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Foreword

In keeping with the scholarly traditions of Vilnius University Kaunas Faculty, the 16th “Prof. Vladas Gronskas International Scientific Conference” was held in December 2021. The conference was held online. This international conference is an arena for cooperation and scholarly fellowship, with young researchers, master and doctoral students from Lithuania as well as Republic of South Africa, Bulgaria, Pakistan, India, Ukraine, Nigeria, Iran, Italy, Egypt, Malaysia, Latvia, Ghana, Algeria, Georgia, participating in the different conference sections.

The main goal of this scientific gathering has always been to contribute to the reliable, safe, effective and sustainable economy and business development. Thus, the organizing committee strives to create a suitable platform for well-grounded and open discussion where young researchers have the opportunity to present and share their insights.

Encouraging entrepreneurship is a crucial condition for economic growth and this puts forward a new approach to business, creativity, value creation, and the implementation of innovations. It is precisely in this context where business and science should interact. To reinforce this relevant bond, the guest speakers of the plenary session were selected amongst experienced practitioners – Prof. Dr Mine Afacan Findikli (Istinye University, Faculty of Economics, Administrative and Social Sciences, Head of Business Department, MBA Programmes Coordinator, Turkey), Dan James (Founder of Elevate Studio, Creator of Video Content, United Kingdom), Mindaugas Šatkus (Ambassador of "European Capital of Culture 2022", Founder 630, Lithuania).

This conference encourages internationalization and a closer cooperation between science and business. Hopefully, there has been some useful take-away for both academia and business conference participants: new insights and inspirations for further scientific.

On behalf of the Scientific Committee
Assoc. Prof. Dr Ingrida Šarkiūnaitė

The Impact of Workplace Environment on Expatriates' Adaptation to New Workplace

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Abstract. As industrialization advances around the world, companies are expanding their operations to other regions of the world, resulting in an increase in demand for expatriates who are required to work outside of their home countries. Expatriates are faced with a lot of changes in the host country (cultural differences, language barrier, etc.) and may also encounter some troubles adapting to the workplace environment (physical environment of the office and the occupational health & safety, relationship with coworkers, working hours, workplace culture, etc.). The workplace environment can affect expatriate adaptation negatively or positively. The research results showed that employees who receive cultural and diversity training from their companies tend to be more productive and are at ease in their new roles. Companies are encouraged to establish a diversified environment for their employees in order to lower the likelihood of early repatriation.

Key words: workplace environment, expatriate adaptation, new workplace.

Introduction

Relevance of the article. As industrialization spreads throughout the world, organizations have also expanded their businesses to different parts of the world to increase profits, market share, customer base and to gain global recognition, hence the need for expatriates who are required to work away from their home countries. When expatriates leave their home country to work in an organization, they are faced with a lot of challenges in the host country (cultural differences, language barrier, weather conditions, etc.) and may also encounter some troubles adapting to the workplace environment. Experienced expatriates are used to moving and thus they have learned to recognize and understand the diversity of local market conditions in different territories, giving them a broader perspective when they are in a new workplace and making them high performers. The workplace environment can be the physical environment of the office and the occupational health & safety, relationship with coworkers, working hours, workplace culture and top management decisions. For people who have always wanted to live abroad, relocating to a new country is not a difficult decision. The transition from expatriate living to assimilating into a new country, culture, and bureaucracy may be the most difficult challenge. Therefore, it is important for expatriates to allow themselves, their co-workers, and their managers time to adjust to their new workplace.

Level of problem investigation. It is somewhat inadequately examined, as there are not many scientific articles written to show the relationship between workplace environment and expatriate adaptation to a new workplace. Authors have analyzed and focused on the following subjects: job satisfaction (Lane, Esser, Holte, & Anne, 2010), workplace environment as a reward for firms' productivity, increasing profits for organization (Buhai, Cottini, & Nielsen, 2008; Chandrasekar, 2011), workplace conditions and employees' psychological hazard (Jones, 2010), a decent working environment (Sedarmayanti, 2003), supervisor support as an important source of employees' adjustment (Bushiri, 2014), expatriate adjustment and job performance (Kraimer et al, 2003), relationship between local colleagues, seniors and subordinates and expatriate's work, (Koteswari, & Bhattacharya, 2007). Although there is some comprehensive research with respect to the impact of workplace environment and how it affects employees, research discussing the impact of the workplace environment on expatriates' adaptation to new workplace is still not adequate.

Scientific problem. How does the workplace environment impact expatriates' adaptation to a new workplace?

Object of the article. The impact of the workplace environment on expatriates' adaptation to a new workplace.

Aim of the article. To investigate the impact of the workplace environment on expatriates' adaptation to a new workplace.

Objectives of the article:

1. To analyze the concept of the workplace environment and its factors.

2. To describe expatriate adaptation and the challenges expatriates face.
3. To examine links between the workplace environment and expatriates' adaptation to new workplace.
4. To analyze the empirical level of research regarding the impact of the workplace environment on expatriates' adaptation to new workplace.

Methods of the article. Analysis and synthesis of scientific literature, and classification.

1. Theoretical aspects of impact of workplace environment on expatriates' adaptation to new workplace

Concept of the workplace environment. The workplace environment is the most critical factor in keeping an employee satisfied in today's business world and employees tend to be more productive when the workplace environment is conducive for them to perform their tasks. There have been different definitions of the workplace environment given by several authors, some of which have been identified in Table 1.

Table 1

Workplace Environment Definitions

Author, year	Definition
Chapins (1995)	Workplace environment entails an environment in which the worker performs his work.
Spector (1997)	Identified the workplace environment to consist of safety to employees, job security, good relations with co-workers, recognition for good performance, motivation for performing well and participation in the decision-making process of the firm.
Sedarmayanti (2003)	Similarly describes the workplace as one which should be comfortable and safe for employees.
Bushiri (2014)	Viewed it as an entirety which comprises the totality of forces, actions and other influential factors that are currently and, or potentially contending with the employee's activities and performance at the workplace.
Ruchi, & Surinder (2014)	Described workplace environment as consisting of physical scenery (e.g., noise, equipment); fundamentals of the job itself (e.g., workload, task); extensive institutional features (e.g., culture, history); and even extra-institutional background (e.g., work setting, employee relation).
Oludeyi (2015)	The workplace environment consists of three components which include the technical, the human and the organizational environment.
Mattson, Melder, & Horowitz (2016)	Environment of the workplace had enhanced consequences by motivating employees.
Useche et al. (2018)	Working environment is the totality of the systems, conditions, and situations in which an employee performs his/her tasks.

Source: created by the authors.

Based on the definitions given above, it can be said that a workplace environment is one that is enabling for growth, values employee contribution, gives a sense of belonging, encourages diversity and work-life balance.

The factors of the workplace environment. *Physical workplace factors* involve aesthetics, chemical and particle exposure, noise and vibration exposure, temperature, lighting, and safety. (1) Physical environment. Heath (2006) describes the physical environment, the immediate surroundings, behavioral procedures, policies, rules, culture, resources, working relationships, work location, all of which influence the ways employees perform their work. Physical workplace environment also constitutes things such as furniture (tables, chairs etc.), machine layout, ventilation, and lighting. Others are noise level, protective equipment, workstations, office gadgets, computers, and office space. According to Temessek (2009) the aesthetic, decoration, and design characteristics of the workplace environment, which eventually aid in improving an employee's work experience and induce improved job results (Gitahi, Waiganjo, & Koima, 2015; Kasule, 2015). (2) Occupational health and safety. Chandrasekar (2011) posited that people working in such an environment are prone to occupational disease and its impact on their performance. Some authors tried to understand the relationship between the physical location and conditions of the workplace and the performance of employees. This is very important because places like factories and warehouses need to be built in such a way that they are conducive for employees to be productive. A physical work environment might include the lighting, ventilation, and the temperature (Stup, 2003). *Psychosocial workplace factors* are concerned with how an employee perceives, experiences, and responds to his or her working environment. (1) Relationship with co-workers is a key to cultivation of success and professionalism as it makes the workplace more

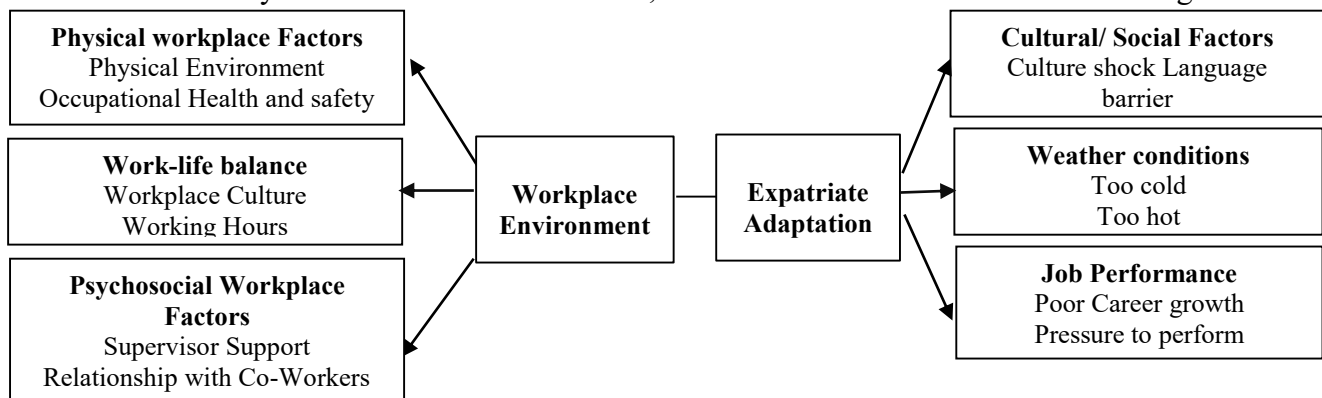
enjoyable. Less anxiety among co-workers in turn means positive attitude towards work and increased productivity (Makin, 2006; Tayler, 2012). When employees communicate effectively with each other, productivity will increase because effective communication means less complaints and more work getting done (Quilan, 2001). It is difficult to meet the organization's goals if there is a conflict among coworkers. Researchers have highlighted the concept of relating with co-workers and explain that this helps expatriates gain social support from host and home country nationals, and this support helps them to adjust in the host country and improve their job performance. Peer relationships contribute to cross-cultural adaptation and productivity of foreigners (Harrison et al., 2005; Liu, & Shaffer, 2005; Claus et al., 2011). (2) Supervisor Support - could lead to the employees' performance but there is a case that the supervisor had failed in supporting their employees (Bushiri, 2014). Immediate supervisors act as advocates for employees, gathering and distributing the resources needed by the employees for them to be able to do a good job and providing positive encouragement for a job well done (Chandrasekar, 2011). **Work-life balance** may be defined as maintaining a balance between working environmental elements and an employee's personal problems (for example, family issues) and its indicators are workplace culture and working hours. (1) Workplace culture - can mean how an organization is being run, from the leadership style to method of operation (hybrid or online), corporate social responsibility, benefits (free food) and dress code. Gherardi (1994) defined workplace culture as the shared set of beliefs about the norms, values, and goals of an organization comprising workplace culture and its informal structure. The leadership style of an organization also influences the quality of the interaction between superiors and subordinates (Koteswari, & Bhattacharya, 2007), for example a company where managers really listen and take care of their staff. (2) Working hours - it is the period when an employee starts and ends work. Work hours vary substantially between countries, but also within countries, e.g., due to the prevalence of part-time work and working hours regulations or agreements (Bick et al., 2016; OECD, 2016). Working hours can be clearly set or unset. At times the working hours are not specified by the employer, nor are they agreed upon by the employee (Rubery et al., 2006). Many contemporary workplaces are characterized by persistent working time patterns with more than 60 working hours per week, constant availability, and an ever-increasing pace of work (Crary, 2013; Michel, 2011; Perlow, 2012; Wajcman, 2014). Despite the negative effects of lengthy work hours, extended working hours are reported to increase the number of sickness absences too (Ala-Mursula et al., 2006). Literature reveals that there is an established workplace culture in which working long hours is seen as a sign of organizational commitment. Kodz et al. (2003, p. 81) defined this culture as "being characterized by long work hours being valued within an organization and interpreted as a sign of commitment". Employees may work longer hours to avoid negative performance appraisals or job loss when a business is facing imminent downsizing. Economic factors faced by the organization like declining profitability, downsizing and job insecurity may also adversely affect working time (Natti et al., 2006). **Expatriate adaptation.** The word *adaptation* can be used interchangeably with the word adjustment. Expatriates' ability to positively perceive the cultural differences might help them to adjust in the host country and improve their performance. Hannigan (1990) regarded adaptation as the change in the cognition, attitude, behavior, and psychology of people who live in a foreign culture. Berry (1997, 2005) stated that adaptation is defined as the changes that occur in individuals and groups in response to their contextual demands.

Past researchers have highlighted the concept of expatriate adjustment and explained that expatriate adjustment is a multi-dimensional construct (work, general and interaction) (Bhaskar et al., 2005; Harrison et al., 2005). Kraimer et al, (2003) found that expatriate adjustment is positively related to job performance and when expatriates properly adjust to the host country's general environment, their job performance will be like such performance in the home country. Therefore it can be said that expatriate adaptation is characterized as the way in which expatriates are mentally at ease across three adjustment dimensions: workplace, relationships, and culture at large.

Challenges that expatriates face. Expatriates experience various challenges in social and cultural context between the parent and host countries some of which have been identified below. **Cultural/Social Factors:** (1) Cultural shock - is one of the changes and it is a psychological and cultural problem based on uncertainty. It has four stages, the first is the honeymoon stage, when foreigners are fascinated and passionate about a new culture and excited about being in a new environment. On short-

term missions, foreigners can stay in this stage and only be positively involved in their experience. After the honeymoon phase, expatriates can get tired and start to miss their acquaintances. Frustration can be exacerbated when combined with extreme stress in an unfamiliar place, often associated with language barriers, traffic problems, or minor annoyances. This is the stage of frustration. The adaptation phase is the third phase, and it can make the locals more open and understanding when they simply want to communicate in the local language or learn more about the culture. The stage of acceptance does not necessarily imply full understanding or complete assimilation of the local culture. However, the level of familiarity allows expats to feel comfortable in their new environment. It is normal for foreigners to experience all kinds of strong emotions. However, this can lead to a depressed mood. This is the so-called "culture shock," which usually begins sometime after a person arrives in the host country and can last up to a year or two, depending on the person. Culture shock is difficult to avoid when exploring the culture of a host country. (2) Language barrier - Language is a very important issue in managing expatriates (Rubin, & Rubin, 2011). What native speakers often do not realize is that frequently it is not the other person's accent but their own way of speaking that creates the greatest barriers to effective communication (Berardo, & Deardorff, 2012; Javadpour, & Samiei, 2017). Language barriers often go hand-in-hand with cultural differences, posing additional problems and misunderstandings in the workplace (Morrison, 2002). **Weather conditions.** (1) Too cold - winters can extend up to five months in some regions, including Estonia, Canada, Iceland, and Russia, with temperatures as low as -40 degrees Celsius. Lingjaerde et al. (1986) found that residents of more northern regions, including Norway and countries north of the polar circle, experience more depression with hypersomnia than depression with insomnia during the winter. Also, a population survey in Japan suggested greater winter-related changes in sleep duration in more northern cities compared to more southern cities Okawa et al. (1996). (2) Too Hot - temperatures from 30 degrees and above are related to an abundance of vitamin D intake, outdoor activities and sports, lengthy days, and an energetic temperament. **Job Performance.** (1) Poor career growth - loss of career direction, and underestimation of current jobs in their home countries are some of the frequently cited career changes expatriates experience (Minter 2008; Koteswari, & Bhattacharya, 2007) and are sometimes the main reasons for being denied employment opportunities. Another challenge for expatriates interested in their careers is the inability to acquire skills that can be transferred to their future job in their home country. (2) Pressure to perform - expatriate adjustment in a foreign country has a direct psychological impact on personal self-esteem and may also impair personal relationships (Templer et al., 2006). Understanding of expatriate psychographics is an important area in expatriate adjustment because personal psychological factors such as motivation, relational skills, flexibility/adaptability, and extra-cultural openness have a direct impact on expatriate adjustment (Mol et al., 2005). Personality, emotional maturity, and adaptability assist expatriates' ability to cope with job and performance-related demands in a new country, while extra-cultural openness promotes an expatriate's social and cultural adjustment.

Based on the analysis of the theoretical research, the theoretical model is introduced in Fig. 1.



Source: created by the authors.

Fig 1. Theoretical model of impact of workplace environment on expatriates' adaptation to new workplace

In summary, it can be stated that there are possible links between the components that make up the workplace environment and expatriates' adaptation to a new workplace. The physical environment of

the office and occupational health & safety, relationship with co-workers', supervisor support, working hours, work culture and culture shock, language barrier, weather conditions, work-life balance and poor career growth are some of the challenges expatriates face in a host country.

2. Empirical research level of impact of workplace environment on expatriates' adaptation to new workplace

This part examines empirical research and its results (Table 2) in relation to the workplace environment component and expatriate adaptation definition and the challenges employees experience as an expatriate, and the links between workplace environment and expatriates' adaptation to new workplace and the research model is presented.

Table 2

Empirical investigation level of impact of workplace environment on expatriates' adaptation to new workplace

Authors (year)	Aim of research	Research results
Al-Omari, & Okasheh (2017)	To study the impact of the work environment on job performance.	Workplace environmental elements such as ventilation and light, as well as noise, are among the primary circumstances that have a detrimental impact on employee job performance.
Lankeshwara (2016)	To investigate the influence of the working environment on employee performance in the garment and textile business, utilizing the Brandix Intimate Apparel – Awissawella.	The findings of the multiple regression revealed that the physical work environment, job aids, and supervisory support were all positive influences on employees' performance, with job aid being the most important.
Gitahi, Waiganjo, & Koima (2015)	To focus on the effect of the workplace environment on bank employees' performance in Nakuru Town, Kenya.	Findings from the analysis revealed that physical features of the workplace environment have no significant impact on the performance of the employee.
Naharuddin, & Sadegi (2013)	To investigate the links between job performance, job aids, physical working conditions, and supervisor support	A negative link between supervisor support and employee performance was discovered, indicating that the supervisor had little substantial influence on employees.
Leblebici (2012)	To perform their research on a foreign bank in Turkey, analyzing the working environment circumstances in connection to employee productivity.	Healthy behavioral working settings have a positive effect on employees even when physical environmental factors are unfavorable.

Source: created by the authors.

It can be said that elements relating to the physical environment and occupational health & safety of the office such as air, noise, temperature, space, light and color if not properly managed can have a negative effect on an employee's job performance. Adopting beautiful aesthetics can boost employee productivity. Psychosocial factors like supervisors' support can have a positive influence on employees. This means that creating a positive psychosocial office environment would considerably improve employee performance. If the employees are to be happy, they must work in a pleasant setting and are expected to have positive and dynamic attitudes regarding their job activities, which will result in them advancing in the organization because they would be encouraged to work. Factors affecting work-life balance have a substantial impact on employee performance. This means that an increase in the practice of work-life balance among employees will result in a proportional rise in their performance. Additionally, a balance in the work-life of employees will assist them in feeling fulfilled both in their employment and in their personal lives.

Having discussed the empirical studies on Workplace Environment and expatriate adaptation to the new workplace, the Table 3 presents the influence of Workplace Environment.

Table 3

Influence of Workplace Environment Factors on Expatriate Adaptation to new workplace

Author, year	Location of the study	Workplace Environment Factors				
		Physical environment and occupational health & safety of the office	Supervisor Support	Work-life balance	Working hours	Workplace culture
Al-Omari, & Okasheh (2017)	Jordan	Influence				
Leblebici (2012)	Turkey	Greater influence				
Naharuddin, & Sadegi (2013)	Malaysia		No influence			
Lankeshwara (2016)	Sri Lanka		Influence			
Leblebici (2012)	Turkey		Greater influence			
Gitahi, Waiganjo, & Koima (2015)	Kenya	No influence	Greater influence	Greater influence		
Duru, & Shimawua (2017)	Nigeria				Greater influence	
Shahzad, Iqbal, & Gulzar (2013)	Pakistan					Greater influence

Source: created by the authors.

In summary, it can be said that there is no influence on physical environment and occupational health & safety of the office for employees in Kenya. Also, there is a greater influence of supervisor support in Turkey and Kenya. Work-life balance, working hours, workplace culture all have a greater influence in Kenya, Nigeria and Pakistan respectively.

Conclusions

1. The analysis of the concept of workplace environment shows that there are different definitions of the workplace depending on the context to which it is presented: (a) Physical environment of the office and occupational health & safety make the expatriate feel comfortable and healthy. (b) Relationships with co-workers' allows the expatriate to understand why other colleagues act differently. (c) Workplace culture creates an environment where the expatriate feels at home.
2. Evaluating the challenges expatriates face, it can be said that expatriates experience culture shock, language barrier, weather conditions, pressure to perform and poor career growth.
3. Examining links between workplace environment and expatriates' adaptation to new workplace. It can be said that employees need to be familiar with their environment to be productive.
4. Analyzing the empirical level of research, it can be said that unhappy employees due to the environment of work, have not better remarkable satisfactory results, organization culture affects job performance.

References

1. Ala-Mursula, L., Vahtera, J., Kouvonen, A., VAAAnen, A., Linna, A., Pentti, J., & KivimAki, M. (2006). Long hours in paid and domestic work and subsequent sickness absence: does control over daily working hours matter Occupational and Environmental Medicine, 63(9), 608-616.
2. Al-Omari, K., & Okasheh, H. (2017). The Influence of Work Environment on Job Performance: A Case Study of Engineering Company in Jordan. International Journal of Applied Engineering Research, 12(24), 15544-15550.
3. Berardo, K., & Darla, K. (2012). Deardorff. *Building Cultural Competence Innovative Activities and Models*. 1st ed., Stylus Pub.

4. Bhaskar-Shrinivas, P., Harrison, D. A., Shaffer, M. A., & Luk, D. M. (2005). Input-based and time-based models of international adjustment: Meta-analytic evidence and theoretical extensions. *Academy of Management Journal*, 48, 257–281.
5. Buhai, S., Cottini, E., & Nielsen, N. (2008). The impact of Workplace Conditions on Firm Performance (Working Paper Number 08-13). Retrieved from http://www.hha.dk/nat/wper/08-13_sebu.pdf.
6. Bushiri, Ch., P. (2014). The impact of working environment on employees' performance, the case of Institute of Finance Management in Dar es Salaam. Masters thesis, The Open University of Tanzania.
7. Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–68.
8. Berry, J. W. (2005). Acculturation: Living successfully in two countries. *International Journal of Intercultural Relations*, 29(6), 697–712.
9. Bick, A., Bruggemann, B. & Fuchs-Sch, N. (2016). Hours Worked in Europe and the US: New Data, New Answers, IZA Discussion Papers 10179, Institute for the Study of Labor (IZA).
10. Chapins, A. (1995). Workplace and the performance of workers. Reston: USA.
11. Chandrasekar, K. (2011). Workplace Environment and its Impact on Organizational Performance in Public Sector Organizations, *International Journal of Enterprise Computing and Business Systems*, 1(1).
12. Claus, L., Lungu, P. A., & Bhattacharjee, S. (2011). The effects of individual, organizational and societal variables on the job performance of expatriate managers. *International Journal of Management*, 28(1:2), 249-271.
13. Cray, J. (2013) 24/7: Late Capitalism and the Ends of Sleep. London and New York: Verso.
14. Duru, C. E., & Shimawua, D. (2017). The Effect of Work Environment on Employee Productivity: A Case Study of Edo City Transport Services, Benin City, Edo State, Nigeria. *European Journal of Business and Innovation Research*, 5(5), 23-39.
15. Gherardi, S. (1994). The Gender We Think, the Gender We Do in Our Everyday Organizational Lives. *Human Relations* 47, 591–608.
16. Gitahi, N. S., Waiganjo, M., & Koima, J. (2015). Effect of Workplace Environment on The Performance of Commercial Banks Employees in Nakuru Town. *International Journal of Managerial Studies and Research*, 3(12), 76-89.
17. Hannigan, T. P. (1990). Traits, attitudes and skills that are related to intercultural effectiveness and their implications for cross-cultural training: A review of the literature. *International Journal of Intercultural Relations*, 4(1), 89–111.
18. Heath, B. (2006). Effect of perceived work environment on employee's Job behavior. *Journal of Business*, 7(2), 23-34.
19. Jones, D. A. (2010). Does serving the community also serve the company? Using organizational identification and social exchange theories to understand employee responses to a volunteerism programme. *Journal of Occupational and Organizational Psychology*, 83, 857-878.
20. Kirk, P.M., Cannon, P.F., Minter, D.W. & Stalpers, J.A. (2008). Dictionary of the Fungi. 10th Edition, Wallingford, CABI, 22. Retrieved from <http://www.slideshare.net/fitolima/dictionary-of-fungi-kirk-et-al-2008-10a-edicao>.
21. Kodz J., Davis, S., Lain, D., Strebler, M., Rick, J., Bates, P., & Gineste, S. (2003). Working long hours: a review of the evidence. Volume 1 Main report. Employment Relations Research Series (16).
22. Koteswari, V.B. & Bhattacharya, M.S. (2007). Managing expatriate stress. *Delhi Business Review*, 8 (1): 89-98.
23. Kraimer, M.L., Wayne, S.J., & Jaworski, R.A. (2003), "Source of support and expatriates performance: the mediating role of expatriate adjustment", *Personal Psychology*, 54(9), 71-99.
24. Lane, K., Esser, J., Holte, B., & Anne, M. M. (2010). A study of nurse faculty job satisfaction in community colleges in Florida. *Teaching and Learning in Nursing*, 5(1), 16- 26.
25. Lankeshwara, P. (2016). A Study on The Impact of Workplace Environment on Employee's Performance: With Reference to the Brandix Intimate Apparel – Awissawella. *International Journal of Multidisciplinary Studies*, 3(1), 47-57
26. Leblebici, D. (2012). Impact of workplace quality on employee's productivity: case study of a bank in Turkey. *Journal of Business, Economics*, 1(1), 38-49.
27. Lingjaerde, O., Bratlid, T., Hansen, T., & Gotestam, K.G. (1986) Seasonal affective disorder and midwinter insomnia in the far north: studies on two related chronobiological disorders in Norway. In *Clinical Neuropharmacology*. Raven Press, New York. 187–189.
28. Makin, A.M. (2006). A new conceptual framework to improve the application of occupational health and safety management system. In proceeding of the European safety and reliability conference, 2006. Estoril, Portugal: Taylor & Francis Publishers.
29. Mattson, E., Melder, J.D., & Horowitz, J. (2016). Workplace environment and the likelihood to participate in deviant behaviour. *Sentience*, 14, 24-26.
30. Michel, A.A. (2011). Transcending socialization: A nine-year ethnography of the body's role in organizational control and knowledge workers' transformation. *Administrative Science Quarterly* 56(3), 325–368.
31. Mol, S.T., Born, M. Ph., Willemsen, M.E., & Van Der Molen, H.T. (2005) Predicting Expatriate Job Performance for Selection Purposes: A Quantitative Review, *Journal of Cross-Cultural Psychology*, 36(5), 590-620.
32. Morrison, E.W. (2002). Newcomers' Relationships: The Role of Social Network Ties During Socialization. *Academy of Management Journal*, 45(6), 1149-1160.
33. Naharuddin, N., & Sadegi, M. (2013). Factors of workplace environment that affect employees performance: A case study of Miyazu Malaysia. *International Journal of Independent Research and Studies*, 2(2), 66-78.

