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The Contribution of Women on Corporate Boards: Board's Effectiveness – Focus on ICT

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Abstract

The composition of supervisory and board of directors in companies is extremely important for the successful operation of companies. Nowadays, women in the workplace, and especially in management positions, encounter a form of discrimination that has its own professional name - the phenomenon of "glass ceiling". Therefore, it is very important to analyze the representation of women and men on the company's supervisory board and board of directors. This paper will explain women's leadership style, differences between men's and women's leadership style, and the problems that women in employment, and especially in promotion. The aim off this paper is to determine whether the "glass ceiling" phenomenon is prominent in Croatian companies and to what extent. In addition, women's representation in senior positions will be related to business performance criteria.
Keywords: „glass ceiling", female executives, discrimination, supervisory board, board of directors, promotion, IT companies

1. Introduction

According to the statistics provided by the European Institute for Gender Equality in 2019, the percentage share of women on the supervisory boards or boards of directors in the largest quoted companies in the EU was 25%, with men comprising a significantly larger proportion – as much as 70% – of corporate board members. Moreover, a research conducted in 2015 covering the 400 largest Croatian companies by revenue in 2014 has shown a similar distribution of data. The boards of directors of the companies covered by the research comprised of 15% of women and 85% of men, while the supervisory boards consisted of 21% of women and 79% of men [9]. Furthermore, based on their 2017 research, the Network of Executive Women estimates that women will account for only 15% of executive ranks if their status does not start to improve. This proportion is significantly lower in comparison with the current percentage of women executives, which is 35% [25].

The principal indicator of discrimination against women in the workplace is precisely their position in management. Discrimination is reflected in the fact that the number of female executives is inversely proportional to the level of management [2]. In many companies, there is a great deal of unequal distribution of women and men on different hierarchical levels within the same occupation – a type of discrimination better known as vertical segregation or the “glass ceiling” phenomenon [21]. Reasons contributing to women’s underrepresentation in senior positions are multiple. The main reasons for discrimination against women in employment, and especially in promotion, are various stereotypes and prejudices. According to one of those stereotypes in management, “women’s place is in the house and they do not devote themselves to work or a career” [2]. Such a deep-rooted belief cannot be shattered at once. However, as years bring about positive changes in society, this stereotype is gradually wearing off.

One extremely important factor which had an impact on women’s advancement in the past was their education. Today, the situation has improved in this respect, as numerous analyses have shown [1]. In fact, according to the Croatian Bureau of Statistics, in the Republic of Croatia in 2017 women outnumbered men in higher education with 34.7% against 23.2% [8]. Moreover, women have fewer opportunities to build networks, which is a significant obstacle hindering their professional advancement [2]. A study conducted in 2018 in Germany involving 37 female executives deals with the reasons why women are less successful at professional networking than men. The findings of the study reveal that women underestimate their selfworth in professional networking, and restrain from exploiting the opportunities which may come from social ties, leading them to engage less in networking activities [18].

The introduction of this paper will be followed by an overview of literature dealing with the types of discrimination women face in the workplace as well as the importance of the “glass ceiling” phenomenon. Afterwards, the methodology used for the analysis will be described. The fourth chapter will deal with the results of the analysis, the aim of which is to get an insight into women’s representation on boards of directors, supervisory boards, and recruitment committees. More precisely, the aim is to determine whether the “glass ceiling” phenomenon is prominent in Croatian companies and to what extent. Additionally, the study will examine female representation in executive positions in IT companies conducting information and communication activities. Finally, women’s representation in senior positions will be related to business performance criteria. The conclusion of this paper will be provided in the final chapter.

2. Literature Overviews

2.1. Types of Discrimination Women Face in the Workplace

According to research conducted on the global as well as national level, women differ from men in the workplace in several key aspects. The most prominent difference is evident in the fact that, on average, women earn less than men with the same level of education [2]. Gascoigne lists several reasons for the gender pay gap. The first reason is related to the fact that, unlike women, a greater number of older men occupy positions which have existed for a long period of time. Naturally, older, and more experienced employees with longer seniority are paid more than their younger counterparts. Moreover, women are paid less than men due to the imbalance between different positions and flexible working hours. In other words, women tend to opt for low-paid jobs in order to be able to take care of their families, while men are more flexible, and therefore have more opportunities to work in managerial positions, which are high-paying [17].

