

AUTOMATION FROM THE PERSPECTIVE OF MODERN SERVICES SECTOR IN POLAND

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Purpose: The aim of the study was to find out how automation is perceived by representatives of the companies from the Modern Business Services Sector (MBSS) in Poland. Research questions were posed, which referred to the assessment of the importance of automation and the readiness of companies to implement it.

Design/methodology/approach: The answers were obtained on the basis of the realisation of 20 individual in-depth interviews - conducted among representatives of various companies from the MBSS.

Findings: Participants in the study positively assessed the importance of automation in the operation of their companies, particularly from the perspective of maintaining competitiveness and keeping up with economic trends. Respondents declared a high level of readiness to implement work automation systems and programmes, although only a small proportion of the companies represented were actually taking any action in this regard. Both organisational culture, company resources and customer demand were identified as key facilitators of automation. In contrast, customer relationships and insufficient company resources were the most important barriers.

Originality/value: There is an insufficient amount of scientific studies on factors supporting and blocking the introduction of automation in MBSS enterprises in Poland. Due to the fact that the conclusions from foreign literature do not allow for generalisation to enterprises in Poland, the overarching aim of the work presented in this article is to fill the gap in the literature concerning factors supporting and blocking the introduction of automation in MBSS enterprises in Poland.

Keywords: intelligent process automation (IPA), robotic process automation (RPA), modern business services sector (MBSS), in-depth interview (IDI).

Category of the paper: Research paper.

1. Introduction

The Modern Business Services Sector¹ is at the forefront of digitalisation, impacting other parts of the economy in both the manufacturing and service sectors (NUB SRK, 2020). For example, in Q4 2021 54 per cent of the transactions that took place in the outsourcing market were related to digitisation-focused processes (digital-focused outsourcing), which can include, but are not limited to: data analytics; cyber security; automation; cloud adoption; mobility (Statista Research Department, 2022). Importantly, the digitisation and automation of the MBSS was already observed before the COVID-19 pandemic (Manning et al., 2018; Ribeiro-Navarrete et al., 2021), the outbreak of which only provided an additional (albeit significant) impetus, resulting in centres introducing intelligent process automation (IPA) solutions or using robotic process automation (RPA) and artificial intelligence (Kholiya et al., 2021; Siderska, 2020; Van Looy, 2021).

Among the goals of introducing IPA in general, the need to optimise costs, improve the quality and speed of services or reduce manual work stands out. In contrast, key barriers to the introduction of process automation include the inadequate quality of the data held, lack of financial, time, as well as competence resources to implement IPA (Suri et al., 2018).

Industry reports suggest that the majority of centres in Poland (which have introduced IPA), implement RPA, and nearly half of centres also use machine learning (ABSL, 2022). However, the actual estimation of the scale of automation in Polish companies is significantly limited for at least two reasons. Firstly, cost- and knowledge-intensive solutions (e.g. AI, RPA) have an impact on building the competitiveness of companies (Nowacki, Wasilik, 2016), making them (e.g. related algorithms) most often subject to corporate secrecy, including under copyright or patent law (Hulicki, 2021; Wyczik, 2021). Secondly, the development of automation solutions is subject to strong dynamics of change (and thus difficult to record), as suggested by both academic studies and industry reports (Chheda et al., 2021; Deloitte, 2021; SSON, 2021).

Nonetheless, it is predicted that RPA backed by modern technology will become even more versatile (Siderska, 2020). Along with artificial intelligence, robots will be able to develop a variety of solutions to facilitate human work organisation (Madakam, Holmukhe, Jaiswal, 2019). Bots combined with smart technologies will accelerate the pace of learning processes, while integrated RPA with technologies such as machine learning, artificial intelligence (cognitive) and data analytics (e.g. Big data) will enable the processing of data (available in real time) as well as even more accurate development of predictions (Ivančić, Suša Vugec, Bosilj Vukšić, 2019). Industries will be supported by RPA to improve business processes and optimise

¹ The modern business services sector includes (Gnusowski, 2018): business process outsourcing (BPO), information technology outsourcing (ITO), services provided by so-called shared service centres (SSC) and research and development services (R&D).

operational efficiency all the time. The implementation of RPA will provide organisations with the opportunity to save money and increase process efficiency by automating some simple and repetitive tasks, thus ensuring better quality and accuracy of work.

