WOMEN FRIENDLY DigitalWay

Report on Digitalization and Female Labour Force in Tourism and Manufacturing Sectors in Türkiye

WOMEN FRIENDLY DIGITAL WAY: REPORT ON DIGITILIZATION AND FEMALE LABOUR FORCE IN TOURISM AND MANUFACTURING SECTORS IN TÜRKİYE

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PREFACE

The United Nations Development Programme (UNDP) Strategic Plan of 2022-2025 lists “development financing”, “strategic innovation” and “digital transformation” as three key factors that holistically facilitate human development. UNDP’s most recent and third Gender Equality Strategy of 2022-2025 notes that “the enormous power of digital transformation may help bridge gender gaps.” There is however a looming threat of widening “digital gaps” referring to the difference between men and women in skills, assets and access to technology.

Increasingly growing as a key facilitator and driver of the development process, digital transformation on one hand signifies a risk that women may lag in human development and benefitting from the outcomes of development due to the gender digital divide disfavouring women, and radically reshapes on the other hand both economic and civil life and offers a window of opportunity for policies to enhance gender equality. Digitalization may result in big losses or big gains for gender equality. This view starkly lays down a definition of significant responsibility for development policy actors: Digital transformation should, if it is ever to take us to an equal and fair future, be managed in a perspective that encompasses women, meeting their specific needs and empowering them socially and economically. To develop women-friendly digital transformation policies, it is necessary to create information based on data on how and where gender inequalities interact with digital transformation processes by societies and sectors, and develop a common understanding on the solutions.

The report “Women Friendly Digital Way: Digitalization and Female Labour Force in Tourism and Manufacturing Sectors in Türkiye” was prepared to take a first step to respond to such need for developing women-friendly digitalization policies. The report inquires, based on field observations and experience, what analytical framework a women-friendly policy in the digital

transformation of SMEs should refer to, and which key foci and means it should hold. The report endeavours to present in a more clear and legible manner the complicated picture created both by the multi-dimensional, multi-layered structure of the digital transformation and its dynamics varying by sectors, and by the styles of self-construct and self-expression of gender equality which may take up various forms in various contexts.

What does the experience of SMEs in the manufacturing and tourism sectors in Türkiye tell us about digital transformation and gender interaction, what needs does it point out that digital transformation policies should address to improve gender equality? Around what questions can we address this matter?

Let's get started then!..

McKinsey & Company predicts in "Future of Work: Türkiye's Talent Transformation in the Digital Era" (2020) that in Türkiye, with the current technologies, six out of ten occupations could be automated by 30 percent by 2030. This change will render obsolete repetitive work activities and data collection and processing, while jobs based on human interaction and management activities will sustain. Automation, artificial intelligence and digital technologies will transform certain jobs as well as creating new ones. Accordingly, 7.6 million jobs will be lost and 8.9 million new jobs will be created by 2030. It is estimated that 1.8 million jobs could be created in occupations that currently do not exist, particularly in technology-related sectors, such as digital service designers, sustainable energy experts, cybersecurity specialists, and AI-assisted healthcare technicians.

One should better keep in mind in looking at this picture that men and women do not possess the same skill sets, and occupations and jobs are not identically distributed. Occupational areas of men and women are segregated, sometimes to such high degrees in some jobs and occupations hence the phenomena of "feminization" or "masculinization" of labour. Such segregation may be vertical or horizontal. The former type leads to gender-based hierarchies in gender-intensive jobs, but the latter does not. One way to understand the gender extent of such change is to examine how technological change, innovations and digital transformation affect such feminized or masculinized jobs individually, whether deepen or add new issues or fields of segregation to the already existing gaps.
Such big change where upon the onset of digital transformation, new enterprises and job descriptions emerged, new skills started to rise, enterprise organization and operations were restructured also created opportunities to roll back gender gaps and inequalities. McKinsey & Company's global projection of 2019 predicted that with the impact of automation of jobs, 10 to 160 million women would have to change jobs by 2030, and if they were successful in changing jobs, they could have more productive and better paid jobs than before. Critical for such transition would be the rapid closing of gaps in skill sets (STEM, technology, ICT) demanded by better jobs.

It is known that gender-based segregation and inequalities exist in STEM and ICT, as areas brought to the foreground, in terms of both education and employment, implying women's smaller presence than men. Women in Türkiye have a share of 35 percent in jobs based on STEM skills, 23 percent on ICT skills, and 10 percent on technology skills. In addition, while 36 percent of women receive education in STEM, only 10 percent land jobs based on technology. It is expected that the digital transformation will be accompanied by a large increase in the number of jobs based on ICT skills and stronger status for such jobs. Such jobs will make up a considerable portion of decent jobs by strong demand for such skills, competitive wages and secure employment conditions. McKinsey & Company's projections of 2030 for Türkiye

indicate that the demand will increase by 63 percent for technological skills including basic digital skills, scientific research, technological design and advanced data analysis.

Furthermore, OECD data (2018) suggest that the gender pay gap tends to fully disappear for workers of similar skill levels in digital-intensive jobs in Türkiye. Accordingly, this will have positive impact on reducing women's unequal access to ICT skills, increasing their presence in ICT jobs, growing share of women in employment rates and decent jobs, and reducing gender pay gaps. Digitalization may create dynamics where men's representation grows further women's in the relevant specialties, practices and management to the extent they involve use of new technologies. It is observed that men have an overwhelming majority in technical and technology-related jobs regardless of skill levels and the identity of such occupations and workplaces represents a masculine character. Therefore, purposeful and systematic promotion of women's presence in technical and technology-related jobs and skills emerging in parallel with digitalization will help prevent the emergence dynamics that exclude women from such areas, and creation of sexist stereotypes, occupational cultures and identities.

Another expected result of digitalization at enterprises is that while ICT-based jobs are on the rise, some jobs disappear and some others undergo change in definitions of competence to require new and technology-related skills. The labour-saving effects of digital technologies will categorically reduce women's employment in such feminized jobs as office services, sales, restaurants and accommodation. Where digital transformation increases worker productivity, the need will arise that new skills should be acquired to work with digital methods and tools. To prevent all such effects collectively from resulting in increases in job losses and inequalities for women, it is necessary to structure re-training, re-skilling and up-skilling programmes on the basis of gender-disaggregated data, analysis and women's empowerment in employment.

Another trend associated with the digitalization in the world of work and enterprises arises in the "future forms of work". Forms of work in digital medium and supported by digital means offer various opportunities for some jobs in terms of flexibility in the organization of work by time and space. In this framework, the outcomes for men and women of emerging flexible forms of work in respect of gender dynamics and work-life balance. Flexibility may help women meet domestic unpaid work, expected more of women than of men, and avoid work-life conflict. However, the blurring of boundaries delineated by time settings and spatial transitions between work and family or private life may lead to further reinforcement of gender roles and spatial segregation (masculinization of workplaces and feminization of remote working) and associated inequalities. Home working may arise as a new expression of patriarchal control over women. Therefore, it seems necessary to develop policies based on gender-awareness and data, careful, and centred on workers.

For entrepreneurship, new digital methods and tools may also have an impact that will distort the competitive process against small-scale enterprises because they are unable to access due to their limited resources and scales, and in some cases, help small-scale enterprises compete against large ones at more levelled field. It is important therefore to support small-scale enterprises discerning what effect is likely to apply to them. In the broadest sense, making digital services and technologies accessible will support gender equality in this area. In addition, it is essential to increase the number of women entrepreneurs in new occupations created by digitalization services and particularly in technological innovation and techno enterprises so that quality jobs can be created for women in the changing labour market.

It is necessary to address the functioning of gendered stereotypes in the management of digitalization at enterprise level. Sexist prejudices may result in a risk that digital transformation is perceived as a "technical and masculine" process, thus exclude women. Such risk is further augmented by male domination of ICT departments and tasks conspicuously observed in enterprise transformation processes. Indeed, involving women equally in the enterprise transformation teams that manage digitalization processes will improve women's representation in technology and shatter sexist stereotypes, and render the process more effective in the context of principles of diversity and participation as well as enhancing women's knowledge and skills on the matter and advancing their careers. Therefore, it is of critical importance that when forming such teams, the enterprise management and all various parties involved in the process prefer and encourage adequate women representation in such teams.

Of particular importance to Türkiye is the question of what gender equality means for the digitalization, economy of future and transition to work life, and how it can be managed. With female participation in the labour force fluctuating around 30 percent, female employment rates further lower, and increasingly rising female unemployment rates, Türkiye is among countries which most need to improve women's contribution and participation in the economy and derive highest benefits therefrom. Educated young women constitute the group with the highest unemployment rate in the economy. Gender wage gaps in the employed population are lowest for the group with high education and skills. Therefore, in transition to the economy future, key strategies to improve women's contribution to the economy and bridge the wage gaps include creating better jobs for educated women in competitive skills and high-status occupations. It is observed that the Turkish employment market has considerable skill mismatches which is likely to widen through green and digital transitions and may be further exacerbated by market rigidities based on occupational segregation by gender. This signifies that removing gender segregation in the labour market offers a serious opportunity to improve market efficiency and economic productivity. Furthermore, women's economic empowerment will advance the goals of holistic development and prosperity through solving the problems of income distribution and prosperity caused by gender-based job and income gaps as well as higher participation and effective distribution to jobs of female talents in the economy. What venues does digital transformation open to us seizing such opportunities?

Prepared as a result of the field work to analyse the gender dimension of digitalization in tourism and manufacturing sectors, this report aims to enrich the key debate in the literature on digitalization and women's economic empowerment, examine localization by sectors, and accordingly formulate policy recommendations. In this context, it reviews gender segregation in occupations and jobs in sectors, presents digital transformation trends and outcomes in feminized and masculinized occupations by cases from the field work, and identifies the potential problems that small-scale enterprises may encounter in digital transformation.

The report underlines that women's access should be improved to skills which will be in higher demand due to digitalization (STEM and ICT-based technological skills); for reshaping jobs along digitalization, re-training, re-skilling and up-skilling programmes should be formulated to advance the objectives of enhancing women's employment by quality and quantity, and eliminating gender segregation in occupations; equal access by women-owned enterprises to digital technologies and digital transformation services and support should be a special policy priority. Another priority relates to preventing visible and invisible sexist stereotypes, exclusive

occupational and workplace culture that stands as barriers to the access of women, as professionals and entrepreneurs, to digital skills and technologies. To implement such strategies, the underlying work also develops a highly rich list of recommendations that can be implemented in collaboration of a large group of stakeholders, government, regulatory and supportive organizations, private sector and civil society. It should however be kept in mind that this paper is a call to deeper work on research and policy development at the level of sectors, regions and enterprises rather than a final product of exploring and implementing women-friendly digitalization policies.

UNDP will continue to collaborate with all key partners in the field to enable the digital transformation process to bridge gender gaps in the economy, and facilitate data and document generation and relevant policies and practices in effective and fair management.

On behalf of UNDP Türkiye
Aslı Çoban, PhD
Gender Expert

INTRODUCTION

Although its footsteps started to be heard long ago, the impact of digitalization became more obvious both on the world of work and labour force during the COVID-19 pandemic. Remote working practices became popular with automation and digitalization, affecting closely all groups of workers. During this process, digitalization was the most important solution for enterprises which moved their operations online and applied smart working solutions to be able both to sustain their production and overcome setbacks experienced in supply chains (OECD, 2020). Although the use of digital technologies by SMEs across the world similarly intensified due to COVID-19, recent studies show that many SMEs are lagging far behind large-scale enterprises in terms of digitalization. Particularly, the level of digitalisation in smaller SMEs with 10 to 49 employees remains very low (OECD, 2020).

SMEs in Türkiye too were primary enterprises under risk during the COVID-19, and 30% of enterprises were temporarily closed down due to either lockdown measures or decrease in demand, which varied significantly by business line. It is therefore important to address the digital transformation needs of SMEs and the impact of digitalization on employees, particularly female employees, in order to improve the capacity of SMEs in terms of adaptation to risks and taking on new business models. Since SMEs loom large in female employment, it is necessary to analyse the meaning of digital transformation in terms of women's work and female labour force and to evaluate the direction of major changes that will emerge in the near future in respect of women and gender equality. It is therefore important to scrutinise what kind of outcomes do digitalization processes produce in terms of gender-based division of work and how these processes contribute to women working in managerial and non-managerial positions in enterprises in terms of their involvement in the enterprise management and to women entrepreneurs in terms of their careers.

The aim of this study is to address the impact of digital transformation processes in SMEs operating in the tourism and manufacturing sectors in Türkiye on the female labour force. Accordingly, the study was conducted in February-May 2022 to determine the level of digital transformation experienced by certain enterprises operating in the accommodation services sector in Kaş, Antalya and Nevşehir as well as in the manufacturing sector in Kocaeli and Tekirdağ and to analyse the outcomes of such transformation in terms of the female labour force. In this context, 17 interviews were held with Development Agencies, Chambers of Commerce and Industry, Administrations of Organized Industrial Zones, and relevant associations and persons, and 23 interviews were held with enterprises, including 12 from the tourism sector and 11 from the manufacturing sector. The question asked during these interviews were developed specifically for these two sectors, taking into consideration the Digital Way Platform Roadmap (2021) which was prepared in coordination with the General Directorate of Development Agencies of the Ministry of Industry and Technology and UNDP Türkiye for the analysis of digitalization steps of SMEs Among the further question asked were those approaching the impact of the digital transformation in enterprises on labour force as well as on women's work.

The findings from field studies shows that in both sectors, the capacity of digitalization is low to create transformation in gender-based division of work. Women's jobs in the sector are either such jobs as cleaning and caregiving that are similar to domestic jobs they undertake or jobs that are traditionally known as women's jobs and that are considered to be based on women's dexterity in textile and garment industries. Besides, jobs that require physical strength are automatically coded as men's jobs. Digitalization makes nearly no change in the existing gender-based division of work in the sectors. In addition to this, findings from research support that however, there is a higher correlation between digitalization and employment of educated, professional women and their representation in executive positions. Furthermore, digitalization may have a positive effect, even slightly, on female entrepreneurship activities.

The further sections of the report discuss these findings specifically for the two sectors.

1. DIGITALIZATION, GENDER EQUALITY AND WOMEN'S WORK: TRANSFORMATION, INDICATORS AND PROJECTIONS

Recent developments in female employment ensure women being more apparent in the labour market, while they elicit inequalities experienced by women in the labour market. Many studies show that there is a high gender-based gap between global female and male labour force participation rates (LFPR). The gender-based gap appears not only in LFPRs but also in various aspects due to gender-based division of existing jobs in the labour market. Gender-based division of work refers to that distribution of jobs between men and women is different as well as indicates that this segregation is based not only on workplaces but also on both professions and sectors. In such a segregation which divides jobs as women's jobs and men's jobs, some jobs, particularly that are recurrent, service-based and requires low qualifications are considered as women's jobs, while some others that require technical knowledge and physical strength are considered as men's jobs. This gender-based segregation also results in a gender wage gap between the wages paid to women and men as well as means that it is challenging for women to reach and be represented in executive positions, which are called as glass ceiling.

Since jobs in science, technology, engineering and mathematics (STEM) areas are dominated by men, women have long been drastically under-represented in such areas. It is known that today, female labour force in STEM areas accounts for only 28% (AAUW, 2022). Although the number of girls and boys studying in mathematics and science in early ages are almost equal, the number of girls, who opt for progressing in science and mathematics education, considerably decreases after secondary schools. Indeed, women are disproportionately behind men in all STEM-related sectors. One factor contributing to this is the preconception that science and mathematics areas are typically considered as men's area, while arts and humanities are more often considered as women's areas. This preconception not only affects people's perspective on women in these areas but also results in the probability of women to build their careers in these areas to remain low (ILO, 2019; OECD, 2018; UNWOMEN, 2019). OECD data shows that employees in the ICT sector are predominantly men and that the rate of women's existence in this sector can only be considered as marginal. One of the reasons that explain the employment based gender gap in the ICT sector is that, of the youth at 15 years old in the OECD countries, on average, 5% of boys

want to work in this sector, whereas the rate of girls is only 0.5%. The number of men who become engineer, scientist or architect is twice of women (OECD, 2018).

Gender gaps emerge not only in STEM and technology production areas but also in digital skills that are required for the use of increasingly spreading technology. The digital gender discrimination" phrase is frequently used to refer to resource- and competency-related gaps in the access and efficient use of ICT that emerged within and between countries, regions, sectors and socio-economic groups based on gender (OECD, 2018). For example, women's access to the Internet and mobile phones is behind that of men. Globally, the rate of women who have access to the Internet is 45%, whereas it is 51% for men (these percentages may vary by region and country) (OECD, 2018:24). Similarly, women are relatively more disadvantaged, compared to men, in terms of possessing and the use of mobile and smart phones. Women cannot sufficiently benefit from digital business platforms (particularly those serving freelancers), service platforms and online marketing platforms that have increasingly become widespread in recent years due to gender-based gaps existing in their digital skills as well as gender-based prejudices and stereotypes. Due to these effects, prejudices regarding women's incompetency in technological areas may, when combined with the lack of woman role models in the technology-related efforts, pose the risk regeneration of gender-based inequalities and increasing such inequalities rather than reducing (UNWOMEN, 2019; OECD, 2018).

The transformation specific to labour market and working practices caused by digitalization offers various opportunities and poses risks for women. Apart from discussions on the place of women in the technology generation, findings on the jobs to be created or lost with the spread of automation, particularly AI technologies, suggest that these processes would have serious consequences for gender equality and women. For example, it is predicted that digitalization would, separately for women and men, result in 40 to 160 million people to transition their jobs or sectors by 2030 (UNWOMEN, 2020). Even though the effects to come out are expected to be similar for women and men, it is obvious that the effects on women would include gender-based influences due to differences in their positions in the existing labour market and inequalities in the distribution of domestic workloads. Studies aimed at assessing the effect of digital transformation on women focus on three different areas.

The first one of these requires to reassess the tasks that were previously central in the industrial production and relevant competencies, since such tasks can be automated with digitalization. This leads, in general, to reassess manual and non-manual tasks, particularly personal services and domestic services in which women are dominant. For example, studies conducted across Europe show that the changes in the service and retail sectors do not deeply affect female employees, whereas the changes in the construction and manufacturing sectors make male labour force more vulnerable (Howcroft and Rubery, 2018). This results from the horizontal segregation in the labour market. It is seen that automation does not cause women to lose their jobs since they intensively have jobs that are less sensitive to digitalization and that however, it causes people to lose more technical jobs that are considered as male jobs (Kohlrausch and Weber, 2020). Furthermore, there is no finding in various studies that digitalization eliminates the segregation in jobs (as jobs for males and jobs for females) that arises from the gender-based division of work (Piasna and Drahokoupil, 2017).

Digitalization ensures and facilitates the establishment of online platforms, or of business models which are based on new databases known as platform economy. The existence of a platform economy is accompanied by a decrease in standard employment relations and an increase in the formalisation of jobs, which has extreme sexist effects. A platform economy provides

job opportunities on a 24/7 basis all around the world, while it allows marginal groups, such as low skilled and uneducated women, to access gainful employment. However, initial studies on platform employees show that only highly skilled employees with specific qualifications (mostly men) can benefit from digital jobs that are undertaken through the platform (Huws et al., 2017). The use of digital technologies on the benefit of employees is a challenging process, and benefits gained by employees differ according to resources held by each employee. However, negotiating power of women is less due to the fact that they mostly work in part-time and low-skilled jobs (Abendroth and Reimann, 2018).

