry of Finance, 2010: Finnish public governance – A background report.
[44] Local Government Act (365/1995), Chapter 3 Section 18.
[45] Land Use and Building Act (132/1999), Chapter 5 Section 37 and Chapter 7 Section 52.
[46] Land Use and Building Act (132/1999), Chapter 1 Section 2.

degree of autonomy in local land use planning[47]. The local authorities have the so-called municipal monopoly in statutory land use zoning, meaning that local authorities have, besides the responsibility, also the right to control statutory land use and zoning within their municipality (Nuuja and Viitanen 2007).

The Finnish zoning system consists of four levels of zoning: national objectives of land-use planning, regional plans, local master plans and local detailed plans. The regional plan acts as a set of guidelines for lower level planning, which includes local master plans and local detailed plans. (Nuuja and Viitanen 2007.) Land use in municipalities is organized and steered by local master plans and local detailed plans. The local master plan indicates the general principles of land use in the municipality. The local detailed plan indicates how land-areas within a municipality are used and built.[48]

(1) *Local master plans* cover community structure and land use. The purpose of the local master plan is to lay out the general principles of the community structure and land use of a municipality. The local master plan allocates areas for different land uses such as housing, traffic, services and recreation.[49] When the local master plan is drafted, the regional plan must be taken into account[50]. The local master plan is approved by the municipal council[51].

(2) *Local detailed plans* control construction and indicate how land-areas within the municipality are used and built. According to law, the local detailed plan is drawn up for the purpose of organizing land use, construction and development in detail. Local detailed plans determine the characteristics of local neighborhoods, covering land uses and all types of construction. The locations and sizes of buildings are also defined in detail. Plans may cover whole districts or only a single property.[52] When the local detailed plan is drafted, the regional plan and the local master plan must be taken into account[53]. The local detailed plan is approved

[47] Finland's Ministry of the Environment, 2005: Regional land use planning in Finland.
[48] Land Use and Building Act (132/1999), Chapter 1 Section 4.
[49] Land Use and Building Act (132/1999), Chapter 5 Section 35.
[50] Land Use and Building Act (132/1999), Chapter 5 Section 39.
[51] Land Use and Building Act (132/1999), Chapter 5 Section 37.
[52] Land Use and Building Act (132/1999), Chapter 7 Section 50.
[53] Land Use and Building Act (132/1999), Chapter 7 Section 54.

by the municipal council. When the impact of the plan is minor, the municipal council's authority may be delegated to the municipal board or to a committee.[54]

The zoning process consists of several stages, whose content depend on the nature and significance of the zoning project. The following description is based on the general zoning process description presented by Finland's Ministry of the Environment[55].

(1) *Starting stage:* The initiative for a zoning process can come from a landowner, an inhabitant or different administrative actors of the municipality. Preceding the actual zoning the local authority conducts an assessment of the need and requirements for a statutory land use plan. The assessment procedure is conducted both in the context of local master and local detailed plans. If the municipality considers the project appropriate, the zoning begins with the preparation of the participation and assessment scheme. The scheme covers participation and interaction procedures as well as an assessment of the impact of the plan. The initiation of the zoning process must be publicized so that interested parties have the opportunity to obtain information on the principles of the zoning and on the participation and assessment procedure.

(2) *Preparation stage*: The plan draft is prepared according to the participation and assessment scheme. The plan draft describes the preliminary purposes of use of the planned area and the amount and location of buildings. The plan draft is published according to the participation and assessment scheme. Residents have the right to express their opinion on the published plan draft.

(3) *Proposal stage:* From the basis of the plan draft and expressed opinions the plan proposal is finalized. The plan proposal is presented in public. Members of the municipality and interested parties are provided with an opportunity to express their opinion on the matter. On the local level, the plan proposal is usually first considered in the administrative bodies (committee or municipal board) before it is formally published. For instance, in Helsinki the plan proposal is presented to the city zoning committee. The plan proposal supported by the committee is

[54] Land Use and Building Act (132/1999), Chapter 7 Section 52.
[55] See Tulkki and Vehmas, 2007. Environmental Administration Guidelines 1/2007.

presented in public. A citizen who is not content with the proposal can express his opinion in written form.[56]

(4) *Approval stage:* If no complaints are received the plan proposal is approved. The local master plans and local detailed plans are approved by the municipal council. When the local detailed plan does not have significant impact the plan can also be approved by the municipal board or a committee.

Rinkinen (2007) reports the results of the Ministry of the Environment and the Association of Finnish Local and Regional Authorities' analysis of the duration of the local detailed plan process in 54 municipalities between 2004 and 2005. They find that the median duration of the zoning process was 10.3 months for the whole sample and 9.9 months for large municipalities. These results are relevant for later empirical analysis and especially for constructing the lags used in the regression models in Section 6 of this thesis.

2.3.2 Other permits required

Service stations also require building and environmental permits. A building permit is required for the construction of a building. A building permit is also required for repair and alteration work that is comparable to building construction and for extending a building or increasing its gross floor area. To receive a permit, the project needs to be in line with the local detailed plan if the building is constructed in its area.[57] The municipal building supervision authority approves building permits[58].

According to the Finnish Environmental Protection Act, an environmental permit is required for fuel stations and for the distribution of liquid fuels when specific limits are exceeded[59]. The environmental permits are also approved on the municipal level. For instance, in Helsinki the environmental permits are usually approved by a special environmental committee[60].

[56] City of Helsinki, 2012a: Planning procedures.
[57] Land Use and Building Act (132/1999), Chapter 18 Section 125.
[58] Land Use and Building Decree (895/1999), Chapter 1 Section 4.
[59] Environmental Protection Decree (169/2000), Chapter 1 Section 1.
[60] City of Helsinki, 2012b: Functions of environmental committee.

3 Literature review

In this section I first present a brief overview of existing academic research on the value creation effects of political connections of firms and the possible means through which political connections can create value for politically connected firms. After that I present literature on zoning decision making and its political aspects. Finally, I conclude the section by presenting the limited body of literature on the effects of ABC service station stores on their operating environment. Due to the limited amount of extant research on the ABC service station stores, I also shortly discuss a report published by interest groups representing Finnish fuel retailers[61] that analyzes the political connections of S Group and their implications on the land allocation decisions concerning S Group's units.

3.1 Value creation through political connections

Granovetter (1985) argues that even in modern capitalist societies, social networks, including political connections, are a significant determinant of resource allocation and other economic actions. Several recent academic studies provide supportive evidence for this argument by showing that political connections can create value to companies (see e.g. Fisman 2001; Faccio 2006). The academic literature provides evidence for that this enhancement of firm value may stem from multiple sources, such as access to bank financing (Johnson and Mitton 2003), government subsidies (Faccio et al. 2006) and allocation of procurement contracts (Goldmann et al. 2010). These value creation opportunities associated to political connections may inspire firms to become politically connected (Jiang 2008).

Faccio (2006) studies the relationship between political connections and share prices by examining over 20,000 firms in 47 economies. In his study, Faccio defines political connections as at least one large shareholder or top officer being a member of parliament, a minister, or closely related to a top politician or party. His results suggest that appointments of politicians to corporate boards have no significant effect on stock prices, even though such connections are widespread. However, he finds that the stock

[61] The report was written for the Federation of Finnish Enterprises (Suomen Yrittäjät), the Association of Finnish Fuel Retailers (Suomen Bensiinikauppiaitten ja Liikennepalvelualojen Liitto SBL ry) and the Foundation for Retail Trade Research (Vähittäiskaupan tutkimussäätiö).

prices of firms tend to increase significantly when a businessperson representing the firm enters politics. Fisman (2001) finds that the market values of Indonesian firms are significantly associated with the changes in the political landscape. Claessens et al. (2008) analyze the value of political connections in the Brazilian market. Their results show that the firms that provided contributions to federal deputies around the 1998 and 2002 elections experienced higher stock returns than firms that did not do so. However, as Faccio reports, political connections are less common in the presence of more stringent regulation of political conflicts of interest, thus the results from less developed countries and cross-country studies cannot as such be generalized to countries with established legal systems and lower perceived levels of corruption.

A few papers focus on analyzing the value of political connections in the developed countries by providing evidence on the US stock market. Goldman et al. (2009) find that the US firms that announced a board nomination of a politically connected director experienced a positive abnormal stock return. Moreover, they reports that the companies connected to the Republican Party increased in value in response to the Republican victory in the 2000 Presidential Elections. Fisman et al. (2006) and Jayachandran (2006) also analyze the effects of political connections in the US market, but instead of systemic effects they focus on the impact of political connections to single politicians. Jayachandran finds that firms lost 0.8% of their market capitalization during the week that Senator Jim Jeffords left the Republican Party for every $250,000 they gave to Republicans in the previous election cycle. Fisman et al., who analyze the market value of personal ties to Vice-President Cheney, present somewhat contrary evidence. Their results show that the value of ties to Cheney is zero, indicating that political connections would not create value to the US firms. They present that media scrutiny prevents highly placed public officials in the United States from favoring those with whom they have personnel connections. Although these studies deal with the important question of whether companies can benefit from having political connections, they mostly remain silent in the area of the exact source of this value.

Even though the channels for political influence are likely to be multifold, previous academic studies that report evidence on the sources of value of connections are relatively limited to certain types of benefits. Most of previous studies have analyzed

preferential access to credit (Johnson and Mitton 2003; Khwaja and Mian 2005), regulatory protection (Kroszner and Stratmann 1998) and government aid to financially troubled firms (Faccio et al. 2006).

Various papers that pursue to examine the channels for political influence are focused on analyzing whether politically connected firms are favored in credit decisions in developing economies. Several studies suggest that politically connected firms are associated with preferential access to bank financing. For instance, Khwaja and Mian (2005) show that companies in Pakistan with political connections receive more loans and default on these loans at a much higher rate relative to unconnected companies, providing evidence that these loans are granted based on political considerations. Charumilind et al. (2006) provide similar evidence for lending practices in Thailand. Leuz and Oberholzer-Gee (2006) argue that Indonesian firms with political ties often receive cheap loans from state-owned banks and are therefore less likely to use foreign capital markets as their financing source. Claessens et al. (2008) find that firms which provided financial support to candidates in the federal elections of 1998 and 2002 in Brazil significantly increased their bank financing relative to a control group. To conclude, evidence from several developing economies suggests that politically connected firms are favored in credit decisions, but again such research on developed economies is scarce.

In addition to preferential access to debt financing, a handful of other ways how political connections can pay off have also been identified. Inter alia, Goldman et al. (2010) examine a sample of US firms around the 1994 and the 2000 elections and provide evidence that politically connected firms are more likely to experience an increase in government procurement contracts when they are connected to the winning party. Faccio et al. (2006) analyze the likelihood of government bailouts by using a sample of 450 publicly listed and politically connected firms from 35 countries over the period 1997 through 2002. They find that politically connected firms are significantly more likely to be bailed out than similar non-connected firms and the likelihood increases if the IMF or World Bank provides financial assistance to the firm's home government. Faccio (2007) analyzes the characteristics of politically connected firms in a cross-country study of 47 countries. His cross-country analysis suggests that firms

connected through their owners enjoy significantly lower taxation than unconnected firms.

The literature presented here has managed to widely validate the value creation opportunities associated to political connections and identify a few means through which these connections can bring benefits for politically connected firms. However, the consequences of these connections on market competition have received surprisingly little attention. The most direct attempt to capture the effect of political connections on market competition seems to be the cross-country analysis by Faccio (2007). He finds particularly strong evidence on that politically connected firms are associated with significantly higher market shares than non-connected firms. According to Faccio, the stronger market power of more connected firms proxies for monopolies, government contracts and protection in general.

To conclude, it seems evident that political connections can provide firms with various types of benefits. However, research has so far focused only on a relatively limited body of candidates for potential sources of such value. Additionally, academic studies have been mainly carried out through cross-country analyses and by focusing on developing economies. In this thesis, I contribute to existing research by focusing on zoning decisions as a source of value from political connection. My study also analyzes the phenomenon within Finland, which is a developed economy with an established legal system and a low perceived level of corruption. In 2011, Finland was ranked as the second least corrupted country in the world[62].

3.2 Decision making in zoning process

The importance of zoning decisions in the economic development of communities is widely recognized in existing literature. The importance of these decisions is likely to stem from that zoning can be seen as the primary means for regulating and coordinating land use (Ostrow 2008). Through zoning local governments can influence the development, usefulness, and distribution of their land (Oliver 2001). Hanushek and Quigley (1990) describe land-use rules as the most significant market intervention taken by state and local governments. Furthermore, zoning decisions have also been shown to

[62] Transparency International, 2012: www.transparency.org, referred 10.04.2012.

have an impact on growth management (Burby and Dalton 1994) and economic development policy (Blakely and Bradshaw 2002) of communities.

In addition to being an important tool in community development, zoning is also associated with significant private interests. Lubell et al. (2005) argue that economic and development interests have a substantial interest in land-use decisions, because land-use policy has consequences for the private risk and return of investments. In fact, land use is recognized as the quintessential targeted policy that can direct benefits to particular constituencies (Denzau and Weingast 1982). The argument by Fleischmann (1989) shows that the direction of benefits in zoning decisions is particularly vulnerable to face conflicting interests, since zoning involves complex relationships among elected officials, local government professionals, appointed zoning commissions, and various private interests.

Cordes (1989) presents five specific problems of bias and conflicts of interest in zoning decision making. He argues that the clearest and most frequent type of impermissible conflicting interest is the financial conflict. By financial conflicts he refers to situations in which a participating decision-maker might benefit financially, for example as a business associate or landowner. Although the decision-maker might not realize an immediate financial benefit, there might be substantial pressure to make a particular decision to ensure that the relationship, including its attendant financial rewards, continues. A second source of conflicts of interest in zoning decision making stems from other types of relationships that a decision-maker might have with parties involved in or affected by zoning decisions. These relationships with an interested party might improperly affect the ultimate decision, thus calling into question the accuracy of decisions and undermining the legitimacy of the system. As a third source Cordes presents biases based on self-interest. *Ex parte* communications between zoning decision-makers and private parties presents the fourth problem in zoning decisions. These communications, in which one or more of the concerned parties is not present, imply a challenge since they do not allow all parties a chance to respond to presented views. This may significantly reinforce public perception that zoning boards are subject to special influence. A final source of biases in zoning is the receipt of campaign contributions by a decision-maker who must later decide an issue affecting the

contributor. The contributions raise serious fairness concerns, mainly because of the perception that favorable decisions can be bought. This framework presented by Cordes illustrates that local zoning decision-makers are vulnerable to several types of conflicts of interest and biases.

Several papers have pursued to explain local officials' land use policymaking. Previous literature supports the importance of professional planners' advice, the desire to avoid conflicts and harm to citizens, as well as specific local circumstances as three key factors influencing local officials' land use decision making (Koontz 2005). Moreover, political pressure and the commitments of local officials have been found to affect recommendations for land use policy changes (Burby and May 1997). Fleischmann and Pierannunzi (1990) examine factors affecting re-zoning decision of local governments in Atlanta. Their results show that the zoning commissions' recommendations dominate the governing bodies' decision making in re-zoning cases. Burby and May also conclude that the commitment of zoning staff is a key variable influencing the adoption of plan policy recommendations. Several papers also argue that members of municipal councils decide re-zoning by satisfying as many constituents as possible to be re-elected (Siegan 1972, 16-18; Weaver and Babcock 1979, 5-10, 140-153; Fischel 1985, 207-230). According to Schneider (1989), one of the advantages that business constituents have in land-use decisions is their perceived importance to local economies. However, Fleischmann and Pierannunzi find that business and citizens' interests do not have a clear effect on the local officials' land use decision making. Furthermore, Fleischmann and Pierannunzi have recognized the significance of local circumstances for zoning decision making. Local context is likely to bring unique factors that affect land use decision making. This is an important observation, which implies that the generalizability of the results of zoning related research is often limited. For example, in declining areas, there is likely to be more support for increased development rather than farmland preservation.

One challenge to the fairness of zoning decisions and the direction of benefits to different parties is presented by the composition of zoning decision making bodies. Ostrow (2008) argues that because of their small size and homogenous constituency, local decision making bodies are particularly vulnerable to political capture by a single

interest group. He argues that the factional domination can appear in several ways at the local level. One is sheer corruption, made possible in smaller representative bodies because a limited number of persons have influence that could potentially be bought. Another possibility is domination by a few actors who are perceived by others as powerful. Ross and Smith (1994) also support the claim that zoning decisions are especially vulnerable to problems of bias and conflicts of interest because of the localized nature of the decisions, the fact that members of zoning boards are drawn from the immediate geographical area and the political nature of the zoning process.

