

IDENTIFYING EMPLOYEE SKILLS IN SMEs IN THE REPUBLIC OF NORTH MACEDONIA

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DOI: <https://doi.org/10.31410/EMAN.S.P.2020.93>

Abstract: *The main aim of this paper is to identify current levels of knowledge, skills and abilities of the SMEs' employees in North Macedonia, vis-à-vis firms' needs for knowledge and skills. This paper analyzes the current levels of employee job-specific, soft, digital and entrepreneurial skills on a sample of firms in North Macedonia. For the purposes of this research, the employees were classified in three categories: core employees, supporting employees and managers. The results of the research show that the main challenge regarding the soft skills refers to solving complex problems, capacity for job analysis and initiative. Adapting to new technologies is found to be the weakest aspect of digital skill among employees. Entrepreneurial skills related to risk taking, capacity to generate new ideas, creativity and innovation as well as flexibility at work are also considered to be a challenge.*

Keywords: *Employee skills, SMEs, North Macedonia.*

1. INTRODUCTION

The new 21st century criteria for employee skills stem from the global trends pertaining to business environment changes, rapid ICT advancements and wide-spread use of new technologies, increased competitiveness in international markets, changes in business processes and customer expectations, as well as growing focus of firms on services. These global trends impose a need for workforce with a diverse and broad skillset. Recent research underlines the growing importance of soft and ICT skills along with job-specific skills, as a main prerequisite for achieving sustainability and competitive advantage of firms. Entrepreneurial skills do not lag behind in importance, since the entrepreneurial orientation of firms is closely related to innovation and creativity, considered to be one of the main pillars in firm's success. Thus, such complementary skill sets composed of soft, job-specific, digital and entrepreneurial skills constitute human capital prerequisite for competitiveness and sustainability of the SMEs. The level of these skills, however, depends on employee's position, firm's core business, its long-term strategy, and the level of technology applied within the firm - as internal factors, as well as the industry, competition and the overall business environment - as external factors. These four skills were the main focus of analysis in this paper. The current levels of soft, job-specific, digital and entrepreneurial skills were identified for three employee categories: core employees, supporting employees and managers. The findings reveal a rather satisfactory level of employee skills. A need for upskilling in different aspects of the skill set is identified for different employee categories.

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2. IDENTIFYING EMPLOYEE SKILLS FOR ACHIEVING FIRM'S SUSTAINABILITY AND COMPETITIVE ADVANTAGE

Today, in line with rapid technological changes, mass digitalization in production and services and the increasing competitive pressures, advanced employee skills have become central factor for achieving sustainability and competitive advantage. These global trends set new requirements for employees with high-level cognitive and non-routine skills who are able to cope with unpredictable tasks and who can understand and communicate new ideas and concepts (OECD, 2018, p.13). The main characteristic of today's knowledge employee is the ability to overcome complex challenges and to generate creative and innovative solutions in new situations. In this regard, Swart (2007, p. 452) defines knowledge workers as "employees who apply their valuable knowledge and skills to complex, novel, and abstract problems in environments that provide rich collective knowledge and relational resources". In a knowledge-based economy, the firm's success is mainly a result of the management of 'intangibles', among which the human capital. Firms should, therefore, develop their human capital so that it meets, and even exceeds, the requirements for knowledge and skills to achieve sustainability in the new market reality.

Formal education and job-specific skills are only part of the required set of skills. Recent studies underline the importance of soft skills, besides job-specific skills as essential 21st century employee skills, while others focus on the increasing importance of digital and entrepreneurial skills. Attempts have also been made to examine the relationship between employee skills and organizational performance. For instance, Balcar (2016) concludes that the productivity of hard skills stems from their combination with soft skills. In fact, an increase in hard and soft skills results in 8.84% and 8.51% wage increase (as approximation of productivity), respectively. Similarly, Haskel et al. (2005) found that hard and soft skills are positively associated to productivity, while the skills gap between top and bottom-ranked firms in the productivity distribution explains for about 3-10% of the total factor productivity gap. The requirements of employee skills are however closely related to the occupation, position, the technological development of the firm and the industry. McKinsey Global Institute (2018, p.5) classifies skills in five broad categories, associating them to different groups of occupations: physical and manual skills, basic cognitive skills, higher cognitive skills, social and emotional skills and technological skills. In addition, this study anticipates significant increase in the demand for several skills by 2030. Primarily, the increase in demand shall be for technological skills, as a result of the wide-spread digitalization and automation, immediately followed by higher cognitive skills and social and emotional skills, as a result of the changes in business processes, organizational structures and new working patterns. An increase in demand for skills in the following years is also reported by CEDEFOP (2018, p.30), especially those related to customer service, communication and team-working, problem solving, planning and advanced ICT skills.

