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OUTSOURCING OF ACCOUNTING SERVICES IN DIGITAL AGE

Adrian ISIP*[1]

Abstract: *Accounting function deals with recording, reporting and advising activities. In general, larger companies do not outsource routine tasks, since they need accounting information for making decisions more often than smaller enterprises, that outsource accounting primarily to fulfil their legal obligations. Digitalization facilitates remote access to data, electronic data exchange, instant communication and automatic data processing. This paper investigates outsourcing of accounting services in digital age considering several collaboration arrangements. We mobilized transaction costs economics and resource-based view as theoretical framework, accounting services market from Romania as context and case study as research method involving 3 accounting firms. Our results indicated that clients' decisions to insource, outsource or co-source the accounting services depend on the availability of internal and external professionals, their costs, frequency of information need and technology readiness. Accounting process means to receive documents from clients, process data from documents based on the agreed terms, prepare and submit the reports to clients. Technologies like robotic process automation and artificial intelligence ensure faster data processing, accurate information and prompt reactions. Nowadays more large companies could outsource their accounting due to e-invoice system and cloud technology. Having in view the clients' demands, accounting firms can deliver on-site, hybrid or remote services. Our study has implications for accounting firms and their clients and we presented what opportunities they have in digital age for collaboration. Our contribution was to show that e-invoice system and digital technologies enhance the provision of remote services and accounting firms could also target larger companies as clients.*

Keywords: *external accountants, accounting activities, outsourcing reasons, digital communication, remote services, task automation, real-time reporting*

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Introduction

Within the business, accounting function is in charge with recording of transactions, reporting of results and advising the managers. Companies keep accounting records to obtain knowledge about their businesses and to comply with their legal obligation. Accounting services can be provided by internal accountants or accounting firms (Barrar et al., 2002).

Usually, enterprises outsource their accounting services for reasons that regard cost reduction, focus on the core business, access to external experts, flexibility and process improvements (Tomašević et al, 2023; Zandi et al., 2019). The reasons for not outsourcing the accounting services could relate to information confidentiality, data security, information availability, delivery delays, low control over the outsourced function and high dependence on accounting firms (Asatiani et al. 2019; Everaert et al., 2007; Höglund & Sundvik, 2016).

Larger companies embrace in most cases a partial outsourcing since they are primarily interested in having access to external experts, whereas smaller enterprises tend to outsource the entire accounting function and though outsourcing they seek to fulfil their legal obligations with lower costs (Everaert et al., 2007).

*[1] *Adrian Isip, PhD Student, Bucharest University of Economic Studies, Doctoral School of Accounting, E-mail: isipadrian06@stud.ase.ro , ORCID: 0000-0002-4136-6549*

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Recent studies emphasized the importance of digital technologies in the development of companies (Coban, 2023). Accounting function is impacted as well in a large extent by digitalization. In digital age there is growing need for real-time data and digital technologies enable remote access to data, electronic data exchange, instant communication, automatic data processing, real-time reporting and assistance in decision-making (Agostino et al., 2021; Moll & Ygitbasioglu, 2019; Oesterreich et al., 2019).

Robotic process automatic (RPA) relieve the accountants of those repetitive activities related to data entry and data reconciliation and their use ensures faster data processing and fewer errors (Cooper et al, 2019; Harrast, 2020). Digital technologies come with critical changes to the roles of accountants, allow them to move away from bookkeeping activities and bring them more into the position of business advisors (Leitner-Hanetseder et al., 2021).

After we reviewed the literature, we observed that in spite of many previous studies on accounting outsourcing and digitalization, yet there is little research on how digital technologies influence the collaboration between accounting firms and their clients and this represents the problem statement. The purpose of this paper is to investigate outsourcing of accounting services in digital age considering the collaboration arrangements between accounting firms and their clients.

We mobilized transaction costs economics and resource-based view as theoretical framework, accounting services market from Romania as context and case study as research method involving 3 accounting firms. In our research we focused on the collaboration of accounting firms with their clients, analyzing the joining process of the new clients, digitalization of accounting services and the accounting process for existing clients.

Following our theoretical framework and considering the empirical evidence the results indicated that clients' decisions to insource, outsource or co-source the accounting services depend on the availability of internal and external professionals, their costs, frequency of information need and technology readiness.

Meetings and discussions with the clients are necessary to understand better their businesses, their requests and to establish the communication channels, the expectations on services, deadlines and deliverables. Accounting process means to receive documents from clients, process data from documents based on the agreed terms, prepare and submit the reports to clients.

Within accounting services industry, the speed of information generation is crucial. Digitalization of the accounting services is related to the use of virtual meeting applications, cloud computing, transfer of electronic data, the automation of tasks and the use of artificial intelligence. Technologies like robotic process automation and artificial intelligence ensure faster data processing, accurate information and prompt reactions. Nowadays more large companies could outsource their accounting due to e-invoice system and cloud technology. Having in view the available digital technologies and clients' demands, accounting firms can deliver on-site, hybrid or remote services.

Our study has implications for accounting firms, their clients and academia. Accounting firms and their clients could be more interested in the results of our research, since we presented the opportunities that accounting firms and their clients have in digital age for collaboration.

Our paper is structured in four parts. In the first section we reviewed the relevant literature and we developed our theoretical framework. The second part deals with the aim of this study, our research context, the research methods and the research questions. In third section we focused on the findings of this study and we discussed our results considering also

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the previous articles. The final part includes the main conclusions, our contributions, the implications and the limitations of this study and directions for future research.

Literature review

Accounting function is expected to facilitate decision-making process by providing useful and timely information to managers (Lambert & Sponem, 2012). Authors like Collis and Jarvis (2002) emphasized that companies have the legal obligation to keep accounting records and provide financial information to internal and external users.

