WOMEN AND POWER OF DIRECTORS: HOW IT AFFECTS FINANCIAL OUTCOMES OF FIRMS

- A Quantitative Study

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ABSTRACT

Gender equality is widely discussed topic in the modern society, and the issue of female underrepresentation on corporate boards has been discussed for decades. Previous research, on one hand, is focused on non-financial contribution of women on boards, such as improvement of communication, decision-making, stronger focus on CSR and stakeholder orientation etc. On the other hand, correlation between female presence and financial outcomes, such as accounting and market performance, has been receiving contradicting results that would show positive relationship, negative or no relationship at all. However, earlier studies only considered the physical presence of women on boards as a predictor of performance. They did not account for the actual role of women on the boards - are they tokens, or do they hold a real power to make a change and influence financial outcomes?

In order to rise above the shortcomings of the previous research, this study evaluates the power held by women on Swedish boards in Large Cap companies. With that purpose, power indices had been developed that consider such influence sources as leadership, committee participation, connections to the owners and to the management, and experience. The power index also accounts for the fulfillment of “critical mass” criterion. The findings had shown a negative relationship between power of female directors and firm performance, although this correlation might be explained by a short-term oriented nature of the research. Furthermore, this paper suggests a large variety of subjects for future research in the field of gender equality on boards.
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INTRODUCTION

The introductory section presents a practical and theoretical background of women and power on boards that formed the basis for the study. The purpose and research questions of the study are presented in the end of the section.

Background

Modern society strives for equality on social and professional levels. Allbright, as a foundation that works for gender equality and diversity at leading positions in the business sector, reports several benefits of having equal companies from their annual reports (Nord, 2012). Better balance in the leadership, wider competence base, diversified risk profile and better connection to the consumer were named as some of the advantages of having equal companies. Moreover, improved corporate governance was also highlighted as one benefit meaning higher levels of equality on boards generates a greater focus on clear communication to employees, on customer satisfaction and social responsibility. However, there are also contradicting opinions regarding diversity at leading positions in companies. For instance, professors from Columbia University argue for negative impacts in terms of difficultness in communication and splitted points of view that can lead to personal attacks or promotion of hidden agendas (Frijns, Dodd & Cimernova, 2016). Additionally, extremely high levels of diversity in groups can lead to reduced efforts, commitment and trust to the group. The professors also point out that diversity makes boards less efficient, due to more costly decision-making processes with wider range of options that should be taken into account. Moreover, Remus Valsan, professor at Edinburgh Law School, also brings up decreased quality of decision-making as the downside of diverse boards, which originates from the diversity criterion and which results into having insufficient expertise among board directors (Valsan, 2013). Additionally, Valsan argues for following results of a diverse board: “decreased cohesion in the board, resulting in distrust, lack of cooperation and breakdown in communication”. Taken this together, there are varied options regarding diversity on leading positions at firms and the debate is still ongoing.

Despite the contradicting opinions of academics regarding diversity, the share of women on boards in Sweden showed a consistent growth already from 2002, when the number of female directors increased on 5.2% only within a year, and from then on continued to grow. Pernilla Petrelius Karlberg, researcher and teacher at Stockholm School of Economics, observed this major change and found varied explanations to the fast development in her research (Petrelius Karlberg, 2003). The main explanation was the ongoing development within board recruitment where more women had gathered enough experiences and qualifications to shoulder the role as board directors at this time. Additionally, during the beginning of the 2000s, it was seen as more positive to have women on the boards than before and that the general debate on the subject of gender equality contributed to an additional force for the development. Moreover, the nomination committees worked even more active to find qualified women, instead of men, to boards as a response of the ongoing debate. This could have been the starting point for the
major change in Swedish corporate governance that was expected just around the corner where
gender quotas were discussed as one potential option to reach even more equal boards in order
to improve businesses.

Today, gender quota is still an ongoing debate where both critics and benefits have been raised
regarding implementing gender quota on boards as a law proposal in Sweden, even if the boards
states several of benefits with gender quota, for example that it reduces the risk for gender
discrimination since it opens up the opportunity for women to integrate in the business
leadership area. Additionally, gender quota can create positions for female leaders as well as
push for the diversity development. Conversely, previous research by Tienari et al. (2009)
shows negative impacts of gender quota meaning that it can send deceptive signals that women
cannot receive a position in a corporate board only based on their competence rather than their
gender. This might lead to conflicts within the company and can consequently affect the work
of the board negatively. Nevertheless, companies can be encouraged to seek heterogeneity on
the boards even without legal enforcement, provided a strong proof is given in favor of its
advantages. If companies are convinced of obvious benefits, both financial and non-financial,
with striving for equal gender distribution on the boards, the leaders of the company would
naturally try to involve more women with the purpose of increasing effectiveness of the
operations. For that to be possible, a solid theoretical and empirical base must be presented.

Problematization

Influence of diversity on external and internal dynamics in corporations can be assessed and
understood from different perspectives. On one hand, heterogeneous groups, especially in
terms of gender, contribute largely to non-financial improvements in the firm. For instance,
reassuring board diversity brings an opportunity of taking advantage from different skill-sets
and evaluating multiple alternatives in decision-making, while homogeneous groups improve
the speed of decision-making, yet result in one-sided outcomes (Hambrick & Mason, 1984;
Robinson & Dechant, 1997). The Upper Echelon model by Hambrick and Mason particularly
reflected on the importance of diversity in company leadership, which includes the board of
directors. According to this theory, diversity can act as “a cure” for groupthink and is especially
important in times of crises as it assists the firm to solve the problems and increase profitability.
Additionally, female role in improvement of CSR, anti-groupthink and their input in overall
positive reformation of corporate governance has been agreed upon by many other scholars
(van Ees, Gabrielson & Huse, 2009; Kiradjian, 2018; Nord, 2012; Bernardi & Threadgill,
2010; Kamalnath, 2017; Kramer, Konrad & Erkut, 2006; Cook & Glass, 2018). That being
said, diversity and female directorship should be associated with positive outcomes.

On the other hand, however, there is no established study that can completely determine a
relationship between the parameters of gender diversity and company performance, so the
possibility of financial benefits to be gained from involving more women into corporate boards
remains uncertain and vague. The correlation between female presence on corporate boards
and financial outcomes has been widely researched. Surprisingly, scholars were able to show a positive connection (Erhardt, Werbel & Shadrer, 2003; Gordini & Rancati, 2017; Lückerath-Rovers, 2013), a negative connection (Ahern & Dittmar, 2012; Bøhren & Strøm, 2010; Adams & Ferreira, 2009) and no correlation at all (Carter, Simkins & Simpson, 2010; Rose, 2007; Wang & Clift, 2009) even when studied similar types of companies in similar economic context. If diversity is associated with positive outcomes and profitability, as per Hambrick and Mason (1984), it would be expected that the research bulk on this relationship would reflect a positive correlation as well. Hence, the above-mentioned studies in their majority originated from the idea of the beneficial nature of diversity: presence of female directors is expected to increase diversity, which should positively correlate with firm performance. And yet, some studies showed no connection between the factors, and some even reflected a negative impact of heterogeneity on profitability. This contradiction in the outcomes presents a challenge and provokes an interest regarding why the results are not consistent and what can be missing in the pool of previous research.

While determining the factors that influence performance, the authors of all above studies established the share of women on boards of directors to be the decisive aspect of impact. Thus, the previous research only considered physical presence of female directors. However, it had not been accounted for whether women have a real influence or not, which can vary among corporations. In cases when a director is a minority representative in terms of culture, race or gender, and is not accepted and acknowledged by the entire team, he or she is called “a token”.

Knowledge aggregation from several sources (Torchia, Calabrò & Huse, 2011; Anisman-Razin & Saguy, 2016; Srivastava, Das & Pattanayak, 2018) allows to define tokenism as a practice of establishing an image of equality and diversity for the sake of appearance of fairness with the purpose of building a better public profile. The problem with this practice is in renouncing the main idea of diversity, which is to accumulate strength of variety of workers. As per Hambrick and Mason (1984), diversity leads to innovativeness, higher level of strategic decision-making, better monitoring, risk management and higher profitability in turbulent environments. However, if the rest of the group perceives the minority person (in this case – a woman) as a token, her actual merits would be discounted and ideas disregarded, thus making it challenging to capitalize on human capital of the female director.

Tokenism of female directors is a widely discussed problem, which shows that in some companies women are only appointed to satisfy legal or social requirements and increase the public image of the company. They have none or a small weight in decision-making; it is noted that tokens are often excluded from the groups, and some decisions are even taken by other directors outside the boardroom on private informal meetings (Burgess & Tharenou, 2002). Even though gender equality plays a significant part in progressiveness and success of the Western society, gender biases are still present amongst corporate leaders (Engelstad & Teigen, 2012). According to Liu, Wei and Xie (2014), gender biases signal tokenism due to sex-role stereotyping of women, and disregarding their professional qualities. Tokenism can be caused by limitations in influence and by insufficient size of the female representation of the group, which is called “critical mass” theory, which suggests that there is a need for three or more women to sit on the board in order to be influential and overcome gender biases (Torchia,
Calabrò & Huse, 2011; Kramer et al., 2006; Arena et al., 2015). Liu et al. (2014) also argue that there is a strong need to communicate the following message to the corporate leaders: diversity is not only needed because it is the right thing to do; it shall be promoted for increasing shareholder value. Unless this connection is proved and presented, the issue of tokenism would still be present.

Tokenism, according to Lansing and Chandra (2012), hinders female directors from fulfilling their leadership duties to a full extent, thus affecting significantly the contribution that she as a director could make to the work of the board. Nevertheless, previous research overlooks role of a female director in the firm by neglecting her position: is she a token, or does she possess a real power through involvement in certain power structures? There is a risk that companies have higher presence of women on boards but they still have limited influence and power in the boardroom. In this way, the companies only formally comply by paying a tribute to social or legal requirements. The controversy among the existing theoretical pool can be explained by a disregard towards the real role of women on boards.

Powerful actors in the organization shape its strategy (Hambrick & Mason, 1984). Hence, the more power the person holds, the more influence he/she is enabled to execute. Pfeffer (1981) argues that power is a structural phenomenon both on a micro and macro level, which describes the existence of intraorganizational power in leading groups, not only power on markets. Hence, power structures exist on boards due to their members’ high ability to influence organizations’ performance and survival. Because of the variation of power influence between the board directors, particular conditions in terms of different social aspects and responsibilities within the board affect how the division of power should be splitted. There was no study found on distribution of power on boards whereupon the authors found it interesting to research this gap of how power is divided among board directors depending on their gender, due to its major influence of the company and its development.

In order to rise above the shortcomings of the existing research while investigating the influence of female presence on firm performance, it is vital to address the variation of power that women possess in different companies. Triana, Miller and Trzebiatowski (2013) highlighted the importance of power held by the board members in order to take advantages of diverse boards, meaning that “power represents the ability to exert influence and have other do one’s will because it influences collective outcomes, including decision-making, learning and inclusion” (Triana et al., 2013, p. 613). For this purpose, the study is intended to assess the relationship between the actual power held by female directors in a company and the financial outcomes. It is possible that power of female directors can also influence non-financial outcomes, such as CSR, human communications, corporate governance, philanthropic work etc. However, it is the correlation between women on boards and financial performance that is associated with widely contradicting results and noticeable research gaps that need to be closed.

The geographical focus of this study is put on Sweden, where the share of women on corporate boards constitutes nearly 34% (Allbright, 2018). Even if Sweden cultivates a gender equal picture from a global perspective and has a way more gender-diverse society compared to other countries, there is still feminist research that argues for having inequality, segregation and...
constant asymmetrical power relation between men and women in Sweden as well (Tienari et al., 2009). Therefore, there is a need for greater and clearer understanding of whether there is also inequality in terms of power distribution between directors of different genders, and of the results of empowering women on corporate boards in Sweden, which can shed light on this contradicting topic and eliminate gender biases and tokenism from the minds of corporate leaders.

External and internal pressure to involve women to corporate boards will not have any effect unless the group decides to change from within (Merchant, 2011). Therefore, this study is intended to contribute to the existing bulk of knowledge by explaining the effect of “power” in the boardroom and how it determines performance. Moreover, it aims to provide a greater understanding for company leaders of whether it can be expected that eliminating tokenism and giving women a real power on the board has a potential to lead to financial benefits.

**Purpose and research questions**

The study aims to devise the distribution of power on Swedish boards in accordance to gender, and to explain the connection between involvement of women in boards’ power structures and firm performance in Sweden.

In order to fulfil the two purposes of the study, the following research questions will be addressed:

RQ1: How influential are female directors in Sweden from the perspective of their involvement in power structures?

RQ2: How does the total level of power held by female directors influence market and accounting performance of the firm?

RQ3: Does involvement of women in separate power structures contribute to the market and accounting performance?
THEORETICAL METHOD

In the theoretical method chapter, an introduction of the theoretical starting points of the thesis is initially discussed: the resource dependency theory and various of diversity theories. The chapter is then followed by a description of why a deductive research approach has been chosen and concludes by stating the ethical considerations that have been addressed.

Theoretical framework

In order to investigate the connection between women on boards, their power structure and how it affects the performance of the firm, the purpose is to contribute to the empirical research field and try to explain if gender has any effect of performance. The study is based on previous research within the field of corporate governance, gender diversity on boards and power structures. To fulfill the purpose of the study, hypotheses are designed and will be tested against the empirical data in order to identify if and how female presence on boards affects the performance of firms. The resource dependency theory will form the basis of this study since the theory defines how the board is working as a linkage mechanism. Moreover, the theory also clarifies how board capital explains the links between board and firm performance (Hillman & Dalziel, 2003).

Since the study has a gender focus, previous research within the diversity field will also be applied. The main theory of diversity will be based on Hambrick and Mason’s (1984) theory that highlights several of benefits with diversity on boards, for example better and more strategic decision-making and problem solving in turbulent environments and higher innovativeness. Several of previous empirical studies also indicate on positive effects by having a more gender equal board, for example higher level of monitoring and risk management (Brown, Brown & Anastasopoulos, 2002), increased the level of CSR commitments (Cook & Glass, 2018) and positive effects on the corporate culture (Kamalnath, 2017). Moreover, there are studies that argue for the importance of adding more women to the board in order to obtain gender diversity and thereby achieve non-financial benefits (van Ees, Gabriëlsso & Huse, 2009; Kramer et al.p, 2006; Jackson, 1992; Robinson & Dechant; 1997; Adams & Ferreira; 2009). Additionally, tokenism and gender biases will be discussed in the theoretical framework as a way of explaining the complexity of diversity. Kanter (1977) highlighted three main challenges that tokens are meeting - visibility, polarization and assimilation and King et al. (2010) discussed potential negative consequences of tokenism in professional life that might affect the performance of the firm. Also, Liautaud (2016) pointed out that gender biases and stereotypes still exist, where women are generally subjected as weaker candidates for leadership positions.