34. NAtti, J., Anttila, T., & VAisAnen, M. (2006). Managers and working time in Finland. *Decent working time* 289.
35. Okawa, M., Shirakawa, S., Uchiyama, M., Oguri, M., Kohsaka, M., Mishima, K., Sakamoto, K., Inoue, H., Kamei, K., & Takahashi, K. (1996) Seasonal variation of mood and behaviour in a healthy middle-aged population in Japan. *Acta Psychiatr. Scand.* 94, 211–216.
36. Oludeyi, O. (2015). A Review of Literature on Work Environment and Work Commitment: Implication For Future Research In Citadels Of Learning. *Journal Of Human Resources Management.* Vxiii. 32-46.
37. Perlow, L., A. (2012) *Sleeping with your Smartphone: How to Break the 24/7 Habit and Change the Way you Work.* Cambridge, MA: Harvard Business School Press.
38. Quilan, M. (2001). Precarious employment: Work re-organization and the factoring of OHS management. *International Journal of Systematic Occupational Health and Safety Management*, 24(10), 175-178.
39. Rubery, J., Ward, K., & Grimshaw D. (2006). Time work and pay: understanding the new relationships. *Decent working time* 123.
40. Rubin, H.J. & Rubin, I.S. (2011). *Qualitative Interviewing: The art of hearing data.* SAGE.
41. Ruchi, J., & Surinder, K. (2014). Impact of work environment on job satisfaction. *International Journal of Scientific and Research Publications*, 4(1), 1 – 8.
42. Sedarmayanti (2003). *Working Procedures and Work Productivity an Overview of Aspects of Ergonomics or the link between Man and Work Environment.* Bandung: Mandar Maju.
43. Shahzad, F., Iqbal, Z., & Gulzar, M. (2013). Impact of organisational culture on employees job performance: An empirical study of software houses in Pakistan. *Journal of Business Studies Quarterly*, 5(2), 56.
44. Spector, P. (1997). *Job satisfaction: Application, assessment, causes and consequences*, Thousand Oaks, CA, Inc. (Vol. 3). Sage Publications. Retrieved from <https://doi.org/10.4135/9781452231549>
45. Stup, R. (2003). *Control the factors that influence employee success.* Managing the Hispanic workforce Conference. Cornell University and Pennsylvania State University.
46. Tayler, B. (2012). *Creating a psychologically healthy workplace: The role of communication.* Retrieved from http://www.phwa.org/resources/creating_a_healthy_workplace.
47. Temessek, G. (2009). Expanding the Psychosocial Work Environment: Workplace Norms and Work–Family Conflict as Correlates of Stress and Health. *HR*, 3(1), 71-88.
48. Templer, K.J., Tay, C., & Chandrasekar, A. (2006). Motivational Cultural Intelligence, Realistic Job Preview, Realistic Living Conditions Preview, and Cross-Cultural Adjustment, *Group and Organisational Management*, 31(1), 154-173.
49. Useche S., Montoro L., Alonso F., & Oviedo-Trespalacios O. (2018). Infrastructural and Human Factors Affecting Safety Outcomes of Cyclists. *Sustainability*. 10, 299. doi: 10.3390/su10020299.
50. Wajcman, J. (2014). *Pressed for Time: The Acceleration of Life in Digital Capitalism.* Chicago, IL: University of Chicago Press.

Digital Competition in Different Sectors of the Economy

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Abstract. The introduction of information and communication technologies (ICT) into different sectors of the economy has led to the emergence of the digital economy, defined by the “fourth industrial revolution”. Digital competition in different sectors of the Ukrainian economy is mainly seen in the creation of digital services, while global practice demonstrates the modernization of enterprises based on digitalization of production, the sales sphere and so on.

Digitization and its competition in different spheres of the national economy is studied here. Namely, it is determined that nowadays digitization of the real sector of Ukraine's economy in the form of innovative production is not observed at the moment, but digitalization is more represented in the financial sector. Taking into account the current structure of the financial market in Ukraine, it was found that digitalization processes have largely affected the banking sector, which is embodied in the presence of developed Internet banking. It is found that the stock market in Ukraine currently lags far behind the banking sector in terms of the introduction of digital technologies.

Key words: digital economy, digitization, real and financial sectors of the economy, digital competition

Introduction

Relevance of the article. Nowadays, in the term of global capital and production flows, digital competition in different spheres of the national economy leads to real advantages of globalization – the flow of ideas, talents and contributions that drive innovation and productivity. Value chains are being changed, new centers are emerging, and economic activity is being transformed. This transition creates new grounds for countries to increase their role in the world economy. These opportunities will help to locate the infrastructure, institutions and business environment in which their companies and citizens have to participate fully.

Level of problem investigation. Reviewing recent studies and scientific research in the field of digitalization, there is an apparent lack of investigation into the peculiarities of digital competition in different spheres of the national economy.

Scientific problem. Researchers emphasize that digitizing data, markets, and economic branches gives additional control over information to subjects of economic relations. This additional control allows users to “shape their own experience”. In other words, digitization allows for an expanded degree of interaction between the user and information. Many scientists are exploring the radical uniqueness of digitization and information digitization. Many scientists believe that the digitization of information gives us significant and important properties. Scientists consider this to be a characteristic of digital information and a necessary consequence of digitization. Today, there are virtually no analogues in digital technology. The ultimate reason is that digitization shapes social groups and social interactions. Scholars often use the term “digitization” to discuss changes in social structure and practice.

Object of the article is studying digitalization and its competition in different spheres of the national economy.

Aim of the article is to investigate the peculiarities of digital competition in the economy of Ukraine.

Objective of the article is to define theoretical backgrounds of digitalization and the digital economy to analyze consequences of digital competition between different spheres for the national economy.

Methods of the article. The study uses modern research methods, namely:

- systematic approach (to study the possible theoretical foundations of digital competition in different spheres of the economy);
- method of theoretical generalization, historical and logical methods, systematic approach (to study the theoretical foundations of digitalization in the global economy);
- statistical and economic-mathematical methods (to analyze the current trend of development in real and financial sectors);

- methods of scientific analysis (to obtain data about common backgrounds of ways to transform the national economic system in the context of digitalization);
- method of theoretical generalization, historical and logical methods, systematic approach (to study the theoretical foundations of digitalization in the global economy).

1. Theoretical part

Digital transformation is a profound transformation of business, its organization, competencies and models that must take full advantage of the changes and opportunities of digital technology. Although digital transformation is largely used in business contexts, it also affects others – such as government agencies and organizations involved in addressing social issues, such as environmental pollution and population aging.

We should emphasize the positive impact of digitalization, as lots of scientists do (Slozko, & Pelo 2015; Chmarzo, 2017; Matt, Hess, & Benlian, 2015; Hartl, & Hess, 2019). It is established that digitalization (conversion of information from analog to digital form for further usage, storage and processing on electronic media), from an economic point of view, entails the penetration of digital technologies into different sectors of economy, to optimize and automate operational processes, and increase in productivity.

The term “digital economy” appeared in 1995 (simultaneously in Topscott, & Negroponete), and is defined as an economy based on digital computer technology and information and communication technologies (ICT), but, unlike informatization, digital transformation is not limited by the introduction of information technologies, and radically transforms areas and business processes.

The digital economy began to develop in the late 1950s, and digital innovations have been active around the world since the 1960s. The second phase of digitization began around the mid-1990s, with the global spread of the Internet and mobile communications. Today we can talk about the third stage of digitalization, associated with the spread of digital currencies and distributed registry technology in the world economy.

The concept of Industry 4.0 provides fully automated production, which is managed in real time, taking into account the influence of external conditions. The world's leading industrial countries (such as the United States, Germany, Italy, Japan, etc.) understand the digital economy as a process of creating and using unified production and service systems. In Ukraine, digitalization focuses on the introduction of new services based on the collection and analysis of various data and does not cover issues of radical change in the production system, approaches to design, production, marketing and operation of these physical objects, which is embedded in the concept Industry 4.0. The economic effect of digitalization of industry can have many directions. This includes both the digitization of technological processes and methods of organization of production, and the digitization of means of labor (equipment, appliances, machinery) with the best quality characteristics.

The human element is key at all levels, as well as at the stages of social transformation (cooperation, ecosystems, skills, culture, empowerment, etc.) as, of course, digital transformation. In non-digital interactions and operations, digital transformation plays a role in terms of empowering any agent. The strategy of digital transformations is aimed at creating opportunities to take full advantage of new technologies and their impact faster, better and more innovatively in the future. The path to digital transformation requires a step-by-step approach with a clear roadmap that engages a variety of stakeholders. This roadmap takes into account the ultimate goals as an ongoing process, sustainably embodied in digital innovations.

Moreover, Internet commerce has increased the usage of new technologies, as result increasing the demand for new electronic payment methods. Thus, a new trend is the use of the Internet as a new money market (Boshkov, 2018).

Nowadays, crypto currency takes a prominent position in digital completion as well as ready-made information money on a microprocessor or database. Undoubtedly, the purpose of such a tool is to increase the efficiency of the traditional method of payment. There are currently no clear standards in the Blockchain mechanism, so participants can easily communicate without a controller. Blockchain

technology is a universal online currency, which in turn raises many questions about the benefits and the risks/losses that may arise from its use. High technology ensures the development of payments and global competition. The ambiguity of judgments about the use of digital currency leaves ample room for analysis of its acceptance, trust and expectations, which are the main drivers of the spread of the network. Network distribution requires interdependence with demand, which means that the network must reach the minimum requirements before it reaches balance. The minimum network size is called the “critical mass”. Therefore, the future of digital currency is still an unresolved issue due to the existence of the concept of “critical mass”.

Although there is no standard definition of digital finance, there is a common understanding that digital finance covers all products, services, technologies and/or infrastructure that allow individuals and companies to access payments, savings and credit services online. According to the analysis of the transformations, it acquires new characteristics: firstly, the globalization of the world market implies its growth worldwide due to increased trade turnover, number of participants and instruments; secondly, the processes of deregulation, integration and convergence of international financial markets, the emergence of financial conglomerates, transnational banks and corporations contributed to the further deregulation of financial markets; thirdly, the process of digitalization has led to significant changes in payment systems: technical support, technological improvement and application (Tsyganov, & Apalkova, 2016). Thus, by “digital finance” we propose to mean financial products and services produced using information and communication (digital) technologies, as well as technologies and infrastructure that allow individuals and companies to access payments, savings and credit services remotely on the Internet) without direct communication with a financial service provider. The role of information and communication technologies is becoming increasingly important in today’s globalized world. With the reduction of costs for data collection, storage and processing and the significant increase in computing power, “digitalization” is becoming more and more a separate economic activity around the world. Although the pace of digital transformation varies from country to country, they represent both opportunities and risks for countries at all levels of development. This impact depends on the willingness of countries, businesses and people to reap the benefits of digitalization (Borzenko, & Hlazova, 2021).

2. Analytical part

Digital competition in different branches of the economy in Ukraine is basically expressed in background sectoral digitalization and its competitiveness. Digitalization focuses on the introduction of new services based on the collection and analysis of various data and does not cover issues of radical change in the manufacturing sector, approaches to design, marketing and operation of those physical objects, which is enshrined in the concept of Industry 4.0.

According to the Global Innovation Index Report, (2020), which compares the innovation activities of 131 countries, Ukraine ranked 45th in 2020, joining the economic group of lower-middle income countries (the leaders in innovation development are Switzerland, Sweden, the United States, and the United Kingdom). According to the report of the World Economic Forum (WEF) for 2019, Ukraine ranked 60th among 100 countries in terms of technology and innovation. In terms of production structure and driving forces, Ukraine ranked 70th and 59th, respectively. That is, Ukraine belongs to the group of countries that lag behind (OECD Report, 2021).

It should be admitted that the innovation vector of state development, namely public spending on innovation, is a modern indicator of the information society.

According to the State Statistics Service, in 2019 approximately 1 billion USD was spent on innovations, internal, external research and development, and other spheres related to the creation and implementation of innovations (Table 1).

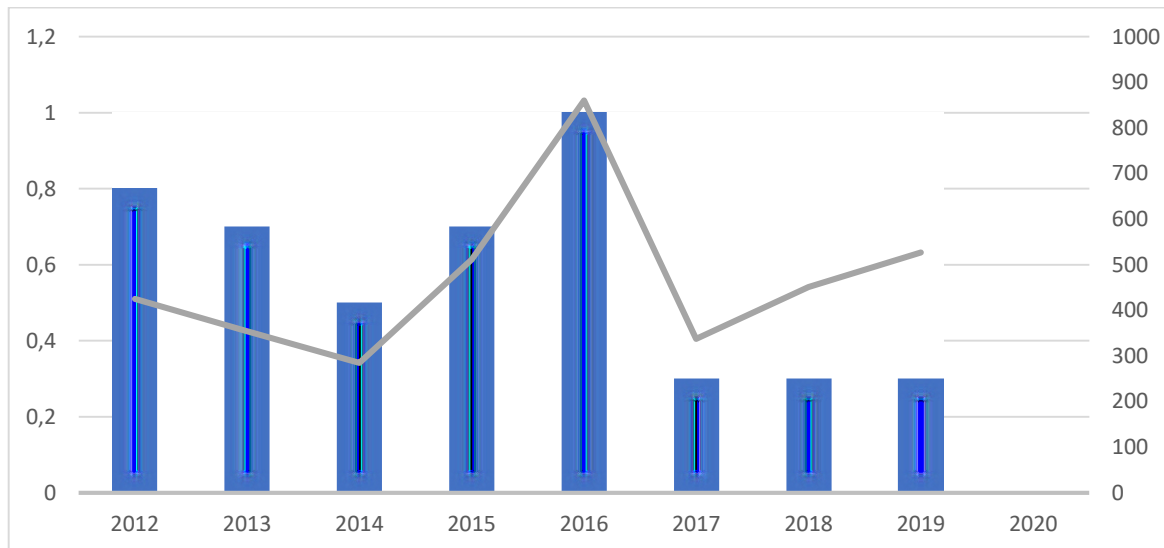
Table 1

Structure of innovative activity and its funding		
	Type of innovative activity in Ukraine	Amount
1.	Innovations of the enterprise	526 million USD
2.	The purchase of machinery, equipment and software	377 million USD

3.	Internal and external research and development	108.10 million USD
4.	Acquisition of new technologies	1.38 million USD
5.	Work related to the creation and implementation of innovations	39.97 million USD

Source: State Statistics Service (2019).

Currently, the volume of funding for innovation in Ukraine is less than 1% of GDP (Fig. 1), while in the EU this figure is about 2.14%. This fact has a negative impact on the digital transformation and modernization of the economy.



Source: State Statistics Service (2020).

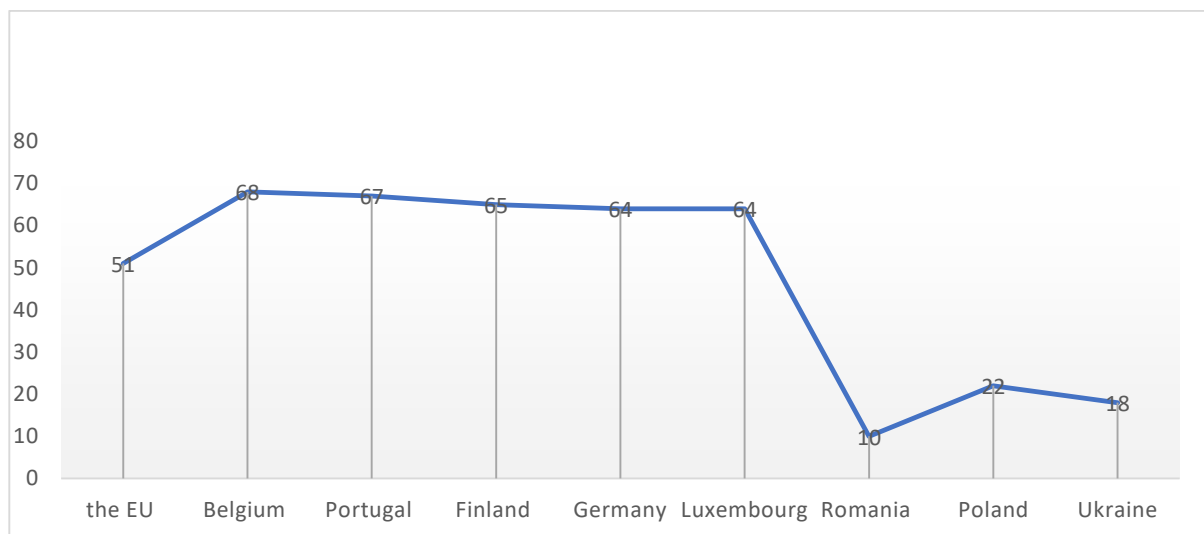
Fig. 1. The amount of funding for innovation in Ukraine (million USD (right axis), % GDP (left axis))

Thus, we believe that the funding for innovation in Ukraine should be on an appropriate level to develop and maintain digitalization of the real sector of the national economy. Since Ukraine is attending to integrate into the EU single market, it is necessary to accelerate digital transformation in the weakest areas, namely: legal regulation, the development of telecommunications infrastructure and the introduction of digital technologies into the real sector of the national economy. Depending on the level of digitalization that Ukraine will gradually implement within the framework of the EU digital single market, there might be a positive cumulative impact on Ukraine's GDP.

We propose that the components of the EU digital single market that need to be improved in Ukraine are: electronic identification, payment systems, electronic payments and settlements, protection of intellectual property rights on the Internet, cybersecurity and personal data protection.

Considering the digital competition in different sectors of the economy, it should be admitted that the process of digitalization in Ukrainian industry shows negative dynamics. The process of implementing Industry 3.0 has not yet been completed in the Ukrainian economy. Even the level of automation in Ukrainian industry is very low. For example, in metallurgy it is about 50%. The most important partners of innovative enterprises in cooperation are mainly suppliers of equipment, materials, components or software (26.1%), as well as consumers (13.7%). The share of enterprises that cooperated with scientific organizations (consultants, commercial laboratories, universities and other universities and research institutes) is only 8.4% in Ukraine (Nekrasov, 2019). According to the State Statistics Service, only 16.4% of enterprises were engaged in innovative activities in industry. In developed countries, the share of innovative enterprises is 4-5 times higher and on average in the EU is 51%, including in Belgium - 68%, Portugal - 67%, Finland - 65%, Germany - 64%, Luxembourg - 64%. The lowest in Romania - 10% and Poland - 22% (Fig. 2). In Ukraine, only 3.9% of enterprises spent money on research and development (internal and external). The share of innovative products in total sales has been at the level of 6-7% for many years. Science-intensive GDP in Ukraine has decreased significantly.

Therefore, we believe the problem of rapid transition from the level of Industry 3.0 to Industry 4.0 is very acute.



Source: State Statistics Service, 2020

Fig. 2. The share of innovative enterprises in 2020, %.

Nowadays, digitalization is mainly seen as the creation of services in Ukraine, while modernization of enterprises based on the introduction of innovative technologies into production, marketing and so on is being conducted in developed countries. Digitization of the real sector of Ukraine's economy in the form of innovative production is not observed. Digitalization is more represented in the financial sector, embodied in the form of developed Internet banking (Privat Bank, Ukrsibbank, Alfa-bank, Monobank).

A question of great importance in digital competition sphere is the introduction of e-hryvnia (crypto hryvnia). It has been implemented since 2016. The e-hryvnia will not need expensive intermediaries in the form of banks, as operations will take place on NBU (the National Bank of Ukraine) servers. Issuance of e-hryvnia is much less risky in comparison with placing money in a commercial bank. It is assumed that the e-hryvnia can be used, for example, to pay subsidies for utilities and other social assistance. According to the developers of e-hryvnia project, it will simplify the control over cash flows that are allocated from the state budget.

We should admit that Ukraine's legislation is quite restrictive on digital trade. Here, most barriers are related to:

- cross-border electronic payments and cross-border electronic transactions (lack of mechanisms for the use of electronic digital signatures in foreign trade contracts, lack of mutual recognition of electronic identification and electronic trust services between Ukraine and major trading partners, etc.),
- technical requirements for the use of local software and cryptography.

We believe that overcoming these barriers is necessary for Ukraine's integration into the European and global digital space, which is increasingly affecting international trade and the global economy.

Deepening digitalization in all areas leads to the optimization of the economic system, but the more the economy is "digitized", the more the problem of economic cybersecurity can be faced, and data protection needs to be solved.

Conclusions

Thus, we define theoretical backgrounds of digitalization and digital economy to analyze the consequences of digital competition between different spheres for the national economy, getting the following results:

1. Digital competition in different spheres of the economy is embodied in Ukraine in the form of “remote access services”, while digitalization in developed countries is seen as the modernization of enterprises based on the introduction of innovative technologies in production, marketing and more.
2. Digital competition in the form of the introduction of innovative production is not generally observed in the real sector of Ukraine's economy, while digitalization is more represented in the financial sector. This trend is confirmed by the dynamics of low investment activity in the field of innovation (below 1% of GDP), low level of innovative enterprises in the economy of Ukraine (approximately 16 %).
3. It was also determined that the current trend of the information society and the digitalization of social and economic relations is seen in the implementation of the Central Bank Digital Currencies project, embodied in the development of the e-hryvnia. The advantages of CBDC based on blockchain technology are instant transactions as well as low cost. The national digital currency is currently considered an instrument of control over earmarked funds.

The findings can be interesting to scientists who have been studying the peculiarities of the digital economy as well as relevant government institutions dealing with the problems related to the digital transformation of Ukraine's economy.

References

1. Borzenko, O., & Hlazova, A.B. (2021). Cryptocurrency as a secondary form of manifestation of finance virtualization. Retrieved from <http://rep.ksu.kz/xmlui/handle/data/11092>
2. Boshkov, T. (2018). Blockchain and Digital Currency in the World of Finance. Retrieved from <http://dx.doi.org/10.5772/intechopen.79456>
3. E-hryvnia: simplification of calculations in exchange for strengthening financial control. [E-hryvnyia: sproshchennya rozrakhunkiv vzamin na posylennya finkontrolyu] (2021). Retrieved from <https://www.dw.com/uk/e-hryvnia-sproshchennia-rozrakhunkiv-vzamin-na-posylenia-finkontroliu/a-58898647>
4. Global Innovation Index (2020). Retrieved from https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf
5. Hartl, E., & Hess, Th. (2019). It projects in digital transformation: a socio-technical journey towards technochange. In Proceedings of the 27-th European Conference on Information Systems (ECIS), Stockholm & Uppsala, Sweden, 2019.
6. Matt, Ch.; Hess, Th.; & Benlian, A. (2015). Digital Transformation Strategies. *Business & Information Systems Engineering*. 57(5), 339–343.
7. Negroponte N. (1995). Being Digital. – Hodder and Stoughton. Retrieved from <http://governance40.com/wp-content/uploads/2018/12/Nicholas-Negroponte-Being-Digital-Vintage-1996.pdf>
8. Nekrasov, V. (2019). How artificial intelligence is progressing: a report on recent achievements. [Yak prohresuye shtuchnyy intelekt: zvit pro ostanni dosyahnennya]. *Economic truth*. Retrieved from <https://www.epravda.com.ua/publications/2019/07/15/649648>.
9. OECD Digital Economy Papers. – OECD. (2021). Retrieved from https://www.oecd-ilibrary.org/science-and-technology/oecd-digital-economy-papers_20716826
10. Rise of the central bank digital currencies: drivers, approaches and technologies, (2021). Retrieved from <https://www.bis.org/publ/work880.htm>
11. Schmarzo, B. (2017). What is digital transformation? Retrieved from <https://www.cio.com/article/230121/what-is-digital-transformation-2.html>
12. Slozko, O., & Pelo, A. (2015). Problems and risks of digital technologies introduction into e-payments. *Transformations in Business and Economics* 14(1), 225-235.
13. State Statistic Service, (2020) Analytical data, Retrieved from <http://www.ukrstat.gov.ua>
14. Tapscott, D. (1994) The Digital Economy. Retrieved from <http://dontapscott.com/books/the-digital-economy>.
15. Tsyganov, S., & Apalkova, V. (2016). Digital Finance Areas of life during transactional processes Operations in financial markets taking into account the digital currency of 68 new payment instruments. Structural changes in the global market of electronic payment services. *Investments: practice and experience*, 3, 26-33.

Importance of Sustainability Indicators in Construction SSCM

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Abstract. For ongoing review in the strategic planning of the construction industry, numerous complex categories such as ecological, social, and economic are necessary. The present research and analysis look at sustainable supply chain management (SSCM) in the construction industry from a holistic viewpoint, focusing on the construction company's long-term sustainable decision-making tools rather than only SCM for building projects. This article specifies a number of sustainability measures for assessing supplier networks of construction companies. By analyzing their use in prior literature and agreeing to the explanation, those indicators were grouped and assigned to the categories which better reflect the SSCM principle of their application in the construction sphere. For sustainable policymakers and construction business managers, the use of indicators can aid in the development of policies for the construction sector.

Key words: *Supply Chain, Construction, Sustainability Indicators, SCM, Sustainable Construction.*

Introduction

Relevance of the article

The implementation of SSCM in building projects decreases environmental impact, lowers the chance of failure and boosts the corporation's competitiveness. According to researchers studying supply chains and their management (Mentzner et al., 2001), the performance of supply networks (local and holistic) can be improved if conjunctural connections and processes between enterprises are actively controlled. The importance of management is sometimes underestimated, which also determines the added value of construction projects.

Level of problem investigation

In the building industry, innovations are adopted slowly. The SC is considered as a series of events that cannot be monitored at a single point or stage and it must be viewed as a network (Li et al., 2006). Finance, information, and material links connect all entities in the construction SC, but not all of them are required in every point of the chain (Fliedner, 2003). A contractor can receive components from several sources at the same time and distribute his finished product to a number of distributors and wholesalers. The structure of the construction SC is determined by the customers' needs and the actions of the company. Regardless of the peculiarities of construction organizations, the majority of existing sustainable SSCM methodologies and techniques are being integrated to construction with no further examination.

Scientific problem

The existing academic literature demonstrates that integrating sustainability indicators into construction SCM has several benefits and obstacles (Salami, Isah, & Muhammad, 2021). Better traceability, general efficiency, logistic management, authentication and certification systems are among the former. Modern technology helps to achieve important supply chain quality criteria like traceability and certification (RezaHoseini, Noori, & Ghannadpour, 2021), as well as green consumption and waste reduction in the construction industry. This necessitates politicians having a thorough understanding of the underlying technology and how it impacts and produces current value networks. The limitations of technology, especially consumers' reluctance to adapt, must be better understood. The current legislation does not adequately account for the unique characteristics of artificial intelligence solutions. These are some of the key elements for legislators to create regulations that collectively account for advanced technology's functionality in construction (Banihashemi, Fei, & Chen, 2019).

Object of the article is SSCM indicators in the construction sector and their application, implementation and development in the supply chain.

Aim of the article is to compile a list of sustainability indicators to be used in analyzing construction companies' supply chains.

Objectives of the article: 1. To analyze SSCM in construction sector. 2. To extract main sustainability indicators. 3. To find the most important sustainability indicators which have the most power for the construction projects in SC. 4. To make recommendations for future research and conclusions.

Methods of the article

This research is based on exhaustive literature review, empirical research, statistical data review, legislative documents and questionnaire of the experts of SSCM. The results are shown in the tables.

1. A brief theoretical introduction

SSCM promotes a broader variety of actions for SC executives and businesses. This necessitates the creation and implementation of policies to improve partners' ecological, financial and social governance. The SSCM can be divided into four sections: (1) data, production, and money planning; (2) economic and social factor management; (3) inventions and software product development; and (4) stakeholders' accountability (Rajesh, 2020). Consumers are required to determine the arrangement of the construction SC as a result of the entity's activities. The supply chain is viewed as a series of operations, and it must be considered a system. SSCM highlights a broader array of activities for SC managers and businesses, as that necessitates the development and implementation of plans to improve partners' social, ecological and financial management (Goel, Ganesh, & Kaur, 2020). To meet the expanding demands of clients and contractors, some steps must be done to optimize operations and the construction processes as the present systems and technologies are unproductive, insecure and unstable.

2. Sustainability indicators in SSCM

Despite the increasing prevalence of sustainable logistics and SCM in construction, SSCM's possibilities, obstacles, and limitations still remain. Additional research is needed and the topic's potential has yet to be realized (Prasad, Pradhan, & Gaurav, 2018). Several issues of the SSCM in construction have been recognized, including environmental, economic, and social patterns (Schulz, & Flanagan, 2017), which are typically known as a Triple Bottom Line.