Entities can fulfil the legal requirement to keep accounting records either by hiring employees or by collaborating with accounting firms (Barrar et al., 2002). Smaller companies compared to larger corporations face more resources constraints and whereas larger companies can dedicate a team of employees to handle a specific business function in house, smaller enterprises do not possess these resources (Harland, et al., 2005).

Smaller enterprises tend to outsource the accounting and tax services due to the reasons which are related to their need to save money or their lack of internal competences (Juntunen et al., 2022). Moreover, Potryvaieva and Palieiev (2023) consider that outsourcing of accounting services is the best solution for small companies to meet their legal obligations with minimal costs.

Authors like Fomina and Kolomiiets (2022) mentioned that in order to ensure the accuracy of the accounting records and the protection against the potential fines, accounting firms and clients should stay tightly with the document flow schedule and exchange information in a timely manner.

There are studies investigating the relationship between the outsourcing of accounting services and the quality of accounting reports and the main conclusions were that outsourcing of accounting services ensures better compliance with the laws and regulations and improves the financial reporting quality (Höglund and Sundvik, 2016).

Companies choose to outsource their accounting and tax services for reasons that regard cost reduction, focus on the core business, access to external experts, flexibility and process improvements (Tomašević et al, 2023; Zandi et al., 2019).

The reasons for not outsourcing the accounting services could relate to information confidentiality, data security, communication difficulty, information availability, delivery delays, low control over the outsourced function, high dependence on accounting firms and loss of internal expertise (Asatiani et al. 2019; Everaert et al., 2007; Höglund & Sundvik, 2016).

There are papers on the subject of accounting outsourcing showing that outsourcing reasons depend on the size of the companies and further the size and the age of the companies can influence the outsourcing intensity. For instance, Everaert et al. (2007) found that, smaller enterprises are interested in reducing the costs and they often embrace a total outsourcing, while larger companies through partial outsourcing seek to acquire external expertise. Authors like Cassar and Ittner (2009) revealed that outsourcing intensity in case of younger enterprises is higher compared to older companies since these entities need more support from accounting firms in their early age.

Islomov (2022) emphasized that for carrying out the accounting function, larger companies can use internal accountants for daily transactions and frequent tasks and accounting firms for those activities that require a high level of expertise. In his opinion, sourcing of accounting services in this manner involves lower risks.

Considering the type of outsourced tasks, Kamyabi and Devi (2011a) indicated that accounting firms can provide statutory and non-statutory services to their clients. Statutory

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services are related to the compliance with the laws and regulations, whereas non-statutory services regard the business advice and other demands from the clients.

On the same subject of accounting outsourcing, Everaert et al. (2010) and other researchers like Hafeez and Andersen (2014) pointed out that companies can outsource routine tasks (data entry, data reconciliation and bookkeeping), non-routine activities (compliance, reporting, analysis and advice) or the entire accounting function and the enterprises have to consider the frequency of information need and the fact that accounting tasks are interrelated when they engage in outsourcing agreements.

With reference to the importance of accounting information, there are authors who claimed that even though accountants are perceived by the companies as an important source of information and advice, most small enterprises keep accounting records primarily to comply with the legal requirements and for those companies the accounting information has a low importance in decision-making process (Burke & Jarratt, 2004; Carey & Tanewski, 2016).

There are studies revealing that in case of accounting outsourcing, the provision of advisory services on a regular basis can support the companies to achieve a higher financial performance by improving the allocation of their resources and helping them to make better decisions regarding the business operations (Cahyaningtyas et al. 2020; Kamyabi and Devi 2011b; Munjal et al. 2019).

In a dynamic business environment, companies face challenges related to keeping up with the changes in the legislation and the development of technologies and for smaller enterprises the outsourcing of accounting services could be an option of helping them to stay updated, compliant and run their activity without disruptions (Faituša et al., 2020).

Recent studies emphasized the importance of digital technologies in the development of companies (Coban, 2023). Other papers explored digital technologies such as cloud computing, robotic process automation and artificial intelligence and their impact on accounting services. In digital age there is a growing interest in the possession of data in real time and this objective can be achieved by using mobile devices and digital technologies to collect, process, analyze and share data (Oesterreich et al., 2019).

In respect to digitalization there are authors who claimed that the main cause of digitalization is the need for real-time data and the development of digital technologies enables remote access to data, instant communication, electronic data exchange, automation of tasks, continuous data processing, real-time reporting, data analysis and assistance in decision-making and considering all these features, the business processes are significantly transformed (Agostino et al., 2021; Moll & Ygitbasioglu, 2019).

Moreover, Leitner-Hanetseder et al. (2021) mentioned that digital technologies come with critical changes to the roles and the tasks of accountants emphasizing that the intensification of the collaboration between the humans and machines is meant to bring accountants more into the position of business advisors and allow them to move away from bookkeeping activities.

Cloud computing deals with the exchange of data, documents, the use of computer applications over the internet and the outstanding features of this technology are related to remote, shared and immediate access to data and because of that cloud technology creates opportunities for remote collaboration (Ma et al., 2021; Saad et al., 2022).

As regards the automation of tasks, there are papers investigating the use of robotic process automation (RPA) in connection with accounting services. In these papers it is mentioned that RPA technology is suitable for those rule-based tasks that rely on digital inputs and the authors emphasized that automatic solutions for data processing were developed to relieve the

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accountants of those repetitive activities related to data entry and data reconciliation and their use is meant to ensure faster data processing and fewer errors (Cooper et al, 2019; Harrast, 2020).

