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AUTOMATION AND DIGITALIZATION OF BUSINESS PROCESSES – NEW CHALLENGES ARISING, INTER ALIA, FROM THE COVID-19 PANDEMIC

Abstract: The scientific and technical progress is unstoppable. Information technologies have an impact on every spheres of social life, including accounting. The automation of business processes is a common part of business and accounting practice. Manual, regularly occurring transactions, which are made by accountants nowadays, are gradually being replaced by information technologies and automatic robotic systems. The accounting entities fully use cloud storages, artificial intelligence, blockchain technologies, etc. It is even assumed that some professions, due to robotization and automation of business processes, will gradually disappear within a few decades. The digitalization and automation of business processes have recently been accelerated in many cases by the crisis related to the COVID-19 pandemic. The paper focuses on the assessment of the level of automation in different types of accounting entities, with an accent on automation in accounting practice, as well as on new challenges arising from it, many of which are the result of measures taken in the last two years due to the COVID-19 pandemic.
Keywords: Accounting, Automation, Digitalization, E-invoicing, COVID-19 pandemic

1. INTRODUCTION

In the recent period, the use of information technology in business processes as a part of Industry 4.0 has been growing. If companies want to remain competitive, they should focus on more efficient business process solutions, with accent on digitalization and automation. This is supported by Kontić, & Vidicki, (2018) who state that the key factors, which determine the company's potential to become a digital organization are proactive leadership and investment. Digitalization relates to all business processes, such as acquiring new customers, taking care of existing ones, developing new products, automatic tracking orders, mobile warehousing, online invoicing, intelligent store management, or remote document approval. Information technologies help to optimize and automate these processes. Nowadays, it is obvious to issue an invoice right from the smart phone, or to pay invoice just by one click. Electronic banking belongs to areas, where we can see a huge development in digitalization and increasing usage of information technologies. Payments realized by smart phone or by smart watch, payment of invoice by QR code scanning, or just simple creating an account using smart phone with an Internet connection belong to a few examples of information technologies application in business.
Business processes, including those related to accounting, face numerous challenges in the area of digitalization (Gulin et al., 2019; Gotthardt et al., 2020; Marshall, & Lambert, 2018), to which belong the use of big data in accounting, cloud computing, artificial intelligence and blockchain technology that affect the future of business processes. Traditional methods are replaced by Internet based accounting systems. Implementing information technologies in business processes may contribute to increasing of competitiveness of economy, as well as of competitiveness of micro-entities (Domazet, Zubović, & Lazić, 2018). Due to massive digitalization it is expected that many professions will disappear altogether (Jylhä, & Syynimaa, 2019). According to Grace et al. (2018), there is 50 per cent chance that artificial intelligence will beat the performance of human beings in 45 years and replacing the human workforce totally in 120 years.

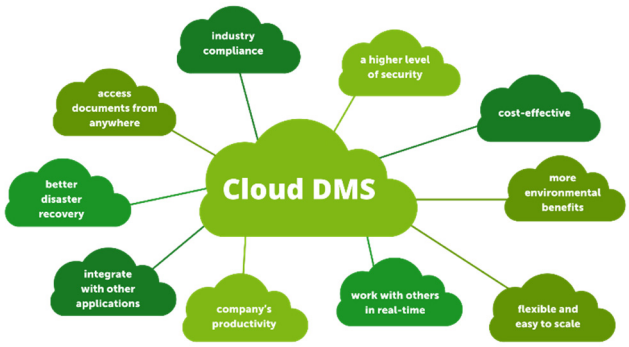
COVID-19 outbreak that has been here with us for 2 years yet, has affected many common stereotypes. The shift of work performance into the online environment, meeting restrictions, or a curfew have had a great impact on the change of standardized ways of work performance of several professions. Thus, still more and more companies use the e-commerce. Business in e-commerce has thrived in recent years, and this growth has also been significantly affected by the COVID-19 pandemic.
What are the possibilities of automation in companies? How to automate and optimize business processes in e-commerce conditions? How to interconnect these processes with accounting system? We have tried to answer these questions in the paper. Therefore, the purpose of the paper is to identify areas and possibilities for improvement of business and accounting processes with use of information technologies, digitalization, and automation.