The study brings up several of previous studies that had been investigating the correlation between female presence on boards and financial performance, where the results were mixed. The authors describe and use valuable contributions from previous research in order to design hypotheses to the current study.
Research approach

In order to meet the purpose of the study, the relationship between theory and empirical data will be investigated through a deductive approach (Bryman & Bell, 2015). The authors assess the deductive approach as suitable for being able to practically test accepted theory that already exists in the field. This is done in order to study how well it corresponds to reality, in this case if the theories are in line with what can explain how women on boards can influence the companies' performance. The theoretical framework and previous research within the field will serve the base for testing hypotheses, which will be subjected to empirical scrutiny (Creswell, 2014). Different variables will be tested against each other in a research that has correlational design. The hypotheses will have a pre-determined approach and be tested against the empirical data. Subsequently, the selected hypotheses will be tested against the data collection, which will either support eller reject the hypotheses. By adopting the deductive approach, where hypotheses are derived from existing theory and then tested, the objective of the research is strengthened since the research process will be less affected by the authors' subjective perceptions (Patel & Davidsson, 2011).

Research ethic

Ethics in business research raise the role of values in a research process that primarily concerns personal integrity and data security (Bryman & Bell, 2015). The authors of this paper have therefore taken a position on ethical aspects that may become relevant for the study. The four ethical considerations are the information requirement (if concerned parties are informed about the purpose of the study), the consent requirement (that participation in the study is voluntary), the confidentiality requirement (if concerned parties are anonymous) and the use requirement (if collected data is used only for the purpose of the study). Since all the information, both theoretical and empirical, has been retrieved through a university library, public databases and web pages of firms, the authors assess that all requirements have been fulfilled. Furthermore, all four requirements have been taken into consideration throughout the study and that they have been appropriately fulfilled.

Moreover, the study takes into account the gender identification of a director given publicly at online databases and in annual reports, as an ethical perspective. However, it is important to acknowledge that in social studies scholars distinguish biological and social determinants of gender, as well as their combinations. This paper does not research gender identification of directors, instead it relies on the data given publicly. Nevertheless, it is possible that due to external factors and personal qualities some women, for instance, may represent to a larger extent typical male features, and vice versa, which can affect their professional behaviour and the amount of power and respect they command. This concept could be closer investigated through a qualitative study where the dimension of genders is in a bigger focus. Psychological climate inside the company and personal experiences and qualification of the directors is also one aspect that needs to be evaluated qualitatively in order to assess whether there is a difference between companies and directors in power and their influence on performance.
LITERATURE REVIEW

The following section presents the theoretical framework of references that forms the basis of the study. Initially, the resource dependency theory and board capital is presented, which is followed by a section of diversity on boards. The chapter also highlights previous research on diversity on boards and financial performance, which is further extended by a section of tokenism and gender biases. Finally, various power structures are presented that form the basis for the hypotheses of the study.

Resource dependency theory and board capital

In order to improve the performance within a firm, good corporate governance is needed (Brown et al., 2002). One important mission of the board is to provide and handle the resources in a strategically smart way to get most value from them. A lot of research within the field of composition of boards has been done and the results indicate on direct connections towards the outcome of the corporate governance. Additionally, the resource dependence theory has been brought up as an important factor for improved performance of organizations (Pfeffer & Salancik, 1978). Furthermore, Pfeffer and Salancik (1978) came up with the idea of externally linkage mechanisms from organizations towards their environment in order to reduce their dependence and obtain resources beyond their own knowledge base. The resource dependency theory, applied on corporate governance, demonstrates the board as a significant link between the firm and its environment and external resources, that the firm is dependent on. Moreover, Pfeffer and Salancik (1978) argue for several benefits of having the board as a linkage mechanism. Firstly, the board can bring useful information that is beyond the rest of the management’s range. Secondly, the board works as a communication channel externally, and thirdly, the board is an important link of obtaining commitments from valuable actors in the environment. Lastly, board members often have a direct connection to legitimizing organizations that might be useful contacts for the development of the firm.

Within the resource dependency theory, board capital is used in order to investigate links between the board and firm performance (Hillman & Dalziel, 2003). Board capital consists of both human capital, such as experience, expertise and reputation, and relational capital, as network and relationships to valuable external actors. Since boards generally consist of lawyers, financial representatives, top managers of other firms and community leaders, the board capital benefits the organizations in terms of valuable advices and external perspectives in a character of counselor. Moreover, board capital provides the organization with its legitimacy and reputation. Hence, the reputation and legitimacy of an organization can be affected by who serves on the board and who the organization is linked with. The board can also reduce the transactions costs when doing deals with external actors, decrease the uncertainty and thereby enhance the performance, due to their valuable channels of communications and information. Additionally, board capital can help firms reach valuable knowledge and experience from important stakeholders groups, such as customers, suppliers and significant communities, out of the directors’ networks that comes from the board capital.
Therefore, the identity of a director has a direct impact on board capital. Depending on social status, educational and professional backgrounds, special skills, cultural origin, and of course the gender, a director could make a unique input into the work of boards. Women as a group can contribute to board capital by bringing certain specific features that are more common among female than male directors. There is a correlation between female presence on boards and increased board capital due to a wider base of varied knowledge and experience, delivering various perspectives in the boardrooms and opening for more opportunities, which is discussed in more details in the next section about diversity on boards.

**Diversity on boards**

Diversity on boards is a widely discussed topic for a reason: it significantly contributes to the board efficiency from the perspective of non-financial factors and outcomes, which was agreed upon by a large number of researchers. When it comes to financial benefits from diversity, the discussion is somewhat more complex and will be explicitly presented in the section to follow. Yet, numerous scholars have problematized, proven and encouraged diversity on boards due to the monetary, social and ethical benefits other than increased performance that could be gained from it.

Results from a study by Hambrick and Mason (1984) show that heterogeneous groups take better and more strategic decisions in turbulent environments and show higher innovativeness. Moreover, heterogeneous groups tend to solve undefined and not usually occurred problem easier than homogenous groups. Hamrick and Mason (1984) point out variation in experience, options and knowledge as possible reasons to this analysis. Additionally, previous results from Brown et al. (2002) also show that diverse boards present higher level of strategic decision making, monitoring and risk management. Strategic decisions may lead to significant changes for a company’s development from a long-term perspective. Therefore, high levels of quality in decision making is something several of companies strive for. Results from Brown et al. (2002) show that diversity in boards tend to deliver higher quality within their decision-making processes which are likely to result into desired outcomes.

Results from Cook and Glass’s (2018) study also showed that female presence on boards increase the level of CSR commitments which influences the entire firm and its stakeholders. Moreover, the study also showed that female leaders are more likely than men to be involved in nonprofit and community organizations, which could lead to higher incitements for prioritizing CSR activities within the firm. Additionally, a study from Kamalnath (2017) has shown that female presence in boards tend to increase the corporate culture positively. Moreover, women tend to improve the communication within and outside the boardroom. This could benefit the solution structure with presenting a wider perspective and avoid the risk of ignoring bad information when taking decisions. Moreover, homogenous groups tend to generate groupthink, leading to routinization of decision-making, which can be eliminated with higher gender diversity (van Ees et al., 2009).
According to van Ees et al. (2009), routinization creates performance programs and decision-making biases, which could end up in “good enough” solutions and decisions. By adding more women to boards, the negative outcomes of group thinking could be overcome. Kramer et al. (2006) also argue for adding more women to the board representation since the current women on the board will feel safer and will be more secure when “speaking up” in discussions. As a consequence, this could benefit the culture in the boardroom which would have impact on the entire company, its outcomes and the relationships towards the stakeholders. Additionally, a study by Jackson (1992) shows that heterogeneous groups tend to be more creative and reach higher quality within strategic questions because of the broader variation of experience and knowledge.

Research from Robinson and Dechant (1997) showed that diversity on boards, both in gender, ethical origin, age, experience and competence, could receive several positive contributions. Examples of this could be better understanding of the market situation, increased creativity and innovation within the group, more effective problem solving and improved effectiveness in leadership, which might have an indirect impact on the financial performance. Therefore, Robinson and Dechant (1997) argue for deficiencies in research on investigating direct relationships for how increased female influence on boards can have any impacts, negative or positive, on the financial performance.

A study by Adams and Ferreira (2009) also showed that female presence on boards had positive influence in the effectiveness within the boards as well as at the corporate governance, but does not necessarily affect the companies' profitability. Moreover, the study by Ahmed and Ali (2017) on corporate boards in Australia revealed that female directors have a strong impact on stock liquidity of the firms, which indicates that women are not only tokens but have a real impact on market performance. Additionally, Low, Roberts and Whiting (2015) discovered that female representatives on corporate boards contribute to higher return on assets in countries where there is no cultural barrier for female involvement; on a contrary, in countries with gender biases still in place, presence of female directors has a negative influence on firm performance. This leads the discussion to the next point - how does female presence on boards affect the financial performance?

Additionally, it is worth mentioning from previous research that is not only the presence of women that is the underlying source to the positive correlation, it is the diversity of genders. Previous studies emphasise that having only women in boards will not result in improved financial performance, which is an important aspect to take into account (Erhard et al., 2003; Gordini & Rancati, 2017; Lückerath-Rovers, 2013). Therefore, it is important to balance equally the share of women and men in order to capitalize on gender diversity.
Previous research on diversity on boards and financial performance

Positive correlation

Several studies have shown a positive relationship between an increased presence of women on boards and higher company value. One of them is a study of Erhard et al. (2003) where the authors investigated the financial performance on American companies and where the results indicated that board diversity is positively associated with the financial performance. Erhard et al. (2003) defined diversity as the representation of not only gender, but also the ethnic difference on boards of directors. Moreover, they bring up Watson, Kumar and Michaelsen (1993) who suggested that diversity could be seen as a competitive advantage due to a larger base of knowledge and higher level of creativity and innovation, which would have positive impacts on financial performance. Ultimately, Erhard et al. (2003) reflected that there is a positive contribution of female directors to both financial and non-financial factors.

Previous findings are also supported by Gordini and Rancati’s (2017) study were a positive correlation between financial performance and female presence on boards was found based on 900 listed companies in Italy. Referring to previous studies, a more diverse board would generate a better understanding for the marketplace due to a more representative board reflecting on potential customers, employees and investors. Also, a more equal board can enhance problem-solving and decision-making since there are more perspectives involved, which brings more alternatives to evaluate and find the best option. Conversely to these theories, previous research argued that greater diversity on boards would generate more splitted opinions and critical questions, which in terms could lead to more conflicts due to a bigger variation of opinions. Additionally, the decision-making process will then take more time and be less effective. However, Gordini and Rancati’s (2017) were capable to argument in favor of positive financial outcomes from involving women to corporate boards.

Moreover, Lückerath-Rovers (2013) investigated the relationship between women presence on boards and financial performance on about 100 companies in the Netherlands and the results showed a positive correlation. As discussed in the study, a more heterogeneous board representation shows more direct and indirect benefits within the organization due to a better reflection of the key stakeholder groups such as customers, employees and investors. Additionally, previous studies argue for the importance of having legitimacy and conformity according to the societal expectations in order to survive at the market.

Negative correlation

Research by Ahern and Dittmar (2012) is one of few studies that had shown a negative connection between increased female presence on boards and financial performance. The study was based on Norwegian companies and it aimed to investigate the relationship between women presence on boards and financial performance, as well as effects out of the gender quota law that was implemented in 2003. Additional results of the study indicated that companies, after the law was implemented, appointed younger and less experienced women to the boards which might be one explanation to the negative correlation. The same negative results have also been found in the study of Bøhren and Strøm (2010) with the similar methodology. Their
study also supported the idea of heterogeneous boards being less effective in decision-making due to a wider range of opinions and perspectives.

Additionally, results from the study of Adams and Ferreira (2009) indicated a negative correlation based on listed companies in the US. However, Adams and Ferreira also found several positive effects with a more gender equal board, such as better in monitoring and providing empirical evidence regarding different assignments, but a general negative effect on the financial performance remained. One potential reason to this negative correlation might be to a deteriorating defense strategy against acquisitions due to a more equal board.

**No correlation**

In 2003, Carter, Simkins and Simpson conducted a research on listed firms in the US from 1990. The results showed that diversity in boards improves the financial performance. However, in 2010, the same study was made but instead data from 1998-2002 was used. The results from the later research could not indicate any correlation between presence of women and minorities on boards and financial performance. Though, theories from Robinson and Dechant (1997) discuss that diversity increases innovation and creativity since attitudes and beliefs tend to vary systematically due to age, race, and gender. Additionally, a more equal board tends to have a more effective problem-solving, even if there is a bigger risk for conflicts, so Robinson and Dechant argue in favor of evaluating the alternatives with higher precision and more carefully explore potential consequences. However, there is no evidence in this study that a better working and gender equal board would result in a better financial performance.

Furthermore, in a study of Wang and Clift (2009) listed companies in Australia were investigated in order to find correlation between female presence on boards and financial performance, but no correlation was found. Additional contributions from the study indicate that large companies usually have more women on leading positions compared to small companies and that large corporate boards have minorities to a greater extent. Moreover, the study indicated that board diversity affects the reputation of the firm positively regarding its environment and stakeholder, which is beneficial for the market position.

Lastly, results from a study of Rose (2007) indicated no correlation between female presence on boards and financial performance of a company based on Danish corporations. Nevertheless, one possible reason to the non-existing correlation in the results might be that within the boards, the socialization to the group is important in order to be accepted and that an adaptation to the group is necessarily, especially when women are strongly underrepresented. In addition, it is not enough with only one or two women in the board due to lack of strong enough impact in a group that is dominated by men, which supports the theory of the critical mass of at least three women. Despite the financial performance, diversity in boards matters referring to moral obligations and the concept of ownership, which could be compared with the stakeholder theory (Carver, 2002). The board should not only strive of maximizing the shareholder value, they should also emphasizing value for other stakeholders.
Table 1 - Compilation of previous research on board diversity and financial performance

<table>
<thead>
<tr>
<th>Study</th>
<th>Country, Period</th>
<th>Companies</th>
<th>Dependent variable</th>
<th>Independent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive correlation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gordini and Rancati (2017)</td>
<td>Italy, 2011-2014</td>
<td>918</td>
<td>Tobin's Q</td>
<td>Share of women on the board</td>
</tr>
<tr>
<td><strong>Negative correlation</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Adams and Ferreira (2009)</td>
<td>the US, 1996-2003</td>
<td>1,939</td>
<td>Tobin's Q, ROA</td>
<td>Share of women on the board</td>
</tr>
<tr>
<td><strong>No correlation</strong></td>
<td></td>
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</table>

*NR=not reported. Rose (2007) had 443 firm-year observations on almost all listed firms on the Copenhagen Stock Exchange.

ROA=return on assets  
ROS=return on sales  
RIO=return on investments  
ROIC=return on invested capital  
ROE=return on equity  
SHERT=shareholder return
Tokenism and gender biases

Tokenism nature and consequences

The classical work on tokenism theory by Kanter (1977) stresses that tokens face three challenges: (1) visibility, which implies that women on the board experience constant feeling of being watched, which puts additional pressure on their performance; (2) polarization, which means that the dominant group can feel threatened by the tokens, thus excluding them from the group and exaggerating the differences between them; (3) assimilation, which results into stereotypical categorization of women, thus limiting their impact on decision-making.

