Advances in Research

22(3): 10-17, 2021; Article no.AIR.68211
ISSN: 2348-0394, NLM ID: 101666096

Impact of COVID-19 on SMEs and the Role of Digitalization

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/AIR/2021/v22i330300
Editor(s):
(1) Dr. Nebi Bilir, Isparta University of Applied Sciences, Turkey.
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(2) Arup Barman, Assam University, India.
(3) Abbas Bleady, Qassim University, Saudi Arabia.
Complete Peer review History: http://www.sdiarticle4.com/review-history/68211

Short Communication Article

Received 11 March 2021
Accepted 22 May 2021
Published 08 June 2021

ABSTRACT

Small and medium sized companies (SMEs) should be drivers for national economies, also providing opportunities for socio-economic participation and mobility. But SMEs, more than bigger companies, have experienced difficulties during Covid-19 due to less customer demand for goods and services, limited resources and problems with digitalization. All these facts require rapid change in SME strategies. Based on literature research and on work with SMEs undertaken by the author during European projects, the goal of this communication paper is to illustrate some difficulties experienced by SMEs due to COVID-19 and problems they have with digitalization and skill gaps, as well as measures which could help them. First, the impact of Covid-19 on SMEs and the role of digitalization in their recovery and further developments are presented. Second, certain structures required within SMEs and necessary skills and competences are described in this context. Proposals are then made for reskilling processes within workplace learning and other learning approaches to improve the skills and competences necessary for SME recovery processes.
Lifelong learning (LLL) plays an important role in addressing the skills gap between what students have traditionally learned in formal education and the needs of employers and the labor market. LLL should be more connected with other forms of training/learning, digitally supported, interdisciplinary and practically oriented in order to contribute towards achieving the new skills and competences

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necessary during and after the COVID-19 pandemic and to promote digitalization as a driver to success. The paper also presents examples of the work of the Study Group Lifelong Learning of the IAT, coordinated by the author, and conclusions.

Keywords: SMEs; COVID-19; digitalization; reskilling; workplace learning; cooperation; digital competences; lifelong learning; SGD4.

1. INTRODUCTION

The Covid-19 pandemic impacts health and the economy; social distancing limits people's activities outside their workplaces and homes, affecting both actors and companies, including small and medium sized enterprises (SMEs). But throughout this time, SMEs should nonetheless remain drivers of national economies. They account for over 60% of employment across the EU27 and the UK, and over 55% of value added, indicating their role in the economy, as also presented in the literature and reports [1]. SMEs are also a key driving factor for economic inclusivity, providing opportunities for socio-economic participation and mobility [2]. SMEs are flexible and able to quickly identify and commercialize new market trends.

Covid-19 is not only a public health pandemic but also involves an economic crisis. Entrepreneurs, employees and managers of companies and policy decision-makers must identify actions to help SMEs to react and to quickly implement the necessary measures. However, many enterprises have difficulties in this context. Such problems are more serious among SMEs than for many other enterprises due to less demand for goods and services during the COVID-19 pandemic. SMEs have limited resources, limited abilities to counter risks, and problems covering costs due to reduced business activities. SMEs are facing difficulties involving a lack of funds and liquidity, finding employees and customers, and particularly using digital technology to increase efficiency. Consequently, many SMEs are expected to go out of business during and after the Covid-19 pandemic [3].

In addition to Covid-19, digital transformation demands changes in all strategies because operations should be digital and supply chain relationships extended.

(https://www.vodafone.com/content/dam/vodcom/files/vdf_files_2020/pdfs/sme-digitalisation.pdf).

It is necessary that the crisis caused by the Covid-19 pandemic is viewed as the right moment for SMEs to improve the quality of their products or services and to develop various strategies for offering goods or services based on their business concerns. Covid-19 and digitalization should act as catalysts for SMEs to develop suitable structures, use digital technologies, improve the competences and skills of their staff, and particularly increase sales by promoting their business through digital marketing. In general, digital transformation is a radical and comprehensive shift in the use of technology for work with the aim of improving company performance.

