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25th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems

The use of IT systems in financial and accounting services for enterprises in the conditions of the COVID-19 pandemic

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Abstract

In Poland, remote teams and work outside of the company were rare by this time. Almost all organizations had to virtualize at a faster rate by delegating their employees to work remotely, facing many challenges that they had to overcome in a short time. This article aims to check the directions and effects of changes in the digitalization of financial-accounting processes concerning the COVID-19 pandemic. The rate of use financial-accounting programs in remote work and upgrade of work organization, availability to internet platforms, identification security level of data, defining barriers that influence the limit of digitalization processes and financial-accounting programs were made.

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Peer-review under responsibility of the scientific committee of KES International.

Keywords: finance; IT systems; financial and accounting programs; company; pandemic; COVID-19.

1. Introduction

COVID-19 pandemic accelerated the digitalization processes of enterprises, which have been systematically implemented in Poland for many years. However, the rate wasn't enough satisfactory, and in many cases, the owners of companies didn't feel the need to implement any changes in companies units.

The remote job was available only for a few corporation employees located in big cities. Even in that cases, the employers weren't happy about employees applied for a remote job, which was the result of a lack of trust.

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Lockdown, close of many economic branches, recommendations to work remotely issued by the Polish government has probably forever changed the approach of entrepreneurs to the digitization process of their business, as well as remote work.

The fact that e-accounting has existed for many years, meant that many financial accounting processes were already digitalized before the pandemic. It's not clear to what degree. The research gap observed in this regard prompted the authors to make research aimed at characterizing the financial-accounting digital process during the COVID-19 pandemic in Poland.

The particular goals were set:

- Determine the financial-accounting digital processes level during the pandemic, serviced outside of entrepreneurs seat.
- Identification of financial-accounting data security level due to programs digitalization and implementation of remote work in companies.
- Determine the barriers which influence limitation particular financial-accounting digitalization programs.

Researches used the method of diagnostic survey and the method of literature analysis. In the analyze of survey results was used the method of vertical comparisons.

2. Review of literature

Electronic accounting (e-accounting) is one of the forms of bookkeeping the account books in Poland. It is regulated by the regulations of the Accounting Act. In article 13 paragraph 2 is specifies that equivalent to the traditional account books is also information resources created by using a computer and organized in form of separate computer data set, databases or particular parts. Concerning that, the place of their creation and storage is meaningless. The condition for maintaining accounting information resources with the use of a computer form in the possession of software enabling the enterprise to obtain legible information regarding entries made in the account books. It is possible by printing them or transferring them to an informatics data carrier [18].

The functioning of e-accounting is the subject of numerous publications. Starting with foreign literature, mention should be made of the author Deshmukh [4] who discussed the basics of digital accounting and the development of accounting software and financial reporting languages, Web-based and electronic data interchange (EDI). The author also emphasized the influence of the Internet and ERP systems on accounting. Similarly, the use of ERP systems in accounting was widely described by Okungbowa [13].

Simkin, Rose and Carolyn Strand Norman described the use of accounting information systems to collect and transform data into useful information that is essential for decision making [17].

The article by Güney [5] describes the role of technology in the development of modern e-accounting, emphasizing the benefits of creating a system for keeping books and documents used in accounting in electronic media (including cost reduction).

The functioning of e-accounting in the company was also described by Krawiec and Kubiak. In their opinion, e-accounting should be considered from two perspectives. A slighter perspective is equal with accounting that uses a computer with appropriate software installed for evidention of economic operations. From a wider perspective, besides using a computer and specialistic software, the element of e-accounting is also using the Internet [8].

In 2013, the process of informatization of small and medium-sized enterprises in Poland was described widely by Krupa [9]. The author points that the implementation of modern IT solutions ERP class in Poland mainly depends on the entrepreneur and abilities to break classic barriers in this area. In Poland, such barriers are: lack of enough knowledge, as well as experience. Many Polish entrepreneurs are characterized by a lack of need to grow and the absence of constantly improving business. They often don't have a strategy for creating a new business model.