King et al. (2010) highlighted that tokenism is spread much largely in high-status position than in low-status positions. The phenomenon of tokenism on corporate boards as the top echelon of the company was discussed further by Torchia et al. (2011), who developed a subsequent theory called “critical mass” (which will be discussed in details in the following section), highlighting how crucial it is to have three or more representatives of the same gender on the board in order to be able to capitalize on diversity. This theory makes yet another contribution to better understanding tokenism and finding ways to eliminate it in high-status teams in corporations.

When discussing tokenism at work, King et al. (2010) connected it to inequality in professional life and highlighted that tokenism occurs not only due to underrepresentation but also as an outcome from various contextual factors, such as psychological work climate, job prestige, status. Particularly psychological climate was addressed as the determinant of whether discrimination processes would take place inside the company or not. Although, psychological climate is a complex, multidimensional and subjective factor that varies among companies and calls for qualitative assessment.

Another consequence of tokenism, according to King et al. (2010), is lower job satisfaction. Women who experience unjust treatment at work tend to be discouraged to show maximum performance. This, in return, can have a possible influence on financial outcomes of the entire company. Lastly, tokenism leads to diminishing of achievements of the women, disregard to their experiences and qualifications, which obstructs female directors from performing their directorship duties to their full potential (Lansing & Chandra, 2012). Thus, tokenism hinders companies from gaining advantages to the fullest extent from the human capital of female directors.

However, as discussed by King et al. (2010), not all tokens experience the same issues. Even a token can strongly contribute to decision-making processes, which is evaluated positively by its peers. Nevertheless, tokens who don’t experience negative outcomes of their outcast position remain an exception rather than a rule. The limitation of tokenism theory mainly lies in its gender neutrality: according to Zimmer (1988) gender plays an important role in our society, thus experience of tokenism of men and women would differ. Another shortcoming of the theory, given by the author, is that concentrating on tokenism can negatively affect the developments of solving inequality, because it turns people’s attention away from sexism in a firm, and in the society.
Variations in outcomes between male and female tokens lead the discussion to the subject of sex role stereotypes and gender biases. Almost 35 years ago researchers Yoder and Sinnett (1985) established that underrepresentation is not a sole factor to define tokenism, which was later supported by King et al. (2010). Generally, male tokens do not experience “visibility, polarization and assimilation” consequences, while women do. Therefore, the phenomenon of tokenism is more complex and can occur regardless of the simple presence of a certain number of women in a group.

This creates a discussion regarding gender biases in corporate boards. Liautaud (2016) discussed how common it is for male leaders to stereotype women candidates as lacking ambition and confidence. There are still some who believe that women are more emotional, not assertive enough to inherit leadership tasks and they are tactic-oriented hence lacking strategic view. Furthermore, motherhood is believed to be an obstacle for higher work performance. Personal qualities of men and women are also prescribed and generalized: men are expected to be achievement-oriented, rational and assertive, while women are supposed to be considerate, intuitive and collaborative. For many individuals it is true, but in many cases, however, these characters do not correspond the reality (Heilman, 2012). Such prejudices lead to stereotypes, and stereotypes lead to biases. Unfortunately, biases push women down so many of them do not dare to attempt to take a leadership position.

Biases, stereotypes and obstacles make a “glass ceiling”: women represent 53 % of workforce, for example in the USA, and yet they only hold 19 % of directorship in the same companies (Liautaud, 2016). Inequality in representation is also accompanied by stricter judgement of female directors. Gender biases result in inequality in performance evaluation and career prospects (Jonnegård, Stafsudd & Elg, 2010), which means that female directors have to reflect noticeably higher performance in order to receive the same acknowledgement as men. Furthermore, women in leadership are 45 % more likely to be fired than men holding the same position.

Bjerk (2008) argues that there is no discrimination in promotion to top echelons of corporations, and the share of women is lower because of lack of qualified and ambitious female leaders. However, other studies have shown that stereotyping among corporate leaders have been increasing for the past 30 years (Marlin, 2012). Moreover, stereotypes among women about men also exist and are just as large and influential. It suggests that despite shifting social norms and expectations, gender stereotypes are not changing as quickly.

To sum up, the number of women on corporate boards is increasing and the society continuously fights inequality and discrimination. And yet, tokenism and gender biases still exist and result in mostly negative consequences for the individual, as well as for the entire group, with a small exceptions of people who can turn their detached position to their benefit.
**Power Structures**

Whether there is a correlation between female presence on corporate boards and firm performance can be tested by assessing the role of women in power structures, i.e. whether women are not only tokens but also have the ability to influence the decision-making and have a direct effect on company value (Triana et al., 2013). Boards of directors and their members can be assigned different types of powers: structural power refers to hierarchical position, ownership power gives the right to choose the suitable representation, expert power reflects the area of competence, prestige power is measured by reputation and experience within influential fields. This study will measure the impact of women with structural power on corporate performance. Further the research will present various dimensions, which can be understood as positions of power.

*Leaders on boards - Power of the Chair and the CEO*

A chairman (or the Chair) is the head of the board of directors in companies and is elected by the board of directors, unless different is prescribed by the articles of association or the AGM (The Swedish Companies Act, 2005). It is true that the Chair would not participate in daily management of the firm, and yet he/she has the power to set the agenda for the board and to influence the voting process (Chris, 2015). The persona of the Chair is vital for the achieving shareholder goals of high performance (Mínguez-Vera & Martín-Ugedo, 2010).

Companies in Continental Europe, as well as in the UK, have a distinctive difference between board leadership and management leadership – the Chair and the CEO are rarely the same individual (Ward, 2008). Independence of the Chair is valued as it is associated with higher board performance, which influence positively firm’s profitability. However, there is still a problem of truly independent Chairs, who do not have any connections to the management or to the owners (Ward, 2008). Although, this highlights that the identity of the Chair has a direct impact on company performance.

The Chair is not a symbolic position, but a real responsibility over board’s development and effectiveness. This person is expected to work closely with the CEO in a “bridge” role for communicating issues between the management and the board (Heffernan, 2014), ensuring effectiveness of strategic decisions and communication, setting cultural values and risk appetites etc. According to Ward (2008), the Chair is “a coach” of the entire enterprise, therefore the leader of the board of directors is holding a position of power which gives him/her the right of influencing the strategy of the firm, which has a direct impact on performance and profitability.

CEOs who sit on the board of directors hold a position of power second to the Chair, which comes with privileges and responsibilities. According to Swedish Corporate Governance Board (Online), a CEO is responsible for day-to-day company management; all the issues beyond this area of responsibility must be presented to the board of directors for consideration. It is possible that a CEO can exercise the role of an executive director on the board. Moreover, it is the right of the board to appoint new or fire underperforming top managers, such as the CEO (The Swedish Companies Act, 2005).
Frequently, CEOs play a significant role of the boards since they are the key source of information for the boards. CEOs can deliberately choose investment projects with a greater degree of sensitive information which would help the executives to obtain more authority: when CEOs are involved with corporate boards that are focused mostly on monitoring, the boards tend to delegate the decision-making power to the CEO (Baldenius, Melumad & Meng, 2014).

CEO does have a strong influence on CSR disclosure (Muttakin, Khan & Mihret, 2018), on strategic change (Haynes & Hillman, 2010), and on firm performance in general (Park et al., 2018; Combs et al., 2007). Depending on the identity of the CEO, the influence can be positive, such as he / she may stimulate a greater discussion of problematic issues, or negative, if the CEO is monopolizing the board (Muttakin et al., 2018).

Under various institutional preconditions CEOs can obtain a dual role and become an executive Chair, which is a common title in the US (Ward, 2008). This position gives the CEO an excessive level of power and control (Muttakin et al., 2018), which results into higher consideration towards the shareholder values (Aiyeshia, Engel & Liu, 2011). Moreover, Muller-Kahle and Schiehll (2013) refer to the Chair position as the most powerful in the organization, followed by the CEO. Therefore, holding both CEO and the Chair position grants the person higher structural power. Outside the US, however, there is an evidence of decreased performance of companies without separate board-management leadership (Rahman & Haniffa, 2005; Dahya, Lonie & Power, 1996; Kyereboah-Coleman & Osei, 2008). Particularly in Sweden, public LLCs are not allowed to nominate the same person to both the Chair and the CEO duties (Bolagsverket, 2018).

Overall, there is a solid ground for stating that the Chair as the leader of the board, and the CEO as the head of TMT while participating on the corporate board, have a strong and multidimensional influence on firm performance, and that their identity matters. Women in leadership, that being the Chair or the CEO, have been discussed by many authors to contribute to non-financial factors in the firm, as well as some studies showed a positive correlation with the financial performance. For instance, as per van Ees et al. (2009), it is women who improve decision-making; it is women who encourage tougher questions and do not ignore bad information, as per Kamalnath (2017). To have a woman as a leader has a potential to enhance the role of all female directors and to capitalize on their contribution.

H1: There is a positive correlation between the women in leadership positions in corporate structures and both market and accounting performance of the firm.

Committees

Effectiveness of any board at a large scale is defined by the effectiveness of its committees (Larson, 2009). Committees’ main objective is to help the board to achieve its goals by overseeing basic board responsibilities: “governance, quality, finance, audit, goal planning and setting, and executive performance” (Larson, 2009, p. 10). Committees work as “feeders” of the board’s work, which highlights the power held by these structural elements. Involvement
of women in different committees is associated with higher return on assets (Srivastava et al., 2018).

According to the Swedish Corporate Governance Code, board members shall initiate an audit committee and a remuneration (compensation) committee. Audit committees improve financial reporting of companies (Oussii & Bouilia Taktak, 2018; I Putu Sugiartha Sanjaya, 2016). Shareholders rely largely on the audit committee for providing the accurate financial information and expertise (Ward, 2008). Furthermore, audit committees reduce earnings management – producing financial reports which present overly positive overview of the company’s financial situation and business activities (I Putu Sugiartha Sanjaya, 2016). It is an important element of good corporate governance, which leads to better performance through enhancing the monitoring function of the board (Tengamnuay & Stapleton, 2009). Furthermore, presence of women in audit committees contributes to additional decrease in earnings management (Abdullah & Ismail, 2016).

Compensation committee oversees remunerations of the company’s executive officers, its fairness and evaluation criteria (Compensation Resources, 2015). Sun, Cahan and Emanuel (2009) showed a direct connection between the quality of the compensation committee and accounting performance of the firm, which indicates a power of this structure to influence economic outcomes of the corporation. Furthermore, similar results have been presented by Tosi Jr and Gomez-Mejia (1994) and by Sun et al. (2009): monitoring of CEO compensation and firm performance are positively correlated, which indicates the importance of the existence of compensation committee and its capacity to influence financial outcomes of the businesses.

Board committees have chairmen too, and the power of the Chair in committees differs. Chappell, McGregor and Verlilyea (2004) show that the Committee Chair often exercises up to 50 % of the voting weight in the decisions taken. Therefore, whether the person is or is not the Chair of a committee, he / she would also possess a different level of influence in the power structures of the corporations.

To sum up, both audit and compensation committees are performing a significant work in terms of control of the board as well as of the entire enterprise. Committee participation gives additional influence to the board members. Due to the fact that diversity contributes to enhanced monitoring (Adams & Ferreira, 2009), having more women inside the committees should lead to higher efficiency in terms of control, which results in better financial performance (Brown et al., 2002).

H2: There is a positive correlation between the female presence in board committees and both market and accounting performance of the firm.

Independency and Family Ties

According to Baldenius et al. (2014), there are two types of directors: monitoring and advisory. Although all directors are normally involved in both monitoring and advising at the same time, the distribution of their time and efforts differs depending on their background and expertise. For instance, independent directors with financial backgrounds would normally focus on
monitoring, while inside directors with non-financial expertise (engineers, for example) would engage in advisory on decision-making processes.

Independent directors are experts in monitoring and minority shareholder protection (Fama & Jensen, 1983; Hillman & Dalziel, 2003). On the other hand, dependent directors contribute with resource provision in a form of advice, counsel, legitimacy and links to other organizations. Board members who are connected to the company through family relationships have incentives to give advice and encourage the company to collaborate with other companies to strengthen the firm’s external image (Hillman & Dalziel, 2003). For the purpose of this paper, it is important to establish whether independence or connection to the company and its owners gives more power to the directors, and how it influences performance.

Independent directors are invited to corporate boards with the purpose of shareholder value maximization (Ponomareva & Ahlberg, 2016). Their presence is beneficial for companies that have the purpose of higher returns, which would not be the only objective of family-controlled firms, however. According to agency theory, resource dependency theory and upper echelon theory, presence of independent directors likely to lead to increased effectiveness of the board (Ruigrok et al., 2006), thus the opinion regarding positive relationship between performance and presence of outside directors is widespread, especially in Anglo-American institutional context. Rosenstein and Wyatt (1990) stress on the importance of outside directors for shareholder value creation as their involvement increases share prices. On the other hand, Lin, Pope and Young (2002) found out that appointment of outside directors does not benefit financial outcomes, but evokes a positive market response. Depending on the experience, outside directors are often used to trusting the CEO and not involving as much in decision-making. If their previous place of occupation was CEO-controlled, it is expected that the outside director on the new board would rely on the CEO rather than controlling the management and decision-making, and would reflect a certain level of passiveness (Zajac & Westphal, 1996b). Baldenius et al. (2014) also highlighted that more independent boards tend to focus on monitoring, while handing over the responsibility of decision-making to the CEO.

Terjesen, Couto and Francisco (2016) determined that independent directors influence neither market performance nor accounting performance if the board is not gender diverse, even though the authors acknowledge that independent directors enhance transparency and monitoring, hence it is expected that the performance should also improve. Nevertheless, this study highlights that gender diversity is more important than independence in terms of positive influence on performance. To sum up, the study of Terjesen et al. (2016) yet again stresses on the importance of gender balance on corporate boards.

According to Canella, Jones and Withers (2015), certain companies have an organizational identity, which means that the members share the same attributes and values throughout the organization. Dependent directors are more likely to have an organizational identity compared to independent directors, which would bring more contribution to the company. Canella et al. (2015) find that directors who share the organizational identity are affecting the firm in a positive way. Consequently, directors with a strong organizational identity will act in the firm's best interests through resource provision and monitoring the management. Therefore, family-
controlled firms are more willing to involve directors from inside the company and industry, because family-firm's goal is to continue with the firm and its going concern (Canella et al., 2015). Family-controlled firms have higher gender diversity and lower number of independent directors (Vieira, 2018). Particularly in Sweden, firms are often controlled by families (SCB, 2017). Family firms in Sweden operate both small domestic producers and as well as in big multinational companies, in various industries across the country. Moreover, the family owned companies are estimated to account for over one third of Swedish employment and of Swedish GDP.

If the CEO, a board member or the top manager belongs to the controlling family, the person will have knowledge, experience and company insight from the venture. If an outsider is employed to one of the above positions, he / she does not have the same knowledge and experience about the company. Therefore, it is important to have dependent directors on the board, because they can mediate knowledge that can be useful for decisions-making (Brunninge, Nordqvist & Wiklund, 2007).