Extant literature has also focused on analyzing the actual composition of zoning-decisions making bodies. Walker (1950, 150-153) reports that zoning boards in 31 large US cities were dominated by business owners, professionals, and technical occupations in 1937. This phenomenon seems to still exist as in a more recent study Anderson and Sass (2004) find that in the US, small towns have a fairly representative board makeup, but blue-collar citizens are significantly underrepresented in larger cities. They also conclude that the majority of those sitting on zoning boards tend to benefit, either directly or indirectly, from development. Anderson et al. (2008) present similar evidence for the proposition that individuals with white-collar occupations dominate zoning boards in the US. Moreover, they find that individuals with professional occupations in business are disproportionately represented in zoning boards. In addition, over 30% of board members are found to have a direct interest in property development. Walker argues that this occupational distribution may cause several consequences. He argues that large representation of specific occupations may hinder the committees' ability to reflect "the citizen point of view" and the decisions undertaken do not represent the population as whole. To determine the potential effects of the occupational skew, Anderson et al. conduct a survey of citizens to determine whether their attitudes toward controversial land use issues vary according to demographic factors, including occupation. They find that various demographic characteristics correlate with differing attitudes towards zoning issues. Thus, their results suggest that a board composed of a broader cross section of citizens might make different decisions than a board with more skewed representation.

Overall, academics have widely recognized the importance of zoning decisions for different interest groups, as well as the particular vulnerability of these decisions to conflicts of interest. However, most of the papers are written from a legal perspective and do not focus on empirical analysis. Consequently, the political nature of zoning decisions has been analyzed empirically only to a limited extent.

3.3 Research on ABC service station stores

In this section, I first discuss an earlier report on the political connections of S Group commissioned by fuel retailer interest groups. Despite that the report is not an academic study, I consider it as an essential part of this section as it seems to be the only published piece of work that directly relates to my research questions and the only existing attempt to analyze the political connections of S Group. Second, I briefly present relevant research on the operating environment of Finnish service stations.

3.3.1 Political connections of S Group

Laitinen (2007) analyzes S Group's political connections and their effects on the land allocation decisions in a report written for the Federation of Finnish Enterprises, the Association of Finnish Fuel Retailers[63] and the Foundation for Retail Trade Research[64]. Laitinen identifies the political connections of S Group by analyzing the dual roles that the members of the supervisory boards and the boards of directors of S Group's regional cooperatives have in municipal councils, municipal boards and committees. Laitinen's research was carried out between October 2006 and January 2007, but the exact moment for measuring political connections is not defined.

Laitinen concludes that the political connections of S Group cause significant ineligibility problems due to the widespread existence of political connections. To analyze the effect of these connections on the land allocation decisions, Laitinen presents descriptive example cases of the land allocation and opening decisions of ABC service station stores from several municipalities. These case descriptions remain to some extent anecdotal, as Laitinen does not report the exact sources for the used information. Laitinen's main conclusion is that municipalities have favored S Group in

[63] Finnish name: Suomen Bensiinikauppiaitten ja Liikennepalvelualojen Liitto SBL ry.
[64] Finnish name: Vähittäiskaupan tutkimussäätiö.

land allocation decisions due to the group's political connections. However, the results that he reports do not make the causality between the political connections and favorable zoning decisions apparent.

3.3.2 Operating environment of service station stores

A novel academic study by Mäntylä et al. (2011) analyzes the impacts that service station stores have on their operating environment in Finland. The sample of analyzed units consists of four service station stores of which three belong to the ABC chain. Their interview and survey based research focuses on the overall operating environment, and does not specifically concentrate on the land allocation decisions of municipalities. Nevertheless, they find no evidence for that the regional cooperatives of S Group would be in a better position than competitors in the land allocation decisions of municipalities. Based on their interviews with municipal representatives, in small rural areas all companies that are willing to invest in the area are provided with support and allocated land when feasible. However, due to the interview and survey based research methodology and the sensitive nature of the topic, it is possible that the results are biased due to subjective answers.

Moreover, Mäntylä et al. (2011) analyze factors that affect the placement of service station stores. According to them, the placement of automated filling stations is less dependent on their neighboring area than grocery stores. Mäntylä et al. state that the road network is the most important factor in the placement of automated filling stations, whereas service stations that sell grocery goods are more strongly affected by the structure and offering of other nearby grocery stores. Similarly, the service stations with extensive grocery store operations are likely to affect the competition both in the fuel trade and grocery store markets. Also Lähde (1999) reports that the likelihood that a grocery store is located in conjunction with a service station increases with the size of municipality and the significance of the road along which the service station is located. According to a report written by the Finnish Road Administration (2007) service station stores are typically located neither in city centers nor remote areas, since they aim to serve both road passengers and local inhabitants. Thus traffic amounts, the amount of local population and competition affect strongly the location of service station stores.

Mäntylä et al. (2011) also analyze the impacts that service station stores have on their operating environment. They state that the municipalities covered by their research have started to develop the area where an ABC service station store is located, but the direction of the causality is not clear. They also conclude that customers have started to either partially use the services of new service station stores at the expense of existing grocery retailers. However, the interviews with local entrepreneurs and inhabitants suggest that this impact of the new service station stores has had no major effects on the level of competition. In the interviews, other grocery store entrepreneurs felt that they have not lost customers due to the service station stores. This evidence on the small effect on the local competition may be caused by the fact that road passengers are an important customer group of service station stores. Mäntylä et al. conclude that the phenomenon is mainly related to the increase in new road passenger customers that stop within the municipality after the opening of a new service station store, not to changes in the local residents' purchasing behavior.

4 Research questions

This section presents the research questions of my study. First, I present the research questions that focus on analyzing the relationship between S Group's political connections and the zoning decisions of the group's ABC service station stores. After that I discuss my research question on the association between the group's political connections and the market share of its service station stores. Since my thesis focuses on a highly specific phenomenon and the amount of extant studies examining the effect of political connections on zoning decisions is very limited, my research questions are mostly drawn from anecdotes presented in the press, as well as logical expectations derived from these anecdotes, rather than empirically validated previous research.

4.1 Research questions on zoning decision making

The anecdotes presented in the press mainly state that the political connections of S Group have granted the group preferential access to land and favorable treatment in zoning decisions (see e.g. Leivonniemi 2010; Ranta 2011; Ranta 2012). Specifically, these anecdotes state that the zoning decisions of the group's ABC service station stores have been affected by the group's political connections. In the case of ABC service station stores, the motivation to utilize political connections in zoning decisions may arise from both involved sides. First, politically connected representatives might have incentives and power to lobby ABC service station stores to be located in their municipalities. Second, S Group may have an incentive to leverage these connections in the zoning decision making.

According to Jiang (2008), politicians are self-motivated to build a career through improving the employment rate, regional fiscal and economic health. Thus, the incentive for politically connected S Group representatives may arise for instance from the positive effect of ABC service station stores on the employment and service offering of a municipality. Due to their relatively large size and service offering, ABC service station stores often have a significant role as an employer and a service provider, especially in smaller municipalities (Mäntylä et al. 2011). It is noteworthy that the median population of the 336 Finnish municipalities is relatively low, only 5,839 in

2012[65], implying that there is a large amount of small municipalities for which an ABC service station store in itself is a relatively significant employer.

Although the potentially improved employment rate and wider service offering often benefit local citizens, fair market competition may suffer if politicians prefer to achieve these objectives by favoring a certain operator, such as the S Group. Smaller operators are unlikely to have as wide political connections as S Group, which through its 21 regional cooperatives has a strong local presence in nearly all Finnish municipalities. If the political connections are used to obtain favorable zoning decisions for the group's units, the connections can simultaneously be used to hinder smaller competitors to even compete with the group's units. As Jiang (2008) states, while accomplishing specific objectives may improve politicians' own welfare, it may come at the expense of the equality of different parties. It can be further argued that as a consequence of the unequal treatment of different business actors, the efficiency of markets may ultimately suffer.

In addition to the proposition that political connections can be used to lobby the placement decisions of ABC service station stores, municipal politicians themselves also have a financial incentive to become S Group representatives. The regional cooperatives of S Group have the right to grant discounts for the members of their board of directors and supervisory board. Until 2010, the regional cooperatives had the right to give these discounts also to the members of the council of representatives, but in 2010 SOK recommended that regional cooperatives remove these discounts. (Koskinen 2010.) However, the discount practices had varied between regional cooperatives and not all of them had provided discounts to the members of councils of representatives even before the year 2010 (Pohjalainen 2010).

Thus in practice, the S Group representatives benefit financially from the presence of the group's units in their municipalities, which may create an incentive for connected representatives to use their political power to locate ABC service station stores into their municipality. In addition to the discounts, the representatives also receive compensation from their participation in the group's decision making organs. The level of

[65] The Association of Finnish Local and Regional Authorities, 2012: www.localfinland.fi, referred 14.4.2012.

compensation varies according to the position.[66] Even though this compensation probably does not directly contribute to the phenomenon, some representatives may be motivated to lobby zoning decisions relevant to S Group in order to keep their seats in the representative bodies of the cooperative.

The politicians' self-interest represents only one side of the coin. S group managers might be motivated to locate service station stores into municipalities that are more strongly connected to the group to facilitate the investment process. Strong connections might make certain municipalities to seem more lucrative and create value for the group for instance, by accelerating the process or allowing access to better land areas.

The incentives for utilizing political connections in the zoning decision making may thus stem from multiple sources. However, the mere existence of political connections does not necessarily imply that these connections are actually leveraged in the zoning decision making. Thus my first research question asks whether the political connections of S Group representatives are associated with the zoning decisions of its ABC service station stores. If political connections are related to the zoning decisions of the group's service station stores, one could expect that an ABC service station store is more likely to be zoned and opened in a municipality where S Group's political connections are stronger.

> ***Research question 1A:*** *Is an ABC service station store more likely to be opened in a municipality where S Group's political connections are stronger?*

The second part of my first research question (i.e. 1B) stems from the decentralized governance structure of S Group. As discussed in Section 2, S Group's regional cooperatives operate mainly in specified operating areas. Each of the operating areas covers several municipalities[67]. Thus if one municipality is more strongly connected than another municipality belonging to the same regional cooperative's operating area, the politically connected representatives of the more strongly connected municipality might have more power in the placement decision of a new ABC service station store. Again, the group might also prefer to locate the ABC service station store into the more strongly connected municipality to utilize these connections. Thus a municipality's

[66] Rules of S Group's regional cooperatives: see e.g. Helsingin Osuuskauppa Elanto rules 2012.
[67] S Group, 2012: www.sok.fi, referred 14.4.2012.

share of the total connections of a regional cooperative is also a potential candidate to explain the zoning decisions of ABC service station stores. Therefore, the second part of my first research question asks whether the likelihood that an ABC service station store is zoned and opened in a municipality is greater in a municipality that has a larger share of the total connections of the relevant regional cooperative. The research question differs from the research question 1A in that this second part focuses on measuring political connections of a municipality in relation to connections of other municipalities belonging to the same regional cooperative, instead of analyzing each municipality independently.

> ***Research question 1B:*** *The strength of political connections differs from one municipality to another within a regional cooperative's coverage area. Within that area, is an ABC service station store more likely to be opened in a municipality with stronger political connections?*

Anecdotes in the press also state that S Group's service station stores have been provided with better land areas (see e.g. Leivonniemi 2010). If the political connections of the group create value in the zoning processes and land allocation decisions of ABC service station stores, then one could expect that the service station stores are more likely to be located in better operating areas than their competitors in more strongly connected municipalities. As discussed earlier, location is a vital competitive aspect for service station stores. Thus, the allocation of better locations to ABC service station stores might represent one source through which political connections create value for the group. Consequently, my second research question is formulated as follows:

> ***Research question 2:*** *Are ABC service station stores located in better operating areas than their competitors in more strongly connected municipalities?*

4.2 Research question on market share

In addition to stemming naturally from better competitive advantage, market share may also be based on a monopolistic position or stem from advantages in obtaining concessions or licenses (Faccio 2007). In the service station business, one such type of concession could be privileged access to land. It is possible that politically connected firms can influence the outcome of land allocation decisions, and are consequently

allocated with better land areas. It can be hypothesized that this phenomenon creates barriers to entry for competitors and weakens price competition, which in turn leads to higher market share for the politically connected firms. Therefore, if political connections are associated with the zoning decisions of S Group, the market share of ABC service station stores can be expected to be higher in more strongly connected municipalities. Since ABC service station stores also include a grocery store, one can expect that they affect the competition of both the service station and small grocery store markets. My third research question is therefore formulated as follows:

> ***Research question 3:*** *Do ABC service station stores have higher market shares in small grocery store and service station markets in municipalities where S Group's political connections are stronger?*

5 Methods and data

In this section I first describe the research design used in this study. Second, I provide an overview of the statistical methods applied in the thesis and present the procedure used for determining the political connections of S Group. Third, I define the variables used in the empirical analysis. Fourth, I give a brief overview of the sample selection process to introduce the reader to my data. Finally, I describe the sample, the data retrieval process and the data sources in more detail.

5.1 Research design

I employ a modified case-study approach from an independent researcher's standpoint to analyze whether politically connected firms can gain from their connections to municipal politics. I focus on the expansion of S Group's ABC service station store network to analyze the relationship between political connections, zoning decisions and market power. I see my approach as a useful starting point for analyzing the value of political connections in Finland, since it allows me to focus precisely on the governance structure of a specific firm. The case-study approach also allows me to focus on a question that has already garnered significant public attention and has economic importance on its own, i.e. whether S Group can gain from having political connections in the form of preferential access to land. My research design can be divided into the following four steps:

(1) I analyze the existing evidence on the effect of political connections on the zoning decisions of S Group and find that the discussion on the topic is almost purely driven by anecdotes. Most of the anecdotes presented in the press also seem to be based only on the proposition that S Group seems to be connected to municipal politics via dual roles of their representatives in municipal administrative bodies. After carefully scanning the research and public discussion on the political connections of the group and the penetration of its service station stores, I formulate my three research questions. The research questions are mainly inspired by the public discussion due to the limited amount of previous empirical evidence and academic studies on similar topics.

(2) I build a unique panel dataset to measure the relationship between political connections, zoning decisions and market power. My comprehensive dataset is composed of three subsets. The first subset consists of the names of the representatives of S Group's regional cooperatives collected from the entire observation period. The second set contains the names of the municipal councilors of the municipalities that belong to the operating areas of S Group's regional cooperatives. The second set also contains the members of the municipal boards and selected committees of the municipalities. My third subset consists of detailed information on all retail trade units in Finland, including road traffic amounts near unit locations.

(3) After collecting the data I cross-reference the names of S Group and municipality representatives to detect possible connections. I define several variables to measure the level of political connections of the group and use these measures as my key explanatory variables. I also detect the lag between zoning decision and opening dates of ABC service station stores to be able to measure the political connections at the appropriate moments in time.

(4) In the empirical part I employ both univariate and multivariate analyses to study whether the political connections of S Group have been associated with the zoning decisions of its ABC service station stores and their market share. The univariate analyses are mainly based on proportional tests whereas Probit and OLS regressions are employed in the multivariate analyses.

5.2 Statistical methods

In this subsection I discuss the usage of panel data, the matching procedures used to determine the political connections and the type of regression analyses employed in this thesis.

5.2.1 Usage of panel data

Panel data is generally defined as a dataset that contains observations on multiple phenomena over a period of time for the observed individuals or observation targets. Panel data thus includes a cross-sectional dimension and a time series dimension. In this study, the used panel dataset includes multiple observations for the same municipality

over time. The use of panel data provides several advantages such as the ability to control for variables that cannot be measured. However, the use of panel data is also often associated with a number of limitations. In my analysis the most significant problem is autocorrelation, which is a frequent problem of panel data. In this study this implies that standard errors are correlated over time for a given municipality, which results in biased standard errors. Autocorrelation does not affect the coefficients but the statistical significance of the coefficients is affected through the effect on standard errors. However, autocorrelation can be controlled by using cluster-robust standard errors. I cluster the standard errors at the municipality level to reduce the potential to overstate significance of the variables.

5.2.2 Matching political connections

In much of my analysis, I analyze the propensity of municipalities that are politically connected with S Group's regional cooperatives to build ABC service station stores to unconnected or less strongly connected municipalities. My analysis focuses on the municipal level due to the local nature of S Group's governance structure and the fact that the zoning decisions relevant to service station projects are made by municipal councils, municipal boards and specific committees. Therefore, S Group's potential connections for instance with Members of Parliament would not, in this context, be as interesting to analyze as potential connections with municipal representatives. Connections to municipal politics are also more interesting to analyze than the connections to e.g. Members of Parliament because most municipal politicians retain other occupations alongside their political career.

In this thesis, I focus only on direct connections, i.e. dual roles of politicians and S Group's representatives. Indirect connections, such as connections through family members and relatives, are excluded for two reasons. First, they are hard to detect in a reliable way. Second, their explanatory power is likely to be smaller than that of direct dual role connections. Although several papers use campaign contributions as a proxy for political connections (see e.g. Jayachandran 2006), these contributions are not used in this thesis due to the limited availability of data before the year 2009. Additionally, Faccio (2006) decides against using campaign contributions to measure political

connections, as he argues that connections via dual roles are likely to be more durable than one-time campaign contributions or cash payments.