Another survey was carried out by Kowalewski and Niedzielska based on small enterprises conducting business in the area of Olsztyn in Warmińsko-Mazurskie voivodship [7]. It indicates that the majority of small enterprises (16 out of 18) used computer-based accounting. The study showed that only two enterprises apply mixed accounting, which is a combination of manual, and computer accounting. The surveys conducted indicate also that most of the enterprises (10) surveyed use standard, easily available financial-accounting software. Amongst the eight enterprises maintaining full accounting, six entities use tailor-made software developed to their individual orders. At the same time, only two entities use software made available by accounting bureaus.

The use of IT tools in the financial management of the modern enterprise is described in detail by Mandziej [10]. She characterized accounting software (Symfonia and Optima programs), considering them as the most popular. They support the company in the realization of financial activities. According to Siemieniuk, Boguszewski and Igtowska, the most popular applications which support financial-accounting departments are: Symfonia- general ledger, Navo- general ledger, as well as ProFinn- general ledger [16].

Kowalewski, Lelusz and Niedzielska in 2015 examined the factors influencing the implementation and exploitation of financial accounting systems in small-sized enterprises in Olsztyn [6]. The research showed, that the most frequently indicated factors that making implementation and exploitation of IT accounting systems difficult was also lack of possibility to install software on many positions and the grew up with these exploitation costs. Meanwhile, the pandemic proved that many employees switched to remote work almost overnight.

The processes of virtualization in connection with the need to implement remote work in many enterprises was described by Pietrzyk [14]. He made it clear, that companies had to face many obstacles, for example, organization culture, including the lack of digital competencies. It was necessary to learn new methods of training employees in this area. Moreover, Balcerowicz-Szkutnik and Sroka recognized that teleworking (remote work) is a consequence of globalization [2].

Workplace changes within the COVID-19 context have been described widely by Ancillo, Nunez and Gavrilu [1]. They said, that the revolution that comes up with the COVID-19 pandemic has changed the way companies and employees work, and how they will do so in the future. This will require a constant rediscovery the way of how they work and will result in completely new, yet undiscovered activities, which will generate deeply changes in the workplace. A similar opinion is in McKinsey [11]. COVID-19 pandemic has begun new ways of doing business. In effect, enterprises need to change the way they operate, as well as the role of offices in creating safe, successful and satisfying careers for employees [3],[12],[15],[19].

3. Methodology and research sample

The researches were made in April 2021 by using the diagnostic survey method. The method of vertical comparisons was used in the analysis of the survey results.

The questionnaire was addressed to randomly selected people working in financial accounting departments localized in Poland. The survey was available in online Google form. Links were sent electronically way to companies. In research took part 236 respondents- accounting employers. The survey considered 27 questions and metrics which was used. The survey questions concerned: software used in financial accounting enterprises, changes in its use during the pandemic time, ways of secure private data, implement remote work, barriers in making changes in financial accounting processes.

The dominant group of respondents were women (83%), with an average age of 26-40 (45%). The respondents aged 41-60 (40%) were slightly minimally percentage. The headquarters of the enterprises in which the responders worked was most often located in cities with more than 500,000 inhabitants (32%).

4. Research results

The financial accounting software used by enterprises isn't still the same [Fig. 1.]. The largest percentage of responders uses the following programmes: Optima (21%), Symfonia (10%), Insert (7%), SAP, Enova (6% each) and Impuls (5%).

As much as 45% was the "other" category, which included 56 different programs, each of which was not more than 4% of the total. It was for example Exact, Raks SQL, WA-PRO, R2 Płatnik, author's program, Microsoft Dynamics, Rekord, Fakt, Asseco, Softlab ERP, Comarch XL, Vulcan, FK Mikrobit, Progman, Rewizor, Radix, r2-reset, Wizja, Hansa, Infosystem, Tgsoft, CDN XL, Mała księgowość rzeczywospolitej, Syriusz, Lsi, BR, Ognik, Budżet, Ksat, Teta, Oracle, Ortago, Softhard, Sputnik, QNT, Pigeon, Ratusz, Varico, Fakir, AGA, ALA, Soldeo Smart, V-MAG, Tarun, mOrganizer, STREAMSOFT, Tiksoft Finka, Peoplesoft, Tagetik, Prestiż, Skp, BUCHALTER, MADAR, MAAT, Unisoft, Veritum, Sigid.