Directors with connections to the management, or “inside directors” are an important tool for fighting uncertainties and volatile situations (Upadhyay et al., 2017). Inside directors may be assigned to the board in the times of crisis when there is a need for strong and united leadership (Shaikh, O'Brien & Peters, 2018). However, the research of O'Shannassy and Leenders (2016) indicated that with longer tenure inside directors obtain a significant power and cooperate with the Chair and the CEO. This leads to the top echelons being “too comfortable in the saddle” and to decreased performance. And on a contrary, the research of Bøhren and Strøm (2010) suggests a positive influence of directors, dependent on CEO, on board effectiveness.

Ntoung et al. (2017) researched influence of family ties within directorship and management in the company power structure on corporate performance in civil law institutional context. The findings indicated a positive correlation between presence of family-tied persons on corporate boards and in the CEO position and company value and profitability. Consistent with their research, Chu (2011) also draws conclusion regarding a positive relationship between family involvement in ownership and control and financial performance. Dependency towards the shareholders of the company usually indicates a family relationship between the director and the investors. Family members have a significant influence in the upper echelons of the company due to the ownership and control factors that they possess (Patel & Cooper, 2014). It is suggested that in family firms directors with ties to the owners have a power to influence corporate decisions, and in civil-law countries it would lead to positive outcomes.

Swedish corporate governance model is strongly based on trust in the controlling owner and on foundation that these few owners would solve the problems upon occurrence (Jonnergård & Larsson Olaison, 2016). Moreover, the cognitive foundation of the Swedish model points on the role of controlling shareholders as the party that controls the management and ensures the efficiency of the corporation. The objectives of firms in Sweden, as per Ponomareva and Ahlberg (2016), are both financial, related to increase of profits, and non-financial such as “the preservation of control over the firm, the survival of the firm through generations, legitimacy and reputation gains” (Ponomareva & Ahlberg, 2016, p. 59). In the study of Jonnergård and
Larsson Olaison (2016) they described independent directors as the ones without accountability and in the Swedish context, on a contrary to the Anglo-American model, pose a threat to the shareholder wealth.

In family-controlled firms, according to Ponomareva and Ahlberg (2016), outside directors can feel pressured by the controlling owner and they are not likely to challenge the authority of the management and the involved family members. Independent directors have limited contact with the firm, they lack firm-specific expertise, therefore, the authors rise the issue of economic efficiency of involvement of independent directors in family-controlled firms. Instead, owners appoint family members to the board, and at the same time avoiding agency conflict between the directors and the principal, as their goals are aligned. Independent directors are risking to be excluded from the group, which means that they could become tokens on the board. The collaboration between the directors can also decrease which would lead to negative financial consequences.

According to Liu et al. (2014), female executive directors have stronger positive impact on corporate performance than female independent directors, which according to this study indicates that executive effect outweights the benefits of monitoring. This study allows to suggest that independent female directors possess lower structural power than dependent female directors. Therefore, this leads to the next hypothesis concerning dependency towards the owners and the management. It is possible to propose that dependent (inside) directors are likely to have more power to influence the decision-making due to their additional control and acknowledgement given to them by personal ties. Furthermore, gender diversity leads to better understanding of market situation (Robinson & Dechant, 1997), to enhanced decision-making and concentration on long-term benefits (Hambrick & Mason, 1984; Jackson, 1992; Brown et al., 2002), thus employing more women to the board should lead to better outcomes. Moreover, it is important to consider the institutional context in question: based on the above discussion, it is possible to state that the Swedish model tends to focus on the value of inside directors and the possible contributions they can make. On the other hand, independent directors tend to have “an outsider” status, which indicates a possibility of them being tokens. Therefore, the assumption to be tested in this study concerns the large influence that can be executed by female inside directors due to the historical presence of controlling shareholders in Sweden and their desire to remain in control.

H3: There is a positive correlation between the share of female directors with ties to the owners and managements and both market and accounting performance of the firm.

Experiences as determinants of power

One of the reasons that the subject of increased number of women in leading positions is so widely debated could be due to the concern that under-qualified people are chosen for the job due to the lack of women with proper experience and knowledge (Wiersema & Mors, 2016; Paquette, 2015). Looking at the medium age of the members of the boards, it has been proven that female directors are on average seven years younger than their colleagues on the same board (Ahern & Dittmar, 2012). When Norway implemented the gender quota, it led to younger
and less experienced boards, which is a common effect when adding women to boards. Moreover, Ahern and Dittmar (2012) are connecting age with experience in their research, meaning that higher age generates higher level of experience on the board. However, there is still an ongoing discussion regarding a demographic mix of ages on boards as the ideal composition.

Age diversity on boards has shown mixed evidence regarding the performance, both financial and non-financial. Some studies indicate that age diversity improves the firm’s financial performance due to greater range of experience, resources, knowledge and networks of the board (Kim & Lim, 2010; Mahadeo, Soobaroyen & Hanuman, 2012). Controversially, there are some research that show negative aspects of age diversity and financial performance in terms of decreased profitability (Ali, Ng & Kulik, 2014) and a weakened attitude towards strategic changes (Tarus & Aime, 2014) due to cognitive conflicts and lower group cohesion.

Zhang (2012) indicated that demographic differences in term of age of the composition of the board can have a positive impact on the company’s strategic decision-making. This can lead to improved relationships with the company’s stakeholders and thereby improve the financial performance. Tarus and Aime (2014) believe that age diversity would be ideal for a well-composed board that is constantly seeking development, which in turn can positively affect the financial result. Older board members can contribute with experience and wisdom, while younger people contribute with energy and drive for success.

Moreover, the tenure of the board of directors is an additional determinant of the quality of board capital (Vafeas, 2003). Even this variable has conflicting views from previous research regarding the effect of director tenure on director behaviour. Vafeas (2003) argue that long board tenure will generate board members with more knowledge about the organization and the industry it is operating in. Additionally, by staying longer as a board director, the confidence and competence will increase and be more developed, provided that the person is still motivated to perform a good job. In contrast, Katz (1982) indicates that longer tenure can have negative impacts since the board members might tend to isolate from important information sources. It can also reduce some of the internal communication channel within the firm, which will worsen the decision-making processes. Furthermore, Hambrick (1995) argued that the board can be less effective in controlling, monitoring and advertising to the rest of the firm due to less openness to outside information, which could be a result of longer tenure.

Finally, board members’ age and tenure define how they are perceived in the entire group (Zender & Lawrence, 1989). These two factors define the communication patterns inside the group and shape the way the board interrupts, understands and reacts to the information. Other factors, such as previous occupations, backgrounds, education, social status, also have an impact on whether a person would be accepted in the group, or if they are risking to face social isolation. However, it is the age and tenure that have the biggest influence on improvement of communication inside the board of directors, according to Zender and Lawrence (1989), and which are the most commonly researched.
To sum up, the theoretical base regarding the role of age, experience and tenure shows various results in terms of its influence on financial outcomes. It allows to accept the fact that these qualities of a directors can indeed influence their own performance, and as a result, the performance of the firm. However, the main interest of this paper is to establish whether age and tenure give more power to the female directors, and how it could influence the performance. So firstly, taking for the ground the statement of Zajac and Westphal (1996a), who said that longer tenure grants the board higher power, the reasonable assumption would be that female directors with longer tenure on the board do indeed possess higher power to influence the daily functionality of the board. And secondly, considering that age is associated with experience (Ahern & Dittmar, 2012), and experience gives the members of the board more respect and more power (Zajac & Westphal, 1996b), older female directors would command more respect and would also have higher power.

In regards to how powerful female directors influence financial performance of the firm, it is challenging to argue whether age and tenure could improve or worsen the outcomes. The research shows different results on this matter. Above it was discussed that there are multiple perspectives of how to look at influence of experience and years on the same board on the performance. Nevertheless, one can investigate the following causality: older women with higher tenure have more power; possessing more power by the minority gender results in equalizing of power diversity, meaning that the total power on the board is distributed more equally between the two genders. Finally, following the assumption that diversity can be capitalized, firms with more powerful women could increase their performance. The above leads to the next hypothesis that would call for testing the relationship between age with tenure and financial performance.

H4: There is a positive correlation between the share of power obtained by female directors from age and tenure and both market and accounting performance of the firm.

**Critical Mass as moderating factor**

In order for women to get their voices heard, there should be three and more women on the board to stop being tokens and achieve real power (Torchia et al., 2011; Torchia et al., 2010). The number “three” is referred to as “critical mass” that allows women to improve decision-making and to change the board dynamics. Even a lone woman makes a substantial contribution. However, this situation contributes to tokenism and invisibility of this one woman (Kramer et al., 2006). She is viewed as representing all women and needs to work hard in order to be included, heard and to have an impact. Adding a second woman to the board helps them to feel more comfortable, although with only two women present the gender awareness is still in attendance, meaning that it can trigger biases, stereotype attitudes and provoke exclusion of the female directors. Tokenism still can exist, the women may still be stereotyped, have to work hard to be heard and have to keep distance from each other due to concerning about being seen as conspirators.

But when three or more women serve on the board, this situation is normalized, gender does not play any role anymore – women are no longer seen as outsiders; thus three female directors
can be considered a critical mass (Kramer et al., 2006). Moreover, women are more likely to be heard, get more support, feel more comfortable by being themselves and increase collaboration with the other board members. Of course, this theory is addressed to the bigger firms with higher amount of board members and cannot be applied on all medium and small firms with smaller boards.

A study from Konrad, Kramer and Erkut (2008) argues for three reasons why the number of women makes a difference in a boardroom. Firstly, by having more women in boardroom, the chance of breaking the stereotypes that solo women are subjected to increases. Secondly, by having the critical mass of three women on the board helps changing the dynamic of the male-to-male communication. Lastly, in order to make any changes in groups, three is the “magic number” whereupon at least three women is beneficial for the strategic work within the board.

When it comes to relationship between firm performance and critical mass of female directors, there is an evidence that a simple presence of women on the board does not make a statistically significant difference unless there are three or more women involved (Arena et al., 2015). In cases when critical mass of women is achieved, their presence influences firm performance positively. Similar findings of critical mass theory are supported by Liu et al. (2014) when studied Chinese corporations: only three or more women create impact on corporate performance by empowering the female directors.

Due to the above, it is possible to conclude that there is a direct connection between achieving critical mass and power of the directors, hence presence or absence of critical mass is important for assessing the level of power a female director holds. Simple participation in board meeting in a director role gives the power of vote and the right to communicate the ideas and proposals. However, other factors are associated with additional power and a greater ability to make an impact, particularly critical mass is a mandatory condition for having a real power. Therefore, this factor will be accounted for while assessing the total impact of women in power on corporate performance, but the authors of this paper are not intended to test the previous research on the critical mass theory in a separate hypothesis as there is no research gap detected by the authors in this part of the literature. Instead, critical mass is to be considered when evaluating the total power held by female directors.

As can be seen in the Table 1, the majority of previous research concentrated utterly on the share of women on the corporate boards as the measurement of their possible impact on market and / or accounting performance. In order to fill the gap and contribute to the existing research, there is a need to assess the weight of the structural position of the board members and if there is a correlation. Due to increased gender equality and higher diversity, which allows companies to capitalize on its benefits, it is possible to assume that women in power contribute positively to market and accounting performance of the firm.

H5: There is a positive correlation between the power given to women on the board and the market performance of the firm.

H6: There is a positive correlation between the power given to women on the board and the accounting performance of the firm.
EMPIRICAL METHOD

The empirical method describes the basics of the empirical approach of the study and initially presents why a quantitative method and cross-sectional design were chosen. Furthermore, some of the study's delimitations are presented, followed by a section of the data collection and samplings of the study. Moreover, the chapter describe how all variables are operationalized and ends with highlighting the quality criteria.

Research strategy and approach

Since this study is linked to the business area in corporate governance, the study will apply a positivistic theory of science, which refers to empirical information and forceful knowledge (Sohlberg & Sohlberg, 2014). By examining women's power in Swedish Large Cap companies, the authors want to contribute to empirical research and explain whether women's power affects performance. The study is based on existing theories regarding women on boards, gender equality and corporate performance in order to investigate the established hypotheses of the study.

The collected data in its nature will have to be able to be delimited, measured, compared and explained, in order to be observed objectively. As the purpose of the research is to study the relationship between female on boards and firm performance, the study will have its starting point of the power structure within boards and financial ratios of the companies, independently from the social aspect (Bryman & Bell, 2015). The study is connected to the quantitative methodology, meaning the study has its starting point in collection and analysis of numerical data. The choice of how to collect the data is based on the availability to measure and establish correlations between different variables, which is one of the main motives for quantitative studies.

Research design

The research design of the study is of cross-sectional character, due to the variables will be collected at a single point of time and several of different cases will be studied. Bryman and Bell (2015) describe a cross-sectional study as collecting quantifiable data with at least two variables that are examined for finding relationships or patterns. Furthermore, a cross-sectional study should investigate more than one case, which is fulfilled in this study due to the sampling of 96 Large Cap companies in Sweden. When only studying one case, then there is no variation to investigate, and therefore it is important for this study's feasibility to include several cases. The study should also take place at the same specific time in order to meet the requirements of a cross-sectional study, which Bryman and Bell (2015) described as when the data collection of the variables to be investigated simultaneously. If collecting of data is selected out of two different time episodes, then the research has its character of a longitudinal study. A
A longitudinal study has greater ability to identify the causal direction than a cross-sectional study, but still it does not find all the answers on the causal relationships. However, if just a link between variables can be established, it does not mean that it is not possible to draw conclusions. Lastly, Bryman and Bell (2015) highlighted the importance of having quantitative or quantifiable data which is necessary to be able to assess the variation in the information of a systematic method. The data in this study includes financial ratios and corporate governance indicators, which are both of quantitative character.

**Delimitations**

In order to define the size, scope and boundaries of the research, certain delimitations must be drawn. First of all, the study only considers Swedish listed Large Cap companies. The authors acknowledge the possibility of diverse results if similar approach is applied on a different sample of companies.

This study does not concentrate on women occupying other significant positions in the corporations. Such, the constraint of the paper is passing up on the impact of women on corporate performance, when they are engaged in TMT but are not involved with the board of directors. Such involvement may have an impact on firm performance, as TMT is also considered to be a part of the Upper Echelon model by Hambrick and Mason (1984), and its gender diversity may affect the outcomes of the business.

Finally, developments in firm performance over time are disregarded in this paper. An approach where changes of financial results are tracked over time and connected to structural changes on the boards can give a great insight on the subject in question. This study is not intended to investigate the correlation between performance and female presence on boards over a time period above one year. However, accounting and market performance, that are to be researched in the paper, reflect different time-related outcomes: accounting values characterizes past performance, while market characteristics reflect potential long-term outcomes for the firm (Gentry & Shen, 2010). Therefore, the paper will study past performance of Swedish Large Cap companies for the year 2018, as well as assess market potential of these firms based on the data from the first half of the year 2019.

**Data collection and sampling**

Most of the samples of this studies include all board members from 96 Swedish Large Cap companies, as well as financial ratios and corporate governance indicators from the selected companies, which are listed on the Stockholm Stock Exchange. The reason for only including listed companies is due to easily accessible information and that the companies are obliged to report about the gender composition of the board, which corresponds to the regulations of the Swedish Corporate Governance Code (2016). The study has two defaults from the listed
companies because some of the essential information could not be found and did not meet the requirements for the study.