2. DOCUMENT MANAGEMENT SYSTEMS

The shift of businesses into the online environment due to restrictions related to COVID-19 outbreak has the technology industry growing faster more than ever. New challenges regarding digitizing of accounting records caused by movement and meetings restriction, have forced companies to digitize paper documents into the electronic format. The very popular form of processing accounting documents was just scanning them and sending them in .pdf format to responsible persons, or just using the electronic format with the electronic signature. The increasing number of electronic documents and accounting records put new requirements and challenges on accounting documentation, issuing of accounting records, their circulation in the company, and their storage (archiving). Many accounting entities fully use the cloud storage in their processes for these purposes, with possibility of electronic storage of accounting ledger, automatic recording and e-storage of invoices, as well as e-invoicing. According to Avokaado (2021), almost 48% of businesses choose to store their confidential and important data in the cloud, as the cloud-based documentation enables flexibility and security. In spite of massive digitalization, there are still documents, which the accounting entities are obliged to issue and store in the paper form (such as documents relates to employment relations, labor law documents, etc.). These documents can be stored in the paper form, but also in the electronic form. Avokaado (2021) states some statistics that prove the inefficiency of on-premise paper documentation:

- *Companies spend an average of $25,000 to fill their file cabinets plus $2,100 a year to maintain them,*
- *Managers miss important info daily because they cannot find it because it is on paper,*
- *Almost 80% of the information in paper documents is never used again,*
- *Using paper can cost anywhere from 13 to 31 times more than the paper itself,*
- *70% of today´s businesses would go down in 3 weeks if they lost their paper records in a fire or flood,*
- *Each lost document takes about 25 hours to recreate,*
- *Redoing documents has cost US companies $1,5 trillion,*
- *A copy-paste error cost a company 10% of its annual profits,*
- *Workers waste 20-30% of their time managing documents, and*
- *Businesses lose $600 billion every year because of inaccurate or missing data.*

To avoid the inefficiency, the integrated cloud-based document management systems (DMS) has been established. The document management system could be defined as a computer-based system used to receive, track, manage and store documents, as well as reduce paper, which offers many benefits (Picture 1).



Picture 1: Cloud Document Management System
Source: Avokaado, 2021

According to Filipe, Martins, & Rocha (2019), implementation of DMS dematerializes, optimizes and simplifies the internal processes. Thanks to DMS, documents stored in the cloud can be accessed remotely, the only condition is an Internet connection. Documents can be retrieved, sorted by defined criteria. DMS regulates company´s compliance with legislation, which mandates the accounting entity to organize documents in a reliable host. Cloud DMS provides a higher level of security through cloud providers, who take security very seriously. Fees for cloud-based DMS are lower in

comparison with maintenance expenses, expenses for new computers, disk space, paper, ink, etc. This leads to reduction of overall expenses for document processing. Cloud DMS based on digital documents has environmental benefits due to less paper, less energy. Collaboration and documents sharing is easier with cloud-based DMS. The company can control who to give access to, so negotiating with other team members becomes easily. Thanks to DMS, the management can concentrate on decision-heavy tasks that directly impact company´s growth. DMS could be integrated with other company´s applications, systems, and software. It speeds up and streamlines the work. A cloud-based disaster recovery solution provides continued operations despite disruptions. This is more efficient in comparison with paper-based systems, because if unforeseen or unexpected circumstances, such as lockdowns, fires, or system failures occur, the company still can have access to its data, or can recover data much faster.
The advantage of documents digitization and electronic archives is mainly their accessibility for every employee of the company with an access. The documents do not need to circulate physically in the company. It saves costs, time, increases transparency and reliability, and on the other hand, reduces errors. An integral part of building an information system is backup and security. The basic requirement is the possibility to control an access to the system by name and password, the authorization of the user to work only with certain documents, and to use only allowed functionalities.
If the company wants to be able to operate as much as possible without paper and fully use the potential of digitalization, the electronic signature plays a significant role. There can be three different types of signatures (Podnikajte, 2021a):

