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Women in the ICT Sector in European Union States: Facing Gender Inequalities

Abstract

This paper aims to investigate the patterns of gender inequalities in the Information and Communication (ICT) sector in European Union (EU) countries. Based on secondary data from Eurostat, a cluster analysis has been conducted to identify clusters of EU countries with various patterns of dependencies among the gender pay gap, female entrepreneurship, and employment in the ICT sector. Three clusters of EU countries have been identified with different patterns of the situation as regards women in this sector. In countries belonging to the first cluster, a higher level of gender pay gap coexists with the lowest share of female participation in the ICT sector and features the choice of entrepreneurship rather than employment. In countries of the second cluster, the lowest gender pay gap is observed together with an increase in female employment in the ICT sector as compared to the countries in the first cluster, and a higher share of employed women than entrepreneurs. In the countries of the third cluster, the moderate gender pay gap found therein is associated with the highest share of female ICT entrepreneurs, and is higher than the share of employed professionals. The discovery of the various patterns of the co-existence of the gender pay gap and women's participation in the ICT sector reveal that the pay gap is rather the factor preventing women from entering this sector, as there is limited potential to push them towards entrepreneurship instead of paid employment. The authors' results contribute to the theory

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of entrepreneurship and gender studies by investigating gender gaps in entrepreneurship and wages in the ICT sector as a primary sector.

Keywords: ICT Sector, Primary Sector, Gender Inequalities, Gender Pay Gap, European Union, Cluster Analysis

Introduction

Significant progress has been made in women's empowerment and in reaching gender equality. However, some gender inequalities in terms of wages and access to certain sectors or positions still exist (Soare et al., 2022; Coron, 2020). Women tend to be underrepresented in primary sectors with higher earnings and better career opportunities, while being overrepresented in secondary sectors with lower pay and fewer perspectives of professional development (Gaweł, Mroczek-Dąbrowska, 2022; Kapsdorferová, Jacková, Švikruhová, 2021; Agrawal, 2021; Damelang, Ebensperger, 2020; Aidis, Weeks, 2016). Women often face a gender-based wage gap which cannot be explained by differences in education and work experience, but rather by existing pre-entry discrimination related to social and cultural contexts, which reduces the accumulation of the human capital of women (Arrazola, de Hevia, 2018).

Today, the ICT sector is a primary labour market sector which shapes all aspects of human activity as the driving force of digitalisation. The significance of digital transformation places a premium on the interplay between genders within the ICT sector. Looking at data which has been published by Eurostat, the statistical office of the European Union (EU), the ICT sector is male-dominated, with the percentage of women among ICT entrepreneurs ranging from 12.2% to 32.6% (ec.europa.eu, 2024a), and the percentage of women among employed professionals from 17.4% to 23.6% (ec.europa.eu, 2024b) in various EU countries in 2020. Although the ICT sector is known for being highly paid, the gender pay gap in it ranged from 10.8% to 30.4% (ec.europa.eu, 2024c).

The importance of digitalisation along with the diversity of gendered aspects in this sector among EU countries are the main justifications for this research. This paper aims at investigating the patterns of gender inequalities related to the gender pay gap along with female participation in employment and entrepreneurship in the ICT sector in EU states. Aligned with this goal, the authors adopted the theory of occupational choice, which considers the choice between working as an employee or operating as an entrepreneur as alternative forms of professional activity

(Banerjee, Newman, 1993; Bradley, 2016). The rationale of this research assumes that the gender pay gap in the ICT sector, as an expression of gender discrimination, could prevent women from entering the sector entirely, or could even push them to undertake entrepreneurship as an occupational choice alternative to paid employment to prevent discrimination. To address the aim of the paper, a cluster analysis of data on EU countries was conducted to find different patterns of dependencies among the gender pay gap, female entrepreneurship, and employment in the ICT sector among EU countries.