Artificial intelligence is another emerging technology with a high impact on accounting profession, which on the one hand can assist the managers in decision-making process and on the other hand can support the accountants to perform a quick and in-depth data analysis in order to find patterns in data, observe trends, reveal areas of risk, interpret the results and make predictions (Kumar et al., 2023; Zhang et al., 2020). According to Hasan (2021), an important branch of artificial intelligence is represented by accounting and tax expert systems that store the knowledge of human experts in a database for subsequent use in solving complex business cases.

Theoretical framework

Having in view the information conveyed by accounting managers working within accounting firms and prior research on the outsourcing of accounting services, we mobilized transaction cost economics and resource-based view as explanatory theories in order to interpret the results of this study which deals with the outsourcing of accounting services in digital age.

Transaction cost economics was proposed by Williamson (1979) and he emphasized that the transaction costs influence the size of the company and determine which tasks are carried out in house and which activities are outsourced. In his opinion when the internal transaction costs are higher than the external transaction costs, then the company will have the inclination to outsource those activities and when the external transaction costs are higher than internal transaction costs, then the company will tend to internalize those tasks.

Resource-based view was developed by Barney (1991) who specified that companies have to make a suitable allocation and combination of their tangible resources (physical assets) and intangible resources (knowledge and skills of the employees) in order to achieve efficiency and effectiveness within the business they are running. In addition to that, he mentioned that those companies facing a lack of internal resources can acquire external resources to ensure the proper operation of their business.

Transaction cost economics and resource-based view theories were also used in prior research by many authors to explain the outsourcing decisions made by companies regarding the accounting services (Cahyaningtyas & Ningtyas, 2020; Hafeez & Andersen, 2014; Kamyabi & Devi, 2011a; Tomašević et al., 2023).

Data and Methodology

Research context

Romania is a developing country from Europe and in the beginning of the year 2023 according to National Institute of Statistics (2023) the resident population was 19.1 million inhabitants. For the same period, National Trade Register Office (2023) indicated a number of 1.2 million active companies and 20.1% of these legal entities were companies with foreign participation.

In the Figure 1. it is presented the structure of Romanian companies according to the number of the employees, considering Eurostat database and as it can be observed 99% of the companies have less than 50 employees. Since 80% of all companies have less than 10 employees these entities are good candidates for outsourcing of accounting services.

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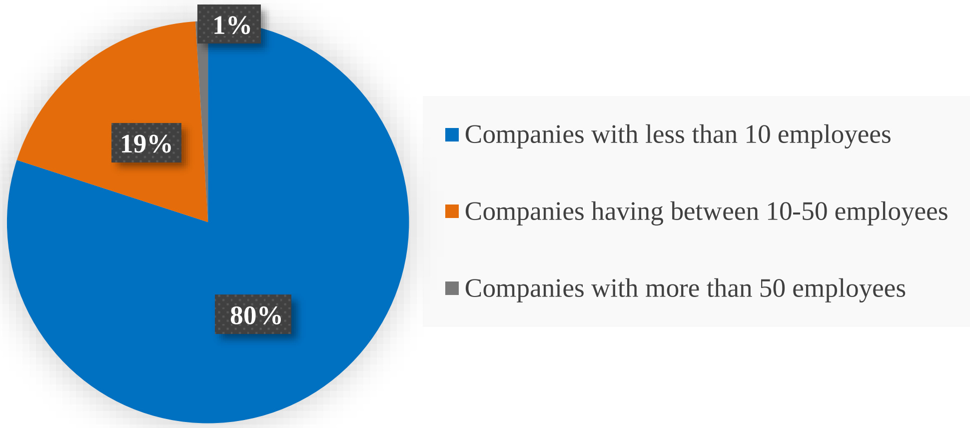

Figure 1. The structure of Romanian companies according to the number of the employees
Source: Own processed information based on Eurostat database (https://ec.europa.eu/eurostat)

In Romania, the companies interested in outsourcing of accounting services can contact the accounting firms, request a service offer, negotiate the service offer and sign the contract if they agree on the final service offer. Based on available data for the year 2023 on the website Top firms, it is presented an overview of accounting services industry in the table 1. and as it can be observed the industry is dominated by 63 accounting firms that achieved a market share of 36%. The first cluster of 17 accounting firms consists in large accounting firms and within this cluster are also found Big Four accounting firms.

Table 1. An overview of accounting services industry

Turnover range	No of accounting firms	No of employees	Average no of employees	Turnover (mil. euro)	Average turnover (mil. euro)	Market share
≥ 5 mil. euro	17	3,068	180.5	307	18.1	27%
≥ 1 mil. euro and < 5 mil. euro	46	1,340	29.1	102	2.2	9%
< 1 mil. euro	12,562	17,980	1.4	724	0.1	64%
Total	**12,625**	**22,388**	**X**	**1,133**	**X**	**100%**

Source: Own processed information based on website Top firms (https://www.topfirme.com/caen/6920/)

Research methods

The aim of the current paper is to investigate outsourcing of accounting services in digital age considering the collaboration arrangements between accounting firms and their clients. Since this study required empirical evidence, we decided to employ case study as research method. Case study as qualitative data collection method usually involves a limited number of participants and is recommended to be used when researcher need to investigate recent circumstances and real-world events in order to achieve a deep understanding (Rashid et al, 2019).

According to Bell et al. (2018) a qualitative approach is intended to discover and describe experiences, behaviors, feelings, opinions and motivations of participants since the researcher's attention is on the meaning of the investigated phenomenon and not on its frequency and researcher primarily uses words rather than numbers.

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We also identified similar approaches that used case studies as data collection method in prior research related to outsourcing of accounting services (Aman et al., 2012; Ahmed, 2018; Maleah et al, 2010; Nicholson et al., 2006; Nielsen et al., 2015).