- *The simple electronic signature without exactly defined format criteria or security level criteria, such as scanned handwritten signature at the end of the e-mail,*
- *The improved electronic signature that guarantees higher security, as it must meet certain criteria, e. g. allows to identify the signatory, for example signing of documents in internet banking, where it is possible to sign by entering a password from two-factor authentication,*
- *The qualified electronic signature that represents the form of improved electronic signature with additional requirement for security and identification of the signatory (through identity card with an electronic chip).*

Introduction of e-signature requires the change of processes and habits in the company. The experts agree that introduction of electronic signature brings many benefits, such as improvement of documents storage, time savings, elimination of manual errors, reducing the need for printing and scanning signed documents, or ecological aspect – paper savings.

3. AUTOMATION IN ELECTRONIC SHOP

Another area of business processes automation is an electronic shop (e-shop). The popularity of purchasing goods is growing, and due to several lockdowns during the COVID-19 pandemic, when most stores had been closed, e-shops were the solution for many entrepreneurs. In a fast-growing e-commerce business, the e-shopper must respond flexibly to new market trends, not lag behind the competition, constantly innovate, look for new sales channels, and improve existing ones. However, the process of ordering goods, payment and registration of payment, until goods are delivered to the customer, consists of many steps. This process can be significantly facilitated by automation using the Enterprise Resource Planning (ERP) information system.

3.1. Enterprise Resource Planning

The Enterprise Resource Planning system is according to Moon (2007) an enterprise information system designed to integrate and optimize the business processes and transactions in a corporation. It is the internal integrated information system used for management and coordination of all sources, workplaces and functions of business sphere through shared data storage. It is a category of business management software, usually a suite of integrated applications that a company can use to collect, store, manage, and interpret data from many business activities. According to Král (2019), the ERP is something like the central brain for all company´s activities that helps companies with enterprise resource planning and management. Due to globalization, it is necessary to look for any tools that will give the company a competitive advantage. Many companies achieve this advantage by using the ERP system. The ERP system combines customer management, human resources, enterprise intelligence, financial management, inventory and supply chain capabilities into one system (Picture 2). The ERP stores all entered data in one database, which allows all departments to work with the same information. The advantages of the ERP are (Midasto, 2021):

- *Increasing profit using the ERP system,*
- *Streamlining internal processes,*
- *Better analysis and data evaluation,*
- *Higher productivity,*
- *Customer satisfaction,*
- *Easier compliance and risk management,*
- *Easier warehouse management, and*
- *More accurate production planning and resource management.*

Picture 2: Enterprise Resource Planning
Source: Král, 2019

When integrating the ERP with the online store (e-shop), the list of products and the data update are done only in one system, in that of ERP, and the e-shop gets this information automatically. This integration brings many advantages, such as reducing of personnel costs, minimizing errors or the number of complaints, and increasing the e-shop credibility for its customers. Thus, the company can eliminate human errors and make the work of their employees more efficient. At the same time, the company has all the data needed for accounting for in the economic system. Thanks to this integration and adaptation, many processes run without the need for human intervention. The operation of the company is faster, more accurate and more efficient. Anyone in the company can check the order status, the number of issued invoices, or how the sales are rising or falling. The biggest benefit of the ERP system is (Podnikajte, 2021b) the centralization of all the e-shop agendas in one place – from order registration, requirements for the purchase of goods or materials (if the e-shop does not have it in warehouse), through issuing inventories from the warehouse, invoicing, accounting for, up to payment matching. Thanks to the ERP system, it is possible to have an immediate overview of the company as a whole, including related analyzes. The manager can evaluate the consumption of individual customers, the best-selling products, or product categories.
When thinking about integration the ERP system with the e-shop, the company should define functions, which will be provided by the e-shop and those which will be provided by the ERP system itself. If the entrepreneur handles a couple of orders a day, the interconnection between e-shop and the ERP system is not necessary.