However, the transformation of the world of work has changed the professional landscape for SMEs, requiring new skills that are not necessarily acquired in school, previous training or studies. Under the current conditions, technology plays a big role in the sustainability of company operations. However, digitalization and automation change routine activities, e.g. intelligent machines maintain themselves (predictive maintenance) and replace the service technician. Additionally, globalized supply chains, worldwide networking and short-term market changes have become the norm. Such changes require new skills from workers – future skills – to facilitate the use of efficiently intelligent machines or computer programs. Competencies in dealing with other people, with external environmental influences – and with oneself, particularly acquired in different ways in the course of professional life, should be developed further through suitable organized training, workplace learning, reskilling measures and the willingness of workers to learn and change attitudes and take new decisions, i.e. through lifelong learning (LLL) [4,5].

Based on literature research and work with SMEs undertaken by the author during European projects, the goal of this communication paper is to illustrate some difficulties experienced by SMEs due to COVID-19 and problems they have with digitalization and skill gaps, as well as some measures which could help them. First, the impact of Covid-19 on SMEs and the role of digitalization in their recovery and further developments are presented. Second, certain structures to be created within SMEs and

necessary skills and competences are described in this context. Proposals are then made for reskilling processes within workplace learning and other learning approaches to improve the skills and competences necessary for SME recovery processes.

Lifelong learning (LLL) plays an important role in addressing the skills gap between what students have traditionally learned in formal education and the needs of employers and the labor market. LLL should be more connected with other forms of training/learning, digitally supported, interdisciplinary and practically oriented in order to contribute towards achieving the new skills and competences necessary during and after the COVID-19 pandemic and to promote digitalization as a driver to success. The paper also presents examples within the work of the Study Group Lifelong Learning of the IAT, coordinated by the author, and conclusions.

2. IMPACT OF COVID-19 ON SMES AND ROLE OF DIGITALIZATION

SMEs bring significant contributions to employment and economic value added and they should be a key pillar of the EU's recovery from the disruptions determined by COVID-19. A consequence of limiting human interaction due to closures was a disruption to normal business operations for many SMEs, within public health measures and employee health concerns requiring changing of work environments. It is expected that SMEs have problems during recovery hindering growth due to their small businesses being on risk driven by non-established customer bases and lower economies of scale, less reserves to finance in the case of economic shocks [6]. As the economy reopens, businesses require workers capable to contribute to recover and develop. This will be a particular challenge for businesses that have to laid workers businesses with uncertain potential.

Digitalization could support SMEs within recovering, i.e., to be more flexible and reducing the need for human interaction if possible, helping SMEs to innovate and grow through the Covid-19 and after that. Digitalization can help businesses in a number of areas essential to their development.

According to different business models, and needs of SMEs, the digital tools used rang from quick-win adoptions to implementations that are more complex [7,8]. Digital transformation requires functional use of the internet in design, manufacturing, marketing, sales and presentation that is a databased management model [9]. It also includes cyber security, simulation, internet and block chain. It should be a comprehensive motivation, innovation and consequences within SMEs by using digital transformation.

But overall, European SMEs lag behind larger businesses in terms of using digital technologies e.g., connectivity, more complex and higher-return technologies like cloud computing and other ones [10].

In addition to having tools available and the capacity in terms of time and resources to initiate a digital transformation and recovery, a key challenge for many SMEs is the capability to plan, initiate, and implement a digital transformation for their business with improved performance [11]. Digital transformation is complex and if it is not capably planned for, can result in deteriorations rather than improvements in the business's operations.

(https://www.vodafone.com/content/dam/vodcom/files/vdf_files_2020/pdfs/sme-digitalisation.pdf).