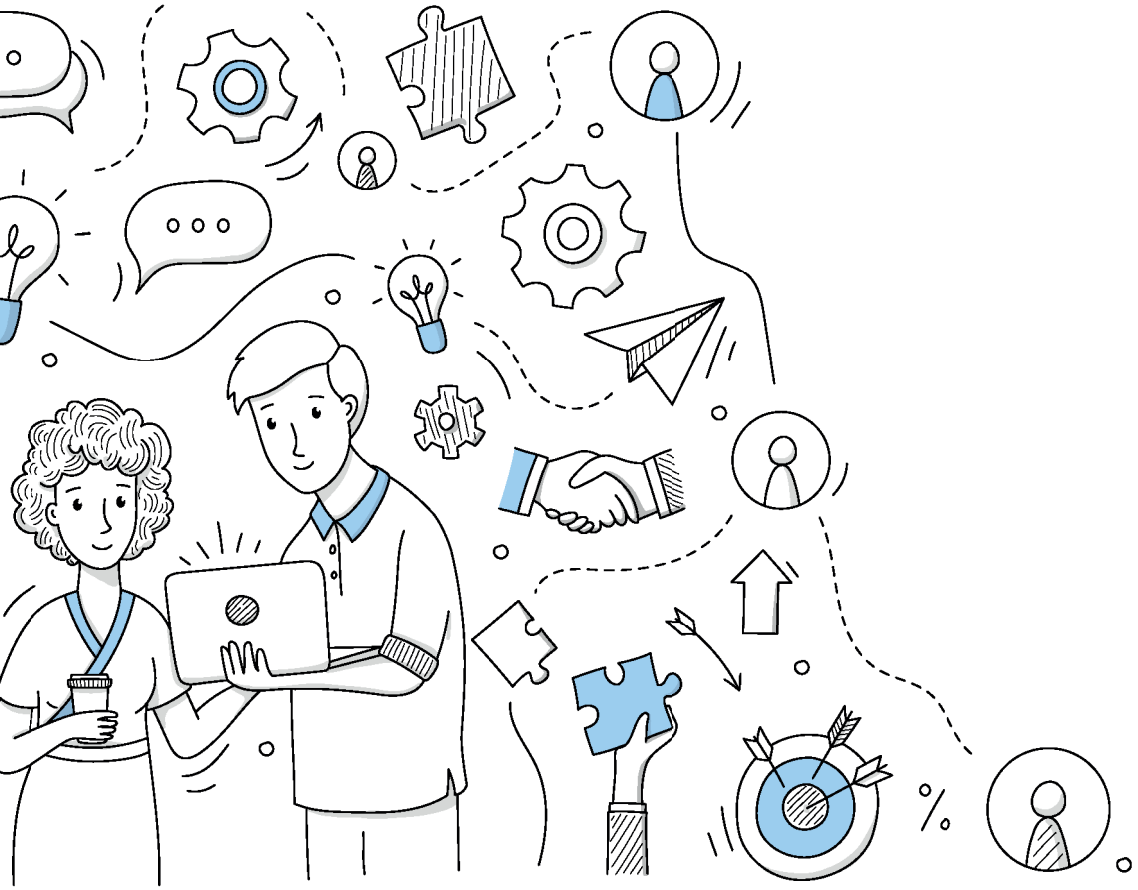
Workers serving at online platforms usually intensify in low income countries. The contribution of AI to the growth of high-paying professional jobs in the robotics and data science is addressed in many studies, whereas the existence of a large 'invisible' employee group in these sectors and jobs is rarely discussed. Various jobs, such as tagging data to feed algorithms, cleaning codes, training machine learning instruments and controlling and copying contents, are ensured to be undertaken by platform employees with low wages. For example, more than 100,000 commercial content moderators or 'ghost workers', who check content posted on social media, are employed under poor conditions and with low wages (UNWOMEN, 2020). It is predicted that the growth in the platform work would mitigate gender-based effects in the labour market and would ensure more flexibility for those with caregiving responsibilities, thus actually providing benefits for women. On the other hand, certain studies show that gender gaps in both participation and wages are continuing also in platform jobs.

The third result brought by digitalization for women is the gender-blind practices existing in the development of AI and such technologies. In the technology development sector, lack of differences, gender-blind practices and male dominant structure are inherently involved particularly in algorithms, and other systems in which AI is developed. There are considerable amount of examples regarding how this leads to sexist consequences. In the labour market, algorithmic prejudice was detected in a recruitment algorithm developed by Amazon and found to be discriminative against women and in gender-based marketing algorithms which had higher probability to show vacancy notices for scientific careers to men than women (Kohlrausch and Weber, 2020).

Another issue is that the fewer women employed in the AI sector, the higher potential for future AI systems to display masculine assumptions and gender prejudice. For example, sexist prejudice may automatically show up in STEM-related recruitments. On the other hand, technology can also be used to eliminate sexist prejudices and to support diversity in workplaces. To give a few examples, a range of practical AI-based solutions, such as #MeTooBots, which mark communications which may include harassment among employees; the "nudge" software of Humu, that suggests dynamically more inclusive behaviours to employees; and an application by Diversio to

match inclusion policies with needs of enterprises based on automatic analysis of in-house diversity and employee's feedback (UNWOMEN, 2020). Such initiatives are of great importance for the technology industry to cope with the diversity crisis and to withstand prejudices and norms imprinted in the currently produced systems.

When we look at that in the tourism and manufacturing sectors, on which this study focuses, how jobs in these sectors will be shaped in the future and how will automation and digitalization will affect both the structure of jobs and gender gaps, there are studies indicating that the results of automation differ on the sector basis. For example, in the accommodation and restaurant sector which globally employs 4.9% of women and 2.8% of men, almost 73% of all activities are sensitive to automation. However, in the education, healthcare and social services sectors, in which predominantly women work, the level of such sensitivity is much lower (ILO, 2019). Another ILO study shows that automation resulted in 14% of job losses and decreases in employment in middle income countries from 2005 to 2014. It is pointed out that automation and digitalization threaten women's jobs in both medium- and high-income countries, and that the jobs mostly held by women in the manufacturing sector, which employs 18% of women and 14% of men in medium-income countries, will be lost (ILO, 2019). According to this data, digitalisation and automation processes pose a risk, especially if their transition is not well-managed, of increasing the gender gap in employment. For these reasons, the development of gender-sensitive policies is essential in terms of eliminating inequalities as well as change for leading to egalitarian outcomes.



This study addresses the possible impacts of digital transformation and applications in SMEs operating in the tourism and manufacturing sectors in Türkiye on the female labour force. The study is assessed through the changes, opportunities, and risks caused by digitalization for female employment, leadership, and entrepreneurship in these two sectors, the findings from field studies, and other existing studies in this field.

The findings for the tourism and manufacturing sectors from field studies are presented in the following sections of the report. At the outset, the level of digital transformation used prevalently in sectors is addressed, while the effects of this transformation on the use of female labour in the relevant sector are discussed for both sectors under a separate heading.

THIS STUDY ADDRESSES THE POSSIBLE IMPACTS OF DIGITAL TRANSFORMATION AND APPLICATIONS IN SMES OPERATING IN THE TOURISM AND MANUFACTURING SECTORS IN TÜRKİYE ON THE FEMALE LABOUR FORCE.

2. TOURISM SECTOR IN TÜRKİYE: ACCOMMODATION SERVICES, DIGITALIZATION AND FEMALE EMPLOYMENT

Tourism sector is one of the important service sectors that allows generating income through the provision of social, economic and cultural activities in a country. Accordingly, countries focus their attention on both national and international tourism activities in order to increase their levels of prosperity and economic development (Çetintaş and Bektaş, 2008). The rapid and increasingly significant development of activities in the tourism sector makes great contributions to the economy (Istanbul Development Agency, 2012). Tourism is one of the key service sectors for Türkiye as well. It is seen that in Türkiye, the share of tourism income in GDP was 4.6% in 2019, corresponding to an amount of more than 34 billion USD (TÜRSAB, 2020). According to TURKSTAT data for 2021, tourism income increased by 103% over the previous year, totalling 24,482,332,000 USD (TURKSTAT, 2021).

One of the most important contributions made by the tourism sector is its capacity to create employment (Şit, 2016). When it is considered in terms of employment, the sector directly employed 462,000 people (1.6% of the total employment) in 2017, whereas 2 million people were directly or indirectly employed (7.4% of the total employment), together with relevant sectors (Turkish Ministry of Development, 2018). Although the tourism sector is, as a labour-intensive sector, a source of employment for a large population, the employment is mostly on a seasonal basis, which in turn affects the qualifications and efficiency of employees. Looking at the global level, it is seen that in 2019, 139,823,000 people, 54.2% of which were women, were employed in the accommodation and food and beverage services sector (ILO, 2020). Considering this percentage, it can be said that women are intensively employed in the tourism sector. In Türkiye, the female employment rate is 25.2%, falling way behind the global average (Ardıç, Yetiş and Çalışkan, 2020).

The digital transformation has had an increasing impact on such areas as lodging and agency services in the tourism sector in recent years, as is the case in all sectors (Erdoğan, 2020). In line with the increasing interest in technology, tourism enterprises opt for internet-based technologies for the purposes of ensuring sustainability in the market in which they operate, reaching new customers faster and maintaining their existing potential customers. (Atar, 2020). In this context, the Internet is considered as a

constant, continuous and valuable instrument that provides information and communication (Erdoğan, 2020). In addition to this, it is seen that AI is used at every stage of the tourism sector and that relevant data is used to follow-up the experiences of customers. Choices of individuals are guided in line with such data. The enterprises operating in this sector are therefore in a sectoral transformation process (Topal, 2020). Due to this transformation, enterprises are expected to use digital marketing tools, including e-mail, mobile applications, social media, search engine optimization, online advertisement applications. Inbound marketing blogs, podcasts, videos, e-books, e-bulletins, search engine optimization and social media applications have become key digital marketing tools for tourism enterprises (Erdoğan, 2020).

Although digital transformation in the tourism sector has multidimensional effects on employment and the use of labour, such effects, particularly those on female employment in the sector, have been scarcely researched. This study examines the effects of digitalization on female employment in the accommodation services subsector in the two pilot provinces.

The following parts of the report address digital transformation in the accommodation services subsector in Kaş, Antalya and Nevşehir and its impact on female employment, female entrepreneurship, and executive women in this subsector.

Accommodation Services in Kaş, Antalya

Akdeniz Bölgesi'nde yer alan Antalya ilinin Antalya is located in the Mediterranean Region and has a surface area of 20,909 km^2. Antalya has, on the southern side, 640 km of very green beaches looking at the deep blue sea, which makes the province an important tourism centre. Since the weather is sunny and there is no rain during a long period in a year, the region has tourism potential based on the 'sea, sand, sun' concept (Kapan, 2018). The outstanding business line in the tourism sector in Antalya is the accommodation business administration (Ekici and Çiftçi, 2021). In Antalya, the accommodation business administration at locations where tourism is highly popular is generally undertaken on a large scale, meaning that there are large hotels with high number of rooms and high customer capacities. The structures of both the province and the tourism sector therein are confirmed by the fact that a considerable portion of new investments is made in the accommodation facilities. 90% of such investments are domestic (Western Mediterranean Development Agency, 2018). Despite the fact that Antalya, as a province, has such a structure, small-scale accommodation facilities, which are called boutique hotels, are common in Kaş district. Kaş has become an important destination for travellers in recent years. The thing which makes Kaş important in terms of regional tourism is that the district is on a transit point. Located on a roadway connecting the Aegean and Mediterranean Regions, Kaş is a stopping point on the route starting from Tekirova neighbourhood of Kemer and directed towards Marmaris-Fethiye-Bodrum. Besides, the interest in Kaş increased after a TV series that was shot therein, and reached even higher levels during the pandemic. Another fact that increases the interest in Kaş is that the district is one of the important diving centres with its underwater beauty.
During the interviews, it was stated that in the summer period, there are 20 bus services from Dalaman Airport to Kaş on a daily basis. Moreover, with the increasing popularity of remote working practices and freelance work during the pandemic period, Kaş stood out as a new settlement.

In Kaş, 80 to 85% of the accommodation services are offered by small hotels with 10 to 20 rooms. This is also the prevalent size of hotels in the district, and the maximum total bed capacity of Kaş is around 15,000. Hostels and villas in Kaş are also important types of facilities offering accommodation services. During the

interviews, it was stated that there are many villa rental enterprises in Kaş and that 8.3% of the villas operated for accommodation services purposes in tourism activities in Türkiye is located in the Kaş region. Small hotels, apart hotels, and villa-type facilities operate mostly in the summer period, whereas only a small number of enterprises serve throughout the year.

The interviews under this study were held with those from the centre of Kaş and Çukurbağ peninsula, where the accommodation enterprises are concentrated. The interviewees are generally from hotels that are considered small and medium-sized enterprises, as is the case in the literature. Under the study, interviews were conducted with five hotels in Kaş Centre and Çukurbağ Peninsula and the average number of rooms in these hotels was 18. Hotels diversify their services by offering different types of rooms to their customers. For example, one hotel with 16 rooms classifies its rooms as Junior suites, comfort suites and penthouse suites, while another hotel with 12 rooms has, aside from its standard rooms, the concept of Instagram and honeymoon rooms. This is because of the structure of boutique hotels that allows to provide customisable services. Unlike the large hotels in Antalya that operate on an all-inclusive system basis, the accommodation enterprises in Kaş that have a small number of rooms offer only bed and breakfast services. The services offered other than these are charged extra. On the other hand, a few accommodation enterprises with a large room capacity also offer all-inclusive services. The number of hotels serving such services can, however, be counted on the fingers of one hand.

Looking at the customer profile of accommodation enterprises, it is seen that the enterprises in the Kaş Centre and Çukurbağ Peninsula differ from each other. The hotels in the Çukurbağ Peninsula mostly serve foreign tourists, whereas the hotels located in the Centre mostly serve domestic tourists. This differentiation is because of the proximity of the Çukurbağ Peninsula to the sea, which affects not only the tourist profile but also the prices of hotels. The high hotel prices, which are set in euros, in the Çukurbağ Peninsula make it difficult to serve domestic tourists in terms of affordability. The region mostly welcomed English, Spanish, German and American tourists before the pandemic, whereas it served mostly domestic tourists during the pandemic. The tourist profile after the pandemic is predominantly Russian.

Accommodation Services in Nevşehir

The historic Cappadocia is one of the well-known tourism centres both in Türkiye and around the world with its distinctive landforms and natural and cultural attractiveness. There are many touristic activities in the region, including those related to nature, culture, balloons, faith, wine, thermal, ATV, carpet weaving, entertainment (Turkish nights), gastronomy, horse sports, pottery, and ceramics. These activities are mostly in the Ürgüp, Göreme, Avanos and Uçhisar districts of Nevşehir (AHİKA, 2019). There are unique landforms and numerous museums throughout the region due to the geographic and historic structure of the region. Therefore, tourists come to Cappadocia mostly for cultural purposes and visit museums and archaeological sites. Having visitors from all over the world, Cappadocia hosted more than 1.5 million domestic and foreign tourists in 2019. Furthermore, 3.8 million people visited the museums and archaeological sites that are affiliated with the Nevşehir Provincial Directorate of Culture and Tourism. In Cappadocia, there are various enterprises, including facilities with rock-carved architecture specific to Cappadocia, accommodation facilities with tourism investment and/or operation certificates, and food, beverage and travel businesses, to meet the intense interest in the region of domestic and foreign tourists (AHİKA, 2019).

Nevşehir has important tourism potential with its natural, historical and cultural structures. Therefore, accommodation enterprises in this province have increased rapidly depending on

the development of tourism activities, making significant contributions to the environment and the economic and cultural structure of the local people. In Nevşehir, “since the areas with intense cultural tourism activities are protected areas, in order to open accommodation enterprises that serve in the form of boutique hotels, buildings with architectural characteristics suitable for the natural, cultural and historical texture of the region are built, or old houses and mansions are renovated and transformed into accommodation facilities” (Eren, Çalışkan and Çamlıca, 2016).

The majority of accommodation facilities in the region are classified as hostels and boutique hotels, and there are also cave hotels specific to the Cappadocia region. According to the data of the Turkish Ministry of Culture and Tourism, there are 642 enterprises in Nevşehir that have either a Tourism Operation License issued by the Ministry (including seven five-star hotels) or a Certificate issued by Municipalities. Looking at the number of these enterprises (accommodation facilities) on a district basis, it is seen that 206 of them are in Göreme, 239 of them are in Ürgüp, 67 of them are in Uçhisar and 71 of them are in Avanos. These enterprises have a total capacity of 20,642 beds (Ministry of Culture and Tourism, 2021).

Table 1: Number of Accommodation Facilities in Nevşehir

DISTRICT	Certificated by the Ministry	Certificated by Municipalities
Avanos	13	58
Göreme	22	184
Ürgüp	48	191
Uçhisar	17	50

Source: Ministry of Culture and Tourism, 2021

Looking at the types of accommodation establishments, it is seen that there are mostly small and medium-sized boutique hotels, hostels, and rock-cave hotels specific to the region. Managements of accommodation enterprises design their hotel rooms in an authentic style in compliance with the cultural and geographical nature of the region. Since most of the areas in the region are protected areas, and thus the accommodation facilities to be built must have a special design, it is not possible to establish large accommodation facilities. This affects the number of rooms and beds in accommodation facilities and prevents large hotel chains from investing in the region.

During the study, interviews were held with operators of seven hotels, including five boutique hotels and two large-scale accommodation facilities, in Avanos, Göreme and Uçhisar districts. It was seen that the accommodation facilities in the part of Avanos district that is close to Nevşehir provincial centre were large-scale enterprises, whereas there were small-scale boutique and cave hotels in the parts of Avanos, Göreme and Uçhisar districts that are located in the protected area. The average number of rooms in the boutique hotels and large-scale hotels that are involved in interviews were 28 and 280, respectively. There are different room types of in each respective accommodation facility. Operators classify rooms according to two factors: sight of landscape and room concept (such as honeymoon, marriage proposal, wedding and museum). As it has become popular to make marriage proposals in this region in recent years by virtue of the geographical and cultural structure of the region, accommodation enterprises needed to design a new room concept accordingly. In line with the increasing use of thermal hot water resources in the region, hotels have included such services as Turkish baths, saunas, hot water pools and spas in their concepts. Accommodation facilities provide bed and breakfast services only. The services offered other than these are charged extra. Since various entertainment activities, including, for example, balloons, safari, ATV and horse riding, are popular among and preferred by tourists coming to the region, accommodation facilities establish a communication network with the enterprises engaged in serving such activities and can offer attractive packages to their guests. The transfer and reservation processes for such activities are organized by accommodation facilities through this communication network.