3.2. Automation of Invoicing and Processing of Documents

Choosing the right invoicing application is a very important step. The e-shop company should answer questions, how to automate the invoicing and how to import these data into accounting (Podnikajte, 2022c). E-shops with only a few orders a day can issue invoices manually, using invoicing application or accounting software. If the number of orders exceeds the certain level, this manually provided activity becomes an unnecessary burden, unbearable for the entrepreneur, as well as for the accountant, and as the number of cases increases, so does the error rate. According to the Slovak legislation, the seller is obliged to confirm the order immediately. If the confirmation of orders is automated, the automation of invoicing can be the next step.
The invoicing depends on the time the payment is realized and, on the time, when the goods or services are actually delivered. The settings of invoice´s content, or mode of DPH, especially when a company delivers goods or provides services to customers abroad, are among other issues that should be taken into granted, when setting up invoicing processes.
Automated invoicing has many advantages:

- *The reduction of administrative and time burden on this agenda,*
- *A real-time overview of company´s income, profit, expected tax liability for VAT, unpaid receivables*,
- *An integration with warehouse,*
- *An integration with payment gateways, and*
- *An integration with transport companies.*

Invoices are generated automatically without the need for manual intervention and are imported into the accounting software, which also reduces the cost for the accountant´s work. Furthermore, the interconnection between the e-shop and the warehouse enables to monitor the amount of stocks and to predict the need of purchasing goods or materials for production. The e-shop operator can plan the purchase of inputs before he needs them, which provides a competitive advantage.

3.3. Automation of Warehousing and the Logistics Processes

Having enough inventory in the warehouse is one of the key factors for companies, especially for e-shops. If the goods are missing, the processing of the order is postponed, and the customer´s dissatisfaction grows. On the other hand, it is not appropriate to have a warehouse full of products, for which there is no demand. Therefore, the effective warehouse management, quantity optimization and automation of the purchasing process are important. According to Anđelković, & Radosavljević (2018) the functioning of order-picking process, which is very significant in terms of contribution to the competitiveness of company, depends on information technology, such as Warehouse Managements System.
Thus, the solution can be the investment into new technologies, such as semi-automated stackers with guidance, robotic registration sorting - packing line, automated table workstations, or the Autonomous Mobile Robots (AMR). Investing in technology should be based on economic base and quick return. The key indicator is turnover. The entrepreneur should be informed about how fast the inventories are selling. The purpose is the highest turnover at the lowest number of inventories in the warehouse. Many companies use (Podnikajte, 2022b) inventory mirroring, cluster picking or dynamic slotting. Inventory mirroring means that the bestsellers are not only in one place in a warehouse, but in several zones. The cluster generation method, which groups orders with the same priority and their individual items close to each other, helps to process orders more efficiently. Dynamic slotting helps to determine, where is the optimal place for storing a particular item. The storage of inventory items is not static, but varies according to season, the development of orders and their items. The virtual copy of the whole warehouse belongs to often used technology in e-shop.
The entrepreneur is thus able to automate purchase and sale of goods, and set up online campaign for low-turnover goods he needs to get rid of. Systems based on artificial intelligence can automatically select missing items with the necessity to re-order them. Sometimes these systems are able to send the order directly to supplier.
Intelligent technologies, modern systems and complex solutions help companies to save time, costs and even “feet” of their employees. Orders are processed faster, customers are more satisfied and the error rate is lower. As from the future perspective and the expansion of operations to more warehouses, the necessary capacities can be relocated and the technologies can be used exactly, where they are most needed at the moment. This will have a positive impact on sustainability and the environment, too.
Many companies use mathematics models to optimize the purchase and the quantity of inventories (Podnikajte, 2022a). It helps to improve the stock records, to settle automatic reminders, when inventories decrease under the minimum level, or to predict the inventory consumption. The automatic generation of online invoices, their export into the accounting software and their automatic accounting for, as well as the payment matching, are other examples of automated business processes.
Another step in processing of the order is issuing of goods from the stock. The artificial intelligence, such as automated control system, is most often used in warehouses in order to reduce errors caused by humans. Companies use all available technical means, such as code readers, Radio Frequency Identification (RFID) tags, calibrated proportional scales connected via a network to their ERP system, PDA devices, etc. RFID tags are a type of tracking system that uses smart barcodes in order to identify items (Pontius, 2022). The automated control system may look like this: The first level of control is being carried out in the individual sectors of the warehouse. The employee can verify the position of the item in the warehouse via the PDA at any time. Number of items are checked via a special scale. The system shows the storekeeper the corresponding number of pieces. The second level of control is being carried out at the output control, where the system, after reading the barcode, also displays an image of the component on the monitor for check in. The whole process of the output control can be recorded by cameras.