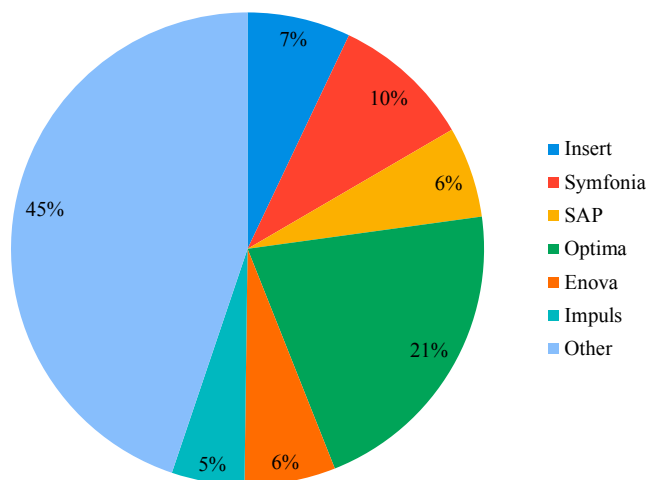


Fig. 1. Types of financial-accounting software used in companies;

Remote communication in companies is still (which was quite a surprise), most often done by telephone (46%), followed by MS Teams (24%) or Skype (9%) [Fig. 2.]. The rest of the tools, such as: Slack, Mail, Webex, Google Meet, Zoom, WhatsApp, VPN, or Messenger accounted for a total of 21%.

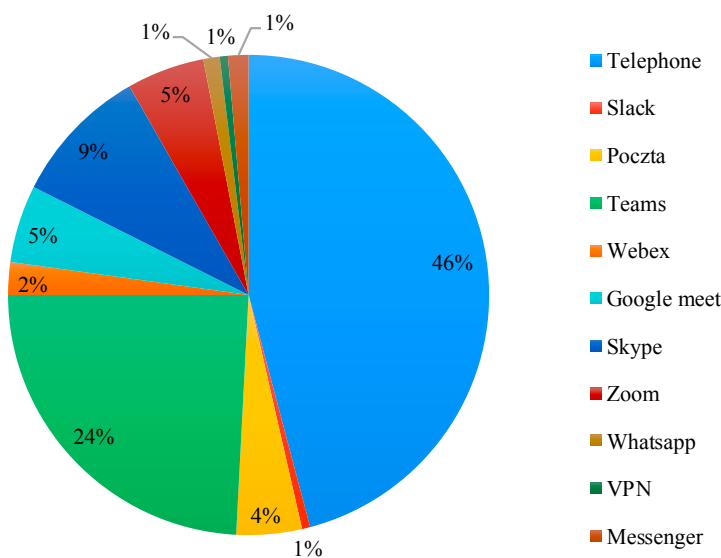


Fig. 2. Types of remote communication programs.

The respondents emphasized that as many as 78% of employers provided them with online access to financial and accounting programs in the online form. It was slightly often business equipment (56%) than a private one (44%). It is also worth noticing that in half of the studied cases, as many as 76-100% of employees of the surveyed companies received remote access to financial and accounting programs.

The respondents were also asked about changes in the circulation of documents and work time evidence. It had been shown that in many cases the circulation of documents in companies is still in paper form (36%), although in 36% of companies it was already electronically before the pandemic. 25% of enterprises changed the document flow from paper to electronic, mainly in the area of facturing (46%). In the context of working time records, in 46% of the

studied cases, it was electronic before the pandemic, and in 45% it was still paper. Only 9% of the respondents replied that the work time evidence during the pandemic had changed from paper to electronic.