The remainder of the paper is structured as follows – firstly, the authors discuss a literature review on gender inequality, with especial focus on the ICT sector. Then, they present the research method and results, and, finally, conclude by focusing on their results and highlighting those results' implications and novelty.

Women in the ICT Sector – Searching for Gender Equality

Belief in equal rights and access to opportunities and resources for all is an essential foundation for female empowerment, and one which contributes to significant progress in reaching gender equality (Freeman, Svets, 2022). Gender equality acknowledges that every individual, regardless of gender, deserves fair and equitable treatment and that society as a whole benefits when all members can participate fully and equally.

Despite the improvement made towards gender equality, numerous countries and sectors still experience a great deal of gender inequality (Bilan et al., 2020; Madsen, Scribner, 2017; Alsos et al., 2016), highlighting the persistent challenges that need to be addressed. One of the most notable issues is the gender wage gap (Coron, 2020; Ravazzini, Chesters, 2018; Lips, 2013; Khoreva, 2011), observed despite equal pay for work of equal value being one of the core values in modern societies (Amado, Santos, São José, 2018). The gender-based wage gap refers to a disparity in earnings between men and women, with women consistently earning less than their male counterparts for performing similar work (Sköld, Tillmar, 2015). The continuing separation of roles into so-called 'female' and 'male' responsibilities is also evident from the fact that 25% of women work part-time, compared to only 8% of men (Tokbaeva, Achtenhagen, 2021). The persistence of the gender wage gap underscores the deep-rooted biases and structural inequalities that continue to hinder women's economic empowerment.

Another area of gender inequality is female underrepresentation in power positions, including senior managerial positions, parliament

members, or entrepreneurship, with a significant gender gap in entrepreneurship persistent over time and space (Hagg, Politis, Alsos, 2023; Lewellyn, Muller-Kahle, 2020; Ughetto, Rossi, Lehmann, 2020; Lopez-Nicolas et al., 2020; Hernik, Minguez, 2020). Despite an increasing presence of women in the workforce with their equal qualifications and capabilities, they continue to encounter challenges in accessing top leadership roles. The exclusion of women from positions of political power also undermines the democratic principles of equal representation and participation, thereby hindering the implementation of inclusive and equitable governance.

The gender gap in entrepreneurship, despite a number of global initiatives and challenges, can still be observed in many countries of the world. It is caused by culture, religion, and various other social aspects (De Melo, Da Silva, De Almeida, 2019; Markussen, Roed, 2017). Women also face unique barriers when starting and scaling businesses. In European Union countries, women account for around 30% of entrepreneurs, while female-owned businesses are often smaller (Reichborn-Kjennerud, Svare, 2014), less profitable, and with lower access to financial capital (Morazzoni, Sy, 2022). Women with the potential to engage in entrepreneurial activities are deterred from entrepreneurship by limited access to financial resources or other reasons that prevent them from having equal opportunities (De Andrés, Gimeno, De Cabo, 2021; Parboteeah, Walter, Block, 2015; Avnimelech, Zelekh, 2023).

Little attention has been paid to the opportunity to target emerging technologies to match women's roles in processes in various contexts where the risk of gender gaps is overbearing and dangerous for social progress (Thylin, Duarte, 2019; Lafrenière, Sweetman, Thylin, 2019). Addressing the underrepresentation of women in senior management positions, politics or entrepreneurship is a vital step towards achieving gender equality by breaking down barriers, combating prejudice, and implementing inclusive policies.

The next aspect of inequality is related to gender representation in specific sectors, as men tend to be overrepresented in primary sectors characterised by the highest productivity and the best working prospects, while women tend to be overrepresented in secondary sectors that often offer limited opportunities for professional development (Gaweł, Mroczek-Dąbrowska, 2022; Kapsdorferová, Jacková, Švikruhá, 2021; Agrawal, 2021; Damelang, Ebensperger, 2020; Aidis, Weeks, 2016). Primary sectors, such as technology, engineering, finance, and high-end manufacturing, often dominated by men, are associated with higher salaries, career advancement opportunities, and positions of influence.