Thus, to detect the political connections of S Group, the names of the members of the group's governance organs are cross-referenced with the names of municipal politicians. Before cross-referencing the names, I divide the names into separate groups according to the operating areas of regional cooperatives to improve the reliability of my results, and to diminish the change that people who share the same name are matched incorrectly.

5.2.3 Regression analysis

To assess whether political connections are significant in explaining the likelihood of favorable zoning decision for ABC service station stores, I mainly use multivariate Probit regressions. Since Probit regression estimates the probability of a certain event, the method can be employed when the dependent variable is binary. For instance, in this thesis the Probit regressions estimate the probability that an ABC service station store is opened in a municipality. Unlike OLS regression, Probit regression does not assume that the relationship between a dependent variable and explanatory variables is linear. To analyze the relationship between political connections and the market power I use OLS analysis. Due to autocorrelation in the data, robust standard errors clustered at the municipality level are used in each of the regression specifications. In conjunction with Probit analyses I also report marginal effects calculated at the means of the variables. Marginal effects often provide a good approximation to the amount of change in the dependent variable that will be produced by a one-unit change in the independent variable. Since the group of control variables is limited for certain hypotheses, I analyze the hypotheses also by cross-tabulating the observations. Proportional tests are used to analyze the statistical significance of the difference in proportions between groups.

5.3 Variables and regression models

In this section I present all variables used in this study. First, I specify my dependent variables. I then describe the variables used to measure the political connections of the regional cooperatives. To better capture the relationship between political connections

and zoning decisions, I employ several definitions for political connections. Finally, I present the control variables applied in this study.

5.3.1 Dependent variables

To examine whether the political connections of S Group are associated with the likelihood that an ABC service station store is zoned and opened in a municipality, I define a dummy variable which gets the value of 1 if an ABC service station store is opened in the municipality and 0 otherwise. The likelihood is estimated by using Probit regression on yearly observations. This means that each municipality forms one observation for each year during the examination period.

> ***ABC zoned*** is a dummy variable equal to 1 if an ABC service station store is zoned and opened in a municipality during the observation year, and 0 otherwise. (Research questions 1A and 1B)

To analyze whether ABC service station stores are located in better operating areas than their competitors, I construct a Probit regression in which the dependent variable is a dummy that measures whether the traffic amounts are higher near an ABC service station store than near the locations of its competitors. I compare the traffic amount to the average traffic amount of all the competitors in a municipality, as well as to the competitor with the highest traffic amount. The traffic amount is the highest average daily traffic amount measured within a specific radius. The radiuses used in this thesis need to be relatively short, as easy access from a main road is an important competitive factor in the service station store business. Therefore, I decide to use radiuses of 500 meters and one kilometer. Even though the one-kilometer radius might seem too long in the context of service station stores, I still employ it in my analyses since due to road arrangements the shorter radius may not be able to capture all traffic amounts from the roads that the service station unit serves. In research question 2, only the service stations that operate in the same municipality with the ABC service station store are included as competitors. I limit the competitor group for this research question to service stations, since traffic amounts are likely to have a different effect on the location preferences of service stations and small grocery stores, although the grocery stores partly operate in the same market with ABC service station stores.

Better land is a dummy variable that gets the value of 1 if the traffic amount close to an ABC service station store is higher than the average traffic amounts close to its nearby competitors' and 0 otherwise. In unreported regressions, the traffic amount near an ABC service station is also compared to the competitors with the highest traffic amount in the municipality. The traffic amount is measured as the highest average daily traffic amount within half and one kilometer radiuses of the unit. (Research question 2)

To examine whether ABC service station stores have higher market shares in more strongly connected municipalities, I define an OLS regression in which the dependent variable measures the market share of all the ABC service station stores within the municipality. Since the net sales of ABC service station stores are not reported, I use the personnel classification of the Business Register of Statistics Finland to develop a proxy for market share. The classification consists of nine categories, which each cover a specific range of employees. I use the midpoint from each range to calculate a proxy for the market share of ABC service station stores. In the third research question, I widen the competitor group to service stations and small grocery stores, since ABC service station stores also include a grocery store. The standard industrial classification is used to identify service stations and small grocery stores. In this thesis the small grocery store market includes units that operate under TOL 2008 codes 47112, 47113 and 47114. These codes correspond to small supermarkets (over 400 m² but not more than 1,000 m²), self-service stores (over 100 m² but not more than 400 m²) and smaller units such as kiosks (under 100 m^2). The service station market is covered by the TOL 2008 code 47301.

Market share is the share of ABC service station store(s)' employees of the total amount of employees of small grocery stores and service stations within one municipality. (Research question 3)

5.3.2 Measurements for political connections

Due to the decentralized decision making structure of both S Group and Finnish municipalities, defining political connections is a fairly complicated proposition. In this thesis, I use the expression *connected members* to refer to persons who have a dual role in the analyzed municipal decision making organs (municipal council, municipal board,

and specific committees) and in the decision making bodies of regional cooperatives (council of representatives, board of directors, and supervisory board). By *relevant committees* I refer to municipal committees that are relevant to construction and zoning decisions. In this thesis the expression *irrelevant committees* is used to refer to education and social committees, which are used as control committees.

The connections in different municipal decision making bodies are analyzed separately in the empirical part to better understand the role of these different types of connections in zoning decision making. Municipal councils are chosen to the analysis, since as discussed in Section 2, Finnish Local Government Act requires that all but minor local detailed plans are approved by the municipal council. Municipal boards and committees are included in the analysis since they are entitled to approve minor plans not approved by the municipal council, and since they also may participate in the preparation of plans. Irrelevant committees are chosen into the analysis for two reasons. First, I use them to test whether S Group's connections are more likely to occur in relevant or irrelevant committees. Second, I use them to analyze whether connections in these organs are related to the zoning decisions in a different way than in the organs relevant for zoning decisions.

In addition to analyzing whether the existence of political connections is associated with the zoning decisions of S Group, I also analyze whether the strength of these political connections is related to the zoning decisions. I partly follow previous academic research on political connections (see e.g. Faccio 2006; Claessens et al. 2008) and define the following measurements for the political connections of S Group:

(1) **Connected** is a dummy variable that takes the value of 1 if at least one S Group representative (council of representatives, board of directors or supervisory board member) is also a member of a municipal council, a municipal board, a committee relevant to building and zoning decisions or of two control committees and 0 otherwise.

(2) **% of connected** is the amount of connected S Group's representatives compared to all the members in the abovementioned municipal decision making bodies.

(3) **Votes** is the share of votes received by elected S Group's representatives in municipal elections.

For the purposes of the second part of my first research question (i.e. 1B), I construct a variable that measures the variation in the level of political connections within municipalities belonging to the operating area of a single regional cooperative. To capture the variation, I use the measurements for political connections presented above, but so that the level of political connections of one municipality is compared to the total number of connected S Group representatives within the operating area of the regional cooperative in question. Thus, two proxies for **political connection** for the purposes of the research question 1B are constructed as follows:

(1) A municipality's share of all connected municipal councilors within the operating area of a regional cooperative

(2) The share of votes received by the connected municipal councilors of a municipality compared to the total share of votes received by connected councilors within the operating area of the relevant regional cooperative

According to Finnish Law, municipalities can merge their councils either fully or partially if a municipal merger occurs during the office period of the municipal councils[68]. In this thesis, I assume that the councils are merged fully in each of the cases where a merger occurs during the office period. During my observation period there were only 19 municipal mergers that came into force during the office term of municipal councils[69], therefore the assumption I made is unlikely to affect the reliability of my results. The composition of municipal decision making organs may also change during the office term and calendar year. To simplify my analysis, I decide to use the year-end composition of decision making organs.

5.3.3 Control variables

Control variables are used to control for other factors that may be related to the zoning decisions and market share of ABC service station stores. Traffic amounts, local

[68] Municipal Merger Act (1698/2009), Chapter 6 Section 24.
[69] The Association of Finnish Local and Regional Authorities, 2012: www.localfinland.fi, referred 23.3.2012.

population and the competitive situation have been found to strongly affect the location of service stations (Finnish Road Administration 2007). I relegate competition at the municipal level to a robustness check because ABC service station stores are likely to be located in larger cities where competition is often stronger. Therefore, one can expect that the difference in the competition between different neighborhoods of a municipality is a more important factor for the location decisions of ABC service station stores than the municipality level competition. As a robustness check, I also employ population density as an alternative variable for measuring the characteristics of the local population. The size of municipality is used as a control variable in the analysis on the market shares of ABC service station stores, since competition can be expected to be higher in larger cities. Based on these observations, my control variables are defined as follows:

Main control variables

Size of municipality is the natural logarithm of the population of a municipality.

Distance from ABC is the natural logarithm of the distance to the nearest municipality with an ABC service station store measured in meters.

Highway is a dummy variable that takes the value of 1 if a municipality is located along a highway and 0 otherwise.

I use the Finnish Road Statistics[70] to determine which roads cross through which municipalities. The municipalities for which highway kilometers are equal to more than one are considered to be located along a highway. Highways[71] are roads that serve long distance traffic between regions. In Finland, they are labeled with numbers 1 through 39.

Control variables used as robustness checks

Competition is measured by using the Herfindahl index. In this thesis, I follow the standard definition of the Herfindahl index and define it as the sum of the squares of the market shares of the 50 largest firms (or summed over all the firms if there are fewer than 50) within the service station and small grocery store market.

[70] The Finnish Transport Agency, 2010.
[71] In Finnish: valtatie.

Both service stations and small grocery stores are used in the index, since ABC service station stores always include a grocery store. Increases in the Herfindahl index generally indicate a decrease in competition and an increase in market power, whereas decreases indicate the opposite. I use the size of personnel classification of the Business Register of Statistics Finland as a proxy for market shares as defined earlier in the dependent variable section.

> ***Population density*** is the natural logarithm of the population density of a municipality.

In each of the regression specifications the control variables are always measured with the same lag as the political connection variables.

5.4 Sample selection

First, I look at the sample selection from the regional cooperatives' side. My sample includes all S Group's regional cooperatives that have operated in Finland between 1996 and 2009. During the examination period the number of regional cooperatives decreased from 23 to 22 due to a merger between two regional cooperatives[72]. The merger between regional cooperatives is treated so that the entities are considered as separate units until the merger and as one entity after that. I exclude the local cooperatives from the sample due to their different position in the group and minor size. The governance organs of S Group that are analyzed in this study are the councils of representatives, the boards of directors and the supervisory boards of regional cooperatives.

Next, I look at the sample selection process from the standpoint of service station stores. My initial sample includes all ABC service station stores that were opened between 1998 and 2010 and that were still operational in 2010. The start of the period is selected based on the building year of the first unit of the ABC service station store chain. Of the 108 ABC service station stores that existed at the end of 2010, four were originally investments of local cooperatives. These four units are tracked from the press releases and annual reports of S Group. Due to the exclusion of local cooperatives, I also exclude the service station stores that were initially opened by them from my sample. I

[72] S Group, 2012: www.sok.fi, referred 23.3.2012.

also exclude one service station store from the sample for which I am unable to determine the opening year in a reliable way. Moreover, I add to my sample three units that were built during the examination period but were closed at the latest in 2010. I am able to track these units from the press releases of S Group.

As discussed in Section 2, it is also important to note that all ABC service station stores have not been pure new investments i.e. green-field projects. Since my study focuses on the zoning decisions of the service station stores, the main sample only includes the units that have been pure new investments. Acquired units and old stations that have been converted under the ABC brand have been excluded from all empirical tests except for the market share analysis. The ABC gasoline stations that only sell gasoline, i.e. unmanned or cold stations that do not provide any extra services such as grocery stores or restaurants are not included in the sample. Due to the relatively small size and land area requirements of the unmanned stations, their zoning decisions are likely to differ from those of actual service station stores. The sample therefore only includes the units that S Group defines as ABC service station stores. The final sample of pure new investment ABC service station stores opened by the regional cooperatives consists of 64 units.

I next turn to the selection of the municipality sample, which is guided by my decision to exclude local cooperatives from the sample. My study covers all municipalities where the regional cooperatives of S Group operated during 1996 and 2009. I exclude the operating areas of local cooperatives and the Åland islands from my sample. The municipalities located in the Åland islands are excluded from the sample due to their unique location, which likely affects the possibility that an ABC service station store is located in the area. In fact, in 2010, no ABC service station stores were located in the Åland islands. The number of municipalities covered by my analyses varies year by year due to municipal mergers. Municipalities that have merged during the observation period are treated as separate municipalities until the merger is completed and as one entity after that. The sample size also varies year by year due to mergers between regional and local cooperatives. From the press releases of S Group, I determine that 11 local cooperatives merged with regional cooperatives during the examination period. The operating areas of merged local cooperatives are included in the sample starting

from their first full operating year as part of the regional cooperative. As a final adjustment I exclude one municipality located near to the borders of regional cooperatives, which I am not able to allocate in a reliable way to any of the surrounding regional cooperatives. After all these adjustments, the final sample of the year 1996 consists of 416 municipalities. By 2009, the number of municipalities in my sample has diminished to 325. In total, the final sample consists of 5,587 municipality years.

This study focuses on S Group's representatives' connections to municipal politics, since the zoning decisions of small retail trade units are made on the municipal level. All municipal councilors of the municipalities belonging to the operating areas of regional cooperatives are therefore included in my sample. In addition to municipal councils, important organs in the municipal administration from the zoning process point of view are the municipal board and certain committees. Therefore, these organs are also analyzed in this study. In summary, my study covers the connections between S Group's regional cooperatives' representatives and municipal councils, municipal boards and committees relevant to building and zoning decisions. Moreover, as a control test I analyze the connections to two irrelevant committees that should have a smaller or no role in zoning processes.

5.5 Data retrieval and sources

To analyze the relationship between S Group's political connections and the zoning decisions and market share of its ABC service station stores, I construct a dataset that includes data on political connections of the regional cooperatives, ABC service station stores and their competitors, zoning decisions, traffic amounts and municipality specific descriptive statistics covering the time period from 1996 to 2009. Table 3 summarizes my main datasets and their sources.

Table 3 Data sources

This table presents the data used to analyze the relationship between S Group's political connections and the zoning decisions and market share of ABC service station stores.

Data	Items	Source
Political connections		
Names of the representatives of S Group's regional cooperatives (council of representatives, board of directors and supervisory board)	18,612 names	Typed manually from the annual reports of the regional cooperatives. The annual reports are obtained from the National Library and the National Board of Patents and Registration of Finland
Names of the municipal councilors elected in the municipal elections of the years 1996, 2000, 2004 and 2008	47,138 names	Downloaded from the election database of Statistics Finland
Names of the members of municipal boards, committees relevant to building and zoning decisions and two committees on education and social affairs used as a control group	118,142 names	Typed manually from the material provided by 183 Finnish municipalities
ABC service station stores and competitors		
Detailed establishment level information on retail trade units in Finland	Location, amount of personnel and establishment date for 354,103 retail trade unit years	Business Register of Statistics Finland, annual reports of the regional cooperatives, press releases
Traffic amounts	Daily traffic amounts for main roads near the retail trade units	The Finnish Transport Agency (Digiroad 2010)
Zoning decisions		
Lags between the plan approval and opening dates of ABC service station stores	Date of approval of the current local detailed plan for the operating plots of ABC service station stores	The National Land Survey of Finland
Control variables		
Descriptive statistics on the municipal level	Population, population density, road network	The National Land Survey of Finland, the Finnish Transport Agency, Statistics Finland, the Association of Finnish Local and Regional Authorities

5.5.1 Political connections

This subsection describes the data I use to measure the level of political connections of S Group. First, I present the process of retrieving the data on S Group's representatives. Second, I describe the retrieval of municipality level data and describe how the data on municipal politicians was collected from Finnish municipalities. Third, I describe the results of matching of these two datasets.

5.5.1.1 Retrieval of S Group data

To measure the political connections I first collect data on S Group representatives. As discussed in Section 2, the administration bodies of the regional cooperatives include a council of representatives, a board of directors and a supervisory board. Out of these, the council of representatives is not a mandatory organ. However, in 2009 S Group consisted of 22 regional cooperatives of which only two did not have a council of representatives. One regional cooperative chose its first council of representatives in 2007[73]. The other 19 regional cooperatives had a council of representatives during the whole examination period[74]. The existence of a council of representatives is likely to have a major effect on the amplitude of the political connections of a regional cooperative, since the councils typically consist of dozens of members.

To measure the political connections of S Group representatives I manually collect the names of the representatives of the group's regional cooperatives from the annual reports of the cooperatives. Overall, the S Group dataset consists of 18,612 names of the representatives that have been members of a council of representatives, supervisory board or board of directors between 1996 and 2009.