The customer profile of accommodation facilities in Nevşehir is quite diverse, with tourists coming from Pakistan, India, France, Italy, the United States, and Russia, as well as Far East countries. The majority of tourists were from China before the pandemic, whereas the number of tourists from Russia increased during the pandemic. Unlike sea tourism, which is common in Türkiye and hosts guests for a period of 10–15 days, this region hosts guests for a short time. Although there is a wide variety of activities in the region, domestic tourists prefer to make daily visits to the region as those activities can be done within a short period of time. However, the number of domestic tourists during the pandemic increased. Since accommodation facilities were serving foreign tourists before the pandemic, their room rates were relatively high; however, the increasing number of domestic tourists during the pandemic was instrumental in the decrease of room rates. Tourism activities in the region continue throughout the year, with peak seasons, i.e. the highest number of tourists, during April-May and September-October.

2.1 Digitalization in Accommodation Services in Kaş, Antalya and Nevşehir

Digitalization has an effect which we feel more closely in recent years. It closely affects the tourism sector as well, and the sector started to focus on the use of technology in order to be able to keep up with global innovations and changes (Gürbüz, 2021). In the tourism sector, digitalization mainly takes place in the management, human resources and marketing departments, whereas digital technology is also used in the provision of accommodation, transportation, shopping and dining opportunities for tourists (Gürbüz, 2021). Accommodation enterprises should, in order to provide consumers with fast, high quality and the required variety of services, keep up with the changing technological conditions, adapt innovations brought by the technology into the enterprise and update the existing system. Accordingly, digitalization processes in accommodation enterprises operating in Antalya (Kaş) and Nevşehir (Cappadocia) provinces were discussed under six headings, including pricing management, reservation management, online reservation, front desk services, housekeeping services and social media management, and interviews were held to analyse the level of digitalization in these areas.

Pricing Management

Pricing is an important element for enterprises, which must determine a pricing strategy for the service they offer and thus maintain their competitiveness in the sector. In tourism marketing, the price impacts customers' demands and steers the perception of customers about the quality of service offered. The enterprises therefore pay attention to such factors as demand, profit, competition, market dominance, and customer loyalty, when determining their pricing strategy (Gürbüz, 2021).

Accommodation enterprises, agencies and corporations apply different pricing policies, which are determined on a daily and weekly basis. Even for additional guests, certain accommodation enterprises may apply different price policies for their branches in different locations (Turkish Ministry of Industry and Technology and UNDP, 2021). Accommodation enterprises also consider, when determining their price policies, the location (distance to the centre, sight of landscape, etc.), the characteristics and image of the facility. This makes pricing management one of the leading areas in terms of limited use of digital instruments. In this context, another boutique hotel operator interviewed in the Çukurbağ Peninsula in Kaş stated that:

"At the beginning, this place was built as an apart/ hotel. There were kitchens, and we were not using the restaurant; then we changed that concept in 2010 or 2011. We also changed the room concept; we now operate as a boutique hotel, and there is no kitchen in the rooms anymore. Our rooms are typically larger as compared to other hotels in Kaş; all people suggest us making two rooms from one room and say that we will generate more income. We do not prefer this. We want to make benefit but also want our guests to be comfortable. I mean, we are operating as a boutique hotel. We have 16 rooms. Our maximum capacity is 48 persons. There are junior suits, for which we accept two persons. We have comfort suits on first and second floors; they are quite large, with a size of 55 m2, and they have very large bathrooms and large saunas; their maximum capacity is 4 persons. On the roof floor, there are penthouse suits with a size of 80 m2; I accept 3 persons in those rooms. They have a huge sunbathing terrace, and a jacuzzi. They have a hammam style bathroom and a fireplace. We do not work with the domestic market because our rates are very high. In general, guests coming to the Peninsula and guests coming to the Kaş centre are quite different, and the hotels in the Peninsula have high room rates, thus the customer potential here is quite different."

In addition to the facts expressed by a hotel operator, who was one of the interviewees, the observations made showed that hotel's proximity to the sea and their architecture affected the price gap between the hotels in the Kaş centre and Peninsula. On the other side, the operator of a luxury hotel in Nevşehir, with whom we held an interview, told about the factors which affected the prices:

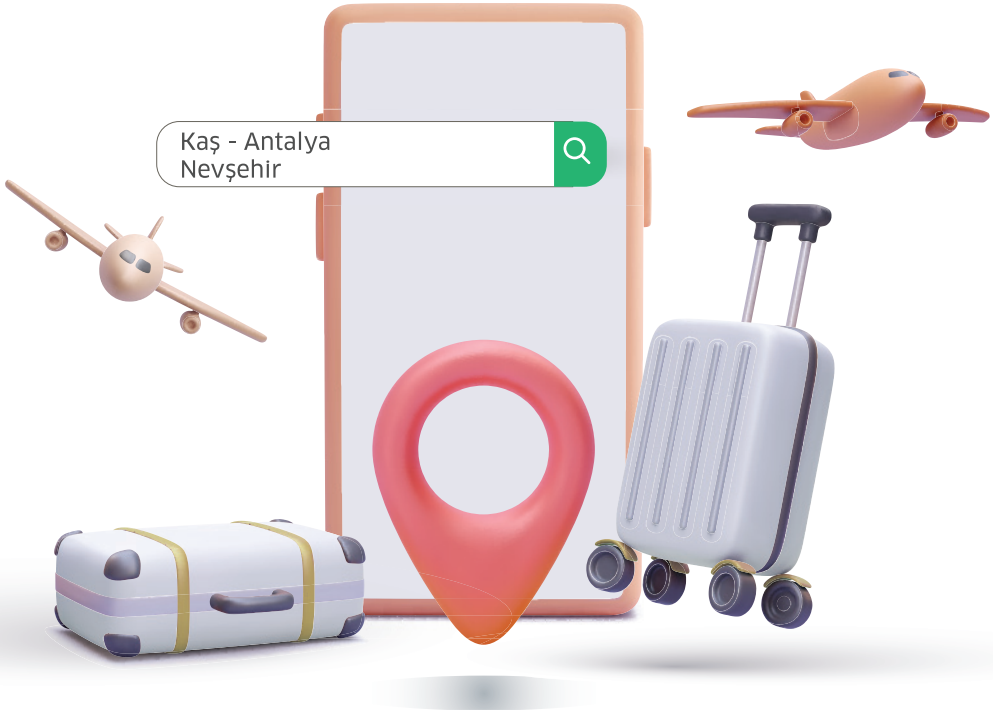
"The owner of the hotels is a collector with a security certificate. There are certain pieces from Nevşehir museum and certain pieces from the collection of the hotel owner, which we demonstrate in our hotel. These are located not only at the reception and entrances but also in all rooms. Our hotel is a candidate member of Relais&Chateaux. The only candidate hotel in Türkiye. This is a service quality award granted in France only to top class hotels and restaurants. This inevitably makes our prices different as compared to other hotels in the region."

Considering the digitalization processes, in terms of pricing management, of the accommodation enterprises that were involved in interviews, it was stated that most of the hotels do not have any digital application used for pricing strategy, and that they mostly determine the price based on market research. In this regard, another operator in Kaş said that:

"The cost of a room changes between 500 to 700 TRY. Of course, we determine our prices accordingly, and tell about our base cost. In Göreme, they charge 400 TRY for a jacuzzi room. I ask them how it can be 400 TRY? Do you make cost calculations? But they tell about various things; there is no such tourism management. The only product sold and marketed without an inventory option is the hotel room. There is no inventory. We do not have the option that it is ok under these conditions or we will sell it tomorrow. We should therefore follow the market well. If you cannot do it, you cannot run a tourism business.

Only one person, who was the operator of a hotel in Kaş Peninsula stated that they use the Amora application to determine the pricing strategy. The prices of the rooms are determined by entering the percentage of the costs in the application.

"I make my calculations in the way. I too have a program that I use, I work with Amora. You can determine all details and costs therein and make a calculation accordingly. The costs of social security, this and that, you can determine everything in there. I no longer try to make detailed cost analyses, I increase the percentage of anything the price of which has increased, and enter in the program in this way."



Reservation Management

Tourism sector is among the sectors that closely follow technological developments and can quickly adapt to technological processes. The sector previously maintained office automation through more traditional methods, i.e., typewriters and calculators; the sales transactions were then moved to internet platforms with the start of the use of global reservation systems based on technological developments (Tutar, Kocabay and Kılınç, 2007). However, e-commerce applications are also among the information technologies used by the tourism sector. E-commerce applications allow accommodation businesses to easily and directly maintain their commercial relations with reservation websites, online payment service providers, travel agencies, tour operators and other businesses (Pırnar, 2005). It includes many processes for accommodation businesses, such as managing reservations from a single screen, marking the reservation type, keeping the information of customers who previously purchased service, sending confirmation e-mails for reservations, applying a different room rate for people who checked in late to the hotel, and allowing the change of room rates (Turkish Ministry of Industry and Technology and UNDP, 2021).

When talking about the process of transition from traditional methods to digitalization in an interview, a hotel operator based in Kaş said:

"Digitalization certainly provides an incredible advantage in terms of time. It is unbelievable… You can do a certain transaction with one click now; we normally were doing it in two hours."

Furthermore, a hotel operator in Nevşehir also told about the process of transition from traditional methods to digitalization.

"Technology is not merely an ingredient in the business, we conduct the whole business by technology. Before getting into it, let me give a live example for this transformation. When I started to work here -in 2009- I was the cook, and the operator was the owner of this place. I took it over seven years ago. In the early years, we worked with tourism agencies and everything was recorded in paper files; our room occupancies, availabilities, prices were recorded in paper files. We were receiving reservations through fax, through telephone and were recording them on papers. We were writing all of them name by name; that writing work was consuming almost 20%, 30% of our energy. After one year, in 2010, I learned managing reservation systems through internet and computer, and we started to use this system. Because, following paper records is very difficult but it is a secured work because it remains as confirmed; it is a secured work because you have a document in your hands but it is difficult to follow-up and you cannot respond to rapidly changing variables. For example, a guest asks you, in a certain period, if there is availability after two months. If you did not tick previous reservations, you could not see the system instantly. You have to call back, and when they do not answer, you have to wait for one or two hours… Since we started to use an application or the internet, we have been able to look and respond immediately"

Accommodation services in tourism sector process a significant amount of data. A large amount of information, including that on

payment, passengers, destination, location, etc., is required to be submitted for all individuals who are traveling and staying at an accommodation facility. Therefore, there is an active flow of information between all departments of an accommodation business (Sheldon, 1997). To facilitate such flow of information, hotels use various applications collected under the umbrella of 'Channel Manager'. This software allows accommodation businesses to update and manage prices, availability and promotions on their website or other websites of which they are a member from a single platform. It facilitates the management of reservation processes, and from this aspect, it is an indispensable system for accommodation businesses, either large- or small-scaled. When talking on Channel Manager applications, a hotel manager said:

"Channel Manager came to Türkiye in 2014-2015 and established in 2017. It started to spread in 2019. Channel Manager is like a bed bank. In this digital platform, there are hundreds of digital dealers, such as Booking.com, Expedia, ETS, etc. Previously, you constantly needed to make a quota control in such applications as Booking.com and Expedia. After a while, this became a troublesome situation for SMEs. Because you may be sold at any time. The same room may be sold in different digital platforms. And also there are walk-in guests; you may sell a room to more than one person. In such a situation you may be fined. But, Channel Manager eliminated this situation. Because it gathered all platforms. You connect all sales channels (Booking.com, Expedia, ETS Tur, etc.) through this channel manager. You upload quotas and prices to this channel manager and all sales channels sell with the same price. It sees all quotas and all sales channels. When a room is sold, it is appeared on all sales channels. Price competition is also eliminated by Channel Manager, and you have the opportunity to work with many sales operators. It has rapidly spread in the last two years. And also, there is a new channel in which there are tour operators. The payment here... you do not make a payment agreement with enterprises. Payment is made to the channel manager."

In the hotels that took part in the interviews, the most digitalized section is the reservation management. All the accommodation businesses that took part in the interviews have their own website and use at least one of the channels in the Channel Manager. Among the most common programs used for reservation management are Hotel Runner, Mod Hotel, Reseliva, Elektra Hotel, Amonra Hotel, Fidelio Hotel. Talking about the programs used and how they operate, a hotel manager from Nevşehir Uçhisar said:

"Now, our online sales are very important; by online sales I mean those well-known websites, including global ones, for example, booking.com, Expedia.com, hotels.com, and local ones, otelz.com, odamax.com, ets.com, Jolly, Tatilsepeti; of course, all these are all involved in the sales. The prices of the hotels, particularly in this region, are not fixed because of the pricing circumstances I have already mentioned; the prices are dynamic and may change according to demand and availability. It is extremely risky to adjust prices on each of these contracted websites and you may make mistakes, because we have three types of rooms and we have both a refundable price and a non-refundable price for each room types. That is, there are two prices for each of the three room types, and in total there are six prices. It is very difficult to follow them manually, and even if it were easy, we would not prefer it, because it would be prone to mistakes. So, what we do? There are enterprises established for this. Among them, now, the leading and most popular one is Hotel Runner. This platform, what we call Hotel Runner, is integrated with those online websites. We start the process with this Hotel Runner; when I make an adjustment to increase the room price on March 5th from 50 euros to 80 euros from any website, the price on all the contracted websites or alternatively on websites that I mark is automatically adjusted. Depending on this price, the non-refundable price is also adjusted accordingly. Therefore, since the relevant mathematical calculation is done in the background, I can adjust the prices on the websites with which I work with one click."

It was seen that the features offered by the reservation applications used in the hotels that took part in the interviews vary according to their costs. Among the features offered by reservation applications with high cost are resource management, inventory management, and management of accounting and human

resources departments, whereas those with low cost include only online reservation management. Large-capacity accommodation businesses prefer more comprehensive applications because they can integrate these applications with other departments for the management of human resources, inventory, accounting and resources. Small-scale accommodation businesses use Channel Manager applications less comprehensively because of their costs and can integrate this application with front desk services only.

Regarding the integration status of the Hotel Runner, a Channel Manager application, with the programs used in the hotel, a hotel manager in Uçhisar said:

"We have an agreement with Hotel Runner. If someone from X enterprise comes and if s/he tells me 'I am a Channel Manager enterprise' I would say my name Seçkin, with whom you are integrated. If s/he says 'we have no integration yet we are currently working on an agreement', I would say get integrated and then come to me; there should be advantage for me. I work with 10-15 website for online sales, I can reach them through Hotel Runner. I can change all prices with just a click. I can adjust availability, not only the price; I can adjust that we are full on this date and close this room for sales on this date, then all room types are closed for online sales, I can also open whenever I want. This is an advantage. Because, the integration increases the demand for the Channel Manager application."

"We have also another program which we use within the hotel, there is a software program we use within our business, this is called, the one we use, Mod. But there are different ones: Electra, Sedna. This Mod program can also be integrated with the Hotel Runner application. We make an adjustment in the Hotel Runner and also in the Mod for the transfer of reservations when there is any received from booking.com or elsewhere. Now, the receptionist is sitting. Rooms are sold from Booking.com, and Hotel Runner receives the information on the respective reservation from Booking.com and transfers it to the Mod program. What benefits do we get from the transfer to the Mod program? For example, if a receptionist does not know how to use the Hotel Runner, s/he can transfer the reservation to the future reservations module of the Mod program, with which she is familiar, with no need to log into the Hotel Runner. The program gives a warning to reserve the room, then s/he logs in, looks, reserve the room and waits for the guest."

During the pandemic, certain small-scale accommodation businesses stopped using the application because of its high cost. A boutique hotel operator in Kaş who was among interviewees expressed his views on this issue:

"Among such programs, there was Reseliva that we used, but then we desisted from using them. Now, we look at all of them manually. Indeed, during the pandemic process, we thought to eliminate them, and in general, we quit many online channels."

This interviewee said that such applications make it much easier to conduct and follow-up business processes, and that, however, they had to reduce operation costs in the hotel during the pandemic process in connection with the decrease in the number of customers. Because since these applications should be purchased on a monthly or annual basis, they cost too much for SMEs.

Front Desk Services

Front desk services are the focal point of activities in accommodation businesses. This department collects information and documents and distributes them to the respective departments. A front desk department is referred to as the "centre", "core", or "brain" of an accommodation business because of its great importance in terms of steering the activities of the accommodation business, representing the business to its customers, and making the first impression (Yolal and Ekmeksiz, 2007). Front desk services use information, technology and various applications to improve customer relations and create customer value, making processes more effective (Payne and Frow, 2005).

Looking at the digitalization process in the front desk departments of the hotels that took part in the interviews under this study, it is seen that they got used to Channel Manager applications as these applications facilitate the provision of services and enable the staff to perform front desk transactions very quickly. On the other hand, obtaining and uploading to the system the identity information of arriving customers and transferring this information to the gendarmerie or police directorates and Ministry create a significant workload for the front desk departments. Some of the hotels that took part in the interviews use an ID scanning device to make this process easier. This device reduces the workload of the front desk departments in accommodation businesses, relieves the staff in terms of the responsibility in accordance with the Law on Protection of Personal Data (KVKK) and accordingly gives confidence to customers. Regarding the ID scanning device, the front desk manager working at a hotel that actively uses such a device said:

"Regarding digitalization in our sector, there are many different systems, including from ID readers to Channel Managers, that are actively used. For example, think an ID reader just like a scanner, a smaller version of a fax machine; you insert a passport or ID, it reads all the information and automatically transfers it to the system. We actively use it. The system scans information automatically and directly integrates with the system. The system also notifies ID information to the security forces; when we click Check-in button, the system makes integration automatically."

The hotel at which this manager is working is a large accommodation business operating in Nevşehir and its capacity is large enough to serve 900-1,000 people. Using this device makes it very easy for accommodation businesses to perform front-office services. Although using this device is of great important for both large- and small-scale businesses, its cost presents a difficulty for businesses in terms of affordability. Regarding this issue, a front desk employee of another hotel said:

"It is considered a scanner; there is such a digital device; it scans the identity information of people and directly transfers it to the automation program, what we call PMS. We get IDs from guests and scan them through the device; all the information in IDs is automatically processed; there is such a system, but we do not use it; this is also because of the room capacity. Since our hotel is small, it is very simple for us to enter the ID information for the reservation of 14 rooms; it doesn't take too long. However, it is really beneficial, for example, in a hotel with 300–400 rooms; but it would be nice if we had it."

It is seen that another application for digitalization processes in the front desk services is the payment transactions used in order to gain customer trust. During the payment process for a customer who wants to make a payment at the accommodation business, the front desk staff sends a payment link to the customer, ensuring that s/he completes the payment transactions without sharing his/her card information with the business. Regarding this application, a front desk manager working in a luxury hotel that actually uses this application said:

"The payment link is an application that we have been using for about 6–7 months. Without seeing guests' card information and with no need for signing, for example, there would be a payment of 5,000 TRY in total for a two-night reservation, a link is sent to the guest once our reservation office enters the information in this application. The guest opens that link and makes this payment of 5,000 TRY after entering his/her card information on that page. We do not see the card information nor any other information, but the payment is transferred to our account."

Housekeeping Services

Housekeeping services is among the most important areas in accommodation businesses. During their stays, customers get the longest-time service from housekeepers. Housekeeping services consist of activities, including those related to hygiene, cleaning and order, that directly influence customer satisfaction. Therefore, this department requires significant

physical effort and covers many different tasks, being one of the most active departments in accommodation businesses.