Most of the information was retrieved from Holdings, a Swedish database of listed companies with web-address “holdings.se”, and missing information was collected from the annual reports of the firms. Primarily the information from the companies was collected from 2019, otherwise the information from 2018 was used. The most updated information about market value was considered in the research. In most cases it covered the first quarter of 2019, while for some companies the information was gathered for the end of 2018. Information regarding the board members different positions, gender and dependency towards the company was retrieved in order to get a better understanding of how much influences the women on boards have. Moreover, financial ratios as ROA and Tobin’s Q from the companies were studied in order to see any correlations between women in power on boards and financial performance of a firm. Company and market value were downloaded directly from Holdings into an Excel file, whereupon the data regarding the rest of the information was collected manually into the Excel file in order to compile the data and easily numerate the financial ratios.

Even if the study is based on secondary data, Bryman and Bell (2015) mean that is could be of better quality than other self-collected primary data. The reason is that data collection of researchers and organizations are often more thoroughly done due to more resources, time and knowledge. This study retrieved most of the data from Holdings, which is one of the most powerful analysis tool for ownership data in Nordic listed companies (Modular Finance, Online). Moreover, the platform of Holdings is used by professional actors, such as banks and institutional investors, that is active on the financial market. With the background of this, the authors have thereby considered the source to be credible.

Operationalization

Due to the quantitative nature of this research, there is a need to devise the measurements, notions and their relationships of the study (Bryman & Bell, 2011). In order to do that, operational definitions and formulas are to be assigned for each concept. Furthermore, concepts are defined as “a name given to a category that organizes observations and ideas by virtue of their possessing common features” (Bryman & Bell, 2011, p. 713), and are reflected in variables that allow quantitative assessment of the concept. With the purpose of answering the research questions and fulfilling the purpose of the study, a sample of independent, dependent and control variables had been collected, organized and operationalized, which is presented below. A more detailed description of the operationalization of the variables, their definitions, measurement and related theory, is available in Table 2 (see Appendix 1).

Independent variables

The independent variables are built in a form of power indices. The concept of power of the board members is defined as per Triana et al. (2013) - an ability to influence the collective outcomes. Some scholars had already been empirically testing influence of power given to
corporate leadership on financial performance, and building power indices based on groups of independent variables: Muttakin et al. (2018) built the power index for executive directors based on CEO duality, ownership, tenure and dependency in form of family ties; similar approach to power assessment on corporate boards had been reflected in studies of Combs et al. (2007) and by Baldenius et al. (2014).

Power is a complex and multidimensional factor. It can be measured in various ways, and results may differ depending on the chosen approach. Measuring power could be complex since it includes a number of other aspects than what is included in this study. For example, social aspects are difficult to measure in this study because of its quantitative nature. The data is based on information about board members that is available online where no information about the character of the board directors is included. Furthermore, the group dynamics on boards can look different depending on the different personalities of the board members, which is not taken into consideration in this study. This may have impacts on how the power structure looks, regardless of age, gender, experience, expertise etc. To sum up, power is difficult to measure in this type of study, and the authors are aware that this may affect the results.

The power index in this study is original and has not been earlier composed of the same bulk of variables. Nevertheless, the choice of each factor is theoretically justified, as discussed earlier in this paper. First of all, the Chair duties entitle the director to affect the course of events on the board meetings (Chris, 2015; Heffernan, 2014), and it has direct effect on financial performance (Mínguez-Vera & Martín-Ugedo, 2010). Secondly, while the Chair is the head of the board of directors, the other leadership position is given to the CEO as the responsible for daily management. The executive director can affect the corporate performance through the decision-making power on the board (Baldenius et al., 2014; Park et al., 2018; Combs et al., 2007). In order to test the relationship between the gender of the CEO and the Chair, the first power index of leadership (PI_L) was developed, because the roles of CEO and the Chair are considered a power position by Muttakin et al. (2018) and Muller-Kahle and Schiehll (2013). However, due to legal regulations in Sweden, the value of this index can only be between one and zero.

Next, according to Larson (2009), committees and their work directly affect firm performance, and, according to Srivastava et al. (2018), the composition of committees in terms of gender matters for financial outcomes. Consequently, evaluation of the influence of a board member can be done by studying the power index for committee participation (PI_C). This study is intended to concentrate on audit and compensation committees as the source of influence for directors. Board members on audit committee are tasked with enhancing monitoring, which leads to better performance (I Putu Sugiartha Sanjaya, 2016; Tengamnuay & Stapleton, 2009), while the job of compensation committee and its members is not only limited to assigning remunerations to the executives, but also setting standards for their evaluation, which stimulates efficiency (Tosi Jr & Gomez-Mejia, 1994; Sun et al., 2009). Overall, members of audit and compensation committees are given duties with high responsibility, which is directly correlated with performance characteristics of a firm.
Following, the other group of independent variables concerns the questions of independency and family ties. It is challenging to judge which group of directors have more influence on corporate performance – the inside (dependent) directors or outside (independent) directors. A careful review of theoretical base related to this question revealed that both dependent and independent directors influence corporate performance and are crucial for proper board functioning. However, in regards to the power to influence the decisions, inside directors have more authority due to their overall larger involvement in decision-making (Baldenius et al., 2014), role in advisory (Hillman & Dalziel, 2003), ties to the owners and the controlling family which grant higher control options (Ntoung et al., 2017; Patel & Cooper, 2014) and relationships with the Chair and the CEO (O’Shannassy & Leenders, 2016; Shaikh et al., 2018). Particularly the study of Liu et al. (2014) indicated that inside female directors indeed have a stronger influence on performance than their independent female colleagues. The institutional context of civil law countries, which includes Sweden, and its specifics in terms of family control had been also addressed. Therefore, the next power index of dependency (PI_D) was tested in relation to the gender of the directors and their impact on performance.

How experienced a board member is has a potential to define the power held by the individual. Actual age of a director is straightforwardly connected to experience, as discussed theoretically in this paper. Age of directors and its impact on heterogeneity of the board have previously been studied in regards to deviation of the actual age of the board members from the average age (Anderson et al., 2011). With the purpose of coding the age of board member, this paper addressed the deviation of the age of a member from the average age of the entire board in the company. The age higher than average is associated with higher power on the board, and vice versa. Moreover, tenure on a corporate board has an impact on organizational outcomes, as per Zender and Lawrence (1989), and defines the relationship between the group. Lower tenure, according to the authors, is associated with higher chance of social isolation. This means that newer board members can be tokens. The question regarding how long the tenure must be in order to learn the corporate processes and be accepted and respected by the group is nearly impossible to answer as it lacks strong scientific base. However, the discussion is ongoing among corporate leaders, and many sources claim that a period of one to two years should be sufficient for a member of a team to reach top productivity and learn the system fully (Oakes, 2012). Therefore, in order to determine what tenure gives power to influence decisions on the board, the border of two years had been set in this study: tenure above two years gives sufficient power to be accounted for, while tenure under two years does not guarantee influence and significant roles on the board. Together, age and tenure shall create a power index of experience (PI_E) for each company, given to both male and female board members.

Finally, the last factor considered in power structures is the critical mass, which is expected to have a moderating effect on the real role of women on boards. There is no hypothesis in this paper related specifically to critical mass, as it had already been proven by several scholars that critical mass of three or more people of the same gender must be present in a group in order to achieve the necessary recognition of each member (Konrad et al., 2006; Torchia et al., 2011; Torchia et al., 2010; Arena et al., 2015, Liu et al., 2014). Therefore, there is no specific power index built for critical mass factor, although it is included in the total power index.
To sum up, the group of independent variables is presented in a form of four partial power indices related to leadership, committee participation and dependency, and one total power index (PI) that aggregates all previous indices in order to evaluate the full power of female directors in the company.

Dependent variables

Firm performance is multidimensional, however it is possible to analyze it from two perspectives - market and accounting (Gentry & Shen, 2010). The authors confirm practical differences between the two measurements, and the results may differ depending on what characteristic is chosen for performance assessment. Therefore, this study is intended to assess the correlation between power indices and market performance on one side, and accounting performance on the other.

It would be proper to start with accounting performance of a firm and its book criteria of financial outcomes. Accounting measures are used for evaluating historical events in firms and have an inward-looking focus (Wang & Clift, 2009). Previous research on the topic of gender diversity on company board and its connection to accounting results is wide, yet had shown controversial results (Erhard et al., 2003; Lückerath-Rovers, 2013; Bøhren & Strøm, 2010; Adams & Ferreira, 2009; Wang & Clift, 2009). The most common dependent variable among these studies is return on asset (ROA) which indicates how successfully management of the firm is allocating its assets in order to generate more income. ROA is to be used as a measurement of accounting performance in this study.

Market-based performance can be seen as a forward-looking indicator of the potential of a firm in terms of future cash flows (Wang & Clift, 2009). The most common measurement of market performance used in the previous studies on gender equality on boards is Tobin’s Q, which is an indicator of whether the firm is worth more than the cost of its assets (Gordini & Rancati, 2017; Ahern & Dittmar, 2012; Bøhren & Strøm, 2010; Adams & Ferreira, 2009; Carter et al., 2010; Rose, 2007; Wang & Clift, 2009). The value between zero and one indicates that the firm is worth less than it would cost to replace its assets; if Tobin’s Q is above one, it demonstrates that the firm is overvalued and is worth more than its assets.

Control variables

Firm size is the first control variable, which is chosen due to “its consistent correlation with value creation in asset-pricing tests” (Bøhren & Strøm, 2010, p. 1290). Moreover, larger firms have relatively more female directors (Wang & Clift, 2009). Firm size is to be defined by net turnover as per Holdings database, which includes values of net sales or revenues from annual reports. “Net turnover includes the revenues from the sale of products, goods, and services after the deduction of discounts. Net turnover also includes other revenues after the deduction of discounts of the accounting unit, whose objects include the achievement of other revenues than revenues from the sale of products, goods, and services” (TPA, Online). This variable was not calculated manually; the information was gathered from Holdings, annual reports and companies’ official websites. However, the value of firm size reflects numbers in million of SEK, which differs significantly from the rest of the variables in the study. Thus, with the
purpose of more accurate assessment of variations and changes between the variables, the value of firm size was presented as a logarithm of net turnover.

Board size is used as the second control variable due to its possibility to affect appointment of female directors (Lückerath-Rovers, 2013). According to Adams and Ferreira (2009), there is a direct correlation between the board size and the number of women on the board. And lastly, industry was used as the third control variable. As per Lückerath-Rovers (2013), to control for industry is important for studies related to gender distribution of the board of directors as companies in financial sector normally have more female directors. Industry is coded as a dummy variable, where the value of “1” is assigned to corporations in financial business, and “0” is given to companies in other sectors.

Coding of the variables

After each independent factor is given the value of “1” or “0”, power indices (PI_L, PI_C, PI_D, PI_E and PI) are calculated as a sum of these factors for all directors. Next, in order to specify how much power women hold in the total power structure in each firm, a sum of power indices of female directors is divided on a sum of power indices of all directors. Thus, each company in the sample obtains one aggregated value for each category (aggregated PI_L, PI_C, PI_D, PI_E and PI) that measures power of women on corporate boards. To sum up, building of power indices included the following steps:

Step 1: each director in all Swedish Large Cap companies is assigned values of “1” or “0” for holding certain power:

- being the Chair;
- being the CEO and having the duties of executive director;
- participating in audit committee;
- participating in compensation committee;
- being dependent in relation to the owners;
- being dependent in relation to the management;
- being older than the average age of the board members;
- having a longer tenure than two years on the same board;
- fulfilling the requirement of critical mass.

Step 2: each director is assigned a value of partial power indices, as per formulas in Table 2 (Appendix 1).

Step 3: each director is assigned a value of total power index as a sum of partial power indices and critical mass evaluator.

Step 4: each company in the sample receives aggregated partial and total power indices, calculated as the ratio of a sum of power indices of female directors to a sum of power indices of all directors (for more details, see Table 2 (Appendix 1).

Step 5: power indices of companies receive a value, which corresponds to whether the company delegates low, medium or high level of power to female directors, as discussed below.
Power indices with the value under 0.2 would indicate that women in such organizations have low, if not none, power, as their weight in board work is lower than one fifth. If the power index of a firm lies between 0.2 and 0.6, it would determine that female directors hold moderate influence over the board’s decisions. And finally, if the power index is above 0.6, women on such board are the dominating power. With the purpose of generalizing the results, all power indices (PI_L, PI_C, PI_D, PI_E, PI) are coded further and given the following values, which concludes the data on independent variables that would participate in statistical analysis:

- Value 0-0.2 coded as “0”.
- Value 0.21-0.6 coded as “1”.
- Value 0.61-1 coded as “2”.

**Data analysis**

Overall, the data was analyzed with the help of SPSS Statistic Viewer: Linear Regression Analysis and Correlation Analysis have been run for receiving results. With the purpose of obtaining comprehensive results, several analyses have been performed:

1. Independent variable PI and dependent variable ROA; control variables S, N, I.
2. Independent variables PI_L, PI_C, PI_D, PI_E and dependent variable ROA; control variables S, N, I.
3. Independent variable PI and dependent variable Q; control variables S, N, I.
4. Independent variables PI_L, PI_C, PI_D, PI_E and dependent variable Q; control variables S, N, I.

Analyses “1” and “3” are intended to investigate the relationship between the performance and the total power held by women on the board. PI includes the summary of all other partial indices (PI_L, PI_C, PI_D, PI_E), thus giving an aggregated answer regarding if and how the total power of female directors explains the financial performance. Furthermore, as far as PI already includes the partial indices, with the purpose of increasing the accuracy of the results the analyses were run separately for PI and for the partial indices.

Analyses “2” and “4” are run with the purpose of assessing the separate weight of each power, coming from leadership, committee participation, ties to the owners and management, and experience, in their influence on corporate performance. Regression analysis based on this set of variables is expected to show the relationship, if any, between the dependent and independent variables and to allow answering the research questions.

**Quality criteria**

Bryman and Bell (2011) highlight three quality criteria of business research: reliability, replicability and validity. Reliability concerns the credibleness of the study, replicability about the opportunity to repeat a study and validity refers to the ability in assessing whether the conclusions drawn from the survey are reliable or not. Additionally, generalizability is to be studied due to Bryman and Bell (2011) argue for being a significant criterion in quantitative
studies. Based on the methodology of the study, all mentioned criteria above will be observed in order to study the quality of this paper.

**Reliability**

The reliability criteria, described by Bryman and Bell (2011), has a significant role within quantitative research since researchers are often interested in how reliable and consistent the results are. Even the criteria of stability is included within this concept, referring to the measure's stability over time and that it does not vary. Also, a factor of intermittent reliability is deprived in the criteria of reliability and assesses whether subjective assessments can occur when the researcher observes or translates data into categories. Putting this together, the authors state that the reliability of the study is high since the study would produce the same results if it is done ones again. One factor is that the study is using secondary data where the information is hard to misinterpret and which enables an objective approach.