According to the data available from the Croatian Bureau of Statistics, in the Republic of Croatia in 2017, the average monthly income of men was higher than women by 1,126.00 HRK. On the other hand, the average monthly net income of women was 5, 552.00 HRK, which was lower than men's average monthly net income by 794.00 HRK, which was 6,346.00 HRK [8]. However, the European Commission's data suggest the Republic of Croatia fares significantly better than the rest of the EU and their average. Specifically, in the Republic of Croatia in 2014, the gender pay gap was almost half the average of the European Union, i.e. women were paid for their work 8.7% less than men [11]. It is important to note that in 2011 in the European Union, women earned on average 16.8% less than men. Nevertheless, five years later, in 2016, the situation had somewhat improved. To be more precise, women earned 16.2% less than men [14].

Another reason stated as important for the gender pay gap is that higher paying jobs are in fact less flexible and require employees to devote a great deal of their time to work. Consequently, it is maintained that women taking care of their children, families, households, etc. cannot completely dedicate themselves to such obligations, which predetermines their inclination towards lower paying jobs with fewer responsibilities [4]. An analysis of the data from the Croatian Bureau of Statistics reveals that in 2017 in the Republic of Croatia, most of the women was employed in education and human health and social work activities, accounting for 78,7% of employees. The other two leading sectors dominated by women include the financial and insurance activities, where female representation amounts to 69.5%. Additionally, in 2017, women had lower earnings than men in the activities dominated by women. More precisely, in financial and insurance activates, women had the average monthly net income of 7,580.00 HRK, in contrast to 10,156.00 HRK man had, which represents a pay gap of 2,576.00 HRK [8].

A similar distribution of data is found in other activities where women's representation exceeds 50%. To illustrate, in wholesale and retail trade in 2017, women had the average monthly net income of 4,884.00 HRK, while men had

6,116.00 HRK. In addition, in 2017, men's net income in education was 6,599.00 HRK, while women were 5,551.00 HRK Similarly, the data from human health and social work activities showed discrimination against women regarding net income in 2017. To be specific, women earned a 6,024.00 HRK salary for their work, while men were paid on average 2,025.00 HRK more for their work in the same activity [8].

The main very important and salient difference between men and women is the fact that women occupy managerial positions more rarely than men and that women with the same level of knowledge and skills advance more slowly than men [23]. Additional research [22] stated that, unlike men, women feel less inclined to compete against others. In fact, women are less willing to compete against men, which accounts for their underrepresentation in managerial positions. On the other hand, women are apt to compete against themselves, rather than other people from their company.

A study conducted in 2019 by the Credit Suisse Research Institute involving 3,000 companies from 56 countries yielded the following findings: the US, Canada, Scandinavia, the UK, France, Germany, South Africa, Australia and New Zealand are the countries with the highest share of women in managerial positions. Precisely, the proportion of women in managerial positions in companies operating in these countries ranges from 20% up to 43%. With not more than 4%, Japan stands out as the country with the smallest share of women in managerial positions in the covered companies. Mexico and Brazil have a somewhat higher percentage of women in managerial position – 8% to be more precise, while the rest of Latin America has only 9% of women in senior management [7].

Moreover, the study by the Credit Suisse Research Institute clearly shows the difference between financial indicators when a company is run by a woman. When the female representation in senior management exceeds 20%, the data representing EBITDA margins, CFROIs and P/E ratios are higher than in the case when there is less than 15% of women in senior management of a company. When female representation on boards is more than 20%, the EBITDA margin is higher by 2%, the Cash Flow Return on Investment (CFROI) is higher than 2.04, and the Price-to-Earnings ratio is higher by 16% [7].

According to data from 2019, there was 28.1% female and 71.9% male ministers in the European Union. Moreover, a similar distribution of men and women is found in the Parliament and regional assemblies. There is 29.3% female and 70.7% male members of Parliament. Similarly, 28.5% of members of regional assemblies are female, while 71.5% are male. However, in financial institutions or, to be more accurate, on the Central Bank board, the ratio of women is 20.3%, while the ratio of men is 79.7%. A share of 39.9% of female and 60.1% of male board members participate in the organization of financing research in the member states of the EU. Data provided by the European Institute for Gender Equality in 2019 suggest that the smallest proportion of women can be found on executive boards of national Olympic organizations. The share of women in such executive bodies is 14.8%, while male representation in the same bodies is 85.2% and more [15].