Considering the aim of this paper we seek to answer the following three research questions:

- RQ1. How is the joining process of the new accounting clients?
- RQ2. How is digitalization changing the accounting process?
- RQ3. How is the accounting process for existing clients?

Our research methodology had in view steps such as preparation, data collection, data processing and analysis and reporting the results. In our study we involved 3 accounting firms located in Bucharest. For data collection we used sources represented by discussions with 3 accounting managers, presentations made by 3 senior accountants and field observations with the support provided by 3 experienced accountants and 3 junior accountants.

Data collection process started in the beginning of June 2024 and ended in the middle of July 2024 and during this step a research notebook was used to write down the information conveyed by accounting managers, senior accountants and to record our observations.

In data processing and analysis steps, the notes written in the research notebook were read multiple times and were coded manually (data received labels) and because of that a list of main themes emerged and those labels were used to capture the essence of the investigated phenomenon.

We applied an inductive reasoning since we started with our specific observations, we discovered patterns in data, we established relations between data and then we formulated general conclusions (Woo et al., 2017). In table 2 we presented more details regarding the accounting firms involved in this study.

Table 2. The details regarding our case study accounting firms

Firm's code	Turnover range	Type of firm	Firm's age	Contact person (Position and Gender)	Data collection source	Period of data collection
A	≥ 5 mil. euro	local	20	Accounting manager (M)	Discussions	04.06.2024
				Senior accountant (F)	Presentations	10.06.2024
				Experienced accountant (M) & Junior accountant (F)	Observations	13.06.2024
B	≥ 1 mil. euro and < 5 mil. euro	local	28	Accounting manager (F)	Discussions	18.06.2024
				Senior accountant (F)	Presentations	26.06.2024
				Experienced accountant (F) & Junior accountant (F)	Observations	03.07.2024
C	< 1 mil. euro	local	23	Accounting manager (F)	Discussions	09.07.2024
				Senior accountant (M)	Presentations	11.07.2024
				Experienced accountant (F) & Junior accountant (M)	Observations	16.07.2024

Source: Own processed information

After reading the research notes multiple times, we observed that accounting managers repeatedly emphasized that most companies choose to outsource accounting services when they lack resources in terms of workforce or competences and when the costs of external accounting services are lower than the costs of organizing an internal accounting department. Considering those strong opinions, through data analysis we reached transaction cost economics and resource-based view theories and we employed them as theoretical framework for this study.

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Findings and Discussions

Since this accounting research is qualitative in nature, we followed the recommendations made by Bell et al. (2018) for presenting the results of our empirical study. We considered the importance of empirical evidence, the role of theory and the link between these two pillars in reporting the findings.

We organized the results around our theoretical framework and the themes of our research questions. Our theoretical framework is represented by the transaction cost economics and resource-based view. The narratives were constructed having in view the main themes such as the joining process of the new clients, digitalization of accounting services and accounting process for existing clients.

Based on empirical data and our theoretical framework we created figure 1 which shows the sourcing decision (insourcing, outsourcing or co-sourcing) for accounting services by taking into account the main decision factors such as the availability of human resources and the costs related to the provision of the services.

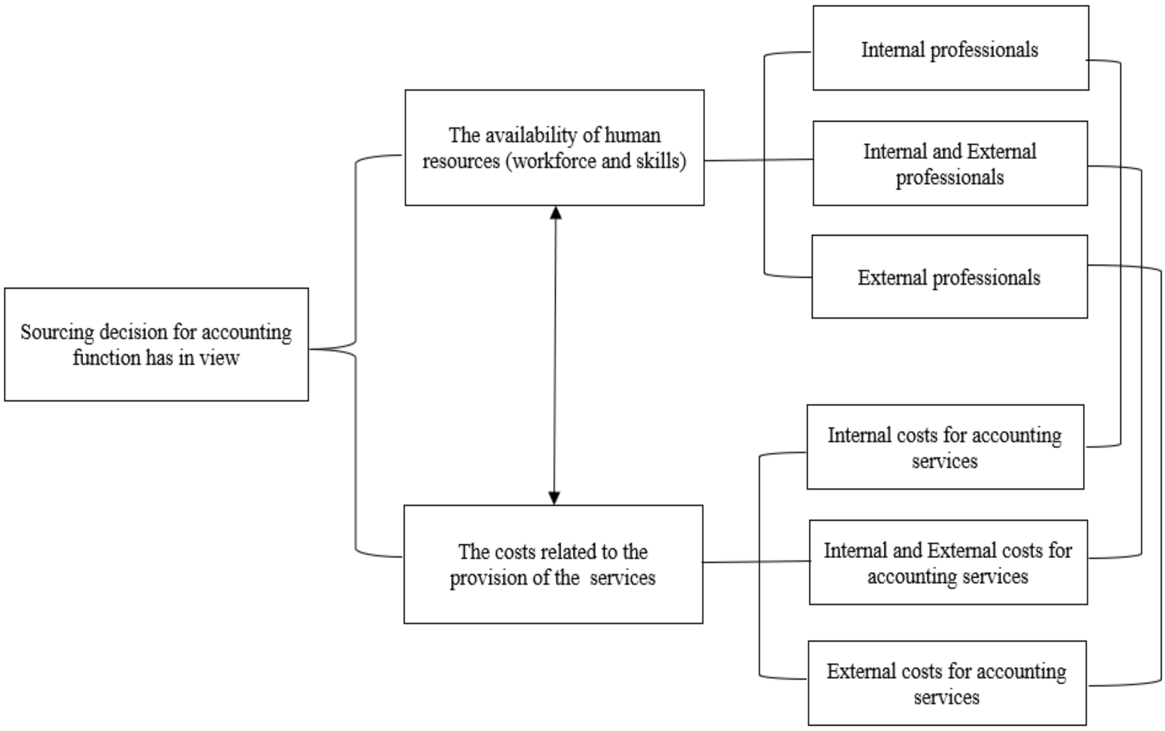

Figure 2. The sourcing decision for accounting function

Source: Own creation based on empirical data and theoretical framework.