The annual reports of the regional cooperatives are collected from the archive of the National Library, which contains almost all annual reports of the regional cooperatives during the observation period. For the years for which I am not able to find the annual report, the composition of the council of representatives cannot be determined. However, I am able to collect the names of the members of boards of directors and supervisory boards of the regional cooperatives for these missing years from the database of National Board of Patents and Registration of Finland. Thus, my sample includes the names of the members of the boards of directors and supervisory boards for each regional cooperative for all the analyzed years, but the information on the members of councils of representatives is missing for certain years and regional cooperatives for which the annual reports are not available. These missing observations vary between one and four regional cooperatives per year. It should also be noted that all regional cooperatives do not provide the changes in the composition of the representative organs

[73] Annual reports of the regional cooperatives 1996-2009.
[74] Annual reports of the regional cooperatives 1996-2009.

that occur during the financial year, thus I am not able to track all changes in the member base. However, for those years that this data is available, no major changes seem to occur during the fiscal year. For the years and regional cooperatives for which I am able to track the changes, I decide to use the year-end compositions of governance organs in my analysis.

5.5.1.2 Retrieval of municipal politicians data

To detect the political connections of S Group, I also collect the names of municipal politicians from the municipalities that belong to the regional cooperatives' operating areas. Before being able to collect the names, I first need to identify which municipalities belong to the operating area of each regional cooperative. To start, I collect a list of all the Finnish municipalities that existed in 1996 from the database of Statistics Finland to be used as a base list. In 1996, 455 municipalities existed, but municipal elections were held only in 436 municipalities as 16 municipalities are located in the Åland islands and three municipal mergers came into force from the beginning of 1997. Thus my original sample consists of 436 municipalities, which I match to the operating areas of regional and local cooperatives based on the information provided by the annual reports of the regional cooperatives, a book on S Group's history (Herranen 2004) and press releases. If I am unable to determine the correct regional cooperative for a specific municipality from these sources, I include the municipality to the regional cooperative that has opened retail trade units in that municipality, since the regional cooperatives mainly provide services within their own operating area[75]. In 1996, there were 21 local cooperatives[76] of which nine are identified to operate either in the Åland islands or only in specific areas within municipalities. The operating areas of the remaining 12 local cooperatives are excluded from the sample, which decreases the sample size to 417 municipalities.

After identifying the municipalities that belong to the operating areas of regional cooperatives, I collect the names of municipal politicians for these municipalities. To determine whether S Group's representatives are also active in municipal councils I collect the names of all municipal councilors in each municipality between 1997 and

[75] S Group, 2012: www.sok.fi, referred 1.3.2012.
[76] SOK annual report 1996.

2009. Thus my examination period includes the municipal elections of the years 1996, 2000, 2004 and 2008. Since the municipal elections of the year 1996 are the first municipal elections for which the election results are provided in electronic form, I am not able to analyze the political connections between S Group and municipal councils in 1996. The office term starts in the year following the elections, thus to analyze the year 1996 I would need the results from the elections of the year 1992 which are not provided in electronic form. The analysis for the year 1996 is conducted on the municipal board and committee level.

The names of municipal councilors are obtained from the municipal election results and therefore my data does not take into account changes in the composition of the councils during the office period. The municipal election results are obtained from the database of Statistics Finland. The Statistics Finland records include, inter alia, the names of elected municipal councilors, their home municipalities, party and the number of votes received. The number of elected municipal councilors has decreased during my examination period due to municipal mergers. In 2008, 10,412 municipal councilors were elected, whereas in 1996 the corresponding figure was 12,482 (Statistics Finland, 2011). As each year is analyzed separately during the observation period between 1996 and 2009 in the panel data, the final dataset contains 150,926 observations of municipal councilor names.

In addition to municipal councils, I need to collect the names of municipal board members and members of the committees selected for the analysis. Data on the composition of these organs is not collected in a centralized manner, and I therefore need to collect the information directly from Finnish municipalities. In November 2011, I asked all continental Finnish municipalities to provide the names of the members of their municipal board and selected committees from 1996 to 2009. Specifically, the municipalities were asked to provide the names of the members of their municipal board, the building committee, the committee that is in charge of the usage of the municipality's land area and buildings, and the education and social committees. In the case the municipality had merged with other municipalities during the examination period, I also asked the information for the merged municipalities. I did not particularly ask the municipalities to include the changes in the composition of the organs, since I

learned that it would require manual work and would thus likely decrease the response rate and my sample size remarkably. For the municipalities that provided the changes in the composition of the member bases of the requested organs, I take the changes into account and use the year-end composition of the decision making bodies to measure the political connections each year.

In 2011, there were 336 municipalities of which 16 were located in the Åland islands. The remaining 320 municipalities were approached with the information request described above. The request was sent by email to the person considered the most appropriate for the purposes of providing the data, i.e. typically the person in charge of the municipality's registry or archive. The appropriate contact details were collected from the municipalities' websites. In case the contact information used was not up-to-date or the letter was not sent to the right person, it is possible that some municipalities did not receive the request. The requested information was provided by 183 municipalities, in addition to which the information for 76 merged municipalities was also provided, resulting in a total sample of 259 municipalities. The final sample of the members of the municipal boards and the committees consists of 118,142 names. These names were manually collected and typed from the material provided by the municipalities. This exercise required a considerable amount of time, which also implies that despite meticulous efforts it is probable that the dataset contains a certain degree of spelling errors.

Table 4 presents summary statistics on the municipalities' responses to my information request. The average size and population density of the municipalities that provided the information is somewhat lower than the figures for the group that did not provide the information. This suggests that the largest cities were not as active as smaller ones in providing the information. It is also noteworthy that the municipalities that provided the requested information were more connected to S Group through municipal councilors than those who did not provide the information. The share of connected politicians is 0.8 percentage points higher in the municipalities that provided the information. In 2009, a pure new investment ABC service station store was located in 41 of the municipalities that provided the requested information. Overall, there seem to be no

major differences between the two groups that would affect the generalization of my results.

Table 4 Summary statistics for information request responses

This table provides summary statistics on municipalities according to their response to the information request. The table is based on the municipal structure and statistics of the year 2009. Actual responses were received from 183 municipalities, which in my sample corresponds to 189 municipalities in 2009 due to municipal mergers. ABC service station stores include only the units that have been pure new investments. Connected municipality is defined as a municipality where at least one municipal councilor is also a member of a regional cooperative's council of representatives, board of directors or supervisory board. Connected councilor is defined as a person who is also a member of a regional cooperative's council of representatives, board of directors or supervisory board.

	Information provided N=189		Information not provided N=136	
Variable	**N**	**Mean**	**N**	**Mean**
ABC service station stores	41		18	
Connected municipality	128		135	
% of connected municipal council members	189	3.2%	136	2.4%
% of votes of connected municipal councilors	189	2.6%	136	1.9%
Habitants	189	15,153	136	17,781
Land area (km^2)	189	868	136	1,001
Population density (pop/km^2)	189	36	136	85

5.5.1.3 Descriptive statistics for the political connections data

After collecting the names of S Group's regional cooperatives' representatives and the municipal politicians of the relevant municipalities, I cross-reference the names to detect political connections. Table 5 illustrates the development of political connections between S Group and municipal councils during the examination period as well as shows the distribution of ABC service station stores by regional cooperative. In Table 5 the level of political connection is measured by comparing the number of council of representatives, board of directors and supervisory board members who are also municipal councilors to the total number of representatives in the corresponding S Group organs. The table shows that the political connections of S Group's regional cooperatives are widespread and that the average and median levels of political connection have clearly increased from 1997 to 2009. In 2009, on average 23% of the representatives of regional cooperatives were also municipal councilors, while in 1997 the corresponding figure was 16%.

The data also shows that there are clear differences in the amount of political connections between regional cooperatives. In 2009, Helsingin Osuuskauppa Elanto, the

largest of the regional cooperatives, was the most connected with more than half of its representatives having a dual role as municipal councilors. On the other end, the regional cooperatives that do not have a council of representatives were clearly less connected: for instance, in Etelä-Karjalan Osuuskauppa, which was the least connected, only 4% of the representatives were connected to municipal councils in 2009. As the table illustrates, each of the regional cooperatives operates at least one ABC service station store. The amount of ABC service station stores operated by regional cooperatives varies between one and ten. Most of the ABC service station stores are located in the operating area of Etelä-Pohjanmaan Osuuskauppa, which operates almost 10% of all ABC service station stores. In 2009, every fifth representative of Etelä-Pohjanmaan Osuuskauppa also had a dual role as a municipal councilor.

Table 5 Development of political connections 1997-2009

This table presents the connected representatives of S Group's regional cooperatives (council of representatives, board of directors and supervisory board) as a fraction of the total members of the corresponding organs between 1997 and 2009. The table only measures connections to municipal councils. The regional cooperatives are divided into three panels according to their management structure and the availability of data. All the cooperatives in Panel A have a council of representatives and information of the council of representatives members is available for all the years examined. In Panel B, a council of representatives has not been part of the administration structure of the regional cooperatives during the examination period. Panel C shows regional cooperatives with incomplete information of the members in the council of representatives. In Panel C, the relative number of connected members is calculated based on known members (i.e. some of the years include only the connections of the members of supervisory board and board of directors). n/m indicates that the regional cooperative has merged with other regional cooperative or has not yet started operations. The statistical figures below the table include only regional cooperatives with complete information in a given year. The table also presents the distribution of ABC service station stores in March 2012 based on the regional cooperative structure of 2009.

Group description	Regional cooperative	Home municipality	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	ABC service station stores
Panel A: Regional cooperatives with complete information	Andelslaget Varuboden	Kirkkonummi	10%	11%	11%	11%	11%	11%	11%	11%	17%	27%	27%	25%	23%	1
	Etelä-Pohjanmaan Osuuskauppa	Seinäjoki	18%	17%	16%	14%	20%	20%	18%	20%	26%	25%	25%	24%	20%	10
	Helsingin Osuuskauppa Elanto	Helsinki	26%	26%	36%	38%	40%	40%	43%	46%	44%	46%	51%	58%	52%	6
	Keskimaa Osk	Jyväskylä	18%	19%	19%	19%	21%	21%	20%	21%	29%	31%	32%	31%	29%	6
	Koillismaan Osuuskauppa	Kuusamo	8%	8%	8%	8%	7%	7%	7%	7%	9%	10%	9%	9%	12%	3
	Osuuskauppa Hämeenmaa	Lahti	18%	21%	25%	26%	15%	15%	18%	19%	33%	33%	32%	33%	34%	9
	Osuuskauppa KPO	Kokkola	23%	25%	25%	21%	19%	20%	20%	21%	23%	23%	23%	28%	26%	7
	Osuuskauppa Maakunta	Kajaani	29%	27%	26%	32%	30%	25%	25%	18%	24%	24%	24%	22%	30%	1
	Osuuskauppa Osla Handelslag	Porvoo	11%	9%	9%	9%	9%	17%	15%	15%	15%	16%	16%	16%	11%	1
	Osuuskauppa Seutu	Lohja	8%	8%	14%	14%	14%	14%	13%	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*
	Osuuskauppa Ympyrä	Hamina	17%	18%	18%	15%	14%	12%	12%	12%	18%	18%	18%	18%	21%	3
	Osuuskauppa Ympäristö	Kouvola	10%	11%	10%	20%	17%	19%	19%	23%	28%	30%	30%	28%	19%	6
	Pohjois-Karjalan Osuuskauppa	Joensuu	19%	18%	18%	23%	21%	21%	21%	23%	24%	24%	24%	21%	24%	5
	Suur-Seudun Osuuskauppa	Salo	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*	23%	22%	22%	22%	23%	18%	8
Panel B: Regional cooperatives that did not have a council of representatives	Etelä-Karjalan Osuuskauppa	Lappeenranta	4%	4%	0%	0%	12%	8%	8%	8%	8%	8%	8%	8%	4%	3
	Jukolan Osuuskauppa	Nurmes	4%	4%	4%	4%	0%	4%	4%	4%	8%	8%	8%	12%	12%	2
Panel C: Regional cooperatives with council of representatives information missing for at least one year	Osuuskauppa Arina	Oulu	27%	31%	38%	38%	28%	39%	39%	41%	34%	38%	38%	37%	32%	8
	Osuuskauppa Keula	Rauma	5%	10%	10%	10%	8%	6%	8%	8%	8%	20%	22%	23%	27%	3
	Osuuskauppa PeeÄssä	Kuopio	22%	21%	21%	26%	24%	24%	24%	30%	29%	30%	27%	12%	12%	7
	Pirkanmaan Osuuskauppa	Tampere	20%	20%	13%	18%	14%	14%	14%	22%	20%	21%	21%	28%	26%	6
	Salon Seudun Osuuskauppa	Salo	20%	20%	11%	10%	4%	4%	8%	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*	*n/m*
	Satakunnan Osuuskauppa	Pori	10%	9%	9%	9%	19%	21%	20%	20%	18%	18%	18%	18%	33%	3
	Osuuskauppa Suur-Savo	Mikkeli	20%	21%	21%	21%	16%	16%	11%	19%	21%	20%	21%	26%	32%	7
	Turun Osuuskauppa	Turku	18%	19%	19%	20%	16%	16%	20%	20%	23%	23%	23%	37%	39%	4
Mean			16%	16%	16%	17%	16%	17%	17%	19%	22%	23%	24%	25%	23%	5
Median			18%	18%	18%	19%	15%	16%	18%	20%	22%	23%	23%	24%	26%	5
Standard deviation			7%	7%	9%	9%	9%	10%	10%	10%	9%	9%	10%	11%	11%	3
Min			4%	4%	0%	0%	0%	4%	4%	4%	8%	8%	8%	8%	4%	1
Max			29%	27%	36%	38%	40%	40%	43%	46%	44%	46%	51%	58%	52%	10

Table 6 describes the political connections separately for the ABC service station store municipalities and for municipalities in which no ABC service station store has been opened in the second calendar year following the measurement of political connection. The ABC service station store municipalities include only the municipalities in which the units are pure new investments. The average absolute number of connected municipal councilors, members of municipal board and irrelevant committees is statistically significantly higher in the ABC service station store municipalities. ABC service station stores' stronger presence in larger cities partly explains the higher absolute number of connected members. However, when measuring the average relative number of connected members, the effect of municipality size is partly taken into account. The average relative amount of connected members is also statistically significantly higher in ABC service station store municipalities, except when measuring the connections to relevant committees. Both t-test and Wilcoxon-Mann-Whitney tests support the conclusion that political connections are significantly higher in the ABC service station store municipalities than in the municipalities in which no pure new investment ABC service station stores are located.

Table 6 also illustrates that both the absolute and relative numbers of connected members in relevant committees are essentially equal in both panels, but the connections in irrelevant committees are significantly higher in the ABC service station store municipalities. Moreover, the connections are more common in irrelevant committees than in relevant committees in both types of municipalities. The relatively higher representation of S Group representatives in irrelevant committees (education and social committees) is a curious result. A member of these committees is less likely to be able to use decision power that would be of significant value to the S group. Although one may only speculate of the motivation of the S Group affiliated members of these committees, it is possible that they participate both in municipality politics and in S Group's activities simply because they are unusually active citizens eager to participate in decision making, regardless of whether that happens at the municipality or S Group level. Education and social committees can be argued to have a more wide-ranging role in local decision making than committees focusing mainly on zoning and construction decisions, so active citizens may wish to seek representation in these committees to maximize their overall policy influence.