There are multiple reasons why women are underrepresented in STEM fields, including stereotypes, gender bias and socio-cultural complexities [12]. Despite the evidence that women are as effective or even more effective than men in IT professions, the stereotype about men's better competence in the same profession continues to undermine women's position. The glass ceiling phenomenon is still pervasive even in today's "digital era", which is supported by the fact that women account for only 11% of executive positions in companies in Silicon Valley. Thus, it is not just the low number of women in the IT industry that is problematic, but also the fact that they are not perceived as competent and quality workers [3]. In a study of GitHub users, it was revealed that male programmers were favoured over women when the quality and acceptability of their codes was assessed. However, women and their codes scored better when their gender was left unknown, rather than when it was clearly stated which code was written by a woman and which one was written by a man [5].

According to the data provided by the European Commission in 2018, the number of men taking ICT studies was four times higher than the number of women. Moreover, the number of women enrolling in ICT studies had decreased compared to 2011. The interest and entrepreneurship women demonstrate in this field is not sufficient to encourage higher female representation in ICT companies. The European Commission's study showed that the proportion of female CEOs in IT companies stood at 14.8%, while the highest number of women employed in ICT fields was in Bulgaria (26.5%), as well as in Romania and Lithuania (25.7%) [12]. Women's position as ICT specialists in the Republic of Croatia did not differ so much from their position in the rest of the EU. As much as 13% of women were employed in ICT fields in the Republic of Croatia, while their share in the same field stood at 17.2% at the level of the European Union [13]. On the positive side, there were almost no disparities in women's and men's salaries. In fact, women earned a 0.7% lower salary than men in this field [24].

2.2. "Glass Ceiling" Phenomenon

The discrimination of qualified and competent women in their promotion within a company is known as the "glass ceiling" phenomenon [19]. As the term itself suggests, it is transparent that this phenomenon assumes the existence of barrier within a company preventing women from rising beyond it and advancing in their careers. [23]. The glass ceiling hinders women's advancement regardless of the type of sector: private, public, or business [20]. The first woman to identify this type of discrimination was the editor of the Working Woman magazine, Gay Bryant. However, it was not until 1986 and the publication of an article by two journalists from the Wall Street Journal that the term "glass ceiling" entered common usage [19].

Additionally, the term can be explained as favoring men, rather than women, for leadership positions [26]. Therefore, the glass ceiling phenomenon refers to vertical discrimination preventing women from reaching management positions. Women who succeed in reaching a managerial position tend to remain in it. In fact, they most commonly manage business functions such as procurement, sales, marketing, finance, etc., seldom accessing higher managerial positions or becoming executive managers [2]. Research has shown that women tend to give up more easily than men once they have reached management positions, i.e. women in managerial positions leave their jobs at three times the rate of their male colleagues [10]. Although the glass ceiling phenomenon refers primarily to women, it is increasingly used to denote discrimination against other minorities [6].

In most of the cases, this type of discrimination is not perceived neither by the woman facing it nor other people in the workplace. Consequently, women only perceive it when they “hit” their heads against this glass ceiling. Over the years, the glass ceiling phenomenon has worn off, but is still substantially salient in companies. This phenomenon can be shattered, but only over a longer period. Furthermore, to tackle the glass ceiling phenomenon, a personal plan should be created. This includes a continuous knowledge and competence development, efforts aimed at building relationships and communication with colleagues at work, as well as a proactive attitude towards task completion [23].

3. Methodology Description

The data on board members and authorized company representatives, as well as the data on total revenues, profits/losses in the accounting period, and credit ratings of the analysed companies were gathered by using the info.BIZ service launched by the Financial Agency. The collected data were then analysed in Microsoft Excel. The 500 largest companies by total revenue in 2018 and 2019 were initially supposed to be included in the analysis. However, 17 companies were excluded from the analysis, including those categorized as institutions, other companies, limited partnerships, as well as companies in the insolvency and pre-insolvency proceedings or companies which have been erased from the register. The final sample comprised 483 companies that were either joint-stock companies or limited liability companies according to their legal structure. The largest portion of the sample, i.e. 76.40%, comprised limited liability companies, while joint-stock companies account for 23.60% of the sample. In other words, the analysis includes 114 joint-stock companies and 369 limited liability companies.

A sample of 472 companies, either joint-stock companies or limited liability companies according to their legal structure, was also included in the analysis based on the criterion of total revenue in 2019. The final analysis for 2019 does not include 28 companies, namely those categorized as institutions, other companies, limited partnerships, as well as companies in the insolvency and pre-insolvency proceedings or companies which have been erased from the register. As in the analysis for 2018, the majority of the sample included in the analysis for 2019 comprised limited liability companies with a share of 80.51%, while joint-stock companies account for 19.49% of the sample. it is important to note that the analysis for 2019 does not include authorized company representatives because they were not listed in the database retrieved from the info.BIZ service.

