IMPACTS OF INFORMATION AND COMMUNICATION TECHNOLOGY ON PROFESSIONAL AND PERSONAL LIFE AND EMPLOYEE SATISFACTION

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Abstract: Modern information and communication technology (ICT), as a complex system of tools and systems, affects the individual and society as a whole. Its presence and application are not limited to the professional environment but are woven into all aspects of an individual's everyday reality. The key research question of this study focuses on analyzing the impact of ICT on employees' work and personal life and on their overall levels of satisfaction. Both positive and negative experiences of ICT use, expectations that come with its use, the degree of dependence on ICT, and its role in interpersonal relationships are examined.The results of the study were obtained using an anonymous online questionnaire distributed between June 10th and 20th, 2023, to a random sample of employees who actively use ICT in their professional environment. It is found that the majority of employees have a positive attitude toward ICT because of its contribution to optimizing communication, supporting global processes, and enabling the acquisition and exchange of information in the context of professional and personal life. Negative effects have also been identified, such as increased pressure on work performance, reduced personal interaction, limited time for family life, blurring of boundaries between work and personal life, dependence on ICT, and disruption of work processes.The research contributes to an in-depth understanding of the impacts of ICT on the professional and private lives of employees. Awareness of the positive and negative aspects of ICT use is key to developing guidelines that promote the balanced use of technology and the creation of a supportive environment to improve productivity and the quality of interpersonal relationships..

Keywords: employees, professional and personal life, information technology (IT), information communication technology (ICT), ICT impacts, employee satisfaction

JEL classification: M15, O15, C83.

1. Introduction

Over the past decades, technology has drastically transformed the world, becoming instrumental in everyday life and transforming everyday objects into "intelligent" devices, such as smartphones, cars, and homes. It enables linking, access to, and distribution of information (Grogan, 2012). Information and communication technology (ICT) is present in all aspects of human life, which has led to systematic changes in cognitive processes, interpersonal interactions, and the performance of tasks (Marius, 2012). Schmidt et al. (2012) point out that the abundance of access to ICT has fundamentally transformed the human environment. The United Nations Digital Economy Report (2020) highlights that ICT has changed the life of the individual and society as a whole, while facing modern challenges. Rincon et al. (2012) note that advances in ICT have brought a technological revolution that has transformed the way organizations operate and the daily activities of individuals in their professional and private lives. The 24/7 culture, which stems from the association with fast access to information at the "touch of a button", aims to improve users' quality of life (Piazza, 2007).

In the business context, the importance of investments in ICT to maintain competitiveness, increase productivity, and achieve cost-effectiveness is growing (Tusubira and Mulira, 2004). Piazza (2004) points out that rapid changes in the global business environment place additional pressure on organizations to maintain productivity, which requires employees to remain connected to the work environment in a virtual sense, as a unified system between ICT and the organization is formed.

Chesley (2014) explains the concept of "work extension", where ICT becomes an integral part of organizational practices. This enables employees to perform paid tasks outside the normal working environment, which becomes possible using always accessible ICT devices. Xobni (2010) points out that, because of this, ICT devices begin to play a key role in a person's private life. Perrons (2003) and Hoonakker (2014) point out that working from home, although it brings positive aspects, negatively affects the family space, as it blurs the boundaries between work and family life. Working from home has become a normal working pattern and an expected behavior for employees (Roberts, 2007).

Chesley (2005) found a significant association between intensive ICT use, increased stress, decreased family satisfaction, and negative work-life interactions, resulting in a two-way conflict between work and life. Demerouti et al. (2014) emphasize that organizations are adapting to the new "world of work" enabled by ICT. The new world of work includes adapting working hours, the workplace, and various possibilities of communication with colleagues, superiors, and clients through modern ICT.

Research in the field of ICT can identify a more pronounced focus on the study of the impact and effects of individual ICT devices and their specific use in particular environments or for specific concepts. The main focus of the research is on the educational environment, looking at how technology can contribute to improving teaching, and the overall impact of the uptake of ICT. Many studies have been conducted in this area, including the following: Achimugu et al. (2010); Kumar and Prasad (2014); Leask and Pachler (2013); Lindquist (2013); Shirazi et al. 2010; Tolani-Brown (2010); Van der Knaap (2014). Research has also been carried out focusing on other aspects, such as productivity (Kılıçaslan et al., 2013), innovations (Arvanitis and Loukis, 2014; Higon, 2011), and an organization's success (Arvanitis and Loukis, 2014; Higon, 2011; Kılıçaslan et al., 2013; Preda et al., 2014; Saltari et al., 2013). In the context of the working environment, it is noted that most research focuses on the impact of ICT on specific industries or organizations (Hall et al., 2013; Higon, 2011; Livingstone, 2012; Ollo-Lopez and Aramendia-Muneta, 2012). Nevertheless, many studies overlook the potential impact of ICT devices on individuals or employees. Studies dealing with this mostly follow a quantitative approach (Berkowsky, 2013; Fallahi, 2011; Koutamanis et al., 2013; Salehan and Negahban, 2013; Zorn et al., 2008), while only a few use mixed methods (Lasrado and Bagchi 2011 and Lindsay et al., 2007).

In the following literature review, we will present the research perspective, conceptualize ICT for a holistic understanding, and use a quantitative survey to examine the impact of ICT on employees' work and personal life and overall satisfaction. The analysis will not be limited to the specific industries and demographics of the respondents.