Numerous publications highlight the importance of transitioning to a more sustainable methodology, particularly in the construction industry. Shen, Tam, & Ji (2010) explains that through competitive activities the sustainability level could be increased in the construction management strategy. SSCM incorporates the construction company's management, external stakeholders, suppliers and consumers' sustainability goals and regulations. All participants in the building supply chain must accomplish certain goals in order for the SC to be sustainable (Fritz, 2019). Product life-cycle analysis, which allows the identification of an item's environmental impact throughout its life cycle from the stage of the product design to the stage of product or building utilization could be used as an example (Stanitsas, Kirytopoulos, & Loepoulos, 2021). Construction businesses must wisely choose suppliers of building supplies based on a various types of criteria, such as environmental, social and economic, which they must specify with the organizational plans, regulations and legislative norms (Schöggl, Baumgartner, & Hofer, 2017).

The majority of SSCM research focuses on the three fundamental pillars of sustainability which are sometimes referred to as the Triple Bottom Line. Few scientists explored these pillars for the SSCM, and they supplied the most generally referenced definitions of the SSCM. Nonetheless, there are presently insufficient techniques available to assess a construction company's sustainability using the Triple Bottom Line. Not all markers are equally precise and quantifiable, according to Moldan, & Dahl (2012). According to Stanitsas, Kirytopoulos, & Loepoulos (2021), it is important to separate sustainability indicators to various categories before evaluating construction business' supply chains.

Categorization of Sustainability Indicators in Construction Sector

Research methods.

Aim of the research is to find the most important sustainability indicators which have the most power for the construction projects in supply chain.

Objectives of the research: 1. Conclude an exhaustive literature review; 2. conduct a survey with the professionals of sustainable construction businesses; 3. using the formula of the categorization of importance (1) find the most important indicators and 4. summarize the results.






Research methods: literature review, development of a new system of sustainability indicators, comprehensive analysis of survey results, categorization of indicators according to their importance.

The research data analysis and the discussion of the results

In order for the results to be achieved, once sustainability indicators have been developed, the significance of the indicators needs to be determined. The importance of sustainability indicators varies in terms of the construction SCM (Boone et al., 2019). Therefore, one of the most important parts of the analysis is to determine the importance of the indicators. Determining the weights of indicators affects the weight of certain indicators in the construction supply chain process, so it can be applied to all multi-criteria assessment tasks. All the indicators listed above can be categorized in a number of different ways, one way being according to their importance, by dividing them into five groups (Table 1):

Categorization of indicators according to their importance

Table 1

IMPORTANCE	SIGNIFICANCE COEFFICIENT	COLOR CODE
LOW	0	
MEDIUM	0,25	
HIGH	0,5	
VERY HIGH	0,75	
MORE THAN VERY HIGH	1	

Source: created by the author.

The evaluation of the hierarchy and the breakdown of the problem separation allow to describe the problem of reference weighting of indicators. The aim of the proposed model is to achieve a more accurate solution.

The ratio scale (intensity) is as follows:

Green - low importance; yellow - a little more important; orange - high importance; red - very high importance; black - absolutely high importance (Tamošaitienė et al., 2017). These indicators contribute to and influence the ethics of sustainable TGV practices.

After the finishing the survey, the Average counting formula (1) to find the most important indicators was applied:











































$$M(x) = (x_1 + x_2 + x_3) / 3 \quad \text{Formula 1}$$

The research data analysis and the discussion of the results

In the period of time of December 2021 three groups of construction experts from large construction companies that use supply chain technologies were asked via email to select the key sustainability indicators. They were grouped according to the similarities of the construction companies that they represented. Out of 70 listed indicators they reduced this number to 38 key indicators. Also they were asked to evaluate these indicators according to their importance by dividing them into five groups (Popovic et al., 2018) according to color value (Table 1). Three groups of experts arranged sustainability indicators in construction SC into five groups according to color code and importance. Following the responses from the three groups of experts, a weighting factor (1) was calculated and is also provided in the tables below with the optimized list of sustainability economic indicators (Table 2).

The final list of sustainable economic indicators

Table 2

Group	Theme	Indicator	Color code			Significance coef.	Importance nr.
			1	2	3		
ECO 1	Work performance and final results	Successful financial and economic performance of work; Ability to pay and affordability; Emphasis on project results				0,917	1 – 2
ECO 2	Stability	Economic and political stability				0,167	13
ECO 3	Stakeholders	Stakeholder involvement; Supply chain collaboration; Customer relations management, access to contacts				0,833	3 – 4
ECO 4	Innovations	Innovation management, new product development				0,583	6
ECO 5	Profit	Targeted marketing and benefits Economic and environmental accounting				0,250	9 – 10 – 11 – 12
ECO 6	Efficiency	Effective project control; Effective risk management plan; Scope management control				0,917	1-2
ECO 7	Strategy	Best practice strategy				0,250	9 – 10 – 11 – 12
ECO 8	Recourses	Efficient allocation of resources; Cost management plan; Resource planning				0,833	3 – 4
ECO 9	Internationality	Internationalization				0,250	9 – 10 – 11 – 12
ECO 10	Bureaucracy	Bureaucratic rationalization				0,417	7
ECO 11	Ethics	Business ethics; Organizational culture				0,250	9 – 10 – 11 – 12
ECO 12	Improvements	AI management technologies and general improvements				0,333	8
ECO 13	Incentives	Targeted incentives				0,083	14
ECO 14	Money planning	Effective strategic planning; A project management plan for construction activities is being developed; Implementing a change management strategy; Efficient data processing for decision-making practices				0,750	5

Source: created by the author.

The reduced list of sustainability environmental indicators (Table 3).

The final list of sustainable environmental indicators

Table 3

Group	Theme	Indicator	Color code			Significance coef.	Importance nr.
			1	2	3		
ENV 1	Education	Environmental education				0,167	11
ENV 2	Stakeholders	Sustainable project implementation by managing construction project stakeholders; Environmental responsibility				0,667	5
ENV 3	Environmental impact	Life cycle of products and services to reduce environmental impact; Environmental Impact Assessment Project Report				0,917	1 – 2 – 3
ENV 4	Sustainable materials	Use of sustainable building materials; Appropriate and flexible environmental design details and specifications				0,917	1 – 2 – 3
ENV 5	Environmental management	Environmental management plan				0,250	8 – 9 – 10
ENV 6	Biodiversity	Project biodiversity				0,250	8 – 9 – 10
ENV 7	Load on nature	Consistent and predictable load				0,333	6 – 7
ENV 8	Risk management	Adaptation to climate change, disaster risk management				0,833	4
ENV 9	Politics	The importance of environmental management systems and policies				0,250	8 – 9 – 10
ENV 10	Sustainable use of resources	Ecological efficiency; Energy efficiency Renewable energy sources usable, reduction of fossil fuels; Sustainable use of natural resources; Construction water quality impact				0,917	1 – 2 – 3
ENV 11	New technologies	The latest environmental construction technologies and methods				0,333	6 – 7

















Source: created by the author.

Optimized list of sustainability social indicators (Table 4).

The final list of sustainable social indicators

Table 4

Group	Theme	Indicator	Color code			Significance coef.	Importance nr.
			1	2	3		
SOC 1	Holistic approach	Social responsibility; A holistic approach to benefits				0,250	11 – 12
SOC 2	Charity and social activities	Financing of social actions, concepts of social justice				0,333	9 – 10
SOC 3	Sustainable work practices	Sustainability and organizational culture of construction companies; Work practice				0,750	2

SOC 4	Employee accountability	Employee commitment in the workplace; Accountability culture				0,417	6 – 7 – 8
SOC 5	Workers' rights	Human rights; Sustainable employment				0,500	5
SOC 6	Society	Community relations and involvement; Public acceptance of the project				0,250	11 – 12
SOC 7	Stakeholders	Stakeholder involvement and management; Contractor - supplier relationship				0,667	3
SOC 8	Policy	Independence of political factors from the construction project; Transparent and competitive procurement processes				0,333	9 – 10
SOC 9	Quality	Implementation of quality management system; High quality work is emphasized				0,583	4
SOC 10	Documentation	Detailed contract documentation; Management of intangible assets				0,167	13
SOC 11	Competition	Promotion of competition; Adaptation to the project environment				0,417	6 – 7 – 8
SOC 12	Reports	Social impact reports; The scope of the construction project and the constraints of the project are well defined				0,417	6 – 7 – 8
SOC 13	Applications of systems	Tracking of construction project management stages / processes; Product - service systems				0,833	1

Source: created by the author.

The most important sustainability indicators identified by experts that have an impact on the analysis of construction supply chains (Table 4).

The most important indicators from all three sustainability groups

Table 4

Importance	Indicator	Coef. of Importance
1.	Work performance and final results (ECO 1)	0,917
2.	Efficiency (ECO 6)	0,917
3.	Environmental impact (ENV 3)	0,917
4.	Sustainable materials (ENV 4)	0,917
5.	Sustainable use of resources (ENV 10)	0,917
6.	Applications of systems (SOC 13)	0,833
7.	Stakeholders (ECO 3)	0,833
8.	Risk management (ENV 8)	0,833
9.	Recourses (ECO 8)	0,833
10.	Money planning (ECO 14)	0,750

Source: created by the author.

Conclusions

1. The parameters of sustainability were classified into three categories: social (governing), economic, and environmental. As an outcome of the research, construction project managers will be able to more effectively plan current, innovative sustainable solutions in terms of achieving sustainability accomplishments in research programs, taking into consideration the 38 attributes identified. The most important indicators were work performance and final results, efficiency

(economical), environmental impact, sustainable materials and sustainable use of resources (environmental) and applications of systems (social).

2. The in-depth examination of the indicators according to the SCM sustainability scenario provides a foundation for construction professionals and scholars to further examine and research the indicators of construction engineering projects. In a practical situation, use of such indicators could assist environmental legislators and building company management in developing policies for the construction sector. This method could be applied to construction businesses' life-cycle optimization models, software approaches and etc. For continued study, a factor analysis method can also be used to identify the underlying correlation between the defined sustainability criteria.

References

1. Banihashemi, T.A., Fei, J. & Chen, P.S.-L. (2019). Exploring the relationship between reverse logistics and sustainability performance: A literature review. *Modern Supply Chain Research and Applications*, 1(1), 2-27.
2. Fliedner, G. (2003). CPFR: An emerging supply chain tool. *Ind. Manage. Data Syst.*, 103, 14-21.
3. Fritz, M.M.C. (2019). Sustainable supply chain management, in L. Filho et al., (eds) Responsible consumption and production. *Encyclopedia of the UN Sustainable Development Goals*, Springer.
4. Goel, A., Ganesh, L.S. & Kaur, A. (2020). Project management for social good: A conceptual framework and research agenda for socially sustainable construction project management. *International Journal of Managing Projects in Business*, Vol. 13(4), 695-726.
5. Li, S., Ragu-Nathan, B., Ragu-Nathan, T.S. & Rao, S.S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *Omega-Int. J. Manage. Sci.*, 34, 107-124.
6. Mentzer, J.T., Dewitt, W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D. & Zacharia, Z.G. (2001). Defining supply chain management. *J. Bus. Logist.*, 22, 1-25.
7. Moldan, B. & Dahl, A.L. (2012). *Editorial. Ecol. Indic.* 12, 1-3.
8. Popovic, T., Barbosa-Povoa, A., Kraslawski, A. & Carvalho, A. (2018). Quantitative Indicators for social sustainability assessment of supply chains. *Journal of Cleaner Production*, 180, 748-768.
9. Prasad, D.S., Pradhan, R.P. & Gaurav, K. (2018). Analyzing the critical success factors for implementation of sustainable supply chain management: an Indian case study. *Decision*, 45, 3-25.
10. Rajesh, R. (2020). Exploring the sustainability performances of firms using environmental, social, and governance scores. *Journal of Cleaner Production*, 247.
11. RezaHoseini, A., Noori, S., & Ghannadpour, S.F. (2021). Integrated scheduling of suppliers and multi-project activities for green construction supply chains under uncertainty. *Autom. Constr.*, 122.
12. Salami, S.F., Isah, A.D., & Muhammad, I.B. (2021). Critical indicators of sustainability for mixed-use buildings in Lagos, Nigeria, *Environ. Sust. Indic.* 9.
13. Schöggel, J.P., Baumgartner, R.J. & Hofer, D. (2017). Improving sustainability performance in early phases of product design: A checklist for sustainable product development tested in the automotive industry. *J. Clean Prod.*, 140, 1602-1617.
14. Schulz, S.A. & Flanigan, R.L. (2017). Developing competitive advantage using the triple bottom line: a conceptual framework. *Journal of Business & Industrial Marketing*, 31(4), 449-458.
15. Shen, L.Y., Tam, V.W.Y. & Ji, Y.B. (2010). Project feasibility study: The key to successful implementation of sustainable and socially responsible construction management practice. *Journal of Cleaner Production*, 18, 254-259.
16. Stanitsas, M., Kirytopoulos, K. & Loepoulos, V. (2021). Integrating sustainability indicators into project management: The case of construction industry. *Journal of Cleaner Production*, 279.
17. Tamošaitienė, J., Zavadskas, E. K., Šileikaitė, I. & Turskis, Z. (2017). A novel hybrid MCDM approach for complicated supply chain management problems in construction. *Procedia Engineering*, 172, 1137-1145.

Impact of Knowledge Management on the Operational Risk of the Modern Organizations

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Abstract. Organizations face a variety of challenges daily that sometimes make their operations risky. It is very important to define the risks and have a plan for managing threats. One way to manage risk is to use knowledge management. An organization is created by people, so maintaining for people is the most important goal of the organization. Brain drain can become significantly damage the organization. It is quite difficult to calculate the specific impact of risk on the organization in terms of qualitative indicators. However, it is unequivocally recognized that knowledge management in organizations is extremely important. Therefore, this topic – knowledge management in the risk management process of organizations - was chosen to find out how knowledge management, in addition to economic decisions, can contribute to an organization's risk aversion. This article aims to determine how the knowledge management process serves the operational risk management of organizations.

Keywords: *knowledge management, activities of the organization, operational risks, risk management.*

Introduction

Relevance of the article

When it comes to organizational risks, we often think only of economic indicators. But behind the numbers also lie the people, their knowledge and experience. Human resources, employee loyalty, employee turnover, motivation, and knowledge management gain a broader significance. The biggest challenge for modern organizations is to encourage employees to share their knowledge. Knowledge is the currency of today's organizations. Knowledge management is identified as a key competitive factor and a driving force for organizational development.

Level of problem investigation

Authors often analyze either the economic aspects of risk or the aspects of knowledge management in modern organizations. Conversely, knowledge management only hints in general terms that knowledge management helps maintain productivity and increase organizational efficiency. Both acknowledge that it is quite difficult to calculate the specific impact of risk on an organization in terms of qualitative indicators.

Scientific problem

There are not many authors who research economic topics from the point of view of knowledge management. However, it is unequivocally recognized that knowledge management in organizations is extremely important. When analyzing the scientific literature, there is a lack of joint research that would include both risk management and knowledge management as one process.

The object of the article – *is* that knowledge management process tools are used in organizations to manage operational risks.

Aim of the article – to help organizations manage operational risk using knowledge management as a tool.

Objectives of the article:

1. To perform a theoretical substantiation of risks and the impact of their management on the activities of organizations, defining the concept of risk in the activities of the organization and risk management processes and tools.
2. Establish knowledge management interfaces with an organization's operational risk management processes.
3. Evaluate the knowledge management tools used in organizations.
4. Evaluate the impact of knowledge management on the operational risk management of an organization.

Methods of the article

Analysis of literature and scientific sources is used in this article to substantiate the theoretical basis of what constitutes a risk. The concept of risk and its management tools and processes are then analyzed. The paper also analyzes knowledge management, key processes and their impact on risk management. A mixed qualitative research method was chosen: interviews with specialists and qualitative content analysis. After analyzing the answers of interviews, knowledge management tools were identified, and a podcast was analyzed using qualitative content analysis.

1. Influence of risk management on the activities of organizations

Risks in research are explored in a variety of contexts. Risks in the context of organizational governance are focused on a financial assessment. However, the word “risk” itself is not just a financial or numerical expression.

Risk, in its innate sense, means danger. In the scientific literature, risk is assessed differently. Therefore, there are many definitions of this term and it is applied in different situations.

All authors agree that a uniform definition of risk is not possible and depends on environmental factors. The concept of risk usually has a negative connotation in the definitions: loss, unfavourable or undesirable result, damage, negative accidental circumstances, danger, uncertainty, bad event. However, some authors also see opportunities or positive significance in risk: the diversity of results, the possibility that unforeseen events will not happen, the determination to act.

Risk management is an important part of the strategic management of every organization (Osmar & Turrent, 2018). The identification of risks and the measures applied in the organization must be in line with the goals and capabilities of the organization in the case of a specific risk, so it is very important to have up-to-date, up-to-date information and suitably qualified staff.

It is recommended that risk management begins with structuring, which helps the organization identify risks, analyze them, and define how they will be addressed in particular risk. After adequate assessment and identification of threats, they can be managed by creating an appropriate management plan for each organization (Sax, & Andersen, 2019). Risk can be managed, that is, by the use of various tools that allow one to predict the occurrence of a risky event to a certain extent and take measures to reduce the degree of risk (Aven, 2016). The authors propose an analysis of an organization's business processes by dividing the risk into environmental risk, process risk, and the risk of information needed to make decisions.

A risk management strategy should be implemented within the organizational culture, achieved through established policies and rules (Zahra, 2015).

The importance of leadership in a flexible and ever-changing system is emphasized. The head of such an organization must look for new resources and opportunities, and be prepared to make the necessary decisions at any time. This requires constant personal change and the acquisition of new knowledge.

In summary, authors acknowledge in their research that both private businesses and public authorities pay too little attention to naming and managing risks. Business risk management is not an end-to-end process: as the external environment changes and internal organizational changes occur, risk management processes need to be considered and modified as needed. Financial documents, various reports (balance sheet, profit and loss statement, profit and loss statement, cash flow statement), draft budgets, unit price, sales figures, etc. are the most commonly used for research. All of these documents provide an overview of the economic aspects of an organization's operations but do not reflect the situation in the areas of human resources, knowledge management, and communication — the implications of these areas for the organization's processes and activities in terms of risks to the organization.

The scientific literature often mentions the experience and knowledge of top managers. While the influence of managers in managing risk is important, perhaps even more persuasive - managers in an organization need to empower their employees and motivate them to share the necessary experience and knowledge to avoid defined risks.

Experience is classified as a qualitative risk management tool and researchers agree that it is not so easy to measure. In addition, experience and existing knowledge also have a period of validity: changing

markets, changing societies, consumer and other habits, and existing experiences may in some cases not save the situation but damage the organisation's ambitions, results or reputation.

2. Knowledge sharing as a risk management tool

Sharing knowledge means sharing success and failure stories, learning from successes and mistakes. Lessons learned intelligently can lead to better organizational performance and contribute to the well-being of an organization. It also helps you respond faster and more effectively to change and act responsibly (Atkočiūnienė, & Radiūnaitė, 2011).

Internal collaboration within the organization is emphasized by Chechen Liao, Shu-Hui Chuang, & Pui-Lai To (2010). To make use of available organizational knowledge, the departments of an organization should collaborate through learning, as working together can lead to significantly better results.

When knowledge resources are distributed through functions and shared between them, an organization receives a return on knowledge resources. The ability to use the available knowledge to make decisions allows an organization to respond more effectively to changes in the environment (Chechen Liao, Shu-Hui Chuang, & Pui-Lai To, 2010).

An important factor in the development and effectiveness of knowledge management in an organization is managerial behaviour (Donate, & Sánchez de Pablo, 2014). On the one hand, leaders can create conditions that allow employees to use their knowledge and skills. On the other hand, the behaviour of a leader can also create certain barriers to knowledge sharing when employees accumulate knowledge but do not share it.

Sharing tacit knowledge can reduce or eliminate certain risks or costs (Girnienė, 2013). However, people do not pass on their knowledge to others automatically. There are many reasons why knowledge is not shared, so the desire to share knowledge is limited. The ability to share knowledge depends primarily on a person's ability to communicate and his or her social behaviour.

Probst et al. (2006) identify several reasons why employees are reluctant to share knowledge: individual reluctance, the influence of organizational culture, use of power, trust in the organization, management.

Culture, among other organizational factors, has the greatest positive impact on knowledge management (Zheng, Yang, & McLean, 2010). This means that to create a knowledge-friendly environment, more attention needs to be paid to the formation of culture in knowledge management practices. The four cultural dimensions of a merged organization — adaptability, coherence, engagement, and mission – have a positive impact on knowledge management.

A study by Zheng, Yang, & McLean (2010) show that an organization's culture, structure, and strategy are closely related. Adaptive organizations that consistently adhere to their values engage employees, and share missions in their culture are also inclined to address challenges and find ways to reduce costs by looking to the future and being proactive in their strategy. Such organizations are more prone to a decentralized structure. These correlations mean that three organizational factors create an interdependent system in which changes in one or two factors can affect the other factor (s). Organizational change is usually required when developing knowledge management projects. It is important to consider all three factors when designing and implementing the expected changes.

The importance of culture is confirmed by a study by Lindner, & Wald (2011) which states that a positive set of values, attitudes, and expectations of knowledge in an organization facilitates people's willingness to share knowledge and trust other people's knowledge. The study found that knowledge culture is the most important factor in explaining the effectiveness of projects. The knowledge culture is complemented by informal communication, tolerance for mistakes, positive project culture and the support of top management. In some cases, if an organization is still young or running short-term projects, the organization's culture may compensate for organizational arrangements and lack of organizational memory.

Knowledge culture is about open knowledge transfer within and between projects. It depends on the willingness of individuals to share knowledge and on mutual trust. Confidence and understanding of the

benefits of personal and organizational knowledge management become a prerequisite for facilitating the activities of potential participants in knowledge management projects (Lindner, & Wald, 2011).

For knowledge transfer to be smooth and continuous, it is necessary to strengthen cooperation inside and outside the organization: the stronger the links between the partners, the more intensive the knowledge sharing. It should be noted that informal relationships when building social networks help to strengthen connections. Individual knowledge through dialogue, the process of knowledge exchange, discussion, sharing of experience and observation strengthens not only the knowledge of the individual, group, organization but also inter-organizational knowledge (Atkočiūnienė, 2010).

Knowledge sharing is also encouraged by various motivational systems: at the group level (when allowed to work with a stronger team with more knowledge and opportunities), at the material level (when agreeing on a specific bonus or other material rewards) and at the individual level (when agreeing on responsibilities). Motivation is an additional element of knowledge-based leadership. Numerous studies show that both explicit (e.g., reward) and implicit (e.g., empowerment) motivation have a positive impact on the development and success of knowledge management. One of the most important tasks for leaders is to realize that different individuals are influenced by different motivational factors. Managers should therefore use a variety of methods, depending on the needs of the members of the organization (Donate, & Sánchez de Pablo, 2015).

Although evaluation and reward encourage knowledge-sharing, those employees who were not responsible for sharing share knowledge very rarely. This shows that encouraging employees alone is not enough, and knowledge sharing does not take place without accountability and knowledge-sharing practices. Also, Wang, Noe and Wang (2014) note that without accountability and control, rare and poor knowledge sharing will be more harmful than beneficial to both employees and the organization itself. This study showed that accountability and encouragement stimulated knowledge sharing. Evaluation and beneficial knowledge sharing have been found to have a stronger impact than conventional knowledge sharing.

A study by Brown, Dennis, Burley, & Arling (2013) states that knowledge coded by an organization did not affect the value of knowledge when people shared knowledge. The study found that the increasing complexity of procedures also increases the value of knowledge sharing, which has a negative impact on the use of digital information. Interactivity is important when transmitting complex knowledge. Therefore, to perform more complex tasks successfully, it is necessary that the direct transfer of knowledge "from mouth to magnifying glass" makes complex tasks easier, thereby realizing the value of the transferred knowledge. Employees receive better help by gaining knowledge according to their needs and sharing information with another person than by using codified knowledge of the organization.

The consequences of knowledge sharing can also be negative. First, knowledge sharing can take a long time to gain specific experience. Second, employees find it difficult to give away their source of power and status to make it available to all members of the organization. Third, the benefits of accumulation should not be overlooked: while accumulating knowledge avoids the risk of passing on knowledge, thus preserving its power and status, the negative consequence is that it does not gain full recognition for what it knows when accumulating knowledge (Hislop, 2009).

Knowledge sharing can weaken the position of the knowledge owner in an organization. In such cases, the organization must have an interest in building trust, in some cases linking knowledge sharing to pay or certain incentives.

Knowledge management practices abound, and a less formal work environment is thought to facilitate efficiency through appropriate informal practices. There is no one-size-fits-all answer: both formal and informal practices are positively valued in research. These practices should focus on the individual: knowledge sharing, fostering innovation, empowerment, various meetings, informal networks, project teams, success stories, and more (Cerchione, Centobelli, Zerbino, & Anand, 2020). The effective sharing of knowledge is also encouraged by an experience-based approach to personalization. (Brown, Dennis, Burley, & Arling, 2013).

In summary, tacit knowledge is an important factor in keeping organizational knowledge up to date. This knowledge "lies" in the minds of employees, so the organization must have an interest in using the

tacit knowledge for the benefit of the organization. Knowledge sharing helps an organization avoid a variety of risks by leveraging good and bad experiences. However, employees face a variety of fears that the organization and leader should manage with motivation, clarity, and creating a safe environment.

3. Knowledge sharing in organizations as a risk management tool

Research methods

Aim of the research – explore how knowledge management tools help organizations manage operational risks.

Objectives of the research:

1. Investigate the importance of organizational culture for the expression of tacit knowledge.
2. Evaluate the possibility of using the knowledge of employees for risk management of the organization.
3. Identify what knowledge management tools help maintain valuable knowledge in the organization.
4. Assess how knowledge and experience are accumulated in an organization.

Research methods. After a detailed theoretical analysis of the organization's operational risk management using knowledge management, a mixed qualitative study was performed. The study is in two parts: an interview and a qualitative analysis of the podcast content. The second study follows from the first and is therefore supplemented by recommendations and insights from experts.

Insurance companies operating in Lithuania were selected for the first research and interview. A questionnaire was prepared for the interview and sent to the respondents. Respondents could choose to answer by phone or by mail. The interview method was chosen to find out what specific knowledge management tools organizations use to avoid risks, what risks they face, and how to retain valuable knowledge and experience in organizations, so the interview questions were open-ended, with free-form answers. This prevented respondents from answering with programmed responses.

After analyzing the answers, knowledge management tools were identified, and the podcast *Žmogiškieji iššūkiai (Human Challenges)* was analyzed using qualitative content analysis. This method was chosen due to the increased approach of professionals and the validation of existing experience. In addition, the two studies were conducted almost in parallel in terms of time, which allowed for a deeper examination of the specific issues and a proper emphasis on the analysis of the studies.

During the analysis, the following categories were distinguished: organizational culture, the influence of the manager, employee growth. The content of the podcast was analyzed according to these categories.

The research data analysis and the discussion of the results.

Research has revealed how knowledge management helps organizations avoid risk.

The study found that insurance companies do not have a single person managing knowledge flows. However, organizations also protect their business - it is too dangerous to entrust valuable information to one person. In addition, organizations are large, so it would be difficult for one person to cover all the knowledge and information they manage, and it would not be worthwhile to set up a separate department. Therefore, knowledge management functions are taken over by heads of departments or divisions who are professional and knowledgeable in their field.

Respondents confirmed that there are people responsible for specific processes, the loss of which could become a risk to the organization in response to the estimated loss. Confidentiality agreements and other legal remedies are in place for the organization to protect itself from such departures or betrayals. Efforts are being made to turn the knowledge managed by such people into information that is useful to the organization and to capture and turn it into processes. A shift is organized for employees who are important to the organization to consolidate the continuity of information, knowledge and

experience in the organization. Specialists recommend maintaining a constant relationship with these people, talking about career opportunities within the organization and needs.