Based on the above said, today, employees should possess a set of knowledge, skills and abilities, composed of: 1) *Soft skills*-analytical and critical thinking, problem solving, communication, teamwork, job-related decision making, ability to quickly adopt new work methods and techniques, adapt to change etc.; 2) *Job-specific skills*-hard skills related to the specifics of the job, the occupation, and those related to the technology used in the firm/industry; 3) *Digital skills*-different levels of ICT skills, skills related to use of sophisticated equipment and machinery, smart technology, and the ability to adopt new technologies; and 4) *Entrepreneurial skills*-combination of business and entrepreneurial skills as knowledge of different business aspects, proactivity, creativity, innovation and change orientation, flexibility, risk taking and alike. Ac-

According to this skills framework, firm can achieve competitive advantage in the 21st century if their employees possess a set of complementary skills. It should also be taken into account that different factors impact the demand for skills, and hence determine the level of each skill, both at individual and firm level.

3. RESEARCH METHODOLOGY

Determining the level of soft, job-specific, digital and entrepreneurial skills among employees in small and medium enterprises in the Republic of North Macedonia was the primary focus of this paper. To meet the objectives of this research, a questionnaire pertaining to firms' perception of the level of employee skills was distributed to business owners or senior managers of private firms in different sectors in North Macedonia. The questionnaire encompassed questions related to the different skills and abilities of employees classified in four major skill groups – soft, job-specific, digital and entrepreneurial. For the purposes of this research, employees were classified in three categories: *core employees* (employees who are directly included in the production process or customer service i.e. who perform activities closely related to the core business), *supporting employees* (employees who perform supporting activities to the core business i.e. activities that support the implementation of core business as administration, legal or HR issues, technical support, and alike) and *managers* (business owners and employees at managerial positions). This classification enables an in-depth analysis of skill levels among different types of employees. A sample of 133 SMEs was included in the analysis.

4. EMPLOYEE SKILL LEVELS IN SMES IN NORTH MACEDONIA

The analyzed sample included micro (37%), small (43%) and medium (20%) enterprises. Most of these firms operate in the domestic market (78.2%), either between 5 to 10 years (40%) or more than 10 years (49%). Firms that offer services cover a dominant share of 51% of the survey sample, while 26% of firms are in production and 23% in trade.

4.1. Soft skills of SMEs' employees

Employee soft skills in the observed sample are generally at a satisfactory level. However, there is a need for improvements of certain soft skills of core and supporting employees. In particular, 37.6% of the firms stated that their core employees have unsatisfactory level in terms of problem-solving initiative (Table 1). Similar percentage of firms (36.8%) considers the ability of core employees to adopt new working methods and techniques to be dissatisfactory. One third of the firms reveal a necessity for upgrading core employees' skills regarding their job-related decision making, adapting to change and solving complex problems. Development of these skills is important as they are crucial to organizational performance and improved work environment.

The results point out that the soft skill levels of supporting employees are similar to those of core employees. There is a need to upgrade and improve their skills for solving complex problems, capacity to analyze work, problem solving initiative and adopting new work methods and techniques. In addition, communication skills and team working impose greatest challenge to managers. For almost quarter of firms, these skills among managers are at an unsatisfactory level.

The main challenges concerning employee soft skills refer to analytical thinking, which is also closely related to their ability to solve complex problems, and subsequently job-related decision making.

Table 1. Share of firms according to the level of employee soft skills

	Core employees		Supporting employees		Managers	
	Satisfactory	Unsatisfactory	Satisfactory	Unsatisfactory	Satisfactory	Unsatisfactory
Solving complex problems	72.2%	27.8%	59.4%	40.6%	86.5%	13.5%
Capacity to analyze work	73.7%	26.3%	64.7%	35.3%	83.5%	16.5%
Applying knowledge in practice	87.2%	12.8%	77.4%	22.6%	88.0%	12.0%
Problem solving initiative	62.4%	37.6%	66.9%	33.1%	95.5%	4.5%
Job related decision making	69.9%	30.1%	74.4%	25.6%	94.0%	6.0%
Ability to work independently	84.2%	15.8%	85.0%	15.0%	94.0%	6.0%
Communication skills	81.2%	18.8%	81.2%	18.8%	75.2%	24.8%
Team working	88.0%	12.0%	83.5%	16.5%	77.4%	22.6%
Easily adapting to change	71.4%	28.6%	77.4%	22.6%	83.5%	16.5%
Adopting new work methods and techniques	63.2%	36.8%	65.4%	34.6%	86.5%	13.5%
Working under pressure	84.2%	15.8%	82.7%	17.3%	85.0%	15.0%