One problem in this context is a lack of knowledge or skills to plan, manage, and optimize the digital transformation. This is particularly by smaller businesses, which depend on the skills and knowledge of owner-managers, who may not have the specialized ICT capabilities, or experts. Additionally, in order to achieve the benefits of digital transformations, employee should have skills to optimally use tools and increase performance and productivity.

There are European countries where the available pool of IT professionals is limited. Czech Republic, Greece, Hungary, Italy, Portugal, and Romania are under the EU27 and UK average. Also, more digitalized countries such as Germany have a significant gap in skilled human capital compared to Ireland, the Netherlands, and the UK. In the survey of German businesses, 67% of SMEs indicated a shortage of IT skills among employees being a key obstacle to digital technology adoption, while 55% indicated a shortage of IT specialists more widely [1].

Across the EU27 and the UK, only 43% of medium-sized businesses and 15% of small businesses employed any ICT specialists, compared to 75% of large businesses [12]. The gap was largest in the Czech Republic, Germany

and Greece, with a 65 to 68--percentage point's difference between larger businesses and smaller businesses, and smallest in Spain, Ireland, and the UK, with a 53 to 56 percentage point difference.

(https://www.vodafone.com/content/dam/vodcom/files/vdf_files_2020/pdfs/sme-digitalisation.pdf).

3. MEASURES TO IMPROVE THE SKILLS AND COMPETENCES WITHIN SMES

Many workers all around the world were displaced due to COVID-19, and it is expected that will continue in 2021. In the following we present some measures which can contribute to improve the skills and competences within SMEs and employee's retention, like creating suitable structures, using new learning methods i.e., within workplace learning, offering and supporting reskilling and upskilling.

The employer can promote achieving of competences competencies in cooperating with other people, with external environmental influences- and with oneself by creating the right structures i.e., within the leadership and corporate culture. Employers who let their employees work independently and only occasionally give guidance support them to take responsibility, to self-organization, self-efficacy and creativity. During home office, many employees have also acquired such skills. If interdisciplinary teams are created and a healthy culture of debate has been established in the company, further future skills are promoted: network skills, conflict management, empathy, critical thinking, communication skills and resilience.

(https://personalumbau.de/kreative-problemloeser-welche-kompetenzen-in-zukunft-gefragt-sein-werden/).

New forms of collaborative learning are successfully implemented in many companies i.e knowledge networks and working independently on self-determined topics. Reverse mentoring, in which an older person with a lot of experience meets with a younger person with high digital competence or other needed ones in a tandem - in order to learn from each other is very useful. Employees can use this form of mentoring on their own initiative with other colleagues – without ordering from above outside of working hours or, in consultation with a supervisor, also during working hours.

Referring workplace learning, a cross-functional response team composed of members from all relevant stakeholder groups from company should be build. These include people from management, learning-delivery personnel, IT and platform technologists, and vendors. The work should be coordinated with the company's COVID-19- measures. Clear decision points and criteria for canceling or deferring a workplace learning program should be developed, including how these decisions will be communicated [13].

The entire new program of workplace learning facilities should be discussed and priorities have been set about what is necessary to be adapted to a virtual environment or digital-only format. A calendar and milestones, the affected participants, programs for redesigning, progress key indicators and difficulties have to be continuous updated.

The plan for workplace activities should be consistent with the guidelines available from local and global health authorities. Employees should know criteria when programs will be modified or canceled. It will be ensured that learning participants have—and are familiar with—digital used tools i.e., virtual collaboration tools, including videoconferencing and cloud-based document sharing.

Limits to what learning should be addressed when using digital tools and sessions are important. It should be considered what has to be done before, during, and after the session to maximize its impact.

As the pandemic continues and digitalization has to be implemented, many firms have found that upskilling or reskilling their staff is vital to their economic recovery. In the following some factors to be considered by reskilling helping business which are presented.

(https://www.bbntimes.com/companies/upskilling-is-essential-for-small-businesses-uring-covid-19) and also how to combine digitalization with reskilling processes.