It has been found that one business organization does not value this aspect of business and feels calm because it has various means of knowledge preservation in place when knowledge is transformed into information and data contained in the organization's databases. Other organizations acknowledge that there are still gaps in the translation of knowledge into information that can be shared. Knowledge, information and data are valued in all organizations surveyed. However, both organizations recognize that the key bearer of knowledge - the employee - needs to be protected in organizations.

The study found that organizations promote knowledge sharing: tacit knowledge in the minds of every employee is completely useless to the organization. Organizations use the following means of knowledge sharing: meetings, various meetings, workshops, team projects, sharing good and bad experiences, learning from each other. It is pointed out that knowledge is also ageing, so in the course of such processes knowledge is updated, new perspectives are learned, new inspiration and ideas emerge from which initiatives are born. Employees of organizations are allowed to learn by organizing various training or seminars or learning from each other. Knowledge is also encouraged to be shared through self-expression, listening to ideas and implementing various initiatives.

It has been investigated that knowledge sharing is most encouraged by organizational culture. If employees in an organization feel safe and not afraid to make mistakes, the sharing of knowledge and experience to avoid important mistakes in the future becomes more open. Effective internal communication, overlapping values and relationships with the manager help to maintain a safe and reliable atmosphere in the organization. The values of the organization determine the culture of the organization, so each employee must live with the existing values or choose the organization according to the values. If the values of the employee and the organization coincide, the employee will willingly share his / her knowledge and experience, as together with the organization he/she will strive for operational efficiency and set goals for both personal and organizational purposes. Effective internal communication allows keeping employees aware of what is happening inside and outside the organization, to share important events for the organization, including the experience and knowledge of employees. Using internal communication tools, the received knowledge is captured and made meaningful, as it can be used by other employees of the organization. This process helps the organization avoid mistakes that have already been made and thus streamline its operations.

The study found that managers are the key personnel for retrieving tacit knowledge and preserving it in the organization. The manager's responsibilities are to build relationships with employees, maintain security and, most importantly, set and adhere to goals. A leader is a personality that keeps you in the team (and in the organization) and that often reveals unspoken knowledge. The manager is not a friend, so he must not only listen, but also evaluate, and empower the relevant employees of the organization, giving them responsibility for specific work that leads the organization toward its goals and effectiveness. If the relationship between the manager and the employees is good, he will be able to anticipate the emerging risks associated with employee departures.

Conclusions

1. After the theoretical substantiation of the risks and the impact of their management on the activities of the organizations, the operational risks of the organizations shall primarily indicate the risk or potential failure. The authors do not recommend the use of a uniform definition in research, as risks depend on environmental factors. Organizations should be prepared for risk, and have a variety of risk management processes in place. It is most effective when these processes are integrated into an organization's strategic goals. Managers should initiate the implementation of these goals, using not only their knowledge but also the knowledge and experience of the organization's employees.
2. Risk and knowledge management processes are designed to implement the set strategic goals of the organization. These processes complement each other to help an organization achieve efficiency in the marketplace. Knowledge must be made available to all employees in the

organization. Only the explicit knowledge becomes an asset of the organization, which allows problems to be solved quickly. As part of the risk comes from the internal processes of the organization, the role of the manager becomes very important. The manager needs to self-assess what knowledge people need for the organization. If a favourable organizational culture is created, employees will not be afraid to share their experience and knowledge to achieve good results in the organization.

3. A mixed qualitative study by interview and content analysis revealed, that information is collected during various meetings, projects, initiatives. Organizations do not risk keeping knowledge in the hands of a single employee: information in a specific area is usually shared between different departments, between employees at different levels. However, organizations recognize that there are experts who are given more power and responsibility. Employee turnover destabilizes an organization, damages reputation, and disrupts efficiency.
4. The study found that the impact of knowledge management on the organization's operational risk management is positive. The manager has a key role to play in this process. His responsibility is not only to put the team together, but also to broadcast the organization's goals, strategy, vision, and other things that are important to the organization's operations, including the risks that the organization may and does face. One of the main roles of a manager is to communicate with his employees and team members. If the communication is sincere and open, there is no fear of expressing one's opinion and accepting criticism, a positive atmosphere is created in the organization and a work-friendly organizational culture is created.

References

1. Aven, T. (2016). Risk assessment and risk management: Review of recent advances on their foundation. *European Journal of Operational Research*, 253(1), 16: 1-13. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0377221715011479>
2. Atkočiūnienė, Z.O. (2010) Žinių vadybos įtaka tobulinant organizacijose kompetencijas. *Informacijos mokslai*, 52, 14-22. Retrieved from <https://www.zurnalai.vu.lt/IM/article/view/3198>
3. Atkočiūnienė, Z.O., & Radiūnaitė, R. (2011) Žinių vadybos įtaka darnaus vystymosi reikšmėms įgyvendinti organizacijoje. *Informacijos mokslai*, 58, 56-73. Retrieved from <https://bit.ly/3GQXo0u>
4. Brown S.A., Dennis A. R., Burley D., & Arling P. (2013) Knowledge Sharing and Knowledge Management System Avoidance: The Role of Knowledge Type and the Social Network in Bypassing an Organizational Knowledge Management System. *Journal of the American Society for Information Science and Technology*, 64(10), 2013–2023. Retrieved from <https://bit.ly/35cqflx>
5. Cerchione R., Centobelli P., Zerbino P., Anand A. (2020) Back to the future of Knowledge Management Systems off the beaten paths. *Management Decision*, 58(9), 1953-1984. Retrieved from <https://www.emerald.com/insight/content/doi/10.1108/MD-11-2019-1601/full/html>
6. Cervantes-Cabrera, O. & Turrent, G. (2018). The importance of Risk Management Assessment: A proposal of an Index for Listed Companies. *Journal of Accounting Research, Organization and Economics*. 1. 122-137. 10.24815/jaroe.v1i2.11747. Retrieved from <https://bit.ly/3GNSPnW>
7. Chechen L., Shu-Hui, Ch., & Pui-Lai, T. (2010). How knowledge management mediates the relationship between environment and organizational structure. *Journal of Business Research*. 64 (2011) 728–736. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0148296310001529>
8. Donate M. J., & Sánchez de Pablo, J.D. (2014). The role of knowledge-oriented leadership in knowledge management practices and innovation. *Journal of Business Research*. 68(2), 360-370. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0148296314002197>
9. Girmienė, I. (2013). Žinių vadybos ir inovacijų sąsajos: konceptualūs požiūriai. *Informacijos mokslai*, 64, 75-89.
10. Hislop, D. (2009). *Knowledge management in organizations*. New York: Oxford University Press.
11. Lindner F., & WaldSuccess A. (2010). Success factors of knowledge management in temporary organizations. *International Journal of Project Management*. 29(7), 877-888. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0263786310001328>
12. Probst, G., Raub, S., & Romhardt, K. (2006). *Žinių vadyba. Sėkmės komponentai*. Vilnius: Knygiai.
13. Sax, J., & Torben, J. A. (2019). Making risk management strategic: Integrating enterprise risk management with strategic planning. *European Management Review* 16, 719–40. Retrieved from <https://research.cbs.dk/en/publications/making-risk-management-strategic-integrating-enterprise-risk-mana>
14. Sheng, W., Noe, R.A., & Zhong-Ming, W. (2014). Motivating Knowledge Sharing in Knowledge Management Systems: A Quasi-Field Experiment. *Journal of Management*, 40(4), 978-1009. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/0149206311412192>

15. Wei, Z., Baiyin, Y., & McLean, G. N. (2009). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, 63, 763–771. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0148296309001714>
16. Zahra (2015). An investigation of risk management strategies in projects. *Marketing and Branding Research*. 2. 10.19237/MBR.2015.01.07. Retrieved from <https://bit.ly/33QUBpE>

Analysis of Economic Activity of Foreign Direct Investors in Latvia

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Abstract. The aim of this article is to investigate the activity of foreign direct investors in Latvia and find out the main source of financing for foreign investors - new investments or reinvested earnings. To achieve the set goal, the methodology of the Sixth Edition of the International Monetary Fund's Balance of Payments and International Investment Position Manual was used to define the types of foreign direct investment (FDI). This methodology was adapted to Latvian data. At the request of the author, Lursoft IT Ltd selected business data on all registered companies with foreign capital in Latvia since 2005 and aggregate data were used in the analysis. Foreign direct investment in Latvia flows mainly in the form of reinvested earnings, due to the profit earned from operating activities in Latvia. While new investments or greenfield investments in equity is lower compared to the amount of reinvested earnings.

Keywords: *Latvia; Foreign Direct Investment; Greenfield Investment; Brownfield Investment; Investment Climate.*

Introduction

Relevance of the article

FDI is a type of foreign investment aimed at establishing a new, independent company or expand an existing business through merger or takeover. Today, these investments are an important financial instrument with a significant role in the development of economics, especially in countries where the local capital is limited. Such investments are subject to a variety of difficulties and opportunities and, therefore, FDI-related research will continue to be relevant in the future. Keeping in mind the unsuccessful approach leading up to 2008, prudent bank crediting policy prevents companies from obtaining the necessary flow of money for investments. The existing approach of the banks in issuing loans is much more careful. On the other hand, other types of financial instruments are limited; risk capital is very poorly developed in the Latvian market. The issuance of bonds is relatively expensive. Prudent commercial banking policy is not the only reason for weak local investment activity. Based on a study by Stockholm School of Economics in Riga on the shadow economy in the Baltic States, in Latvia, the shadow economy in 2019 was 23.9% of GDP, which is a high number (Stockholm School of Economics, 2020). It is also important to note that out of all companies that submitted annual reports to Lursoft IT Ltd in 2019 (109.5 thousand companies) only 66 thousand had an annual turnover up to 12 million euro. In turn, only 56.8% of these companies have positive equity and positive profits. It can be concluded that the range of potential companies to which commercial banks can issue loans is limited. Thus, faster investment development is hindered by both demand and supply factors. In light of low investment activity, it is very difficult to increase productivity. Until then, foreign direct investment can supplement local capital.

Level of problem investigation

Since the restoration of Latvia's independence, Latvia has attracted almost 16 billion euro of foreign direct investment. This corresponds to 52.3% of Latvia's nominal GDP in 2019. There have been no studies on whether this significant FDI inflow was invested in the creation of new companies, or the so-called "greenfield" investments, or in the takeover of existing companies.

Scientific problem

Whether the current investment environment in Latvia is favourable for acquisitions of local companies by foreign investors, but not for setting up new businesses.

Object of the article – foreign direct investment inflow in Latvia.

Aim of the article - to evaluate the activity of foreign direct investors in Latvia, describing the economic indicators of companies for the last 15 years.

Objectives of the article:

1. To analyze the theoretical aspects of the foreign direct investments movement.
2. To develop a methodology for the identification of greenfield and brownfield FDI.

3. To describe the dynamics of FDI and the accumulated volume in Latvia.
4. To analyze the economic activity of foreign direct investors

Methods of the article: analysis of scientific literature, statistical analysis.

1. Literature review

Theoretical studies in FDI facilitate a better understanding of economic mechanism and behavior of economic agents, both at micro and macro level, encouraging cross border investments. FDI theories could be broadly classified under macroeconomic and microeconomic perspectives (Denisia, 2010; Kaushal, 2019). Macroeconomic FDI theories highlight country-specific factors and align well with trade and international economics. Microeconomic FDI theories being firm-specific relate to ownership and internationalization benefits and incline toward industrial economics and market imperfections. These theories examine FDI motivations from the investor's viewpoint and connect with firm-level or industry-level perspective in decision making (Kaushal, 2019).

FDI has been widely accepted as an important vehicle for development because of FDI's positive effects on the host state's economy (Bao, et al 2022), including technology transfer, the introduction of new managerial skills (Denisia, 2010), increasing product quality (Lin, Lin, 2010), increasing institutional quality (Hyun, 2006), improving productivity (Liu et al., 2001) and promoting capital accumulation (Yao et al., 2016). An issue that has received limited attention in literature is that the growth effects of FDI are likely to depend on the direction of FDI flows (Sirr et al., 2018). Based on the neoclassical theory, FDI flows from more advanced to less advanced economies are expected to have the highest growth effect as the advanced countries are endowed with better cutting-edge technology and operational techniques. Therefore, the larger the gap between the country-pairs in endowments and capabilities, the higher is the spillover potential through technology, human capital, and knowledge diffusion, allowing for a faster catching-up process (Schiff, & Wang, 2008).

FDI represents one of the most researched phenomena in international business (Paul, & Singh, 2017). Over the past 70 years, many researchers have tried to explain the phenomenon of FDI, while failing to crystallize a single, generally accepted theory of FDI. Most reviews of the FDI literature do typically focus on a specific subset of FDI only. For instance, (Meyer, 2004) surveyed the research on FDI spillovers in the context of emerging market economies. (Chan et al., 2006) examined the interdependencies between FDI and MNE foreign-marketentry strategies. Blonigen (2005) reviewed past research on hostcountry-specific determinants of FDI. (Casson, 2000; Buckley, & Casson, 2009) analyzed the progress of FDI research and internalization theory.

All theories of FDI can be divided into two main groups: widely used theories and recent models and frameworks. Widely accepted theories include the following frameworks: internalization theory (Buckley, & Casson, 2009), the eclectic paradigm or Dunning's OLI paradigm (Dunning, 2001), the Product life-cycle theory (Vernon, 1966). New theories have also developed in recent years, such as: linkage, leverage, learning model (Hobdari et al., 2017), springboard theory (Luo, & Tung, 2018), conservative, predictable and pacemaker model (Paul, & Sanchez-Morcillo, 2019).

FDI can be made to start a completely new business abroad, commonly referred to as a greenfield investment, as well as in the full or partial acquisition of an existing business or in the form of a merger or takeover. FDI can be in three forms. The first form is greenfield investment. Greenfield investments imply the creation of new subsidiaries in the host economies. (Bertrand, 2004). The second form is extension of capacity. This type of FDI does not create a new economic activity, but develops already an existing one. It is an investment in previously established direct investment enterprises in the form of an increase in share capital or reinvested earnings. (Bertrand, 2004). The third form is mergers and acquisitions. (International Monetary Fund, 2009). The extension of capacity and mergers and acquisitions FDI is classified as brownfield investments.

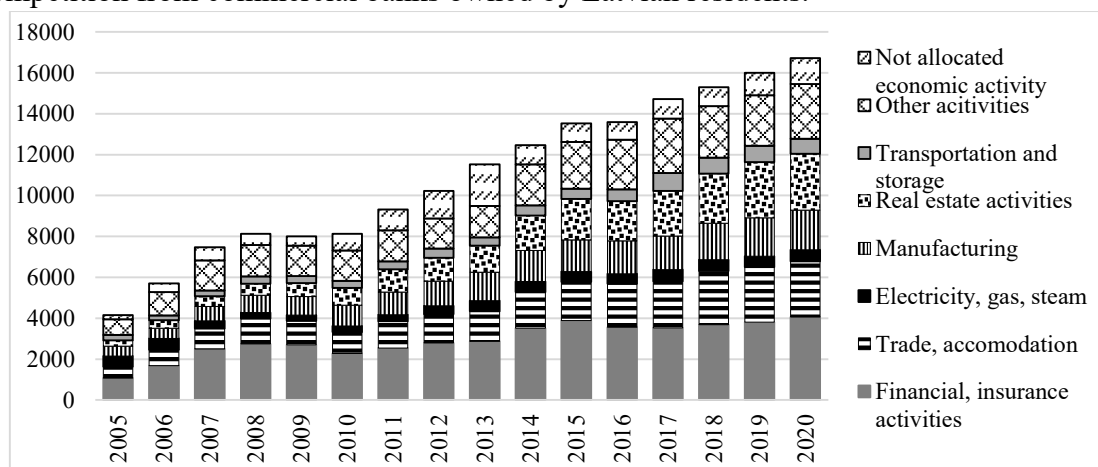
Existing evidence strongly supports the importance of greenfield FDI to host economies, and greenfield has a significant impact on international technology spillovers. (Liu, Zou, 2008) find that foreign greenfield creates both intra-industry and inter-industry spillovers on innovation, and there exist

only inter-industry spillovers from M&As. (Nocke, & Yeaple, 2007) develop an assignment theory to analyze the volume and composition of FDI. In their model, firms enter a foreign market through greenfield investment or cross-border acquisitions. In equilibrium, both types of FDI coexist within the same industry, but firms engaging in greenfield investment are systematically more efficient.

2. Dynamic of incoming oreign direct investment in Latvia

FDI plays a significant role in the growth of Latvia's economy, but there is a noticeable degree of cyclicity in the intensity of the flows. Since the restoration of Latvia's independence, Latvia has attracted 15,9 billion euros of foreign direct investment. This corresponds to 52.3% of Latvia 's nominal GDP in 2019. Almost 80% of the accumulated FDIs were invested in the share capital of companies and reinvested in the development of the company, in other words, they were no-debt flows. This means that most of the incoming FDIs in Latvia were invested in the company's capital shares, intellectual and real estate. Accumulated FDI in the form of debt instruments has increased from 584 million in 2000 to 3,239 million euro in 2019. However, the share of debt instruments in total accumulated FDI has gradually declined, to 20% in 2019. In 2019, the amount of FDI was 781 million which is broadly in line with the average investment dynamics over the last decade. In 2019, the total inflow of FDI was divided between equity investments (460 mln euros), reinvested earnings (388 mln euros), while the amount of debt instruments was negative (-67 m euros).

In terms of industry, the largest share of accumulated FDI was observed at financial and insurance sectors. Fig. 1 shows the FDI stock in Latvia by kind of activity in millions of euro. In 2019, most or 24.3% of accumulated FDI is concentrated in the financial and insurance sectors, mainly represented by Latvian largest commercial banks in terms of assets, most of which are Scandinavian bank subsidiaries. It should be noted that the share of this sector increased significantly during the period of 2005-2008 and since then steadily boiled in the range of 25%-30%. At that time, foreign direct investment in the financial and insurance sector was on average almost three times higher than in manufacturing. Such large investments in this sector can be explained by potentially high profit opportunities and relatively weak competition from commercial banks owned by Latvian residents.



Source: author's compilation based on Bank of Latvia data

Fig. 1. FDI stock in Latvia by kind of activity, milion euro

In particular, the accumulated FDI in manufacturing accounted for 11.6% of total accumulated FDI in 2019, which mostly concentrated in traditional industries. Manufacturing industry development is one of Latvia's prior industries for attracting FDI. Foreign direct investments inflows in this sector have been relatively stable even in the years of the sharp economic downturn in 2009 and have been growing in recent years, but their share remains virtually unchanged. Assessing the structure of accumulated FDI in manufacturing from a qualitative point of view, it must be concluded that foreign investors invest primarily in low and medium-low technology sectors. The share of accumulated FDI in the high-tech

processing industry, such as the manufacture of electrical and optical equipment, machinery and mechanical appliances, pharmaceutical products is only one-fifth. Thus, indicating the low attractiveness of these industries for foreign capital.

The geography of incoming foreign direct investors is wide, however. The largest investments have been received mainly from the Baltic Sea region and countries with which close trade relations have been established, such as the Netherlands, Norway, and Great Britain. The share of EU Member States in total accumulated FDI in Latvia is very high, averaging 71.2% over the last ten years. In recent years, a positively growing trend can be observed in investments from the CIS countries, which is most likely related to the temporary residence permit program implemented in Latvia. However, with the exception of Russia, the share of FDI in other CIS countries is very small.

Repatriation of profits to the investor's country of residence is considered in the scientific literature as a negative factor of FDI, therefore it is important to assess the amount of profits that remained in Latvia and were invested in the company's development and the share of dividends paid to foreign investors. Foreign direct investors received 1,074 million euros in dividends from 2005 to 2008, while the amount of incoming FDI in this period was 4,455 million euros. This means that for every euro invested, an average of 25 cents was paid out to direct investors in the form of dividends. However, from 2011 to 2014, this proportion changed significantly. During this period, approximately 51 cents of each foreign euro were returned to investors. In the period from 2015 to 2019, this proportion continued to increase in favour of dividend payments, and out of each euro invested, an average of 1.38 euro was paid to foreign investors in dividends. The growing amount of dividend payments is related to the amount of accumulated FDI.

The significantly higher amount of dividends paid since 2017 was determined by the significantly higher amount of foreign-related corporate profits in this period. With the gradual improvement of the economic situation, the profits of foreign investors have been steadily increasing, from EUR 80 million in 2010 to EUR 1549 million in 2018 and EUR 1389 million in 2019. The increase in the share of dividends in profit distribution also indicates that the amount of dividends paid has increased since 2017. In 2017, 84% of the profit was paid in dividends and 16% was reinvested in the development of the company. In 2018, this proportion was 78% against 22%, but in 2019 it was 72% and 28%. In the period from 2012 to 2016, or on average over five years, this proportion was 60% and 40%, respectively. However, it should be taken into account that dividends can also be paid for the previous period.

3. Foreign direct investors performance in Latvia

Research methodics

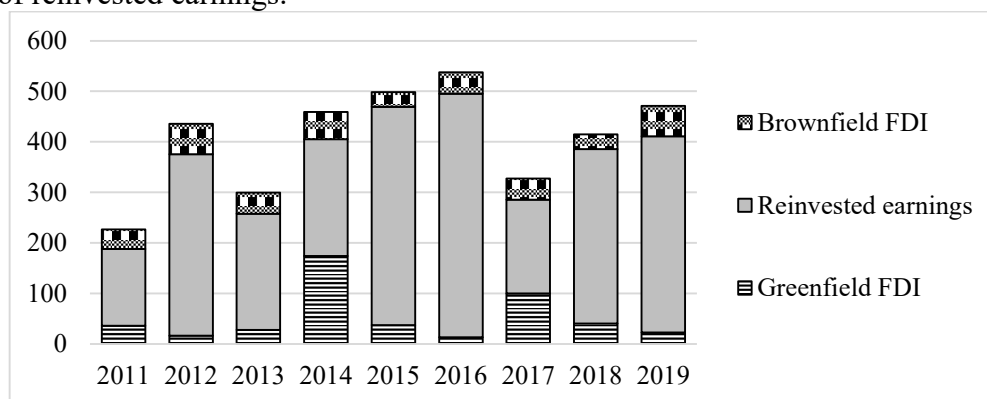
Given that there are no statistics on the establishment of new companies with foreign capital in Latvia (greenfield investments), as well as separate investments of capital increase and mergers and acquisitions (brownfield investment), there is a lack of data to answer the question, whether the current investment environment in Latvia is more favourable for foreign investors to buy local companies or establish new ones. Based on the current 6th edition of the IMF's Balance of Payments and International Investment Position Manual FDI definition and the theory discussed above, the author defined greenfield and brownfield investments as follows. The amount of share capital of a new company was considered to be a greenfield investment. First, when a foreign resident establishes a completely new company in Latvia and all 100% of the company's shares are owned by a foreign investor. In this case, the amount of share capital is greenfield investment. Secondly, when a foreign resident establishes a completely new company in Latvia together with a Latvian resident, but on the condition that the foreign investor owns at least 10% of the company's shares. In the second case, only the part of the share capital that belongs to the foreign resident is considered as FDI. Brownfield investments were considered to be capital increase investments. Capital increase investments can be identified when a foreign resident, invests in a company registered and operating in Latvia, provided that at least 10% of the shares of a

company registered in Latvia that were previously owned by a Latvian resident were acquired. Based on this methodology, Lursoft IT Ltd specially selected the necessary data at the request of the author. Further analysis is based on data prepared by Lursoft IT Ltd and Bank of Latvia for period from 2005-2019.

The research data analysis and the discussion of th results

In 2019, 21,228 companies with foreign capital were registered in Latvia. However, only 59% (or 12,435 of the total number) were engaged in economic activity. Most of the companies registered in Latvia with foreign capital are fully owned by foreign residents. At the end of 2019, 74.5% of economically active enterprises in Latvia with foreign capital were fully subsidised by foreign investors. 16.9% of cases, foreign investors held 50% or more of the company's capital shares, but less than 100%. In only 8.6% of cases, these were Latvian and foreign joint ventures, where the share of foreign investor shares ranged from 10 to 50%. In the last 15 years the dominance of foreign investors in companies registered in Latvia with foreign capital increased. Foreign residents are increasingly choosing a corporate governance model where they have full control over the company. On the other hand, the management of companies together with a Latvian resident is not considered to be an attractive company management model.

Regarding greenfield investments, Fig. 2 shows the amount of foreign direct investors' investments in newly established companies in Latvia by years. In 2019, the amount of investments of foreign direct investors in companies established in 2019 was only 22.7 million euro. The volume of this type of investment was also weak in the previous years, thus it can be concluded that the amount of investments in foreign capital of a company established by a foreign investor in Latvia is insignificant compared to the amount of reinvested earnings.



Source: author’s calculations based on SIA “LURSOFT IT” and Bank of Latvia data

Fig. 2. Inflow of greenfield, reinvested earnings and other brownfield investments in Latvia, million euro

If the time factor is applied to greenfield investments and it is assumed that the amount of reinvested earnings within four or five years from the establishment of the company is also greenfield investments (if the company has made a profit during this period), then the total amount of greenfield investments is clearly higher. However, one of the difficulties in analysing greenfield investments is the time factor, namely how long foreign direct investment should be considered as greenfield investments. It is assumed that these may be 4 or 5 years after the establishment of the company, but there is no common methodology of this aspect. Given that there is no common understanding among scientists about the time factor, the author classifies incoming greenfield investments as an investment in the share capital in the year of formation of the company.

Brownfield investments were considered to be capital increase investments. The amount of foreign direct investment with the aim of acquiring at least 10% or more from a company owned by a Latvian resident is quite volatile. In this way, investments became especially popular among foreign investors from 2009. Most likely, this is due to the fact that Latvian companies in difficulty during the crisis opted

to choose to sell part or all of their shares to foreign residents, seeing no other opportunity for the company's development. This type of FDI does not create new economic activity. It should be noted that attributing the share of incoming FDI that went to the repurchase of domestic companies against FDIs in share capital, it can be concluded that this type of investment relative to total FDI in share capital has increased over the last 15 years.

The financial crisis of 2008–2010 had a negative impact on economic activity in Latvia, thus the indicators of corporate earnings significantly deteriorated. In 2008, companies that were wholly or partly owned by foreign direct investors suffered increased losses, reaching 600 million euros. That is more than the previous four years combined. In 2009, the amount of losses was even higher and amounted to 672 million euros. From 2010 to 2014, the amount of losses gradually decreased. However, the number of companies that had losses in the reporting year has increased on the contrary (from 4874 companies in 2009 to 5224 companies in 2014). In 2017, the amount of losses in the reporting year reached 695 million euros, but the number of companies operating at a loss increased to 8287. Such results for 2017 and 2018-2019 (as the amount of losses was also significant in those years) can be explained as follows. Assessing the above results, the amount of profit of foreign direct investors (in recent years, foreign investors generally had a record amount of profit), it can be concluded that competition for market shares between foreign companies and local companies, as well as in the attraction of new consumers in Latvia is very high. Thus, there is a relatively large number of companies with foreign capital that operate at a loss in Latvia, do not withstand competition and are unable to successfully exist in the market.

If a company with foreign capital is liquidated or the shares of a foreign resident are repurchased by Latvian residents, it means an outflow of foreign direct investment from the country. If in the early 2000s the outflow of FDI from Latvian-registered companies was small and related to legal factors, namely the protection of investors' rights and the fulfilment of contractual obligations, then in 2008-2010 the determining factor was the overall economic downslide. Starting from 2014, the investment environment both in Latvia and the other Baltic States was negatively affected by the deterioration of the geopolitical situation in the Eastern European region.