**Replicability**

Replicability is similar to the concept of reliability since it aims to study the possibility of repeating a study (Bryman and Bell, 2011). Within this concept, the methodology the most essential since it is what other researcher should rely on when they want to replicate the study. Since all data consists of public information from Holdings, the data collection will be easy to repeat for other researcher. Additionally, the choice of ratios and indicators are easy to get access from since all information could be collected by Holdings, or direct from the annual reports of the companies. Based on these assessment, the authors believe the replicability is high since the study can easily be replicated by other researcher in the future.

**Validity**

The third criteria within business research from a quantitative approach that is raised by Bryman and Bell (2011) is validity, which shows if the measure reflects the content of the concept in question. In other words, the validity describes the degree to which the study actually measures what it is supposed to measure, according to the purpose of the study. As far as this paper is built on the foundation of earlier studies, the proposed measurements to a high extent reflect the subject of the research.

**Generalizability**

According to Bryman and Bell (2011), quantitative researchers are interested in being able to generalize results from studies carried out to other groups than those that have been studied in a study, which is what generalization is about. Additionally, this criterion consider how well the study could be used in alternative contexts than this current one. The authors consider the generalizability as high and to be of relevance to this study, since previous research, mentioned in frame of literature, show different results regarding the relationship between women in boards and firm performance. Therefore, the hope with this current study is to contribute to a further perspective on within this field, with a focus on power structure in corporate boards where the results could be useful for future research as well.
RESULTS

The following chapter presents the results of the quantitative evaluation of the collected empirical material. Furthermore, the results of various regression analysis are presented in different tables and explained in short.

With the purpose of increasing understanding of how powerful female directors in Sweden actually are, the distribution of the total power index was researched.

Diagram 1 - Frequency distribution of Power Indices of female directors in Swedish Large Cap companies

The Diagram 1 shows how many companies received a certain value of power index, which allows to claim what share of power female directors hold on corporate boards in Sweden, and how common each value is among corporations. Furthermore, in order to evaluate inclusion of women in separate power structures, such as leadership, committees, group of dependent directors and directors with higher age and tenure (experience), the following descriptive statistics were generated.
Table 3 - Descriptive statistic of independent variables

<table>
<thead>
<tr>
<th></th>
<th>PI</th>
<th>PI_L</th>
<th>PI_C</th>
<th>PI_D</th>
<th>PI_E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0,334</td>
<td>0,120</td>
<td>0,380</td>
<td>0,200</td>
<td>0,343</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0,016</td>
<td>0,030</td>
<td>0,019</td>
<td>0,026</td>
<td>0,018</td>
</tr>
<tr>
<td>Median</td>
<td>0,300</td>
<td>0,000</td>
<td>0,369</td>
<td>0,000</td>
<td>0,330</td>
</tr>
<tr>
<td>Mode</td>
<td>0,330</td>
<td>0,000</td>
<td>0,333</td>
<td>0,000</td>
<td>0,330</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0,161</td>
<td>0,297</td>
<td>0,190</td>
<td>0,256</td>
<td>0,172</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>0,026</td>
<td>0,088</td>
<td>0,036</td>
<td>0,066</td>
<td>0,029</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0,134</td>
<td>4,071</td>
<td>0,603</td>
<td>1,043</td>
<td>-0,181</td>
</tr>
<tr>
<td>Skewness</td>
<td>0,795</td>
<td>2,343</td>
<td>0,542</td>
<td>1,219</td>
<td>0,371</td>
</tr>
<tr>
<td>Range</td>
<td>0,690</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>0,830</td>
</tr>
<tr>
<td>Min</td>
<td>0,080</td>
<td>0,000</td>
<td>0,000</td>
<td>0,000</td>
<td>0,000</td>
</tr>
<tr>
<td>Max</td>
<td>0,770</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>0,830</td>
</tr>
<tr>
<td>Sum</td>
<td>32,084</td>
<td>11,500</td>
<td>36,460</td>
<td>19,209</td>
<td>32,931</td>
</tr>
<tr>
<td>Count</td>
<td>96,000</td>
<td>96,000</td>
<td>96,000</td>
<td>96,000</td>
<td>96,000</td>
</tr>
</tbody>
</table>

According to the data in Table 3, and based on Kurtosis and Skewness values, it is possible to state that the independent variables are not normally distributed. It also allows the readers to evaluate the situation with power distribution on Swedish corporate boards by studying the mean and median values, as well as the standard deviation, minimum and maximum values.

Regression analysis

In order to investigate the relationship between power indices of female directors and firm performance, linear regression analyses have to be performed. After coding power indices as “0”, “1” and “2” depending on the level of power the directors have, four regression analyses have been run. The results are presented in the following tables. In order to provide a more detailed data overview, a correlation analysis has also been run for the same four models, results of which can be found in the Appendix 2.
Table 4 - Results of linear regression explaining how total power index affects ROA

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>P-value</th>
<th>Explanation degree (R Square, Beta)</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model summary</td>
<td>0.021</td>
<td>0.118</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td>0.051</td>
<td>-0.199</td>
<td>0.964</td>
<td>1.037</td>
</tr>
<tr>
<td>I</td>
<td>0.014</td>
<td>-0.255</td>
<td>0.928</td>
<td>1.077</td>
</tr>
<tr>
<td>S</td>
<td>0.632</td>
<td>-0.058</td>
<td>0.664</td>
<td>1.507</td>
</tr>
<tr>
<td>N</td>
<td>0.660</td>
<td>-0.055</td>
<td>0.630</td>
<td>1.588</td>
</tr>
</tbody>
</table>

The model is significant as p-value is under 5% and the given set of variables explains changes in ROA on 11.8%. As far as significance of PI is 5.1% and only deviates from conventional limit by 0.1%, it is possible to consider the evidence that PI influences ROA significant enough. The tolerance levels are all above 10% while VIF value is under 3, meaning there is no relationship between separate independent variables. The model reflects a negative relationship between the independent variables and ROA. Particularly, correlation between ROA and PI is -19.9%.

Table 5 - Results of linear regression explaining how partial power indices affect ROA

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>P-value</th>
<th>Explanation degree (R Square, Beta)</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model summary</td>
<td>0.088</td>
<td>0.128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI_L</td>
<td>0.782</td>
<td>-0.032</td>
<td>0.753</td>
<td>1.327</td>
</tr>
<tr>
<td>PI_C</td>
<td>0.103</td>
<td>-0.188</td>
<td>0.762</td>
<td>1.313</td>
</tr>
<tr>
<td>PI_D</td>
<td>0.296</td>
<td>-0.112</td>
<td>0.873</td>
<td>1.145</td>
</tr>
<tr>
<td>PI_E</td>
<td>0.631</td>
<td>0.054</td>
<td>0.792</td>
<td>1.263</td>
</tr>
<tr>
<td>I</td>
<td>0.019</td>
<td>-0.259</td>
<td>0.946</td>
<td>1.182</td>
</tr>
<tr>
<td>S</td>
<td>0.596</td>
<td>-0.067</td>
<td>0.630</td>
<td>1.588</td>
</tr>
<tr>
<td>N</td>
<td>0.637</td>
<td>-0.061</td>
<td>0.601</td>
<td>1.663</td>
</tr>
</tbody>
</table>
There is no significant relationship between partial indices and ROA. It shows in the total model summary as well as separately for each power index. Multicollinearity cannot be given as the reason for insignificance as all tolerance values are above 10% and VIF are under 3.

Table 6 - Results of linear regression explaining how total power index affects Tobin’s Q

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>P-value</th>
<th>Explanation degree (R Square, Beta)</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model summary</td>
<td>0.010</td>
<td>0.133</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td>0.064</td>
<td>-0.186</td>
<td>0.964</td>
<td>1.037</td>
</tr>
<tr>
<td>I</td>
<td>0.062</td>
<td>-0.192</td>
<td>0.928</td>
<td>1.077</td>
</tr>
<tr>
<td>S</td>
<td>0.136</td>
<td>-0.180</td>
<td>0.664</td>
<td>1.507</td>
</tr>
<tr>
<td>N</td>
<td>0.400</td>
<td>-0.104</td>
<td>0.630</td>
<td>1.588</td>
</tr>
</tbody>
</table>

The model is significant, where 13.3% of Tobin’s Q is explained by PI and control variables. Yet the significance of the PI is somewhat above the conventional limit. The authors consider p-value for PI to be marginal, which means that it is possible to discuss the negative relationship between the variables, although the evidence of it can be questioned. However, when it comes to relationship between Tobin’s Q and partial power indices, the model is not significant, and there is no multicollinearity. Furthermore, the relationship between each partial PI and the dependent variable show a very low significance.

Table 7 - Results of linear regression explaining how separate (partial) power indices affect Tobin’s Q

<table>
<thead>
<tr>
<th>Tobin’s Q explained by partial PI</th>
<th>Dimensions</th>
<th>P-value</th>
<th>Explanation degree (R Square, Beta)</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model summary</td>
<td>0.091</td>
<td>0.127</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI_L</td>
<td>0.795</td>
<td>-0.030</td>
<td>0.753</td>
<td>1.327</td>
<td></td>
</tr>
<tr>
<td>PI_C</td>
<td>0.248</td>
<td>-0.133</td>
<td>0.762</td>
<td>1.313</td>
<td></td>
</tr>
<tr>
<td>PI_D</td>
<td>0.748</td>
<td>-0.034</td>
<td>0.873</td>
<td>1.145</td>
<td></td>
</tr>
<tr>
<td>PI_E</td>
<td>0.749</td>
<td>-0.036</td>
<td>0.792</td>
<td>1.263</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>0.089</td>
<td>-0.186</td>
<td>0.846</td>
<td>1.182</td>
<td></td>
</tr>
</tbody>
</table>
Overall, regression analyses had shown that there is a correlation between some of the predictors and the dependent variables. The degree of explanation for the entire models is not high, while in cases where significance was achieved the correlation between the PI and ROA are somewhat higher. The sample size consisted of 96 cases, which resulted in lower significance of the model, therefore the accuracy of the evidence can be disputed.

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.153</td>
<td>0.387</td>
</tr>
<tr>
<td>R</td>
<td>-0.181</td>
<td>-0.112</td>
</tr>
<tr>
<td>2</td>
<td>0.630</td>
<td>0.601</td>
</tr>
<tr>
<td></td>
<td>1.588</td>
<td>1.663</td>
</tr>
</tbody>
</table>
ANALYSIS AND DISCUSSION

The analysis and discussion chapter presents the similarities and differences between the theoretical frame of reference and the collected empirical material, as well as a reflection on the result of the hypotheses tested. Initially, the study describes how power distribution on Swedish corporate boards looks like, followed by a discussion on the correlations between female power and financial outcomes.

Power distribution on Swedish corporate boards

Even though women occupy 34% of board seats in Sweden, this research shows that they are likely to hold token position. As per Diagram 1, the most common situation is when women hold 20% or less of power on the board. This happens in more than ⅓ of all Large Cap companies in Sweden, which indicates that despite the improvements in gender equality, there is still a long way to go until achieving truly balanced boards.

Descriptive statistics analysis shows that on average women hold 33.4% of power on boards, which corresponds to the number of seats they occupy. However, the data shows that only 12% of women are involved in leadership positions, such as executive director (CEO) or the Chair. According to various authors (Chris, 2015; Heffernan, 2014; Ward, 2008; Mínguez-Vera & Martín-Ugedo, 2010), leadership in companies comes with a wide range of responsibilities, and at the same time grants the person power to influence financial outcomes. Moreover, CEOs navigate day-to-day company management, Chairs ensures effectiveness of strategic decisions and influences processes on the board. Therefore, this high underrepresentation of women in leadership may result in one-sided outcomes, and companies would fail to capitalize on human capital of female directors.

Secondly, the dependency index indicates that there are fewer women with connections to the owners or to the management than men. Only 20% of power, generated by family ties to shareholders and inside relationships, belongs to female directors. Because Sweden is dominated by family firms, it is still surprising to see that there are few female directors that can influence the board via their ties to the owner or the management, as family-control firms have higher gender diversity (Vieira, 2018). The study of Vieira (2018) highlighted that family ties allow women to enter boards of directors easier, and this paper is not questioning this comment. So what can possibly be the reason for lower power of female directors from the viewpoint of dependency?

Inside directors with connections to the company and its management on boards, both male and female, possess unique knowledge about the company and can largely contribute with their expertise (Canella et al., 2015). The empirical results of this study support the research of Liautaud (2016) that indicated a strong disproportion between the total number of female employees in companies and their share on corporate boards, which assumes that it is harder for women to climb the career ladder. The figure of power index of dependency also suggests that fewer women in Swedish corporations are able to reach the board of directors, which can
possibly be explained by gender biases and sex roles stereotypes, which according to Jonnergård et al. (2010) and Marlin (2012) are still present in minds of top echelons of companies.

Thirdly, the experience index is rather coherent with the share of female directors: 34% of women on boards hold on average 34.3% of power that can be drawn from age and tenure. Data sample in this study included the age of each director in all Large Cap companies, which allowed to additionally assess the average age of directors depending on gender. Out of the data collection from this study, the descriptive statistics in Table 12 (see Appendix 3) state that female directors are generally younger than men. Average age of men on boards in Sweden are 59 versus 55 for women. This could also be compared to the study of Ahern and Dittmar (2012) which showed that women normally are younger than men, based on Norwegian companies between 2001-2009. In short, as far as female directors are normally younger than their male colleagues, they must be extracting their power from tenure instead. It generates an assumption that women often stay on the same board for more than two years, which gives them more knowledge about the firm and the industry (Vafeas, 2003).

Finally, descriptive statistics show a stronger position of women on board committees. Compared to the share of women on boards in Sweden, they execute 4% more influence through their participation in audit and compensation committees: 38% of committee power belongs to the 34% of women on boards. This is a positive development in terms of gender equality in power structures, which aims to the equal weight in decision of both male and female directors. Committees are vital for the boards’ functionality and effectiveness (Larson, 2009), and the quality of their work has a direct impact on the entire firm (Sun & Cahan, 2009; Tosi Jr & Gomez-Mejia, 1994; Emanuel, 2009). Well-composed committees improve financial reporting, enhance the monitoring function of the board and perform the evaluation of management (Oussii & Boullila Taktak, 2018; I Putu Sugiartha Sanjaya, 2016; Ward, 2008; Abdullah & Ismail, 2016). Hence, more equal level of power diversity inside committees, according to supporters of heterogeneity such as Hambrick and Mason (1984), would positively affect the effectiveness of fulfillment of their duties, which would be beneficial for the entire corporation.

To sum up, the distribution of power on Swedish corporate boards is somewhat disperse. It is characterized by overrepresentation of women in board committees, but underrepresentation in leadership. Furthermore, the overall level of women in power corresponds to their share on boards, although a large number of companies do not delegate sufficient level of control to their female directors. Yet, the descriptive statistics has also shown that no power index is close to reaching the level of 50%, which would qualify the firm to be called “gender equal”, and which contributes to understanding of how far the level of power among Swedish corporations is from being balanced.