To summarize the conclusions regarding the digitalization of business (financial-accounting) processes, respondents were asked which specific processes were digitized (signing contracts with customers, signing transfers, issuing invoices, etc.), as well as whether the employer provides access to the same tools (IT resources) that the financial and accounting department used while working in the office, i.e. financial and accounting systems, e-mail, network drives, internal messaging, Intranet, other working systems, etc. [Fig.3.].

In the first case, issuing invoices (73%) and signing transfers (71%) were digitized. In many cases (44%), contracts with customers are also signed remotely, although in this example as many as 42% of respondents answered that it is still done in a traditional way.

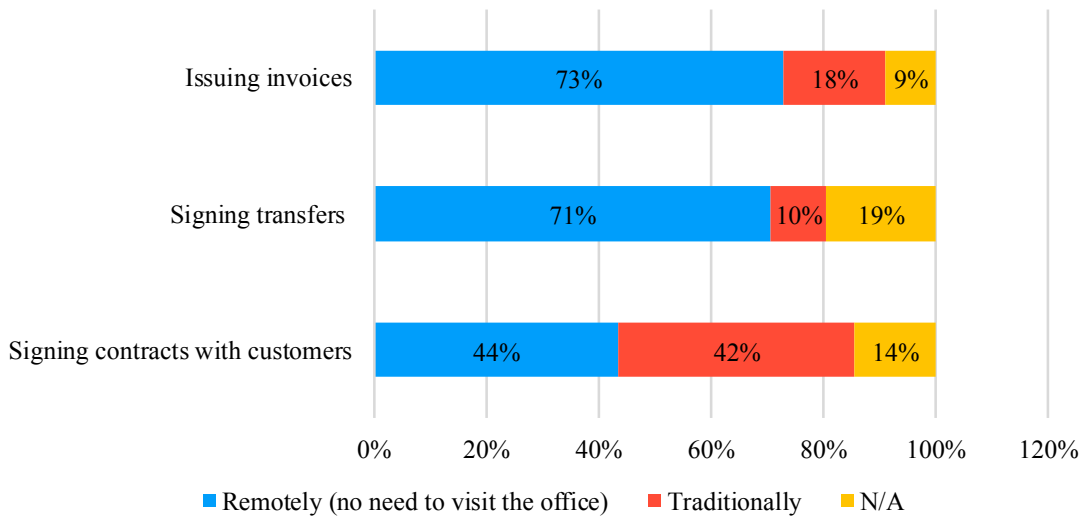


Fig. 3. The degree of digitalization of business processes during the COVID-19 pandemic.

Remote access to the same resources that employees previously used while working in the office was also rated highly. In sequence: financial and accounting systems (86%), e-mail (87%), network drives (72%), internal communicators (69%), Intranet (62%).

When analyzing the level of security in connection with the implementation of remote work during the pandemic, respondents were asked about the method of securing data confidentiality [Fig. 4.]. In 34% of cases, it was VPN protection, and in 14% of cases, it was file encryption. 31% of the respondents emphasized that they used both of these security measures at the same time.

It is disturbing that, according to 12% of respondents, confidential data is not secured in any way. Considering that accounting data is largely confidential and sensitive, it is necessary to educate companies in this area and increase the level of security of the information sent. Additionally, 8% of the respondents had no knowledge in this subject.