The underrepresentation of women in these sectors reflects a systemic barrier that limits their access to the benefits and rewards that come with working in the various fields of high productivity and economic growth. Conversely, women tend to be overrepresented in secondary sectors, which often offer limited opportunities for career advancement, lower wages, and reduced job security as compared to primary sectors. This overrepresentation reinforces the gendered division of labour, and is influenced by societal expectations, cultural norms, and systemic biases.

An example of a contemporary primary sector is the Information and Communication Technology (ICT) sector, which is not only a highly prosperous industry, but also shapes the way business and society function through the profound impact of digitalisation. The ICT sector encompasses a wide range of activities related to the development, implementation, and utilisation of digital technologies, including software development, telecommunications, data management, cloud computing, artificial intelligence, and more. The ICT sector's prosperity stems from its ability to offer transformative solutions, increase efficiency, and create new opportunities for economic growth. Organisations across industries rely on ICT technologies and services to enhance productivity, streamline operations, reach wider audiences, and tap into global markets. This sector not only generates significant revenue and employment opportunities but also fuels the emergence of new business models, entrepreneurship, and disruptive innovations. With changing demands, regulations, and significant pressure, work needs have increased tremendously in today's competitive age, leading to intensifying work/life balance challenges. The ICT sector is no exception in this sense, and responds to these challenges by engaging in initiatives such as work flexibility, compressed workweeks, job sharing, telecommuting, leave options, stress management, and child/dependent/elderly care, all in its attempts to attract more women into the sector (Phipps, Prieto, 2014).

Female Entrepreneurs and Specialists in Digitalisation

On the one hand, as digitalisation becomes increasingly pervasive, the ICT sector has the potential to empower individuals and marginalised groups and narrow socioeconomic gaps by providing access to information, education, and employment opportunities (Munyeka, Maharaj, 2023; Krchová, Höesová, 2021). On the other hand, the benefits and opportunities offered by the ICT sector are not equally distributed as gender disparities persist within the industry, with women being underrepresented in technical roles and positions.

The development of the ICT sector and the digitisation of its outputs can affect female entrepreneurship both directly and indirectly. It is essential to understand the implications of these changes, as they can shape the opportunities and challenges faced by women in the realm of entrepreneurship. A direct impact can be observed in the share of female entrepreneurs in the ICT sector, but the rationale for such changes is contradictory and rather pessimistic. Despite the potential for women to thrive in the digital realm, various factors hinder their full participation and success. The gender gap in entrepreneurship is widespread in the science, technology and engineering sectors (Lechman, Popowska, 2022; Hampton, McGowan, Cooper, 2011), and the ICT sector (Tihlarik, Sauer, 2021), and is sustained by the underrepresentation of women among ICT workers, as well as among graduates of STEM and ICT education at the university level (Lechman, Popowska, 2022; Kvasny, Trauth, Morgan, 2009). It is believed that the gender gap in employment in high-tech sectors is even widening (Lechman, Popowska, 2022). Indeed, gender biases and stereotypes persist within the tech industry, resulting in the overrepresentation of men in technical roles while discouraging women from pursuing entrepreneurship in the ICT sector.