4. COMMIT WITH RESKILLING

In order to survive the pandemic, access to learning and growth is critical and now it is a chance and need for companies to ensure that their employees are reskilled quickly.

(https://www.ceps.eu/ceps-publications/study-on-up-and-re-skilling-in-micro-and-small-enterprises/).

The author participated in 2020 within a Study with 20 German SMEs about upskilling and reskilling of their employees. Short interviews of the manager and an employee from each company have been done during a period of 3 months. The companies belong to ICT, health and service sector. Some conclusions are presented below [14].

The German SMEs have an important role in the industry and overall employment: the SME sector accounts for nearly 99% of total enterprise in the Germany [15,16]. Due to significance of SMEs to the German economy and the potential impact of a changing digital landscape, and its impact on the skill demand, it is important to understand the reskilling initiatives required in the future. Not covering areas of both skill demand and skill supply leads to a miss understanding of the future of reskilling. Policies and initiatives (such as digital 2025 and the National Skills Policy) have been introduced in Germany to help tackle the challenges, digitalization and reskilling. Suggested areas of focus to build a balanced future for digitalization and reskilling are: Studying Rate of Digitalization in SMEs, Considering Growing Skill Divide, Awareness of Federal Initiatives among SMEs, Improving Education Systems, Combining Formal and Non-Formal Training with Lifelong Learning, Adapting Nature of Digital Skills.

A sharper strategic focus on both a federal and SME level on these factors can help the skilling supply to meet the changing skilling demand landscape. Thereby reducing potential stress that the reskilling setup may face. It is likely to further SMEs stay competitive by a combined approach of acquiring and producing the best digital talent.

By using digital learning methods and virtual tools, the employers should support staff engagement by developing essential skills to future businesses. Development of skills in IT and project management i.e., are important and can use tools, such as:

- Asana: Project management.
- Slack: Team communications.
- Harvest: Time tracking.
- Zoom: Video conferencing.

5. COLLABORATION OPPORTUNITIES

The author analyzed during 2018-2020, within a project about the development of research skills of SME employees, the impact of university–industry collaborations on the innovation performance of a sample of 10 SMEs from Germany. 5 from these companies are very innovative, the other 5 have problems with innovation [17]. One considered aspect was which forms of collaboration are suitable in this context: formal or informal collaborations, but also absorptive capacity of SMEs to improve innovation performance. The conclusion was that SMEs more than big company need practical research skills oriented to their working tasks. Both industry and academia could benefit from such long-term cooperation. SMEs gain work-ready talent with specialist knowledge and practical training, and universities benefit by having opportunities to work and apply relevant technologies and solve challenging problems. But there are also problems to be solved within such cooperation i.e., the universities do not understand always the SMEs needs and the companies do not explain clear their problems.

There are many companies having no choice to find new ways of addressing demand for the front-line staff or those with specific skills like in the healthcare industry, but there was also a very high demand for supermarket workers, call center staff, as well as people in cleaning or delivery services.

Some businesses within these industries could improve their staffing resources through partnerships and collaborations with others. By working together, these organizations could offer temporary employment of staff. This innovative method of expanding networks helped to keep businesses by creating new opportunities, which can be sustainable.

6. DEVELOP DIGITAL COMPETENCES

Digital transformation of business environments is necessary, and many employees have to develop new skills online when working remotely. Cloud-based technology together with digital tools support small businesses to effectively manage daily workflow processes and staff training.

Reskilling increases employee understanding and overall productivity and is necessary to ensure that staff work can with no skill gaps. Supporting development of digital skills is a cost-effective solution for many businesses over the long term because they will be useful also after Covid-19. Innovative businesses in a post-COVID-19 world will be much different than before. SMEs should quickly identify which activities and behavior changes will be required

and decide which skills are necessary in order to cope with digital transformation, be driver of innovations after pandemic periode.