In recent years, the largest outflow of FDI from Latvia has been recorded. Thus, in 2018, the amount of outflowing FDI from Latvia amounted to 198 million euros, but in 2019 - 151 million euros. The decision to reduce the share capital or liquidate the company in 2019 was made by a record number of foreign direct investors - 5,669 companies. The author has already pointed out that in recent years, despite the fact that foreign direct investors in Latvia generally worked at a profit, both the amount of losses and the number of companies operating at a loss increased at the same time. Consequently, the growing outflow of foreign direct investment from Latvia in recent years can be explained by a deterioration in profitability. Strong competition, rising labour costs that outpace productivity growth, a shortage of skilled labour and an aging population that narrows potential consumption in the medium and long term are the main reasons why foreign investors decide to leave the Latvian market.

In general, it can be concluded that the volume of greenfield and brownfield investment is rather steady. However, the level of FDI in new projects is lower compared to the amount of reinvested earnings, due to the profit earned from operating activities in Latvia. The hypothesis of research is rejected. Investment environment in Latvia is favourable for FDI.

Conclusions

1. Foreign investors are diverse, and each has its own specific interests. Financial and strategic investors will be interested in completely or partially repurchasing an existing company or bank in order to increase the profit. Risk capital companies and investors invest in information and communications sectors and technological start-ups. Other foreign investors want to buy an existing company that already has a production process and supply chains in place to sell its products on the domestic market. Thus, in order to increase the amount of greenfield investments and encourage foreign investors to reinvest more in the development of companies from the profits earned in Latvia, it is necessary to solve several structural problems.

2. Increasingly, it is not just countries that compete with each other to attract investment, but cities too; for example, when it comes to setting up some shared service centres or business process outsourcing centres. In this area, Riga often has to compete with Prague and other cities in Eastern Europe. The range of available support mechanisms offered to entrepreneurs, including foreign investors, is wide, but the main ones are tax incentives. For example, special economic zones also exist in other EU countries with favourable tax regimes. To attract more FDI, tax support mechanisms alone are not enough. As 55.0% of Latvia's economically active population lives in Riga and Riga Region, it cannot be expected that, with the exception of the Riga region, other regions of Latvia will succeed in attracting FDI, especially to high-tech sectors.
3. In order to improve the investment environment in the Republic of Latvia and increase the inflow of greenfield investments, it is necessary to reduce several obstacles. First, the size of the shadow economy needs to be reduced, as this will not only make economic and business processes more transparent, but will also increase tax revenues, thus increasing the economic flexibility needed to implement structural reforms. Secondly, structural unemployment needs to be reduced through targeted labour market and education system reforms and measures to promote innovation. Third, comprehensive reforms in the education and court system, speeding up court proceedings and legal improvements in the field of insolvency need to be pursued. Energy policy is also one of the topical issues on the agenda of entrepreneurs, as the disproportionately high payment burden of the mandatory procurement component on manufacturing companies does not promote the inflow of new foreign investment into Latvia's manufacturing industry, where FDIs are very important.

References

1. *Annual bulletin Latvia's Balance of Payments*. Bank of Latvia. (2020). Retrieved from https://datnes.latvijabanka.lv/lmb/LMB_2019.pdf
2. Bank of Latvia, (2020). Balance of Payments (BOP), International Investment Position (IIP) and International Trade in Services (ITS). Retrieved from <https://statdb.bank.lv/lb/Data/200>
3. Bao, X., Deng, J., Sun, H., & Sun, J. (2022). Trade policy uncertainty and foreign direct investment: Evidence from China's WTO accession. *Journal of International Money and Finance*, 125.
4. Bertrand, A. (2004). Mergers and acquisitions, greenfield and extension of capacity. *Direct Investment Technical Group*. Retrieved from <https://www.imf.org/external/np/sta/bop/pdf/diteg42829.pdf>
5. Blonigen, B. (2005). A review of the empirical determinants of FDI. *Atlantic Economic Journal*, 33(1), 383-403.
6. Buckley, P.J., & Casson, M. (2009). Internalisation Theory of the Multinational Enterprise: A Review of the Progress of a Research Agenda after 30 year, *Journal of International Business Studies*, 40(9), 1563-1580.
7. Casson, M. (2000). Enterprise and leadership: Studies on firms, networks and institutions. Cheltenham: Edward Elgar.
8. Chan, C., Makino, S., & Isobe, T. (2006). Interdependent behavior in foreign direct investment. The multi-level effects of prior entry and prior exit on foreign market entry. *Journal of International Business Studies*, 37(5), 642-665.
9. Denisia, V. (2010). Foreign Direct Investment Theories: An Overview of the Main FDI Theories. *European Journal of Interdisciplinary Studies*, 3, 53-59.
10. Harrison, A., Love I., & Mcmillan, M. (2004). Global capital flows and financing constraints. *Journal of Development Economic*, 75(1), 269-301.
11. Hobdari, B., Gammeltoft, P., Li, J., & Meyer, K. (2017). The Home Country of the MNE: The Case of Emerging Economy Firms. *Asia Pacific Journal of Management*, 34(1), 1-17.
12. Hyun, H. (2006). Quality of institutions and foreign direct investment in developing countries: Causality tests for cross-country panels. *Journal of Business Economics and management*, 7(3), 103-110.
13. Kaushal, L. (2019). *Foreign Direct Investment: The Indian Experience*. Business Expert Press.
14. Lin, H., & Lin, E. (2010). FDI, trade, and product innovation: Theory and evidence. *Southern Economic Journal*, 77(2), 434-464.
15. Liu, X., Parker, D., Vaidya, K., & Wei, Y. (2001). The impact of foreign direct investment on labour productivity in the Chinese electronics industry. *International Business Review*, 10(4), 421-439.
16. Liu, X., & Zou, H. (2008). The impact of greenfield FDI and mergers and acquisitions on innovation in Chinese high-tech industries. *Journal of World Business*, 43(3), 352-364
17. Luo, Y., & Tung, R. (2018). A general theory of springboard MNEs. *Journal of International Business studies*, 49(2), 129-152.
18. Meyer, K. (2004). Perspectives on multinational enterprises in emerging economies. *Journal of International Business Studies*, 35(4), 259-276.
19. Nocke, V., & Yeaple, S. (2007). Cross-boarder mergers and acquisitions vs greenfield foreign direct investment: The role of firm heterogeneity. *Journal of International Economics*, 72(2), 336-365.

20. Paul, J. Sanchez-Morcilio (2019). Toward a new model for firm internationalization: Conservative, predictable, and pacemaker companies and markets. *Canadian Journal of Administrative Sciences*, 36(3), 336-349.
21. Paul, J., & Singh, G. (2017), The 45 years of foreign direct investment research: Approaches, advances, and analytical areas. *The World Economy*, 40(11), 2512-2527
22. Schiff, M., & Wang, Y. (2008). North-South and South-South trade-related technology diffusion: How important are they in improving TFP growth? *The Journal of Development Studies*, 44(1), 49-59.
23. *Shadow Economy Index for the Baltic Countries*. Stockholm School of Economics. (2020). Retrieved 12 November 2020, from: <https://www.sseriga.edu/shadow-economy-index-baltic-countries>.
24. Sirr, G., Garvey, J., & Gallagher, L. (2018). Local conditions and economic growth from South-South FDI. *The Journal of International Trade & Economic Development*, 27(4), 380-388.
25. Vernon, R. (1966). International investment and international trade in the product cycle, *Quarterly Journal of Economics*, 80(2), 190-207.
26. Yao, S., Wang, P., Zhang, J., & Ou, J. (2016), Dynamic relationship between China's inward and outward foreign direct investments. *China Economic review*, 40, 54-70.

Links Between the Psychological Impact of Advertisement Breaking Stereotypes, Self-congruence and Brand Attitude

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Abstract. Stereotypes are an integral part of the societal context, encompassing many different social and demographic groups. According to Bordalo et al. (2016), there are three broad approaches to stereotypes, one of which is sociological, most commonly used in the field of marketing research. From a sociological point of view, stereotypes are seen as fundamentally incorrect and degrading generalizations of group characteristics. Accordingly, breaking stereotypes in advertising is a reflection of social change and movements such as feminism and racial equality. It is no secret that advertising, as a sales promotion tool, is playing an increasingly important role in the social context, so the popularity of non-stereotypical advertisement such as 'femvertising' makes it necessary to study the effects of advertisement breaking stereotypes. An empirical study was conducted, to study the links between the psychological impact of advertisement breaking stereotypes, self-congruence and brand attitude.

Key words: *advertisement breaking stereotypes, the psychological impact of advertising, self-congruence, brand attitude, breaking gender stereotypes.*

Introduction

Relevance of the article

Throughout the years the role of advertising has shifted from a sales promotion tool to not only an element of marketing, but also a part of the societal and cultural background. Stereotypes are an integral part of the social context, encompassing the main components of the societal construct - racial and political groups, gender, demographic groups and situations (Bordalo et al., 2016). The manifestation of breaking stereotypes in advertising is considered to be a direct response to the systemic changes taking place in the society. Growing consumer potential and influence is the driving change in brand strategies and values to meet the ever-growing needs of consumers. Belonging to a brand's target audience or market segment leads to brand developers increasingly choosing to break one or another social stereotype or identify with social initiatives (Champlin et al., 2019). In this way, brands relate to the relevant social groups, which often do not feel adequately represented in the media using traditional stereotypical portraits. Inappropriate, and sometimes unethical, stereotyping of social groups provides a basis not only for an ethical dilemma but also for questioning the effectiveness of advertising. When choosing a product or service, the consumer seeks not only to meet physical or utilitarian needs, but also to feel a kind of representation - the consumer must imagine himself using the product, which is especially difficult when the consumer image in advertising does not match the real buyer (Vinjamuri, 2015).

Level of problem investigation

The psychological impact of advertisement breaking stereotypes on consumer attitudes toward a brand has not been extensively explored in research, while it is widely used in advertising. The analysis of the scientific literature revealed the fragmentation of said research. Consumer self-compliance research focuses on consumer relationship with the brand (Malär et al., 2011; Huber et al., 2018) or on the relationships between self-congruence and compulsive consumer behavior (Japutra et al., 2019). However, there is a lack of research examining the links between consumer self-congruence and brand attitudes. Regarding the topic of psychological effects of advertising, there is a tendency to study the psychological effects of advertisement breaking stereotypes on consumer behavior (Nandi et al., 2019; Zawisza, 2019; Varghese, & Kumar, 2020), but there is a lack of research analyzing the links between psychological effects of advertisement breaking stereotypes and consumer behavior.

Scientific problem

It is important to examine the aspects of advertisement breaking stereotypes and how they influence the consumer's attitude towards the brand through the process of psychological impact on the consumer's self-congruence. The results obtained from this research could be applied in the future in order to optimize and improve the effect of the advertisement breaking stereotypes.

For the reasons discussed above the scientific question is formed: *what are the links between the psychological impact of advertisement breaking stereotypes, consumer self-congruence and brand attitude?*

Object of the article: links between the psychological impact of advertisement breaking stereotypes, consumer self-congruence and brand attitude.

Aim of the article: to theoretically and empirically examine the links between the psychological impact of advertisement breaking stereotypes, consumer self-congruence and brand attitude.

Objectives of the article:

1. To reveal the problems and relevance of research on the psychological impact of advertisement breaking stereotypes, consumer self-congruence and attitude towards the brand;
2. To conceptualize the psychological impact of advertisement breaking stereotypes, to examine the aspects of psychological impact and their impact on consumer self-congruence and brand attitude;
3. To conceptualize consumer self-congruence and examine its impact on consumer attitude towards the brand;
4. To develop a methodology for researching the psychological impact of advertisement breaking stereotypes, consumer self-congruence and brand attitude;
5. To carry out an empirical study of the links between the psychological impact of advertisement breaking stereotypes, consumer self-congruence and brand attitude;
6. Based on the results of the empirical study, provide summary, conclusions and recommendations.

Methods of the article. Systematic and comparative analysis of scientific literature were conducted as well as secondary source analysis, quantitative empirical research (online survey), statistical data analysis using Microsoft Office Excel and IBM SPSS Statistics 25 software, with application of statistical analysis methods: descriptive, cross-factor and regression analysis.

1. Theoretical background

In today's societal context, stereotypes can be defined as "the public acceptance of beliefs about the characteristics of members of a social group". Meanwhile, advertisement breaking stereotypes, which has become a direct social reaction to stereotypes, has been around for many years and is widely implemented in marketing strategy. With the change in social norms such as gender stereotypical roles and bias against social minorities, advertising has become not only a means of promoting a product, but also a channel for disseminating social statements. The aim of a modern brand is not only to impress the consumer with a good price and a quality product, but also to maintain a continuous dialogue and one or another political / social / religious status, thus creating a relationship with the consumer. According to Kotler (2003), there are two types of consumer engagement factors used to communicate with consumers. These factors are categorized into rational or informational and emotional or transformational factors. Breaking stereotypes in advertising, in this case, can be considered an emotional factor in attracting consumers, as this phenomenon, in many cases, affects the consumer's psychological processes and perceived self-congruence.

Eisend et al. (2014) considered Hofstede's (2011) cultural dimensions theory to explore the effectiveness of gender stereotypes and their manifestations in advertising in humorous and non-humorous contexts. The results of the study showed that the perception of stereotypical gender roles in advertising directly correlates with the element of humour: respondents rated the manifestations of non-stereotypical gender roles in a humorous context better. According to researchers, women are more likely than men to feel positively about breaking gender stereotypes. However, the results of this study

are only applicable to Germany, according to the Hofstede (2011), a country with relatively high individualism and masculinity index. When assessing the breaking of gender stereotypes in advertising, it is important to take into account the national and cultural attributes of the respondents. Zawisza et al. (2016) explored the influence of socio-cultural aspects of the country in their study of the impact of advertisement breaking male gender stereotypes and included a sample of Polish, South African, and British respondents. Representatives of all three nationalities reported positive reaction to a non-stereotypical male role, which refutes the general belief in the effectiveness of traditional gender norms in advertising in countries with a relatively low level of egalitarianism. According to both research results, it is clear that it is not possible to state unequivocally whether sociocultural aspects influence the impact of advertisement breaking stereotypes on consumer psychological responses and behavior. This is because there is a lack of comprehensive research to show that socio-cultural aspects influence an individual's attitudes towards advertisement breaking stereotypes.

Another example of breaking gender stereotypes in advertising is the popularity of female empowerment advertising (femvertising), which emerged in 2013 along with the fourth wave of feminism. According to Drake (2017), this advertising has a positive effect on consumers' attitudes toward the brand, the intention to buy, and the emotional connection it creates. However, research in the field of femvertising is fragmented, and according to Drake (2017), given the social context, it is important to investigate the impact of women's empowerment advertising topics (gender equality in the workplace, body positivity, etc.) on consumer attitudes towards the brand and consumer behaviour. Champlin et al. (2019) found that brand social responsibility and the implementation of social messages are especially relevant for brands in which millennials are one of the main target age groups. A similar study was conducted by Kapoor, & Munjal (2019) investigating the effects of self-consciousness on emotional and behavioural responses in the case of femvertising. According to the authors, as women's purchasing power grows, especially in countries like India, more and more brands are focusing on this specific consumer category. The feminist movement and advertising remain one of the most popular advertising trends today, so it is important to understand the impact this advertising has on consumers and to evaluate its effectiveness.

Consumer self-congruence is a theory of advertising perception and emotional connection to a brand that states that the consumer compares the concept of self-perception to the potential image of the consumer of the product / service (Astakhova et al., 2017). According to researchers, there are usually two types of consumer self-congruence – actual self-congruence and ideal self-congruence. Astakhova et al. (2017) focused on the relationship between actual and ideal consumer self-congruence and either harmonious or obsessive brand passion. This study revealed that the compatibility between the consumer self-congruence and brand personality leads to a positive consumer relationship with the brand. In their work, Nandi et al. (2019) investigate the effects of breaking gender stereotypes in the context of Indian advertising. The study was conducted on a comparative basis, comparing the effectiveness of advertisement breaking stereotypes and traditional advertising. The study uses a hierarchical scale of effects (Lavidge, & Steiner, 1961), which consists of cognitive, emotional and conative elements. The results revealed that brand awareness is significantly higher in the case of advertisement breaking stereotypes than in the case of traditional advertising. The results of the study show an improved consumer perception of the brand through the use of breaking stereotypes. The authors noted that advertisement breaking stereotypes promoted word-of-mouth (WOM), given that advertisement breaking stereotypes has a greater impact on the consumer as well as provoking reasoning. However, stereotypes and the breaking of them do not always have a positive psychological effect on consumers' attitudes towards the brand, so there is a need to investigate the impact of breaking stereotypes on consumers' self-congruence and links to brand attitude.

2. Empirical investigation

Advertisement breaking stereotypes exists as a phenomenon of social change. Gender stereotyping in advertising, according to many researchers (De Meulenaer et al., 2018; Castillo – Mayen, 2014; Mensa, & Bittner, 2020), has a negative impact on both consumer self-esteem and psychological status,

e.g. self-confidence. A study by Eisend (2010) showed that gender stereotypes in advertising depend on gender-related changes in social development and values, and not the other way around. According to Chu et al. (2016), the manifestation of unconventional gender roles in advertising implies social change in the context of stereotypical gender roles. According to Pérez, & Gutiérrez (2017), certain advertising strategies demonstrate progressiveness in the context of gender equality, but in other cases, advertising messages only exacerbate inequality by reproducing pre-existing stereotypes.

In order to determine the psychological impact of advertisement breaking stereotypes, three aspects of the impact of advertising on the consumer are analyzed: cognitive, emotional and behavioral (Jokubauskas, 2007). Hawkins, & Mothersbaugh (2010) in the emotional nature model predict that the emotional response of the consumer arises from psychological changes caused by marketing factors. In this case, it can be stated that the aspects of psychological effects on the consumer distinguished by the authors (Kotler, 2007; Jokubauskas, 2007; Dolak, 2007; Hawkins, & Mothersbaugh, 2010; Lavidge, & Steiner, 1961) are similar in terms of their function. All authors distinguish between emotional, cognitive and behavioural (action) aspects. Therefore, in developing the conceptual research model, it was decided to rely on the aspects of psychological effects identified by the researchers.

An analysis of the scientific literature has shown that consumer behaviour and self-congruence theory distinguishes two main types of consumer self-congruence: (1) actual self-congruence and (2) ideal self-congruence (Astakhova et al., 2017; Japutra et al., 2019). Malär et al. (2011) developed a research model in order to examine, which the consumer's self-congruence — actual or ideal — is more influential on the brand in creating an emotional connection between the brand and the consumer. According to the authors, emotional attachment to a brand reflects the connection between the consumer and brand and the feelings the consumer cherishes for the brand. These feelings can be attachment, passion, and connection. All three moderating variables used in the model have a strong motivating effect on the relationship between consumer self-congruence and emotional attachment to the brand. Based on the literature analysis, it can be stated that in order to determine the links between the psychological impact of advertisement breaking stereotypes, consumer self-congruence and brand attitude, the conceptual model should distinguish between two possible types of consumer self-congruence: actual and ideal.

The consumer's attitude towards the brand can be either positive or negative. Sheeraz et al. (2016) closely associate attitudes with brand credibility and distinguishes attitudes toward the brand as a mediating variable in the relationship between brand credibility and the intention to buy. Sandhu et al. (2018) explored the relationships between consumer self-congruence, brand attitudes, and intention to buy by constructing a linear conceptual study model and, in contrast to the authors discussed earlier (Astakhova et al., 2017; Japutra et al., 2019; Huber et al., 2018; Malär et al., 2011), do not distinguish between types of consumer self-congruence. In the study, the researchers found a positive effect of consumer self-congruence on brand attitudes and a positive effect of brand attitude on consumers' purchase intention. Consumer self-congruence theory states that congruence between the consumer's ideal, actual and the brand image has had a positive effect on brand attitudes, loyalty, and attachment (Malär et al., 2011). This theory implies that consumers choose products that allow them to better stand out from those around them and help them better articulate their self-esteem. The study confirmed the existing effect of consumer self-congruence on brand attitude.

3. Research

After conducting an extensive literature review and research, the relationship between theoretical constructs are established, the hypotheses are formed and a conceptual research model is created (see Fig. 1). In total, there were 14 hypotheses formed, of which three main blocks can be distinguished:

H1(H1a, H1b, H1c) – Advertisement breaking stereotypes has a positive psychological effect (through the emotional, cognitive and behavioural aspects) on the consumer's brand attitude.

H2(H2a, H2b, H2c) – Advertisement breaking stereotypes has a positive psychological effect (through the emotional, cognitive and behavioural aspects) on the consumer's actual self-congruence.

H3(H3a, H3b, H3c) – Advertisement breaking stereotypes has a positive psychological effect (through the emotional, cognitive and behavioural aspects) on the consumer's ideal self-congruence.

H4 – Actual self-congruence has a positive effect on brand attitude.

H5 – Ideal self-congruence has a positive effect on brand attitude.

As is evident from the presented research framework, there are four main constructs present in this research. These are (1) Aspects of the psychological impact of advertisement breaking stereotypes, (2) Actual self-congruence, (3) Ideal self-congruence and (4) Brand attitudes. The hypotheses described above aim to test what the links are between these constructs. Research was conducted in order to test these hypotheses and determine what links there are between the psychological impact of advertisement breaking stereotypes, self-congruence and brand attitudes.

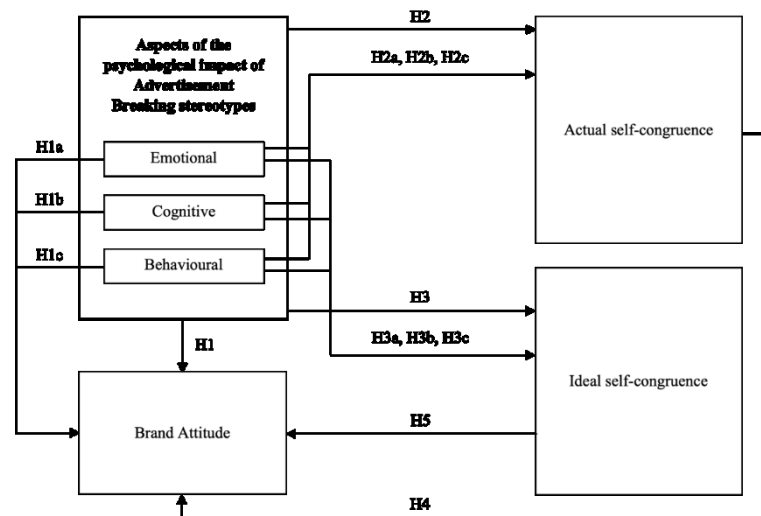


Fig. 1. Research model

Aim of the research is to identify the links between the psychological effects of advertisement breaking stereotypes, consumer self-congruence and brand attitude.

Objectives of the research:

1. Describe the sociodemographic characteristics of the sample;
2. To substantiate the constructs of the conceptual model;
3. To determine the psychological impact (emotional, cognitive and behavioural) of advertisement breaking stereotypes on the consumer's attitude towards the brand;
4. To determine the psychological impact (emotional, cognitive and behavioural) of advertisement breaking stereotypes on consumers' actual and ideal self-congruence;
5. To determine the impact of actual and ideal self-congruence on consumer attitudes toward a brand.

Research methods. In order to empirically test the hypotheses, the quantitative type of study was chosen. The survey uses an online questionnaire, which allows for relatively quick and efficient collection of relatively representative information and easy systematization of the data obtained.

Survey sample: after review, a total of 342 questionnaires were used in the study. Of the respondents, 84% were young women.

The research data analysis and the discussion of the results

The respondents were asked to carefully read and fill out a questionnaire, which consisted of two main parts: a Volkswagen “eGolf” 2019 video ad and questions regarding the advertisement and respondents’ immediate reaction to it and a second part, consisting of SEB bank video ad and questionnaire regarding it. These particular advertisements were chosen as a stimula, because of very different gender role representation seen in them. The Volkswagen ad was said to perpetuate harmful gender stereotypes by showing men engaged in adventurous activities in contrast to a woman in a care-giving role (ASA,

2019), whereas the SEB bank advertisement features a female empowering narrative. The two promotional videos were selected based on the practice of other research (Nandi et al., 2019; Zawisza et al. 2016), where respondents are shown two ad groups – advertisement breaking stereotypes and traditional (stereotypical) ad campaigns. After reviewing one video advertisement at a time, respondents filled out a questionnaire, which consisted of a number of inquiries, designed to determine the psychological impact of the ad, the respondent's self-congruence towards the brand and brand attitudes.

I. The results of the study revealed that advertisement breaking stereotypes has the most psychological effect in terms of behavioural aspect, while the emotional aspect has the opposite effect on the consumer's attitude towards the brand as well as on actual and ideal self-congruence. Actual and ideal self-congruence positively affect brand attitude. These results may be due to the distribution of questionnaire responses, as most scales have an average of 3. The study uses 5 and 7 point Likert-type scales, where 3 or 4 means "Neither agree nor disagree". It can be argued that because of this distribution of responses most links between the constructs can be described as moderate.

II. It is also important to mention that due to the chosen subjects of the study – retail banking (SEB) and light electric vehicle (VW e-Golf) sectors – the results of the study can only be applicable in the case of these market fields. In addition, the majority of respondents were young women (under the age of 35), therefore the results of the survey cannot be interpreted as representative of all socio-demographic groups. However, regarding advertising targeted specifically at this socio-demographic group, it can be argued that the phenomena of breaking stereotypes in advertisement has a positive effect on consumer behaviour (desire to purchase a product or service) and brand attitudes. This falls back to Eisend et al. (2014) study, according to which women are more likely than men to feel positive about breaking gender stereotypes.

Conclusions

Advertising, over a long period of its existence, has evolved from a purely sales promotion tool into an important component of the societal context. Another integral part of this context is stereotypes. Although stereotypes are not a categorically negative phenomenon, nowadays, in many cases their manifestations hurt one or another group in society. According to Castillo – Mayen (2014), gender stereotypes form the basis of discriminatory behaviour and affect women more often than men. While commercial advertising campaigns seem to have nothing to do with social issues and emerging movements, this is not true. In order to purchase a product or service, the consumer identifies with the imaginary (or depicted in the advertisement) user of the product / service. This can be difficult when the consumer image used in advertising does not match the image of the real buyer (Vinjamuri, 2015). Accordingly, in order to relate to the consumer, promote his positive attitude towards the brand and to create positive associations in the consumer's consciousness, the brand ideology, views and social image must be in line with the values and views of the target audience. The results of the study revealed that young women (under the age of 35) more often than men feel negative emotions associated with the promotional ad of Volkswagen eGolf. The young, proactive 21st century consumer wants to be seen and represented, which is why breaking stereotypes and women-empowering ads are effective (e.g., the "Like a Girl" campaign, according to Forbes with huge success and 80 million views). Based on the results of this study, it is recommended to apply aspects of advertisement breaking stereotypes in order not only to attract the target consumer (women, under the age of 35), but also to build a relationship with them and contribute to the creation of a tolerant, progressive society.