Despite the many advantages of RPA, there are many risks and challenges that stem directly from the fact that RPA is not suitable for every type of task. This thus highlights the importance of staff skills in correctly identifying processes that are suitable for automation. In addition, RPA operates between different web-based systems and applications (e.g. ERP), requiring the existing infrastructure to be built on top of highly complex IT solutions, where any, even minor, error made during the coding process can result in disruption to the organisation. In addition, the implementation of RPA comes with challenges regarding data security and privacy. It is important to ensure that sensitive data is not misused. After all, unauthorised access to the RPA system, and including databases, can result in serious consequences that stem directly from the possibility of service manipulation (Fernandez, Aman, 2021; Syed et al., 2020).

From another perspective, as suggested by McKinsey Global Institute studies (2017, 2020), nearly half of occupational activities could be automated to some degree using current technological solutions, while in more than 60% of occupations, at least a third of the tasks performed could be fully automated. Predictions made for 2030 suggest that changes as a result of automation would predominantly affect occupations that are strictly physical in nature, as well as those involved in data processing. From the perspective of the MBSS, this would mean significant changes with back-office processes.

However, there is no doubt that the trend towards IPA/RPA/AI will continue with increased vigour until it eventually begins to affect the workforce, particularly in standard services. As a result, lower-skilled employees will need to be retrained to perform more advanced and complex middle-office and front-office tasks, and a hybrid workforce will become standard. This will translate into an increased demand for professional data analysts, big data analysts and artificial intelligence experts, or RPAs - in the form of experts in user interface enhancement or problem solving (Seibt, Vestergaard, 2018). Without AI solutions, companies will not be able to effectively process and analyse the ever-growing stream of different types of data, collected through all possible channels.

With all this, the prevalence of wage, knowledge and time arbitrage in the offshoring process may be important (Zorska, 2012). Despite the generally positive image of the MBSS in Poland, it is largely based on cost arbitrage (Malik, 2018), which makes the implementation of cost-intensive automation solutions potentially beneficial from the perspective of a foreign operator. On the other hand, the implementation of automation solutions can significantly translate into an increase in the attractiveness of a location in terms of service investments. As suggested by the authors of the A.T. Kearney report (Sethi, Raudabaugh, Suman, 2021), the accelerated pace of technological investments made by corporations from various industries will lead to an increase in the importance of the results obtained by individual countries in the area of the so-called digital resonance (which includes measures concerning, among others:

digital skills; legal and cyber security; corporate operations; productivity) - compared to traditional indicators such as cost attractiveness, among others. While Poland is characterised by a high level of cost attractiveness, its attractiveness resulting from digital resonance is rated low. This implies a need for significant progress, which could include improving the ability of legal systems to adapt to digital models, as well as improving the digital skills of the workforce (Sethi, Raudabaugh, Suman, 2021).

1.1. Objectives of the study

It should be stressed that there is a lack of scientific studies on factors supporting and blocking the introduction of automation in MBSS enterprises in Poland. Despite the conclusions from foreign literature, the possibility of their generalisation to enterprises in Poland is limited, mainly due to the fact that the market of modern business services is developing in different countries of the world at a different pace, and some countries have even specialised in providing this type of services to international business. Therefore, the overarching aim of this thesis is to fill this gap in the literature and, more specifically, to answer the following research questions through an exploratory study:

1. What is the importance of automation (and the associated opportunities and threats) in the functioning of companies as perceived by representatives of MBSS companies in Poland?
2. What is the willingness of companies to automate processes, and in particular what factors are perceived as facilitating or inhibiting organisations from implementing process automation?

2. Method

A series of twenty in-depth individual interviews (IDIs) were conducted with representatives of MBSS companies in Poland. For this purpose, the Google Meet platform was used due to the possibilities of conducting and recording the conversation using audio and video. Respondents were individually invited to participate in the study via email in advance. If the invitation was accepted, each participant was contacted by telephone to arrange an interview date and time. On the appointed date, participants received a link to the Google Meet platform via email. At the beginning of each interview, participants were informed of the voluntariness and anonymity of their participation, while also being informed that the interview would be recorded for the purpose of creating a transcription (for data analysis only). After obtaining consent from the participant for participation and recording, qualified facilitators conducted the interview according to a standardised scenario. The duration of each

meeting did not exceed 30 minutes. Based on the recordings obtained, transcriptions of the interviews were made and analysed.