Table 6 Summary statistics for political connections

This table presents the summary statistics of the measures of political connections between S Group representatives and municipal politicians. The political connections are measured between the members of the regional cooperatives' council of representatives, supervisory board, board of directors, and different municipal management bodies, including municipal councils, municipal boards, and selected committees. Relevant committees include committees that are relevant to building and zoning decisions, whereas irrelevant committees include education and social committees. The sample includes 64 pure new ABC service station stores that were opened between 1998 and 2010. The sample size is smaller than 64 units when the connections to municipal boards and committees are measured, since all Finnish municipalities did not provide the information on the members of the corresponding organs. The level of connections is analysed separately for municipalities in which an ABC service station store is built in the second calendar year following the measurement of political connections (Panel A) and for those in which no ABC service station store is built (Panel B). % of total refers to the total number of observations in the corresponding group (ABC built vs. ABC not built). P-values for t-test and Wilcoxon-Mann-Whitney test are presented in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Panel A: ABC built in the second year						**Panel B: ABC not built in the second year**						**t-test differences in means**	**Wilcoxon-Mann-Whitney test**
Measures for political connections	**N**	**Mean**	**Median**	**Standard deviation**	**Min**	**Max**	**N**	**Mean**	**Median**	**Standard deviation**	**Min**	**Max**		
Number of connections in municipal council	64	2.7	1.0	4.4	0	25	5,107	0.7	0.0	1.7	0	27	(0.000)***	(0.000)***
Number of connections in municipal board	44	0.8	0.0	1.2	0	5	3,005	0.3	0.0	0.7	0	6	(0.000)***	(0.000)***
Number of connections in relevant committee	43	0.2	0.0	0.7	0	4	2,999	0.2	0.0	0.5	0	6	(0.337)	(0.524)
Number of connections in irrelevant committee	44	0.5	0.0	1.1	0	6	3,055	0.2	0.0	0.5	0	6	(0.000)***	(0.003)***
Connected municipal councilors (%)	64	5.0%	2.9%	6.4%	0.0%	29.4%	5,107	1.9%	0.0%	3.3%	0.0%	31.8%	(0.000)***	(0.000)***
Connected municipal board members (%)	44	7.1%	0.0%	11.0%	0.0%	45.0%	3,005	2.9%	0.0%	6.5%	0.0%	56.0%	(0.000)***	(0.000)***
Connected relevant committee members (%)	43	1.2%	0.0%	3.0%	0.0%	14.0%	2,999	1.0%	0.0%	2.9%	0.0%	25.0%	(0.679)	(0.529)
Connected irrelevant committee members (%)	44	2.6%	0.0%	5.1%	0.0%	25.0%	3,055	1.2%	0.0%	3.0%	0.0%	25.0%	(0.001)***	(0.006)***
Votes of connected municipal councilors (%)	64	3.7%	2.1%	4.7%	0.0%	24.2%	5,107	1.5%	0.0%	2.8%	0.0%	31.7%	(0.000)***	(0.000)***
Municipality's share of the connected representatives of its regional cooperative	63	15.0%	8.0%	19.0%	0.0%	75.0%	5,074	5.5%	0.0%	12.1%	0.0%	100.0%	(0.000)***	(0.000)***
Municipality's share of votes of the share of votes of connected representatives of its regional cooperative	63	10.7%	8.0%	13.1%	0.0%	62.0%	5,074	5.6%	0.0%	11.8%	0.0%	100.0%		

	N	**% of total**	**N**	**% of total**
Connected municipal council	42	65.6%	1,867	36.6%
Connected municipal board	18	40.9%	627	20.9%
Connected relevant committee	7	16.3%	388	12.9%
Connected irrelevant committee	14	31.8%	488	16.0%

5.5.2 ABC service station store and competitors data

In addition to municipality and S Group representative information, I use a dataset collected from the Business Register of Statistics Finland that contains detailed information of all retail trade units in Finland. The data is collected for the period between 2001 and 2009. I use the dataset to determine the municipalities where ABC service stations stores are located. The dataset also contains establishment dates of the units that enable me to detect the opening years for ABC service station stores. Moreover, it contains employee and location information of all retail trade units in Finland. This data is used to analyze the level of competition on the municipal level and to analyze the market share of ABC service station stores. The data also contains XY-coordinates that help me to collect traffic amount data from the Finnish Transport Agency. The actual traffic amount data is collected from the Digiroad 2010 software package of the Finnish Transport Agency.

As the Business Register data contains the establishment dates of all retail trade units, I use this information to identify the units that have been pure new investments. The Business Register data is reported so that the starting date of an establishment's operation does not change if the establishment and its activities are transferred from one enterprise to another. Therefore, the units whose establishment date is before their opening year as an ABC service station store are principally considered to be renovated units. However, as a robustness check I decide to manually collect the opening years of ABC service stations for all units and cross-reference the information with the information provided by the Business Register of Statistics Finland. I go through the annual reports of the regional cooperatives, press releases and newspaper articles on the openings of new ABC service stations stores to identify and separate the stations that are pure new investments and those that have been renovated from existing units. I am able to identify 64 service station stores that have been pure new investments. It is important to notice that the importance of political connections from the zoning process point of view is limited for renovated units. In these cases the zoning and building decisions are likely to include at the most changes in local detailed plans and building permits. Thus, as discussed earlier I mainly focus only on the units that are pure new investments in my empirical analysis.

The first ABC service station store was opened in December 1998. By 2010, the ABC service station store chain had extended to 108 units. During 2004, which was the strongest growth year, S Group opened 21 service stations. Between 1999 and 2009, the compounded annual growth rate of the ABC service station stores was 30%. Figure 6 illustrates how the political connections of the regional cooperatives have developed in comparison to the growth of the ABC service station store chain.

Figure 5 Political connections and service station stores

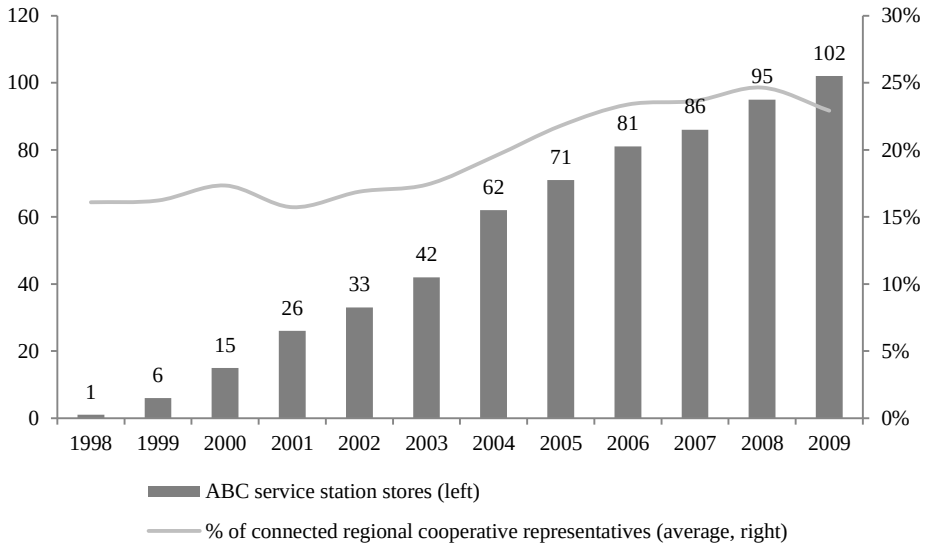


Table 7 provides summary statistics separately for ABC service station store municipalities and municipalities with no ABC service station store in 2010. The table illustrates that on average ABC service station store municipalities are larger in terms of population. Both the median and average population densities are also higher for ABC service station store municipalities than for municipalities with no ABC service station stores. ABC service station stores are also located in municipalities with higher highway traffic amounts. Perhaps surprisingly, ABC service station stores seem to be located in municipalities associated with higher levels of competition. Since the level of competition is higher in larger municipalities, the smaller Herfindahl index of ABC service station municipalities is likely to be partly explained by ABC service station stores' stronger presence in larger municipalities.

Table 7 Municipality level summary statistics

This table provides summary statistics for two groups of municipalities: Panel A displays municipalities that have at least one ABC service station store that has been a pure new investment; Panel B shows municipalities that did not have pure new investment ABC service station stores in 2010. The statistics for ABC service station store municipalities are from two calendar years before an ABC service station store was opened. The statistics for the muninicipalities in which no ABC service station store was located in 2010 are obtained from the year 2009. Highway traffic amounts refer to average daily traffic amounts measured at the municipality level for the municipalities that existed in 2010. ABC and competitor traffic amounts are the highest average daily traffic amounts within a radius of 500 metres from the unit. Competitor traffic amounts refer to the traffic amounts of service station stores that do not belong to the ABC chain. Zero traffic amount means that the unit is not located along highway. Traffic amounts sample includes municipalities where an ABC service station store that has been a pure new investment is located.

Variable	N	Mean	Median	Standard deviation	Min	Max
Panel A: ABC service station store municipalities						
Population	64	50,830	19,412	103,060	1,315	568,531
Land area (km^2)	64	674	352	889	36	5,004
Population density (pop/km^2)	64	261	40,115	561	2	3,050
Highway kilometers	61	45	39	32	0	148
Highway traffic amounts	61	10,208	6,812	10,137	0	46,811
Number of service and automated filling stations	58	10	5	13	1	77
Herfindahl index (grocery stores and service stations)	58	0.09	0.08	0.07	0.00	0.29
Herfindahl index (service stations)	58	0.03	0.25	0.06	0.00	0.24
ABC traffic amounts	228	9,190	9,068	5,969	0	31,769
Competitor traffic amounts	215	5,573	5,576	3,442	0	18,512
Panel B: Municipalities with no ABC service station store						
Population	237	8,520	4,761	15,922	801	175,582
Land area (km^2)	237	911	491	1,662	6	15,052
Population density (pop/km^2)	237	35	10	132	0.19	1,453
Highway kilometers	224	22	16	27	0	200
Highway traffic amounts	224	4,511	2,692	6,922	0	52,591
Number of service and automated filling stations	236	3	2	3	0	31
Herfindahl index (grocery stores and service stations)	237	0.26	0.24	0.15	0.01	1.00
Herfindahl index (service stations)	218	0.64	0.50	0.30	0.09	1.00

Table 7 also includes the traffic amounts for ABC service station stores and other service station stores that can be considered as competitors for ABC. In Table 7, the traffic amount refers to the highest average daily traffic amount within a radius of 500 meters from the unit. The average daily traffic amounts are clearly higher near ABC service station stores than near competing service station stores.

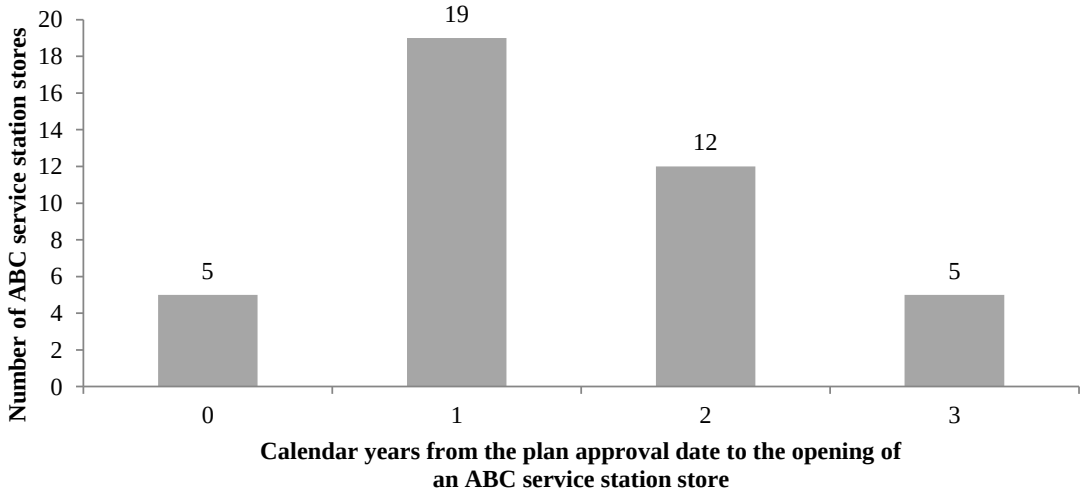
The municipality level statistics presented in Table 7 are collected to control for other factors that might explain the location of an ABC service station store. The statistics, such as land area, population density and population, are obtained from the database of Statistics Finland, the National Land Survey of Finland and the Association of Finnish Local and Regional Authorities. Information of the Finnish road network is obtained from the Finnish Transport Agency.

5.5.3 Zoning decisions data

To measure the political connections of the regional cooperatives at a moment that is relevant to the zoning process of an ABC service station store, I collect the plan approval dates for ABC service stations. I use the plan approval dates of ABC service station stores to determine the time lag between plan approval date and the actual opening date of the stations. I collect the plan approval dates from the database of National Land Survey of Finland. However, only the approval date of the current local detailed plan is provided in the database. Thus, if the plan has been changed after the opening of an ABC service station store, I am not able to detect the original zoning date for the unit. I am able to detect the actual plan approval date for 41 of 64 units that have been pure new investments.

As can be seen from Figure 5, most of these ABC service station stores are opened during the first or second calendar year following plan approval. Since I am unable to detect the exact plan approval dates for each ABC service station store, I use Figure 5 to make the assumption that all ABC service station stores are opened within one or two calendar years from their plan approval date. Thus, in the empirical part political connections are measured with lags of one or two calendar years from the potential opening of an ABC service station store.

Figure 6 Lag between plan approval and opening date



However, the exact plan approval date might not be the most interesting moment in the process to analyze, since the potential effect of political connections can occur in several stages of the zoning process; before, during and at the plan approval stage. In fact, Finnish law prevents any party that has an interest in the zoning process to participate in the decision making[77]. Thus, the effect that political connections potentially have on zoning decisions is likely to occur in more indirect ways and in particular before actual plan approval. Therefore, in addition to measuring political connections at the plan approval date, I also measure the connections during the planning phase of the zoning process.

To be able to measure the connections during the planning phase, I need to determine the average duration of the zoning processes. The duration used in this thesis is 10 months, which is based on finding by Rinkinen (2007), who reports this as the median duration of the local detailed plan process in 54 Finnish municipalities between 2004 and 2005. As discussed, the lags of one and two years from the opening year are used as a proxy for the plan approval year. To measure the political connections during the zoning process, I subtract the average zoning period of 10 months from the plan approval date, and conclude that the zoning processes have started two to three calendar years before the opening year. Thus, in addition to measuring the political connections one and two calendar years before the opening of an ABC service station store, I also measure them with a three-year lag.

[77] Administrative Procedure Act (434/2003), Chapter 5 Section 27-30.

6 Results

This section presents the results of my thesis. I begin by examining the relationship between S Group's political connections and municipalities' zoning decisions concerning ABC service station stores. Furthermore, I study the group's political connections in the context of the market share of ABC service station stores.

6.1 Zoning decisions

In this section, I present the results of my analysis on the relationship between S Group's political connections and the zoning decisions of ABC service station stores. First, I analyze how S Group's political connections are associated with the zoning decision making by measuring the political connections on the municipal level. After that I analyze whether ABC service station stores are more likely to be located in municipalities that have a higher share of the regional cooperative's political connections. This is achieved by measuring the municipality's political connections in relation to the connections of other municipalities belonging to the same regional cooperative. In this section, my analysis focuses only on the ABC service station stores that have been pure new investments.

6.1.1 Political connections of a municipality

To analyze my first research question (i.e. 1A) on the relationship between the political connections of S Group and zoning decisions of ABC service station stores, I first complete several cross-tabulations and after that employ Probit regression analysis. I begin by cross-tabulating my observations to gain a deeper understanding of the data and the nature of the analyzed phenomenon. It is noteworthy that reliable conclusions about causal relationships cannot be drawn from the univariate analysis, since it ignores important factors that may also explain the zoning decisions of ABC service station stores.

In Table 8, I cross-tabulate the strength of the political connections of S Group's representatives and a variable which measures whether an ABC service station store is built in the municipality in the second calendar year following the measurement of the connection. I separately measure the political connections of municipal councils, municipal boards, and committees. I also use the share of votes received by the

municipality's connected municipal councilors in municipal elections as a proxy for the power that the connected members potentially have in local decision making. I further divide the connected municipalities into quartiles according to the fraction of connected members. Municipalities that are not connected to S Group are presented separately in the unconnected group. The quartiles are not exactly same in size due to the nature of the data[78].

As can be seen from Table 8, there is no monotonic relationship between the strength of political connection and opening of an ABC service station store in a municipality. The likelihood that an ABC service station store is opened in a municipality does not monotonically increase with the strength of the connections in municipal councils, municipal boards and the selected committees. Still, the service station stores seem to be more likely opened in municipalities where political connections exist than in unconnected municipalities.

In Panel A of Table 8, I analyze the regional cooperatives' connections to municipal councils. The proportional test indicates that the share of municipalities in which an ABC service station store is opened in the second calendar year following the measurement of political connections is statistically significantly higher in the most connected quartile than in the unconnected group. In the most connected quartile an ABC service station store is opened in 4.0% of the municipality years, while the same figure is only 0.7% in the unconnected group. However, perhaps because of the noise arising from a relatively small number of zoning decisions, the relationship is not monotonic. In the first quartile the share of municipalities where an ABC service station store is opened is higher than in the second and third quartile. Overall, the results do not support the view that the likelihood that an ABC service station store is zoned and opened in a municipality would monotonically increase with the strength of the political connections. It seems that the actual existence of political connections is a more important factor.

[78] The quartiles are different in size for three reasons. First, the Finnish law limits the size of municipal councils to 11 discrete options depending on the population of a municipality. Second, it can be observed that the number of members in municipal boards and committees varies only slightly between municipalities. Third, there is a relatively little variation in the absolute number of connected S Group representatives. The small variation in the member size and in the absolute number of connected persons lead to that the observed fractions of connected members often have relatively similar discrete values. This high frequency of similar values explains the differently sized quartiles.