The enterprises have to organize the accounting function and they have as main three options to hire internal professionals, use external professionals or rely on both internal and external professionals. The availability of human resources can influence the costs related to the provision of the services and vice versa.

Each of these three options involves certain costs and due to the high pressure on the budgets, the companies seek to optimize their costs having in view the advantages and the disadvantages associated with these three options for organizing the accounting function.

The collaboration between accounting firms and their clients has certain peculiarities depending on the choice of the companies to outsource the entire accounting function or co-source the provision of accounting services.

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In the table 2 we presented the services provided by our case study accounting firms, their clients and other aspects regarding the collaboration between accounting firms and their clients such as the location of service provision and the information systems used for accounting records.

We can observe that larger accounting firms deliver a wider range of accounting services, they collaborate with larger clients and international clients and they can provide more flexibility to their clients regarding the location of service provision and the information systems used.

Table 2. The services provided by our case study accounting firms

Firm's code	Main services	Clients	Location of service provision	Information systems used
A	-Bookkeeping; -Payroll; -Preparation of tax returns; -Accounting and tax reviews; -Compilation of financial data; -Preparation of financial statements; -Non-financial or sustainability reporting; -Business advice; -Audit services;	-International companies no matter of their size; -Large local companies; -Larger local medium-sized enterprises; -International natural persons	Both at the clients' premises and at the office of accounting firm	Both the information system of accounting firm and the information systems of the clients
B	-Bookkeeping; -Payroll; -Preparation of tax returns; -Accounting and tax reviews; -Compilation of financial data; -Preparation of financial statements; -Business advice; -Audit services;	-Medium-sized international companies; -Medium-sized local companies; -International natural persons	Both at the clients' premises and at the office of accounting firm	Both the information system of accounting firm and the information systems of the clients
C	-Bookkeeping; -Payroll; -Preparation of tax returns; -Preparation of financial statements; -Business advice	-Small companies; -Smaller medium-sized local enterprises; -Local natural persons	Only at the office of accounting firm	Only the information system of the accounting firm

Source: Own processed information.

Further we presented and discussed in more details our results related to the outsourcing of accounting services in digital age considering also previous studies.

The joining process of the new clients

The joining process means to connect the clients with the accounting firms. Clients play a central role and their needs are thoroughly analyzed in order to establish the common ground for a good collaboration. In most cases the new clients are a result of the recommendations made by former and current clients, lawyers and auditors.

Accounting managers described the joining process of the new clients as one that follows the phase of successful completion of negotiations. In the negotiation phase, the clients and accounting firms agreed on main aspects such as: the scope of work and the list of activities, the location for service provision, the information systems used, the deadlines both

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for providing the supporting documents and delivery of information and reports, the amount of time and the fees.

Accounting firms serve both local and international clients. Some of these clients are natural persons and other are legal entities. For legal entities, the joining process depends on the type of company such as new enterprises or existing companies. For existing companies that collaborated before with other accounting firms, the clients are requested to hand over a list of documents and reports.

Both for the new enterprises or existing companies, the accounting managers and senior accountants usually schedule two or three meetings with the clients in order to gain a deep knowledge on the business operations of the clients, design the client-based working procedure, and discuss with the clients about the importance of submitting all the documents in time. During the first meeting the main goal is to understand better the needs and requests of the clients in order to customize the services based on their specific demands.

Within the joining process, accounting managers and clients establish by mutual agreement the communication channels, they set clear expectations on services, deadlines and deliverables in order to avoid later misunderstandings. The joining process of the new clients also means on one hand for accounting firms to assign the clients to the managers and senior accountants who will be in charge with the outsourced process and on the other hand for clients to appoint the contact persons who will keep in touch with accounting firms.

When new clients are joining, a profile is created for them meaning that they fall into categories such as: clients with large or small number of documents and reports, clients with high or low tax risks, and clients with or without external audit. In the figure 3 we made a presentation of the main steps considered in the joining process of the new clients.

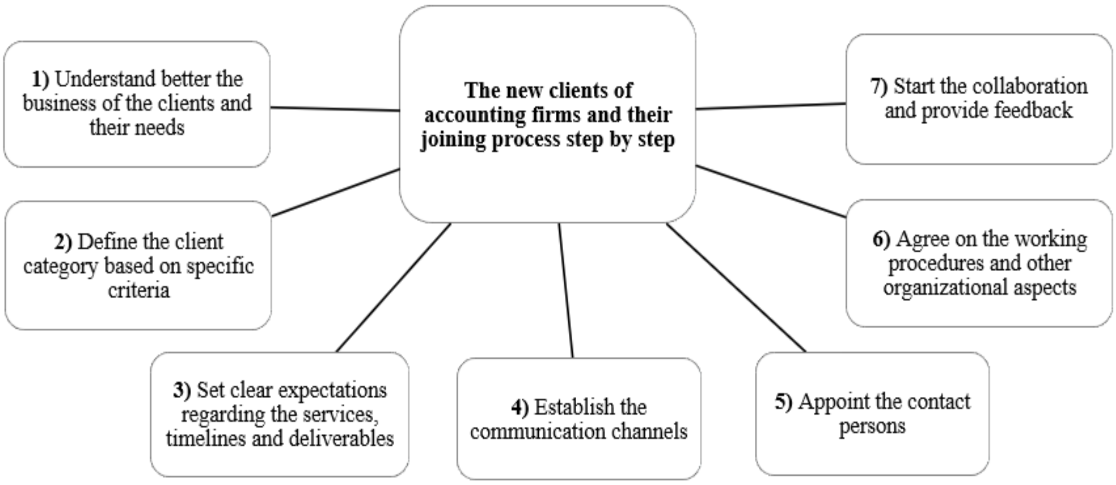

Figure 3. The main steps considered in the joining process of the new clients
Source: Own processed information