In order to analyse the data that were obtained through individual in-depth interviews, the Thematic Analysis (TA) method was used. Thematic analysis enables significant patterns or themes of expression to emerge from the raw data through a flexible interpretive approach (Nowell et al., 2017). Thematic analysis is assumed to be appropriate when the purpose of the study is to explore participants' perceptions, insights and experiences (Braun, Clarke, 2009). Taken as a whole, TA represents a multi-step process that includes: organising, identifying, describing and reporting themes from a dataset (Krzystek, 2018). For the purpose of this study, the following steps were adopted in carrying out the thematic analysis of the recordings/transcriptions from the individual in-depth interviews conducted:

1. Familiarisation with the data in the form of repeated listening / reading of the interview transcriptions.
2. Creating codes - extracting distinctive points (so-called thematic areas) from the research material, which enabled the classification of information extracted from the qualitative data.
3. Creation of thematic threads - sorting the coded content to extract thematic threads.
4. Re-reviewing thematic threads - final verification of the extracted threads to check relevance against the entire data set.
5. Compilation of results - bringing together the relevant elements of the analysis with illustrative examples within the thematic area.

Two researchers, independently of each other, analysed the interview transcriptions and created codes from them. In the next step, the same researchers compared their findings to finally develop final versions of the codes and thematic strands by consensus.

2.1. Materials

The individual in-depth interview (IDI) scenario was a set of questions designed to be asked of the interviewee. The thematic areas around which the interview questions were formulated were developed on the basis of the literature review. For each area, a general call-out question and supplementary questions were formulated and presented to the interviewee. The grammatical form of each question was open-ended, which motivated the interviewee to give a broader answer. This way of conducting the IDI gave the respondent the opportunity to speak with a high degree of freedom and to raise the issues they felt were most relevant. Depending on the course of the interview, it was assumed that the order and phrasing of individual questions may have varied slightly. This was a safeguard in case the selected respondent's answer was exhaustive (i.e. to the extent that there was no need to deepen the participant's statement through additional questions). The questions posed addressed the issues outlined in Table 1.

Table 1.*Scenario for in-depth individual interviews*

Subject area	Trigger question (additional)
Verification/ eligibility questions	What position do you hold?
	How many employees does your company have?
	What industry does your company represent? (Is it a Modern Business Services company?)
The importance of process automation	How important is process automation and new technologies such as VR, artificial intelligence, Big Data analytics, Blockchain, etc. to your company? (Which of these technologies are most relevant to your company and why?)
Opportunities and challenges from process automation	What opportunities do you see for your company as a result of the progressive automation of processes and the implementation of more and more new technologies? What risks do you see for your company arising from the progressive automation of processes and the implementation of more and more new technologies?
Readiness to automate processes: facilitators and barriers	How would you describe your company's readiness to automate processes and implement new technologies in relation to other MBSS companies? (What makes it easier for your organisation to implement process automation and new technologies to match sector trends? What blocks your organisation from implementing process automation and new technologies to match sector trends?)

Source: Own work.

2.2. Participants

The research sample comprised 20 people. According to the recruitment criterion, people responsible for business development processes in the MBSS companies or board members of the MBSS companies, or senior managers with knowledge of the company's development and/or strategic activities, were eligible to participate. The characteristics of the participants in the study are presented in Table 2.

Table 2.*Characteristics of participants in individual in-depth interviews*

No.	Position	Type of company	Number of employees
1	Head of the sales department, member of the board	IT services	560
2	Chief Executive Officer	HR services	25-300
3	Senior Consultant, Senior Manager	Advisory and consulting services	>70
4	Chief Executive Officer	HR services	roughly 50
5	Recruiter	Outsourcing	170
6	HR director	BPO (accounting, HR-payroll, legal)	150
7	Recruitment Coordinator	marketing	150
8	Recruiter	IT services	1000
9	Recruitment Manager	IT services	550
10	Recruiter	IT services	60
11	Senior Recruitment Specialist	HR outsourcing	400-500
12	Recruitment specialist	IT services	>80
13	Sourcing Partner	IT services	>2000
14	Chief Executive Officer	BPO	roughly 50
15	Senior Trainer	call center	roughly 500
16	Chief Operation Officer	IT services	>450
17	Project Manager	Legal services	500-1000
18	Internal Recruitment Specialist	HR consulting	roughly 60
19	Project Manager	Real estate agency	roughly 50
20	Member of the Board (R&D)	Software producer	180

Source: Own work.