2. Review of the literature

Conceptualization of information technology and information and communication technology

Information technology (IT) comprises a complex combination of computer hardware, software, and other technical means and services for the collection, processing, storage, and exchange of information (Gradišar et al., 2012). Trček (2006) defines IT as a specific area of technology focused on the use and processing of data, including automated processes of capturing, storing, manipulating, transmitting, controlling, managing, displaying, exchanging, transmitting, and receiving data. Klic and Dolenc (2007) emphasize that IT goes beyond the obvious devices such as mobile phones, digital cameras, GPS receivers, and computers, as its presence is also reflected in everyday tasks such as the operation of washing machines, ATM transactions, technological characteristics of cars, air conditioners, and the like. In a business context, information technology (IT) is a key element that requires constant updating. It is defined as the totality of work processes where individuals use organizational data

and technical resources to generate information for decision-making in organizations (Kovačič et al., 2004). In the last two decades, we have observed three phases of IT use: task automation, experimental use of innovative procedures, and application reconfiguration. IT is not just a tool, but a development process where the user and the developer merge into one entity (Pivec, 2007).

In the literature, the concept of information and communication technology (ICT) is interpreted in different ways. Čelebić and Rendulić (2012) define it as a technical means of handling information, Rojko (2015) defines it as a technology for information, communication, and cooperation through a computer and network, and Kim (2019) defines it as the totality of information (IT) and communication technologies (CTs) that enable the management of information for communication and exploitation through collection, production, processing, and storage. A report by the United Nations Economic and Social Council (2004) defines information and communication technology (ICT) as the entire infrastructure and services related to broadcasting, computing, and telecommunications that capture and display information in electronic form. The definition by the authors King et al. (2005) continues the information technology (IT) paradigm and encompasses all technical artefacts for the transmission, processing, and communication of information, as well as for the provision of information storage, organization, and processing. Park et al. (2016) emphasize that ICT includes a wide range of technologies, from basic to new areas such as the Internet of Things (IoT). Despite the varied definitions, this research focuses on the definition of the authors Afolabi and Abidan (2011), who describe ICT as the use of electronic devices such as computers, telephones, the Internet, and satellite systems to store, retrieve, and share information in the form of data, text, images, and other forms. The Collins Dictionary defines a smart device as an electronic device that is connected to other devices or networks through various protocols and that can operate interactively and autonomously.

ICT in the professional and private life of employees

In today's business environment, ICT integration is key to increasing efficiency, reducing costs, and giving organizations a competitive edge (Tusubira and Mulira, 2004). Research by several authors, including works by Kamaruzzaman et al. (2010), Kimathi (2012) and Mortagy et al. (2005), confirm the positive impact of ICT on organizational productivity. Almost every business transaction today is carried out in digital form (Lasrado and Bagchi, 2011). Although ICT has been present in workplaces for more than two decades, it is now recognized as a basic necessity, and its absence can lead to unsatisfactory outcomes. However, the increased use of ICT in work processes places greater burdens on workers, increases control over their work, and can reduce their bargaining power. At the same time, ICT can limit the development of their skills, which become outdated or limited by the particular structures they introduce (Zorn et al., 2008).

Madden and Jones (2008) highlight the complex impact of ICT on individuals, with positive aspects such as improved work performance, the easier sharing of ideas, and greater flexibility in working hours. At the same time, they point to negative effects such as increased work demands, increased stress, and difficulties in separating work life from private life. Carroll et al. Carroll et al. 2002 note the impact of ICT on work, personal, and interpersonal relationships, and point out that "smart" mobile phones allow continuous connection with employees, blurring the boundary between work time and personal time. Nevertheless, there is still a lack of a comprehensive understanding of the impact of ICT in a broader sense. Schmidt et al. (2012) point to the challenges of mastering ICT in the 21st century, where individuals are confronted with multiple devices such as mobile phones, tablets, smartphones, as well as laptops and desktop computers.

Studies on the extensive impact of ICT on the personal lives of employees are rare, as highlighted by Papadakis and Collins (2001), supported by the position of Chesley and Johnson (2010). Current research is limited to specific aspects such as temporal adjustment, telecommuting of parents, psychological well-being, the use of ICT in healthcare, and the impact of video games on children (Papadakis et al., 2001). Mieczakowski et al. (2011) highlighted the impact of ICT on the interplay of work and family time, known as work-life interaction. Boundary theory, as described by Clark (2000), explores the reconciliation between work and family life, presenting them as two separate "states" with their own boundaries, cultures, and rules of behavior.

Tenakoon (2007) explores the impact of ICT on work-family balance. Continuous access to work tasks through ICT blurs the boundaries between the work and home environment, creates a "periphery" between the two "countries", and establishes a two-way interaction between work and family. Sustained use of ICT communication is associated with increased distress, reduced family satisfaction, and negative work-family balance. Geurts et al. (2005) define the interference of work in the home as an interactive process, where the work of employees in one area affects their work in another area, whether positively or negatively. Many researchers are studying the balance between positive and negative interactions between the two areas, known as work-life balance, which Clark (2000) describes as "satisfaction and good functioning at work and at home, with a minimum of role conflict".