4. Analysis

The analysis of the data from 2018 on the number and gender of board members and authorized company representatives found that, out of the total of 2,654 members of the bodies of the joint-stock and limited liability companies, 618 were females, and the remaining 2,036 were males. Figure 1 clearly shows that there was an unequal distribution of men and women in managerial positions, at least in 2018 in the 483 joint-stock companies and limited liability companies covered by this research. Furthermore, in all the joint-stock companies analysed in this study, there was 76.71% of men on the management boards, supervisory boards or working as authorized representatives, while women accounted for a significantly smaller portion of executives with a share of only 23.29%.

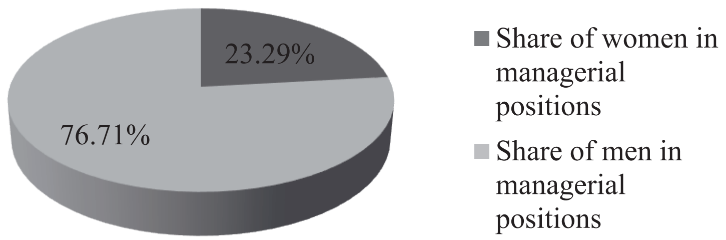

Figure 1. Share of women and men in managerial positions in the analysed companies in 2018. Created by the authors according to the data provided by [16].

The results of the analysis for 2019 lead to similar conclusions. Out of the total of 2,423 members of the analysed companies that have management boards and supervisory boards, 562 of them were female, whereas the remaining 1,861 were male members. Figure 2 shows that male representation in managerial positions was significantly higher than female representation in 2019 as well. To be more precise, in all the joint-stock companies and limited liability companies analysed in 2019, men held 76.81% of positions on management boards and supervisory boards, while the share of women holding managerial positions was significantly lower, i.e. it was 23.19%. The presented data indicate that the distribution of men and women in managerial positions was nearly identical in 2018 and 2019. The results indicate that there is a difference of 0.1 percentage point between the two years.

There was no equal distribution of men and women on management boards, supervisory boards and among authorised representatives. In 2018, the share of women on the management boards of all the analysed companies was 11.57%, whereas their share in 2019 was 11.72%. The share of men in 2018 was 40.66%, while in 2019 they accounted for 44.57% of all members of the other bodies in the companies. This translates into only 307 women and 1,079 men on the management boards of all the analysed companies. The next year the distribution had not significantly changed: there was 284 women and 1,080 men on the boards of all the analysed companies.

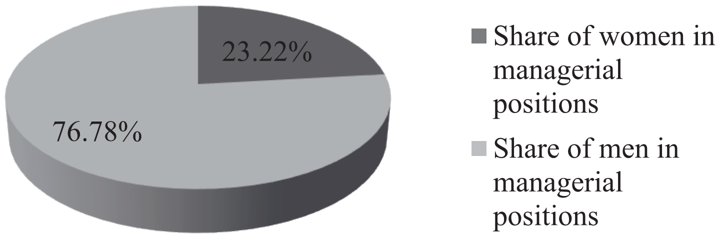

Figure 2. Share of women and men in managerial positions in the analysed companies in 2019. Created by the authors according to the data provided by [16].

There were 297 women and 864 men on the supervisory boards of all the analysed companies in 2018. Therefore, the share of women was 11.19%, while the number of men was three times higher, resulting in a share of 32.55% of male representation. In 2019, there were 278 women, with a share of 11.47%, and 781 men, with a share of 32.23%, on the supervisory boards. The majority of authorized company representatives in the analysed companies in 2018 were male. More specifically, 93 of them, or a share of 3.50%, were male and 14, or a share of 0.53%, were female.

In order to be able to conclude whether companies with women on management boards, supervisory boards and among authorized company representatives are more successful than those who do not have them, it was necessary to compare certain criteria. Business performance was observed according to three criteria: total revenue, profits and losses in the accounting period and credit rating. It should be stressed that, in 2018, total average revenues of all the joint-stock companies covered by this study were higher than total average revenues of all the analysed companies. This was not the case with the analysed limited liability companies. Total average revenues of all the analysed limited liability companies were lower than total average revenues of all the analysed companies. In 2019, total average revenues of all the analysed joint-stock companies were higher than total average revenues of all the analysed companies. Furthermore, total average revenues of the analysed limited liability companies with one women on the management board and supervisory board and two or more women on the supervisory board were lower than total average revenues of all the analysed companies (Table 1).