CEOs (board members), COOs, managers and HR representatives (seconded from the company as competent persons to be interviewed) participated in the study. The respondents represented shared service centres, business process outsourcing and IT services outsourcing companies. Eleven companies represented the HR, sales and marketing and legal services outsourcing industry and the remaining eight companies represented services outsourcing. The companies (or their Polish branches) participating in the study employed, at the time of the research, between 50 and 2,000 employees (including consultants seconded for outsourcing services).

3. Results

The Thematic Analysis conducted allowed for two overarching thematic threads: 1) the importance of process automation; and 2) the readiness to automate processes. In the case of the importance of automation, two categories were identified regarding perceived opportunities and threats from automation. In the case of readiness for automation, two categories were also distinguished, relating to factors supporting and counteracting automation, respectively. For this reason, the remainder of the results will be described according to the extracted thematic threads. On the other hand, as a result of the process related to the highlighting of utterance fragments (texts from the transcriptions) that directly addressed the research questions and thematic threads posed, 129 utterance fragments/text from the in-depth individual interviews were identified.

3.1. Importance of process automation

The vast majority of respondents stated that automation in general is of great, if not enormous, importance to their companies. Only two participants described it as an element of average importance in the functioning of their business (explaining this by the profile of their company and the needs of their customers). The dominant opinion on automation was justified primarily by the need to build competitiveness in the market. Meeting industry trends and keeping up with the needs of external customers were the main motivators for automation, according to participants.

Participant #20: *The more processes are automated, or if we talk about our customers, the more customers want to have automated processes, the better for our company, because we can sell more services to them. The more we have standardised and automated products, the more we reach a larger group of people.*

An equally important factor appeared to be the need to optimise the work of companies. According to the participants, the automation of internal processes makes it possible to standardise/standardise working conditions, including minimising the workload of employees

(as a result of reducing the number of low-complexity tasks assigned to them). Some participants see automation as a kind of safeguard for sustaining business continuity. On the one hand, participants referred to employee turnover or the occurrence of a vacancy in a given position as an example of a situation in which implemented automation would enable specific tasks to be sustained despite such events. On the other hand, participants pointed to the need to process and appropriately secure voluminous amounts of data while possibly minimising errors in both of these processes - precisely through automation.

Participant #7: *For the company, this is certainly very important, for example in terms of the availability of job candidates with the right competences.*

Participant #13: *Certainly automation makes our work easier. We have a lot of databases in our company where a lot of information is stored, for example automatic record searches definitely improve our work.*

The importance of individual new technologies appeared to be more varied in the opinions of participants. This is a direct result of the profile of the business, the competence of the teams, company standards and procedures and customer expectations. Among the technical solutions that participants mentioned as key - now and in the future of companies - were Cloud Services, Python, Java, .Net, OCR, Big Data analytics, AI and technologies supporting data security.

Participant #1: (...) *Java, .Net are the technologies that matter the most to us because the largest number of projects we carry out are in these technologies, and programmers specialising in these two technologies and the largest make up the largest number of people employed by us.*

Only two participants referred to the importance of Blockchain and VR technologies. In both cases, the aforementioned technologies were identified as solutions whose use could potentially be relevant in the further future, although not necessarily in the form of direct application by the company itself.

Participant #17: *It all depends on the context. So far, I haven't seen the use of blockchain technologies in our industry [legal and peri-legal - ed]. I think it's not so much the need to keep up with blockchain technology, in terms of its functionality, but in terms of the potential legal issues that arise from it.*

3.2. Perceived opportunities and threats

Representatives of the MBSS were asked about opportunities and threats strictly related to process automation and the implementation of new technologies in their companies. Among the perceived opportunities, the belief in an increase in company revenues, as well as the overall cost efficiency of companies, dominated. According to the participants, this would be due to the fact that automation directly leads to the modernisation of organisations (as a result of the introduction of innovative solutions), the standardisation of processes (translating into time savings in the execution of tasks) and the expansion of services offered. Participants concluded

that each of these factors is of great importance to external stakeholders - it would therefore translate into an increase in the number of customers and orders.