For the most clients, the office of accounting firms represents the location of service provision. Large clients can request the accounting firms to relocate a team of professionals to their premises. There are other companies that have a lower need for contact with external accountants and for those clients, the accounting firms can ensure the presence of professionals once, twice or three times a week considering the clients' demands.

Regarding the scope of work, clients can choose to collaborate with accounting firms for many reasons. Accounting managers indicated that small companies do not need a full-time accountant and because of that these entities resort to outsourcing of accounting services

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to save money. According to them, small companies outsource the accounting and tax services out of the need to meet their statutory obligations to keep accounting and tax records.

In prior research on accounting outsourcing authors like Carey and Tanewski (2016), Everaert et al. (2010), Juntunen et al. (2022) and Potryvaieva and Palieiev (2023) specified also that smaller enterprises outsource accounting services mainly to comply with legal obligations with minimal costs and for these entities the accounting information is not of great importance in decision making process.

Other companies being larger in size are interested in the accuracy and the completeness of information and to reduce their tax risks and this is why they ask for review and tax compliance services on a regular basis, in case the accounting function is conducted in a shared service center or within an internal accounting department. In previous studies Islomov (2022) reached to similar findings, namely larger companies can choose to use internal accountants for daily activities and external accountants for those tasks that require a high expertise in order to mitigate the risks. However, he did not mention anything about shared service centers.

After the accounting firms start the collaboration with existing companies, they prepare a review report and present the findings to their clients. If accounting firms discover material reconciliation differences and other errors then with the consent of the clients the review can be extended in order to solve the issues found. If the clients do not agree with this in-depth review because of additional costs then accounting firms will prepare a disclaimer. This finding regarding the review of the accounting and tax records belonging to the new joined clients was not reported in prior research even though material reconciliation differences and other errors unsolved by former internal or external accountants can create real problems for the clients in case of subsequent tax inspections.

Digitalization of accounting services

For accounting firms, digitalization comes with many opportunities. First of all, the accounting firms have their own website and they present online their team of professionals, their certifications, the reviews from those clients that are well known on the market in order to promote their services. Within accounting services industry, the speed of information generation is crucial and there is an increasing need for real-time information.

Accounting managers agreed that digitalization has impact on various areas such as communication and connection, data collection and processing, data analysis and interpretation, information reporting, presentation and data visualization. These findings are similar with the results of the study conducted by Oesterreich et al. (2019) who claimed that the objective of real-time data can be achieved by using digital technologies to collect, process, analyze and share data.

Digitalization of the accounting services is related to the use of virtual meeting applications, could computing, transfer of electronic data, automation of tasks and the use of artificial intelligence. Accounting firms use digital technologies at the beginning of the collaboration with new clients for data migration in order to import the initial data into their information system and then as part of the regular accounting process for data collection and processing, data analysis and information reporting. In prior research the subject related to the use of digital technologies for data migration or data initialization for the new clients of accounting firms was ignored.

In the figure 4 we presented the transformation of accounting process having in view the impact of digitalization on collaboration between parties.

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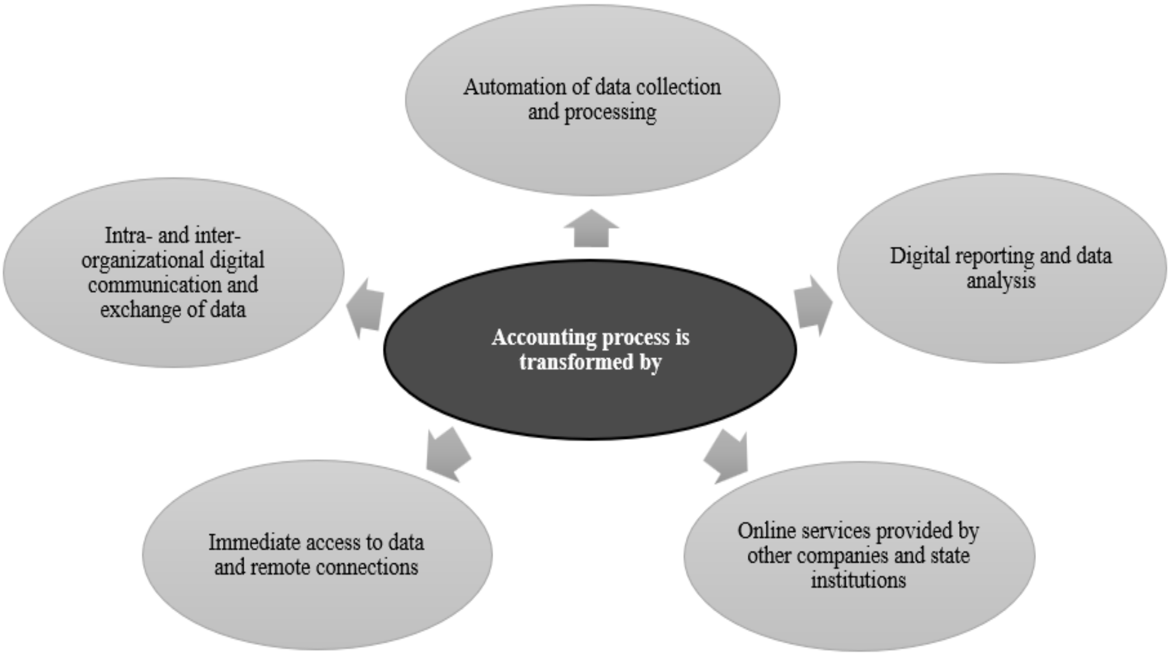

Figure 4. The main components of digitalization that transform the accounting process
Source: Own processed information.