7. THE ROLE OF LIFELONG LEARNING

Lifelong learning (LLL) is an educational philosophy that is changing rapidly particularly within digitalization of organizations and is based on the belief of people that it is not too early or too late to learn, to change attitudes and to be open to new ideas and decisions ([18,19]. There is a disconnect between the skills taught during formal education and those that employers are seeking in new hires. In this context, Lifelong learning (LLL) plays and important role in addressing the skills gap between what students have traditionally learned in formal education and needs of employers and the labor market. There is a new focus on the higher-level skills, ICT competencies and mindset needed for the modern working world. In order to survive/be successful due to many technological changes as well as disruptions like this due Covid-19, the existing and future workforce must be engaged, either independently or with the help of organizations in which they work, on continuous expansion and deepening of their own knowledge. LLL should be a part of daily life, helping to solve immediate problems, gain an understanding, or practice some specific skills wherever the need arises [18].

It exists a shift in how companies design and invest in training, education and employee development. By optimizing the potential of LLL, employers, business and society as a whole can benefit those employees who actively upskill and reskill and so enhance their employment prospects ([20].

Through LLL could bring an important contribution in this context, it seems that LLL remains an often-misunderstood concept in relation with the transformative vision promised within the Sustainable Development 4, Education - SDG4, translated into concrete policy actions.

(https://www.norrag.org/lifelong-learning-in-sdg4-a-transformative-vision-or-just-another-passing-fad-by-maren-elfert/)

It is also a difference between training methods in large companies and within SMEs [21]. Employers of larger companies provide or finance formal training leading to qualifications for their employees. The training (or learning) in most SMEs is more informal, on-the-job (workplace) and related to short-term business objectives or problems. This approach is useful for small business, but it is not enough. Research findings promote the concept of LLL, and associated policy initiatives, to those who own, manage and/or work in SMEs. Digital developments, social distance due to Covid-19 and disruption of education methods encourage the use of digital platforms for lifelong learning – digital LLL and new virtual cooperation forms.

8. CONCLUSION

The pandemic will continue to be challenging for many SMEs and it is therefore important to take measures to help them to survive and be efficient. During the recovery stage of the pandemic economy, governments should define priorities and effective policies to support their businesses and people. In this context, digitalization can be a core enabler for longer-term recovery, as well as mitigating some of the impacts of the pandemic in the shorter term.

Employers should understand the existing skill gaps of their own SMEs as well as skills needed in the future; the focus should be on developing such skills to increase the company's chance of success. By investing in the reskilling of company employees, some risks can be avoided. But at the same time, employees should be willing to learn and acquire future skills in the company. The 4.0 employee also needs 4.0 skills [22].

One of the topics of the Lifelong Learning Study Group of the IAT, coordinated by the author, is to encourage continuous interdisciplinary learning in the workplace within SMEs and the development of LLL skills within presentations, publications and projects, with many benefits for employees. By offering learning programs as part of employees' career paths, employees can be encouraged to remain loyal and productive. Lifelong learning can also support company Internal Mobility strategies and can help meet skill shortages, preparing the leaders of tomorrow. However, employees also need to be responsible for their own learning.

Another contribution of the Study Group is the development, in cooperation with universities and SMEs, of practice-oriented, digital lifelong learning strategies and suitable pedagogical approaches, particularly within upskilling and reskilling processes; this is now undertaken in collaboration with two European universities and several SMEs.

The intensive use of digital technologies during the Covid-19 crisis is an important impulse for digitally supported LLL (digital LLL) as companies and educational establishments have replaced personal activities with digital ones. Covid-19 has had a catalyzing effect on digital lifelong learning. Such concepts have so far rarely been used in upskilling and reskilling processes. In addition to other difficulties such as the digital skills of trainers, there is also a lack of suitable pedagogical approaches. The LLL study group wants to support those responsible in this context, through the discussion, presentation.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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ISBN: 978-1-61208-760-3
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Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/68211