Participant #8: *Myself, I think it's only better for us, because there will be more projects, more clients, more work, also we should only be happy.*

Some respondents also mentioned opportunities in the form of freeing high-quality human resources from routine and repetitive - and therefore tedious or demotivating in the long term - tasks. In their view, this would result in highly competent people being seconded to other tasks that would make optimal use of their abilities. This opportunity was pointed out as being directly linked to keeping employees motivated on the one hand, and on the other hand to simplifying customer service and thus increasing sales opportunities and reaching a larger audience.

Participant #10: *In terms of opportunities, through automation we enable our employees to deal with new and more interesting areas, because they can automate certain processes for themselves and not deal with them anymore. Our organisation assumes that what can be automated is not interesting enough for a human to do.*

The risks mentioned by participants ranged from the potentially high costs of implementing innovative solutions to increased market competitiveness. The divergence in respondents' opinions is illustrated, among other things, by the issue of job cuts as a result of automation. For example, individuals representing HR companies expressed concerns about their jobs, stating that the work they do will be completely replaced by robots and automation solutions. These opinions, however, were not shared by the other participants, who, on the one hand, denied that their jobs would ever be cut as a result of automation, and, on the other hand, pointed to automation as an opportunity for job redeployment in order to better manage human resources.

Participant #6: *I thought that automation would make the HR department unnecessary too, because after all, we are not going to talk to robots, motivate them to work.*

Participant #17: *(...) technology cannot function without humans. Therefore, a popular myth, a source of fear, is that machines will replace us. (...) in the case of outsourcing, the employees freed from their existing jobs are usually a very valuable resource that can simply be re-located to other work, often more valuable.*

No less, participants almost unanimously referred to the rising financial costs associated with implementing automation solutions as a threat to their companies' operations. In doing so, however, it should be clarified that, in the context of costs, participants pointed to the increasing financial expectations of candidates for automation-related positions (resulting from the need for high and specialised skill levels) as the main threat. At the same time, some participants pointed to the difficulty of attracting highly skilled human resources. The progression of automation throughout the sector would, in the opinion of the participants, reduce the market potential of a company that lacks highly qualified specialists.

Participant #8: *A threat is certainly the problem of acquiring new employees, because the market is demanding. Nowadays, a lot of new foreign companies have appeared on the market, which offer high salaries for employees. We, as a Polish company, often cannot beat that, unfortunately. So the danger is that we simply won't be able to recruit as many people as we need.*

Automation, enables standardisation and optimisation of a company's operations, in the opinion of individual participants may at the same time lead to the emergence of more competitors that provide the same services using similar tools.

Participant #2: *The threat could be theoretically a lot of competition.*

It is noteworthy that out of the entire sample, only two representatives of the sector stated the absence of any threats - resulting from increasing automation and the implementation of more and more new technologies.

Participant #12: *These are not threats, they are opportunities for development and to save time.*

3.3. Readiness to automate processes

According to the majority of respondents (i.e. 15/20), their readiness to implement work/process automation systems and programmes is at a high level. However, it is important to delineate between the declared readiness and the activities actually undertaken in this regard. Only five participants declared that they were implementing (i.e. ongoing at the time of the survey) systems and programmes to reduce the human work required. Ten respondents indicated that despite plans and readiness to implement, automation is still not at the expected level and is being implemented too slowly and therefore inefficiently. In turn, five representatives indicated that the level of automation and plans for its implementation in their companies is very low. At the same time, all participants shared the opinion regarding the generally low level of automation in high-tech companies. For the above reasons, it is important to take a closer look at the participants' responses that referred to potential facilitators and blockers of process automation.

Perceived facilitators and barriers. Of all the factors that respondents cited as key motivators for implementing new technologies, three areas stood out: (1) company culture; (2) company resources; and (3) customer demand.