4. AUTOMATION IN HUMAN RESOURCES SPHERE

Digitalization and the technological progress have been applied in the human resources (HR) sphere, too. Automatic recording of employees’ attendance, using virtual reality system for trainings of pilots or doctors, using a cloud solution (data storage) for storing of employees’ data are only several examples of implementation of information technologies in human resources sphere. Owing to the information technologies, HR activities, such as monitoring and attendance records, absences, sick leave, annual leave, salary payments, benefits, training, completion of work contract of employees are carried out faster, more accurately, and easier than before (Berber, Đorđević, & Milanović, 2018). According to Slavić, Bjekić, & Berber (2017) usage of social networks, such as LinkedIn, Facebook & Tweeter, in implementing recruitment is becoming increasingly popular. Artificial intelligence, such as chatbots are good help in onboarding (the adaptive process) of new employees. The chatbot answers frequent questions from newcomers and replaces HR staff. The cloud data storage is a safer solution for employees’ registration in comparison with the paper form. Moreover, the external cloud companies invest more money to secure the systems they are providing for these purposes than the company itself.
The common example of automation in human resources is interconnection of the attendance system with the payroll software, and with the accounting software, where the salaries are subsequently accounted for. According to Berber, Đorđević, & Milanović (2018) the key advantages of electronic human resource management are the faster, more accurate and easier processing of information about employees, cost savings, the release of HR managers from administrative tasks, increased access to HR data, standardization of HR processes within the company, more consistent and up-to-date data on employees and their performance, and the like.

5. THE LEVEL OF AUTOMATION IN THE SLOVAK ACCOUNTING ENTITIES

Digitalization and automation are and will be connected with additional costs the accounting entities will have to bear, either for the technical and software equipment, or trainings of employees in the area of digital skills. Are the accounting entities ready for changes related with automation and digitalization? In what level are their business processes automated? The answers to these questions we have observed through the questionnaire survey that was realized among accounting entities in the Slovak Republic in the period from February 4, 2022 to February 18, 2022. The questionnaire survey was distributed to e-mail addresses of companies´ representatives (managers, heads of accounting departments, or other responsible persons). We have addressed 2 358 accounting entities from all Slovak districts, but only 132 respondents have responded to our survey.

The structure of accounting entities (respondents) according to the size of the company, the seat of their headquarters and the number of employees is displayed in the Figure 1 and the Figure 2.