In another aspect, the digital gender divide has also been recognised (Pawluczuk, Lee, Gamundani, 2021; Yeganehfar et al., 2018), as women's access to digital technologies and use of ICT is limited. Restricted access to digital infrastructure, digital literacy gaps, lacks of confidence in utilising technology, and cultural biases hamper women's ability to fully participate in the digital economy and take advantage of business opportunities in the ICT sector. The indirect impact of the ICT sector may be related to the process of digitalisation itself, which has already been heralded as an enabler of female entrepreneurship (Martin, Wright, 2005). The transformative process of digitalisation refers to the conversion of businesses into digital formats, which opens new possibilities for female entrepreneurs, lowers entry barriers, and provides women with greater access to markets and customers. Digitalisation is believed to make running businesses more genderless (Gaweł, Mińska-Struzik, 2023; Leong et al., 2022; McAdam, Crowley, Harrison, 2020; Yeganehfar et al., 2018; Ameen, Willis, 2016), transcending traditional gender roles and biases. It is shaping a new business culture and influencing the rise of women entrepreneurs online (Steel, 2021; Ughetto, Rossi, Lehmann, 2020) by democratising access to resources and removing traditional barriers to entry and fostering a culture of collaboration, knowledge sharing, and community building among female entrepreneurs. The gender gap in STEM higher education can be mitigated by the importance of self-

directed learning in ICT work rather than formal education in this field (Lemmetty, Collin, 2020).

With these contradictory premises in mind, the authors aim to recognise the patterns of gender inequalities in the ICT sector from the perspective of female participation in entrepreneurship and employment in this sector together and the existing gender pay gap to find different patterns of their co-existence at the macro-level of European Union countries.

The Research Method and Results

To achieve the purpose of the article, the authors adapted open-access data published by Eurostat, the statistical office of the European Union (EU). According to the system of NACE Rev.2 of the statistical classification of economic activities in the European Community, the Information and Communication Technology (ICT) sector is classified as NACE J, and all the data used in this paper reflect the situation in that sector. The year 2020 was accepted as the reference period for two reasons, both due to the technical availability of data for as many EU countries as possible, and because of the strong disruption of the ICT market caused by the pandemic and rapid digitalisation resulting from restrictions on personal interactions in favour of digital interactions. The pandemic brought about rapid growth of the ICT industry. As an example, the increase in the number of entrepreneurs operating in ICT alone stood at 8.3% in 2021 as compared to 2020. However, such changes are caused by external shock, not internal economic processes, and may thus bias the assessment of interactions.

Being aware of the diversity of concepts and definitions of entrepreneurs (Szaban, Skrzek-Lubasińska, 2018), the authors operationalised entrepreneurs as all self-employed persons, both with employees (employers) and without employees (own-account workers), similar to Chowdhury et al. (2015). Looking at the dynamics of entrepreneurs in the ICT sector in 27 countries of the European Union between 2008 and 2020 (fig. 1), some specific tendencies can be observed. One can observe that the total number of entrepreneurs operating in the ICT industry was systematically growing, from 681,700 in 2008 to 883,400 in 2020, which gives a total increase in the number of entrepreneurs by 29.6%. The number of female entrepreneurs in the ICT sector is also growing, but the increase in their number was much smaller at 13.5%, from 136,300 in 2008 to 154,700 in 2020. During that period, the share of women among entrepreneurs in the ICT industry decreased from 19.99% in 2008 to 17.5% in 2020, with the lowest share of women (16.45%) being recorded in 2018.