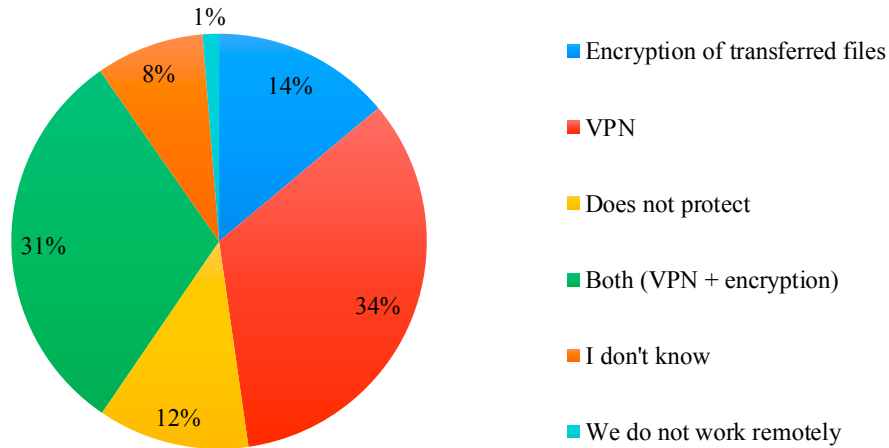


Fig. 4. Ways of securing data confidentiality in companies during the COVID-19 pandemic.

The assessment of the level of data confidentiality protection in connection with the digitization of financial and accounting programs and the implementation of remote work in companies was made by verifying the methods of granting authorizations to financial and accounting systems in companies (accounting authorizations for specific employees, authorizations to approve transfers, etc.), and then by defining changes and methods of data backup (back-ups) when working remotely [Fig. 5].

As many as 94% of cases, authorizations to financial and accounting systems are granted remotely. While 63.56% of companies do them with the help of the IT department, and 30.51% of employees do them remotely on their own.

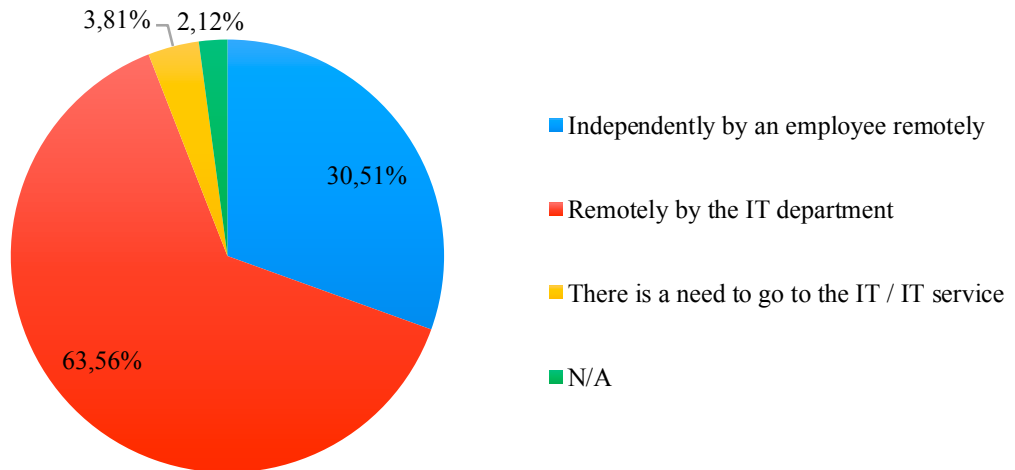


Fig. 5. Methods of granting authorizations to financial and accounting systems during the COVID-19 pandemic.

In 90% of cases, the method of backing up key data (backups) when working remotely has not changed, and the vast majority of respondents didn't have knowledge about how data copies are created (26%). 23% of respondents said it was done via IT, 15% described it as "automatic", 14% on disk and 13% as a copy to the server. The remaining 9% related to the backup by the software producer and in the cloud.

While assessing the barriers to limiting the digitization of individual processes and financial and accounting programs, accountants were asked about the difficulties they encountered in connection with remote work. The answers were to be made on a five-point Likert scale, where 1- meant definitely no, and 5 - definitely yes. The following factors were assessed: lack of Internet access, lack of corporate equipment, lack of online access to corporate programs, unstable VPN connections, difficulty in remote communication (e.g. it is easier to discuss something live than remotely). In the vast majority of cases, the respondents answered that almost none of the barriers mentioned occurred in their case [Fig. 6.]. The answers "definitely not" and "rather (probably) not" were marked by the following number of respondents: 76% - no Internet access, 74% - no company equipment, 80% - no online access to corporate software, 66% - unstable VPN connections. This proves that employers and employees are well prepared for remote work.