Looking at the digitalization process in accommodation businesses, it is seen that the use of technology has increased in many departments and that, however, the need for the "human" factor continues and even has increased in the housekeeping department. Thus, the housekeeping department is the department in which digitalization occurs the least in accommodation businesses.

Digitalization of housekeeping appears to be very low in the accommodation businesses that participated in the interviews. Many housekeeping tasks are carried out based on a timetable kept by the staff of this department, and completed tasks are reported through a WhatsApp communication group. In accommodation businesses, the housekeeping chief supervises this process and reports the status of rooms to the front desk and reception. In this regard, an interviewee hotel operator said:

"Some hotels have a systematic approach, for example, personnel enters the room, cleans it, and then dials zero; then the status of the room is entered in the system used by the reception. Of course, we maintain communication through WhatsApp or by telephone since we do not use that kind of system. We draw up a daily schedule the night before, indicating that, for example, we have five rooms to be checked in, three rooms to be checked out, and two rooms to be maintained; we write them down. Every day, we either write through WhatsApp or, on very busy days (too many check-in and check-out or maintenance), we print out on A4 paper to inform them that these rooms will be maintained; these rooms will be checked out and new guests will check-in; this room was empty last night, but today it will be checked-in, so it should be controlled. At the end of the day or as the rooms are ready, we inform each other that 101 is ready, 105 is ready, and 104 has been maintained. If a customer comes and says that his/her room was not maintained, we get information from the respective housekeeping staff on which rooms were maintained or which rooms could not be entered into; this is how we maintain communication."

There are also various applications developed specifically in improving housekeeping services provided in hotels. Customers can download these applications to their mobile phones via the Play Store or App Store and then use them during their stay. These applications include service options for all departments, from the housekeeping department to the reception. Customers can make requests for their needs from hotel departments through these applications. Since these applications are designed specifically for accommodation

businesses, they enable businesses to provide services more practically and faster, as well as allow hotel management to measure the productivity of employees. Through these applications, the time elapsed for delivering the service or product requested by the customer can be easily followed, and the performance of employees can be assessed based on the service quality they provide. Such an application is used by only one of the hotels that participated in the interviews. The front desk worker in that particular hotel explained the application:

"There is an application in our hotel. Customers may download this application and sign in with their check-in and check-out dates, and through this application, they can make any requests, including requesting housekeeping services, ordering food, conveying any problems to the front desk, or requesting to light the fireplace in their rooms, from any department. The application is integrated with a software program, called WB. It provides services throughout Türkiye, but since each hotel has its own application, it is integrated with that application. We see here, at the front desk, the interface of WB, but guests see only the hotel's application. They are available on Google Play and also on the App Store, they can be downloaded from there."

Social Media Management (Content Development)

Marketing through social media can be defined as the use of social media instruments to increase their visibility. The social media platforms/channels used by accommodation businesses today can be listed as Facebook, YouTube, Instagram, Twitter, Foursquare and Google Plus.

It is important for accommodation businesses to produce an impressive and remarkable social media content so that they can attract customers and increase interaction. Looking at the statistics of social media surveys, it is seen that "the number of social media users around the world increased from almost 1 billion in 2010 to 2.62 billion in 2018 and to 3.80 billion in January 2020" (TÜSİAD, 2022). Considering that approximately half of the global population uses social media applications and that tourism is a human-oriented sector, social media is of great importance for this sector. Accordingly, websites and Google Ads tools are also utilized in addition to social media applications (TÜSİAD, 2022).

Since the levels of education and income of customers who seek accommodation facilities for their vacation plans have increased, they tend to conduct a more detailed search with particular attention to social media content. People who conduct a social media search primarily examine the experiences and comments of previous customers who stayed in the respective facility, as well as real-time posts of the accommodation business, and this examination has an influence on their decision-making process. Therefore, accommodation businesses allocate time and resources to social media marketing to achieve their targets (Milan, Baggio and Piattelli, 2011).

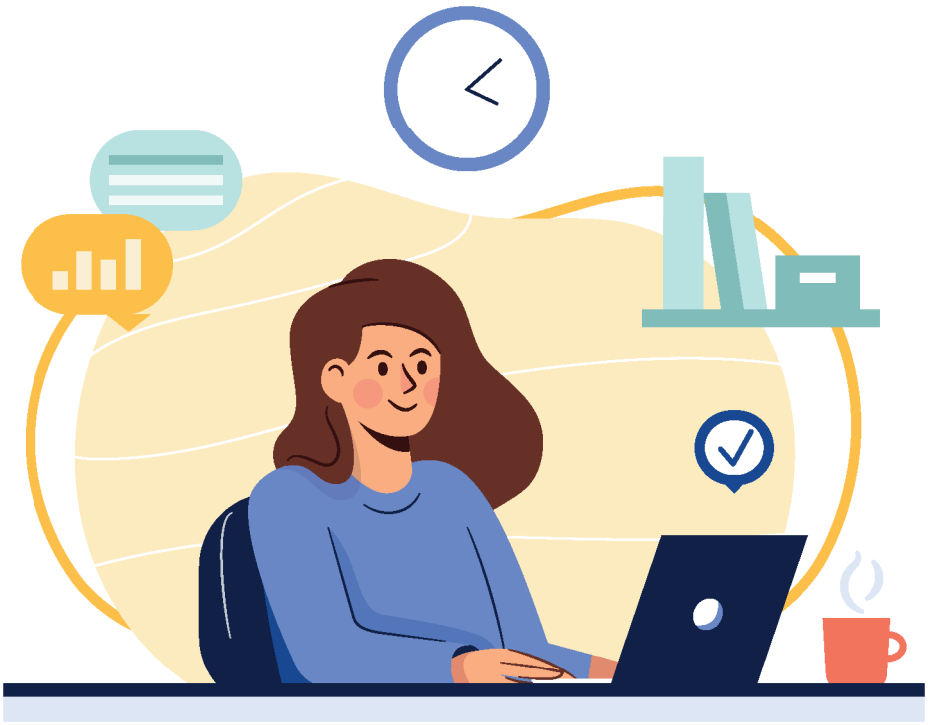
Regarding social media marketing, the hotels that participated in interviews mostly use such digital tools as Instagram and Google Ads and collaborate with influencers. These social media tools are very effective for accommodation businesses in terms of enhancing their visibility and expanding their range of customers. Certain accommodation businesses manage these digital tools by themselves because of high costs, whereas others get support from professional content creators in this regard. For example, when asked how they use social media, a female executive of a hotel operating in Kaş said:

"Instagram and Google Ads are incredibly effective. Among the most effective instruments in the last two years are Google Ads in the first place and then Google comments; now, they are now pointedly used around the world. Especially in the accommodation sector, we purchase a service directly from Google and manage it by our own. Google Ads are more effective than Instagram. We pay per click. We highly opposed Instagram phenomena and we said we don't need influencers. Then an influencer who has many followers came. She made a reservation

for the honeymoon room for her and her spouse; her husband said, "She had a lot of followers, she would have an effect". The woman first made a check in, then shot a video of the view and posted it on Instagram. Then, instantly, lots of clicks, and we received at least 10 reservations on that day. We already named one of our rooms as the Instagram room."

Another hotel manager in Nevşehir explained his social media experience and how their hotels differ in terms of social media:

THESE SOCIAL MEDIA TOOLS ARE VERY EFFECTIVE FOR ACCOMMODATION BUSINESSES IN TERMS OF ENHANCING THEIR VISIBILITY AND EXPANDING THEIR RANGE OF CUSTOMERS. CERTAIN ACCOMMODATION BUSINESSES MANAGE THESE DIGITAL TOOLS BY THEMSELVES BECAUSE OF HIGH COSTS, WHEREAS OTHERS GET SUPPORT FROM PROFESSIONAL CONTENT CREATORS IN THIS REGARD.



"The Instagram account of our hotel is one of the rare hotel profiles with a blue tick in Türkiye. The account is actively used, and I can say it is one of the largest hotel profiles in Türkiye. We do not work with a content creator; this is something that is also under the control of our hotel owners. But there is a point that we do not need any creators because we host too many influencers at the hotel, either for a fee or for free; these are all advertising agreements. The content that these people create in return for their staying or eating here is more than enough for us. Sharing of only such content has great effect in terms of new customers. Usually influencers reach us. When such people say let's go to Cappadocia, spend time there, take pictures, they visit relevant websites and look at the hotels in Cappadocia. When you look at the hotels in Cappadocia, there are three leading hotels that offer luxury services with high quality, have beautiful views, and places to take photos are obvious to everyone. When they see this, they send an e-mail or reach us via phone and say that they want to collaborate. If such an offer is approved by our reservation office and our directorate general, the reservation is confirmed. Of course, there are certain requirements for this process. We provide accommodation for 1-2 nights in return for certain small details, such as the requirement to take a certain number of photos and to share a certain number of stories, in our favour. They come to stay once an agreement is made through e-mail correspondence. Does it have an effect? It has a great effect. When a celebrity stays here and starts posting in that evening, the phones are ringing off the hook."

Based on the interviews, it can be said that the use of social media as a digital marketing tool is one of the most effective marketing methods and has a considerable effect on people's preferences for hotels. Hotels are not indifferent to this development and try to increase their visibility and expand their customer portfolios through social media, either by using their own resources or by purchasing relevant services.

2.2 Digitalization and Female Labour Force in Accommodation Services

With its service-oriented structure, tourism is a labour-intensive sector. This structure produces a positive effect on employment, but due to the fixed-term and seasonal nature of employment practices, there are long and intense working hours during the employment period. Its labour-intensive nature makes the sector important in terms of increasing female employment. Although women constitute 60% of the labour force of accommodation businesses in the tourism sector around the world (UNWTO, 2020), they are represented by 40% in managerial positions, 20% in executive positions and less than 8% on boards of directors (Obadiz, 2016).

As the sector has such an employment structure and a labour-intensive and service-oriented nature, the effects of digitalization processes on the employment structure and practices, particularly on female labour and employment, can be examined under the following headings.

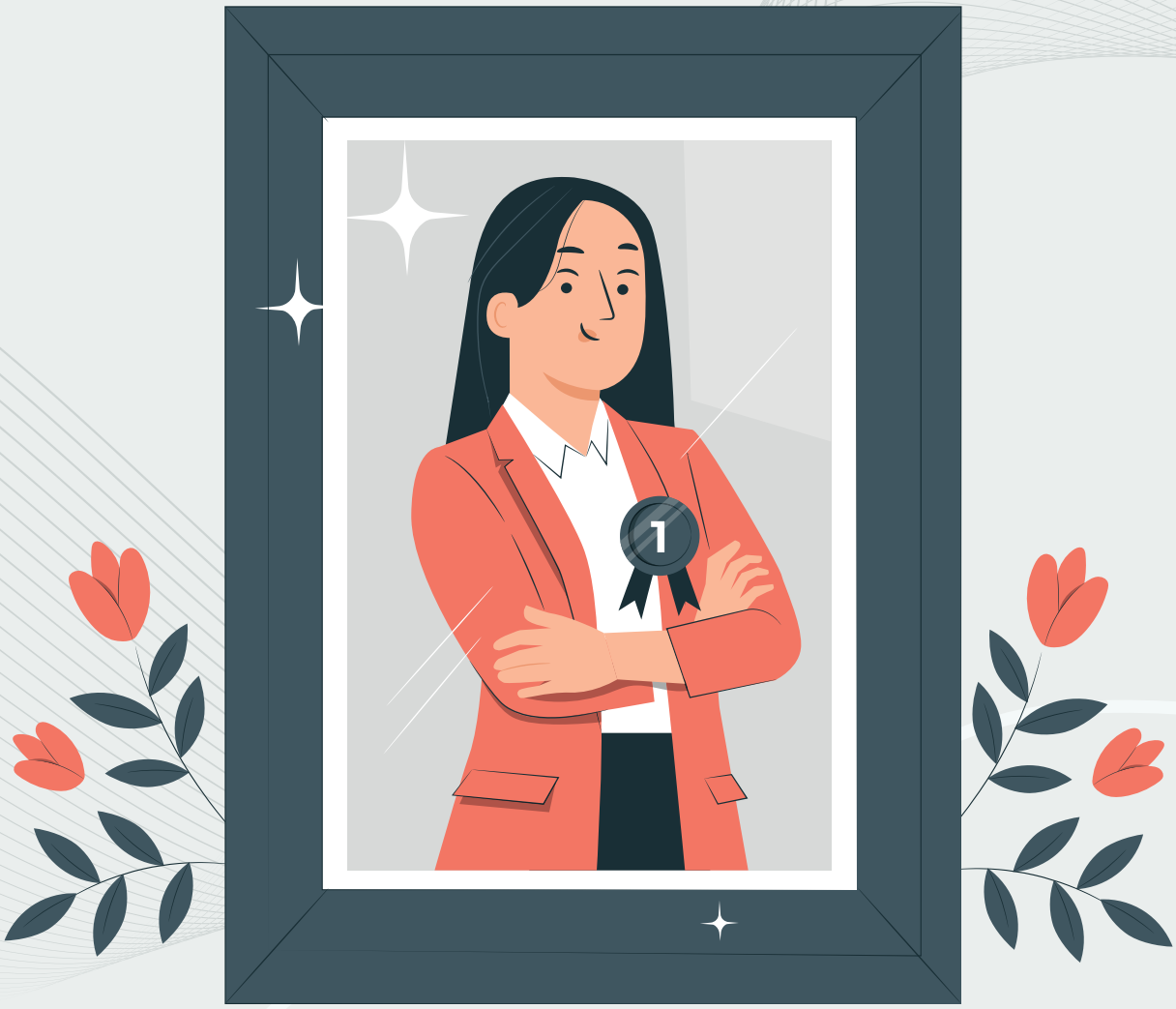
Digitalization and Labour-Saving Impacts

One of the most significant problems experienced in the tourism sector is the labour supply problem because of its labour-intensive and seasonal employment structure. Accordingly, it can be thought that, as findings from the fieldwork reveal, one of the most important reasons for the rapid adoption and spread of digitalization in this sector is that the use of technology reduces labour demand through its labour-saving impacts. Labour saving reduces the demand for more workers, especially for the skilled labour force, regardless of whether male or female, which is consistent with the existing literature in this field. The use of digital tools and programs aimed at facilitating reservations by customers enables the businesses to undertake these transactions with fewer employees, reducing the number of employees, for example, the number of those working at the reception desk has reduced dramatically in recent years.

During the interviews in both provinces, interviewees frequently expressed problems regarding the labour supply. This means that therefore, businesses operating in the sector will closely follow and quickly implement prospective digital developments aimed at labour saving. Although there is a problem regarding labour supply in both Kaş and Nevşehir, the reasons for labour supply bottlenecks in the two regions differ from each other. In the Kaş region, accommodation businesses face difficulties in finding employees since the season is short. Representatives of hotels who participated in interviews stated that they had serious problems in finding female employees, especially for housekeeping services, and that from time to time, this reflected negatively on the internet comments. Regarding the labour supply problem, a hotel operator in Kaş said:

"We cannot find employees now, nor could we find them before, so the biggest problem in Kaş and our biggest problem is finding employees. That is to say, I have experienced it many times; the housekeepers quit working in the middle of the season; they go away and do not come back."

The women coming to Kaş to work in housekeeping services are generally those who live in nearby villages. The tourism boom in Kaş in recent years and the growth in villa tourism during the pandemic increased the demand for workers, particularly female housekeepers. During the interviews, some hotel owners stated that they employed migrant women on a seasonal basis. Labour supply remains limited since the local population is not growing, and there is little migration to Kaş due to the high cost of living therein. Besides, the labour demand increased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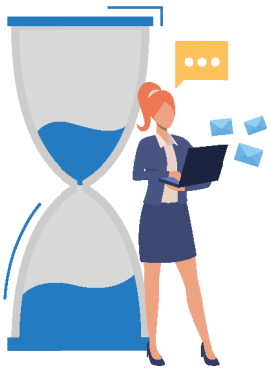
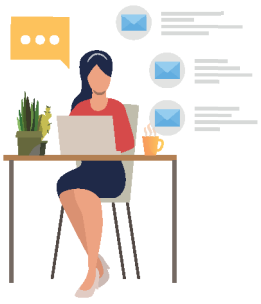
AS ONE OF THE MOST APPARENT CONSEQUENCES OF DIGITALIZATION REGARDING THE FEMALE LABOUR FORCE IN TOURISM, WHITE-COLLAR, EDUCATED WOMEN BECAME MORE VISIBLE IN THE SECTOR.





in proportion to the increase in the number of businesses, making businesses to compete in recruiting each other's personnel. Due to these reasons, one can estimate that many businesses will quickly adopt and implement labour-saving technological developments, especially if they provide cost advantages.

Similarly, the demand for personnel to work in accommodation services in Nevşehir has increased for the tourism season in the region continues throughout the year. The ever-increasing tourism activities and the opening of new businesses further increase the labour demand. For these reasons, employee turnover rates in accommodation businesses are very high. If employees leave their job, they can easily find a job in another place , resulting in employees not being afraid of losing their job. This also makes it difficult for accommodation businesses to find qualified employees.

When asked about the labour force, an interviewee hotel operator said:

"We used to stand up when our chief came, regardless of whether s/he was the head of our department or not. Now, employees instantly quit their job and go away, and then they start working elsewhere on the next day."

"The biggest problem in the region is labour shortage because there are too many hotels, which means many alternatives; employees know that after they leave a business, they can immediately start at a hotel 20 meters away; they are aware of this. Unfortunately, employees' references are checked in the way I am used to. Since they are not checked, another hotel recruits a personnel, I am speaking in quotes, whom I dismissed from here, and they say forget about it, come, you are welcome; because they also need employees urgently".

Due to such labour-related problems, it is estimated that such technologies as tablets, NFC, and wearable devices that enable guests to self-check-in and to activate keys will take the place of traditional hotel services, including those at the front desk and reception, in the future, and that such specific applications as smart assistant and hotel assistant, as well as hotel chat applications and robots integrable with daily messaging applications will be put into practice.

Digitalization and Gender-Based Division of Work: Female Employment in the Grip of Aesthetics and Cleaning

Even though it appears that existing jobs in accommodation businesses can be undertaken by both men and women, the majority of jobs are distributed by the gender-based division of work. In the tourism sector, women are employed in positions such as for cleaning, service and reception, that can be seen as an extension of the domestic reproduction activities they conduct due to their gender-based roles, that have less power and responsibility and accordingly, are less paid and that do not require qualifications (Alarcon and Mullor, 2018). Besides, it is seen employers prefer women in such working areas, such as restaurant, reception and housekeeping, based on the thought that in terms of customers satisfaction, they are more successful in human relations and aesthetically easy on the eyes of customers (Akoğlan, 1996). For this reason, women are preferred for jobs such as receptionist, which involves direct communication with the customer, or such as housekeeper, which involves cleaning. Gender-based division of work puts women in the grip of aesthetics and cleaning in tourism enterprises, and it is observed that digitalization does not have a disruptive and transformative effect on the traditional gender-based division of work.

Looking at the division of work among men and women on a department basis, it was observed that women mostly worked in housekeeping and service delivery, whereas men work as managers, busboys and bellboys, or in human resources or accounting. Reception and kitchen are the areas in which men and women work jointly. Looking at the jobs undertaken by women in the joint working areas, it is seen that women are

preferred in the kitchen because they ensure discipline and order, and they are employed at the reception in terms of aesthetics and considering that they will minimize potential discussions at the reception.