3. Research

Area and objectives of the research

The research focuses on the primary research question that examines the impact of ICT use on the professional and private lives of employees. The core research question addresses the following key parallel sub-questions:

- What are the main positive and negative experiences that employees have when using ICT in their professional and private lives?
- Do employees feel addicted to the use of ICT?
- What are the expectations of employees regarding the use of ICT in their professional and private lives?
- How does the use of ICT affect employees' interpersonal relationships?

The analysis of the results does not take into account differences in the gender, age, and education profile of the respondents. The main objective is to get a general insight into the impact of ICT use on the lives of employees, without focusing on possible variations between different demographic groups.

Five research hypotheses have been set up that examine the effects of the use of modern ICT on the professional and private lives of employees and on their communication and relationships.

- H1: The use of modern ICT has a positive impact on the professional and private lives of employees, especially in terms of continuous connectivity and access to information.
- H2: The use of new ICT in employees' professional and private lives has a negative impact on their face-to-face interactions.
- H3: Employees in their professional and private lives experience a high degree of dependence on modern ICT.
- H4: The presence of ICT in all spheres of human life creates the feeling that the employee is constantly available in both their professional and private lives.
- H5: The use of ICT helps to build good interpersonal relationships both in the professional and private life of the employee, but at the same time reduces the personal aspect in conversations and relationships.

The aim of the research is to test the validity of the hypotheses and to gain insight into the impact of ICT use on different aspects of employees' lives.

Research methods

The secondary part of the research involves analyzing existing data using scientific methods such as induction, analysis, synthesis, comparison, and generalization. The empirical component involves the collection of primary data, which was carried out through an online survey questionnaire distributed via Facebook and email.

Participants in the survey remained anonymous. Only employees who use ICT in their work were included in the random sample, while others were filtered out by an "exclusion" question before the start of the survey. The survey was conducted in June 2023 and covered demographic data (gender, age, education) and five sets of statements to which respondents responded with levels of agreement from 1 (I

strongly disagree) to 5 (I strongly agree). The data was processed in Microsoft Office Excel.

263 respondents took part in the survey, of which 244 were included in the analysis. The remaining 19 questionnaires were only partially completed and were therefore excluded from the analysis. Among the respondents, 63% were women (154 people) and 37% were men (90 people).

Demographic analysis reveals that 37% of the respondents belong to the 41-50 age group, 33% to the 31-40 age group, 14% to the 21-30 and 51-60 age groups, and 1% to the 0-20 and 61+ age groups. In terms of educational qualifications, 45% of respondents have completed vocational or secondary education, the same percentage have a college or university degree, 9% have a master's or doctorate degree, while 1% have completed elementary education.

4. Results

ICT enables easier and faster communication during working hours, which is confirmed by 90% of respondents who agree or strongly agree. The vast majority of the respondents (87%) point out that ICT provides them with an affordable way to communicate, which they see as a very positive impact. Furthermore, it was found that 86% of respondents believe that ICT facilitates work and improves the quality of work performed. The same percentage (86%) of respondents claim that ICT in the workplace improves their availability. According to the statement that ICT enables continuous access to work information even when employees are physically absent, 83% of respondents agree or strongly agree. Almost all respondents (93%) agree that ICT enables them to obtain and share information, which is why they stay informed about everything work-related. A similarly high percentage of respondents (95%) agree or strongly agree that ICT supports globalization, while 77% believe that ICT enables them to easily access work-related information with a single tap on their phone. 91% agree with the statement that ICT enables them continuous connectivity with their family members. 73% of respondents agree that ICT increases personal efficiency and helps to organize their private life, while 90% believe that ICT makes it easy and quick to share the information they need in their private lives.

In the second set, we studied the negative experiences that employees have due to the use of ICT in their professional and private lives. We find that almost half of the respondents (42%) disagree that ICT in the workplace puts additional pressures on their work efficiency, 30% agree or strongly agree, and 28% of respondents are undecided in their response. A large proportion of respondents (63%) also disagree or strongly disagree that they use ICT during working hours as an excuse to avoid face-to-face communication, with 13% answering in the affirmative and 25% answering neither agree nor disagree. Almost half of the respondents (46%) disagree or strongly disagree that ICT during working hours creates a distraction during the

work process that would take them away from the essence of the task at hand. 26% agree with the given statement, 28% of respondents are undecided. The largest proportion (32%) of respondents agree that the use of ICT at work often causes them to lose track of time, while 11% strongly disagree. A large percentage of respondents (42%) agree or strongly agree that ICT compromises their confidentiality and creates an indelible trail, allowing unwanted persons to access personal and confidential information. A large percentage (31%) chose the option of responding to this statement by selecting that they neither agree nor disagree. 43% agree with the statement that they are expected to be more productive due to the use of ICT in the workplace, 35% disagree or strongly disagree, and 22% are undecided. Almost half of the respondents (49%) disagree or strongly disagree that they feel more stress due to use in the workplace, 24% agree or strongly agree, and 26% of respondents responded by selecting they neither agree nor disagree. Half of the respondents (50%) agree that they devote too much time to ICT in their private lives, and 41% agree or strongly agree that ICT reduces the time they spend communicating face-to-face.

In the third set of statements, we touched on the "dependence" on ICT devices. Almost half of the respondents (44%) disagree that the quality of their work in their professional life is completely dependent on ICT. A large percentage (71%) agree or strongly agree that ICT is their constant companion, while 28% agree that they have become dependent on ICT to stay informed and manage their lives on social media.