In the first area, participants unanimously stressed the importance of a pro-development approach by the owners and management to the implementation of the company's strategic goals. Such an approach, according to the participants, includes taking steps and actions to follow sectoral trends, including openness to new technological solutions. Some participants linked this directly to the fact that the company represented has foreign capital, as well as a general organisational culture based on openness and an out-of-the-box approach to the execution of tasks. One person directly referred to the use of agile and scrum practices as key aspects favouring the implementation of automation solutions. In doing so, it should be noted

that the individuals who referred to the importance of organisational culture in their statements represented companies that already had processes that had been automated at the time of the interviews.

Participant #7: *First of all, we are an American company that is always open to new technologies, that is not a conservative, closed company. The company's culture of openness makes us open to new technologies.*

In the case of company resources, participants referred directly to financial aspects (i.e. the available budget, or the ability to finance the implementation process of new technologies) and the facilities of the tools they have, which could be used for implementation work. However, these were not exclusive factors in this area. Equally important in the opinion of the participants was having suitably qualified or experienced specialists who would be directly responsible for the implementation and monitoring of processes. Ultimately, participants representing smaller companies, unanimously stated that it was the scale of their business (relatively small) that enabled them to adapt immediately to external realities or customer requirements - and therefore to automate individual processes.

Participant #10: *Also a high level of experienced professionals, first of all we have people who are very experienced, their competence allows them to act quickly. And the question of scale. We are not a big company, we can modify and implement these processes quickly.*

Finally, participants highlighted the importance of external stakeholders in the form of customers. In this case, it was emphasised that, in the name of maintaining long-term customer relationships and attracting new customers, it is important to streamline processes and introduce new tools - which, according to the participants, is directly related to the progress of automation in companies. Then again, as almost every participant stated, their willingness to automate would transfer into real action, particularly if there was a real need, or external pressure in the form of customer demand.

Participant #1: *I also think that this portfolio of customers is such a trigger for our organisation, because of our cooperation with them we have to improve a lot of processes, get some certifications, introduce a new tool and this also definitely influences the development of automation.*

The factors that participants felt were counteracting the implementation of automation aggregated within the following two areas: 1) financial and human resources; and 2) the needs of external stakeholders. Significantly, six of all participants stated the absence of any barriers. Therefore, the views presented below are based on the responses of fourteen participants.

With regard to the first area, each participant referred to the insufficient financial background a company would have to incur when implementing new technologies. In the opinion of the participants, this would involve not only the purchase of appropriate tools, but also proper budget planning, including the reallocation of financial resources to speed up the implementation process, as well as the development of relevant departments (e.g. IT).

Participant #1: *I think that automation is certainly blocked by a lack of resources. To introduce processes you need resources, you need people involved, and there are so many projects that it is impossible to focus solely on automation.*

Participants went on to highlight the lack of access to skilled staff and resistance from existing employees due to reluctance to learn/use new technological solutions. In doing so, it is important to emphasise that the aforementioned reluctance to learn was not only justified by participants' attitudes, but also by the extensive number of newly emerging technological solutions, the competent acquisition of which is beyond the physical capacity (i.e. in a short time) of even an experienced employee.

Participant #17: *In our industry, there are quite a lot of people with a conservative attitude towards technology, preferring solutions that can be trusted, that are very safe, very analogue. So, it's about the reluctance of users to interact with technology in general. But also, even a technology-friendly person at some point gets tired if they have to learn about the nth solution.*

The second key area of barriers concerned the needs and pressures of external stakeholders - more specifically, the companies' customers. On the one hand, participants pointed to a situation in which a given customer requires the use of older technological solutions, which, in the opinion of the company, will not be as effective as newer solutions. The reason for this situation, in the opinion of the respondents, would be not only the requirements of the clients, but also their infrastructure - preventing the use of new technologies during the execution of the order. On the other hand, participants referred to the opposite situation, in which it is the client who pressures the use of newer and newer technological solutions, so that human resources are strained by the constant learning of a particular, newly chosen solution. Individuals explicitly pointed out that when there is no apparent (financial) benefit from using new and expensive solutions for the benefit of the customer, it is profitable for their company to stay with previously proven and less costly processes.