Explaining in which areas women are employed and why they are preferred, an interviewee operator said:

"The number of female employees was higher than the number of male employees 5-6 years ago. They were commuting from Kaş, and some of the female employees working back then were also studying. Later, some of them got married. Then they could nor in the tourism due to these reasons. Our biggest problem in this region is housing, that is places for employees to stay. In general, we don't have a problem in this regard when our female employees are from Kaş. Also, having a female employee in the kitchen changes many things. The presence of a woman therein ensures that the kitchen is more tidy and elegant; she also brings the men working with her into line. Even if she doesn't do much work, her presence is enough because male chefs are focused on conducting the work and cooking the food. Women chefs have a method and think about what customers would enjoy the most; let me send customers pastries from time to time; let me offer a treat; let me making a cake, it would be sold or if not we will eat. The most positive side to have women in a lounge is that the ladies working as a waitress or an omnibus around her or a barmaid increase the visual beauty. It is very important that the biggest problems in our work here are noise and visual pollutions. Noise pollution disturbs you, you feel unhappy, you cannot rest, and you think that you will not come again. The visual pollution has the same effect; my friends who serve are also women who have a bit of elegance."

It was seen that among the departments in the accommodation businesses that participated in the interviews are kitchen, housekeeping, reception, front desk, human resources and accounting. In accommodation enterprises with a larger capacity, there is a division of work among departments, whereas in smaller enterprises, the division of work is not clear, and all employees may need to work in other departments when they are idle.

An interviewee operator told the division of work in their hotel:

"This is a boutique hotel with 8–9 rooms only; therefore, we run to every point where there is work to do. I mean, all of us go to that point, regardless of our departments. I am the owner of the business, I can do any work; Mehmet is receptionist, he also does any work. Here, one for all, all for one. That is, if there are dishes to wash, we go and wash; if there is a room to clean, we go and clean. There is no male employee in the housekeeping, but if we need, there would be. There is a division in large hotels but no division is made in small hotels. If one or two personnel cannot overcome a work, others should help them. However, there is a sharp line in big hotels. An employee working in the restaurant would not work in the housekeeping, nor would she help."

Looking at the female and male employee profiles, it is seen that they vary based on the serving period of hotels and the nature of work. Since accommodation businesses in Nevşehir provide services throughout the year, operators prefer to employ people residing in the region to ensure permanent employment. In Kaş, hotel operators have to employ people from outside the region since the season is shorter and employment is temporary. It is seen that hotels in both cities also employ students studying at tourism faculties in their respective regions to fill vacant positions during peak periods. These students are employed on a temporary basis with daily wages. In this regard, an operator said:

"When the business intensifies on weekends, we usually employ students coming to work in extra jobs; here, we call them extra workers. We support them and they support us; this is mutual. We run this place as a tavern, and it gets crowded, especially on weekends. During these periods, we temporarily employ students and increase the number of our staff to 10".

Looking at the profile of women working in both regions, it is seen that there are similarities. Women working in housekeeping services are

30 years old or older and have no responsibility for taking care of children during the day (even if they have children, they attend school). These women make a significant contribution to their household economy as they agree with and work at different hotels.

When defining profiles of working women, an interviewee hotel operator in Nevşehir said:

"In general, women who are 35 to 37 years old work here. They work for additional income for their households, and they usually have 2-3 children studying at the school. They do not have to look after children because they usually live close to their mother, mother-in-law or relatives, or at least this was the case for those we encountered. Majority of them come from the local region in Cappadocia, they live within Cappadocia".

When defining profiles of working women, an interviewee hotel operator in Kaş said:

"Women working as a housekeeper usually have the same typology. They are primarily housewives, and when they think about what they can do during the upcoming tourism season and how they can earn money, the easiest way is to work as a housekeeper because they know how to clean. The majority of them have come from their villages and started to live in Kaş; this group constitutes 80% of workers; 20% of these women live in Kaş, but they graduated from primary school only, got married early and are trying to find a place for themselves to work".

As a result of interviews, it was determined that the patriarchal attitudes adversely affects female employment in both regions. In Nevşehir, women have been taking up jobs in the tourism sector for the last five years and can only work in certain positions and at certain time periods due to the restrictive demands by their husbands.

It is observed that the gender-based division of work and the inequality created by such division of work exacerbate women's disadvantaged position in working life. However, business owners state that there is no gender discrimination, that everyone can work in any position other than housekeeping, and that when recruiting staff, the choice is made by considering how eager and hardworking the candidate is for the job. It is, however, seen despite all these emphases that the strict gender-based division of work confines especially low-educated and unqualified women to housekeeping jobs and that digitalization has weak effects in this regard and does not offer hope for equal transformation at all.

Digitalization and Executive Women

As one of the most apparent consequences of digitalisation regarding the female labour force in tourism, white-collar, educated women became more visible in the sector. For example, women with a bachelor's degree are significant employees, especially for full-time tourism jobs in Nevşehir. Automation and digitalisation ensure work processes get easier and the relationship between work and physical power is radically changed, removing barriers to women's participation in jobs that were previously identified as men's work. In general, tourism is a sector in which women work more intensively. However, it is important to examine how digitalization processes affect educated women's participation in the sector.

The field study conducted indicates that there are a considerable number of female operators and entrepreneurs and that women are visible, even if in much lower ranks than men, in the sector. The fact that the jobs in the accommodation and hospitality sector are highly related with women's domestic roles, as well as the digitization of some jobs, shows that even though this is a service sector open to women, white-collar professional women have an important place in formal jobs. The fact that hotels in Kaş district are relatively small-sized and that operation of these hotels on a season basis affect professionalization, whereas finding from Nevşehir in this regard provide more vivid evidence in pointing out of the place of white collar women workers. It was observed that, in large hotels, there is a

considerable number of female managers and that many departments, particularly human resources, marketing and sales, are managed by women. Selda is the sales manager of a large hotel and started to work in the tourism sector as an intern during her university term. She sets a good example to observe a career journey of a woman and the opportunities offered to her by the tourism sector. She started to serve her internship at a hotel in her second year at the university upon advice from her lecturer. When she saw that she can cover her education expenses with her income from this job, it was easier to get permission from her family living in another province to continue to work. Once she graduated from university in the following years, she continued to work in the sector and followed the opportunities offered by her tourism career. Finally, she started to work as a sales manager at a large chain-branded hotel in Nevşehir. Regarding the opportunities offered to women by the sector, Selda said:

"I have always felt I was supported. I started having some difficulties after getting married and having children but I can overcome these difficulties because I love my job. Our enterprise offers various opportunities for our career development; we receive training. I believe that everyone can find a place in the sector and move forward if they wish to do so."

It is possible to see women professionals as managers of some departments in large hotels in Nevşehir, whereas this is not very common in Kaş, but there are women who own hotels and act as managing directors. It was seen in two of the hotels that participated in the interviews during the field study, there were two women who owned the hotel also worked as the managing directors. Aysel was one of these women. She was born and grew up in Germany, has hotel management experience there and is a managing director now. When her family bought a hotel in Kaş, which she runs now, she moved to and settled in Türkiye and started to operate the hotel on her own. Likewise, another hotel in the centre of Kaş is run, with the support of her family, by a woman who owns the hotel. This indicates that women can be managers in the sector in different ways and that the sector has become easier for women due to its service-oriented structure and digitalization of business processes.

Tuğçe and her partner found out that there was a few hotels serving with a new vision in Nevşehir and decided to run a hotel in an attempt to add a new wrinkle to tourism activities in this region. Their challenge to opening a tavern despite the popularity of nightclubs in the region and continuing this business despite the difficulties they faced until being accepted by their business community is a success story of two women entrepreneurs.

Apart from this example, it was also observed during the field study that digitalization increased female entrepreneurship. There is a new field of entrepreneurship, though small scale, especially in the tourism sector, for those who work as digital content creators. The increasing influence of social media on consumers' purchasing decisions has dramatically affected the sector's use of social networks and internet. Research indicates that 74 per cent of consumers tend towards social media tools when making a purchase decision. Enterprises that use social media tools rather than traditional media communication strategies increase their productivity and reduce their costs (Ile & Okoye, 2017). This makes social media a significant instrument not only for large enterprises, but also for small and medium-sized enterprises.

Women started to use social media as an entrepreneurial tool to be free from gender roles in business life. Social media is even considered, beyond being an instrument, a new business area for some women. There are significant job opportunities for those who can manage Facebook, Instagram, or YouTube accounts for an enterprise or produce content for such media. It is seen that Instagram is the most used social media tool in the accommodation

From Being a Student to Entrepreneurship: The Story of Two Women for Running an Accommodation Business

After studying at the tourism faculty in Nevşehir from 2006 to 2010, Tuğçe decided to stay in Nevşehir and run a hotel with her friend. Since both of them had a tourism background and managerial experience in leading accommodation businesses in the region, it was easy for them to take a step towards entrepreneurship. The fact that tourism activities continue throughout the year in Nevşehir was the most important factor for them to stay therein. They realised that there was a need for a business with a new vision in the region, and accordingly, they took action to close this gap... Tuğçe emphasized that the majority of accommodation businesses in the region are places which are inherited and transformed to small boutique hotels, and that the only motivation in this regard is monetary desires. The tourism understanding here started to change with investors coming out of the region. Tuğçe and her partner were also entrepreneurs coming out of this region. They stated that they were alienated by the local people thinking that these two women "occupied their place". Unlike other accommodation businesses in the region, the restaurant started to serve as a tavern. This causes the local people in the region to raise their eyebrows. Since night clubs were popular in this region, opening of a tavern by two women in this region caused misunderstandings.

"We, as two women, opened a tavern here. The people here are used to night clubs, how could they know about the tavern culture? Night clubs are usually places where men go and drink and when they get drunk these places serves as something else; it was a difficult process for our tavern to be adopted, now everyone has great respect..."

Before the tavern opened, there were women working in the restaurant section of the accommodation business; however, once the place started to serve as a tavern, men (husbands or fathers) prohibited women from working in the tavern, causing women to terminate their employment. These women entrepreneurs could not find a female dishwasher for the tavern and then employed an Afghan man.

"They didn't allow women to work because the place was a tavern; women were working in the evenings before. There was no problem when they were serving dinner to Chinese groups or washing dishes thereafter, but when this place was called a tavern, their spouses did not want to send them here, so we could not find a dishwasher. In fact, nothing has changed, we, as two women, are continuing to run this place."

businesses that participated in interviews, and that businesses need professional support in managing these accounts.

Since no professionals are offering such services in Nevşehir, accommodation businesses herein purchase these services from those located in other cities or manage them amateurishly on their own. It was seen that the latter was preferred mostly by small businesses. The reason behind this is that they seek to cut back the financial resources required for this work.

As for Kaş, it is seen that accommodation businesses have been receiving professional support for the last few years regarding the use of social media tools as a digital marketing method. Below is the story of Ms. Serim, a woman entrepreneur who created a new sector after realizing the lack of services for social media content producers in Kaş and contributed to the expansion of such services in recent years.

A New Sector in Kaş: Digital Content Creation

After studying photography, Ms. Serim came to Kaş and realized that there was no social media content creator serving accommodation and restaurant businesses in this region. However, she did not have a camera to do this job. She worked at a silver shop for a while, and then she bought a camera for herself so that she could take pictures of hotels. She ordered a business card for herself and started to go from door to door to tell hotels about herself and the work she would do. In this way, she earned back the money she spent on the camera in two months. Thanks to her work, she became common knowledge in the region even though she did not yet have a website or social media accounts. Her job included taking photos for accommodation businesses and editing and sending them to the respective business. However, Ms. Serim saw that before sharing the photos on their pages, businesses applied filters that impair their quality. She then made an offer to enterprises to manage their Instagram profiles and started to manage accounts of accommodation enterprises for a very small price. Seeing the demand for this service from accommodation establishments after Ms. Serim's efforts, other people started to open agencies that provided such services in Kaş. Social media content creation services, a new sector formed in the Kaş region, increased employment by creating new job opportunities.

"Every hotel posts in social media, but they do it through a receptionist or the hotel manager. Those who need but cannot do it say 'This is important, Ms. Serim can you do it'; when I say my service fee, they say it's too expensive. Yes, my services are expensive now, and I always say that. I show my work and I say look at the photo and the caption I wrote under it. We make a deal for one month, but after this deal, they cannot write captions under photos like me."

Ms. Serim aimed to become common knowledge through suggestions of accommodation businesses to each other by serving with reasonable fees at the beginning; and she achieved her aim. Ms. Serim also stated that managing social media accounts of accommodation businesses was a tough and tiring job because it is of great importance to follow the social media algorithm and interactions and post content in due time.

"I shake from fear in the summer and become anxious, because you see the stats from Instagram and interaction hours and minutes; there are such algorithms, and you have to put the photo at the right time. You don't yet know even what to write, I can just put flowers and complete my service but I've never done that. On the contrary, I try to write a sentence under the photo that suits it; sometimes, I look back and say what a beautiful sentence I did write."

Ms. Serim follows new features emerging in the social media and takes care to use them for the accounts she manages, because such changes gain popularity and increase interaction in the social media.

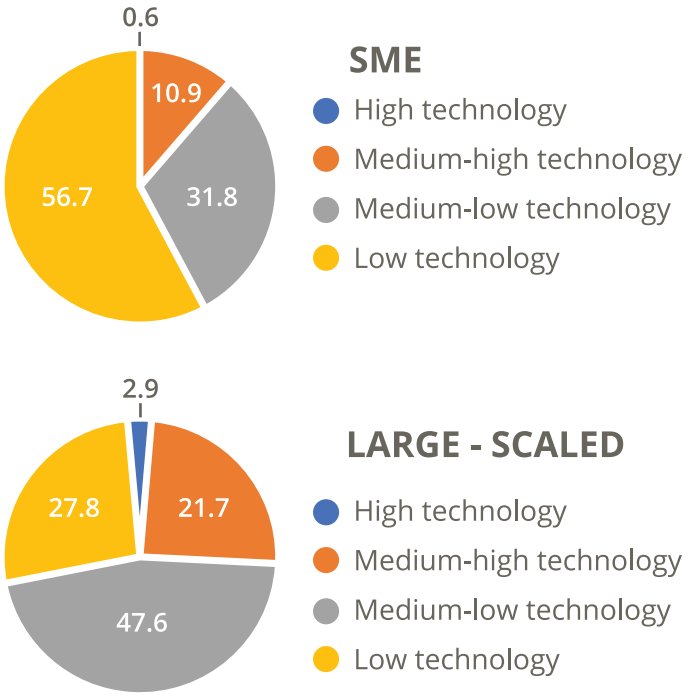
Accommodation businesses that started working with Ms. Serim increased the number of customers. There is an increase in the number of customers who write a message via Instagram or call the hotel and want to make a reservation once a photo is posted. Ms. Serim directs customers who write through Instagram to hotels or restaurants and give their contact numbers. She decides on the texts written in reply to customers together with accommodation businesses. Ms. Serim provides all these services as part of social media management. Apart from these services, she works together with her friends to provide services to accommodation businesses and restaurants on website building and Google Ads.

3. MANUFACTURING SECTOR IN TÜRKİYE: SMEs, DIGITALIZATION AND FEMALE LABOUR FORCE

The manufacturing sector is a key sector for it has connections with many other sectors and affects employment and economic growth. Furthermore, the manufacturing sector has a decisive role on the development of the agriculture and service sectors, as it features, due to its wide range of sub-sectors, the demand and supply of a significant amount of intermediate input from/to many other sectors in the economic structure (Arısoy, 2008). In a broad sense, the industry (ISIC1) includes mining and quarrying (ISIC2), manufacturing (ISIC3), electricity and water supply (ISIC4) and construction (ISIC5). Among these sub-sectors, the manufacturing sector is of great importance. In 2020, "manufacturing" sector had the highest production value in Türkiye that corresponds to 2.84 trillion TRY, whereas the trade and construction sectors had, respectively, 713 billion TRY and 584 billion TRY of production (TURKSTAT, 2021). Sector classification for the manufacturing sector is given in detail in Table 2.

Looking at the situation of SMEs in the manufacturing sector, 2,442 SMEs were engaged in manufacturing advanced technology products in 2020 (KOSGEB, 2020).

Figure 1: Percentage of SMEs and Large-Scaled Enterprises in the Manufacturing Sector by Technology Level (%), 2020



Source: Statistics of Small and Medium-Sized Enterprises, KOSGEB, 2020.

[1] https://ilostat.ilo.org/resources/concepts-and-definitions/classification-economic-activities/

The breakdown of SMEs in the manufacturing sector by their technology level indicates that 56.7% of SMEs -versus 47.6% of large-scale enterprises- make production at low technology. When examined by the size of SMEs, 57.5% of micro-enterprises make production at low technology, whereas 32.2% at medium-low technology, 9.8% at medium-high technology and 0.5% at high technology. These rates are 52%, 29.7%, 17.3% and 1% respectively, in small-sized enterprises, whereas 51.9%, 28.2%, 18.3% and 1.6%, respectively, in medium-sized enterprises (KOSGEB, 2020).

The following sections of this report examine the relationship between digitalization and the female labour force in SMEs operating in the manufacturing sector in Kocaeli and Tekirdağ provinces and discuss the structure of the manufacturing sector in Kocaeli and Tekirdağ, as well as the level of digitalization at the mentioned enterprises. The report further discusses digitalization and its effects on the use of female labour in these two provinces.

Structure of Manufacturing Sector in Kocaeli

With is population of almost 2 million, Kocaeli is one of the leading industrial cities in Türkiye. Data on the employment structure in the city also reflects the characteristics of an industrial city. The share of the manufacturing sector in Kocaeli in the Turkish manufacturing sector is approximately 13%, with the main drivers as the manufacturing of vehicles, the chemical industry and the metal industry. 36.4% of vehicle manufacturing, 27% of chemical industry and 19% of the metal industry are undertaken in Kocaeli (T.R. Kocaeli Governorship of Kocaeli, 2022). It is clear that the automobile industry has a significant role in the economy of the province and Türkiye in terms of not only automobile production but also other sectors and production areas to which it is connected. This data indicates that the relationship between industrial production and use of labour is dominated by technology and has a highly productive structure. This means the industry is large-scaled as well as uses labour-saving technologies (East Marmara Development Agency, 2020).

Kocaeli has a critical role in industrial production not only in the Marmara Region but also throughout Türkiye. Among Türkiye's top 500 industrial enterprises, there are 75 enterprises operating in Kocaeli, whereas this number increases to 133 among the top 1,000 enterprises. There are 19,840 manufacturing enterprises registered in the Eastern Marmara Region, 9,505 of which are based in Kocaeli. To give an idea about the distribution of employment in manufacturing enterprises by the size of these enterprises, half of the employees in the manufacturing sector work at enterprises with 50 or more employees. The other half of the employees work at enterprises with less than 50 employees, i.e., SMEs.