Table 1: Dependence on the use of ICT

Set 3: Dependence on the use of ICT							
Statement		**Responses**					
		1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	Total	Average
1.	In order to do my job to a high quality, I feel I am totally dependent on ICT	24	84	58	62	16	244	2.8
		10%	34%	24%	25%	7%	100%	
2.	No matter what I do or where I go, ICT is my constant companion	0	20	52	134	38	244	3.8
		0%	8%	21%	55%	16%	100%	
3.	I have become dependent on ICT to stay informed and to manage my life on social media	22	72	80	62	8	244	2.8
		9%	30%	33%	25%	3%	100%	

Source: own research for the article

In the fourth set, we sought answers to the question of what expectations employees have of ICT use. A large percentage (60%) agree that ICT in professional life creates expectations for higher productivity and efficiency, 20% disagree or strongly disagree, and 20% are undecided. A large percentage of respondents (56%) agree or strongly agree that ICT in the eyes of employers creates the expectation that employees will be available for work at any time, as ICT makes this possible. More than half of the respondents (54%) agree or strongly agree that ICT makes them always available and able to respond immediately to requests, even in their private lives.

Table 2: Expectations from the use of ICT devices

		Set 4: Expectations						
Statement		**Responses**						
		1 - Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 I agree	5 Strongly agree	Total	Average
1.	The use of ICT in my professional life creates an expectation that I will be more productive and efficient at work	1	23	25	69	4	122	3.4
		1%	19%	20%	57%	3%	100%	
2.	ICT creates an expectation in the eyes of employers that I will be available for work at any time, because ICT provides that opportunity.	1	24	29	58	10	122	3.4
		1%	20%	24%	48%	8%	100%	
3.	Because of modern ICT, I am always available in my private life and respond immediately to requests.	7	18	30	57	9	121	3.4
		6%	15%	25%	47%	7%	100%	

Source: own research for the article

In the final, fifth set, we analyzed the impact of ICT use on interpersonal relationships and employee satisfaction. A large percentage of respondents (75%) agree that ICT helps them maintain relationships with colleagues, family, and

friends, but 57% agree or strongly agree that ICT reduces the personal aspect in conversations and in relationships. 43% of respondents answered in the affirmative to the statement that ICT takes up time that is supposed to be devoted to family, leisure, or friends. Furthermore, 69% of respondents agree that ICT enables them to communicate easily and quickly in their professional and private lives, but at the same time they also confirm (38%) that the use of ICT reduces the need for face-to-face communication. A large proportion (60%) agree or strongly agree that ICT enables them to have more productive relationships in their professional life while saving time, and 79% agree that ICT enables them to create new relationships beyond their geographical boundaries, both in their private and professional lives. More than half of respondents (58%) agree or strongly agree that ICT increases the frequency of their communication.

Table 3: Impact of ICT use on interpersonal relationships and employee satisfaction

Set 5: Impact on interpersonal relationships and employee satisfaction							
Statement	**Responses**						
	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	Total	Average
1. ICT helps me maintain relationships with colleagues, family, and friends	4	10	48	156	26	244	3.8
	2%	4%	20%	64%	11%	100%	
2. ICT reduces the personal aspect in conversations and relationships	2	44	58	110	30	244	3.5
	1%	18%	24%	45%	12%	100%	
3. ICT is taking up time that is supposed to be devoted to family, leisure, or friends	10	52	78	88	16	244	3.2
	4%	21%	32%	36%	7%	100%	
4. ICT allows me to communicate with colleagues, family, and friends easily and quickly, which creates good interpersonal relationships	2	8	66	146	22	244	3.7
	1%	3%	27%	60%	9%	100%	
5. The use of ICT devices for communication (including on social networks) reduces the need for face-to-face communication	28	76	70	62	8	244	2.8
	11%	31%	29%	25%	3%	100%	

6.	In the workplace, ICT allows me to have more productive relationships while saving time, as well as offering easy and fast communication	0	24	72	128	20	244	3.6
		0%	10%	30%	52%	8%	100%	
7.	ICT allows me to establish new relationships, even beyond my geographical boundaries	2	2	46	154	40	244	3.9
		1%	1%	19%	63%	16%	100%	
8.	ICT improves my communication (increases the frequency of communication with family, friends, and colleagues)	2	32	68	124	18	244	3.5
		1%	13%	28%	51%	7%	100%	

Source: own research for the article

5. Discussion

On hypothesis 1: One of the interesting findings of the study is that positive experiences of ICT use outweigh negative experiences. In previous studies, the authors (Casey, 2012; Kakabadse et al., 2007; Zorn et al., 2008) highlight the positive and negative impacts of ICT, without specifying the dominant ones. The most common positive experience that the respondents highlighted in this study is their increased quality of the work, which also aligns with the findings of the authors Cardone et al. (2013). Respondents also pointed out that ICT increases their connectivity (access to information) and consequently availability for employers, customers, and family members. However, this conditionality brings expectations of employers and customers regarding higher employee productivity. Tarafdar et al. (2007) support this finding and state that the use of ICT brings expectations for higher productivity. As a positive experience, this study also highlights easier and faster communication and an important aspect of globalization, as ICT has made the whole world a "smaller place". Based on these findings, we can conclude that the first hypothesis, which states that the use of modern ICT has a positive impact on both the professional and private lives of the employee, especially in terms of continuous connectivity and access to information, is confirmed.