Board equality is called upon by the society and often results in positive market response (Gordini & Rancati, 2017; Ahmen & Ali, 2017) and improves the reputation of the firm (Wang & Clift, 2009). Hambrick and Mason (1984) argued in favor of heterogeneous groups due to their potential contribution to improved strategic decision-making, higher level of
innovativeness and analytical capacity of the group, enhanced monitoring and risk management. According to resource dependency and board capital theories, the identities of the directors have a strong influence on firm performance. More women in leadership and committees would create a diversity of power, which increases the board capital and provides alternative perspectives on the tasks at hand. Furthermore, traditional contributions of female leaders are improved relationship with stakeholders (Cook & Glass, 2018), creating a healthier corporate culture (Kamalnath, 2017), reducing groupthink and routinization of decision-making (van Ees et al., 2009). These benefits are non-financial in their nature, and certain inequalities on Swedish corporate boards might indicate that companies are missing on the above-mentioned benefits that can be drawn from diversity.

Traditionally, it is expected that non-financial benefits of diversity would indirectly lead to positive financial outcomes (Hambrick & Mason, 1984; Lückerath-Rovers, 2013; Hillman & Dalziel, 2003; Pfeffer & Salancik, 1978). Nevertheless, previous research indicates that increased presence of female directors can also lead to negative accounting and market performance (Ahern & Dittmar, 2012; Bøhren & Strøm, 2010; Adams & Ferreira, 2009). Empirical findings of this paper also dispute the common opinion about advantageous nature of diversity, which is discussed in the following section.

**Correlation between female power and financial results**

The idea of financial benefits from diversity is being challenged in this study based on the empirical results. Earlier in the paper there were several examples of investigations given that reflect the same outcomes. For instance, Ahern and Dittmar (2012) explained negative effect of female presence on boards on market performance by decreased age and experience of board members associated with growing number of women on boards. Bøhren and Strøm (2010) concluded that heterogeneous groups suffer from impaired decision-making as it is harder to come to a consensus. Adams and Ferreira (2009) showed that women increase monitoring functions of the board and contribute to higher alignment with interests of shareholders, and yet they create tougher boards which results into conflicts and decreased performance in companies with good corporate governance.

Previously mentioned studies do not consider the power held by women on boards, which was a contribution of this research. Nevertheless, the negative results seem consistent. Particularly, the total power index is negatively correlated with accounting performance, or ROA, which is indicated by the value of -19.9%. When it comes to the relationship between the power index and market performance - Tobin’s Q, the explanation degree equals -18.6%, although the evidence may be questioned due to somewhat lower significance of results. Therefore, the hypotheses H5 and H6 are rejected.

The results concerning the relationship between performance and separate power indices (PI_L, PI_C, PI_D and PI_E) are insignificant, thus no correlation was established in this study between female leadership, participation in committees, dependency or experience in terms of age and tenure on one hand, and marketing and accounting performance on the other. This
contradicts the findings of Srivastava et al. (2018) about positive effect of female presence in committees on performance, possibly due to alternative approach to the research which examines the power held by women instead of their physical presence. The same applies to other predictors such as female leadership and its strong contribution to performance (Muttakin et al., 2018), positive impact of inside dependent female directors (Liu et al., 2014), and possible improvements originated from age and tenure diversity (Kim & Lim, 2010; Mahadeo et al., 2012), meaning that assessing the relationship between separate power categories and performance shows no results unless complexity of “power” is addressed and all power indices are accounted for simultaneously. Therefore, this allows to reject the hypotheses H1, H2, H3 and H4 and to state that the proposed approach of studying the impact of separate power structures in terms of gender on performance does not prove their interrelationship.

Consistent with the statement of Hambrick and Mason (1984) that powerful actors shape the strategy of the organization, the results of this study show that indeed the gender of the director matters when he / she holds power on the board, as it has an impact on outcomes. The empirical investigation in this paper does not provide explanations why there are negative results from empowering female directors on corporate boards in Sweden. Nevertheless, one can present potential reasons why higher power of female directors would be associated with lower performance based on previous studies and theories.

First of all, diversity is generally believed to increase decision-making (Hambrick & Mason, 1984; Brown et al., 2002; Jackson, 1992) and homogeneity to generate groupthink and routinization of problem solving (van Ees et al., 2009). And yet, Gordini and Rancati (2017) discussed theoretically that diversity created splitted opinions and decision-making can take longer time. Moreover, when investigated empirically similar sample of companies in Scandinavia, Ahern and Dittmar (2012) and Bøhren and Strøm (2010) also found a negative correlation between female presence and performance, and explained it by decreased quality of decision-making. Even though these two studies did not consider the power of women on these boards, sample similarity and resemblance of the results allows to suggest that gender diversity can have a negative impact on decision-making inside the boardroom.

Secondly, Ahern and Dittmar (2012) already established that women generally are younger than men on boards, while also finding a connection that higher age generates more experience. Furthermore, according to Zajac and Westphal’s (1996b), female directors with less experience would exercise less power and command less respect. This study also confirmed that the age of female directors is lower than the age of their male colleagues (as per Table 12 in Appendix 3). It is a basis for determining that younger age can have a negative impact on performance due to lower experience of female directors. This statement is consistent with the explanations of negative relationship between female directorship and performance by Ahern and Dittmar (2012), who also claimed that the reason for this correlation lies in lower age and experience of women on boards. However, previous studies have established that age diversity on board could have direct or indirect positive impact on the performance due to a more mix of experience and perspectives (Kim & Lim, 2010; Mahadeo, Soobaroyen & Hanuman, 2012). Hence, the results in this paper question the idea of beneficial nature of age diversity, but
additional and more focused research on this matter is required in order to produce a more decisive answer to this issue.

Moreover, there are several of contrasting previous research regarding how the tenure on board directors affects the performance. This study did not find any correlation on this connection either, which indicated on more research within this area in order to improve the understanding of how age and tenure could affect the performance. Although, this research established that power drawn by female directors from their age and tenure corresponds to their share on boards, as per Table 3. It had been discussed that women must compensate their age by longer tenure with the purpose of overcoming token positions. Thus, even though Ahern and Dittmar (2012) explained negative impact of female leaders on performance among Norwegian companies for ten years ago due to their younger age and experience, this might not be the case for Swedish Large Cap companies nowadays: the difference in age is reduced from seven years in the study of Ahern and Dittmar to 3.6 years in the sample of this paper, and female directors might compensate their overall experience by longer tenure on the same board, where many of them stay for more than two years.

Thirdly, Low et al. (2015) established that negative impact of female presence on performance is observed in countries where there are still gender biases present. Negative results of this study, together with statements regarding presence of gender biases in the modern society of different scholars (Marlin, 2012; Liautaud, 2016; Jonnergård et al., 2010) creates a concern that gender stereotypes are likely to be present in Sweden too, and that it influences the effectiveness of the boards with female directors in power. This study calls for further research on this matter, which is required for better understanding and improvement of internal cultures inside boardrooms.

And last but not least, the risk of tokenism remains. More than a third of Swedish Large Cap companies delegate extremely low level of power to their female directors. As Diagram 1 shows alarming results in terms of how power is distributed among companies, it is visible that tokenism is the issue which has an influence on performance, and which is consistent with the classical view of Kanter (1977) about negative outcomes from tokenism due to “visibility, polarization and assimilation”. The power index PI has accounted for underrepresentation - critical mass has a moderating effect on the value of the index. However, as discussed by King et al. (2010), tokenism can also occur because of psychological climate or social status, which would also have a negative impact on performance, and can influence the real power of the woman even if she technically is involved in power structures. Tokenism tendencies and gender biases present a possible explanation for negative relationship between female directors on powerful positions and financial performance, as women might be discouraged to show their full capacities due to gender biases that may push them into token positions even in power structures.

Nevertheless, it is important to acknowledge that there is one more potential explanation of the results - possibility that women in power decrease financial performance due to gender-specific qualities of women that are not associated with profitability, such as consideration and collaboration (Heilman, 2012; Cook & Glass, 2018). Women often put more focus on
communication, stakeholder relationship and charity, which does not have an instant effect on financial gains. Brown et al. (2002), Robinson and Dechant (1997) and Cook and Glass (2018), for instance, claim that monetary benefits from gender diversity can only be tracked when evaluating long-term effects. So there is a reasonable assumption that empowering women can lead to short-term negative effects on performance, as shown in this study, but can have a potential for additional profits in the future. However, this study does not confirm decidedly, neither it claims, that empowering women on a board would result in negative financial outcomes, as the phenomenon of “power” is complex and multidimensional, it can be measured differently, thus another research might show different outcomes, especially if performed on long-term data sample.

For more than three decades the theory of Hambrick and Mason (1984) about advantageous essence of heterogeneity has been supported around the globe. The reason for that lies in the fact that non-financial contribution of women to the boards cannot be disregarded. Empirical studies of Erhard et al. (2003), Gordini and Rancati (2017), Lückerath-Rovers (2013) argued that together with financial wins from involving more female directors companies would also largely benefit from other outcomes of diversity, and that financial and non-financial results of diversity are interconnected. Gender diversity and empowering women leads to higher level of CSR (Cook & Glass, 2018), stronger corporate culture and communication (Kamalnath, 2017), which has an indirect impact on long-term performance that was not measured in this study and which has to be assessed in a separate analysis. Watson et al. (1993) argued for beneficial nature of diversity due to creation of wider base of knowledge and increased creativity. Furthermore, abiding and indirect positive impact of gender diversity on financial performance was discussed by Robinson and Dechant (1997), which means that provided researchers make a longitudinal study of female power influence, the results might not be negative. Additionally, Wand and Clift (2009) claim that board diversity could have positive impacts of the reputation of the firm. This could affect the market position towards other actors and have indirect influences on the performance. However, these relationships cannot be ensured based on the results of the study as they call for a qualitative and long-term assessment.
CONCLUSION

The final chapter presents the conclusions that can be drawn from the results of the study. The conclusions are based on the patterns that the analysis has shown in relation to previous research and the theoretical framework, which lead to the theoretical implications that the study can contribute with. Furthermore, the limitations of the study is presented, followed by suggestions on future research within the field. Finally, the conclusion chapter ends with a section of the managerial implications of the study.

While attempting to fulfill the purpose of this study, several interesting discoveries have been made. One contribution of this research has been made to the understanding of tokenism in Swedish context. Quantitative analysis allowed to witness the distribution of power among board members in terms of gender. It has been shown that the share of women on boards corresponds their average power to influence financial outcomes of Swedish corporations. However, from the perspective of leadership, female directors are facing underrepresentation and lack of power. Moreover, over a third of corporations in Sweden do not delegate any significant power to their female directors, thus pushing them to tokens positions. According to Kanter (1977), tokenism creates additional pressure of performance of female directors, it leads to social isolation of women on boards and to their stereotypical categorization, i.e. gender biases. Liu et al. (2014) and King et al. (2010) also argued that tokenism and discrimination processes are closely connected, which indicates that there is a possibility that stereotypes are still present in top echelons of Swedish companies. Tokenism is one of the possible explanations of negative correlation between female power and performance in this study, as women can feel pressured and stereotyped even when included in boards’ power structures.

Theoretical discussion and empirical results in this research open new perspectives for understanding the Upper Echelon model by Hambrick and Mason (1984). On one hand, the outcomes confirmed that powerful leaders, such as directors, and their identity have an influence on firm performance. On the other hand, this study questions the beneficial nature of gender diversity, argued for by Hambrick and Mason. When it comes to the assessment of correlation between empowering women and financial performance of the firms, the results showed negative relationship. Generalizing of the findings allows to point that empowering women on corporate boards leads to negative effect on accounting performance, which reflects short-term consequences of female impact (Gentry & Shen, 2010). Market performance, which indicates potential impact of gender diversity and power for the nearest future, also show negative correlation, although the evidence for this is somewhat inconclusive. This allows to suggest that this study reflects mostly short-term outcomes of empowering female directors and it cannot abolish entirely the benefits of diversity discussed by Hambrick and Mason.

Nevertheless, the results of the analysis are consistent with previous research that investigated the influence of female directorship on performance. Even though other scholars did not address the issues of the real role of women on boards and just considered their physical
presence, they also stressed on the negative side of diversity due to impaired decision-making (Ahern & Dittmar, 2012; Bøhren & Strøm, 2010; Adams & Ferreira, 2009); lower average experience of board members was also named the reason for negative impact on performance (Ahern & Dittmar, 2012), and yet this study questions this reason after investigating a designated “experience” power index. The previous studies, however, did also highlight many positive aspects with diversity, which supports the theory of Hambrick and Mason (1984): improved stakeholder relationships, better CSR policies, stronger corporate culture and reputation and many others. This study theoretically discusses that this input of female directors cannot be disregarded as it has a potential for bringing financial gains in a long run.

Lastly, the results showed no relationship between separate types of power, drawn from leadership, committee participation, dependency and experience in terms of age and tenure, and either accounting or market performance of the firms. Therefore, this study explains the connection between women in power structures on the boards and financial outcomes as complex: particular involvement of women in leadership or committees, promoting female employees to inside directors, or encouraging higher tenure of women on boards does not individually make any difference for financial outcomes. Yet, all factors considered together lead to negative influence on short-term performance.

Overall, the purpose of the study was achieved, firstly, by discussing the distribution of power in terms of gender on Swedish boards. Despite a rather fair distribution of power, where 34% of directors are women, and they correspondingly hold 33.4% of board power, Sweden has still a long way to go until achieving gender equality, where men and women would hold the same power due to absence of gender biases and tokenism. Secondly, the research explained the connection between women involved in boards’ power structures and firm performance, which turned out to be negative. Although this study is quantitative in nature and cannot detect the underlying reasons for this connection, based on previous theoretical and empirical investigations the authors were encouraged to discuss the potential justifications for negative correlation between female presence on boards and financial results: diversity-related conflicts, existence of gender biases and stereotypes, risk of tokenism, and long-term orientation of female contribution to success. Therefore, the purpose of this paper was fulfilled, but it also gave origin to the idea of investigating gender equality on boards from the perspective of power held by the directors, which can encourage a wide range of research on what women and men bring “to the table” and how it can be used to the advantage of the corporations and the society as a whole.

Limitations and future research

One of the factors that compose the power index is “critical mass”, which means that more than three women must participate in the board in order to fulfil this criterion (Kramer et al., 2006). The complication with this condition is in the fact that some companies may have smaller boards, where three representatives of one gender would conclude the majority. Such, if a board consists of five people, three women would be a majority; two women would have filled the
requirement of 40% gender diversity, and yet, according to the previous studies, would not be
the critical mass, allowing women to feel more power. Therefore, the results of this study are
applicable to Large Cap companies with larger boards of directors.

Indices are composed of a variety of factors (leadership, committee participation, dependency,
experience, critical mass), each of which is assigned an equal weight in determining the concept
of power. However, it is possible that one factor carries higher significance than the other; for
instance, being the Chair might give more power than participating in board committees. This
is a subject for future qualitative research.

Chairmen in board committees present significant figures in terms of decision-making
(Chappell et al., 2004). As discussed theoretically in this study, the weight of their contribution
often reaches up to 50% of the committee verdicts. However, this research does not consider
the impact and the power of committee chairmen. Therefore, a further research is needed in
order to test how women being the Chair of audit or compensation committees affect market
and accounting performance of firms.