According to this, average revenues of joint-stock companies with one woman on the management board were somewhat lower than average revenues of all the analysed joint-stock companies in 2018, but they were higher in 2019. On the other hand, average revenues of joint-stock companies with one woman on the supervisory board were higher in 2018 and lower in 2019 in comparison to average revenues of all analysed joint-stock companies. However, average revenues of joint-stock companies with one woman among authorized company representatives were significantly lower than average revenues of all the analysed joint-stock companies in 2018. As for the joint-stock companies with two or more women on the board in 2018, their revenues were similar to those of joint-stock companies with one woman on the board. This means that their average revenues were lower than average revenues of all the analysed joint-stock companies. Average revenues of all the analysed joint-stock companies with two or more women on the supervisory board were higher than average revenues of all the analysed joint-stock companies. Average revenues of joint-stock companies with one woman on the management board were somewhat lower than average revenues of all the analysed joint-stock companies. In 2019, average revenues of all the analysed joint-stock companies with two or more women on the management board and supervisory board were higher than average revenues of all the analysed joint-stock companies (Table 1).

Moreover, in 2018 and 2019, average revenues of the analysed limited liability companies with one woman on the management board, supervisory board and among authorized company representatives were lower than average revenues of all the analysed limited liability companies. Yet, after analysing the data for each year, it was found that average revenues of the analysed limited liability companies with two or more women on the management board and supervisory board were higher than average revenues of all the analysed limited liability companies. Total average revenues of all the analysed limited liability companies with two or more women among authorized company representatives could not be compared to other average revenues. This was not possible because only one limited liability company with two or more women among authorized company representatives was included in the calculation of average revenues (Table 1).

In 2018, the joint-stock companies with at least one woman on the management or supervisory board earned higher average profits in comparison to the average profit of all the analysed joint-stock companies. Similarly, the average profits earned by the joint-stock companies with two or more women on the supervisory board were higher, though not significantly so, in comparison to the average profit of all the analysed joint-stock companies By and large, the joint-stock companies with one woman designated as the authorized company representative, and those with two or more women on the management board earned lower average profits when compared to the average profits of all the analysed companies. In 2019, the joint-stock companies with one woman on the supervisory board generated lower profits, while the profit of all the other companies was higher in comparison to the average profit of all the analysed joint-stock companies (Table 2).

	Joint-stock companies (2018)	**Limited liability companies (2018)**	**Joint-stock companies (2019)**	**Limited liability companies (2019)**
Average revenues of JSCs with 1 woman on the management board.	1,088,672,927 HRK	504,588,911 HRK	1,879,230,080 HRK	649,126,244 HRK

Average revenues of JSCs with 1 woman on the supervisory board	1,616,429,49 0 HRK	600,033,988 HRK	879,528,865 HRK	671,593,333 HRK
Average revenues of JSCs with 1 woman as the authorized company representative	426,016,549 HRK	558,209,876 HRK	-	-
Average revenues of JSCs with 2 or more women on the management board	752,124,826 HRK	900,752,708 HRK	1,302,609,18 7 HRK	1,074,550,81 3 HRK
Average revenues of JSCs with 2 or more women on the supervisory board	1,160,995,76 3 HRK	695,450,886 HRK	1,899,926,01 1 HRK	752,288,087 HRK
Average revenues of JSCs with 2 or more women as the authorized company representatives	0 HRK	1,594,891,52 4 HRK	-	-
Total average revenues	1,103,907,41 8 HRK	601,474,950 HRK	1,163,881,31 5 HRK	676,919,374 HRK
Total average revenues of JSCs and LLCs	720,307,525 HRK		772,572,612 HRK	

Table 1. Average revenues of the analysed joint-stock and limited liability companies according to the representation of women on management boards, supervisory boards and among authorised representatives in 2018 and 2019. Created by the authors according to the data provided by [16].

In 2018, the companies earning higher profits in comparison to the total average profit of all the analysed limited liability companies were those that had one or more women on the supervisory board or 2 or more women on the management board. The companies earning lower profits in comparison to the total average profit of all the analysed limited liability companies included the companies with one woman on the management board, one woman designated as the authorized company representative, and two or more women among authorized company representatives. In 2019, only the limited liability companies with one woman on the management board earned somewhat lower profits, whereas all the other companies generated higher profits in comparison to the total average profit of all the analysed limited liability companies.