Participant #7: *Sometimes there is a need to negotiate with clients on the technology used. Sometimes clients necessarily want to work on some specific technology, even though we can see that it will not be successful.*

Participant #8: *As far as our company is concerned, there is nothing blocking us, however we also work with clients (...). So it's kind of a blockade due to the technology the client is using in terms of being able to integrate solutions.*

4. Summary and discussion of results

The aim of the presented study was to find out how automation is perceived by representatives of companies in the Modern Business Services Sector in Poland. Two research questions were formulated relating to the assessment of: 1) the importance of automation

(opportunities and threats); and 2) the readiness of companies to implement it (enabling and counteracting factors). Answers to the questions were obtained through a thematic analysis of data obtained from twenty individual in-depth interviews - conducted among representatives of a variety of the MBSS companies.

Participants in the survey positively assessed the importance of automation in the functioning of their companies, particularly through the prism of maintaining competitiveness and keeping up with the ever-changing trends in the sector. The implementation of new technologies was seen as an opportunity to broaden the offer to customers, modernise and optimise the functioning of enterprises. Automation was associated with an improvement in working conditions, if only as a result of minimising the burden on employees, who (in the absence of implemented automation solutions) are required to perform routine tasks of a lower level of complexity. Among the perceived opportunities, the strongest emphasis was placed on the increase in revenue of companies, as well as the overall cost efficiency of companies. On the other hand, it was possible to deduce from the participants' statements that increasing direct costs (implementation of automation solutions) as well as indirect costs (wages for highly specialised employees) represent the main threat to their companies' operations.

Interestingly, the overwhelming majority of participants unequivocally stated that automation would not replace employees in their case. This thus reflects the observed trends in the MBSS in Poland. In contrast, in the academic literature, estimates of the impact of digital technologies on employment vary widely (Ciarli et al., 2021). Some views are more pessimistic, i.e. digital technologies will mainly lead to the loss of some jobs (Acemoglu, Restrepo, 2019; Frey, Osborne, 2017, Kuzior, 2022); others are more optimistic, i.e. digital technologies will mainly improve existing jobs or create new ones (Arntz, Gregory, Zierahn, 2017; Felten, Raj, Seamans, 2019); and still others take a more neutral position, i.e. the effects will be mixed (Das et al., 2020; Nedelkoska, Quintini, 2018). Nowadays, it is increasingly suggested that, with the development of the fourth industrial revolution, complementarities between automated solutions and workers performing complex cognitive tasks will be highlighted (Ciarli et al., 2021). In addition, it is worth noting the view marking the positive impact of the digitalisation of work on sustainability (Kuzior, Kettler, Rąb, 2022). As also noted by the study participants themselves, process automation can complement humans in performing tasks that require the processing of vast amounts of information and data, thus supporting professionals.

Respondents declared a high level of readiness to implement work automation systems and programmes, although only a small proportion of the companies represented were actually taking any action in this regard. Both organisational culture, company resources and customer demand are key facilitators of automation. On the other hand, however, both customer demand and insufficient company resources can be barriers. The results illustrated a high convergence between the perceived opportunities arising from automation and the facilitators of its implementation. The same applies to the complementarity of perceived threats and barriers.

On the other hand, a certain paradox can be seen, for example in the fact that, while automation is perceived as an opportunity to improve a company's financial performance, it is not implemented - precisely - because of its high financial costs.

The conclusions obtained and their interpretation should be considered with due regard to the limitations that accompany the study carried out. The exploratory nature based on the analysis of qualitative data generally limits the possibility of drawing conclusions about cause-and-effect relationships or relationships. Despite the large sample by the standards of individual in-depth interviews, it cannot be considered representative.

No less, the information obtained can provide an input or basis for designing further hypothesis-testing-oriented research. The opportunities/threats and facilitators/barriers identified in this study can be used to operationalise factors that should be further verified, for example using predictive models. Future research could, on the one hand, focus on the general concept of process automation or, on the other hand, on detailed copies of the technology that fits into this area. Research in this direction should be realised on larger research samples, appropriately estimated for the predicted effect power. It would also be important to select the sample with a view to an equal distribution of representatives of the various industries in the MBSS.

Regardless of the direction taken, it is essential that every effort is made to better understand the factors that could be used to plan measures for the spread of automation in the MBSS companies, including the issue of employee adaptability to new roles and the handling of new processes not yet automated. Quite ironically, it could be argued that automation will not happen until the human responsible for it takes action. As one interview participant (#20) concluded: *It all comes down to people. If we have those who understand what's going on, then implementing any new tool is literally no problem at all.*

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