Table 8 Cross-tabulation of zoning decisions and political connections 1A

This table presents the results of cross-tabulation of the members of a municipal council (Panel A), municipal board (Panel B), committees relevant to building and zoning decisions (Panel C) and irrelevant committees (Panel D), who are also representatives of S Group (connected) as a fraction of total members of the corresponding organs, and a variable which measures whether an ABC service station store is built in the municipality in the second calendar year following the measurement of the connection. The share of votes received by connected municipal councilors in municipal elections is used to measure the level of connection in Panel E. The municipalities are divided into the zero-group (unconnected) and connected group based on their level of connections. The connected group is divided into quartiles that are not same in size due to nature of the data. The sample includes only the ABC service station stores that are pure new investments. Municipalities are only included in the sample for those years for which information on the respective S Group regional cooperative's members of the council of representatives is available. In Panels B, C and D, the cross-tabulation for municipal boards and relevant committees include only the municipalities that have provided the information. P-values for a proportional test between the connected and unconnected municipalities and for a test between the highest quartile and unconnected group are presented in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

			Quartiles according to the level of connection					
Organ	**Strength of connection:**	**Unconnected**	**Lowest connection (1st quartile)**	**2nd**	**3rd**	**Strongest connection (4th quartile)**	**Total connected**	**Total observations**
Panel A: Municipal council	ABC built	19	11	8	6	17	42	61
	% of total	0.7%	2.4%	1.7%	1.4%	4.0%	2.3%	1.4%
	Total observations	2,644	468	463	443	427	1,801	4,445
	Proportional test unconnected vs. connected	(0.000)***						
	Proportional test unconnected vs. strongest connection	(0.000)***						
Panel B: Municipal board	ABC built	23	7	2	1	8	18	41
	% of total	1.1%	4.3%	1.0%	1.0%	5.3%	2.9%	1.6%
	Total observations	2,031	163	201	97	151	612	2,643
	Proportional test unconnected vs. connected	(0.000)***						
	Proportional test unconnected vs. strongest connection	(0.000)***						
Panel C: Relevant committees	ABC built	33	3	3	0	1	7	40
	% of total	1.5%	2.0%	3.1%	0.0%	1.2%	1.8%	1.5%
	Total observations	2,247	152	96	55	87	390	2,637
	Proportional test unconnected vs. connected	(0.807)						
	Proportional test unconnected vs. strongest connection	(0.633)						
Panel D: Irrelevant committees	ABC built	27	6	3	1	4	14	41
	% of total	1.2%	5.0%	2.2%	0.9%	3.2%	2.9%	1.5%
	Total observations	2,198	121	136	106	125	488	2,686
	Proportional test unconnected vs. connected	(0.008)***						
	Proportional test unconnected vs. strongest connection	(0.062)*						
Panel E: Share of municipality's votes received by connected councilors	ABC built	19	10	4	12	16	*n/m*	61
	% of total	0.7%	2.3%	0.9%	2.6%	3.4%		1.4%
	Total observations	2,646	428	442	456	473	*n/m*	4,445
	Proportional test unconnected vs. strongest connection	(0.000)***						

Similar results are obtained when the cross-tabulation is conducted using the relative number of connected members in municipal boards (Panel B). In the most connected quartile, an ABC service station store is opened in 5.3% of analyzed municipality years, whereas in the unconnected group the corresponding figure is only 1.1%. However, it is noteworthy that the sample size is significantly smaller when the analysis is done on a municipal board level due to the limited availability of data. Since the ABC built dummy variable takes a value of one only in 41 observations altogether, the amount of observations in certain quartiles is remarkably small. Therefore these results have to be interpreted cautiously.

When analyzing connections in committees relevant to zoning and construction decisions (Panel C), I do not find a statistically significant difference between the most connected quartile and the unconnected group. The proportion of ABC service station store municipalities is significantly higher in the first and second quartiles than in the two highest quartiles. There is no statistically significant difference between the connected and unconnected group either. The results suggest that connections in the committees relevant to zoning and building decisions are not statistically significantly associated with the likelihood that an ABC service station store is opened in a municipality.

Interestingly, the proportional test of irrelevant committees (education and social committee) provides evidence of a statistically significant difference between the most connected quartile and unconnected group, as well as between the unconnected and connected municipalities (Panel D). One could expect that the effect the irrelevant committees have on zoning decisions is smaller than that of relevant committees, since the means through which the connections in irrelevant committees can affect zoning decisions are more indirect. The simultaneous membership of representatives in both relevant and irrelevant committees might affect the results, but similar findings are nevertheless obtained after excluding persons with such dual roles. One reason for the result might also be that the S Group representatives are relatively more represented in irrelevant committees than in relevant committees, as is illustrated in the descriptive statistics on political connections.

In Panel E of Table 8, the share of votes received by the connected municipal councilors is employed to measure the relative political power that connected members are assumed to have in the decision making of the governance bodies. The proportional test that uses this measure for political connections indicates that there is again a statistically significant difference in the proportion of ABC service station store municipalities between the most connected quartile and the unconnected group. Again the relationship is not monotonic as the proportion of ABC service station store municipalities is smaller in the second than in the first quartile.

Based on the cross-tabulation, ABC service station stores are more likely to be opened in municipalities where political connections exist than in unconnected municipalities. However, the likelihood of opening of an ABC service station store does not increase monotonically with the strength of the political connection. I measure the political connections also with one- and three-year lags from the potential opening of an ABC service station store, but the results are similar to those presented here. I also cross-tabulate the observations by excluding municipalities from the sample after an ABC service station store has been opened in them. This is done because usually only one ABC service station store is built in a municipality, except in larger cities. The results for this subsample are essentially similar to those presented here. Overall, very limited interpretations can be drawn from the cross-tabulations, since other variables that are related to zoning decisions cannot be controlled for. The results are likely to be especially affected by the sizes of analyzed municipalities. Therefore, I next employ a multivariate regression analysis that allows me to control for these potential explanatory factors.

Table 9 presents the results of the Probit regression on the zoning decisions of ABC service station stores that are pure new investments. In Table 9, I measure political connections by using a dummy variable that takes the value of 1 if in a given municipality at least one representative of S Group's regional cooperatives' councils of representatives, boards of directors or supervisory boards is a member in the municipal council, municipal board or committees. Similar to the cross-tabulation, the political connection is measured with a two-year lag from the potential opening of an ABC service station store. I report heteroskedasticity-consistent standard errors corrected for

clustering at the municipality level to ensure that autocorrelation does not affect the t-values[79]. Moreover, time fixed effects are included in the regressions to control for year specific factors.

The results from the regression analysis do not support the conclusion that S Group's political connections have systematically affected the zoning decisions of its ABC service station stores. The coefficients of the political connection dummies are insignificant in all but one of the regression specifications: the coefficient of the political connection dummy is weakly significant only when using relevant committees to measure political connections and when the distance to the nearest ABC service station store municipality is not controlled for. The negative coefficient indicates that the connections in relevant committees are actually associated with a decrease in the likelihood that an ABC service station store is opened. However, the sign of the coefficient is likely to be a chance result more than an implication of a real relationship for several reasons. First, the result does not hold after controlling for all the relevant factors. Second, the result is significant only at a relatively low confidence level. Third, the significance of the result disappears when political connections are measured with one- and three-year lags. Therefore, it can be concluded that the Probit analysis presented in Table 9 does not imply a statistically significant relationship between the existence of S group's political connections and the zoning decisions of ABC service station stores. It should be noted that the number of opened ABC service station stores is relatively small in all the regression setups, and in particular when analyzing the connections to municipal boards and committees. Therefore, the results have to be interpreted cautiously.

[79] Autocorrelation is a frequent problem of panel data. A Wooldridge test is used to confirm the existence of the autocorrelation in the data.

Table 9 Regressions on zoning decisions 1A

This table presents the results of the Probit regression on the zoning of ABC service station stores. All variables are measured at the municipal level. ABC zoned is a dummy variable which takes the value of 1 if an ABC service station store is opened in the municipality in the second calendar year following the measurement of political connection and control variables, and 0 otherwise. Political connections are measured by using a dummy variable that takes the value of 1 if at least one representative from S Group's regional cooperative's council of representatives, board of directors or supervisory board is a member of the muncipality's municipal council, municipal board or selected committees. Size of municipality is the natural logarithm of the population of the municipality. Highway is a dummy variable that takes the value 1 if the municipality is located along a highway, and 0 otherwise. Distance from ABC is the natural logarithm of the distance in metres from the municipality to the nearest municipality where an ABC service station store is located. All independent variables are measured with a two calendar year lag from the potential opening of an ABC service station store. The sample includes only the ABC service station stores that are pure new investments. Municipalities are only included in the sample for those years for which information on the respective S Group regional cooperative's members of the council of representatives is available. Numbers in the parenthesis are robust t-values. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are adjusted for clustering at the municipality level.

		Panel A: Municipal council				**Panel B: Other organs**			
	Expected effect	**(I) Coefficient**	**(I) Marginal effects**	**(II) Coefficient**	**(II) Marginal effects**	**(III) Coefficient**	**(III) Marginal effects**	**(IV) Coefficient**	**(IV) Marginal effects**
Dependent: ABC zoned									
Connected municipal council	+	0.084	0.001	0.071	0.001				
		(0.70)	(0.68)	(0.55)	(0.53)				
Connected municipal board	+					0.010	0.001	0.122	0.004
						(0.68)	(0.62)	(0.70)	(0.62)
Connected relevant committee	+					-0.329*	-0.003**	-0.304	-0.007
						(-1.70)	(-2.10)	(-1.21)	(-1.53)
Connected irrelevant committee	+					0.073	0.001	0.083	0.003
						(0.48)	(0.45)	(0.46)	(0.43)
Size of municipality	+	0.310***	0.005***	0.389***	0.007***	0.288***	0.004***	0.347***	0.010***
		(7.12)	(4.37)	(7.48)	(4.00)	(3.58)	(3.53)	(3.75)	(3.45)
Highway	+	0.480**	0.007***	0.395*	0.007**	0.439**	0.005**	0.345	0.009*
		(2.42)	(3.04)	(1.89)	(2.43)	(2.01)	(2.23)	(1.49)	(1.72)
Distance from ABC	+			0.157**	0.003**			0.144*	0.004*
				(2.44)	(2.22)			(1.75)	(1.67)
Intercept		-5.523***		-7.743***		-8.778***		-6.906***	
		(-12.72)		(-8.47)		(-12.27)		(-5.72)	
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reference probability		0.015		0.017		0.017		0.021	
ABC zoned (N)		61		49		40		32	
Observations		4,141		2,872		2,409		1,516	
Pseudo R^2		0.158		0.178		0.132		0.124	

In addition to measuring the mere existence of S Group's political connections, I also employ variables that measure the strength of these connections in unreported regression specifications. To measure the strength of the political connections I compare the amount of connected members of municipal councils, municipal boards and committees, who are also representatives of S Group to the amount of total members of the corresponding organs (*% of connected* variable). As a robustness check I also measure the absolute number of connected members in the municipal decision making bodies. The political connection variables are insignificant in each of these regression specifications. These results do not support the view that the strength of S Group's political connections would be associated with the zoning decisions.

To ensure the robustness of my results I run several unreported additional regressions. Similar to the cross-tabulation, I also measure the connections with one- and three-year lags. The results show that political connections both one and three years before the potential opening of an ABC service station store are insignificant for all the organs analyzed. To detect whether dual roles of the municipal politicians in different decision making bodies affect the results, I run the regressions for several subsamples. First, I test whether dual roles of irrelevant committee members in municipal boards and relevant committees affect the results. Second, I analyze whether the board and committee members who are also municipal councilors, would have a different impact on the results than the members who are not elected councilors. As a final robustness check, I also run the regressions using OLS analysis. None of the results support the conclusion that the political connections of S Group would have systemically affected the zoning decisions of the group's units.

As robustness checks I also include municipality level competition (*competition* variable) to unreported regression models and replace the *municipality size* variable with *population density*. These additional variables are not included in the final models due to their high correlation with the municipality size variable as illustrated in the appendix. Moreover, the very high level of correlation between the competition and municipality size variables (negative correlation of 0.67) suggests that the competition variable measures more municipality size than the competition that would be relevant to my analysis. This conclusion is also supported by the negative coefficient of the

competition variable (Herfindahl-index) in the unreported regression analyses. It is likely that the negative coefficient of the competition variable stems from ABC service station stores' stronger presence in larger municipalities, where the level of competition is higher. It is important to note that although competition has been recognized as an important determinant for location decisions of service stations (see Lähde 1999), there are two types of competition that are likely to be relevant for these decisions: (1) municipality level competition and (2) competition in different areas within a municipality. Based on my analyses, it seems that the second type of competition would be a more important factor for opening decisions of ABC service station stores. Since in this thesis I only analyze the differences between municipalities, I do not need to control for competition in different areas of municipalities and therefore, I decide not to include the competition variable to my final regression models. Additionally, I exclude the population density instead of the municipality size variable, since the explanatory power of the population density variable is weaker than the municipality size variable's.

The signs of the coefficients of the control variables included in the final analysis support the expected relationships and are statistically significant. Consistent with the view of Lähde (1999), I find that the amount of local population and a location along a highway are positively associated with an increase in the likelihood that an ABC service station store is located in a municipality. The marginal effects calculated at the means of the variables indicate that a municipality's location along a highway increases the likelihood that an ABC service station store is opened in the municipality by 0.5-0.9%. The coefficient of the variable that measures the distance to the nearest municipality with an ABC service station store is positive in each of the panels, indicating that an increase in the distance is positively associated with the likelihood that an ABC service station store is located in a municipality. To conclude, my results indicate that the size of the local population, the road networks of the municipalities, and the existing ABC service station store network are statistically associated with the opening decisions of new ABC service station stores, just as expected.

6.1.2 A municipality's share of the regional cooperative's connections

Next, I focus on analyzing the second part of my first research question (i.e. 1B) and investigate whether the strength of a municipality's connections to S Group, in relation

to the strength of connections of other municipalities belonging to the operating area of the same regional cooperative, is associated with the zoning decisions of ABC service station stores. The analysis differs from the preceding analysis in that previously I did not compare the political connections to other municipalities belonging to the same regional cooperative, but instead analyzed each municipality independently. Now I aim to examine whether ABC service station stores are more likely to be opened in municipalities that are more connected than others within the operating area of the same regional cooperative. I conduct the analysis only on the municipal council level to be able to also include the municipalities that did not provide information on their municipal board and committee members, and in this way ensure comparability between municipalities. Similar to the previous analysis, I begin my analysis by conducting several cross-tabulations, which are examined further by using the Probit regression analysis.

In Table 10, I cross-tabulate the strength of a municipality's political connections measured by the municipality's share of the corresponding regional cooperative's total connections to municipal councils, and a variable which measures whether an ABC service station store is opened in the municipality in the second calendar year following the measurement of political connections. In Panel A, I measure the strength of political connections by using the municipalities' shares of all connected municipal councilors within the operating areas of their respective regional co-operatives. As Panel A illustrates, the proportion of the municipality years when an ABC service station store is opened in a municipality increases monotonically with the strength of the connections. The proportional test indicates that the proportion of ABC service station store municipalities is also statistically significantly higher in the highest quartile than in the unconnected group. In the most connected group, an ABC service station store is opened in 3.9% of observations, whereas the corresponding figure is only 0.7% in the unconnected group. The results suggest that a municipality's share of total connections of a regional cooperative would be statistically significantly associated with the opening of an ABC service station store in the municipality.

In Panel B, I measure the relative strength of a municipality's connections by comparing the share of votes received by the connected municipal councilors of the

municipality to the total share of votes received by connected councilors within the operating area of the relevant regional cooperative. When measuring the strength of connections by using the share of votes, I do not find a monotonic relationship although the proportion of ABC service station stores is statistically significantly higher in the most connected quartile than in the unconnected group. In the most connected quartile an ABC service station store is opened in 2.9% of municipality years, while the corresponding figure is only 0.7% in the unconnected group. If the share of votes is considered as a measure of the power that a municipal politician potentially has in the municipal decision making, then the result does not support the view that there would be a monotonic relationship between the political power of connected members and the zoning decisions of ABC service station stores.