	Joint-stock companies (2018)	**Limited liability companies (2018)**	**Joint-stock companies (2019)**	**Limited liability companies (2019)**
Average profit of JSCs with 1 woman on the management board	100,585,589 HRK	29,463,838 HRK	96,996,020 HRK	36,190,181 HRK
Average profit of JSCs with 1 woman on the supervisory board	103,240,323 HRK	46,252,175 HRK	54,958,660 HRK	44,756,513 HRK

Average profit of JSCs with 1 woman as the authorized company representative	4,922,554 HRK	27,189,842 HRK	-	-
Average profit of JSCs with 2 or more women on the management board	59,188,338 HRK	33,729,600 HRK	90,175,535 HRK	73,275,145 HRK
Average profit of JSCs with 2 or more women on the supervisory board	87,663,662 HRK	50,718,169 HRK	135,262,791 HRK	40,856,285 HRK
Average profit of JSCs with 2 or more women as the authorized company representatives	0 HRK	32,808,684 HRK	-	-
Total average profit	86,466,374 HRK	33,401,837 HRK	79,082,108 HRK	36,309,244 HRK

Table 2. Average profit of the analysed joint-stock companies and limited liability companies according to the representation of women on management and supervisory boards, and among authorized company representatives in 2018 and 2019. Created by the authors according to the data provided by [16].

The analysis of the data on average losses for both years reveals that nearly all of the analysed joint-stock companies that suffered losses and had at least one woman on the management board, supervisory board or among authorized company representatives suffered lower losses in comparison to the average loss of all the analysed joint-stock companies. According to the data from 2018, the analysed joint-stock companies suffered over 50% lower losses when there was one woman on the management board or among authorized company representatives. However, in the case of one or more women on the supervisory board, the average losses were somewhat greater than the average losses of all the analysed joint-stock companies (Table 3).

Out of all the analysed limited liability companies suffering losses, the companies with one woman on the management board and supervisory board suffered greater losses in comparison to total losses of all the analysed limited liability companies. In 2019, the companies with one woman on the management board and supervisory board, and two or more women on the supervisory board suffered greater average losses in comparison to the average losses of all the analysed limited liability companies. In 2018, the companies suffering significantly lower average losses were those with two or more women on the supervisory board, as well as those with at least one woman among authorized company representatives. In contrast, only the companies with two or more women on the supervisory board suffered lower average losses in 2019 (Table 3).

	Joint-stock companies (2018)	**Limited liability companies (2018)**	**Joint-stock companies (2019)**	**Limited liability companies (2019)**
Average loss of JSCs with at least 1 woman on the management board	-40,057,943 HRK	-35,454,395 HRK	-22,449,815 HRK	-35,682,197 HRK
Average loss of JSCs with at least 1 woman on the supervisory board	-92,990,012 HRK	-53,626,564 HRK	-42,611,330 HRK	-40,442,858 HRK
Average loss of JSCs with at least 1 woman among authorized company representatives	-42,377,713 HRK	-4,281,155 HRK	-	-
Average loss of JSCs with 2 or more women on the management board	0 HRK	-14,735,550 HRK	0 HRK	-38,629,817 HRK
Average loss of JSCs with 2 or more women on the supervisory board	-66,414,220 HRK	-25,560,091 HRK	-13,151,646 HRK	-11,816,939 HRK
Average loss of JSCs with 2 or more women among authorized company representatives	0 HRK	0 HRK	-	-
Total average loss	-100,906,594 HRK	-32,353,084 HRK	-108,304,514 HRK	-28,996,168 HRK

Table 3. Average loss of the analysed joint-stock companies and limited liability companies according to the representation of women on the management board, supervisory board, and among authorized company representatives in 2018 and 2019. Created by the authors according to the data provided by [16].

The assessed credit rating of the majority of the analysed joint-stock companies with one woman in executive positions ranged from negligible expectations of default risk to very low expectations of default risk in both years. Such were the assessed credit ratings of 44 analysed joint-stock companies in 2018, and 36 companies in 2019. On the other hand, the assessed credit rating of the remaining 23 joint-stock companies in 2018 and 11 joint-stock companies in 2019 that had one woman on the management board, supervisory board and among authorized company representatives ranged from B1 to B6. A positive change was noted in 2019 as the most unfavourable score was achieved by a company with one woman on the supervisory board, which was assigned a B4 credit rating.