On hypothesis 2: The research reveals that ICT, in addition to positive impacts, also brings negative dynamics to the professional and private lives of employees. The negative impacts in the family context stand out in particular, where ICT too

often seems to take up time that employees could be spending with family members and friends. It is worrying that 60% of respondents confirmed this. In addition, there is a trend to reduce direct personal communication, where electronic communication is becoming a substitute for traditional forms of face-to-face communication. 41% of respondents reported this phenomenon. Based on this finding, we can confirm the second hypothesis, which assumes that the use of modern ICT in the professional and private lives of an employee negatively affects their direct personal communication. Casey (2012) adds his own findings, highlighting that ICT fills time that employees would otherwise spend with family and friends. In addition, it is observed that the use of ICT creates pressure from superiors to be more productive, which corresponds to the response of 43% of the respondents. Together, these findings highlight the complexity of the impact of ICT on the balance between employees' work life and private life, where both positive and negative aspects are closely intertwined and can have long-term consequences for employees' well-being and the work environment.

On hypothesis 3: The research systematically addressed the topic of ICT dependence. Interestingly, a high percentage of respondents (71%) expressed that ICT devices are constant companions in their daily lives, regardless of activities or location. These results indicate the presence of a pronounced dependence on ICT devices, which coincides with the findings of Walsh et al. (2008, 22) that emphasize that some individuals strongly identify with their ICT devices, especially mobile phones, which they perceive as an integral part of their own identity. Nevertheless, the survey reveals that only 32% of respondents express complete dependence on ICT devices in a professional context. This means that the third hypothesis, which assumes a high degree of dependence on modern ICT devices among employees in both spheres of life, applies only to the aspect of employees' personal lives. Based on these findings, it is important that organizations and managers identify the differences between ICT dependence in professional and private contexts and take appropriate action. It is essential to establish meaningful policies and procedures to help employees cope with the potential negative impacts of ICT dependence and to ensure a balance between the use of ICT devices and maintaining employee productivity and well-being.

On hypothesis 4: The fourth part of the study deals with expectations regarding the use of ICT. Research shows that the availability and accessibility enabled by ICT is changing the norm of accessibility in both professional life and personal life. There is an expectation that ICT should make employees more productive (60% of respondents agree). More than half of the respondents (58%) also confirm that employers expect employees to be available outside working hours at any time. In addition, 54% of respondents say that a norm is emerging that modern ICT requires individuals to be accessible at any time, including in their private time. The study confirms the fourth hypothesis, stating that the presence of ICT creates a sense of continuous availability of the employee in both spheres of life. This finding is related

to the concept of "technostress", which refers to a syndrome of excessive expectations for higher productivity and the constant availability of employees (Tarafdar et al., 2007). Brod (1984) defines "technostress" as a modern disease of adaptation caused by the inability to cope effectively with new technologies.

On Hypothesis 5: The research shed light on the significant impact of ICT on interpersonal relationships, both in the professional and personal lives of employees. As many as 75% of employees surveyed confirm that ICT contributes to maintaining relationships at work and in personal life, while 79% of respondents point out that ICT also enables the establishment of new relationships, regardless of geographical constraints. It was found that the use of ICT contributes to building more productive relationships, which was confirmed by 60% of respondents. Similar findings are reported by Kamaruzzaman et al. (2010), Kimathi (2012) and Mortagy et al. (2005). Despite the positive effects, the findings of the survey show that the use of ICT reduces the personal aspect in conversations and relationships, which was confirmed by more than half of the respondents (57%). This means that although ICT has a positive impact on building interpersonal relationships in both spheres of the employee, it also introduces limitations in the personal aspect of communication and interactions. Based on these findings, we confirm the fifth hypothesis, which assumes that the use of ICT contributes to building positive interpersonal relationships both in the professional and private lives of the employee, but at the same time reduces the personal aspect in conversations and relationships.

6. Conclusion

Communication is, among other things, how all social organizational structures and communities are created, operated, and maintained, in all spheres and at all levels of social existence. In short, the quality of the social existence of an organizational structure, in our research case companies, depends, among other things, on the quality of the interactions between those communicating. The new concept of communicative rationality, advocated by J. Habermas, has a promising role as an alternative to the predominantly strategic and persuasive mode of communication, resulting in greater employee satisfaction as a decision-maker. ICT, as a method and medium of communication, has become part of reality and has a significant impact on the quality of relationships in an organization and on employee satisfaction. The results of the research carried out show both the good sides (improved work efficiency and increased competitiveness) and the bad sides (alienation and objectification of people, removal of set working hours, and neglect of the family) of the introduction of ICT in work environments. Although positive perceptions prevail, a manifestation of a marked dependence on ICT is also observed, which accompanies both positive and negative effects on interpersonal relationships. The concluding message of our research is that it is necessary to accept the results of ICT developments (digitalization, artificial intelligence, creative industries), which will

be in the service of employees, and to base relations between stakeholders in the organization on the principles of deliberative communication.

So, in our research, we not only established facts and processes, but we were always looking for a reconciliation between development and progress as an identity of respect for human dignity and ensuring socially responsible and sustainable development. Based on the findings, the study suggests that demographic differences between the surveyed individuals should be taken into account in further research. This would allow a more comprehensive and in-depth insight into the complexity of the issues at stake, so that both the positive and negative aspects of the impact of ICT on professional and personal life and, above all, on employee satisfaction, could be better "controlled". In short, to find a model for the dialectical sublimation of the effects of ICT in the process of progress.