To sum up, women's share of boards is still a discussed topic, where a number of companies
face several of challenges. Therefore, future research within this area will contribute to
important knowledge in how to achieve the optimal composition within boards and
management. The authors have chosen to only study companies from a one-year perspective.
For future research, the authors consider interesting to compare companies over a longer period
of time in order to study long-term changes as well as review companies closer though
qualitative studies, which will contribute with other perspectives within this field.

Managerial implications

The contribution of this study is firstly made by presenting and evaluating the distribution of
power on Swedish corporate boards. It alarms companies of the risk of tokenism, which takes
place in more than a third of firms in the sample. The study discussed theoretically how
tokenism can lead to negative consequences and provided an advanced overview of non-
financial benefits that can be drawn from empowering female directors.

Empowering women has an effect on financial outcomes, which means that corporate leaders
shall be aware of qualifications and backgrounds of potential new female directors. Managers
have to consider financial and nonfinancial benefits from gender diversity and must be prepared
that women in power can contribute to short-term decrease in performance. Nevertheless, this
paper provides a theoretical discussion of other benefits from empowering female directors that
should also be taken into account.

Finally, there are many other features that define a good director than just a gender. Male
directors can possess to a higher degree traditional female qualities, and vice versa (Heilman,
2012). Personal qualities, previous occupations, industry experiences, personal networks,
social and financial status, education and many other aspects also make a director more fitting
for a particular company than anyone else. Therefore, employment and empowering of a
director must be based on a critical evaluation of his or her qualities and potential to increase
the firm’s shareholder and stakeholder values.
REFERENCES


Brown, A. H., Brown D. L., & Anastasopoulos, V. (2002). Women on boards not just the right thing... but the “bright” thing. *The Conference Board of Canada*. Available at:


Modular Finance. (Online). *Products*. Available at: https://www.modularfinance.se/#/products) [Accessed: April 16, 2019]


**APPENDIX 1**

Table 2 - Operationalization of the variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Measurement</th>
<th>Related Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI_Leadership (Pl_L)</td>
<td>Power acquired by a director from holding the position of the leader of the board or the leader of the TMT.</td>
<td>For each director: ( L = \sum L_n ) ( 0 &lt; L &lt; 1 )</td>
<td>Muller-Kahle &amp; Schiehl, 2013; Muttakin et al., 2018.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total for women on the board: ( \frac{\text{Sum of } L \text{ for women}}{\text{Sum of } L \text{ for all dir}} )</td>
<td></td>
</tr>
<tr>
<td>- Chair (L_1)</td>
<td>The head of the board of directors.</td>
<td>1 – director is the Chair; 0 – director is not the Chair.</td>
<td>Chris, 2015; Heffernan, 2014; Ward, 2008; Mínguez-Vera &amp; Martín-Ugedo, 2010.</td>
</tr>
<tr>
<td>- CEO (L_2)</td>
<td>The executive director on the board and the head of TMT.</td>
<td>1 – director is the CEO; 0 – director is not the CEO.</td>
<td>Baldenius et al., 2014; Park et al., 2018; Combs et al., 2007; Haynes &amp; Hillman, 2010; Muttakin et al., 2018</td>
</tr>
<tr>
<td>PI_Committees (Pl_C)</td>
<td>Power acquired by a director from participating in board committees.</td>
<td>For each director: ( C = \sum C_n ) ( 0 &lt; C &lt; 2 )</td>
<td>Larson, 2009; Srivastava, Das &amp; Pattanayak, 2018</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total for women on the board: ( \frac{\text{Sum of } C \text{ for women}}{\text{Sum of } C \text{ for all dir}} )</td>
<td></td>
</tr>
<tr>
<td>- Audit (C_1)</td>
<td>Director participated in the audit committee.</td>
<td>1 – director is on the audit committee; 0 – director is not on the audit committee.</td>
<td>I Putu Sugiartha Sanjaya, 2016; Oussii &amp; Bouilila Taktak, 2018; I Putu Sugiartha Sanjaya, 2016; Tengamnuay &amp; Stapleton, 2009.</td>
</tr>
<tr>
<td>Feature (C)</td>
<td>Description</td>
<td>Calculation</td>
<td>References</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>--------------</td>
<td>------------</td>
</tr>
<tr>
<td>Compensation (C&lt;sub&gt;2&lt;/sub&gt;)</td>
<td>Director participated in the compensation committee.</td>
<td>1 – director is on the compensation committee; 0 – director is not on the compensation committee.</td>
<td>Tosi Jr &amp; Gomez-Mejia, 1994; Sun et al., 2009.</td>
</tr>
</tbody>
</table>
| PI_Dependency (PI_D) | Power to exercise additional control and influence granted to a director from ties to the owners and the management. | For each director:  
\[ D = \sum D_n \]  
0<\(D<2\)  
Total for women on the board:  
\[ \frac{\text{Sum of } D \text{ for women}}{\text{Sum of } D \text{ for all directors}} \] | Baldenius et al., 2014; Hillman & Dalziel, 2003; |
| Management (D<sub>1</sub>) | Director is dependent / has ties towards the management of the firm. | 1 – director is dependent towards the management.  
0 – director is independent towards the management. | Shaikh et al., 2018; O’Shannassy & Leenders, 2016; Liu et al., 2014. |
| Owners (D<sub>2</sub>) | Director is dependent / has ties towards the owners / shareholders of the firm. | 1 – director is dependent towards the owners.  
0 – director is independent towards the owners. | Lious et al., 2017; Patel & Cooper, 2014 |
| PI_Experience (PI_E) | Power of a directors originated from age and tenure, which is reflected in respect and acknowledgement on the board. | For each director:  
\[ E = \sum E_n \]  
0<\(E<2\)  
Total for women on the board:  
\[ \frac{\text{Sum of } E \text{ for women}}{\text{Sum of } E \text{ for all directors}} \] | Ahern & Dittmar, 2012; Kim & Lim, 2010; Mahadeo et al., 2012 |
| Age | Actual age of the director. | 1 - director’s age is equal or higher than the average age in the company.  
0 - director’s age is lower than the average age in the company. | Anderson et al., 2011; Ahern & Dittmar, 2012 |
<table>
<thead>
<tr>
<th>- Tenure</th>
<th>The number of years of a director serving on the board of the current company up to date.</th>
<th>1 - director employed in 2016 and earlier. 0 - director employed in 2017 and later.</th>
<th>Zender &amp; Lawrence, 1989; Vafeas, 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI_Total (PI)</td>
<td>Aggregated indicator of the level of power possessed by a director in a firm.</td>
<td>For each director: $PI = \sum L + \sum C + \sum D + \sum L + M$</td>
<td>Triana et al., 2013; Muttakin et al., 2018; Combs et al., 2007; Baldenius et al., 2014</td>
</tr>
<tr>
<td></td>
<td>Total for women on the board: $\text{Sum of } PI$ for women $\div \text{Sum of } PI$ for all directors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Critical_Mass (M)</td>
<td>Director belongs to the gender group (male or female) that has three or more representatives on the board.</td>
<td>1 – critical mass is achieved for the gender group of the director. 0 – critical mass is not achieved for the gender group of the director.</td>
<td>Konrad et al., 2006; Torchia et al., 2011; Torchia et al., 2010; Arena et al., 2015, Liu et al., 2014</td>
</tr>
</tbody>
</table>

**Dependent variables**

<table>
<thead>
<tr>
<th>ROA</th>
<th>Accounting performance measurement that indicates how successfully management of the firm is allocating its assets in order to generate more income</th>
<th>Net income / Total assets</th>
<th>Adams &amp; Ferreira, 2009; Erhard et al., 2003; Bøhren &amp; Strøm, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin’s Q (Q)</td>
<td>Market performance measurement that indicates the relationship between the firm assets to the firm market value.</td>
<td>Total Market Value / Total Asset Value</td>
<td>Gordini &amp; Rancati, 2017; Ahern &amp; Dittmar, 2012; Bøhren &amp; Strøm, 2010; Adams &amp; Ferreira, 2009; Carter et al., 2010; Rose, 2007; Wang &amp; Clift, 2009</td>
</tr>
</tbody>
</table>
## Control variables

<table>
<thead>
<tr>
<th>Firm size (S)</th>
<th>Indicator of the position of the firm among Large Cap companies in Sweden.</th>
<th>$S = \ln(x)$, where $x$ is a net turnover, established by Holdings</th>
<th>Øhren &amp; Strøm, 2010; Lückerath-Rovers, 2013; Rose, 2007.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board size (N)</td>
<td>Indicator of the number of members that participate on the board of directors in one firm.</td>
<td>Number of board members, not including employee representatives</td>
<td>Lückerath-Rovers, 2013; Adams &amp; Ferreira, 2009.</td>
</tr>
</tbody>
</table>
# APPENDIX 2

Table 8 – Correlation matrix for ROA, PI and control variables

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>PI</th>
<th>N</th>
<th>S</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROA</strong> Pearson Correlation</td>
<td>1</td>
<td>-0.200</td>
<td>-0.100</td>
<td>-0.067</td>
<td>-0.270**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.050</td>
<td>0.332</td>
<td>0.517</td>
<td>0.008</td>
</tr>
<tr>
<td>N</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td><strong>PI</strong> Pearson Correlation</td>
<td>-0.200</td>
<td>1</td>
<td>-0.154</td>
<td>-0.032</td>
<td>0.048</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.050</td>
<td>0.135</td>
<td>0.756</td>
<td>0.643</td>
</tr>
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<td>N</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td><strong>N</strong> Pearson Correlation</td>
<td>-0.100</td>
<td>-0.154</td>
<td>1</td>
<td>0.554**</td>
<td>0.171</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.332</td>
<td>0.756</td>
<td>0.000</td>
<td>0.095</td>
</tr>
<tr>
<td>N</td>
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<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td><strong>S</strong> Pearson Correlation</td>
<td>-0.067</td>
<td>-0.032</td>
<td>0.554**</td>
<td>1</td>
<td>-0.060</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.517</td>
<td>0.000</td>
<td>0.562</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td><strong>I</strong> Pearson Correlation</td>
<td>-0.270**</td>
<td>0.048</td>
<td>0.171</td>
<td>-0.060</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.008</td>
<td>0.643</td>
<td>0.562</td>
<td></td>
</tr>
<tr>
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</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 9 - Correlation matrix for ROA, partial power indices and control variables

<table>
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<tr>
<th></th>
<th>ROA</th>
<th>PI_L</th>
<th>PI_C</th>
<th>PI_D</th>
<th>PI_E</th>
<th>N</th>
<th>S</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROA</strong> Pearson Correlation</td>
<td>1</td>
<td>-0.159</td>
<td>-0.177</td>
<td>-0.119</td>
<td>-0.072</td>
<td>-0.100</td>
<td>-0.067</td>
<td>-0.270**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.122</td>
<td>0.084</td>
<td>0.249</td>
<td>0.485</td>
<td>0.332</td>
<td>0.517</td>
<td>0.008</td>
</tr>
<tr>
<td>N</td>
<td>96</td>
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<td>96</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td><strong>PI_L</strong> Pearson Correlation</td>
<td>-0.159</td>
<td>1</td>
<td>0.398**</td>
<td>0.129</td>
<td>0.226*</td>
<td>-0.150</td>
<td>-0.018</td>
<td>0.232*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.122</td>
<td>0.000</td>
<td>0.211</td>
<td>0.027</td>
<td>0.144</td>
<td>0.863</td>
<td>0.023</td>
</tr>
<tr>
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<td>96</td>
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<td>96</td>
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</tr>
<tr>
<td><strong>PI_C</strong> Pearson Correlation</td>
<td>-0.177</td>
<td>0.398**</td>
<td>1</td>
<td>0.080</td>
<td>0.288**</td>
<td>-0.230*</td>
<td>-0.143</td>
<td>0.025</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.084</td>
<td>0.000</td>
<td>0.437</td>
<td>0.004</td>
<td>0.024</td>
<td>0.166</td>
<td>0.812</td>
</tr>
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<tr>
<td><strong>PI_D</strong> Pearson Correlation</td>
<td>-0.119</td>
<td>0.129</td>
<td>0.080</td>
<td>1</td>
<td>0.331**</td>
<td>0.029</td>
<td>0.132</td>
<td>0.020</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
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<td>0.211</td>
<td>0.437</td>
<td>0.001</td>
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<tr>
<td><strong>PI_E</strong> Pearson Correlation</td>
<td>-0.072</td>
<td>0.226*</td>
<td>0.288**</td>
<td>0.331**</td>
<td>1</td>
<td>-0.049</td>
<td>0.103</td>
<td>0.091</td>
</tr>
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<td>Sig. (2-tailed)</td>
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<td>0.001</td>
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<tr>
<td><strong>N</strong> Pearson Correlation</td>
<td>-0.100</td>
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<td>-0.230*</td>
<td>0.029</td>
<td>-0.049</td>
<td>1</td>
<td>0.554**</td>
<td>0.171</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>0.332</td>
<td>0.144</td>
<td>0.024</td>
<td>0.778</td>
<td>0.638</td>
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<tr>
<td><strong>S</strong> Pearson Correlation</td>
<td>-0.067</td>
<td>-0.018</td>
<td>-0.143</td>
<td>0.132</td>
<td>0.103</td>
<td>0.554**</td>
<td>1</td>
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</tr>
<tr>
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<td>0.517</td>
<td>0.863</td>
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<td>0.200</td>
<td>0.318</td>
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<td>0.562</td>
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Table 10 - Correlation matrix for Tobin’s Q, PI and control variables

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<td>-.174</td>
<td>-.208*</td>
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<td>.091</td>
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<td>.031</td>
<td>.042</td>
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<td>PI</td>
<td>Pearson Correlation</td>
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<td>1</td>
<td>-.154</td>
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<td>.135</td>
<td>.756</td>
<td>.643</td>
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<tr>
<td>N</td>
<td>Pearson Correlation</td>
<td>-.208*</td>
<td>-.154</td>
<td>1</td>
<td>.554**</td>
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<tr>
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<tr>
<td>S</td>
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<td>-.032</td>
<td>.554**</td>
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<tr>
<td>I</td>
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</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 11 - Correlation matrix for Tobin’s Q, partial power indices and control variables

<table>
<thead>
<tr>
<th></th>
<th>Q</th>
<th>PI_L</th>
<th>PI_C</th>
<th>PI_D</th>
<th>PI_E</th>
<th>N</th>
<th>S</th>
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</thead>
<tbody>
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<td>Q</td>
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<td>-.111</td>
<td>-.084</td>
<td>-.122</td>
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<td>-.220*</td>
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<td>.416</td>
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<td>.226*</td>
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<td>-.018</td>
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<td>.000</td>
<td>.211</td>
<td>.027</td>
<td>.144</td>
<td>.863</td>
<td>.023</td>
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<td>.129</td>
<td>.080</td>
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<td>.331**</td>
<td>.029</td>
<td>.132</td>
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*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).
APPENDIX 3

Table 12 - Descriptive statistics for average male and female directors in Swedish Large Cap

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<th>Men</th>
<th>Women</th>
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