Source: Authors' calculations

4.2. Job-specific skills of SMEs' employees

The biggest share of firms reports that their employees possess the job-specific skills necessary for conducting job activities. More specifically, 77% of the firms have noted that their core employees and managers possess job-specific skills essential for the work, while almost 67% of the firms have the same perception about their supporting employees (Table 2). The level of job-specific skills related to the technology used in firms is similar. Again, around 75% of the firms stated that the core employees and managers have these job-specific skills and 60.9% of the firms think that supporting employees also are acquainted with the job-specific skills related to the technology used in their enterprise.

Table 2. Share of firms according to the level of employee job-specific skills

	Job-specific skills related to the job			Job-specific skills related to technology		
	Completely	Partially	None	Completely	Partially	None
Core employees	78.2%	21.8%	0.0%	75.2%	22.6%	2.3%
Supporting employees	66.9%	24.1%	9.0%	60.9%	27.1%	12.0%
Managers	76.7%	20.3%	3.0%	75.9%	21.1%	3.0%

Source: Authors' calculations

The results from the analysis show that the SMEs' employees in North Macedonia generally possess the job-specific skills needed to perform their jobs, as well as the skills related to the technology of their firms. However, the dynamic changes in technology and processes are imposing the need for continuous upgrade of the job-specific skills, since they are crucial for the firms.

4.3. Digital skills of SMEs' employees

Digital skills in the last years have growing importance in the employment process. As technology has wider use in every aspect of the business, the expectations are that employees should acquire certain level of knowledge and understanding of digital skills related to the equipment and processes of the firms. The results from the research indicate that employee digital skills

are relatively acceptable. Figure 1 shows that 60.2% of the firms consider that their supporting employees fully understand and use the technology used (equipment, machines, software etc.). This however points to the need for improvement of the digital skills related to the technology among this employees' category. The main challenge to firms refers to the capacity of employees to accept new technologies, as the results show less satisfactory levels. Namely, half of the firms consider that core and supporting employees quickly accept this kind of changes related to the new technologies. At the same time, only 3.8% of firms believe that core employees do not easily accept the introduction of new technologies.

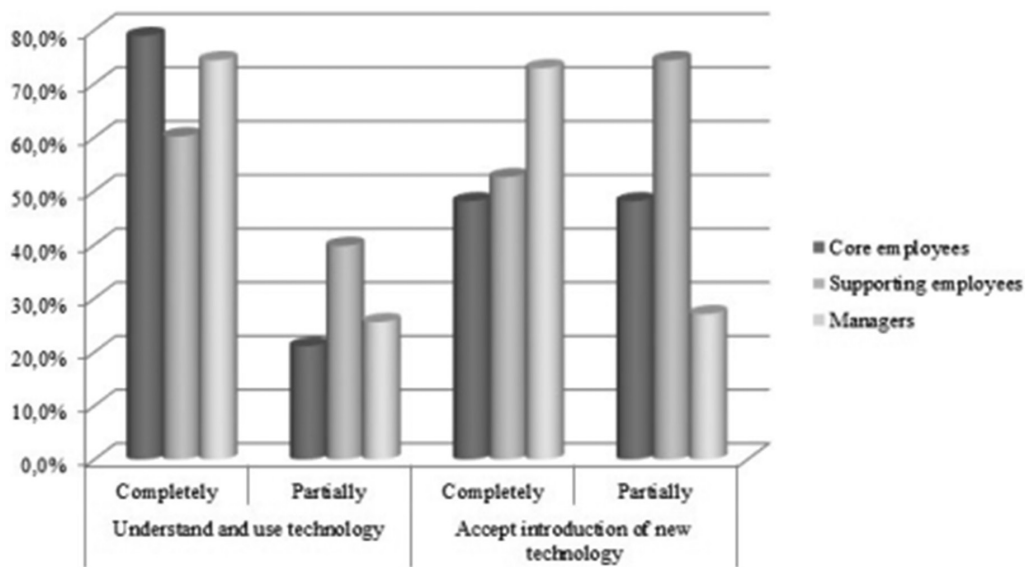


Figure 1. Share of firms according to the level of understanding, using and accepting the technology by the employees

Source: Authors' calculations

The level of digital skills of all employees, and particularly of core employees, depends on the industry, the customers, as well as the technology level of the firm. For instance, core employees in ICT firms should possess advanced level of digital skills, while in technology-intensive firms, at least high level of these skills.