References

Achimugu, P., Oluwagbemi, A., & Oluwaranti, A. (2010). An evaluation of the impact of ICT diffusion in Nigeria's higher educational institutions. *Journal of Information Technology Impact, 1*(1), 25-34.

Afolabi, A. F., & Abidoye, J. A. (2011). Integration of information and communication technology in library operations: Towards effective library services. *Journal of Educational and Social Research, 1*, 113-120.

Arvanitis, S., & Europidis, L. E. (2014). An empirical investigation of the impact of ICT on innovation in European hospitals. Paper presented at the *22nd European Conference on Information Systems*, Tel Aviv, Israel.

Berkowsky, R. (2013). When you just cannot get away. *Information, Communication & Society, 16*(4), 519-524. http://dx.doi.org/10.1080/1369118X.2013.772650

Brod, C. (1984). *Technostress: The Human Cost of the Computer Revolution*. Boston, MA: Addison-Wesley.

Cardona, M., Kretschmer, T., & Strobel, T. (2013). ICT and Productivity: Conclusions from the Empirical Literature. *Information Economics and Policy, 25*(2), 109-125.

Carrol, J., Howard, S., Vetere, F., & Peck, J. (2002). What Do the Youth of Today Want? Technology Appropriation by Young People. Retrieved from https://www.researchgate.net/publication/232628117_Just_What_Do_the_Youth_of_Today_Want_Technology_Appropriation_by_Young_People_PDF (June 1, 2023)

Casey, J. (2012). The Impact of Technology on Our Work and Family Lives. https://www.huffpost.com/entry/the-impact-of-technology_b_1932974 (June 4, 2023)

Chesley, N. (2014). Information and communication technology use, work intensification and employee strain and distress. *Work, Employment & Society, 28*(4), 578-596.

Chesley, N. (December 2005). Blurring Boundaries? Linking Technology Use, Spillover, Individual Distress, and Family Satisfaction. *Journal of Marriage and Family, 67*(5), 1237-1248.

Chesley, N., & Johnson, B. (2010). Information and communication technology, work, and family. In S. Seet & J. Chesley (Eds.), *Work and Family Encyclopedia*. Chestnut Hill, MA: Sloan Work and Family Research Network. Retrieved from https://workfamily.sas.upenn.edu/wfrn-repo/object/ej08hr00at6ew6q3 (June 4, 2023)

Clark, S. C. (2000). *Work/Family Border Theory: A New Theory of Work/Family Balance. Human Relations, 53*(6), 751.

Čelebić, G., & Rendulić, D. I. (2012). *Priročnik za digitalno pismenost*. Zagreb.

Demerouti, E., Derks, D., ten Brummelhuis, L. L., & Bakker, A. B. (2014). New Ways of Working: Impact on Working Conditions, Work–Family Balance, and Well-Being. In C. Korunka & P. Hoonakker (Eds.), *The impact of ICT on quality of working life* (pp. 123-141). Dordrecht: Springer. https://link.springer.com/chapter/10.1007/978-94-017-8854-0_8

Fallahi, V. (2011). Effects of ICT on the youth: A study about the relationship between internet usage and social isolation among Iranian students. *Procedia: Social and Behavioral Sciences, 28*, 394-398. https://www.sciencedirect.com/science/article/pii/S1877042811002898?via%3Dihub (June 2, 2023)

Geurts, S., Taris, T., Kompier, M., Dikkers, J., van Hooff, M., & Kinnunen, U. (2005). Work-home interaction from a work psychological perspective: Development and validation of a new questionnaire, the SWING. *Work & Stress*. 319-335. https://www.academia.edu/12655215/Work_home_interaction_from_a_work_psychological_perspective_Development_and_validation_of_a_new_questionnaire_the_SWING (June 4, 2023)

Gradišar, M., Jaklič, J., & Turk, T. (2012). *Osnove poslovne informatike.* Ljubljana: Ekonomska fakulteta v Ljubljani.

Grogan, A. (2012). Smart appliances. *Engineering & Technology, 7*(6), 44-45.

Hall, B., Lotti, F., & Mairesse, J. (2013). Evidence on the impact of R&D and ICT investments on innovation and productivity in Italian firms. Retrieved from https://www.nber.org/system/files/working_papers/w18053/w18053.pdf (June 2, 2023)

Higon, D. A. (2011). The impact of ICT on innovation activities: Evidence for UK SMEs. *International Small Business Journal, 29*(6), 684-699.

Hoonakker, P., & Korunka, C. (2014). *The impact of ICT on quality of working life*. Dordrecht: Springer.

Kakabadse, N., Porter, G., & Vance, D. (2007). *Addicted to Technology. Business Strategy Review*. Retrieved from https://www.researchgate.net/publication/227695161_Addicted_to_technology

Kamaruzzaman, S., Salled, H., Zawawi, E., & Abidin, A. (2010). Current use and needs of ICT in Malaysian building industry: The industry perspective. *Design and Built Journal, 8*(2), 78-84.

Kılıçaslan, Y., Kayış, A., Sickles, R., & Üçdoğruk, Y. (2013). The Impact of ICT on productivity: Evidence from Turkish manufacturing industry. *EY International Congress on Economics I (EYC2013)*, Ankara, Turkey, 24-25.