The responses to difficulties in remote communication were more evenly distributed. In 36% of respondents, the respondents assessed that it was a significant barrier related to remote work, while 39% of the respondents considered it not to be a barrier. 25% of respondents had no opinion on this topic.

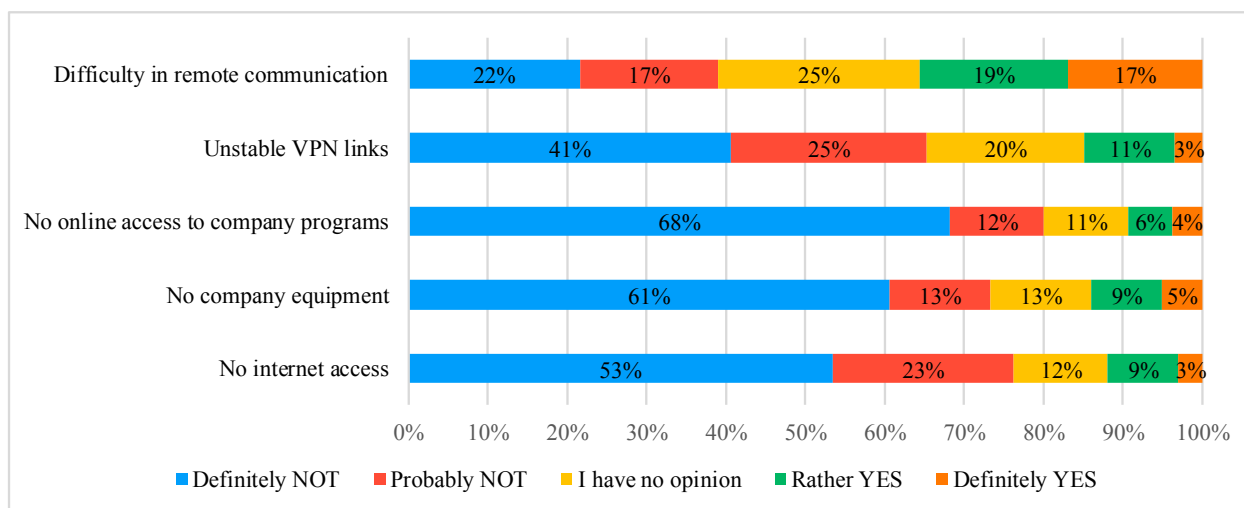


Fig. 6. Barriers related to remote work in companies during the COVID-19 pandemic.

5. Summary and suggestions

The process of digitization of financial and accounting services is systematically progressing, which was clearly visible in the results of the presented empirical research. However, this was not a sufficient level, and the decisive factor that accelerated it in real terms was the COVID-19 pandemic.

Many financial and accounting processes in Poland had already been digitized before the pandemic. It is worth noting, however, that during the pandemic, the vast majority of employers allowed their employees access to the same resources that they used before in the office. Nevertheless, to a large extent, employees used private computer equipment, to communicate using generally available Internet platforms and instant messaging, as well as traditional means of communication (telephone).

The financial and accounting data is properly secured by encrypting the sent files and using VPN, although almost half of the documents sent were in paper form. The remote work itself was prepared in a very professional way, excluding most of the possible barriers that could limit the digitization of individual processes and financial and accounting programs.

The digitization of accountants' work, including remote work, is a definite future for the development of enterprises. Enterprises should invest in the development of remote processes. However, changes in the labour law

are necessary regarding the organization of remote work and covering the costs incurred in connection with the provision of financial and accounting services outside the entrepreneur's seat.

The added value of the publication is the recognition of the used financial and accounting programs, communication platforms and the Internet during remote work of accountants of Polish enterprises. In addition, the related limitations were indicated, emphasizing the need to expand professional skills and develop the digitization of handling accounting and financial processes.

Interviews with entrepreneurs have shown that many companies already analyze permanent models of remote work in full or in a hybrid form. Consultations with employees on this matter are being carried out, and the coming years will show the verification of these plans.

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