According to the results obtained for both years, the analysed joint-stock companies with two or more women on their management boards, supervisory boards and among authorized company representatives fared slightly more poorly than the companies with only one woman in executive positions. Furthermore, 19 of the analysed joint-stock companies were assigned the A rating and were grouped into classes from 1 to 3, which means that the expectations of default risk were very low or negligible in the case of these 19 joint-stock companies. There were 27 companies that were attributed such credit ratings in 2019, when the overall scores were slightly better than in the previous year. As already mentioned, the assessed credit rating for the majority of joint-stock companies with two or more women in managerial positions was poor. The expectations of default risks varied from low to very high in the case of 26 such companies. Just like the A class, the B class was also attributed a better score in 2019 in comparison to the previous year. To be precise, the credit rating of 15 joint-stock companies varied between B1 and B6.

Based on the data for 2018 and 2019, it may be concluded that, in the majority of the analysed limited liability companies, a very good credit rating coincides with the fact that there is one woman on the management board, supervisory board and among authorized company representatives. To put it more precisely, 103 analysed limited liability companies in 2018 and 91 limited liability companies in 2019 with one woman in managerial position were assigned ratings from A1 to A3, meaning that default risks were negligible or very unlikely. The B rating was assigned to 64 analysed limited liability companies in 2018, while there were 61 limited liability companies in the same class in 2019. These were all the companies with a low to average likelihood of default risk in payment. Moreover, one limited liability company with one woman on the supervisory board was assigned the C3 rating in 2018, meaning that there was a strong likelihood of default risk in payment. In 2019, two companies were assigned the C1 credit rating. Both of them had one woman on their management board and one woman on their supervisory board. Only one limited liability company was assigned the C2 credit rating and that company had one woman on the management board, which means that there was a strong likelihood of default risk in payment.

Out of all the analysed limited liability companies, the credit rating ranging from A1 to A3 was assigned to 65 of them in 2018 and to 59 of them in 2019, all of which had two or more women on their management boards, supervisory boards or among authorized company representatives. Consequently, the likelihood of these companies facing default risk in payment was negligible or very low. On the other hand, estimated credit ratings ranging from B1 to B6 were assigned to 37 analysed limited liability companies in 2018 and to 27 of them in 2019, all of which had two or more women on the management board, supervisory board and among authorized company representatives. There was also one company in 2019 whose credit rating was estimated as C1, which means that there was an above-average probability that it will face default risk in payment.

In 2018, there were 16 companies among the 483 joint-stock companies and limited liability companies included in the sample that were classified in section J (Information and communication) according to their economic activities. Among them, 7 companies were joint-stock companies in their legal structure and the remaining 9 companies were limited liability companies. In total, 112 people were identified as members of management boards and supervisory boards. Among them, there were 30 women who were in managerial position in the analysed IT companies, whereas the number of men in executive positions in this profession was significantly higher and it amounted to 82. In percentages, the share of women on supervisory boards of IT companies was 26.79%, while the share of men was 73.21%. Therefore, it may indeed be concluded that the glass-ceiling phenomenon is largely present in IT companies according to the analysis for 2018. Women in managerial positions in IT companies accounted for 1.13% of all executives in the analysed joint-stock companies and limited liability companies, whereas men's share was 3.09%.

In 2019, there were improvements in terms of female representation in managerial positions. There were 20 IT companies among the 772 joint-stock companies and limited liability companies included in the sample. Among these 20 companies, 7 of them were joint-stock companies, whereas 13 of them were limited liability companies. The total number of members of the management boards and supervisory boards of the 20 analysed IT companies was 59, including 21 women and 38 men. According to this, the share of women in executive positions in IT companies was 35.59%, while the share of men was 64.41%. When the analysis for 2019 is taken into account, it becomes clear that executive positions are predominantly held by men in IT companies as well. However, the data indicate that the share of women had increased in comparison to the previous year. Taking into account joint-stock companies and limited liability companies covered by this study, women accounted for 0.87% of executives, while the share of men was 1.57%.