Kim, G. (2019). *A Case Study on Smart Concentrations Using ICT Convergence Technology. International Journal of Advanced Smart Convergence*. Retrieved from https://koreascience.kr/article/JAKO201909258119880.pdf (June 8, 2023), 159-165.

Kimathi, K. (2012). Impact of ICT in education, entertainment, development, governance/politics & industry. Retrieved from https://www.academia.edu/5066850/IMPACT_OF_ICT_IN_EDUCATION_ENTERTAINMENT_DEVELOPMENT_GOVERNANCE_POLITICS_AND_INDUSTRY (June 5, 2023)

Klinc, R., & Dolenc, M. (2007). The Impact of IT on Productivity. *Sistem, 12*, 12-14.

Koutamanis, M., Vossen, H., Peter, J., & Valkenburg, P. (2013). Practice makes perfect: The longitudinal effect of adolescents' instant messaging on their ability to initiate offline friendships. Retrieved from http://dx.doi.org/10.1016/j.chb.2013.04.033 (June 12, 2023)

Kovačič, A., Jaklič, J., Štemberger, M. I., & Groznik, A. (2004). *Prenova in informatizacija poslovanja.* Ljubljana: Ekonomska fakulteta.

Kumar, R., & Prasad. (2014). *Impact of ICT tools in Higher Education.* Delhi, India: A K Publications.

Lasrado, F., & Bagchi, T. (2011). A cross-cultural evaluation of the contemporary workplace and its managerial implications. Retrieved from https://www.researchgate.com/ publication/263581956_A_cross-cultural_evaluation_of_the_contemporary_workplace _and_its_managerial_implications (June 10, 2023), 1-15.

Leask, M., & Pachler, N. (2013). *Learning to Teach Using ICT in the Secondary School: A companion to school experience* (3rd ed.). New York, NY: Routledge.

Lindquist, E. (2013). What's your name on Facebook. Retrieved from https://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=3798810&fileOId= 3798813 (June 8, 2023)

Lindsay, S., Smith, S., & Bellaby, P. (2007). The impact of ICT on family. Retrieved from https://www.researchgate.com/publication/5275874_Enabling_healthy_choices_Is_ICT_ the_highway_to_health_improvement (June 3, 2023)

Livingstone, S. (2012). *Critical reflections on the benefits of ICT in education. Oxford Review of Education, 38*(1), 9-24. http://dx.doi.org/10.1080/03054985.2011.577938 (June 7, 2023)

Mieczakowski, A., Goldhaber, T., & Clarkson, J. (2011). Culture, Communication and Change: An Investigation of the Use and Impact of Modern Media and Technology in Our Lives. Retrieved from http://wwwedc.eng.cam.ac.uk/projects/comms/ (June 8, 2023)

Madden, M., & Jones, S. (2008). *Networked workers.* Technical report. Pew Internet.

Marius, M. (2012). 6 ways technology is changing the way we do business. Retrieved from https://www.ict-pulse.com/2012/03/6-ways-technology-is-changing-the-way-we-do-business/ (June 1, 2023)

Mortagy, Y., Boghikian-Whitby, S., & Mortagy, B. (2005). The utilization of ICT in small and medium-size enterprises in Egypt. Retrieved from http://goo.gl/v85fcx (June 10, 2023)

Ollo-López, A., & Aramendía-Muneta, E. (2012). ICT impact on competitiveness, innovation and environment. *Telematics and Informatics, 29*(2), 204-210. http://dx.doi.org/10.1016/j.tele.2011.08.002 (June 4, 2023)

Papadakis, M., & Collins, E. (2001). *The application and implications of information technologies in the home: Where are the data and what do they say?* Arlington, VA: National Science Foundation.

Park, M.-S., Kim, S., Kim, H., Chang, D. S., & Jeong, S. (2016). Performance Analysis of a National R&D Program: A Case Study of SMEs in the ICT Sector in South Korea. *International Journal of Policy Studies, 7*(1), 31-52.

Perrons, D. (2003). The new economy and the work-life balance: Conceptual explorations and a case study of new media. *Gender, Work & Organization.* Retrieved from https://onlinelibrary.wiley.com/doi/abs/10.1111/1468-0432.00004 (June 17, 2023)

Piazza, C. F. (2007). 24/7 workplace connectivity: A hidden ethical dilemma. Paper presented at *Business and Organizational Ethics Partnership, Markkula Center for Applied Ethics*, Santa Clara University, Santa Clara, CA. Retrieved from http://www.scu.edu/ethics/ practicing/focusareas/business/connectivity.pdf (June 10, 2023)

Pivec, F. (2004). *Informacijska družba.* Maribor: subkulturni azil.

Preda, A. M., Crisan, D., & Stanica, J. (2014). The impact of ICT on innovation performance in Europe: Case of Romania. *Journal of Information Systems & Operations Management, 8*, 197-206.

Rincon, A., Vecchi, M., & Venturini, F. (2012). ICT Spillovers, Absorptive Capacity and Productivity Performance. *Quaderni del Dipartimento di Economia, Finanza e Statistica.*

Roberts, K. (2007). Work-life balance – the sources of the contemporary problem and the probable outcomes. *Employee Relations, 29*(4), 334-351. https://www.emerald.com/insight/content/doi/10.1108/01425450710759181/full/html (June 7, 2023)

Rojko, K. (2015). *Vpliv zadnje gospodarske krize na odstopanja v difuziji IKT.* Ljubljana: Vega, 9.