Table 10 Cross-tabulation of zoning decisions and political connections 1B

This table presents the results of a cross-tabulation of the strength of a municipality's political connections in relation to other municipalities belonging to the same regional cooperative and a variable which measures whether an ABC service station store is opened in the municipality in the second calendar year following the measurement of political connections. Panel A measures the strength of political connections by using the municipality's share of all connected municipal councilors within the operating area of a regional cooperative. Panel B uses the share of votes received by the connected municipal councilors of the municipality of total share of votes received by connected councilors within the operating area of regional cooperative. The municipalities are divided into the zero-group (unconnected) and connected group based on their level of connections. The connected group is divided into quartiles that are not identical in size due to the nature of the data. The sample includes only the ABC service station stores that are pure new investments. Municipalities are only included in the sample for those years for which information on the respective S Group regional cooperative's members of the council of representatives is available. The p-values for a proportional test between the highest quartile and the not connected group are presented in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Political connection	**Strength of connection:**	**Unconnected**	**Quartiles according to the level of connection**				**Total observations**
			Lowest connection (1st quartile)	**2nd**	**3rd**	**Strongest connection (4th quartile)**	
Panel A: Municipality's share of the connected municipal councilors within a regional cooperative	ABC built	18	6	8	12	16	60
	% of total	0.69%	1.23%	1.59%	3.02%	3.89%	1.36%
	Total observations	2,610	488	504	398	411	4,411
	Proportional test (unconnected vs. strongest connection)	(0.000)***					
Panel B: Municipality's share of votes compared to the total share of votes received by connected councilors within a regional cooperative	ABC built	18	9	9	12	12	60
	% of total	0.69%	1.70%	1.99%	2.96%	2.90%	1.36%
	Total observations	2,610	530	452	405	414	4,411
	Proportional test (unconnected vs. strongest connection)	(0.000)***					

Similar to when analyzing research question 1A, I also conduct the cross-tabulations by measuring the political connections with one- and three-year lags from the supposed openings of potential ABC service station stores, but the results are similar to Table 10. I also cross-tabulate the observations by excluding municipalities from the sample after an ABC service station store is opened in them, but the results remain essentially unchanged. The main finding from the cross-tabulation is that the likelihood of opening ABC service station stores seems to increase monotonically with the relative strength of political connections in relation to other municipalities in the operating area of the same regional cooperative. However, as discussed earlier, reliable conclusions cannot be drawn from the univariate analysis. I therefore next employ a multivariate Probit regression analysis to control for other factors that might be associated with the locations of ABC service station stores.

Table 11 presents the results of regressions on the political connections and zoning decisions of ABC service station stores, when the municipality's political connections are measured as a share of total connections of the regional cooperative. Since some of the regional cooperatives area more active in opening ABC service station stores than others, I include regional cooperative fixed effects to the regression models in addition to the year fixed effects.

Table 11 Regressions on zoning decisions 1B

This table presents the results of the Probit regression on the zoning decisions of ABC service station stores. All variables are measured at the municipal level. ABC zoned is a dummy variable which takes the value of 1 if an ABC service station store is opened in a municipality in the second calendar year after the political connection is measured, and 0 otherwise. In Panel A, the political connection is measured by using the following ratio: connected municipal councilors of the municipality divided by the total number of connected municipal councilors in the operating area of the respective regional cooperative. The variable captures the level of political connections of a municipality in relation to other municipalities belonging to the same regional cooperative. In Panel B, the number of connected councilors is replaced by the share of votes received by connected municipal councilors. Size of municipality is the natural logarithm of the population of the municipality. Highway is a dummy variable that takes the value of 1 if the municipality is located along a highway, and 0 otherwise. Distance from ABC is the natural logarithm of the distance in metres from the municipality to the nearest municipality where an ABC service station store is located. All independent variables are measured with a two calendar year lag from the potential opening of an ABC service station store. The sample covers only the ABC service station stores that are pure new investments. Municipalities are only included in the sample for those years for which information on the respective S Group regional cooperative's members of the council of representatives is available. Numbers in the parenthesis are robust t-values. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are adjusted for clustering at the municipality level.

		Panel A: Municipal council				**Panel B: Share of votes**			
	Expected effect	**(I) Coefficient**	**(I) Marginal effects**	**(II) Coefficient**	**(II) Marginal effects**	**(III) Coefficient**	**(III) Marginal effects**	**(IV) Coefficient**	**(IV) Marginal effects**
Dependent: ABC zoned									
Political connection	+	0.136	0.002	0.255	0.004	-0.106	-0.002	-0.014	-0.001
		(0.36)	(0.35)	(0.53)	(0.52)	(-0.29)	(-0.29)	(-0.03)	(-0.03)
Size of municipality	+	0.389***	0.006***	0.490***	0.007***	0.408***	0.006***	0.510***	0.007***
		(6.15)	(4.34)	(7.31)	(3.66)	(7.23)	(4.42)	(8.44)	(3.71)
Highway	+	0.398**	0.005**	0.318	0.004*	0.390**	0.005**	0.311	0.004*
		(2.03)	(2.38)	(1.51)	(1.81)	(2.00)	(2.34)	(1.48)	(1.77)
Distance from ABC	+			0.296***	0.004**			0.290**	0.004**
				(2.56)	(2.20)			(2.50)	(2.15)
Intercept		-6.382***		-10.769***		-6.540***		-10.867***	
		(-10.75)		(-6.91)		(-11.99)		(-6.94)	
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional cooperative fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reference probability		0.015		0.017		0.015		0.017	
ABC zoned (N)		60		48		60		48	
Observations		3,931		2,755		3,931		2,755	
Pseudo R^2		0.186		0.228		0.185		0.227	

Similar to the cross-tabulation, in Panel A of Table 11 I measure the strength of political connections by using a municipality's share of all connected municipal councilors within the operating area of the corresponding regional cooperative. Panel B uses the share of votes received by the connected municipal councilors of the municipality of the total share of votes received by connected councilors within the operating area of the same regional cooperative. The coefficient of the political connection variable is insignificant in both panels. This suggests that ABC service station stores are not more likely to be located in better-connected municipalities than in less-connected ones, even when the level of political connections is measured in relation to other municipalities belonging to the same regional cooperative. In Table 11, I measure the political connection with a two-year lag. Unreported regressions yield similar results when the connection is measured with a three-year lag and when an OLS regression is used as a robustness check.

However, when a one-year lag is used, the coefficient of political connections becomes statistically significant (t-value = 2.58). The municipality's share of the connected municipal councilors becomes significant in each of the regression specifications. It is noteworthy that the results are highly significant even though I adjust the standard errors for clustering at the municipality level and employ both time and regional cooperative fixed effects. The positive coefficient of the political connections variable suggests that ABC service station stores are more likely to be opened in municipalities, which have a higher share of the corresponding regional cooperative's political connections. As discussed earlier, most of ABC service station stores for which I am able to detect the plan approval date are planned in the year preceding the opening of the station. Thus, this result gives weak support to the conclusion that the political connections of S Group would be positively associated with the zoning decisions of ABC service station stores. However, the connections measured with two- and three-year lags yield t-values that are far from being significant. Therefore, the significance of the one-year result is not robust and it seems more likely that this finding is a chance result.

The statistical significance and signs of control variables are consistent with expectations, as well as the results from the preceding regression analysis regarding

research question 1A. Consistent with my earlier results the size of a municipality and a municipality's location along a highway are positively associated with the likelihood that an ABC service station is opened in a municipality. The coefficient of the variable that measures the distance to the nearest municipality with an ABC service station store is also positive and significant.

In conclusion, the results from the analysis of a municipality's share of the total connections in the corresponding regional cooperative's operating area do not support the conclusion that these political connections would have systemically affected the zoning decisions of ABC service station stores. Even though the results provide evidence of a statistically significant positive relationship between the openings of ABC service station stores and political connections measured one calendar year before these events, the results from longer lags challenge the robustness of this finding.

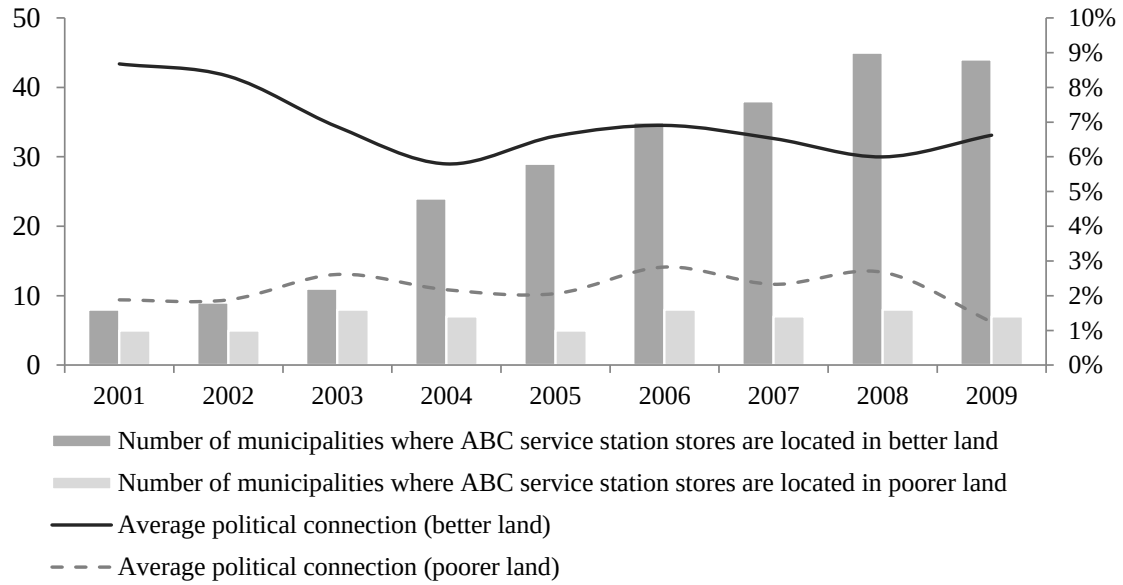
6.2 Quality of land

In this subsection I aim to answer my second research question by analyzing the relationship between the political connections of S Group and the allocation of operating locations in the service station market. I first visualize the research environment with a graphical illustration, after which I report the results of cross-tabulations and Probit regression analyses.

Figure 7 illustrates the distribution of ABC service station stores by the quality of land and the proportion of connected municipal councilors measured at the municipal level. The sample includes the pure new investment ABC service station stores from the calendar year following their opening date. In Figure 7, the lines correspond to the average proportion of connected municipal councilors, whereas the bars illustrate the amount of ABC service station store municipalities in two different groups: (1) ABC service station store municipalities where the competitors are located in better operating areas than ABC service station stores on average (poorer land group) and (2) municipalities where ABC service station stores are located in better operating areas on average (better land group). I measure the quality of land by using the highest average daily traffic amount within a 500 meters radius of the units. In this analysis I

only include other service stations stores as competitors, as traffic amounts are unlikely to affect the location preferences of small grocery stores as strongly.

Figure 7 Quality of operating areas and political connections



The figure clearly shows that in each observation year ABC service station stores are located in better operating areas than their competitors on average. Moreover, the lines show that the average share of connected municipal councilors is higher in the municipalities in which ABC service station stores are located in better operating areas. Even though the figure seems to indicate that there is an association with the strength of political connections and the quality of land of ABC service station stores compared to their competitors, no conclusions on the causality of this relationship can be made.

Several reasons might explain why ABC service station stores are located in better operating areas than competitors on average. First, operators of other service stations might simply not have been able to identify or have not had enough resources to occupy the best operating areas as efficiently as S Group. Second, it might be that the road network has later developed in a way that has been favorable to S Group's locations. Third, it might be that the political connections of S Group have helped the group to get control over the better operating areas. The last explanation is supported by the higher level of political connections in municipalities in which the ABC service station stores are located in better operating areas.

Moreover, since the competitors used in this analysis mainly consist of units that existed before the opening of ABC service station stores, one might argue that comparing the locations of ABC service station stores to their competition is meaningless. This proposition is based on the logic that the operators, who have been the first to establish their stations in a municipality, have chosen their locations according to a different set of criteria than newer arrivals. Newer competitors, such as ABC service station stores, will have had stronger incentives to locate their new units in the best possible locations, while location might not have been as important a factor for existing service stations as they have entered into the market when the competition has been weaker. However, if political connections are related to the dominance of S Group in better operating areas, one might counter-argue that the competition has not had the same possibilities in choosing their initial locations as S Group. Thus, if different rules apply to S Group, then the locations of existing competitors are relevant in analysing the dominance of S Group.

To investigate the matter further, several cross-tabulations are conducted. Table 12 shows the results from the cross-tabulation of political connections with a two calendar year lag and a dummy variable that measures whether an ABC service station store is located in a better operating area than its competitors on average. The analysis is completed on a yearly basis and includes ABC service station stores from the calendar year following their establishment. Competitors include all the service station stores that are located in municipalities, where at least one ABC service station store is located. If several ABC service station stores are located in one municipality, the traffic amount is defined as the average traffic amount of all the ABC service station store units located in the municipality.

When analyzing the connections to municipal councils in Table 12, I find that the proportion of ABC service station stores located in better operating areas is statistically significantly higher in the most connected quartile than in the unconnected group, but the relationship is not monotonic. The result holds both when measuring the relative number of connected municipal councilors and the share of votes received by the connected councilors. Since the analysis is done at the municipal level, the amount of observations is relatively low when analyzing connections in municipal boards and

committees. Therefore, instead of quartiles I only divide them into two groups: connected and unconnected. Only the connections to municipal boards seem to be statistically significant.

I also conduct a cross-tabulation to investigate whether ABC service station stores are located in better operating areas than their competitors in the year following their establishment, but these results do not differ significantly from the results presented here. I also compare the traffic amounts of ABC service station stores to the competitor with the highest traffic amount in each municipality, but again essentially similar results are found. Overall, the analysis provides evidence that ABC service station stores are built in better operating areas than their competitors, and that new competitors are not able to obtain as good operating areas as ABCs are located in. Similar to the analysis on the relationship between political connections and the zoning of ABC service station stores, the cross-tabulations suggest that the mere existence of the connections is more strongly associated with this dominance than the specific strength of the connections.

Table 12 Cross-tabulation of quality of land and political connections

This table presents the results of cross-tabulation of the members of a municipal council (Panel A), municipal board (Panel C), committees relevant to building and zoning decisions (Panel D) and irrelevant committees (Panel E), who are also representatives of S Group (connected) as a fraction of total members of the corresponding organs, and a variable which measures whether an ABC service station in the municipality is located in a better operating area than its competitors on average in the second calendar year following the measurement of connection. The share of votes received by connected municipal councilors in municipal elections is used to measure the level of connection in Panel B. The municipalities are divided into the zero-group (unconnected) and connected group based on their level of connections. The connected group is divided into quartiles that are not identical in size due to the nature of the data. The quality of land is measured by the highest average daily traffic amount within a radius of 500 metres from the units. The sample includes only the ABC service station stores that are pure new investments. Municipalities are only included in the sample for those years for which information on the respective S Group regional cooperative's members of the council of representatives is available. In Panels II, III and IV, the cross-tabulation for municipal board and relevant committees include only the municipalities that have provided the information. P-values for proportional test between the connected and unonnected municipalities and for test between the highest quartile and the not connected group are presented in the parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Organ	Strength of connection:	Unconnected	Quartiles according to the level of connection: Lowest connection (1st quartile)	2nd	3rd	Strongest connection (4th quartile)	Total connected	Total observations
Panel A: Municipal council	ABC better land	38	31	17	33	29	110	148
	% of total	80.9%	83.8%	70.8%	100.0%	100.0%	89.4%	87.1%
	Total observations	47	37	24	33	29	123	170
	Proportional test unconnected vs. connected	(0.136)						
	Proportional test unconnected vs. strongest connection	(0.012)**						
Panel B: Share of municipality's votes received by connected councilors	ABC better land	38	29	25	25	31	*n/m*	148
	% of total	80.9%	87.9%	80.7%	89.3%	100.0%		87.1%
	Total observations	47	33	31	28	31	*n/m*	170
	Proportional test unconnected vs. strongest connection	(0.010)***						

		Total unconnected	Total connected	Total observations
Panel C: Municipal board	ABC better land	42	51	93
	% of total	80.8%	94.4%	87.7%
	Total observations	52	54	106
	Proportional test unconnected vs. connected	(0.032)**		
Panel D: Relevant committees	ABC better land	57	37	94
	% of total	89.1%	86.1%	87.9%
	Total observations	64	43	107
	Proportional test unconnected vs. connected	(0.640)		
Panel E: Irrelevant committees	ABC better land	52	42	94
	% of total	83.9%	93.3%	87.9%
	Total observations	62	45	107
	Proportional test unconnected vs. connected	(0.139)		

Next, I employ Probit regression analysis to investigate the relationship between political connections and the allocation of operating locations to ABC service station stores. Table 13 presents the results of the regression analysis on the quality of land of ABC service station stores. Better land is a dummy variable that gets the value of 1 if an ABC service station store is located in a better operating area than its competitors on average. Differently to the cross-tabulation in Table 12, the regression analysis in Table 13 is done by measuring the traffic amounts within a radius of one kilometer from the units. I use the longer radius since the cross-tabulation shows that in almost 90% of the observations, when the quality of land is measured by using the highest daily traffic amount within a radius of 500 meters from the units, an ABC service station store is located in a better operating area than competition. This low variation in the dependent variable and the small sample size are likely to affect the reliability of the results. Although the number of observations is essentially the same when using both radiuses, the number of analyzed competitors increases slightly since I am able to determine the traffic amount for more units when using the longer radius. For ABC service station stores the traffic amounts are essentially similar with both radiuses, since the units are mostly located within 500 metres from the highway.