There are 37 Organized Industrial Zones (OIZs) in the Eastern Marmara Region, 14 of which are located in Kocaeli, including Gebze (GOSB), TOSB Automotive Sub-Industry, Machinery Specialisation, Gebze VI-IMES Machinery Specialization, Gebze V Chemical Specialization (GEBKİM), Gebze Plastic Manufacturers; Dilovası (DOSB), Arslanbey, Gebze Güzeller, Gebze Coal Processers Specialization, Alikâhya, Asım Kibar and SME OIZ as well as Kandıra Food Specialisation which is under construction. There are also five Technology Development Zones and two export processing zones in Kocaeli. Furthermore, there are various research centres and technology parks aimed at developing technology and knowledge in the province, including TUBITAK MRC, TSE, Kocaeli University Technopark, Gebze Technical University Technopark, Gebze OSB Technopark and TUBITAK MARTEK.

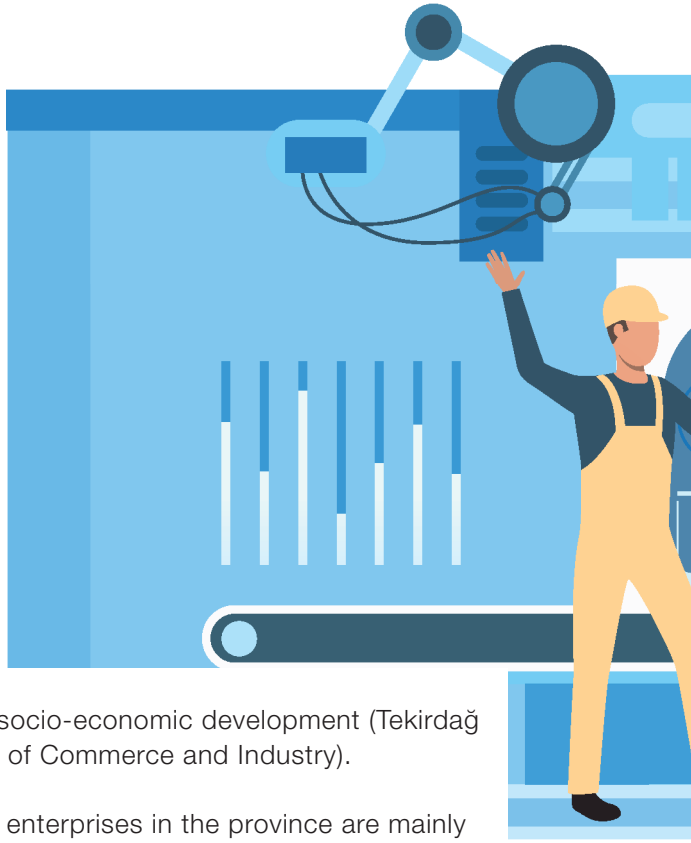
The automotive sector is the main buyer of products produced by key industries, such as iron, steel, petro-chemicals and defence, that are aggregated in the Eastern Marmara Region, and is the pioneer of technological development and

deepening in these industries. The automotive industry and its sub-industry are also clustered in this region and serve as a significant employment and production source, particularly in Kocaeli (East Marmara Development Agency, 2020).

Such major automotive enterprises as Anadolu Isuzu, Hyundai, Askam and, particularly, Ford Otosan, operate in Kocaeli. The geographical proximity to Istanbul and Bursa also facilitates the development of the sector in this province and the establishment of effective downstream and upstream links through supply chains. Among the sub-industries, the tire industry is highly developed; the OIZs in which the sub-industries operate are located in the city centre and districts. There are also many production units which produce safety parts, including seat belts, airbags and steering wheels. The plastics industry has also developed in line with the petro-chemical and automotive industries (East Marmara Development Agency, 2020).

Structure of Manufacturing Sector in Tekirdağ

Tekirdağ is among the significant industrial production centres both in the Western Türkiye. The province contributes significantly to the country's economy in certain sectors with its 13 Organized Industrial Zones (OIZ), the European Free Zone (ASB), transportation infrastructure, qualified labour force, and rapidly increasing industrial investments. Tekirdağ is an attractive region for investments, based on various factors, including natural resources, such as coal and gas; groundwater reserves; proximity to Istanbul, a global market and financial centre; transportation infrastructure, including railways, highways and divided roadways, connecting active airports and sea ports to industrial zones and Europe. There are more than 1,200 industrial enterprises located in Çerkezköy Organized Industrial Zone, Çorlu Leather Organized Industrial Zone and European Export Processing Zone, as well as around Çorlu and Çerkezköy. Tekirdağ ranks as the 7th province in Türkiye in terms of socio-economic development (Tekirdağ Chamber of Commerce and Industry).



Industrial enterprises in the province are mainly located in Çerkezköy and Çorlu districts. Looking at the sectoral breakdown, textile industry is the leading sector and followed by leather, food, machinery-metal, metal goods, agricultural tools and energy industries, respectively. The most exported products from the province are textile products, leather products, wine, iron, and sunflower oil. According to data from the Istanbul Chamber of Industry, there were 18 enterprises from the Çerkezköy Organized Industrial Zone in the "Türkiye's Top 500 Industrial Enterprises-2020" list.

During the interviews held as part of the field study, it was stated that, in Tekirdağ, there were 4,784 enterprises, 90% of which were SMEs. These enterprises are distributed to 13 organized industrial zones in located in Tekirdağ. Among these OIZs, Çerkezköy Organized Industrial Zone is the one that is the earliest and hosts most enterprises in Tekirdağ. Enterprises in Çerkezköy Organized Industrial Zone are engaged in various sectors, including manufacture of textiles and clothing, rubber and plastic products, chemicals and chemical products, fabricated metal products, electrical equipment, basic pharmaceutical products and pharmaceutical materials, basic metal products, paper and paper products, food products and other goods.

3.1 Digitalization Processes of SMEs Operating in the Manufacturing Sector

Studies conducted and interviews held on the digitalization of SMEs operating in the manufacturing sector show that SMEs lag behind digitalization processes. During interviews, it was stated that SMEs do not have a digitalization strategy or a systematic approach in this regard and that most importantly, there is limited access to financial resources required to invest in this field. They need to raise their awareness and receive training in this regard. It was further stated that the majority of SMEs start digitalization processes when they tend to grow which is concurrent with the second-generation managers taking management of their enterprises.

SMEs inherently employ 250 or fewer employees, and it is seen that they, particularly smaller-sized SMEs, seek to conduct administrative tasks with an extremely limited number of employees. For example, in an enterprise with 40 employees, an accountant undertakes irrelevant tasks as well. Besides, for SMEs working with a single main contractor in their supply chains, digital transformation generally comes into question if requested by the main contractor. In such cases, digitalization can, however, be achieved for certain stages only. It was stated that SMEs are more eager to digitize in such administrative areas as accounting and human resources, and as for production stages, the prominent areas are product tracking with barcode systems and digital marketing.

The D3A: A Tool for the Assessment of Digital Transformation in Türkiye (Akarun et al., 2020), which is one of the few studies on the digitalization of SMEs, was implemented in the Dudullu Organized Industrial Zone. According to this report, the level of digital maturity is at the lowest level for the organizational structure that includes such areas as decision making methods, interdepartmental cooperation, strategy development methods, digitalization strategies,

business processes, and employee development and training. Customer management includes sales, marketing, orders, dealership and after-sales services. Digitalization is at the lowest in this area, especially at SMEs producing for a single customer. Product development refers to the P&D and R&D structure, innovation activities and product customization, and the digitalization of SMEs in this area is at the lowest level since many businesses do not have their own products. Average-sized SMEs do not have R&D units, nor do they have patents or externally supported projects. Supply Chain Management focuses on planning regarding material requirements, procurement, inventory, warehouse and shipment. In this area, SMEs use digital tools usually for keeping data on their inventory and making simple planning and analysis through this data. Digitalization in Production Management includes work orders, scheduling, downtimes, material movements, quality and maintenance. It is stated that average-sized SMEs do not collect much data for production management and that the data collected is not used for analysis purposes. Data collection and analysis on quality and maintenance are implemented if requested by the main supplier. Employees working in the production process should closely monitor material movements and machinery downtimes and analyse the relevant data through production control systems (Akarun et al., 2020).

The findings of the fieldwork in Tekirdağ and Kocaeli show that the level of digitalization of SMEs is high in administrative departments, whereas it is lower in the manufacturing phase as it requires automation and costly investments. Findings on the level of digitalization of SMEs operating in the manufacturing sector are examined in six areas:

Organizational Structure

Findings in this area seem to support the findings regarding the organizational structure and decision-making processes of SMEs in the literature. Since SMEs are small-sized structures, they are operated by one person or as a family business. Daily, ordinary or strategic decisions are usually made by the boss. Even if there are predefined roles for the units, relationships and business processes among them are not updated frequently. Information systems are insufficient; however, relevant services can be outsourced when needed. There are no programs for the development and training of employees and improving their digital skill levels.

The enterprises that participated in interviews use various programs within their organizational structures. The features of the programs used vary according to the sizes of enterprises. Large-scale enterprises use more comprehensive software programs, whereas small-sized enterprises prefer simpler ones considering their costs. Regarding organizational structure, representatives of enterprises explained how they went digital in such issues as decision-making processes, interdepartmental communication, employee development and training. In this regard, the human resources manager of a chemical enterprise that produces plastic raw materials explained the digital tools they use in the organizational process:

"We mostly work through online platforms. We work on many digital platforms. That's why the Covid period did not affect us much. We use Teams. We use SAP software. This software provides a great advantage to enterprises, but it is very expensive. SMEs may not afford it. Probably, there are many more suitable software programs for their business scales. This software features a strong tracking module. All orders can be entered and tracked from this module. There is another module that can be used by HR. All data and wages of employees are stored in that module. We manage the performance system from that module. We assess employees' performance throughout the year from that module. The module is also used form informing employees. E-mail regarding increases in wages, bonus payments are sent automatically. We also use another module for payrolls. This decreases dependency on individuals. I mean, everything is included in the system. Furthermore, if there is an approval process, it can also be executed through the system. So, it eliminates

the problems when a person leaves from the job, such as how to do this work, which customer was that, what correspondence was exchanged. When someone replaces another, s/he can easily manage the process if s/he has knowledge on the software. However, SAP requires support in the technical sense. That's why we have a technical unit abroad regarding SAP. The software may need to be developed or when there is a problem, this team can respond".

When asked to explain the digitalization in their organizational structure, the human resources officer of another enterprise that manufactures small home appliances replied:

"We, as HR, have a system called MEYER; it is a personnel tracking system. Previously, I mean one year ago, employees were manually writing their annual leave forms and then bringing them to us. However, they now write to their manager through the system that they will take a leave for x days. Previously, they were coming to us to ask about their leave balance; many employees were coming and going for this purpose. Now, everyone can ask their managers or respective heads of departments to take a leave. Accordingly, managers enter a leave request which the system directs to me. I can see in the system who has taken annual leave for how many days. Besides, employees can fill out the satisfaction survey forms from their tablets through this program. We also perform some of our work from Google Forms, and this provides convenience for us. We also consider going digital for personnel affairs. We will remove the paperwork and go completely digital. We are planning to transfer all documents, including photographs and employment contracts, to digital platforms."

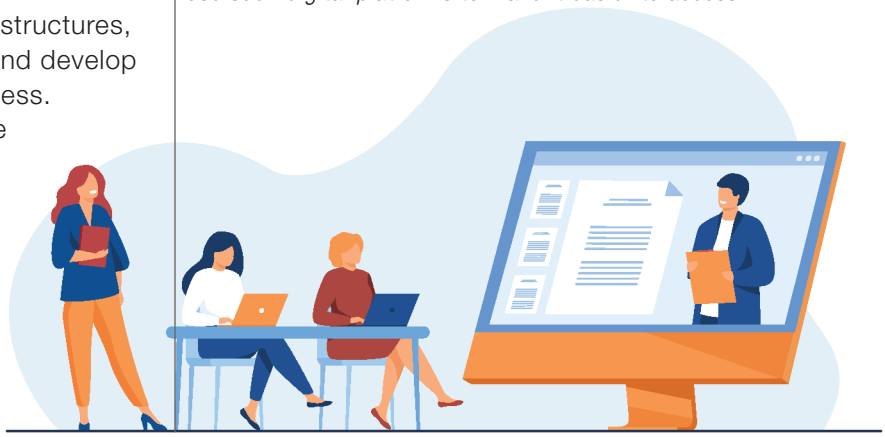
When managing their organizational structures, enterprises use digital applications and develop various policies to adapt to this process. Enterprises use more comprehensive programs in proportion to their size and prefer software programs through which they can monitor all business processes and which can be integrated with other programs. Smaller-sized SMEs consider the cost of software programs and may prefer those with fewer features.

Customer Management

One of the most critical problems facing SMEs in terms of customer relations is that a considerable proportion of SMEs do not work directly with customers. Since most enterprises are a supplier to large enterprises, they predominantly manufacture a single product for a single customer. Furthermore, some SMEs have a limited product range as they work on a project basis. At average-sized SMEs, sales and marketing are conducted by the senior manager, who also determines the price based on their experience and keeps data on sales transactions by themselves. Sales are usually made by face-to-face conversations or via phone or e-mail. Customer data and information are recorded in a digital media without using a special software program. When explaining their digitalization processes in customer management, representatives of enterprises who participated in interviews also touched upon such issues as reaching customers, communicating with customers, etc.

The owner of a cosmetics enterprise stated his experience regarding reaching customers as follows:

"Digitalization processes are also reasonable in terms of finding customers; we try to work on an export basis; actually, this is the goal of our country. Therefore, we can use such digital platforms to make it easier to access



to customers. We use them from time to time. There are software programs. For example, there is software called Exporter to which we are a member; we can find customers through this software. We have a presentation in this software; when customers log in, they can see us and make a request."

The manager of that chemical enterprise does not have great knowledge of the customer management process, but describes the digital applications they use as follows:

"Our sales team uses a program called SALESFORCE. Frankly speaking, I do not have detailed knowledge about its content, but I guess such data as the customers reached, their comments, how many customers they visited, etc. are managed through the program. They are also using SAP."

The manager of an enterprise that produces small home appliances stated that they do not use digital tools in customer management because they do wholesale and said:

"We offer two types of supply mechanism to our customers. We ask them would you like to buy this design that we possess. The customer comes and says I like this design, mark my logo on this design. We provide services through such a mechanism, or customers say I like this design, can you do it, we also serve as a supplier through such a mechanism. But since we are engaged in wholesales, we do not use digital tools in this process at all. Because this process mostly proceeds through mutual agreements. There might be digitalization at the ordering stage. I'm sure it is selected through a system."

It is seen that enterprises that participated in interviews has a poor level of digitalization in the customer management process. SMEs directly communicate with customers using such communication tools as telephone and e-mail, whereas large-scale enterprises carries out this process through software programs.

Product Development

Product development is one of the areas in which SMEs have poor digitalization performance. The majority of enterprises produce products developed by another business, making them not to engage in product development. Average-sized SMEs do not have R&D units, nor do they have patents or externally supported projects. SMEs that participated in interviews either involve in the product development processes of other enterprises, or produce their own products, or produce a part of other enterprises' products.

When explaining that they are trying to develop their own software for the product development process, the manager of a paint firm said:

"Basically, we make production as an industrial group. We produce all those groups, from undercoat to varnish and to paste. Apart from them, we receive various demands from the market, including, for example, button paint, eyeglass frame paint, varnishes for these products… we work on such demands. Many customers demand paints from us. Market demands are supported by the innovation department within our enterprise. We also use off-the-shelf software programs in this regard. Now we are trying to develop a software program for us. We are trying to improve instant tracking in production and product development stages. Because we are an enterprise dealing with both domestic and international customers."

In this regard, the system development manager of a textile enterprise said:

"We have an internal software program, we follow all processes through this program. Each employee can log into the system by using his/her username and password. Here we can follow R&D projects; each employee conveys their opinion through this program and indicates the required investment amount, if there is any; these are submitted to the senior management for approval; We follow all these processes from here. Employees may submit any failures they have encountered during production through this program. We also follow them here. For a new product to be produced in the future, R&D personnel can make inquiries by entering details, for example, the product to be developed, the materials (e.g., thread type) to be used, and can display relevant texts that have previously been submitted. We follow records on

faults and failures from here."

Large-scale enterprises maintain product development processes continuously and develop programs, through which they can involve all relevant personnel in a product development process, whereas SMEs conduct limited R&D studies that are initiated with requests from customers.

Supply Chain Management

Enterprises usually keep data on their inventory and use this data for making simple planning and analysis. Supply chains are of great importance for enterprises, particularly SMEs. The reason is that SMEs have great difficulties in purchasing products at affordable prices and reaching suitable supply chains for this purpose. In this regard, the representatives of enterprises who participated in interviews told about the difficulties they experienced regarding planning and material requirements and the relevant digitalization processes.

Regarding procurement, the owner of an enterprise that manufactures raw materials for the cosmetics sector said:

"For example, there is no such local procurement platform on a regional or national basis. To provide material, we contact plenty of suppliers and search resources to find where it is sold. I think that if such a platform is established, it would be a good business idea, while such a procurement platform would make it easier for local manufacturers."

In this regard, the system development manager of a textile enterprise said:

"We frequently hold quality meetings and follow them through a management system. We keep audit reports, minutes of quality meetings, supplier evaluations in this system. We can also see our actions and suggestions through the system. There is a form for our supplier evaluations. It makes calculation automatically, for example, a supplier rated A based on a score of 97.4. The purchasing department enters the answers to the questions in that form, then the supplier's score is calculated, and we can follow the evaluations at meetings."

The executive of a paint enterprise described their digitalization process in supply chain management as follows:

"For example, which group of paints did we produce in which year and in which tone? As we have a great variety of products, how many tons of goods did we produce annually in these product groups? What was our annual turnover for them? All of our costs per kilogram are defined. What is our profitability? Since 2000, we have been using a program through which we can answer to these questions. Thanks to this program, we can instantly get data for a 10-year period within 30 seconds. This is a program we have been using for a long time."

Production Management

It is stated that average-sized SMEs do not collect much data for production management and that the data collected is not used for analysis purposes. Data collection and analysis on quality and maintenance are implemented if requested by the main supplier. Employees working in the production process should closely monitor material movements and machinery downtimes and analyse the relevant data through production control systems It was observed that there are similar practices in the production processes of the enterprises that participated in the interviews. They furthermore told how they conduct production management process, including work orders, scheduling, quality and maintenance and how they go digital in this area.

The human resources manager of an SME explained the system they implement in such processes as work orders and scheduling:

"We also take work orders from Mikro, i.e., the program. Of course, the production is performed in line with work orders. We have a personnel control system for checking their entry and exit times; they swipe their cards at the entrance and exit. We have been using it for two years;

previously, they were signing a file for entry and exit times. For the production process, there are production forms to monitor the daily production amount; such data should be entered in Mikro to form a database; however, we get wrong results when people do not enter relevant data in Mikro. We cannot find personnel for that position. I have had great problems for the last two months on this issue; we could not recruit a person who knows Mikro."

The human resources manager of another explained the system they implement in production management:

"Regarding this, we have a quality department. All processes are defined, describing which steps will be followed, and we proceed according to these processes. There is also an approval process for those monitored through SAP, it is also defined who will approve. I mean, all processes and workflows are defined, and we do not have any problems at that stage."