Senior accountants explained the high importance of virtual meeting applications for their collaboration with the clients and their colleagues. External accountants and their clients can meet online anytime to discuss without having to travel and in this manner, they can reduce the costs and save time. In previous studies on accounting outsourcing, the importance of virtual meeting application for the provision of accounting services was not emphasized.

Accounting managers indicated that virtual meeting applications and cloud technology allowed them to engage in the provision of remote services, since they started the collaboration with clients located in different parts of the country and they even hired accountants from other cities as remote workers in order to overcome the shortage of professionals on the local labor market.

These findings related to the use cloud technology within accounting firms are consistent with the conclusions of the articles written by Ma et al. (2021) and Saad et al. (2022) meaning that cloud technology can facilitate the remote delivery of services since it provides shared and immediate access to data and possesses real-time collaboration functionality.

In respect to the exchange of digital data, we were told that the mandatory adoption of e-invoice system for all companies in Romania had a positive effect on the bookkeeping process and the outsourcing of accounting services. Experienced accountants mentioned that all incoming and outgoing invoices that were submitted to e-invoice platform are downloaded and confirmed with the clients using digital approval workflows prior to the bookkeeping process.

Since the enterprises exchange nowadays more and more digital data, according to accounting managers, the implementation of robotic process automatic (RPA) solutions is absolutely necessary to streamline the accounting activities and allow the accountants to be engaged more in non-routine tasks. Experienced accountants told us that RPA tools require minimal supervision, they can be easily integrated with the existing information systems in order to process the incoming and outgoing invoices, the bank statements and they ensure high data processing speed and accurate information.

Accounting managers believe that the use of RPA technology can help accounting firms to save time needed to provide services to new clients and to cope with the shortage of professionals on the local labor market in certain extent. In prior research authors like Cooper et al. (2019) and Harrast (2020), emphasized the use of RPA technology for repetitive and rule-based tasks in order to increase the accuracy of information and process data faster, but these researchers did not mention anything about the possibility to use RPA technology to cope with the shortage of professionals.

Accounting managers stated that artificial intelligence technology is used within accounting firms mainly for review and audit services and for those complex business cases accountants rely on expert systems to find the appropriate solutions. Our result regarding the use of artificial intelligence technology within accounting services industry primarily for in-depth data investigations and the exploration of alternative solutions for complex business cases is consistent with prior research conducted by Hasan (2021), Kumar et al. (2023) and Zhang et al. (2020).

The accounting process for existing clients

Accounting managers specified that accounting process means to provide the services needed by the clients and follow the working procedure that was agreed between the clients and accounting firms. The client-based working procedure contains details regarding the client category, the industry, the business activities, the relevant laws and other regulations applicable to those business activities, the main operations for each business activity, the description of the high-risk areas, the reports that should be prepared for mangers alongside with their timelines, the tax and accounting legal obligations and their deadlines, the instructions regarding the bookkeeping of the main business operations, guidelines for preparing the management reports, the financial statements, the tax returns and other tasks.

Having in view the client category based on the workload and the frequency of information need, the accounting process for existing clients consists in tasks that can occur daily, weekly or monthly. For example, in case of large clients that requested the accounting firms to relocate a team of professionals to their premises, the accounting tasks occur daily because these entities are clients with a large number of documents.

There are clients that in spite of having internal accountants they request review services and other support from the accounting firms in respect to the month and year closing, the preparation of the financial statements and tax returns. For some large clients according to the agreed client-based working procedure, the accounting firms have to make also the payments and the clients have to approve them.

We were informed about some large clients that have the main location of the service provision at the office of the accounting firms and considering the agreements concluded with the clients, the external accountants have to book or process daily the documents into the information system of those clients since for decision making process, they frequently need accounting information.

Accounting managers emphasized that clients have their own role within the accounting process namely they should submit the supporting documents in time and respond promptly to their requests when clients are asked to provide additional information regarding the business transactions and events. The late submission of the supporting documents can cause further issues such as the late preparation of the internal and external reports including also the tax returns and in these circumstances the clients can receive fines in case the tax returns are submitted with delay.

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In previous studies on accounting outsourcing researchers like Fomina and Kolomiiets (2022) emphasized also the importance of keeping up with the document flow schedule to avoid inconveniences.

In the figure 5 we presented the main steps regarding the accounting process in case of outsourcing which starts with the receipt of the supporting documents from clients, then it continues with the preparation of internal and external reports and it ends with document archiving.