The results of the research show that in almost two thirds of the firms, core and supporting employees have medium or high level of digital skills, while in 65% of the firms' managers have high level of these skills. However, the analysis points out that there is still a need to improve the digital skill levels of all employees. Namely, a significant share of firms pointed to a need for improvement of their current levels of ICT skills for all employees, mostly at high and advanced level.

3.4. Entrepreneurial skills of SMEs' employees

The 21st century business dynamics imposes a need for higher level of entrepreneurial skills. Continuous efforts of firms to improve their working processes, the quality of products and services and to increase productivity and efficiency, more or less, depends on the entrepreneurial skills of all employees. The research results show that the main challenges regarding the entrepreneurial skills of core and supporting employees refer to insufficient risk taking, lower capacity to generate new ideas, lack of creativity and innovation, lower leadership skills (Table 3).

Table 3. Share of firms according to the level of employee entrepreneurial skills

	Core employees		Supporting employees	
	Satisfactory	Unsatisfactory	Satisfactory	Unsatisfactory
Demonstrate work proactivity	61.7%	38.3%	63.2%	36.8%
Take initiative at work	57.9%	42.1%	61.7%	38.3%
Work flexibility	63.9%	36.1%	70.7%	29.3%
Risk taking	39.8%	60.2%	45.9%	54.1%
Demonstrate creativity	57.9%	42.1%	58.6%	41.4%
Innovation and change orientation	45.1%	54.9%	54.9%	45.1%
Capacity to generate new ideas	51.9%	48.1%	51.1%	48.9%
Demonstrate leadership skills	45.1%	54.9%	49.6%	50.4%
Capacity to adapt to new situations	72.9%	27.1%	72.9%	27.1%
Orientation to work process improvements	68.4%	31.6%	63.2%	36.8%
Job-related business skills	63.2%	36.8%	72.2%	27.8%

Source: Authors' calculations

More than 60% of the firms note that core employees have unsatisfactory level regarding their readiness to take risk and in 54.9% of firms this category of employees do not manifest sufficient levels of innovation and change orientation, as well as leadership capability. Low levels of these skills are evident among supporting employees too. For illustration, within 54% of firms, supporting employees have unsatisfactory level of risk-taking skills, while in almost half of the firms, leadership skills. Relatively high share of firms (48.9%) stated that their supporting employees need to possess higher capacity to generate new ideas. The level of entrepreneurial skills among managers is significantly better. Still, the results on skill levels of managers should be taken with caution, due to the possibility of some degree of bias in the responses, since the surveys were answered mostly by the managers. Nevertheless, the analysis of the results shows that there is a need for improvement of some entrepreneurial skills of managers, as, for example, their knowledge of finance and business investments, as well as marketing and market research. Namely, around a quarter of analyzed firms consider that these skills of the managers are not at a satisfactory level.

4. FUTURE RESEARCH DIRECTIONS

Further research should focus on in-depth examination of employee skills at an industry level. As noted earlier in this paper, industry characteristics directly impact the level and requirements of all skills among employees. Thus, defining skill demands and requirements for specific industry and identifying the current levels of employee skills shall contribute to developing policies at firm- and industry-level. Future studies should also examine the impact of organizational culture and firm's technology levels in determining the existing skill levels of employees.

5. CONCLUSION

This paper highlights a rather satisfactory level of soft, job-specific, digital and entrepreneurial employee skills. The main challenges that firms face mostly refer to certain aspects of soft, entrepreneurial and digital skills. Hence, SMEs' employees should improve their capacity to analyze work, their initiatives in solving problems, job-related decision making and adopting new working methods and techniques. Firms should also develop training efforts on improving

digital skills of their employees to better understand and use the technology, as well as to accept the introduction of new equipment, machines and software. In addition, developing policies to foster innovation and creativity, work proactivity, risk taking, and initiative and change orientation should be of paramount importance to firms in their efforts to maintain sustainability and competitiveness.

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