References

1. Astakhova, M., Swimberghe, K. R., & Wooldridge, B. R. (2017). Actual and ideal-self congruence and dual brand passion. *Journal of Consumer Marketing* 34(7), 664-672. doi:10.1108/JCM-10-2016-1985
2. Behm-Morawitz, E. (2017). Examining the intersection of race and gender in video game advertising, *Journal of Marketing Communications*, 23(3), 220-239. doi: 10.1080/13527266.2014.914562
3. Bordalo, P., Coffman, K., Gennaioli, N., & Shleifer, A. (2016). Stereotypes. *The Quarterly Journal of Economics*, 131(4), 1753-1794, doi: 10.1093/qje/qjw029

4. Castillo-Mayén, R., & Montes-Berges, B. (2014). Analysis of current gender stereotypes. *Anales de Psicología*, 30, 1044-1060. doi: 10.6018/analesps.30.2.138981.
5. Champlin, S., Sterbenk, Y., Windels, K. & Poteet, M. (2019). How brand-cause fit shapes real world advertising messages: a qualitative exploration of ‘femvertising’, *International Journal of Advertising*, 38(8), 1240-1263. doi:10.1080/02650487.2019.1615294
6. Chu, K., Lee, D., & Kim, J. Y. (2016). The effect of nonstereotypical gender role advertising on consumer evaluation, *International Journal of Advertising*, 35(1), 106-134. doi: 10.1080/02650487.2015.1110942
7. Drake, V. E. (2017). The Impact of Female Empowerment in Advertising (Femvertising). *Journal of Research in Marketing*, 7(3), 593-599. ISSN 2292-9355
8. Eisend, M., Plagemann, J. & Sollwedel, J. (2014). Gender Roles and Humor in Advertising: The Occurrence of Stereotyping in Humorous and Nonhumorous Advertising and Its Consequences for Advertising Effectiveness. *Journal of Advertising*, 43(3), 256-273. doi: 10.1080/00913367.2013.857621
9. Eisend, M. (2010). A meta-analysis of gender roles in advertising. *Journal of the Academy of Marketing Science*, 38(4), 418-440. doi: 10.1007/s11747-009-0181-x
10. Hawkins, D. L., & Mothersbaugh, D. L. (2010). *Consumer behavior: Building marketing strategy*. Boston: McGraw-Hill Irwin.
11. Jakštienė, S., Susnienė, D. ir Narbutas, V. (2008). The Psychological Impact of Advertising on the Customer Behavior, *Communications of IBIMA*, (3), 50-55.
12. Japutra, A., Ekinci, Y., & Simkin, L. (2019). Self-congruence, brand attachment and compulsive buying. *Journal of Business Research*, 99, 456-463. doi:10.1016/j.jbusres.2017.08.024.
13. Jokubauskas, D. (2007). Reklamos poveikio etapai, *Žurnalas „Marketingas“* Retrieved from http://www.blaivus.org/UserFiles/blaiivi_karta/13.2.%20Alkoholio%20reklama/430jokubreklama.pdf
14. Kapoor, D., Munjal, A. (2019). Self-consciousness and emotions driving femvertising: A path analysis of women’s attitude towards femvertising, forwarding intention and purchase intention, *Journal of Marketing Communications*, 25(2), 137-157. doi: 10.1080/13527266.2017.1338611
15. Kotler, P. (2003). *Marketing management*. Upper Saddle River, N.J: Prentice Hall. ISSN: 0-13-0497150
16. Kotler, P. & Keller, K. L. (2007). *Marketingo valdymo pagrindai. Leidykla “Logitema”*.
17. Kotler, P., Armstrong, G., Saunders, J., & Wong, V. (2003). *Rinkodaros Principai*, Poligrafija ir informatika, Kaunas, ISBN 978-9986-850-50-2.
18. Lavidge, R. J., & Steiner, G. A. (1961). A model for predictive measurements of advertising effectiveness. *Journal of marketing*, 25(6), 59-62. doi: 10.1177/002224296102500611
19. Malär, L., Krohmer, H., Hoyer, W.D., & Nyffenegger, B. (2011). Emotional brand attachment and brand personality: The relative importance of the actual and the ideal self. *Journal of Marketing*, 75(4), 35-52. doi:10.1509/jmkg.75.4.35
20. Mensa, M. & Bittner, V. (2020). Portraits of Women: Mexican and Chilean Stereotypes in Digital Advertising. *Communication & Society*, 33(1), 63-78. doi: 10.15581/003.33.1.63-78
21. Nandi, S., Bhat, S., & Wolfs, B. (2019). Effectiveness of Indian Advertisements in Breaking Stereotypes: A Comparative Analysis Using the Hierarchy of Effects Model. *Indian Journal of Marketing*, 49(3), 7. doi: 10.17010/ijom/2019/v49/i3/142143
22. Oržekauskas, P., & Krupavičius, L. (2009). Prekių ženklai ir logotipai. Jų informacinio psichologinio poveikio analizė. *Ekonomika ir vadyba*, 14, 476 – 482.
23. Sandhu, M. A., Usman, M., Ahmad, Z., & Rizwan, M. (2018). The impact of self-concept and its congruence with different brands on purchase intention: Evidence from Pakistani consumers, *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 12(2), 695-709.
24. Sheeraz, M., Khattak, A. K., Shahid, M., & Nadeem, I. (2016). Mediation of attitude toward brand on the relationship between service brand credibility and purchase intentions, *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, (10)1, 149-163.
25. Varghese, N., & Kumar, N. (2020). Femvertising as a media strategy to increase self-esteem of adolescents: An experiment in India. *Children and Youth Services Review* 113.
26. Vinjamuri, D. (2015). Diversity In Advertising Is Good Marketing. Retrieved from Diversity In Advertising Is Good Marketing (forbes.com)
27. Zawisza, M. (2019). Gendered advertising: content, effectiveness and effects – psychological perspective, *Handbook of Research on Gender and Marketing*, Edward Elgar Publishing, 8-27. doi: 10.4337/9781788115384.00006
28. Zawisza, M., Luyt, R., Zawadzka, A. M., & Buczny, J. (2016). Does it pay to break male gender stereotypes in advertising? A comparison of advertisement effectiveness between the United Kingdom, Poland and South Africa. *Journal of Gender Studies*, 27(4), 464-480. doi: 10.1080/09589236.2016.1234369
29. „ASA Ruling on Volkswagen Group UK“. Retrieved from <https://www.asa.org.uk/rulings/volkswagen-group-uk-ltd-g19-1023922.html>

Impact of Work-Life Balance Management on Expatriates' Career

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Abstract. As organizations go global by trying to increase revenues or penetrate new markets for expansion, it becomes necessary to have employees who will work overseas. Working overseas as an expatriate requires a lot of effort both from the expatriate and the organization in order for the assignment to be successful. Work-life balance is vital in this regard. Employees will only succeed in the official assignment when their organizations prioritize their well-being, as this will greatly assist them in making sure they are effective and efficient in their work. The goal of this research was to see how work-life balance impacts expatriates' careers and whether there are any relationships between work-life balance and expatriates' careers. Results showed work-life balance has a significant positive effect on performance. This is to say that a healthy work-life balance will impact an expatriates' career greatly, which will also benefit the organization.

Keywords: *Work-life balance, expatriates' careers, employee performance, job satisfaction, organizational support.*

Introduction

Relevance of the article

The increase in the globalization of business has led to the increase in the number of people working as expatriates in different professions and moving from country to country for various work opportunities. This has resulted in organizations becoming competitive by making their staff work outside their home countries as expatriates. Therefore, expatriation has become the new normal and people now find it an easy decision to apply and work abroad in order to thrive in the labor market, even with the challenges involved.

However, managing work-life balance is becoming a prevalent concern to both employers and employees because it is generally linked with employee productivity. Work-life balance is the state of equilibrium where a person equally prioritizes the demands of career and personal life. Work-life balance includes a balance between work and personal life such that both bring satisfaction to the individual. When an employee is constantly attached to a job with no time to relax and rejuvenate, it leads to increased stress, work fatigue, and burnout. Their ability to do their job decreases, performance level suffers, and ultimately productivity decreases. Employers need to create a schedule that allows employees to work and have vacations. The importance of the work-life balance of employees must be a concern to the organization. It requires creating a supportive work environment, enabling job balance and personal responsibility because this will strengthen employee loyalty and increase productivity.

Work-life balance is also a challenge for expatriates and their families, as the employee has to manage time spend at work and with family. When there are disparities between work and family, either the person is spending too much time at work or too much on family matters. This can lead to stress, which can affect the person's productivity at work (Lawson et al., 2013).

Level of problem investigation

Research on work-life balance has gained much ground in recent years, there is a growing trend among organizations to introduce initiatives that promote employee well-being at work. Research into the impact of work-life balance management on expatriate careers has been quite limited. Mendis, & Weerakkody (2017) in their study showed that there is a positive relationship between employee performance and Work-life balance. Salas-Vallina et al. (2017) found there to be a relationship between leadership style and positive attitudes or happiness at work. Work-life balance positively affected medical specialists' happiness at work. Research shows that employees who are engaged will possibly demonstrate positive organizational results such as decreased turnover intention, better customer satisfaction, and an increased level of productivity and profit (Joo, & Lee 2017). Also, the research of Richert-Kamierska, & Stankiewicz (2016) showed that for employees to be contented, promotion and measures must be put in place to look after the wellbeing of each employee.

Scientific problem. How does work-life balance management impact expatriates' careers?

Object of the article is the impact of work-life balance management on expatriates' careers.

Aim of the article is to investigate the impact of work-life balance management on expatriates' careers.

Objectives of the article:

1. To analyze the concept of work-life balance management and its factors.
2. To describe expatriates' careers and their challenges.
3. To examine the links between work-life balance management and expatriates' careers.
4. To analyze the empirical level of research regarding the impact of work-life balance management on expatriates' careers.

Methods of the article: analysis, synthesis.

1. Theoretical aspects of the impact of work life balance management on expatriates' career

1.1. The concept of work-life balance management and its factors

To discuss the concept of work-life balance and its factors, the history and theories of work-life balance will be explained. According to Lockwood (2003), the history of work-life balance can be seen in the 1930s when the Kellogg Company established the reduction in working hours from three daily eight hours shift to four shifts of six hours. These changes showed that there was an increase in employee optimism, production, and efficiency (Lockwood, 2003). The research on work-life balance increased from the 1960s; the research on working mothers and double-income families emerged as women's involvement in the workforce increased considerably (Lewis et al., 2007).

Work-life balance is referred to as trying to balance oneself on a seesaw in which one side is working while the other side is personal or family (Karthik, 2013). Also, Work-life balance is defined by how employees manage their time both at and away from work. Work-life balance is the state of equilibrium where a person equally prioritizes the demands of one's career and the demands of one's personal life.

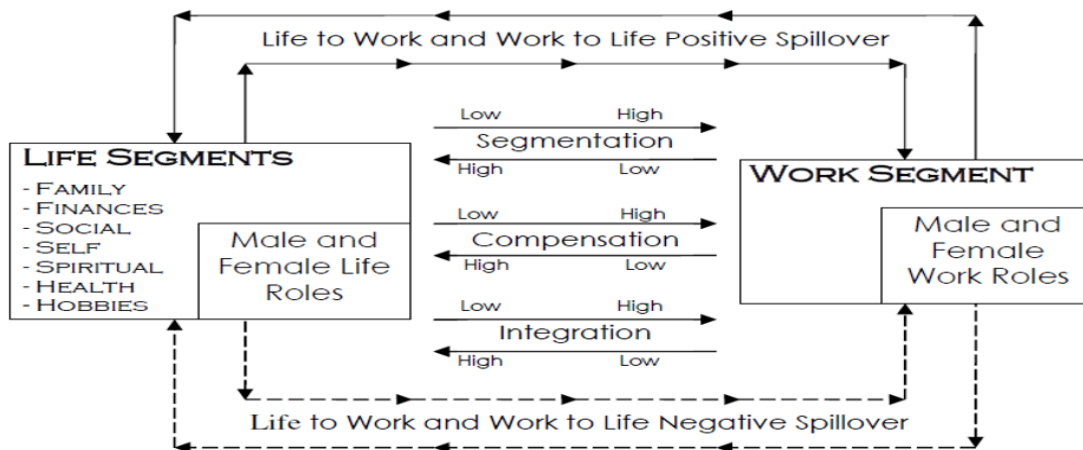
Factors of work-life balance management:

- **Employee Job Satisfaction:** This relates to how people really feel about their jobs and the different aspects of their job roles. Job satisfaction for an employee should be the priority of any organization in establishing their policy (Yücel, 2012). Job satisfaction plays a huge role in an expatriate having a good work-life balance.
- **Employee engagement:** This refers to the roles and responsibilities given to an employee in an organization. Studies show that employees who are engaged will possibly demonstrate positive organizational results such as decreased turnover intention, increase in the level of productivity and profit. (Joo, & Lee, 2017).
- **Contentment at work:** This relates to happiness and how people experience and evaluate their lives. Since a significant amount of time is spent at work, understanding the role played by employment and the work environment is very important. Studies reveal that being happy at work means having a meaningful work-life with positive emotions.
- **Employee Performance at work:** Performance is the product of the capacity of employees, multiplied by support and effort. Hence, the reduction or non-existence of one factor will cause a decrease in performance. A good work-life balance brings high employee performance and vice versa.
- **Expatriate adjustment/Organizational support:** This relates to how well the expatriate is managed and treated. Do they receive training for integration in a foreign land? Do they receive a good salary package/allowance? Is there room for growth? Do they receive mental and psychological help? Etc. If organizations can not answer the above questions with a resounding yes then they are failing in supporting their employees. If organizations help or pay close attention to their employees, this will go a long way in making sure they have a good work-life balance. Their life

outside of work should be important to the organization. Expatriate adjustment is more or less the degree of fit between the expatriate and the new environment in both work and non-work domains.

These factors explained above can greatly influence the performance or work-life balance of an expatriate. All of them can affect the career of an expatriate positively or negatively. This shows that to achieve a positive work-life balance, the expatriate and organization both must play a major role. Then again if organizations take a leading role in looking after the wellbeing of its employees it makes things easier for them to achieve success in their assignment abroad.

Fig 1. below is a model of work-life balance management.



Source: Naithani, P. (2016, as cited in Naithani, 2010a). Impact of health and recreation on work-life balance: A case study of Expatriates. *International Journal of Social Science and Business*, 1(1), p. 6.

Fig. 1. Model of work-life balance

The model shows that there are different parts that make up work-life balance. It shows that spillover from one segment of life into another can have both positive and negative consequences. That is to say that if an employee has a negative spillover from life (For e.g., family, health) into work then it will affect his/her output and performance.

1.2. Expatriates' careers and their challenges

According to Wang et al. (2008), expatriation is defined as a temporary assignment to work in another country. An expatriate can be defined as a parent company employee who is transferred for a set period (from a few months to many years) to work at a foreign branch of a multinational corporation (Banerjee et al., 2012). An expatriate career is one in which a worker/employee takes a position outside his/her home country, either independently or as a work assignment scheduled by the employer, which can be a company, university, government, or non-governmental organization. It is not easy to adapt to a new environment as culture shock can be an issue, being far away from family, adapting to new people and food, language barriers, etc. Bakker, & Demerouti (2007) mentioned that expatriates will face hurdles and problems when going on an assignment abroad, but they have to be able to manage this work experience effectively. This is why organizations need to show support as there will be challenges that the expatriate must overcome.

Expatriates' career challenges can take many forms. As described by Mäkelä, & Suutari (2011), work-family conflict is an issue that many ex-pats struggle with. Below are just a few challenges that an expatriate can experience while on assignment.

- Stress (Stress is the feeling of being overwhelmed or unable to cope with mental or emotional pressure).
- Integration issues (Adapting to a new environment isn't always easy, meeting/blending with locals, understanding the language, and getting acquainted with the culture can be an issue for an expatriate).

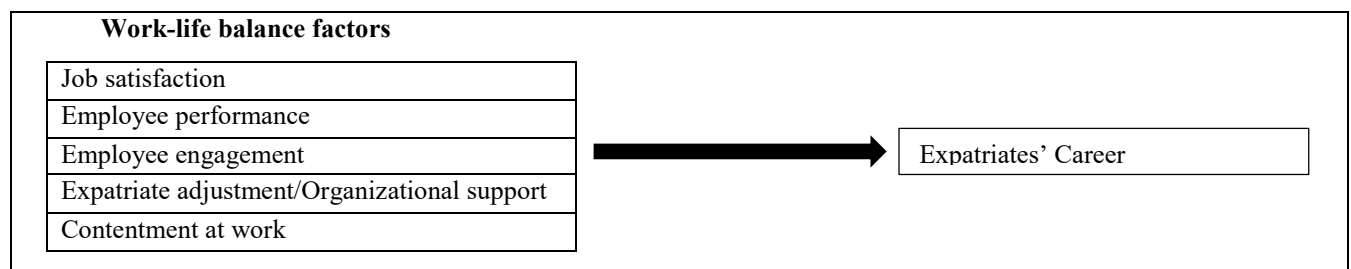
- Family problems (Expatriates will have to leave their family behind and both parties might find it difficult to cope).
- Lack of organizational support (Organizations who don't support the wellbeing of their employees is a challenge that affects the expatriates).
- Language barrier (Understanding a new language can be a challenge for anyone going to a foreign land).

Organizations should be aware of the challenges an expatriate will likely face and help in this regard for a smooth transition into their new role/assignment.

1.3. The links between work-life balance management and expatriates' careers

Health and recreation play a critical role in the success or failure of an expatriate assignment. Guthrie (2012) mentions that the promotion of an employee's health should be a priority to an organization. Koubova, & Buchko (2013) says that despite the limited resources available, a key question is how an individual may maintain a satisfying personal life while also achieving good outcomes at work. The question now is whether the two objectives are mutually exclusive or complementary. The inability of an expatriate to manage his personal and work life will lead to a reduced quality of life, stress, poor performance, etc. For an expatriate, work-life balance management (WLBM) is important to achieving success at work and outside work. As a result, organizations must implement new management techniques that give social and supervisory assistance. Studies have shown that an expatriate's success in his/her assignment is due to many factors, such as organizational support, job satisfaction, and engagement, but most importantly happiness at work. When an employee is exhibiting happiness at work then there is a high tendency that he/she has a good work-life balance. If an expatriate is happy at work, then it will impact his/her career positively, and when unhappy it will affect his/her career negatively.

Based on the analysis of the theoretical research, a theoretical model is introduced in Fig. 2.



Source: created by the author.

Fig. 2. A theoretical model of the impact of Work-life Balance factors on expatriates' career.

This theoretical model shows the five work-life balance management factors that were used in this study and how they can impact an expatriates' career. Studies have shown the impacts and relationships these factors had on an employee could either be positive or negative. Employees need some sort of balance in their work and personal life and the organization plays a key role as well. Expatriates need to understand that if these factors are taken into consideration, then their career journey will be smooth.

In summary, work-life balance has a positive significant impact on employee performance and career. Studies show that employee engagement within the workplace assists employees to survive as well as succeed when dealing with adverse situations, and this can also stimulate creativity among these employees. Expressed in another way, with the desire to discover fresh information to explore and integrate this new information, and then develop their aptitude, employees are pushed to become creative. Also, organizations supporting the wellbeing of their employees will improve the general success of the organization and also the career of the employee.

2. Empirical investigation level of impact of Work-Life Balance Management on Expatriates' career

This chapter provides a study carried out by the various researchers concerning the impact of work-life balance in organizations, expatriates' careers, and factors affecting work-life balance management on expatriates' careers. Table 1 shows the aim of the research carried out by the authors and the results that were derived.

Table 1

Authors' findings from research

Authors (year)	Aim of research	Research results
Salas-Vallina et al. (2017)	To investigate the relationship between transformational leadership (TFL), organizational learning capability (OLC), and happiness at work (HAW) and offers a new measure for HAW.	A relationship was found between leadership style and positive attitudes or happiness at work. It positively affected medical specialists' happiness at work.
Adnan (2019)	To investigate the relation of work-life balance, happiness, and employee performance.	Results revealed that work-life balance and happiness had a favorable and significant impact on employee performance, resulting in increased job satisfaction.
Mendis, & Weerakkody (2017)	The research was on the Sri Lankan telecommunication industry and recognize the impact of work-life balance on employee performance. And, to identify whether the work-life balance leads to higher employee performance through employee job satisfaction.	The findings of the study reveal that there is a strong relationship between work-life balance and employee performance, a strong relationship between work-life balance and employee job satisfaction, and a strong relationship between employee job satisfaction and employee performance. All these relationships are positive and have significant levels.
Shah et al. (2021)	Examines how organizational support mechanisms extended to expatriate families influence the adjustment of the expatriate, the spouse, and accompanying children.	Findings suggest that the expatriate and expatriate spouses' perceptions of organizational support for expatriate children have an impact on their adjustment in the host nation.

Source: created by the authors.

Table 1 shows the studies which were researched by different authors and their findings. In most of these findings, we can see that there is a relationship between work-life balance and an expatriate's career. Job satisfaction, family life, organizational support all play a role in the career of an expatriate. Employees who are contented at work will more likely be productive and perform at a higher level. A relationship was found between leadership style and happiness at work, as it positively affected employees' happiness at work. Also, research showed that another way for employees to be contented, promotion, and other measures must be put in place in looking after their wellbeing. Now when an employee is satisfied on the job, it automatically leads to higher performance at work. Results showed that there is a positive relationship between employee performance and work-life balance. A strong positive work-life balance helps both the employee and the organization. An employee who is less stressed and happier at work and home will perform at higher levels. Expatriate adjustment & organizational support is very important when we talk about the whole expatriate experience. An organization looking to achieve its aims and objectives has to provide support to its employees for greater results. Results showed that expatriates and their families adjust quicker in a foreign country when organizational support is present. An expatriate is more likely to fail in his assignment if there is inadequate support from the organization. This is why organizations have rewards, insurance/health benefits, promotions, counseling, emotional support, family care support, training & development, etc. in place to make sure that the employees see how their needs and wants are prioritized by the organization.

Other research, like that of Abdul et al. (2015), has shown that the most common reason for expatriate failure is inadequate or inflexible support from organizations for the expatriate and their families, the

research confirms and extends the notion that organizations benefit from addressing the well-being of not only the expatriate but also the accompanying family, and in this case the spouse specifically. Nikkhah et al. (2013) study showed that work life, family life, and organizational support have a direct link to the well-being of employees. This model identifies that positive work and family-life balance have a significant correlation with job satisfaction of employees.

In summary, it can be said that employees who are contented at work will more likely be productive and perform at a higher level. A relationship was found between leadership style and happiness at work, as it positively affected employees' happiness at work. Also, research showed that another way for employees to be contented, promotion, and other measures must be put in place in looking after their wellbeing. Job engagement is necessary if an employee is to have a good work-life balance. More engaged employees will demonstrate positive organizational results. Job satisfaction is very important as when an employee is contented and engaged at work it equals satisfaction at work. If there is an imbalance in an employee's life, then it can lead to a lack of satisfaction at the workplace. Now when an employee is satisfied on the job, it automatically leads to higher performance at work. Results showed that there is a positive relationship between employee performance and work-life balance.

Expatriate adjustment & Organizational support is very important when we talk about the whole expatriate experience. An organization looking to achieve its aims and objectives has to provide support to its employees for greater results. Results showed that expatriates and their families adjust quicker in a foreign country when organizational support is present. An expatriate is more likely to fail in his assignment if there is inadequate support from the organization. This is why organizations have rewards, insurance/health benefits, promotions, counseling, emotional support, family care support, training & development, etc. in place to make sure that the employees see how their needs and wants are prioritized by the organization.

Conclusions

1. The analysis of the concept of work-life balance management and its factors shows the existence of work-life balance before now and that its factors greatly impact the expatriates' career positively or negatively.
2. After analyzing expatriates' careers and their challenges, it can be stated that expatriates will face culture shock and adjustment issues when working in another country so family and country choice are important factors as far as global work is concerned because it can be a hindrance if not taken into consideration.
3. Examining the links between work-life balance management and expatriates' careers, it can be stated that work-life balance has a significant positive effect on performance. This is to say that a healthy work-life balance will impact an expatriates' career greatly, which will also benefit the organization and vice versa.
4. After analyzing the empirical level of research regarding impact of work-life balance management on expatriates' careers, it was found that job satisfaction results in higher commitment and lower turnover intention.

References

1. Abdul, M., M., Budhwar, P., & Reiche, B. S. (2015). Sources of support and expatriation: multiple stakeholder perspectives of expatriate adjustment and performance in Malaysia. *The International Journal of Human Resource Management*, 26(2), 258-276.
2. Adnan, B., K. (2019). Impact of work-life balance, happiness at work, on employee performance. *International Business Research*, 12(2), 99-112.
3. Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328.
4. Banerjee, P., Gaur, J., & Gupta, R. (2012). Exploring the Role of the Spouse in Expatriate Failure: A Grounded Theory-Based Investigation of Expatriate Spouse Adjustment Issues from India. *The International Journal of Human Resource Management*, 23(17), 3559 – 3577.
5. Guthrie, V. M. J. (2012). "Management control of work-life balance. A narrative study of an Australian financial institution". *Journal of Human Resource Costing & Accounting*, 16(4), 258-280.

6. Joo, B. K., & Lee, I. (2017). Workplace happiness: work engagement, career satisfaction, and subjective well-being. *Evidence-based HRM A Global Forum for Empirical Scholarship*, 5(2), 206-221. Retrieved from <https://doi.org/10.1108/EBHRM-04-2015-0011>
7. Karthik, R. R. (2013). A study on work-life balance in Chennai Port Trust, Chennai. *Advances in Management*, 6(7), 26-31. Retrieved from <http://www.academiapublishing.org/>
8. Koubova, V., & Buchko, A. A. (2013). Life-work balance: Emotional intelligence as a crucial component of achieving both personal life and work performance. *Management Research Review*, 36 (7), 700-719. Retrieved from <https://doi.org/10.1108/MRR-05-2012-0115>
9. Lawson, K.M., Davis, K. D., Crouter, A. C.C., & O'Neill, J. W. (2013). Understanding work-family spillover in hotel managers. *International Journal of Hospitality Management*, 33, 273-281. Retrieved from <https://doi.org/10.1016/j.ijhm.2012.09.003>
10. Lewis, S., Gambles, R., & Rapoport, R. (2007). The constraints of a 'work-life balance' approach: An international perspective. *The international journal of human resource management*, 18(3), 360-373.
11. Lockwood, N.R. (2003). Work/Life Balance: Challenges and Solutions, Society for Human Resource Management. *Research Quarterly*, 2, 1-10.
12. Mäkelä, L., & Suutari, V. (2011). Coping with work-family conflicts in the global career context. *Thunderbird International Business Review*, 53(3), 365-375.
13. Mendis, M. D. V. S., & Weerakkody, W. A. S. (2017). The impact of work-life balance on employee performance with reference to telecommunication industry in Sri Lanka: a mediation model. *Kelaniya Journal of Human Resource Management*, 12(1), 72-100.
14. Nikkhah, N., Ajirloo, M. B., & KhodaBakhshi, N. (2013). Surveying the relationship between managers' work and family-life balance factors and their job satisfaction and well-being at the oil industry in Khuzestan. *International Journal of Management Research and Reviews*, 3(9), 3441.
15. Salas-Vallina, A., López Cabrales, A., Alegre, J., & Fernández, R. (2017). On the road to happiness at work (HAW): Transformational leadership and organizational learning capability as drivers of HAW in a healthcare "context. *Personnel Review*, 46(2), 314-338. <https://doi.org/10.1108/PR-06-2015-0186>
16. Shah, D., de Oliveira, R. T., Barker, M., Moeller, M., & Nguyen, T. (2021). Expatriate family adjustment: How organizational support on international assignments matters. *Journal of International Management*, 100880
17. Wang, J., Bullock, C., & Oswald, S. (2002). Expatriate selection: The key to international success. *International Business & Economics Research Journal (IBER)*, 1(11).
18. Yücel, I. (2012). Examining the Relationships among Job Satisfaction, Organizational Commitment, and Turnover Intention: An Empirical Study. *International Journal of Business and Management*, 7(20), 44-58. Retrieved from <https://doi.org/10.5539/ijbm.v7n20p44>

The Impact of Innovative Human Resources Management Practices on Employee Behavior

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Abstract. This paper aims to define the aspects (practices) of innovative human resources management and identify the impact on such behavioral outcomes as employee engagement and organizational commitment at the workplace. Proposed practices for innovative human resources management are: idiosyncratic work arrangements, high performance work systems (HPWS), sustainable workplace, employee autonomy. Review of primary and secondary sources has shown that these variables are related to such positive organizational outcomes as workplace productivity, flexibility, level of innovativeness, resistance to internal and external threats. In addition, it was indicated that intensity of HPWS can lead to a workplace burnout in the long run and it is crucial to understand how HRM practices work and what we should expect. This paper gives an overview of abovementioned HRM practices and what impact they can make on employee behavioral outcomes.