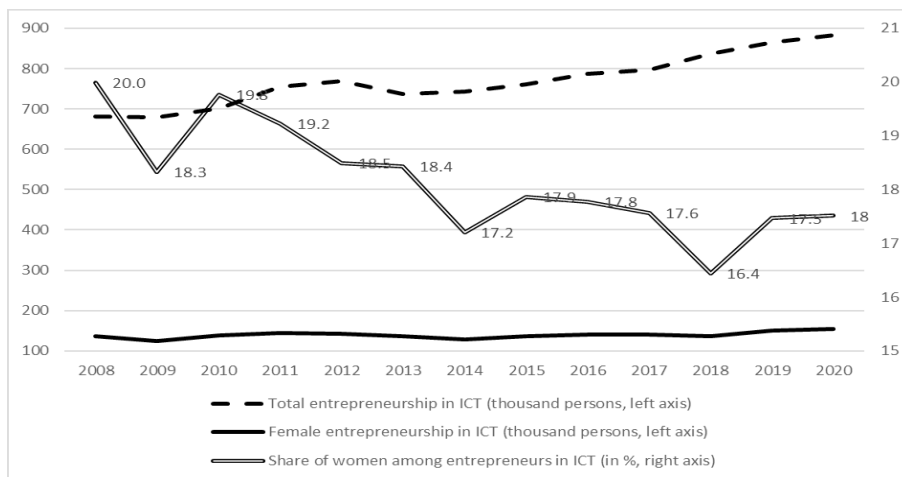


Figure 1. Entrepreneurs in the ICT Sector in the 27 European Union Countries in the Years 2008–2020

Source: the authors’ own estimations based on data from Eurostat.

Similar tendencies can be observed when employment in the ICT sector in EU countries is analysed (fig. 2). Despite the growth in the number of employed specialists, from 5,000,000 persons in 2008 to 6,600,000 persons in 2020, the share of women among them decreased from 33.6% in 2008 to 30.1% in 2020.

The decreasing share of women in the ICT sector in the EU, both in employment and entrepreneurship, can be attributed to a combination of factors, including gender pay gaps, gender inequalities, educational barriers, and limited participation in high-technology positions.

To investigate the gender inequalities in this sector, the authors initially intended to include data for all EU countries in the analysis, but recognised a certain paucity of data on female entrepreneurship in ICT in some countries. Based on data availability, the authors analysed 16 EU Member States (Austria, Belgium, Croatia, Czechia, France, Germany, Hungary, Italy, Lithuania, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, and Sweden) in 2020.

To recognise the problem of gender inequalities in the ICT sector, four measures were initially analysed. The details of their measurement and descriptive statistics are presented in Table 1. First, female entrepreneurship in the ICT (FEinICT) sector was analysed, and, bearing in mind an average of 19.5% of women among ICT entrepreneurs, the lowest share was observed in Poland (11.2%) and the highest in Croatia (32.6%). The gender pay gap in this sector was on average 19%, with the lowest inequality noted in

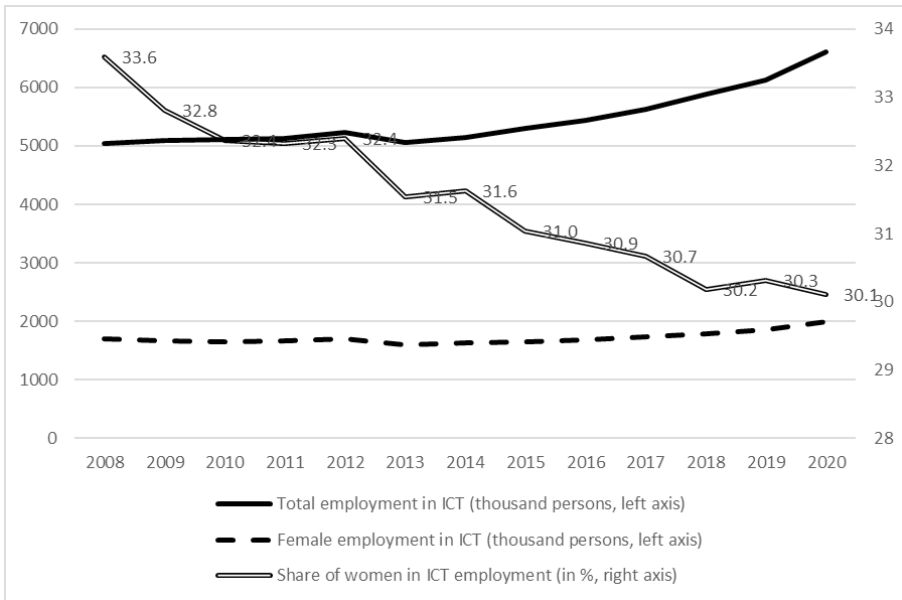


Figure 2. Employment in the ICT Sector in the 27 European Union Countries in the Years 2008–2020

Source: the authors' own estimations based on data from Eurostat.