5. Conclusion

The status of women in companies has changed over the years and is still incessantly changing. Although women started fighting for their rights decades ago, i.e. at the end of the 19th century, this fight is still going strong today. Nonetheless, women are fighting for a different type of rights today, including equal employment opportunities, equal status in companies, as well as equal pay for equal work. Despite their advanced competences and better education than men, women are still underrepresented in senior positions within companies. What accounts for this situation is the so-called glass ceiling phenomenon? Namely, there is an invisible barrier in a company hierarchy beyond which women simply cannot raise, often not even being conscious of its existence. Apart from this phenomenon, women are discriminated against with respect to their pay, which is evident from the data provided by the Croatian Bureau of Statistics, the European Commission, and the European Institute for Gender Equality. Previous research reveals that the glass ceiling phenomenon is still present both in the Republic of Croatian and abroad.

The analysis presented in this paper leads to the conclusion that in 2018 in the Republic of Croatia there was an unequal distribution of men and women in executive positions in the companies covered by the analysis. In all the analyzed joint-stock companies and limited liability companies the percentage share of men on management boards, supervisory boards and among authorized company representatives is 76.71%. In the same executive position, the share of women is significantly lower, i.e. they account for only 23.29% of executives. Additionally, the most radical unequal distribution of men and women is evident in the position of authorized company representative, where the ratio of women is six times lower than that of men. Similarly, the share of women on management boards and supervisory boards is about the same. More precisely, the ratio of women on management boards and supervisory boards is three to four times lower than that of men. From all this, it can be concluded that in 2018 the glass ceiling phenomenon exists and is present to a very high degree.

Very similar results were obtained in the analysis for 2019. Thus, the share of men on supervisory boards and boards of directors was 76.78%, while women held 23.22% of the same managerial positions in all of the analysed joint-stock companies and limited liability companies. The number of women on supervisory boards and boards of directors was also three to four times lower than the number of men in the same positions. After interpreting these results, it was concluded that the representation of women in executive positions had not increased and the glass ceiling phenomenon persisted in the analysed companies in the Republic of Croatia. Nevertheless, it is noteworthy that female representation at least remained at the same level compared to the previous year and it had not declined below that percentage.

Company performance is tightly connected with the representation of women in executive positions. According to the total revenue criterion in 2018, the more successful joint-stock companies are those with at least one woman on the supervisory board, while the less successful ones are the joint-stock companies with one or more women on the management board. In the case of limited liability companies, according to the criterion of total revenue, the significantly more successful companies are those with two or more women on the management board and supervisory board. Furthermore, considering the profit in the accounting period, the more successful joint-stock companies are those with one woman on the management board, and with two or more women on the supervisory board. According to the same criterion, the more successful limited-liability companies are those with one or more women on the management board, and with one woman on the supervisory board. The analysis conducted for the purposes of this paper leads to the conclusion that joint-stock companies with one woman on the management board, supervisory board and among authorized company representatives suffer lesser losses. Similarly, the limited liability companies that suffer lesser losses are those with two or more women on the management board and supervisory board.

According to the criterion of total revenues in 2019, the joint-stock companies with at least one woman on the board of directors and two or more women on the supervisory board were more successful than the companies with one woman on the supervisory board. When it comes to limited liability companies, the results show that the companies with two or more women on the board of directors and supervisory board were more successful than the companies with just one woman in a managerial position. According to the criterion of profit, the more successful companies were those with one, two or more women on the board of directors and two or more women on the supervisory board. Furthermore, limited liability companies with one, two or more women on the supervisory board and two or more women on the board of directors were more successful according to the criterion of profit. A comparison of the companies based on the criterion of losses leads to the conclusion that companies with two or more women on the supervisory board suffered lower losses.

Based on the data for 2018 and 2019, it may be concluded that the glass ceiling phenomenon is pervasive even in IT companies. In 2018, female representation on boards of directors and supervisory boards of IT companies stood at 26.79%, whereas male representation stood at 73.21%. In other words, women in managerial positions in IT companies accounted for 1.13% of all members of the analysed joint-stock companies and limited liability companies, while men accounted for 3.09%. The next year, the glass ceiling phenomenon was still present, but to a lesser extent. Thus, the share of women in managerial positions in IT companies stood at 35.59%, while men's share stood at 64.41%. In the same year, women accounted for 0.87% of all members of the analysed joint-stock companies and limited liability companies, whereas men accounted for 1.57%.

What is more, in both analyzed years, there is connection between credit ratings and the representation of women in executive positions. The majority of the analyzed joint-stock companies and limited liability companies with better credit ratings are those with one or more women in managerial positions. In conclusion, considering the criteria of average profits, revenues and losses in the accounting period and credit ratings, the more lucrative companies are those with one or more women in managerial positions.

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