Key words: *Innovative human resources management, employee behavior, employee engagement, organizational commitment.*

Introduction

Relevance of the article

The aim of every organization is to increase the quality of management by mitigating the risks of environmental changes (Vasiljeviene, 2015). Human resources management (HRM) is one of the most effected by those changes, e.g. dynamic of employee's demographic characteristics, advanced approaches to management dictated by current requirements, demands and needs and other trends make necessity to adapt very rapidly. One of the most recent and relevant examples is Covid 19, which forced organizations to take measures and reorganize work arrangements in order to survive. The relevance of the topic is seen as well on a much broader level. The European commission has prepared the directory "DG HR Management Plan 2021," where such aspects were discussed as requirements to foster modern and high-performance labor, diversification in HRM, ethical and engaging work arrangements, high quality talents acquisition, etc. (EU Commission, 2020). The world economic forum also stresses the necessity of flexibility in work arrangements (Schwab, 2019). Not to mention that across western countries we can already see some changes and initial results, each country is trying to make new legislation in order to help businesses adjust faster. All these aspects can not be fulfilled without the implementation of innovative HRM practices. In other words, the effectiveness of modern organizations depend on their ability to respond quickly and adapt to changing environments through innovative solutions (Kemp, 1987). In this case innovative solutions in HRM are those tools that help to keep the workflow smooth in different situations, e.g. when work is organized remotely, hybrid style or in the office.

Scholars also tie the innovative HRM concept to employee behavioral outcomes by stating that innovative HRM practices aim to make an impact on employee behavior (Kossek, 2006), such as employee engagement and organizational commitment.

Scientific problem

How do innovative HRM practices effect employee behavior outcomes such as employee engagement and organizational commitment?

Object of the article. Innovative HRM practices and employee behavior.

Aim of the article. To define the aspects of innovative human resources management and identify its impact on such behavioral outcomes as employee engagement and organizational commitment at the workplace.

Objectives of the article:

1. To analyze the concept of innovative HRM practices and employee behavioral outcomes.
2. To analyze the effect of innovative HRM to employee engagement and organizational commitment.

Methods of the article: extensive scientific literature review, primary and secondary data analysis.

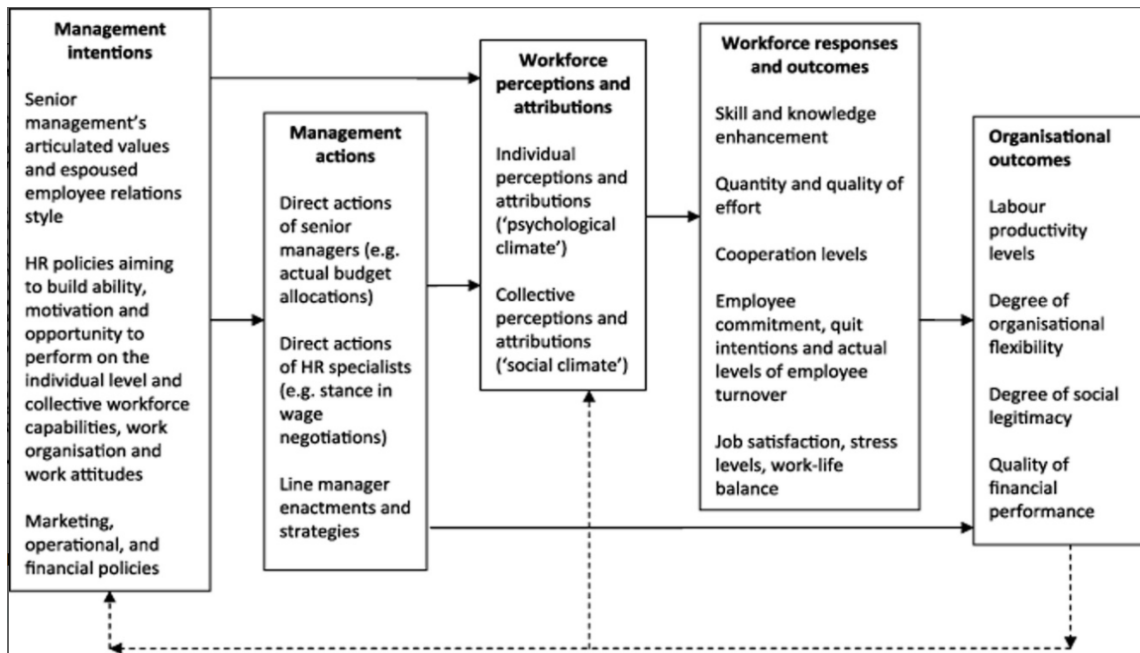
1. Conceptual framework of innovative HRM practices and employee behavior

Innovative human resource management (IHRM) is a modification of existing or established HRM practices which may be new to the organization or improved based on the practices of other organizations (Agarwala, 2010). Kossek (2006) adds that implementation of those practices aims to effect employee behavior. So, the concept of IHRM is developed based on these two primary definitions, as a literature review has revealed that scholars analyze it in terms of the implementation of various practices and tools in order to make an organization more sufficient by making an impact on employee behavior.

The first aspect which is analyzed quite broadly is *high performance work systems (HPWS)*, which is one of the tools of IHRM. Pfeffer (1998) had considerable success defining the HPWS concept. The author establishes seven dimensions for creating value through people: *Employment security, Selective hiring in new personnel, self-managed teams and decentralization of decision making as the basic principles of organizational design, comparatively high compensation contingent on organizational performance, extensive training, reduced status distinctions and barriers, including dress, language, office arrangements, and wage differences across levels, extensive sharing of financial and performance information throughout the organization.* These seven dimensions by Pfeffer (1998) are the basis of the HPWS and IHRM, where employees should be considered as an organizational asset with equal rights, a comfortable and inspiring environment, and well-organized working arrangements. The dimensions themselves communicate that HRM systems require a completely fresh view on organizational development in terms of managing people and one of the solutions is to try to adopt something which is already developed in other organizations. And this is how IHRM started to grow.

Boxall (1992) also contributed a lot to this area as one of the authors who made a massive impact on the conceptual development of IHRM. He described the concept as a strategic and sophisticated HRM. After lots of discussions Boxall, in cooperation with a colleague, created a theoretical model (Fig. 1) which highlighted the main aspects of all HRM systems (Boxal, 2012). He states that every HR system works through its impacts on the skills and knowledge of employees, their willingness to exert effort, and their opportunities to express their talents in their work. This statement supports the definition of IHRM which relates the concept with employee behavior outcomes and the model shows links between HRM systems, behavior outcomes (workforce responses and outcomes) and organizational performance. AMO variables are considered to be inevitable set of mediators through which management's attempts to foster performance need to be transmitted (Boxal, 2012).

HPWS is one of the main aspects of IHRM according to the scientific literature review. Unfortunately, none of aspects have a clear framework or set of well-established dimensions. A scientific literature review shows that constructs are quite flexible and each time some new variables might be considered, even though the basis stays the same, as established by Boxal, Purcell, Pfeffer, & others. For instance, we can see that the concept is developing towards the humanistic management approach with such variables in HPWS construct as humanistic motivation model through culture and trust (Cregan et al., 2020), employee voice (Miao et al., 2020), diversification management (Stavrou, & Solea, 2020), climate for creativity (Esch et al., 2018) etc. This tendency shows that development of the concept of IHRM is relevant more than ever and that is why more clarification is needed in this area.



Source: Boxall, P., & Purcell, J., (2011). High-performance work systems: what, why, how and for whom? Asia Pacific Journal of Human Resources.

Fig. 1. HR systems and the links to organizational performance.

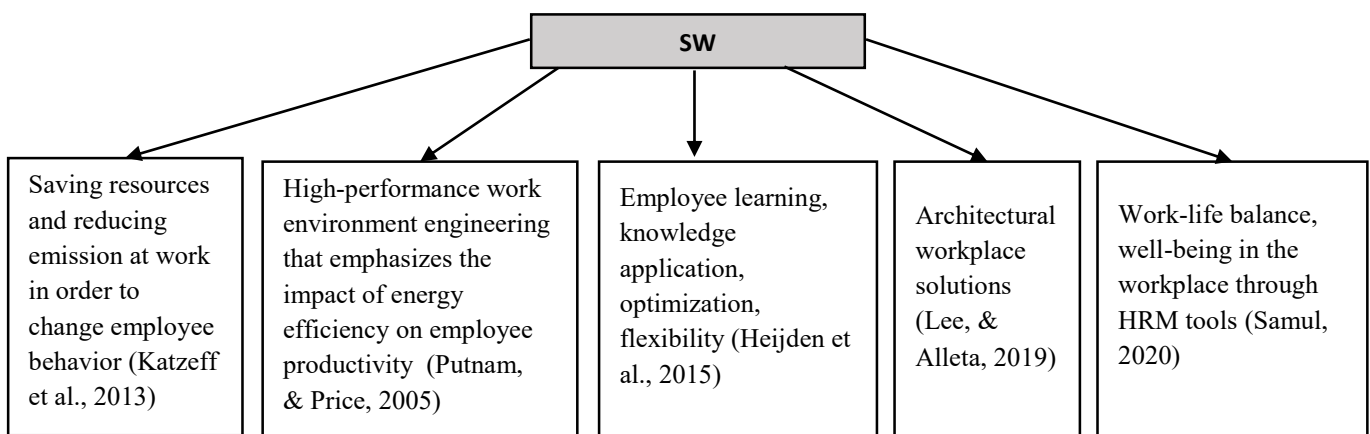
Besides the HPWS, which is more related to the humanistic management approach, we can see the tendency of workplace reorganization and at some level workplace digitalization as a part of the IHRM too. The relevancy of workplace digitalization became more compelling within the Covid-19 pandemic as there was no other way to organize work efficiently. Thus, such aspects of IHRM as *idiosyncratic work arrangements*, *work autonomy*, *sustainable workplace* came into consideration more broadly than before. Rudolph et al., (2021) noted that the pandemic has created a need for HR professionals to reconsider standing policies to meet the changing and unpredictable needs of employees during this time. In other words working arrangements must be as flexible as possible in order to keep work flow sufficient as employees are facing such additional difficulties as child care and other work-family conflict related issues (Rudolph et al., 2021)

Idiosyncratic work arrangements (i-deals) are the individual employment conditions negotiated and adapted to needs of employee and employer. This way of organizing work is associated with higher level of employee engagement, organizational commitment, and work satisfaction (Hornun et al., 2018; Wang et al., 2018). Scholars describe it as a personal flexibility in working hours, special job tasks, and career support. This aspect is supported by the social exchange theory, with recognition that organization is a social system with informal management processes (Hornung et al., 2018). I-deals are seen as a strategic HRM tool (Heijden et al., 2021) which are fostering proactive employee behavior and performance, which is related to such behavior outcomes as engagement and organizational commitment. It is also noted by Obenauer (2021) that i-deals are a perceived value to the organization, not an actual value, that influences the outcome of idiosyncratic deal negotiation. It means that employees can perceive it in a very different way and evaluators also tend to discount such aspect as minorities within the organization who might feel differently about the given flexible opportunities at the workplace.

Work autonomy is one more aspect of IHRM as it represents flexibility and freedom in terms of place, time, and methods how the task might be completed by an employee. Work autonomy is related to creativity and workplace innovation, fostering culture of modern organization (Sia, & Appu, 2015). This aspect makes a positive impact on organizational commitment (Renkema et al., 2021) by letting employees decide how they prefer to complete their tasks. Employees find this option very appealing

when they are looking for a new workplace, so it serves an organization as a competitive advantage in terms of attracting the best talent. Benefits of work autonomy were already stressed by Breugh (1985), in a study where he points out positive impact on job performance quality, job satisfaction, and absenteeism. Unfortunately, at that time practitioners didn't realize the true value of this aspect given that working arrangements were based more on formal control and supervision and less on flexibility.

Sustainable workplace (SW). IHRM relies on the concept of social innovation, which is partially based on sustainable business ideas (McNeill, 2012). EU structural reforms, which aim to improve labor markets and social policies and should therefore help workers acquire the necessary skills for the transition to a green economy, promote better access to equal opportunities in the labor market, fair working conditions, and sustainable and adequate social protection systems (European Commission, 2019). The EU is pursuing inclusive and sustainable growth by promoting labor and human rights. The European Commission also suggests guidelines in the document "Towards a sustainable Europe by 2030" for creating a sustainable workplace. The scientific literature review has shown what is considered to be a sustainable workplace (Fig. 2).



Source: completed by author.

Fig. 2. Sustainable workplace

SW as an IHRM tool is broadly discussed among scholars. As it presented in Fig. 2, the definition of SW contains a considerable variety of variables, from architectural decisions on how to organize a workplace physically so resources would be saved to psychological aspects when work-life balance is considered as a part of the SW.

Analysis of IHRM tools has shown that the concept is mostly concentrated on the idea of how to create the most efficient and friendly environment for achieving organizational goals within the market dynamics and transition towards inclusive and fair labor. It is clear that IHRM is highly related to employee behavior as those tools are aiming to change the behavior outcomes and make it more efficient by finding a balance between the needs of employee and employer.

The theoretical concept of employee behavior is mainly supported by such theories as behaviorism, which aims to explain the causes and consequences of human behavior, theories of planned behavior and reasoned actions. This concept helps in evaluating the impact of the social environment on an individual's decisions and to predict the outcome of the behavior based on person's intention to behave (Rossi, Armstrong, 2008). It also helps with predicting and evaluating employee behavior in the context of planned organizational change (Bakari et al., 2017), which plays an essential role in the context of implementation of IHRM tools. Self-determination theory by Deci, & Ryan (1980) is considered the most extensive and useful in terms of analyzing employee behavior outcomes at a workplace. This theory explains the meaning of automated behavior as the one which can be effected by external. In this case

it is important in terms of understanding the consequences and potential behavioral outcomes of implementation of IHRM tools.

The effect of IHRM tools on employee behavioral outcomes

As the literature review showed, the most relevant behavioral outcomes are *employee engagement*, which indicates the level of one's potential in task performance behavior, promotes connection with the work and other participants, personal existence here and now (physically, cognitively and emotionally) (Khan, 1990) and *organizational commitment* as a relationship with the organization and the job held in it in terms of desire, need and obligation to remain in the organization (Dunham et al., 1994). IHRM tools aim to make a positive impact on these two behavioral outcomes. High employee engagement and organizational commitment are seen as a desirable outcome of a modern organisation. It is extremely important to understand what kind of outcome organizations can get before the implementing various tools, as experimentation can cost too much. This is why organizations tend to pick ideas from the benchmarking companies who have more resources to experiment, but it does not mean that their good practice will have the same effect in other companies.

In order to determine the impact of IHRM practices on employee behavioral outcomes, several studies were analysed based on empirical data (Table 1).

Table 1

Impact of IHRM practices on employee behavioral outcomes

Authors	Analyzed variables	Main findings
Prieto, & Perez-Santana (2013)	High involvement HR practices, innovative employee behavior	Research states that HRM practices are the main tools which can make a positive impact on employee behavioral outcomes.
Bani-Melhem, Zeffane, & Albaity (2017)	<i>Happy</i> workplace, employee behavior, innovative behavior, stress level	<i>Happy</i> workplace creation ensures higher level of work satisfaction, makes a positive impact on innovative employee behavior,
Ocen, Francis, & Angundaru (2017)	Work satisfaction, employee engagement	There is a positive impact of training on employee engagement and work satisfaction, also work satisfaction makes a positive impact on employee engagement.
Pellegrini, Rizzi, & Frey (2018)	Perceives HRM practices, sustainable employee behavior	There is a significant relationship between the sustainable orientation of an organization and sustainable employee behavior.
Dumont, Shen, & Deng (2017)	<i>Green</i> HRM practices, employee behavior	Green HRM practices have significant impact on green employee in-role and extra-role behavior.
Nam, Lee, & (2018)	Innovative HRM practices, employee behavior	IHRM practices have a positive impact on organizational commitment and individual level work performance.
Lee, Pak, Kim, & Li (2019)	Innovative HRM practices, employee behavior	IHRM practices have a significant impact on employee productivity, sufficiency, responsibility, and trust of management.

Source: completed by author.

As seen in Table 1, empirical data supports theoretical assumptions, and one aspect is absolutely clear: that IHRM practices generally make an impact on behavioral outcomes. However, there is still a lack of knowledge in this field and there is a need for more empirical evidence on each IHRM tool and the impact on employee engagement and organizational commitment, including mediators and moderators, as research shows that a variation of mediators and moderators can change the strength of relationship between variables by making the impact stronger and vice versa. Also, we do not yet know long and short-term impacts. There are indications that in the long-run the intensity of these practices can lead to such negative consequences as stress and burnout (Mariappanadar, 2016; Page, et al., 2018; Stankevičiūtė et al., 2019). Also, it is necessary to clarify which IHRM practices should be used in order to effect employee engagement level and which would be more suitable for effecting organizational commitment.

Conclusions

1. IHRM is a modification of existing or established HRM practices which may be new to an organization or improved based on the practices of other organizations. It consists of high-performance work systems, i-deals, sustainable workplace, work autonomy with a purpose to make an impact on employee behavior in order to achieve organizational goals.
2. Empirical data shows that IHRM makes a positive impact on employee engagement levels and organizational commitment in general. However, more empirical investigation and testing of separate variables, moderators and mediators are needed to order get a better understanding how IHRM practices work in the short and long-run.

References

1. Agarwala, T. (2010). Innovative human resource practices and organizational commitment: an empirical investigation. *International Journal of Human Resource Management*, 175-197. doi:doi.org/10.1080/0958519021000029072
2. Bakari, H., Ghulam, A. I. H., & Niazi, K. S. (2017). How Does Authentic Leadership Influence Planned Organizational Change? The Role of Employees' Perceptions: Integration of Theory of Planned Behavior and Lewin's Three Step Model. *Journal of Change Management*.
3. Bani-Melhem, S., Zeffane, R., & Albaity, M. (2017). Determinants of employees' behavior. *International Journal of Contemporary Hospitality Management*, 1601-1620. doi:10.1108/IJCHM-02-2017-0079
4. Boxal, P. (2012). High-performance work systems: what, why, how and for whom? *Asia Pacific Journal of Human Resources*. doi:https://doi.org/10.1111/j.1744-7941.2011.00012.x
5. Boxall, P. (1992). Strategic Human Resource Management: Beginnings of a New Theoretical Sophistication? *Human Resource Management Journal*.
6. Boxall, P., & Purcell, J. (2011). Strategy and human resource management. 3rd edn.
7. Breugh, J. (1985). The Measurement of Work Autonomy. *Human Relations*, 38, 551-570.
8. Commission, E. (2019). Towards a sustainable Europe by 2030. Retrieved from https://ec.europa.eu/info/departments/communication_en
9. Commission, E. (2020). Human Capital and Digital Skills. doi:doi:https://ec.europa.eu/digital-single-market/en/human-capital
10. Cregan, C., Kulik, K. T., Johnston, S., & Bartram, T. (2020). The influence of calculative ("hard") and collaborative ("soft") HRM on the layoff-performance relationship in high performance workplaces. *Human Resource Management Journal*. doi:doi:10.1111/1748-8583.
11. Deci, E. L., & Ryan, R. M. (1980). Self-determination Theory: When Mind Mediates Behavior. *The Journal of Mind and Behavior*, 33-43. doi:http://www.jstor.com/stable/43852807
12. Dumont, J., Shen, J., & Deng, X. (2017). Effects of green hr practices on employee workplace green behavior: the role of psychological green climate and employee green values. *Human Resource Management*. doi:10.1002/hrm.21792
13. Dunham, R. B., Grube, J. A., & Castaneda, M. B. (1994). Organizational Commitment: The Utility of an Integrative Definition. *Journal of Applied Psychology*. doi:0021-9010/94/S3.00
14. Esch, E., Wei, L. Q., & Chiang, F. T. F. (2018). High-performance human resource practices and firm performance: the mediating role of employees' competencies and the moderating role of climate for creativity. *The International Journal of Human Resource Management*.
15. Heijden, B., Aukje Nauta, A., Fugate, M., Vos, A., & Bozionelos, N. (2021). Ticket to Ride: I-deals as a Strategic HR Tool for an Employable Work Force. *Front. Psychol*. doi:https://doi.org/10.3389/fpsyg.2021.769867
16. Heijden, B., Gorgievski, M., & Lange, A. (2015). Learning at the workplace and sustainable employability: a multi-source model moderated by age. *European Journal of Work and Organizational Psychology*, 13-30. doi:https://doi.org/10.1080/1359432X.2015.1007130
17. Hornung, S., Glaser, J., & Rousseau, D. M. (2018). Idiosyncratic deals at work: A research summary. Psychology of everyday activity. Retrieved from <https://bit.ly/2W9MRbI>
18. Katzeff, C., Broms, L., Jönsson, L., Westholm, U., & Räsänen, M. (2013). Exploring Sustainable Practices in Workplace Settings through Visualizing Electricity Consumption. *ACM journals*. doi:https://doi.org/10.1145/2501526
19. Kemp, R. L. (1987). Human Resource innovations: Beyond Cutback to Creativity. *Personel Management in Action*. doi:doi/10.1177/103841118702500206
20. Khan, W. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*. doi:https://www.talenteck.com/academic/Kahn-1990.pdf
21. Kossek, E. (2006). Human Resources management innivation. *Human Resource Management*. doi:doi:10.1002/hrm.3930260105

22. Lee, Y., & Alleta, F. (2019). Acoustical planning for workplace health and well-being: A case study in four open-plan offices. doi:<https://doi.org/10.1177/1351010X19868546>
23. Lee, W. H., Pak, J., Kim, S., & Li, L. (2019). Effects of Human Resource Management Systems on Employee Proactivity and Group Innovation. *Journal of Management*. doi: 10.1177/0149206316680029
24. Mariappanadar, S. (2016). Health harm of work from the sustainable HRM perspective: scale development and validation. *International Journal of Manpower*. doi:doi/10.1108/IJM-12-2015-0204
25. McNeill, J. (2012). Through Schumpeter: Public policy, social innovation & social entrepreneurship. *The International Journal of Sustainability Policy and Practice*. doi:10.18848/2325-1166/CGP/v08i01/55435
26. Miao, R., Lu, L., Cao Y., & Du, Q. (2020). The High-Performance Work System, Employee Voice, and Innovative Behavior: The Moderating Role of Psychological Safety. *Public Health*. doi:doi:<https://doi.org/10.3390/ijerph17041150>
27. Nam, J., & Lee, H. (2018). High commitment human resource practices and employee behavior: a multi-level analysis. *International Journal of Manpower*. doi:10.1108/IJM-09-2016-0171
28. Obenauer, W. G. (2021). Flexible by design: Developing human resource policies and practices that provide flexibility through the uncertainties created by a pandemic. *Industrial and Organizational Psychology*. doi:10.1017/iop.2021.9
29. Ocen, E., Francis, K., & Angundaru, G. (2017). The role of training in building employee commitment: the mediating effect of job satisfaction. *European Journal of Training and Development*. doi:10.1108/EJTD-11-2016-0084
30. Pfeffer, J. (1998). Seven Practices of Successful organizations. *California Management Review*. doi:doi: 10.2307/41165935
31. Pellegrini, C., Rizzi, F., & Frey, M. (2018). The role of sustainable human resource practices in influencing employee behavior for corporate sustainability. *Business strategy and environment*. doi:10.1002/bse.2064
32. Putnam, C., & Price, S. (2005). High-performance facilities engineering: Preparing the team for the sustainable workplace. *Journal of Facilities Management*, 161-172.
33. Prieto, I. M., & Pe'rez-Santana, P. (2014). Managing innovative work behavior: the role of human resource practices. *Personnel Review*. doi:DOI 10.1108/PR-11-2012-0199
34. Renkema, M., Leede, J., & Zyl, L. (2021). High-involvement HRM and innovative behaviour: The mediating roles of nursing staff's autonomy and affective commitment. *Journal of Nursing Management*. doi:<https://doi.org/10.1111/jonm.13390>. doi:doi:<https://doi.org/10.1111/jonm.13390>
35. Rossi, N. A., & Armstrong, J. B. (2008). Theory of reasoned action vs. theory of planned behavior: Testing the suitability and sufficiency of a popular behavior model using hunting intentions. *Human Dimensions of Wildlife*, 40-56. doi:10.1080/10871209
36. Rudolph, W. C., Allan, B., Clark, M., Hertel, G., Hirschi, A., Kunze, F., Shockley, K., Shoss, M., Sonnentag, S., & Zacher, H. (2021). Pandemics: Implications for research and practice in industrial and organizational psychology. *Industrial and Organizational Psychology*, 14(1-2): Special Pandemic Issue. doi:<https://doi.org/10.1017/iop.2020.48>
37. Samul, J. (2020). Spiritual Leadership: Meaning in the Sustainable Workplace. *Sustainable Human Resource Management: Putting People in the Center*. doi:<https://doi.org/10.3390/su12010267>
38. Schwab, K. (2019). The Global Competitiveness Report. *World Economic Forum*. Retrieved from https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
39. Stankevičiūtė, Ž., & Savanevičienė, A. (2019). Can Sustainable HRM Reduce Work-Related Stress, Work-Family Conflict, and Burnout? *International Studies of Management & Organization*, 49(1), 79-98, doi: 10.1080/00208825.2019.1565095
40. Schwab, K. (2019). The Global Competitiveness Report. *World Economic Forum*. doi:https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
41. Sia, S. K., & Appu, A. V. (2015). Work Autonomy and Workplace Creativity: Moderating Role of Task Complexity. *Global business review*. doi: doi:<https://doi.org/10.1177/0972150915591435>
42. Stavrou, E., & Solea, F. (2020). In the eye of the beholder: Employee sexualorientation, perceived supervisory support for life beyond work and job satisfaction. *Human Resource Management Journal*. doi:10.1111/1748-8583.12293
43. Vasiljeviene, N. (2015). *Organizacijų etika, novatoriškumas ir darnios inovacijos iš "Organizacijų etika - instrumentinė inovatyvios vadybos plėtra*.
44. Wang, S., Liu, Y., & Shalley, C. E. (2018). Idiosyncratic deals and employee creativity: The mediating role of creative self-efficacy. *Human Resource Management*. doi:doi:<https://doi.org/10.1002/hrm.21917>

The Link Between the Business Process Management Capabilities and the Benefits Created by Robotic Process Automation in an Organisation

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Abstract. In the context of the Fourth Industrial Revolution, as organisations are increasingly confronted with unclear and complex business environments, digital technologies are being used to acquire and maintain dynamism, innovation, responsiveness to changing societal needs, and agility, which are essential in this time of changes. In the current competitive environment, organising the performance of an organisation solely on the basis of functions and assignments is no longer appropriate. There is a growing interest in the concept of the process-oriented organisation (Szelagowski, & Berniak-Woźny 2020) and a growing focus on the digitalisation of operations and business processes (Kirchmer 2017; Siderska 2020). This article aims to define the link between the essential aspects of the Business Process Management capabilities and the benefit generated by Robotic Process Automation based on theoretical insights.

Keywords: *Business process management, Business process management capabilities, Robotic process automation*

Introduction

Relevance of the research

In the context of the Fourth Industrial Revolution, as organisations are increasingly confronted with unclear and complex business environments, digital technologies are being used to acquire and maintain dynamism, innovation, responsiveness to changing societal needs, and agility, which are essential in this time of changes. Digital transformation is a precondition for the creation of new sectors (e.g., data science) and new business models (e.g., platform type), for the transformation of business models, their products, processes, and corporate structures, and for initiating new corporate roles. This leads to fundamental changes in the corporate environment, enabling new ways of operating (Brocke, Maaß, Buxmann, Maedche, Leimeister, & Pecht, 2018; Thomas 2020; Antonucci, Fortune, & Kirchmer 2021).

However, despite the rapid adoption of new technologies, the planned success of organisations is not always guaranteed (Brocke et al., 2018). The management processes for the successful application and implementation of these technologies are still unclear (Martinez, 2019). On the one hand, organisations seek to improve efficiency and customer satisfaction by digitising processes. On the other hand, this is often hindered by the lack of expertise and financial resources available to organisations (Ubiparipović, Matković, Marić, & Tumbas, 2020). Rapidly changing market requirements and the dynamic development of IT contribute significantly to the evolution of modern management concepts that use IT. Business and digital technology management gradually become interlinked and gain special importance (Thomas, 2020).