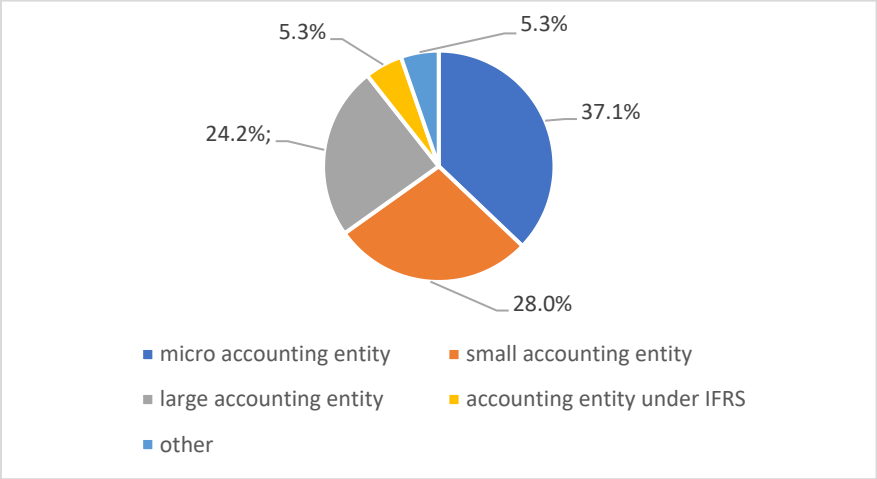


Figure 1: Respondents according to the size of the company
Source: Own research based on questionnaire survey

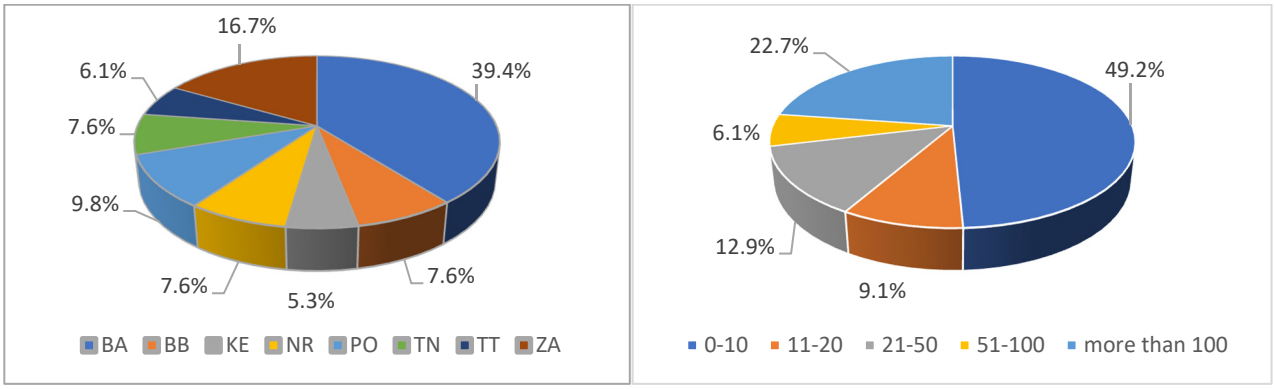


Figure 2: Respondents according to the seat of their headquarters (left) and number of employees (right)
Source: Own research based on questionnaire survey

As we can see from the Figure 1, most respondents were micro accounting entities (37.1%), small entities (28.0%) and large entities (24.2%). Most respondents have their headquarters in the Bratislava Region and in the Zilina Region (Figure 2 left). Regarding the number of employees, almost 50% of respondents have been smaller accounting entities employing less than 10 employees (Figure 2 right). Based on the legal form of accounting entities, most respondents were limited liability companies (77.3%), joint stock companies (15.9%), self-employed persons (5.3%). Two respondents were the organizational unit of a foreign accounting entity.

The most respondents were accounting entities providing the services (63,6%), the accounting entities operating in the wholesale and retail (18,9%), and the accounting entities operating in the manufacture (17,4%). The more particular structure of respondents according to their main activities is shown in Figure 3.