The results reported in Table 13 suggest that the political connections of S Group are not associated with the land allocation decisions of municipalities. The coefficients of the political connection dummies are insignificant in each of the regression specifications. In addition to analyzing the locations of competitors on average, in unreported regression specifications I also compare the traffic amounts of ABC service station stores to the competitor with the highest traffic amount, but the results are essentially similar to those presented here. The political connection dummies remain insignificant also when measuring the political connections with one- and three-year lags.

Table 13 Regressions on quality of land

This table presents the results of the Probit regression on the quality of land of ABC service station store plots. All variables are measured at the municipal level. The sample includes only the ABC service station stores that are pure new investments. Better land is a dummy variable which takes the value of 1 if an ABC service station store is located in a better plot (as measured by traffic amounts within a radius of one kilometer) than its competitors on average in the municipality in the second calendar year following the measurement of political connections, and 0 otherwise. Political connections are measured by using a dummy variable that takes the value of 1 if at least one representative from S Group's regional cooperative's council of representatives, board of directors or supervisory board is a member in municipal council, municipal board or comittees. Municipalities are only included in the sample for those years for which information on the respective S Group regional cooperative's members of the council of representatives is available. Numbers in the parenthesis are robust t-values. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are adjusted for clustering at the municipality level.

		Municipal council		**Other organs**	
	Expected effect	**Coefficient**	**Marginal effects**	**Coefficient**	**Marginal effects**
Dependent: Better land					
Connected municipal council	+	0.273	0.095		
		(0.70)	(0.68)		
Connected municipal board	+			0.232	0.083
				(0.49)	(0.49)
Connected relevant committee	+			0.056	0.020
				(0.11)	(0.11)
Connected irrelevant committee	+			0.677	0.230
				(1.43)	(1.53)
Intercept		0.302		-0.122	
		(0.89)		(-0.34)	
Year fixed effects		Yes	Yes	Yes	Yes
Reference probability		0.712		0.659	
ABC better land (N)		146		91	
Observations		205		138	
Pseudo R^2		0.016		0.079	

Similar to the previous regression analyses I also measure the political connections with one- and three-year lags but the results are essentially similar to those reported here. I also analyze whether the strength of the connections is associated with the quality of land. None of these analyses support the conclusion that the quality of operating areas of ABC service station stores would be associated with S Group’s political connections. I also run an OLS regression as a robustness check. The results from the OLS regression do not essentially differ from the results provided here.

In conclusion, the analysis in this subsection does not support the view that the political connections of S Group would have affected the quality of land of the operating areas of ABC service station stores. ABC service station stores seem to be located in better operating areas measured by traffic amounts than their competitors, but the political

connections of the group are not found to be associated with the creation of this dominance.

6.3 Market share

In this final part of my empirical analysis, I pursue to answer my third research question by analyzing the relationship between the political connections of the regional cooperatives and the level of competition within the small grocery stores and service station market. Table 14 presents the results of the regressions of political connection measures on the market share of ABC service station stores. In this regression, the dependent variable is the market share of ABC service station stores within the small grocery store and service station store markets. As defined earlier, market share is calculated using the number of employees as a proxy for the size of operations of the unit. I measure the political connections with a dummy variable that takes the value of 1 if at least one representative from the corresponding S Group's regional cooperative's council of representatives, board of directors or supervisory board is a member of the municipality's municipal council, municipal board or committees. Political connections are measured with a two-year lag, since the decisions of municipalities that would potentially have affected the market shares of single units must have been made before the observation year. For instance, zoning and land allocation decisions as well as road network changes affect competition with a lag. The sample includes only the municipalities in which at least one ABC service station store is located between 2001 and 2009.

Table 14 Regressions on market share

This table presents the results of the OLS regression on the market share of ABC service station stores. All variables are measured at the municipal level. Market share is the share of ABC service station(s)' employees of the total number of employees of small grocery stores and service stations in the municipality. The total number of employees is calculated using the employee classification of the Finnish business register. The political connections are measured with a two-year lag. Political connections are measured by using a dummy variable that takes the value of 1 if at least one representative from S Group's regional cooperative's council of representatives, board of directors or supervisory board is a member in the municipality's municipal council, municipal board or committees. Size of municipality is the natural logarithm of the population of the municipality and it is also measured with a lag of two calendar years. Municipalities are only included in the sample for those years for which information on the respective S Group regional cooperative's members of the council of representatives is available. Numbers in the parenthesis are robust t-values. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively. Standard errors are adjusted for clustering at the municipality level.

	Expected effect	Municipal council	Other organs
Dependent: Market share			
Connected municipal council	+	-0.015	
		(-0.65)	
Connected municipal board	+		-0.006
			(-0.22)
Connected relevant committee	+		0.014
			(0.65)
Connected irrelevant committee	+		-0.033
			(-1.19)
Size of municipality	-	-0.083***	-0.086***
		(-6.52)	(-4.26)
Constant		0.999***	1.048***
		(8.38)	(4.87)
Year fixed effects		Yes	Yes
N		408	264
R-squared		0.409	0.377
F-value		12.85***	5.18***

As can be seen from Table 14, the results do not support the conclusion that the political connections of S Group would have affected the market share of ABC service station stores. The political connection variables are insignificant in both regression specifications. These findings are in line with my previous results, which have indicated that political connections are not statistically significantly associated with the zoning decisions or the quality of land of the operating areas of ABC service station stores. As these two factors are the primary candidates for driving the market share of service stations stores, it is not surprising that political connections are not found to be associated with the market share either.

Similar to the previous regression analyses I also measure the political connections with one- and three-year lags but the results are essentially similar to those reported here. I

also analyze whether the strength of the connections is related to the market share, but none of the analyses support the conclusion that the market shares of ABC service station stores are associated with S Group's political connections.

In the regressions I control for the sizes of the municipalities, since the competition in the service station and small grocery store market is likely to be higher in larger communities. The negative coefficient of the municipality size variable is in line with this expectation, and indicates that market share of the service station stores decreases with the municipality size. Similar to the political connections, the municipality size variable is measured with a lag of two years from measuring the market share.

7 Conclusion

In this thesis, I empirically analyze whether a politically connected firm that operates in a country with an established legal system and a low perceived level of corruption can benefit from its connections in the form of preferential access to land. More specifically, I examine the relationship between the political connections of Finland's largest retail trade operator S Group and Finnish municipalities' zoning decisions concerning its ABC service station stores. I also analyze whether the hypothesized favorable treatment of S Group in zoning decisions is associated with the market share of ABC service station stores.

S Group and its ABC service station store network provide a particularly interesting research environment for several reasons. First, S Group's operating structure is based on 21 regional cooperatives enabling a strong local presence, due to which the group can be expected to be particularly well-connected to municipal politics. Second, unit locations are widely considered as an important success driver of the service station store business. Third, the amount of units in the ABC service station store network has increased with a compound annual growth rate of 30% between 1999 and 2010, fueling a pronounced public debate over potential conflicts of interest in the zoning decisions of municipalities concerning the ABC service station stores.

The sample used in the empirical analysis of this thesis consists of 64 ABC service station stores that have been pure new investments opened by S Group's regional cooperatives. With some limitations the sample covers all the new investment ABC service station stores opened by the regional cooperatives between 1998 and 2010. As the zoning decisions concerning these units have been made before their opening due to the length of the planning and construction process, the hypothesized political connections of S Group are measured between 1996 and 2009. In my analysis, I define political connection as a dual role of a member of an S Group governance organ as a municipal politician. To identify the potential political connections of S Group, I collect and cross-reference the names of the members of the group's governance organs and municipal politicians in the regional cooperatives' operating areas, seeking exact matches of the first and last names. The political connections are used as a key

explanatory variable to explain the zoning decisions, quality of operating areas and market share of ABC service station stores.

In addition to data on political connections, I collect three other datasets. First, I collect data on daily road traffic volumes to compare the quality of land of operating locations of ABC service station stores to competition. Second, I collect detailed establishment level information on all Finnish retail trade units to analyze the competitive situation and market shares in the service station store business. Third, I collect basic descriptive statistics on the municipalities to be used as control variables in the empirical regression models. The actual empirical analysis of this thesis is based on Probit and Ordinary Least Square regressions complemented with cross-tabulations and proportional tests.

The first step in the empirical analysis is to determine the existence and the strength of the hypothesized connections of S Group to municipal politics during the examination period from 1996 to 2009. I find that the connections between the representatives of S Group's regional cooperatives and municipal politics are widespread during the whole examination period. In 2009, over half of the representatives of the most connected regional cooperative, Helsingin Osuuskauppa Elanto, also acted as municipal councilors in the municipalities belonging to the operating area of the regional cooperative. Although Helsingin Osuuskauppa Elanto is by far the most connected of the regional cooperatives, all of the regional cooperatives are found to be connected to municipal councils. On average, every fourth representative of the regional cooperatives was also a municipal councilor in 2009.

The second step in the analysis is to examine whether these widespread political connections have been related to the zoning decisions of ABC service station stores. I construct and run several statistical tests to examine whether an ABC service station store is more likely to be zoned and opened in a municipality where S Group's political connections are stronger. The results do not support the conclusion that political connections of S Group have systemically affected the zoning decisions of ABC service station stores. I use various test specifications to measure the political connections of the group, and all results suggest that neither the mere existence nor the strength of the political connections is statistically significantly associated with the zoning decisions of ABC service station stores.

The third step of the analysis is to investigate whether S Group can utilize its political connections to gain access to better service station unit locations than its competition. I find that ABC service station stores are located in better operating areas than competition on average. However, this dominance is not found to be associated with the group's political connections. My findings show that on average ABC service station stores are originally built in better operating areas than existing competitors. Furthermore, during each year after their establishment the locations of ABC service station stores on average remain to be better compared to competition. The results suggest that S Group has been able to obtain better locations than existing competitors, and that new competitors on average are not able to obtain better operating locations. The results hold both when analyzing the competitors' locations on average, as well as when comparing ABC service station stores to the competing units that have the best locations of the relevant competitors.

As the last step in the empirical analysis, I examine whether the hypothesized favorable treatment of S Group has translated into larger market shares of the group's service station store units. This is achieved by analyzing whether ABC services station stores have higher market shares in municipalities where S Group's political connections are stronger. Even though anecdotal propositions in the public discussion have suggested that smaller players would have been forced to withdraw from the competition due to S Group's political ties, I find no support for these claims. As my earlier investigations do not support the view that political connections would have systematically affected the zoning decisions and quality of the locations of ABC service station stores – which are the means through which the market share mostly likely would be affected – this result is not surprising. My finding is also in line with Mäntylä et al. (2011), who suggest that ABC service station stores have not had major effects on the competition.

The main conclusion that can be drawn from the results of my empirical analysis is that despite of the widespread existence of connections between S Group and municipal politics, it seems unlikely that the these connections would have systematically led to favorable treatment of the group in zoning and land allocation decisions. I neither find support for the proposition that ABC services station stores would systematically have higher market shares in municipalities where S Group's political connections are

stronger. However, I do find support for that the control variables used in my analysis are statistically significantly associated with the expansion of the ABC service station store network as expected. I find that ABC service station stores are more likely to be located in larger municipalities and in municipalities which are located along highways. These results are consistent with Lähde (1999), who states that the local population and road network have a major effect on the placement decisions of service station stores. As expected, I also find that the structure of the existing ABC service station store network is statistically significantly associated with the decisions to open new stations. The fact that the control variables behave as expected increases confidence in the specifications of my statistical tests, and therefore also increases confidence in my main results. A limitation of the methodology employed in this thesis is that it focuses on the systemic nature of the phenomenon and thus it is unable to determine what role the political connections of S Group have had in single cases. Therefore, based on the results of my thesis no conclusions should be drawn on the effects that S Group's political connections have had in specific zoning decisions or other specific situations.

My results, which do not support the conclusion that S Group's political connections have systemically been associated with the zoning decisions of ABC service station stores and the market power the chain has acquired, are in line with Mäntylä et al. (2011). They find that municipalities seem to be willing to support any parties that are willing to make significant investments, improve employment and widen the service offering of municipalities regardless of the political connections of these parties. Although my thesis is not able to answer the question whether S Group has been favored in the land allocation decisions, it suggests that the political connections of the group would not be the reason behind the potential favoritism. If the group has been favored, it can be hypothesized that factors behind this favoritism could be found from amongst the abovementioned indirect and direct effects of ABC service stations stores on the employment and service offering of municipalities. These factors are likely to be significant particularly for smaller municipalities. This view is also consistent with Schneider (1989), who states that one of the advantages that business interests have in land-use decisions is their perceived importance to local economies. Thus, it is possible that S Group has been favored in the zoning decisions due to its perceived importance to the municipalities' economies.

The fast penetration of the ABC service station stores is a highly interesting phenomenon and offers room for further research. So far, the public discussion has mainly focused on explaining the fast penetration of the chain with the political connections of S Group. However, since my thesis does not provide evidence that would support the claims on the systematic favoritism of S Group in zoning decisions, it would be interesting to analyze other potential factors that relate to the fast penetration of the chain. An approach that combines both qualitative and quantitative methods would enable to analyze the topic from various complementary standpoints. For instance, it would be interesting to extend the research of Mäntylä et al. (2011) through a thorough comparison of the attitudes of unconnected and connected municipalities towards ABC service station stores, and examine whether the perceived importance of these service station stores to the local community systematically explains the zoning decision of the stores.

Although in this thesis I am unable to find a significant relationship between political connections of S group and zoning decisions relevant to its operations, I am able to validate the existence of political connections during 1996 and 2009. These demonstrated political connections of the group bring up several interesting questions that can be analyzed further to contribute to the expanding flux of corporate governance related research on political connections of businesses. For instance, an interesting and yet untouched research topic would be to examine the relationship between the political connections and the locations of the state liquor monopoly's Alko retail stores in connection with S Group's and its competitors' units.

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APPENDIX

Correlation matrix of independent variables

This table presents the correlations between independent variables. All the variables are measured at the municipal level. The share of the members of municipal council, municipal board and committees who are also representatives of S Group (connected), is used to measure the political connections (rows 1-4). Dummy variables that take the value of 1 if municipal council, municipal board or committees are connected to S Group and 0 otherwise are also employed for measuring political connections (5-8). Share of votes received by the connected municipal councilors measure the strength of political connections (9). A municipality's share of all connected municipal councilors and of the total share of votes received by the connected municipal councilors within the operating area of a regional cooperative measure the municipality's share of the total connections within a regional cooperative (10-11). Size of municipality is the natural logarithm of the population of the municipality. Highway is a dummy variable that takes the value of 1 if the municipality is located along a highway and 0 otherwise. Competition is measured by using the Herfindahl-index of small retail and service station markets. Distance from ABC is the natural logarithm of the distance in meters from the municipality to the nearest municipality with an ABC service station store. Population density is the natural logarithm of the population density of the municipality.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Connected municipal councilors (%)	1															
2. Connected municipal government members (%)	0.692	1														
3. Connected relevant committee members (%)	0.458	0.237	1													
4. Connected irrelevant committee members (%)	0.346	0.188	0.132	1												
5. Municipal council connected	0.801	0.489	0.303	0.265	1											
6. Municipal board connected	0.605	0.851	0.227	0.136	0.562	1										
7. Relevant committee connected	0.361	0.207	0.147	0.928	0.303	0.16	1									
8. Irrelevant committee connected	0.439	0.280	0.905	0.166	0.339	0.259	0.191	1								
9. Share of votes received	0.903	0.623	0.344	0.254	0.769	0.541	0.270	0.343	1							
10. Municipality's share of connected representatives	0.730	0.479	0.329	0.317	0.597	0.422	0.334	0.334	0.658	1						
11. Municipality's share of votes	0.674	0.418	0.253	0.236	0.605	0.386	0.243	0.270	0.745	0.876	1					
12. Size of municipality	0.428	0.372	0.198	0.250	0.454	0.386	0.306	0.221	0.338	0.367	0.223	1				
13. Highway	0.152	0.132	0.149	0.150	0.179	0.173	0.161	0.158	0.089	0.172	0.088	0.486	1			
14. Competition	-0.247	-0.231	-0.134	-0.155	-0.282	-0.250	-0.194	-0.155	-0.176	-0.193	-0.100	-0.670	-0.381	1		
15. Distance from ABC	-0.029	-0.033	0.008	-0.013	-0.019	-0.004	-0.033	0.034	-0.036	0.048	0.027	-0.014	0.042	-0.199	1	
16. Population density	0.313	0.244	0.103	0.197	0.258	0.221	0.249	0.079	0.236	0.264	0.146	0.628	0.212	-0.232	-0.293	1