Spain (8.6%) and the highest in Czechia (30.4%). Next, the share of women graduating in the ICT field of tertiary education in the total number of graduates was on average 0.7%, with the highest being in Sweden (1.6%) and the lowest in Belgium and Italy (0.3%). And finally, the share of women among ICT specialists was analysed (being on average 17.7%), with the lowest found in Czechia (10.3%), and the highest in Lithuania (23.6%).

The differentiation of the analysed countries of the EU was the justification for grouping the countries into clusters. The authors implemented a cluster analysis to group the countries into clusters in order to find groups of countries with similar characteristics within a cluster while being different from other clusters. The k-means clustering method was used, with the number of clusters determined by Ward's minimum variance technique, assuming a p-value significance level of $p < 0.05$ is reached. During the process of estimations, the share of women graduates (FGinICT) was statistically insignificant in the clustering and, consequently, this measure was excluded from the final analysis. Based on three other variables, the authors identified three clusters of EU countries, representing different characteristics of the female situation in the ICT sector (details in Table 2 below).

Table 1. Variables’ Operationalisation and Descriptive Statistics for 16 EU Countries in 2020

Acronym	Variable explanations	Mean	Standard Deviation	Minimum value	Maximum value
FEinICT	Female entrepreneurship in the ICT sector; share of females aged 20–64 in the total number of entrepreneurs (self-employed both employers, with employees, and own-account workers, without employees) in the ICT sector NACE J (in %)	19.5	3.4	11.2 (Poland)	32.6 (Croatia)
PGinICT	Gender pay gap in the ICT sector in unadjusted form (in%)	19.0	1.2	8.6 (Spain)	30.4 (Czechia)
FGinICT	Share of female graduates in tertiary education in the field of ICT in the total number of graduates (%)	0.7	0.9	0.3 (Belgium, Italy)	1.6 (Sweden)
SFinICT	Share of females among employed ICT specialists (%)	17.7	2.8	10.3 (Czechia)	23.6 (Lithuania)

Source: the authors’ own estimations based on data from Eurostat.

Table 2. The Mean Value of Variables and Between and Within Cluster Variance for 2020

Variable	Between clusters	df	Within clusters	df	F-value	p-value
FEinICT	318.945	2	206.990	13	10.016	0.002
PGinICT	505.195	2	290.169	13	11.317	0.001
FSinICT	87.905	2	86.525	13	6.604	0.010

Source: the authors’ own based on data from Eurostat.

Descriptive statistics of clusters as mean values and standard deviation, as well as the countries belonging to them, are presented in Table 3. Cluster#1 is characterised by the highest gender pay gap in the ICT sector, resulting in the lowest female representation among ICT specialists and moderate representation among entrepreneurs. Cluster#2 is marked by the lowest gender pay gap, together with the moderate share of women among ICT specialists and the lowest among entrepreneurs. Cluster#3 represents a moderate level of the gender pay gap, as well as the highest share of female entrepreneurs and a moderate share of female specialists.

Table 3. Descriptive Statistics of Clusters

Variable	Cluster #1 (N = 5)		Cluster #2 (N = 6)		Cluster #3 (N = 5)	
	M	SD	M	SD	M	SD
FEinICT	16.601	3.321	16.381	3.112	26.111	5.349
PGinICT	26.720	2.553	13.167	4.468	18.220	6.408
FSinICT	14.200	2.897	19.333	1.558	19.160	3.194
Countries	Czechia, Germany, Hungary, Poland, Slovakia		Austria, Belgium, France, Netherlands, Spain, Sweden		Croatia, Italy, Lithuania, Portugal, Slovenia	

Note: M – mean value, SD – standard deviation.

Source: the authors’ own estimations based on data from Eurostat.