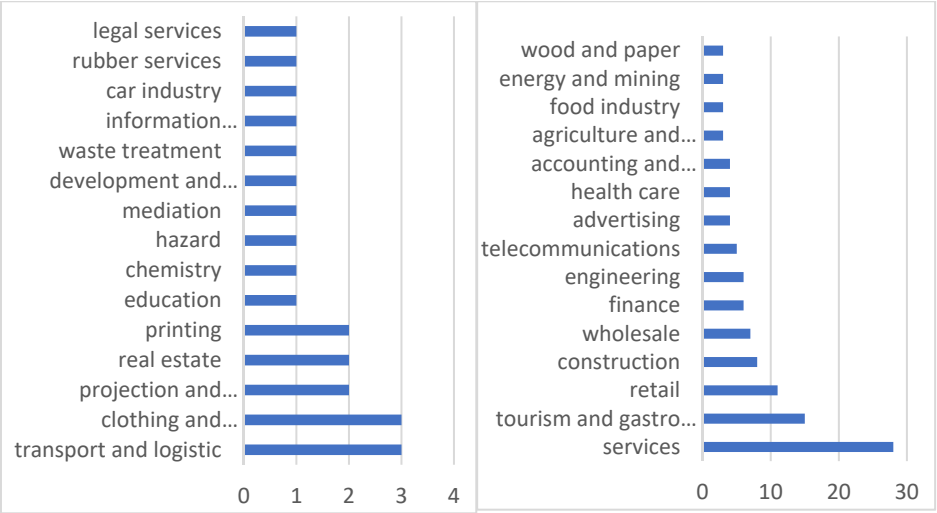


Figure 3: Respondents according to main activities
Source: Own research based on questionnaire survey

Based on the results of our research, up to 29.5% of respondents have all business processes in the company fully automated (from orders, through purchasing of goods, invoicing, payments, up to accounting for, including automation of payrolls and warehouse). Other respondents have stated partial automation of only several processes. For example, up to 38.6% of respondents have integrated invoicing with accounting system; up to 37.9% of respondents have only communication with the Financial Administration Authority (hereafter referred to as "FAA") automated; up to 33.3% of respondents have interconnected payroll and accounting; up to 30.3% of respondents is using the electronic invoicing and electronic signature; and up to 17.4% respondents have reported the warehouse management automation. Some respondents have stated that they have most of the software and databases interconnected, where any employee can log in to the system from anywhere via the Internet. One respondent from the retail sector has stated that they have several processes within the company automated, they are still working on automation, but the physical presence of the employee is still necessary. One respondent (a joint-stock company operating in the engineering sector, with more than 100 employees) has reported that despite the full automation of all business processes, including electronic invoicing, the archiving of documents in their company is still carried out in the paper form.
The level of automation in accounting entities participating in our questionnaire survey based on the size of the accounting entity and legal form is stated in Table 1 and Table 2. As Table 1 shows, full automation of business processes we can see in 6 of 7 accounting entities presenting their financial statements under IFRS (that represents 85.7% of this type of accounting entities), as well as in 19 of 32 large accounting entities (59.4%). Only 6 small accounting entities (16.2%), and 10 micro accounting entities (20.4%) have business processes fully automated. Based on these results, we assume that bigger accounting entities automate business processes to a much greater extent than smaller ones. The questionnaire survey has also proved that most accounting entities have integrated payroll with accounting system, as well as invoicing and accounting system.

Table 1: The Level of Automation Based on the Size of Accounting Entity

Automated Processes	Large Accounting Entity	Small Accounting Entity	Micro Accounting Entity	Accounting Entity under IFRS	Self-Employed Person	Total
Fully automated processes	19	6	10	6	-	41
Warehouse management automation	7	7	7	1	1	23
Automated payroll tool integrated with accounting system	11	13	19	1	-	44
Automated invoicing integrated with accounting system	14	19	18	-	-	51
Electronic invoicing and signature	6	10	23	-	1	40
Communication with FAA	6	14	24	-	6	50
Total sum of individual types of accounting entities	**32**	**37**	**49**	**7**	**7**	**132**

Source: Own research based on questionnaire survey

Based on results shown in Table 2, we can see that more than a half of joint stock companies (57.1%) have fully automated business processes. From nine joint-stock companies, which do not have fully automated business processes, up to 8 companies have warehouse management automation, automated payroll, invoicing and also the communication with FAA. Only 28 from 102 limited liability companies have their business processes fully automated. Up to 6 limited liability companies have automated payroll, invoicing, as well as warehouse management automation. Up to 15 limited liability

companies have reported automation in payrolls and invoicing synchronously; up to 30 respondents have stated interconnection between payroll system and accounting software; and up to 38 respondents have automated only invoicing that is interconnected with accounting software.