When telling about the system they implement in the production monitoring process a software developer said:

"These are sort of things that we try to do without outsourcing; we have developed a software program. We can keep everything, including all documents, up-to-date on this system. Apart from that, we also purchased a software program, called QDMS. For example, what training will be received in which month of 2022, what will be our corrective and preventive activities thereafter, audits, actions... we can enter all these in this system get relevant reports. In the production monitoring module, you can reach such details as products waiting in your machine, contracts, warehouse temperature records, irradiator downtimes; we can also look at previous records."

A human resources manager explained their digitalization regarding the production process:

"Regarding production, we have the MES system. The production plan, margin of error, the duration of the machine downtime if there is an error; all of these can be calculated in the MES system. We are trying to switch to it now; we have even integrated. We can consider this process as digitalization on production. Therefore, our employees know about using computers. We provide a specific training for them. Such training is delivered by a manager who have knowledge on MES system. There is a monitor and a keyboard next to each machine. Reports are received accordingly."

Information Technologies

A distinctive feature for determining the capacity of the information technology is the frequency of backup of the data created within enterprises. Large-scale enterprises use corporate digital archives and cloud storage technologies for storing data. SMEs use lower-level digital technologies for data storage and data backup analysis purposes. The representatives of enterprises who participated in the interviews told what kind of a digitalization process they experienced regarding data storage, data analysis, data backup and document management system.

Regarding data storage and data back processes, a human resources manager said: *"Mikro provides an infrastructure in this regard. We have an agreement with Mikro; they store our data on behalf of us to ensure security. We receive consultancy services from Mikro, they charge us a monthly fee and provide consultancy services in return. Mikro is trying to support us and we are trying to adapt it completely to our own processes; unlike SAP, it is not a very broad program."*

Regarding the data storage and deletion of data in line with legal processes, another human resources manager said:

"We use OneDrive. Everything is stored in common files. We have an IT department. For security reasons, we cannot use flash memories; they were prohibited last year. At our enterprise, everything is saved in OneDrive. Only such statutory documents as invoices, etc. are printed on paper; everything else is saved in the digital system. Such issues as which document will be kept for how long are monitored in line with legal process. Such issues as disposal methods and periods progress step by step in a systematically manner. The quality unit uses a software program called

[2] https://cosb.org.tr/wp-content/uploads/ek2-cosb-genel-degerlendirme-raporu-dijitallesme-olgunluk-duzeyi.pdf

Documentum, which keeps data on relevant document and give a warning on the date on which a document should be revised."

3.2 Digitalization and Female Labour Force in Manufacturing Sector

The manufacturing sector in Türkiye appears to be a male-dominated sector. Many sub-branches of the manufacturing sector also have a male-dominated production structure. In the manufacturing sector, women are mostly employed in manufacturing-related areas. Such employment can however not be construed as women are employed on an equal basis at all departments (Dedeoğlu and Ekiz Gökmen, 2021). It is common knowledge that in the manufacturing sector, women work in more labour-intensive sectors, such as food, textile and garment. However, the manufacturing sector also offers a variety of employment opportunities for white-collar, educated, professional women.

Various aspects of digitalization in the sector in terms of female labour are examined under such headings as gender-based division of work, labour-saving, and impact on educated, professional and entrepreneurial women.

Digitalization and White-Collar, Educated Women Workers

It is observed that, in the manufacturing sector, women work in production departments of certain sectors only, whereas white-collar educated women work as engineers or in such administrative departments as HR. For jobs in accounting, HR, front desk and quality control departments, women are employed even in male-dominated sectors. Women work in administrative jobs in almost all of the enterprises that participated in the interviews as part of the study; educated, professional women work in various departments, including R&D, product development and engineering, of these enterprises even if there is no female worker in production departments.

Employment of women for professional occupations in the manufacturing sector can only be possible in consequence of the conscious policies on female employment, whereas they are employed in certain enterprises just because of the predominancy of female employees. For example, since the employment in production departments of textile enterprises is dominated by women, administrative positions are also dominated by them. Findings on the employment of white-collar professional women in manufacturing enterprises are consistent with the data on overall female employment in Türkiye, and women with bachelor's degrees are represented relatively higher in professional occupations. This can be interpreted as a result of both digitalization and modernization approach pursued by the Republic of Türkiye since its early years.

Another change caused by digitalization that has a relatively greater impact on white-collar female employees is that the jobs held by blue-collar men have shifted towards educated white-collar women as a result of the transformation of these jobs due to digitalization. For example, the tasks related to inventory control systems in an automobile factory started to be undertaken by female engineers with the digitalization of such systems. In fact, this is one of the results, apart from labour-saving, of digitalization even if slightly in favour of female employees. Although there are a small number of such examples, shifting of, even if limited, male's jobs to female professionals indicates that the gender-based division of work in the labour market may be moved into a different state.

However, it is necessary to express that even though these changes are limited, female employment in male-dominated jobs is a consequence of conscious efforts and policies. For example; Pınar, who is working as an engineer in the R&D department of an engine manufacturing enterprise emphasized her own career development and stated that female employment in male-dominated jobs required a conscious insistence, that she previously worked on the field in a logistics-related job in which many female engineers would not work, and that she is now working as one of just three women in a male-dominated workplace. This shows that it is more difficult for women to be employed, even in professional occupations, in male-dominated fields and that, however, it is easier for them to be represented in jobs perceived as women's jobs, which is an expected situation.

Digitalization and Gender-Based Division of Work: Physical Strength and Dexterity

Görüşme yapılan işletmelerdeki kadın istihdamının Looking at the female employment in the enterprises that participated in the interviews, it is seen that there is gender-based discrimination in terms of division of work. It can be said that this division of work was made as a result of the physical effort required for the work performed. It is seen that women are mostly employed in assembly and a few managerial positions in enterprises, and that however they are not employed in such areas as production and warehouse due to the reason stating that the work in such areas is physically hard. According to the study, female employment rate varies based on the product produced. Female employment rate is high in such sectors as textile, cosmetics and food, whereas it is lower in heavy industries such as automotive, electricity and machinery. Indeed, men are associated with 'physical strength', whereas women are associated with 'fine' jobs that require 'meticulousness and greater attention'.

When describing the gender-based division of work in their enterprise, a human resources manager said:

"We are 35 employees here, we can say that almost all of them are women; there are three men, all of which are white-collar. In the assembly section, there are female employees. Unfortunately, all employees are male in the production section, since that section is considered heavy industry. I wish we could also recruit women in the production section. We prefer women for the assembly because that section requires fine workmanship, assembly, screwing, joining, etc."

Regarding female employment in the warehouse, the human resources manager of another enterprise said:

"We don't have any female staff at the warehouse now, because the warehouse is really more appropriate for men now. But we have two co-workers, whom we call material staff, affiliated with the warehouse; they are women. They also support the work in the warehouse."

Speaking about a manual production area in their enterprise that mainly operates automatically, the manager of a socks enterprise said:

"In some areas, there is manual sewing for stronger socks. A total of 128 people, including 3 men and 125 women, work in this enterprise."

The association of assembly and repetitive tasks with women is consistent with the emphasis expressed as 'capable fingers' in the literature. Women work in such activities as quality control that require meticulousness and attention and are performed repetitively in an order, whereas men perform such tasks as heavy lifting, carrying, loading and unloading that require physical strength. Even though technological developments have transformed some of these jobs, the existing stereotypes do not have much effect on which work will be done by whom. It is noteworthy that in a textile enterprise, women work in every department, but there are always men in the dyeing department. This is because of the still standing perception that dyeing is heavy,

dangerous and dirty work and therefore suitable for men.

Besides, stereotypes that prevent women from being employed in jobs that are perceived as male-dominated not only prevail in enterprises but also adversely affect women's education and career paths. Regarding the employment of white-collar women, the human resources manager of an engine factory said:

"It is quite difficult to find female employees in engineering, it is quite difficult to find electrical and electronics engineers. I mean, regardless of how much we focus on female employment, there must be candidates being educated in that profile in universities. It is not easy for enterprises; they cannot achieve this alone. Unfortunately, we have difficulties in finding female candidates when it comes to software and technology."

Moreover, it was pointed out that there are infrastructure problems that prevent the increase of female employment in enterprises. It was stated that there are no toilets and changing rooms for women and that women would not prefer to work in heavily male-dominated working environments. For this reason, aside from digitalization that facilitates opening up jobs to women, physical arrangement should be made in workplaces to incorporate employee diversity. All these transformations are considered a cost item particularly by SMEs, causing them to easily opt for maintaining the existing order.

Findings from the field study confirm that female employment in technical areas and heavy work is low, as emphasised in the literature.

Digitalization and Labor-Saving Impact

It is thought that the development of technology utilized in the manufacturing sector will have various effects, including changes in the nature and structure of jobs, increased unemployment due to such changes, and opportunities for new jobs and occupations. It is the subject of a debate that, in this case, what will be the position of women in employment, where they will be placed in terms of new job opportunities and the equality in access to these opportunities. There are opinions that digitalization in the manufacturing sector would exacerbate the disadvantaged position of women, fall short of offering women new opportunities, and increase inequality in the digital field based on gender inequality. On the contrary, there are other opinions that digitalization in manufacturing would create new jobs for women, affecting employment positively (OECD, 2017; Ansal, 2018).

The interviews also indicate that female labour force will face all these contradictory results in the future. Regarding the effect of digitalization on female employment, an employee of the R&D unit of an enterprise said:

"Actually, we can look from a different perspective; it is difficult to find women for the software side of the work, but perhaps software will facilitate finding women we can employ easily. After we transformed the production line for kit production, we started to recruit (blue-collar) women paid on an hourly basis; previously we couldn't appoint them on the assembly line."

Regarding the effect of the digitalization process on female employment, the human resources manager of an enterprise spoke on the contrary of the above view. He said:

"I correlate digitalization to employment; Unfortunately, with the increase in digitalization, employment decreases. I'm so sorry because robots do everything. We replace the data entry operator with a computer, which can also be used by the foreman, and there is no need for human force. But we cannot say there has been an increase, a decrease, or another effect. When it goes digital, men can also undertake that job."

It was seen that the discussion during the interview was the same as in the literature. Some enterprises think that the digitalization process will affect positively and increase female employment, whereas some others argue that

in general, it will have an effect that will reduce employment, stating that this will not have an effect on female employment. Enterprises arguing that digitalization will increase female employment think that digitalization will make heavy work easier so that women can do it. Enterprises thinking that digitalization will reduce employment state that since the systems will be robotized human power will not be needed anymore.

Digitalization and Women's Leadership/ Entrepreneurship

Since the scales and investment costs in the manufacturing sector are much larger than in the tourism sector, there are rare examples of female entrepreneurship in the manufacturing sector. Despite their prominence as entrepreneurs being quite limited in this sector, there are examples of women who stand out as start-ups, improve second or third-generation family businesses or enter entrepreneurship. The male-dominated nature of the industry affects women's presence in the field of entrepreneurship as well. There are, however, women who take over second-generation family businesses operating, for example, in olive oil production, ceramics and medicine production or enter entrepreneurship in new fields, especially in Kocaeli.

Woman entrepreneur pioneering in software

A woman entrepreneur, who owns a software enterprise and serves as a member of Kocaeli TOBB Women Entrepreneurs Board, manages a software enterprise with 25 employees. Her enterprise has 75 large-scale customers in Turkey and works with many holding companies. Since 2008, the software enterprise has been moving all the business-related processes of various large and medium-sized enterprises to the digital environment, thus, contributing to them increasing their efficiency and competitiveness. The software enterprise digitizes, through the eBA application, organizational structure related business processes, such as reporting and monitoring of files and documents and following of business processes that require approval and control, that have previously been executed manually, for many enterprises producing in various areas, including food, medicine, cosmetics, textiles and automotive, providing added value to these enterprises in terms of efficiency and operational excellence while also allowing them to save time. It offers BEAM software to its customers for monitoring production management-related processes, such as maintenance plans, quality, and occupational safety. Besides, it has accomplished QDMS software aimed at automation of management process and R&D studies and Ensemble software aimed at performance management. The software enterprise analyses customer needs accurately and offers most appropriate solutions for them as well as provides consultancy services. The consultancy services department provides services in the fields of supporting the development of enterprises at every stage and regularly developing and auditing the ways of doing business. Operating in Kocaeli Technopark, the enterprise ranked 13th among the top 500 IT enterprises in Turkey in 2021. Furthermore, the enterprise supports, with the activities conducted through TOBB, the increase of women's participation in industrial employment.

CONCLUSION

The Women-Friendly Digital Way: Report on Digitalization and Female Labour Force in Tourism and Manufacturing Sectors in Türkiye conducted as part of the Digital Way Project that analyses digitalization processes of SMEs and develops supportive infrastructures in this area examines the consequences of the digitalization processes of SMEs in terms of female employment, gender-based division of work, women's leadership and female entrepreneurship in the tourism and manufacturing sectors in the pilot provinces, including Antalya, Nevşehir, Tekirdağ and Kocaeli. To this end, interviews were held with representatives from both enterprises and the institutions conducting studies on these two sectors in these provinces between February and May 2022. The question asked during these interviews were developed specifically for the two sectors examined, taking into account the Digital Way Platform Roadmap (2021) that was prepared in cooperation by the General Directorate of Development Agencies of the Ministry of Industry and Technology and UNDP Türkiye. Apart from these questions, interviewees were also asked about the impact of digital transformation on the labour force and female labour.

It is seen that digitalization in accommodation services in the tourism sector expands mostly marketing and customer outreach strategies. In

this respect, the pricing method is one of the headings under which digitalization is observed at the lowest level. This is because the location of businesses (proximity/distance to the centre, scene, etc.) and features and image of facilities also come into play when determining the price. Businesses use digital tools extensively in reservation management, online reservation and front desk services. Hotels usually prefer a digital channel manager in reservation, online reservation and front desk services. The majority of hotels use a digital channel manager to adapt to the digitalization process, meaning that digital channel management programs play an active role in the digital experiences of accommodation businesses. The use of social media is one of the most effective marketing methods for businesses engaged in accommodation services. From this standpoint, it is possible to say that businesses integrate into digital processes mostly for marketing methods. On the contrary, the level of digitalisation is considerably low in housekeeping services, where there is an empirically observed relationship between digitalisation and female employment. Housekeeping is observed as an area where there is intense female labour in both Kaş and Nevşehir. Technology is almost never used in this area, preventing the development of a relationship between digitalization processes and female employment.

The level of digitalisation at the enterprises operating in the manufacturing sector has also been examined, taking certain stages into account. The level of digital maturity is at the lowest level for the organizational structure that includes such areas as decision making methods, interdepartmental cooperation, strategy development methods, digitalization strategies, business processes, and employee development and training. Customer management includes sales, marketing, orders, dealership and after-sales services. Digitalization is at the lowest in this area, especially at SMEs producing for a single customer. Product development refers to the P&D and R&D structure, innovation activities and product customization, and the digitalization of SMEs in this area is at the lowest level since many businesses do not have their own products. Average-sized SMEs do not have R&D units, nor do they have patents or externally supported projects. Supply Chain Management focuses on planning regarding material requirements, procurement, inventory, warehouse and shipment. In this area, SMEs use digital tools usually for storing data on their inventory and making simple planning and analysis through this data. Digitalization in Production Management includes work orders, scheduling, downtimes, material movements, quality and maintenance. It is stated that average-sized SMEs do not collect much data for production management and that the data collected is not used for analysis purposes. Data collection and analysis on quality and maintenance are implemented if requested by the main supplier. Employees working in the production process should closely monitor material movements and machinery downtimes and analyse the relevant data through production control systems

It is possible to say that digitalization of SMEs resulted in various outcomes in terms of the female labour force. The first one is that digitalization has a low capacity to transform the gender-based division of work in both sectors. Women's jobs in these sectors are either such jobs as cleaning and caregiving that are similar to domestic jobs they undertake or jobs that are traditionally known as women's jobs in textile and garment industries. For example, looking at the breakdown of the gender-based division of work in accommodation businesses, women mostly work in housekeeping and department services, whereas men work in such positions as manager, human resources officer, accountant, busboy and bellboy. The gender-based division of work in hotels causes women to maintain in the workplace the jobs, such as cleaning and service, that are an extension of the reproduction activities for which they are responsible in households, and to occupy jobs that do not require qualifications. Besides, jobs that require physical strength are automatically coded as

men's jobs. Such gender-based division of work remains nearly unchanged as a result of digitalization.

One of the most significant effects of digitalization on labour processes is the labour-saving effect. For example, one of the major reasons of the rapid adoption and spread of digitalization in the tourism sector can be considered that the use of technology reduces labour demand through labour-saving. Labour-saving reduces the demand, particularly for the qualified labour force, regardless of whether it is male or female labour force, which is consistent with the existing literature in this field. Similarly, the use of digital tools for reservations enables businesses to undertake these transactions with fewer employees, reducing the number of employees, for example, working at the reception. It is discussed that automation in production has an effect that can achieve labour-saving for both male and female labour force in the manufacturing sector.

It is observed that white-collar professional women make a ground in both sectors and that the growing scale of enterprises and accordingly the increasing level of digitalization increases women's roles in administrative levels both as an employee and a manager. However, white-collar professional women are also distributed on a gender basis and, in general, occupy jobs that are perceived as women's jobs, and the number of women in such fields as R&D and engineering is more limited. One of the findings from the field is that women can easily occupy jobs when the link between jobs and physical strength is broken. In this respect, digitalisation is important in breaking the perception that a job is done with physical strength. Women's studying in professions that are known as men's jobs, for example, their orientation to engineering also ensures to clear the way for themselves in this field. In this sense, conscious policies followed by enterprises for directing white-collar women to traditional men's jobs are beneficial.

Despite the poor performance of both sectors in terms of digitalization, some areas positively affect female entrepreneurship activities. In the tourism sector, newly developing areas such as digital content creation offer more dynamic opportunities for women since the scales are small. As for the manufacturing sector, women executives and entrepreneurs stand out among the second and third-generation managers. For example, it is noteworthy that women's entering entrepreneurship in the tourism sector is generally based on inheritance. Women transform their properties, which they possess through inheritance, into accommodation businesses, and in this way, they become entrepreneurs in the tourism sector. In this respect, the capital acquired by way of inheritance facilitates women's participation in economic life in these areas. In Kaş and Nevşehir, the method of becoming an entrepreneur by way of inheritance can be considered as one of the factors directing women to entrepreneurship.

Policy Recommendations and Strategies

Establishing a women-friendly digital way in SMEs is crucial for supporting female employment and gender equality. In the light of findings from the literature-based research conducted as part this study, workshop and field, it is considered that some policy steps for general strategies and specifically for SMEs operating in the examined sectors should be taken within the context of the relationship between digitalisation and female employment and the concept of decent work. These policy recommendations focus on supporting the digitalization processes of SMEs, increasing female employment and eliminating gender-based discrimination in the labour market.