Typically, EU countries are classified based on the so-called “Iron Curtain”, a physical wall which divided Europe until 1989. Western countries are considered as so-called “old” EU members, with a relatively higher level of economic development, while Central and Eastern European countries are considered “new” EU members, entering the EU from 2004 onwards. However, as regards the female situation in the ICT sector, this typical division is not valid, as both Western and Eastern European countries belong to all three clusters. It can be assumed that other institutional factors, for example, national culture or labour market culture, can explain the division of countries in the context of the ICT sector, but it requires in-depth research.

To better visualise the differences among clusters, their mean values of all measures are presented in Figure 3 below.

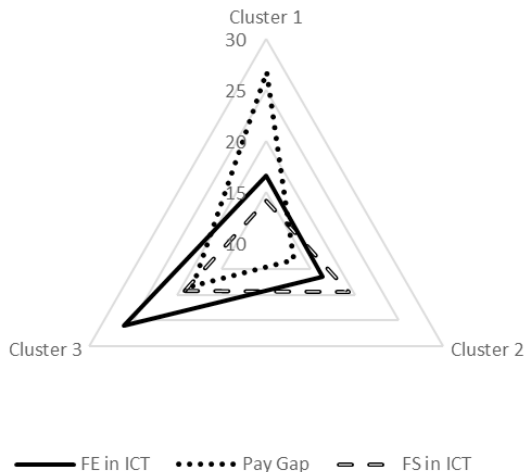


Figure 3. Visualisation of the Clusters’ Characteristics

Source: the authors’ own estimations based on data from Eurostat.

The Results and Discussion

Based on cluster analysis, three clusters of EU countries were identified, showing different patterns of dependencies among the gender pay gap, and female entrepreneurship and employment in the ICT sector. These clusters shed light on the diverse dynamics and contextual factors that shape the experiences of women in the workforce across different regions of the EU. The characteristics of all the clusters of the EU countries confirm the existence of gender disparities (Bilan et al., 2020; Madsen, Scribner, 2017; Alsos et al., 2016).

In the first cluster of EU states, a higher level of gender pay gap coexists with the lowest share of women's participation in the ICT sector; the share of female professionals in the ITC sector is the lowest. However, a shift towards entrepreneurship is also observed as the average share of female entrepreneurs is higher than the share of employed specialists. In this cluster, the representation of female professionals in the ICT sector is notably low compared to the other clusters, reflecting a persistent gender disparity in the industry.

The second cluster of states has the lowest gender pay gap, which has led to an increase in the involvement of female professionals in the ICT sector as compared to the countries in the first cluster. The relatively lower wage gap in the second cluster of countries is associated with a higher share of employed women in comparison to self-employed women. In the countries in the third cluster, the gender pay gap is moderate, resulting in the highest share of female ICT entrepreneurs among all these clusters. In this cluster, female entrepreneurship is the highest among all clusters and higher than the share of employed professionals.

The authors' cluster analysis allows for cross-cluster comparisons and the identification of best practices and lessons learned. In all the clusters, there exists a gender pay gap in the ICT sector, with the highest level being in cluster #1, which is in line with the observation of persistent inequalities (Coron, 2020; Ravazzini, Chesters, 2018). The results confirm that in the case of the countries belonging to cluster #1, the highest gender pay gap is the expression of gender discrimination and prevents women from entering the ICT sector, regardless of the form of activity. In this cluster, the highest pay gap co-exists with the lowest share of female specialists and a low share of female entrepreneurs. The identification of this cluster of countries is also in line with the observation of the existence of pre-entry discrimination, related to social and cultural contexts, and reducing the accumulation of human capital of women (Arrazola, de Hevia, 2018).