Table 2: The Level of Automation Based on the Legal Form

Automated Processes	Joint-stock company	Limited Liability Company	Self-Employed Person	Organizational Unit of Foreign Accounting Entity	Total
Fully automated processes	12	28	-	1	41
Warehouse management automation	8	13	1	1	23
Automated payroll tool integrated with accounting system	9	34	-	-	44
Automated invoicing integrated with accounting system	8	42	-	1	51
Electronic invoicing and signature	5	33	1	1	40
Communication with FAA	9	35	6	-	50
Total sum of individual types of accounting entities	**21**	**102**	**7**	**2**	**132**

Source: Own research based on questionnaire survey

Up to 65.2% of all respondents have reported that they had implemented automation and digitalization on their own, up to 44.7% of respondents had used services of external company for these purposes. Based on this, we can state that up to 9.9% of respondents combines these two variants – some processes they have implemented by themselves, some processes through external supplier.

Up to 52.3% of respondents have reported additional costs related to automation, while 47.7% of respondents have not reported any additional costs related to automation. Up to 19.7% of respondents have stated no or minimal automation costs. Up to 21.2% of respondents have stated automation costs up to 10% of the total costs. Automation costs in the amount of 11 – 50% of the total costs have been reported by 4.5% of respondents. According to respondents, the costs are related mainly to the purchase of technology, software, payments for external data storage, payments for electronic communication, and electronic signature.

6. CONCLUSION

Nowadays, digitalization and automation of business processes are an integral part of business practice. Activities surrounding order processing, order tracking, invoicing, accounting, payroll processing, or inventory management are the main candidates for automation.

Digitizing of accounting records requires to store these data in cloud storage so that anyone in the company had the access to them. Cloud based documentation enables flexibility and security. To avoid the inefficiency of on-premise paper documentation the integral cloud-based document management system has been established. This computer-based system is defined as system that receives, tracks, manages, and stores documents, and which offers many benefits at the same time. The main benefits are reducing expenses, optimizing and simplifying the internal processes, increasing of security, and social sustainability. The DMS could be integrated with other company's applications, systems, and software.

Another system designed to integrate and optimize the business processes and transactions in companies is the Enterprise Resource Planning system, which is used for management and coordination of all sources, workplaces and functions of business sphere through shared data storage. The ERP can be interconnected with e-shop, which leads to centralization of all the e-shop agendas in one place. Many companies use automated invoicing, automation of warehousing, electronic signature, e-invoicing in their practice. Automation and digitalization save costs, time, increase security, transparency, reliability, and company's credibility for its customers, and on the other hand, reduce errors or the number of complaints.

Our research has revealed that companies in the Slovak Republic have their business processes more or less automated. The COVID-19 pandemic with its meeting and moving restrictions has also impacted the level of automation in Slovak accounting entities. The paper form of documents has been gradually replaced by their electronic form, which has contributed to increasing level of automation in Slovak companies.

The bigger companies, especially those presenting their financial statements in accordance with IFRS and joint-stock companies, are usually on higher level of automation in comparison with smaller accounting entities, which are not able to spend so much money on purchasing of these automated systems. The bigger companies dealing with large number of documents usually benefit from automation. Accounting, payroll processing, internet banking, communication with FAA are the main areas, where we can see the highest level of automation in almost all responded accounting entities. Up to 40.9% of respondents have reported automation costs in the amount up to 10% of the total costs.

Automation and digitalization of business processes require high level of cyber security, which belongs to the main challenges the companies have to face. Internet and electricity outages can also be a complication, when automating the business processes, because the employees would not have the access to company's data.

Accounting entities, when thinking about automation and digitalization of their business processes, should compare the costs for technical and software support for automation with benefits the automation brings to them.

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