Strategies/Policy Recommendations	Suggested Methods and Tools	Potential Responsible and/or Cooperation Stakeholders
Public institutions, academic circles, private sector and NGOs should be gathered under a single roof and develop multidimensional digitalization strategies covering all areas and enabling women to be included in the digitalization processes under equal conditions. Moreover, actions in this area should be implemented in a coordinated manner. Coordinated actions developed among the above-mentioned stakeholders in the ICT ecosystem are of vital importance for implementing inclusive and fair policies. This is the only way to eliminate the norms that produce social inequality in education and employment and to reduce gender inequalities not only in the ICT sector but also in other sectors.	Establishment of a board to act as a governance mechanism in this context and discussing an agenda that will form the basis for the strategy within this governance structure. When developing digital transformation strategies, their impact on women and gender equality should be considered. It is therefore essential to include women in decision-making mechanisms and to mainstream gender equality both at the national and local levels.	Relevant Public Institutions and Organisations, TGNA, NGOs, Private Sector, etc.
It should be ensured to bring out pilot programs and role models that will incorporate the following issues in the operation of the enterprises in both the tourism sector and the manufacturing sector: measures for removing barriers to women's transition to white-collar jobs (such as education, stereotypes, gender-based division of work, work climate, etc.); supports for women's participation in blue-collar jobs where they are underemployed and managing such supports together with digital transformation.	In this context, relevant activities and actions should be included, particularly in high-level plans, thematic/sectoral strategies/plans, and reports. Bringing out role models that break stereotypes, and encouraging enterprises for regulations and changes that will pave the way for women to work in men's jobs and the vice versa.	Strategy and Budget Office of the Presidency, Ministry of Industry and Technology, Ministry of Culture and Tourism, Development Agencies

Strategies/Policy Recommendations	Suggested Methods and Tools	Potential Responsible and/or Cooperation Stakeholders
SMEs operating in the tourism sector, where seasonal employment is common, face problems in labour supply and training and have to repeat the training process frequently for newly recruited personnel. A training module can be developed on an online platform to enable SMEs to minimize their loss of time and money in this process. Such module should include various training contents for all those to be employed in different departments of accommodation businesses. In this way, newly recruited employees will be ready for work once they have completed the online training module. Thus, employees who gain competence in their jobs will bring together an efficient business process for SMEs.	A training needs assessment study can be conducted, and on the basis of this training needs assessment study, a training module covering, among other subjects, digital literacy can be developed for the development of supportive skills and offered free of charge through the Digital Platform of the Ministry of National Education to newly recruited young and female employees.	When developing this module, the Ministry of National Education and ISKUR should ensure cooperation with universities and local governments in the respective region.
Since many SMEs cannot afford the cost of accessing programs used for digitalization they should be supported to cover these costs. For example, many businesses cannot purchase all the applications included in the most used management system in the tourism sector. They purchase only the application used for online reservations or else prefer to follow this process manually by reducing the online channels through which online reservations are made. However, SMEs need a low-cost management software system that can be integrated with, apart from the reservation system, such departments as accounting, front desk and human resources.	This process can be facilitated by providing SMEs with access, through digital portals, to appropriate packages of critical software and applications that they need or by including some of these packages in incentive mechanisms. Addressing organisational capacities (including, particularly, innovation and strategic planning capacities) hand in hand with digital transformation management in SMEs; targeting to develop all the vision, innovation and technology competencies required by digital transformation and developing integrated programs	Public Institutions and Organisations, Umbrella Organisations, NGOs, Development Agencies, etc.

Strategies/Policy Recommendations	Suggested Methods and Tools	Potential Responsible and/or Cooperation Stakeholders
Facilitating SMEs' access to digital tools that will support their digital maturity as well as meet their training needs and satisfying their infrastructure needs. For example, it was determined that the internet infrastructures in Kaş and Nevşehir are insufficient since the geographical structure in the Kaş region is mountainous and there are many protected areas in the Nevşehir region. Therefore, small and medium-sized businesses have difficulties in accessing the internet infrastructure. The internet infrastructure should be improved and strengthened since it is a key factor for digital processes.	Contracts for strengthening the internet infrastructure, incentives, and boosting investments to strengthen the infrastructure.	Relevant Public Institutions and Organisations, Mobile Service Provider Private Sector
Digitalization supports (technical infrastructure and software program needs, internet infrastructure, training and mentoring programs) should be provided to satisfy the digitalization needs of SMEs, including women's entrepreneurial activities, both in the manufacturing sector and the tourism sector. Furthermore, digitalization and digital literacy should be included in any training program on entrepreneurship or all kinds of support provided to SMEs, and women should be specifically supported in this area.	Reviewing the existing incentive mechanisms in force and developing and introducing more holistic incentives and exemplary pilot applications.	Relevant Public Institutions and Organisations, NGOs, Private Sector, etc.
Workplace measures that reduce and redistribute women's unpaid care work (e.g., flexible working hours, switch shifts, telework) and employer- and state-funded provision of childcare services are crucial for women to have a chance to move up the digital skills ladder, avail themselves of job-specific ICT training and networking, and seize more remunerative employment opportunities.	Participatory creation of new business models from the perspective of future jobs within the frame of global developments and woman-friendly design, implementation and scaling up of these new business models.	Ministry of Labour and Social Services, ISKUR, NGOs, Private Sector, Coordination Organisations, etc.

Strategies/Policy Recommendations	Suggested Methods and Tools	Potential Responsible and/or Cooperation Stakeholders
The education system should, when preparing girls and women for the future of work, equip students with a comprehensive STEM background and digital skills education. It is important that education transfers the critical thinking skills and technical knowledge that are required for digital innovation and problem solving. For example, digital literacy; initiatives for improving women's internet use; curricula, including training on digital skills and mentoring programs for entrepreneurs, for teachers; and the design, implementation and scaling up of programs promoting social networks of ICT professionals.	Developing and promoting innovative pilot applications based on the existing exemplary pilot applications.	Relevant Public Institutions and Organisations, including Ministry of National Education, NGOs, Private Sector, etc.
Addressing, on the basis of sector-specific needs, the mechanisms that will support digitalization and the transformation processes of businesses into women-friendly businesses, and supporting and ensuring the promotion of businesses that implement women-friendly standards.	Developing support for enterprises that includes the advantages they will have in terms of efficiency, effectiveness and competition for comprising inclusion and diversity to transform male-dominated or female-dominated jobs with the digital transformation. Organising sector-level training, competition and mentoring programs for women to increase the number of female role models working in male-dominated jobs and to improve female employment.	Relevant Public Institutions and Organisations, NGOs, Private Sector, etc.
Collecting gender disaggregated data in a systematic manner to better analyse the impact of digitalization in sectors on labour force will make it possible to discuss the relationship between digitalization and labour force with the effect of the process and to develop policies based on this discussion.	Developing and disseminating data sets methodology and infrastructure for its implementation, strengthening the legal infrastructure required.	Strategy and Budget Office of the Presidency, TURKSTAT, Ministry of Industry and Technology, Ministry of Culture and Tourism, Development Agencies

Practical Recommendations Regarding the Duties and Authorities of Development Agencies and Regional Development Administrations

- Factors encouraging female employment and female entrepreneurship can be defined in the guidelines of agency support programs. In the projects that will create employment, it may be obliged that a certain proportion of the planned employment will be for women. Likewise, it may be configured that if the owner of the applicant business is a woman, she may be given additional points at the evaluation stage, similarly to positive discrimination applied under KOSGEB's Entrepreneur Support Program.
- The participation of individuals known for digital technologies and digital business processes in conversations and similar events in the regions will recompense the initiatives for inspiring, particularly young women.
- The stories of women entrepreneurs, executives or employees, whose project or activity has been supported as part of agency support programs, and who have achieved a certain level of success, may be promoted as role models in the region. It is thought that this would be beneficial for inspiring women in the regions. Such activities may also provide benefits for the promotion of development agencies and regional development administrations.
- It may be taken into consideration to take initiatives both to improve digital skills of female employees of development agencies and to increase their rate of participation in issues related to information and communication technologies. In this way, the presence of women in digitalization will have been supported.
- Promotion of both STEM education, particularly for girls, and digitalisation training for young women will be a significant investment in the future. The poor performance for digitalization in low-population settlements and particularly in rural areas may be reversed with such practices.
- It will be possible to conduct potential research within the context of future professions at the regional scale and to organise events for promoting these professions to girls and young women. Setting up this kind of activities at fairs and similar events at the local level may be beneficial in terms of reaching large audiences and of cost-effectiveness.
- It may be considered that development agencies will maintain digitalization consultancy services provided to SMEs under the Digital Way Project in such a way to give priority to women entrepreneurs. This may be beneficial in terms of the sustainability and visibility of the Digital Way Platform and keeping the agenda developed during the project process on the boil.

REFERENCES

AAUW (2022) “The STEM Gap: Women and Girls in Science, Technology, Engineering and Math”, https://www.aauw.org/resources/research/the-stem-gap/ (erişim tarihi: 15.6.2022).

Abendroth, A. K., ve. M. Reimann (2018) Telework and Work–Family Conflict across Workplaces: Investigating the Implications of Work–Family-Supportive and High-Demand Workplace Cultures, Contemporary Perspectives on Family Research, in Blair, S. L., ve J. Obradović (eds.) The Work-Family Interface: Spillover, Complications, and Challenges. Bingley, UK: Emerald Publishing Limited.

AHİKA (2019) Mini Kapadokya Fizibilite Raporu, https://www.ahika.gov.tr/dokumanflipbook/mini-kapadokya-fizibilite-raporu/4024 (Erişim: 19.02.2022)

Akarun ve diğ. (2020) Türkiye’de Dijital Dönüşüm Değerlendirme Aracı (D3A), 2019 - 2020 Sonuç Raporu: Boğaziçi Üniversitesi Endüstri 4.0 Platformu Raporu, http://industry4zero.boun.edu.tr/wp-content/uploads/2020/07/Sonuc-Raporu-v2.pdf

Akoğlan, M. (1997). Konaklama endüstrisinde kadın yöneticiler. Eskişehir: Anadolu Üniversitesi Yayınları.

Alarcon, D., ve E. C. & Mullor (2018) Gender dimensions in tourism work. Barselona: Alba Sud Publishing.

Ardıç Yetiş, Ş., ve N. Çalışkan (2020) Turizm Sektöründe Kadın İstihdamı: Mevcut Duruma İlişkin Bir Değerlendirme. Manisa Celal Bayar Üniversitesi Sosyal Bilimler Dergisi, 18 (3), 105-119, doi:10.18026/cbayarsos.601634
Atar, A. (2020) Gelenekselden Dijitale Turizm Sektörü. Türk Turizm Araştırmaları Dergisi, 4 (2).

Batı Akdeniz Kalkınma Ajansı, (2020) “Batı Akdeniz Bölgesi İstihdam Analizi”, https://www.kalkinmakutuphanesi.gov.tr/assets/upload/dosyalar/bati-akdeniz-bolgesi-istihdam-analizi.pdf, (Erişim Tarihi: 19.02.2022)

Dedeoğlu, S. ve Ekiz-Gökmen, Ç. (2021). Dünya'da ve Türkiye'de Çalışma Yaşamında Kadın, ILO, Ankara.

Doğu Marmara Kalkınma Ajansı (2020) Doğu Marmara Bölgesi Kalkınma Göstergeleri, https://www.kalkinmakutuphanesi.gov.tr/assets/upload/dosyalar/bolgesel-gostergeler-2020.pdf

Ekici, K. ve Çiftçi, M. (2021). "Antalya İşgücü Piyasasında Konaklama İşletmeciliğinde Bölgesel Uzmanlaşma", Kırklareli Üniversitesi Sosyal Bilimler Meslek Yüksekokulu Dergisi, 2 (1), 18-41. DOI: 10.51969/klusbmyo.945276

Erdoğan, Y. (2020). Çekirdek Kapadokya'da Faaliyet Gösteren Küçük ve Orta Ölçekli Konaklama İşletmelerinde Dijital Pazarlamanın Satış Etkisi, (Yayımlanmamış Yüksek Lisans Tezi), Nevşehir Hacı Bektaş Veli Üniversitesi Sosyal Bilimler Enstitüsü, Turizm İşletmeciliği Anabilim Dalı, Nevşehir.

Eren, D., N. Çalışkan, ve K. Çamlıca, K. (2016). Butik Tarzı Konaklama İşletmelerinin Gelişimine Yönelik Yerel Halkın Tutumları: Nevşehir Örneği. Conference: II. Uluslararası Nevşehir Tarih ve Kültür Sempozyumu: Nevşehir Hacı Bektaş Veli Üniversitesi.

Gürbüz, M. E. (2021) Konaklama İşletmelerinde Dijital Dönüşüm Antalya Örneği, KTO Karatay Üniversitesi, İşletme Anabilim Dalı Yüksek Lisans, Basılmamış Yüksek Lisan Tezi.

Howcroft, D., ve J. Rubery (2018) "Gender Equality Prospects and the Fourth Industrial Revolution." Work in the Digital Age: Challenges of the Fourth Industrial Revolution, edited by M. Neufeind, J, O'Reilly and F. Ranft, London: Rowan & Littlefield.

Huws, U., N. Spencer, D. Syrdal, K. Holts, ve A. Graumans (2017) Work in the European Gig Economy: Research Results from the UK, Sweden, Germany, Austria, the Netherlands,
Switzerland and Italy. Brussels: Foundation for European Progressive Studies.

Ile, C. M., ve R. O. Okoye (2017). "Utilization Of Social Media by Online Entrepreneurs For Successful Customer Awareness In Anambra State, Nıgerıa", Online Journal Of Arts, Management & Socıal Scıences 2 (1), 164-172

ILO (2019) A Quantum Leap for Gender Equality: For a Better Future of Work for All, Geneva: ILO.

International Labour Organization. (2020). ILOSTAT database [Population, labor force participation and employment statistics]. https://ilostat.ilo.org/data/ (Erişim: 11.03.2022)

Kalkınma Ajansları Genel Müdürlüğü ve UNDP (2021) Dijital Yol Platform Yol Haritası,
Kapan, K. (2018). Turizm Faaliyetlerinin Şehirsel Gelişmeye Etkileri: Antalya Örneği (Yayımlanmamış Doktora Tezi). İstanbul Üniversitesi Sosyal Bilimler Enstitüsü Coğrafya Anabilim Dalı.

KOSGEP (2020) Küçük ve Orta Büyüklükteki Girişim İstatistikleri, 2020 https://www.kosgeb.gov.tr/site/tr/genel/detay/8044/kucuk-ve-orta-buyuklukteki-girisim-istatistikleri-2020

Kohlrausch, B., ve L. Weber (2020) Gender Relations at the Digitalised Workplace: The Interrelation Between Digitalisation, Gender, and Work. Gender a výzkum / Gender and Research 21 (2): 13–31, http://dx.doi.org/10.13060/gav.2020.010.

Milano, R., R. Baggio, ve R. Piattelli (2011). The effects of online social media on tourism websites. In: Law, R., Fuchs, M., Ricci, F. (eds) Information and Communication Technologies in Tourism 2011. Springer, Vienna. https://doi.org/10.1007/978-3-7091-0503-0_38

Obadiz, A. (2016). Gender discrimination and pay gap on tourism labor market. World Academy of Science. Engineering and Technology International Journal of Mechanical and Industrial Engineering, 10(3), 823-828.

OECD (2020), "Coronavirus (COVID-19): SME policy responses", OECD Policy Responses to Coronavirus (COVID-19), http://www.oecd.org/coronavirus/policy-responses/coronavirus-covid-19-sme-policy-responses-04440101/.

OECD (2018) Bridging the Digital Divide: Include, Upskill, Innovate, https://www.oecd.org/digital/bridging-the-digital-gender-divide.pdf

Payne, A, ve P. Frow (2005) A Strategic Framework for Customer Relationship Management,
Journal of Marketing, 69(4): 167-176.

Pırnar, İ. (20025) Turizm Endüstrisinde E-Ticaret, Ekonomik ve Sosyal Araştırmalar Dergisi, 28-55, (https://dergipark.org.tr/tr/pub/esad/issue/6044/81332)

Piasna, A. ve J. Drahokoupil. 2017. Gender Inequalities in the New World of Work. Transfer:
European Review of Labour and Research 23 (3): 313–332, http://dx.doi.org/10.1177/1024258917713839.

Satalkina, L., ve G. Steiner (2020) Digital Entrepreneurship: A Theory-Based Systematization of Core Performance Indicators, Sustainability, 12(10).ar

Sheldon, P. (1997) Tourism Information Technology. CAB International, New York.
Şit, M. (2016). Türkiye'de Turizm Sektörünün İstihdama Katkısı. Akademik Yaklaşımlar Dergisi. Cilt 7 sayı 1. ss 102.

T.C. Kalkınma Bakanlığı. (2018). 11. Kalkınma Planı: Turizm Özel İhtisas Komisyonu Raporu.
https://www.sbb.gov.tr/wp-content/uploads/2020/04/TurizmOzelIhtisasKomisyonuRaporu.pdf (Erişim: 16.02.2022)

T.C. Kocaeli Valiliği (2022) Kocaeli Ekonomisinde Sanayinin Yeri, http://www.kocaeli.gov.tr/kocaeli-ekonomisinde-sanayinin-yeri (erişim tarihi: 17.6.2022)

TC. Kültür Turizm Bakanlığı, (2021). Nevşehir İli Konaklama Tesisleri İstatistikleri, https://nevsehir.ktb.gov.tr/TR-291449/konaklama-tesisleri.html, (Erişim Tarihi: 10.03.2022).

T.C. Teknoloji ve Sanayi Bakanlığı ve UNDP. (2021). Dijital Yol KOBİ Dijitalleşme Platformu Yol Haritası. Ankara.

Topal, G. B. (2020). “Turizm Sektöründe Dijital Dönüşüm, Hizmetler ve İstihdam” Öz, S., F. S. Onursal, N. C. Uca, (ed.), Dijital Gelecekte Mesleklerin ve Sektörlerin Dönüşümü, Hiperlink: İstanbul.

Tutar, F., M. Kocabay ve N. Kılınç (2008) Turizm Sektöründe E-ticaret Uygulamaları: Nevşehir Örneği, Karamanoğlu Mehmetbey Üniversitesi Sosyal Ve Ekonomik Araştırmalar Dergisi, 2007(1): 196-206.

TÜİK (2021). Turizm İstatistikler Raporu. https://data.tuik.gov.tr/Bulten/Index?p=Turizm-Istatistikleri-IV.Ceyrek:-Ekim-Aralik-ve-Yillik,-2021-45785 (Erişim: 16.02.2022)

TÜSİAD (2022) E-ticaretin öne çıkan başarısı, tüketici davranışlarında değişim ve dijitalleşme, Deloitte Dijital, https://www2.deloitte.com/content/dam/Deloitte/tr/Documents/consulting/E-ticaretin-one-cikan-basarisi-2022.pdf

UNWOMEN (2020) The Digital Revolution: Implications for Gender Equality and Women’s Rights 25 Years after Beijing, https://www.unwomen.org/en/digital-library/publications/2020/08/discussion-paper-the-digital-revolution-implications-for-gender-equality-and-womens-rights

UNWOMEN (2019) Leveraging Digital Finance for Gender Equality and Women’s Empowerment, https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2019/Leveraging-digital-finance-for-gender-equality-and-womens-empowerment-en.pdf

World Tourism Organization (2020). Global Report on Women in Tourism – Second Edition, UNWTO, Madrid.

Yolal, M, ve M. Emeksiz (2007). A Cooperative Marketing Model Proposal for SMHEs in Türkiye. World Journal of Tourism Small Business Management 1(2) 57-68.

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