Processes are an arterial system in organisations and inter-organisational supply networks (Dumas, La Rosa, Mendling, & Reijers, 2018) and a strategic asset of an organisation (McCormack, & Johnson, 2001). Nowadays, they have become increasingly important in the context of digital innovation (Van Looy, 2021). For this reason, Business Process Management (further - BPM) is in the spotlight (Pereira, Maximiano, & Bido 2019). There is a growing interest in the concept of the process-oriented organisation (Szelagowski, & Berniak-Woźny, 2020) and an increasing focus on digitalising activities and business processes (Kirchmer, 2017; Siderska, 2020).

This article investigates one particular digital technology, Robotic Process Automation (further - RPA), which enables the automation of repetitive business processes. RPA is one of the most important, fastest evolving, and latest concepts (Siderska, 2020) and a highly influential tool for digital transformation (Fernandez, & Aman, 2021).

Level of problem investigation

Contemporary BPM research is no longer solely concerned with process modelling or management methods, procedures, or tools. It is also focused on assessing and improving the BPM capabilities within an organisation (Niehaves, Poeppelbuss, Plattfaut, & Becker, 2014). Scientific sources reveal that the

dominant investigations into the link between BPM and RPA are qualitative studies using case analysis and interview methods. The link between BPM and RPA is a novel topic that needs to be developed in future research.

Scientific problem. The scientific problem focuses on the fundamental question at the theoretical level: what is the link between the essential aspects of the BPM capabilities and the benefit created by RPA?

The object of the article is the link between the BPM capabilities and the benefit created by RPA.

The article aims to define the link between the essential aspects of the BPM capabilities and the benefit created by RPA based on theoretical insights.

Objectives of the article:

- 1) to define the concepts of BPM and the BPM capabilities,
- 2) to define the concept of RPA and identify the benefits of RPA for an organisation,
- 3) to identify the link between the BPM capabilities and the RPA benefits for an organisation.

The research methods include a literature review and a critical analysis of the scientific sources on the issue. The synthesis method was used to investigate and formulate the BPM capabilities and the benefit generated by RPA for an organisation.

1. The link between the BPM capabilities and the benefit created by RPA for an organisation

1.1. Definition of BPM and the BPM capabilities

In the current competitive environment, organising the performance of an organisation on the basis of functions and assignments is no longer appropriate. It is essential to view the performance of an organisation not in terms of functions, units, or products but business processes. BPM is related to managing the whole range of events, activities, and decisions that ultimately add value to the organisation and its customers. These chains of events, activities, and solutions are called processes, and they are the focal point of BPM (Dumas et al., 2018).

BPM is seen as the capability of an organisation, which puts this management discipline on the same level as other management disciplines such as risk management or human resource management (Dumas et al., 2018). In addition to the traditional BPM concept based on executing efficient and stable daily processes/practices, organisations also require a dynamic BPM concept based on non-standard processes, evolving and proactive corporate behaviour management, and rapid reactions to customers' changing needs (Urbach, & Röglinger, 2019).

The BPM discipline investigates the organisation's ability to achieve the advantages such as operational effectiveness, efficiency, quality, innovation, and compliance (Dumas et al., 2018). As a holistic management discipline, BPM as the capability of an organisation is not just performing tasks across the lifecycle. This approach requires an organisation-wide perspective and key capability areas relevant for the successful BPM (Harmon, 2010). Thus, in addition to lifecycle models, BPM is generally structured through capability frameworks, which describe and consolidate the capability areas relevant to implementing process orientation in organisations. The logic of these capabilities is that the institutionalised BPM capabilities enable effective and efficient business processes, which in turn lead to the success of organisations (Kerpedzhiev, König, Röglinger, & Rosemann, 2021). Capability areas are sets of related competencies that need to be assessed and improved to achieve business/process excellence. Capabilities are otherwise also referred to as essential success factors or simply factors (Rosemann, & De Bruin, 2005; Van Looy, De Backer, & Poels, 2014).

Processes themselves focus more on the 'how', i.e., how work is done in the organisation (the work done in a business process transforms physical or informational inputs into outputs), whereas capabilities focus on 'what'. In a business context, capability refers to what an organisation is capable of doing, while a process describes the content of the expression of those capabilities. Capability does not describe how an organisation does it; it states that the organisation can generate a relevant outcome if the right process is adopted (Harmon, 2019; Kerpedzhiev et al., 2021). Thus, the capability is the capacity to generate an outcome. Capabilities exist between the processes that describe how work is done and the outputs that define what is produced by the process (Harmon, 2019). Capability is thus the

ability or competency (e.g., knowledge and skills) of an organisation to achieve anticipated outcomes through certain processes or process areas. Regarding capabilities, it is important for the organisation to be mature enough to retain them (Van Looy, De Backer, & Poel, 2011).

From a theoretical perspective, BPM can be seen as a set of dynamic capabilities for adapting the existing business processes and creating new ones, thereby achieving compliance with the corporate environment. Dynamic capability is defined as the ability of an organisation to create, integrate, and reconfigure operational capability to comply with the market environment (Niehaves, Plattfaut, & Becker, 2013). Operational capabilities include executing day-to-day activities (e.g., providing a service or producing a product) and essentially refer to corporate value-creating business processes. Business processes refer to operational capabilities, which are shaped by the dynamic capability of BPM. According to Wong, Tseng, & Tan (2014), the BPM capability is defined as the ability to coordinate multiple production skills and integrate several technology flows with other resources and capabilities. Thus, in this context, BPM is perceived as a dynamic capability that refers to techniques intended to integrate, create, protect, and reconfigure corporate business processes in changing environments (Niehaves et al., 2014).

One of the key aspects of BPM, relevant to the outcomes of the performance of an organisation, is the maturity of BPM, where maturity models are used to assess and measure the quality of corporate business processes and BPM initiatives (Fischer, Imgrund, Janiesch, & Winkelmann, 2019). Maturity models have received increasing attention among the various approaches supporting BPM (Szelagowski, & Berniak-Woźny, 2020), especially in recent years. Maturity as a measure to assess the BPM capabilities of an organisation has become particularly popular since the development of the Capability Maturity Model (CMM).

BPM capability frameworks are the basis for the maturity models that focus on how capabilities can be developed in a predictable, desirable, or logical way (Kerpedzhiev et al., 2021). The aim of 'maturity' is to systematically improve the capabilities of the business process and the organisation to achieve better results over time (Rosemann, & De Bruin, 2005; Hammer, 2007). The BPM maturity models are evolutionary tools for assessing and improving capabilities (i.e., skills or competencies) consistently to achieve excellence in business/processes. For instance, the BPM maturity models can assess how well an organisation is capable of modelling or executing its processes flawlessly (Van Looy, De Backer, Poels, & Snoeck, 2013).

Considering the importance of mature business processes, the proliferation of maturity models in recent decades was inevitable. It started with the systems intended to manage the software crisis in 1970-1980 and later applied to all types of business processes (Szelagowski, & Berniak-Woźny, 2020). Over the last two decades, researchers and practitioners in the field of BPM have proposed dozens of maturity models of varying breadth and depth. Some of the most popular are Process Performance Index (PPI) (Rummler and Brache 1990); BPM Maturity Model (BPMMM) (Rosemann, & De Bruin, 2005); Process and Enterprise Maturity Model (PEMM) (Hammer, 2007); Process Maturity Ladder (Harmon, 2007); Business Process Maturity Model (BPMM Lee) (Lee et al., 2007); BPO Maturity Model (BPOMM) (McCormack, 2007; McCormack, 2009); Business Process Maturity Model (OMG) (Weber et al., 2008; Szelagowski, & Berniak-Woźny, 2020).

One of the most recent validated instruments for measuring BPM capabilities, also defined as a maturity assessment model, is the BPM Capability Model proposed by Van Looy (2020). The researcher has developed and validated a measurement instrument that helps organisations take advantage of the BPM benefits. The proposed BPM Capability Measurement Model *includes four core capability areas, 13 sub-areas, and 62 measurement units used to manage business processes properly*. The areas distinguished are **life cycle, managerial, cultural, and structural** (Looy, 2020).

The literature review suggests that many BPM capability frameworks and maturity models have been proposed. However, they all differ in their comprehensiveness, scientific validity, and presentation of the measurement instrument. To sum up, the BPM capabilities and their structures, which serve as the basis for the BPM maturity models (i.e., the essential part of BPM maturity models), are crucial for improving corporate performance, as the achievement of a higher level of the BPM maturity also stimulates higher levels of corporate performance.

1.1. Definition of RPA and the benefits created by RPA in an organisation

RPA is a software robot that replicates human activities by performing processes related to structured data, clear rules of action, and unambiguous results (Osmundsen, Iden, & Bygstad, 2019). RPA technology should be treated as a facilitator of the Fourth Industrial Revolution and digital transformation, as it supports business process transformation, product development, and newly emerging business models. The relevance and need for this technology in the business and public sector are growing rapidly nowadays because it allows for improved operational efficiency and significant cost savings. This digital value co-creation in service businesses and networks determines the value to the end-customer's experience through more efficient processes based on the use of modern technologies (Madakam, Holmukhe, & Jaiswal, 2019; Siderska, 2020; Syed et al., 2020).

RPA is gaining increasing interest in the context of digital transformation. This highly advanced technology automates human behaviour and promises great opportunities (Flechsigg, Anslinger, & Lasch, 2021). Therefore, RPA is a new technical approach to process automation with the potential to facilitate technology-driven digital transformation (Schmitz, Dietze, & Czarnecki, 2019). RPA can be perceived narrowly and broadly. From a narrow perspective, it is rapidly evolving software intended to develop software robots. From a broader perspective, RPA is treated as an organisational and technological change leading to the emergence of hybrid corporate environments where humans and robots cooperate with each other (Sobczak, 2019). The discipline originated from the real problems of companies and the fact that they have long tried to automate routine tasks and business processes, often without an adequate return on investment (ROI) (Šimek, & Šperka, 2019).

RPA can be seen as a virtual, digital workforce, bridging manual processes and full automation. It is a virtual robotic workforce cooperating with employees to eliminate almost all manual process activities and tasks to achieve greater efficiency. An RPA robot is not a physical robot. It is a software robot or an analogous virtual assistant that centres on human characteristics and replaces human actions in administrative activities. Some RPA robots replace approximately 1 employee, some more than 5. Classical business process automation was meant to help human participants in the processes and owners. In contrast, RPA potentially targets the redeployment of the entire human workforce. However, currently, RPA is not capable of replacing human work completely. This technology focuses on automating simple, completely predictable tasks, while complex assignments are still left to humans (Lacity, Willcocks, & Craig, 2015; Šimek, & Šperka, 2019; Siderska, 2020; Maček, Murg, & Čič, 2021; Choi, R'bigui, & Cho, 2021).

The ultimate goal of digital business transformation is to add value to the business. However, the introduction of multiple digital technologies into an organisation will not in itself bring the expected benefits (Ubiparipović et al., 2020). Thus, the key issue for an organisation adopting robotic technologies is the value they generate for it.

Based on academic and other sources, the benefits generated by RPA to an organisation can be identified (Table 1).

Table 1

RPA-generated benefits for the organisation: dimensions, criteria, and indicators

Dimensions	Indicators of RPA benefits	Source
Direct benefits	<p><i>Increased operational efficiency:</i></p> <ol style="list-style-type: none"> 1. <i>Reduction of human resources, redirecting them towards creating more value in the organisation.</i> 2. <i>Reduction of financial resources.</i> 3. <i>Reduction of time resources (cycle time, etc.).</i> 	BarNir, Gallagher, & Auger (2003); Lacity et al. (2015); Madakam et al. (2019); Šimek, & Šperka (2019); Schmitz, Dietze, & Czarnecki (2019); Syed, et. al. (2020); Antonucci, et. al. (2021); Maček et. al. (2021); Choi et al. (2021).
	<p><i>Improved operational effectiveness:</i></p> <ol style="list-style-type: none"> 1. <i>Attainment of strategic objectives.</i> 2. <i>Improved performance quality (ensured reliability, improved compliance).</i> 3. <i>Increase in revenue.</i> 	BarNir et al. (2003); Lacity et al. (2015); Osmundsen et al. (2019); Madakam et al. (2019); Schmitz et al. (2019); Syed et al. (2020); Antonucci et al. (2021); Maček et al. (2021).

<i>Indirect benefits</i>	<ol style="list-style-type: none"> 1. <i>New products/services (innovations) created.</i> 2. <i>Innovation in the functioning of management (creation and development of new processes, ways of working, positions).</i> 	Osmundsen et al. (2019); Madakam et al. (2019); Šimek, & Šperka (2019); Schmitz et al. (2019); Siderska (2020); Syed et al. (2020); Antonucci et al. (2021); Maček et al. (2021).
	<ol style="list-style-type: none"> 1. <i>Increased internal customers' satisfaction (employees' well-being, motivation).</i> 2. <i>Increased external customers' satisfaction (24-hour accessibility, no queues, etc.).</i> 	Schmitz et al. (2019); Šimek, & Šperka (2019); Choi et al. (2021).
	<ol style="list-style-type: none"> 1. <i>Contribution to increasing competitive advantage.</i> 2. <i>Contribution to the continuity of corporate performance.</i> 	Šimek, & Šperka (2019); Antonucci et al. (2021); Maček et al. (2021); Choi et al. (2021).

Source: created by the author.

The literature analysis has shown that RPA is a revolutionising workplace technology that generates multi-dimensional benefits for the organisation. The benefits (value) generated by RPA for the organisation are twofold: direct and indirect. The direct benefits are measured by the following criteria: (1) increased operational efficiency (reduction of human, financial and time resources; redirection of human resources towards the generation of higher value); (2) improved operational effectiveness (attainment of strategic objectives, increase in revenue, improved quality of performance). Indirect benefits are measured in terms of the following criteria: (1) innovation and development; (2) increase in internal and external customers' satisfaction; (3) increase in competitive advantage and assurance of the continuity of performance.

1.2. The link between the BPM capabilities and the benefits created by RPA in an organisation

In the context of digitalisation, BPM acquires a new mission (Harmon, 2019), as a digital organisation requires understanding how business models can be implemented and how digitalisation changes the way organisations are managed (Legner et al., 2017). Digitisation is associated with developing new organisational capabilities that lead to a variety of benefits generated by digitisation (BarNir et al., 2003).

BPM can increase the feasibility of digitisation processes. An organisation can benefit from BPM mechanisms and frameworks and start its digitisation processes with BPM initiatives (Imgrund, Fischer, Janiesch, & Winkelmann, 2018). Syed et al. (2020) performed a structured study of 125 articles on the topic of RPA. They concluded that even though the benefits generated to the organisation by implementing RPA can be well documented, it is not a given that the implementation of RPA will definitely lead to the acquisition of these benefits. Benefit generation depends on several key factors, such as the readiness of the organisation for RPA, the capacity of the RPA technology to be deployed, and the implementation and provision of the RPA solution. In other words, it is the issue of the BPM capability of the organisation that is important.

Sliž (2019) draws on researchers' insights to formulate a thesis that implementing BPM has a positive impact on RPA. To fairly benefit from the implementation of RPA, an organisation needs to identify which business processes or which processes have the highest level of standardisation. In turn, this needs to be identified, formalised, and measured. The researcher assessed the potential of process automation in the Polish labour market and noted that in case RPA is defined as a tool to improve business processes, the emphasis should be laid on the fact that, from the perspective of process maturity models, this is possible at the fourth or fifth level of process maturity in an organisation. Meanwhile, in their study, D. Šimek and R. Šperka (2019) provide an insight that for RPA, the BPM maturity or previous experience is not necessary when it is 'only' an automation tool (Šimek, & Šperka 2019). The conclusions of the research conducted by Antonucci et al. (2021) revealed that higher BPM capabilities lead to an increased value through digitisation. Future research could further explore the new or evolving BPM capabilities and empirically investigate the impact of new and evolving BPM capability areas or frameworks concerning different benefits of digitisation (Antonucci et al., 2021).

In today's age of change, processes need to be context-sensitive and comply with external requirements. It is often stressed, both in academic literature and in practice, that, over time, employees' make personal activities a routine, which shapes their habits of doing things one way rather than another. Therefore, changes in processes become difficult to achieve, and there is considerable resistance from

employees. To sum up, it can be noted that the BPM capacity impacts the benefits generated by RPA in the organisation.

Conclusions

1. The BPM methodology involves designing (or redesigning) the logic of the corporate performance; modelling the execution; the actual execution; management, monitoring, and changes to maximise the satisfaction of customers' demand. The BPM capabilities and their frameworks, as the basis for the BPM maturity models, are crucial for improving the outcomes of corporate performance, as reaching a higher level of the BPM maturity stimulates higher levels of the performance of an organisation.
2. RPA is a software robot that simulates human activities by executing processes characterised by structured data and clear rules of actions leading to unambiguous results. The benefits generated by RPA for an organisation can be defined as direct and indirect. The direct benefits include increased operational efficiency (reduction of human, financial and time resources; redirection of human resources towards generating higher value) and improved operational effectiveness (achievement of strategic objectives, revenue growth, improved quality of operations). The indirect benefits include innovation and development, increased satisfaction of internal and external customers, increased competitive advantage and business continuity.
3. The BPM capacity of an organisation is linked to the benefits generated by RPA. While organisations have learned to understand the importance of developing BPM capabilities, digitalisation (including RPA) now transforms business processes and introduces new challenges.

References

1. Antonucci, Y. L., Fortune, A., & Kirchmer, M. (2021). An examination of associations between business process management capabilities and the benefits of digitalisation: all capabilities are not equal. *Business Process Management Journal*, 27(1), 124-144. Retrieved from DOI: 10.1108/BPMJ-02-2020-0079.
2. BarNir, A., Gallagher, M. J., & Auger, P. (2003). Business process digitisation, strategy, and the impact of firm age and size: the case of the magazine publishing industry. *Journal of Business Venturing*, 18(6), 789-814. Retrieved from doi:10.1016/S0883-9026(03)00030-2.
3. Brocke, vom J., Maaß, W., Buxmann, P., Maedche, A., Leimeister, J. M., & Pecht, G. (2018). Future Work and Enterprise System. *Business & Information Systems Engineering*, 60(4), 357-366. Retrieved from DOI: 10.1007/s12599-018-0544-2.
4. Choi, D., R'bigui, H., & Cho, C. (2021). Candidate Digital Tasks Selection Methodology for Automation with Robotic Process Automation. *Sustainability*, 13. Retrieved from <https://doi.org/10.3390/su13168980>.
5. Dumas, N., La Rosa, M., Mendling, J., & Reijers, H. A. (2018). *Fundamentals of Business Process Management* (2nd edition). Springer.
6. Fernandez, D., & Aman, A. (2021). Planning for a Successful Robotic Process Automation (RPA) Project: A Case Study. *Journal of Information & Knowledge Management*, 11(1), 103-117. Retrieved from <https://www.researchgate.net/publication/351685846>.
7. Fischer, D. M., Imgrund, F., Janiesch, Ch., & Winkelmann, A. (2019). Directions for future research on the integration of SOA, BPM, and BRM. *Business Process Management Journal*, 25(7), 1491-1519. Retrieved from DOI: 10.1108/BPMJ-05-2018-0130.
8. Flechsig, Ch., Anslinger, F., & Lasch, R. (2021). Robotic Process Automation in purchasing and supply management: A multiple case study on potentials, barriers, and implementation. *Journal of Purchasing and Supply Management*. Retrieved from <https://doi.org/10.1016/j.pursup.2021.100718>.
9. Hammer, M. (2007). The Process Audit. *Harvard Business Review*, 85(4). Retrieved from http://www.tlog.lth.se/fileadmin/tlog/Utbildning/Kurser/Logistik_i_foerserjningskedjor/Artiklar/Hammer_Process_Audit.pdf.
10. Harmon, P. (2010). The scope and evolution of business process management. In: vom Brocke J, Rosemann M (eds) *Handbook on business process management*, vol 1. Springer, Heidelberg.
11. Harmon, P. (2019). *Business Process Change. A Business Process Management Guide for Managers and Process Professionals* (4th edition). Elsevier.
12. Kerpedzhiev, D. G., König, U. M., Röglinger, M., & Rosemann, M. (2021). An Exploration into Future Business Process Management Capabilities in View of Digitalization. *Business & Information Systems Engineering*, 63(2), 83-96. Retrieved from <https://doi.org/10.1007/s12599-020-00637-0>.
13. Kirchmer, M. (2017). *High Performance through Business Process Management – Strategy Execution in a Digital World* (3rd edition). Springer.

14. Lacity, M., Willcocks, L., & Craig, A. (2015). Robotic process automation: Mature Capabilities in the Energy Sector. *The Outsourcing Unit Working Research Paper Series* (15/06). The London School of Economics and Political Science, London, UK. Retrieved from <http://eprints.lse.ac.uk/64520/>.
15. Maček, A., Murg, M., & Čič, Ž. V. (2021). How Robotic Process Automation is Revolutionising the Banking Sector. Dirsehan. T. (Ed.) *Managing Customer Experiences in an Omnichannel World: Melody of Online and Offline Environments in the Customer Journey*, Emerald Publishing Limited, Bingley, 271-286. Retrieved from <https://doi.org/10.1108/978-1-80043-388-520201020>.
16. Madakam, S., Holmukhe, R. M., & Jaiswal, D. K. (2019). The Future Digital Work Force: Robotic Process Automation. *Journal of Information Systems and Technology Management*, 16. Retrieved from DOI: 10.4301/s1807-1775201916001.
17. Martinez, F. (2019). Process excellence the key for digitalisation. *Business Process Management Journal*, 25(7), 1716-1733. Retrieved from <https://doi.org/10.1108/BPMJ-08-2018-0237>.
18. McCormack, K. P., & Johnson, W. C. (2001). *Business process orientation: Gaining the e-business competitive advantage*. Boca Raton: St. Lucie Press.
19. Niehaves, B., Plattfaut, R., & Becker, J. (2013). Business process management capabilities in local governments: A multi-method study. *Government Information Quarterly*, 30, 217-225. Retrieved from <http://dx.doi.org/10.1016/j.giq.2013.03.002>.
20. Niehaves, B., Poepelbuss, J., Plattfaut, R., & Becker, J. (2014). Business process management capability development: a matter of contingencies. *Business Process Management Journal*, 20(1), 90-106. Retrieved from DOI 10.1108/BPMJ-07-2012-006.
21. Osmundsen, K., Iden, J., & Bygstad, B. (2019). Organising Robotic Process Automation: Balancing Loose and Tight Coupling. *The 52nd Hawaii International Conference on System Sciences*. Retrieved from DOI: 10.24251/HICSS.2019.829.
22. Pereira V. R., Maximiano A. C. A., & Bido, D. S. (2019). Resistance to change in BPM implementation. *Business Process Management Journal*, 25(7), 1564-1586. Retrieved from <https://doi.org/10.1108/BPMJ-07-2018-0184>.
23. Rosemann, M., & De Bruin, T., (2005) Application of a Holistic Model for Determining BPM Maturity. *AIM Pre-ICIS Workshop on Process Management and Information System*. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.225.9386&rep=rep1&type=pdf>.
24. Schmitz M., Dietze, Ch., & Czarnecki, Ch. (2019). Enabling Digital Transformation Through Robotic Process Automation at Deutsche Telekom. In Urbach N., Röglinger, M. (Ed.) *Digitalization Cases. How Organisations Rethink Their Business for the Digital Age*. 15-33. Springer. Retrieved from DOI: 10.1007/978-3-319-95273-4_2.
25. Siderska, J. (2020). Robotic Process Automation – a Driver of Digital Transformation? *Engineering Management in Production and Services*, 12(2), 21-31. Retrieved from DOI: 10.2478/emj-2020-0009.
26. Šimek, D., & Šperka, R. (2019). How Robot/human Orchestration Can Help in an HR Department: A Case Study from a Pilot Implementation. *Organizacija*, 52(3), 204-217. Retrieved from DOI: 10.2478/orga-2019-0013.
27. Sobczak, A. (2019). Building a Robotic Capability Map of the Enterprise. *Management Issues*, 5(85), 132–154. Retrieved from Doi:10.7172/1644-9584.85.8.
28. Syed, R., Suriadi, S., Adams, M., Bandara, W., Leamans, S. J. J., Ouyang, Ch., Hofstede, ter A. H. M., Van der Weerd, I., Wynn, M. T., & Reijers, H. A. (2020). Robotic Process Automation: Contemporary themes and challenges. *Computers in Industry*, 115. Retrieved from DOI: 10.1016/j.compind.2019.103162.
29. Szelagowski, M., & Berniak-Woźny, J. (2020). The adaptation of business process management maturity models to the context of the knowledge economy. *Business Process Management Journal*, 26(1), 212-238. Retrieved from <https://doi.org/10.1108/BPMJ-11-2018-0328>.
30. Thomas, A. (2020). Convergence and digital fusion lead to competitive differentiation. *Business Process Management Journal*, 26(3), 707-720. Retrieved from <https://doi.org/10.1108/BPMJ-01-2019-0001>.
31. Ubiparipović, B., Matković, P., Marić, M., & Tumbas, P. (2020). Critical factors of digital transformation success: a literature review. *Ekonomika Preduzeća*, 68(5-6), 400-415. Retrieved from DOI: 10.5937/EKOPRE2006400U.
32. Urbach N., & Röglinger, M. (2019). Introduction to Digitalisation Cases: How Organisations Rethink Their Business for the Digital Age. In Urbach N., Röglinger, M. (Ed.) *Digitalization Cases. How Organisations Rethink Their Business for the Digital Age*. 1-12. Springer. Retrieved from DOI: 10.1007/978-3-319-95273-4_1.
33. Van Looy A. (2020). Capabilities for managing business processes: a measurement instrument. *Business Process Management Journal*, 26(1), 287-311. Retrieved from <https://doi.org/10.1108/BPMJ-06-2018-0157>.
34. Van Looy A. (2021). A quantitative and qualitative study of the link between business process management and digital innovation. *Information & Management*, 58(2), 1-15. Retrieved from <https://doi.org/10.1016/j.im.2020.103413>.
35. Van Looy A., Backer De M., & Poels, G. (2011). Defining business process maturity. A journey towards excellence. *Total Quality Management & Business Excellence*, 22(11), 1119-1137. Retrieved from DOI: 10.1080/14783363.2011.624779.
36. Van Looy A., De Backer M., Poels, G., & Snoeck, M. (2013). Choosing the right business process maturity model. *Information & Management*, 50, 466-468. Retrieved from <http://dx.doi.org/10.1016/j.im.2013.06.002>.

37. Van Looy A., De Backer, M., & Poels, G. (2014). A conceptual framework and classification of capability areas for business process maturity. *Enterprise Information Systems*, 8(2), 188-224. Retrieved from <http://dx.doi.org/10.1080/17517575.2012.688222>.
38. Wong, W. P., Tseng, M., & Tan, H. K. (2014). A business process management capabilities perspective on organisation performance. *Total Quality Management and Business Excellence*, 25(6), 602-617. Retrieved from DOI: 10.1080/14783363.2013.850812.
39. Legner, Ch., Eymann, T., Hess, T., Matt, Ch., Böhm, T., Drews, P., Mädche, A., Urbach, N., & Ahlemann, F. (2017). Digitalisation: Opportunity and Challenge for the Business and Information Systems Engineering Community. *Business & Information Systems Engineering*, 59(4), 301-308. Retrieved from DOI 10.1007/s12599-017-0484-2.
40. Imgrund, F., Fischer, M., Janiesch, Ch., & Winkelmann, A. (2018). Approaching Digitalization with Business Process Management. *Multikonferenz Wirtschaftsinformatik*, March 06-09, 2018, Lüneburg.
41. Sliż, P. (2019). Robotization of Business Processes and the Future of the Labor Market in Poland – Preliminary Research. *Organisation and Management*, 2(185), 67-79. Retrieved from https://ssl-kolegia.sgh.waw.pl/pl/KZiF/czasopisma/oik/numery/Documents/2019_2_185/sliz_robotization_of_business_processes_and_the_future_of_the_labor_market_in_poland_preliminary_research.pdf.

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