Analysing the descriptive statistics of clusters #2 and #3, the gender pay gaps within the second and third clusters are significantly lower than in the first cluster, which suggests that efforts have been made to mitigate gender-based wage disparities in the related countries, confirming the progress in gender equality (Freeman, Svets, 2022). While not eliminated, the narrowing of the pay gap indicates progress in promoting equal compensation for equal work, thereby creating a more equitable economic landscape for women. As a result, more women are motivated to explore entrepreneurship to leverage their skills, creativity, and potential within the ICT industry. We can also observe that the higher gender pay gap in cluster #3 results in a higher level of female entrepreneurship in this cluster compared to cluster #2. In the case of these two clusters, the gender pay gap is a factor affecting the form of women's occupational activity from paid work towards entrepreneurship while, at the same time, contributing to the theory of occupational choice (Banerjee, Newman, 1993; Bradley, 2016). This shift towards entrepreneurship can be seen as a response to the barriers and inequalities faced by women in the ICT sector.

The factors shaping women's experiences in the ICT sector across different regions of the EU, resulting in different clusters of countries, also indicate policy implications. The reduction of the gender pay gap is of the highest importance in countries belonging to cluster #1, and can be achieved by implementing policies and practices that promote pay transparency, equal pay for equal work, and the elimination of gender-based discrimination in the workplace. Due to the fact that entrepreneurship can be an answer to gender inequalities in the ICT sector, it is recommended that female entrepreneurs are supported in all clusters through targeted initiatives, such as access to funding, mentoring programs, and networking opportunities.

The results of the research point to the insufficient representation of women in the ICT sector, but it is also necessary to deal with the reasons why this difference exists. One of the key causes contributing to gender inequality in the ICT sector, as discussed in the literature, is the gender gap in education for technology (Lechman, Popowska, 2022; Kvasny, Trauth, Morgan, 2009). Indeed, data on the share of female graduates in tertiary education in the field of ICT in the total number of graduates (%) presented in Table 1 reveal this gender gap as well. However, during the cluster analysis, this measure was not a factor statistically significant in clustering, meaning that it does not explain the differentiation of the EU countries involved. Such results can be interpreted in line with the observed importance of self-directed learning in ICT work rather than formal education in this field (Lemmetty, Collin, 2020).

To improve gender equality in the ICT sector, it is crucial to deal with gender stereotypes and to address, *inter alia*, the impact of technology-adoption decision-making processes; the role of ICTs in promoting gender equality; the influence of board gender diversity in high-tech firms; and the impact of technological change on gender inequality in the workplace. Additionally, gender diversity initiatives and workplace experiences should be considered as regards the promotion of inclusivity and equality in the ICT sector. Furthermore, reforming recruitment practices and integrating ICTs more efficiently into society can contribute to promoting ICT-sector-based gender equality. Addressing these issues requires a multifaceted approach that encompasses changing stereotypes, promoting positive role models, providing support for women in ICT, and addressing societal and cultural barriers. EU gender equality policies have led to the adoption of provisions promoting formal gender equality and the integration of women into the labour market. However, it is important to note that not all EU gender-related policies have been aimed at promoting equality but have been associated with reforming the EU social model towards more neoliberal, flexible, and high-employment labour markets (Lemeire, Zanoni, 2021; Rubery, 2015).

This study is limited by its focus solely on EU countries, so further research could also take into account patterns of gender inequality in other parts of the globe. Next, the authors conducted a cluster analysis based on data for 2020 to avoid any potential bias caused by the impact of COVID-19 on the development of the ICT sector. It is worth repeating the research and comparing the results in a few years' time when the impact of digitalisation fostered by the pandemic is internalised by the ICT sector. Due to the fact that the authors have analysed the situation from the macro-level perspective, further investigation could reflect the personal perspective of women operating in the ICT sector.

To sum up, gender inequality in the ICT sector is present in EU countries, with significant variation between states. Inequalities exist in both the gender pay gap and the underrepresentation of women among specialists and entrepreneurs operating in the ICT sector. European Union states exhibit various patterns of the co-existence of different aspects of gender inequalities in the ICT sector, with the pay gap rather being the factor preventing women from entering this sector with its limited potential to push women towards entrepreneurship instead of paid employment.

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