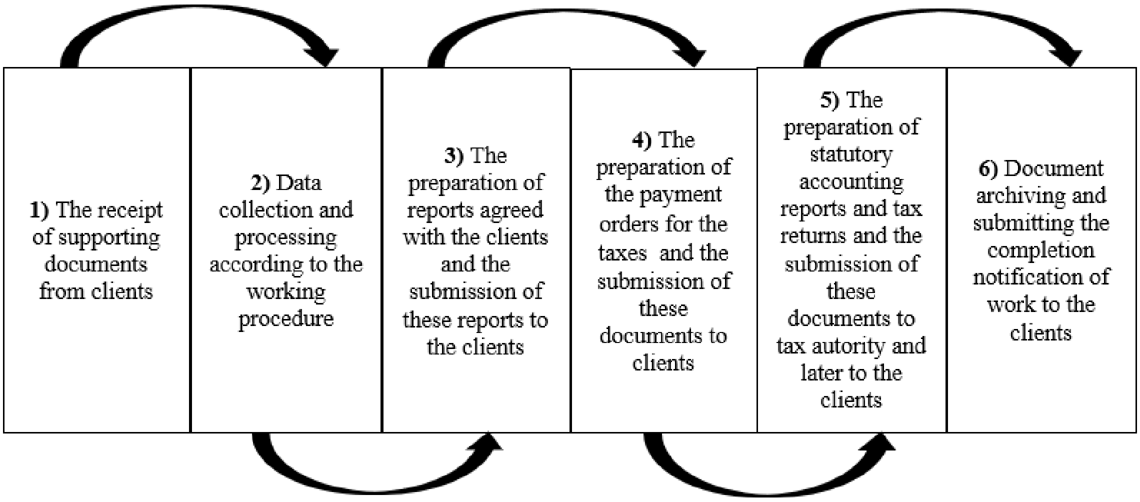

Figure 5. The main steps regarding the outsourced accounting process

Source: Own processed information.

As regards the distribution of accounting activities junior accountants are mainly in charge with data entry and data validation which can mean manual bookkeeping and the import of files and documents. Experienced accountants are responsible for the preparation of the standard reports agreed with the clients, various accounting and tax reports, tax returns and other information requested by other institutions.

Senior accountants provide the support to the junior and experienced accountants, they review their work in order to ensure the accuracy and the completeness of the accounting records. For small clients the accounting activities are usually assigned only to the experienced accountants since these clients have lower risks.

Senior accountants specified that for medium-sized enterprises and large companies the accounting firms have also to prepare regularly several statistical reports requested by National Institute of Statistics and National Bank of Romania and upload the statistical data into their online applications. The compilation and review services are mainly assigned to senior accountants since this type of services require a high expertise.

After reviewing the tax returns and the payment orders for the taxes, the senior accountants submit the tax returns to the tax authority, then these documents are sent to the clients with the request to pay the taxes according to the information provided in the payment orders.

When all accounting activities are completed, the senior accountants close the period into the information system and later an automatic email with a completion notification of accounting works is sent to the clients. We were told that for some clients, the working procedure does not mention any management reports that accounting firm have to prepare for them. Nevertheless, for those clients, the email with the completion notification of accounting works will contain in the attachment a file with general indicators regarding their business activity in order to provide the

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clients an overview of their operations. The accounting process ends with the archiving of the supporting documents, accounting reports and tax returns.

Conclusions

The aim of this study was is to investigate outsourcing of accounting services in digital age considering the collaboration arrangements between accounting firms and their clients. In order to achieve the purpose of this paper, we mobilized transaction costs economics and resource-based view as theoretical framework, accounting services market from Romania as context and case study as research method involving 3 accounting firms.

In our research we focused on the collaboration of accounting firms with their clients, analyzing the joining process of the new clients, digitalization of accounting services and the accounting process for existing clients.

Following our theoretical framework and considering the empirical evidence the results indicated that clients' decisions to insource, outsource or co-source the accounting services depend on the availability of internal and external professionals, their costs, frequency of information need and technology readiness.

Meetings and discussions with the clients are necessary to understand better their businesses, their requests and to establish the communication channels, the expectations on services, deadlines and deliverables. Accounting process means to receive documents from clients, process data from documents based on the agreed terms, prepare and submit the reports to clients.

Within accounting services industry, the speed of information generation is crucial. Digitalization of the accounting services is related to the use of virtual meeting applications, cloud computing, transfer of electronic data, the automation of tasks and the use of artificial intelligence. Technologies like robotic process automation and artificial intelligence ensure faster data processing, accurate information and prompt reactions.

Nowadays more large companies could outsource their accounting due to e-invoice system and cloud technology. Having in view the available digital technologies and clients' demands, accounting firms can deliver on-site, hybrid or remote services.

Our research complements the literature on outsourcing of accounting services by presenting those perspectives related to digitalization of accounting services. Our contribution was to show that e-invoice system and digital technologies facilitate the provision of remote services and accounting firms can also target larger companies as clients.

Our study has implications for accounting firms and their clients and we emphasized what opportunities they have in digital age for collaboration because of cloud technology and how they can benefit more from digitalization of economy which enables the transfer of electronic data between the parties.

Our recommendations for smaller accounting firms to keep updated their website, increase their visibility and promote their services on social media platforms, implement robotic process automation and cloud technology if they want to accommodate new clients, enhance remote delivery of services and provide advisory services in a higher extent.

We identified two potential limitations of our research. The first limitation regards our research context represented by accounting services market from Romania and thus the generalization of findings should be made with caution. Nevertheless, conducting future studies on the same subject in other countries having similar characteristics to Romania could lead to results comparable to our own findings.

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The second limitation is related to the small number of participants which is specific to in-depth qualitative studies. In our research we involved 3 accounting firms and previous studies on outsourcing of accounting using also case study as research method involved either one enterprise (Maleah et al., 2010) or two companies (Ahmed, 2018; Nielsen et al., 2015). Furthermore, each accounting firm is organized quite the same and delivers similar services.

Even though in our study our attention was mostly directed to the outsourcing of accounting services and its relationship with digital age, yet we realized that we could have discussed in our paper also about the challenges of collaboration between artificial intelligence and human accountants and being outside the purpose of this paper we propose this subject as direction for future research.

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