Salehan, M., & Negahban, A. (2013). Social networking on smartphones: When mobile phones become addictive. *Computers in Human Behavior.* http://dx.doi.org/10.1016/j.chb.2013.07.003 (June 15, 2023)

Saltari, E., Wymer, C. R., & Federici, D. (2013). The impact of ICT and business services on the Italian economy. *Structural Change and Economic Dynamics, 25*, 110-118. http://dx.doi.org/10.1016/j.strueco.2012.07.004 (June 4, 2023)

Schmidt, A., Pfleging, B., Alt, F., & Sahami, A. (2012). Interacting with 21st-century computers. *IEEE Pervasive Computing.* http://dx.doi.org/10.1109/MPRV.2011.81 (June 18, 2023), 22-31.

Selwyn, N. (2004). The information aged: A qualitative study of older adults' use of information and communications technology. *Journal of Aging Studies.* https://www.sciencedirect.com/science/article/abs/pii/S0890406504000477 (June 16, 2023)

Shirazi, F., Ngwenyama, O., & Morawczynski, O. (2010). ICT expansion and the digital divide in democratic freedoms: An analysis of the impact of ICT expansion, education and ICT filtering on democracy. https://www.sciencedirect.com/science/article/abs/pii/S0736585309000203 (June 14, 2023)

Tarafdar, M., Tu, Q., Nathan, R., & Ragu-Nathan, T. (2007). The impact of technologies in the home: Where are the data and what do they say? Arlington, VA: National Science Foundation.

Tenakoon, U. (2007). Impact of the use of communication technologies on the work-life balance of executive employees. PA: Information Research Management Association.

Tolani-Brown, N. (2010). *ICTs and sustainable solutions for the digital divide.* New York: IGI Global.

Trček, D. (2006). *Managing Information Systems Security and Privacy.* Berlin, Heidelberg, New York: Springer.

Tusubira, F., & Mulira, N. (2004). *Integration of ICT in organizations: Challenges and best practice recommendations based on the experience of Makerere University and other organizations.* Paper presented at Universities, Kampala: Taking a leading role in ICT-enabled human development. Retrieved from https://docplayer.net/7581739-F-f-tusubira-and-n-mulira-1.html (June 20, 2023).

Van der Knaap, W. (2014). *The impact of ICT on spatial planning education: 25 years of blended e-learning.* Retrieved from https://edepot.wur.nl/350941 (June 14, 2023)

Walsh, S., White, K., & Young, R. (2008). *Over-connected?* Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0140197107000504 (June 9, 2023), 22.

XOBNI. (2010). *New survey from Xobni on email overload shows: There is no such thing as a day off for Americans and Brits.*

Zorn, T., Hector, C., & Gibson, J. (2008). *Perceived effects of information and communication technology adoption on quality of work life: An exploratory study.* Presented at The 58th Annual Meeting of the International Communications Association, Montreal, 1.

UTICAJ INFORMACIONE I KOMUNIKACIONE TEHNOLOGIJE NA PROFESIONALNI I LIČNI ŽIVOT I ZADOVOLJSTVO ZAPOSLENIH

Rezime: Savremena informaciona i komunikacionaa tehnologija (IKT) kao složen zbir alata i sistema utiče na pojedinca i društvo u celini. Njegova prisutnost i primena nisu ograničeni samo na profesionalno okruženje, već su utkani u sve segmente svakodnevne stvarnosti pojedinca. Ključno istraživačko pitanje ove studije usmereno je na analizu uticaja IKT-a na profesionalni i lični život zaposlenih te njihovo zadovoljstvo. Ispituju se pozitivna i negativna iskustva u korištenju IKT-a, očekivanja u vezi s korišćenjem IKT-a, stepen zavisnosti od IKT i njegova uloga u međuljudskim odnosima. Rezultati istraživanja dobijeni su pomoću anonimnog online anketnog upitnika koji je od 10. do 20. juna 2023. distribuiran slučajnom uzorku zaposlenih koji aktivno koriste IKT u svom profesionalnom okruženju. Utvrđeno je da većina zaposlenih pokazuje pozitivan stav prema ICT-u zbog njegovog doprinosa optimizaciji komunikacije, podržavanju globalnih procesa te omogućavanju sticanja i razmene informacija u kontekstu profesionalnog i privatnog života. Identifikovani su i negativni učinci, poput povećanog pritiska na radnu učinkovitost, smanjenje personalne interakcije, ograničenog vremena za porodični život, zamagljivanja granica između profesionalnog i privatnog života, zavisnost od IKT-u i poremećaja u radnim procesima. Istraživanje doprinosi dubljem razumevanju uticaja IKT-a na profesionalni i privatni život zaposlenih. Svest o pozitivnim i negativnim aspektima korištenja IKT-a ključna je za formulisanje smernica koje potiču uravnoteženo korišćenje tehnologije i stvaranje poticajnog okruženja za poboljšanje produktivnosti i kvalitete međuljudskih odnosa.

Ključne reči: zaposleni, profesionalni i privatni život, informaciona tehnologija (IT), informaciono komunikaciona tehnologija (IKT), zadovoljstvo ljudi.

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