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Overcoming Barriers to E-Accounting Adoption: A Survey of Accountants in Turkey

Mehtap Baysal Artık[1], Veysel Kula[2*]

[1] Institute of Social Sciences, Afyon Kocatepe University, 03200 Afyonkarahisar, Turkey
[2] Faculty of Economics and Administrative Sciences, Afyon Kocatepe University, 03200 Afyonkarahisar, Turkey

[*] Correspondence: Veysel Kula (kula@aku.edu.tr)

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Abstract: In recent years, advances in digital technology have rapidly permeated various business sectors and functions, leading to the digital transformation of numerous traditional paper-based accounting processes. Consequently, e-accounting practices such as e-invoicing, e-archiving, and e-bookkeeping have become increasingly widespread. Although e-accounting applications offer advantages such as cost and time savings, increased efficiency, and reliable data storage, there remain significant obstacles to their adoption. This study investigates the primary limitations hindering the use of e-accounting practices by surveying 100 practicing accountants in Istanbul, Turkey, in 2023. The findings reveal that the primary obstacles perceived by the accountants are an inadequate infrastructure and a lack of qualified personnel. Compared with previous studies on the topic, the sample frame in the present research comprises a wealthier, stronger, and more populous province. However, the results suggest that accountants in different provinces with varying levels of industrialization hold similar views regarding the drawbacks of e-accounting applications. Consequently, nationwide efforts to address infrastructure limitations and skills gaps are crucial for overcoming barriers to e-accounting adoption. By addressing these challenges, Turkish accountants and businesses can fully harness the benefits of digital technology.

Keywords: E-accounting; Digital adoption; Survey; Accountants; Turkey; Barriers

1. Introduction

Significant advancements in computer sciences have been observed since the creation of the first mechanical computer by Charles Babbage in the first half of the 19th century and the invention of the first programmable, electronic, general-purpose digital computer in 1945 (Öztürk & Kula, 2021). Business functions across various industries have increasingly integrated advanced hardware and software systems, with the accounting sector being no exception. Brabetea & Goagără (2022) suggest that a continuous evolutionary process, characterized by the consistent adoption of new information technologies, has contributed to the development and modernization of the accounting profession. The transition from traditional manual accounting to computerized accounting and digitalization has facilitated the work of accounting professionals, initially simplifying primary recording, classifying, and summarizing functions. Sabuncu (2022) states that digital transformation features the use of web-based accounting programs operating with cloud technology, enabling automatic data transfer to all official accounting programs and the automatic creation of documents. Consequently, digitalization has resulted in the implementation of e-accounting applications such as e-invoice, e-ledger, and e-archive. These documents, which are products of digital transformation in accounting, are not new but rather contain the same information content produced, maintained, and delivered in an electronic environment. The use of e-accounting applications, predominantly mandated by the government, has become increasingly widespread in Turkey. However, accountants face several limitations when using these applications. This study aims to evaluate the obstacles to adopting e-accounting applications as perceived by accountants in Turkey.

"E-accounting" is an umbrella term used to describe a collection of electronically prefixed documents, with the

"e" prefix denoting "electronic." These documents, also referred to as "e-documents," were defined in Turkey's General Communiqué No. 397 on Tax Procedural Law as the entirety of electronic records containing the information required to exist in paper documents issued in accordance with the Tax Procedure Law. E-documents are not subject to the shape provisions required for paper documents (Article 2). This Communiqué No. 397, which came into effect in 2010, detailed regulations only for e-invoices. Upon its annulment, a new communiqué numbered 509 was promulgated in 2019, providing regulation details for other e-documents such as e-archive, e-dispatchment note, e-independent professional service receipt, and e-foreign currency sales/purchase receipt.

The Revenue Administration's website, established to execute revenue policy and collect taxes and other revenues in Turkey, has a dedicated sub-page for E-documents (E-document, 2023), providing details about e-invoices, e-archives, e-independent professional service receipts, and e-tickets. Widely used e-document types include e-invoices and e-archives, each of which currently has approximately 900,000 registered users. E-invoices are a type of invoice containing the same information required for paper invoices by regulations but issued, stored, submitted, and delivered to registered customers electronically. Although voluntary users can register for the e-invoice system, it is primarily a government-mandated closed system requiring companies exceeding specified sales thresholds to register.

E-archive applications, another type of e-document, have an ambiguous name that may be misleadingly associated with the act of being stored in an archive. Instead, as another government-mandated application, e-archive enables the issuance and delivery of invoices in an electronic environment for customers not registered in the e-invoice system.

Digital preparation of documents offers secure data protection, time-saving, minimized risk of errors, and decreased costs arising from the use of paper books and documents (Gönen & Solak, 2017; Kavcı, 2022; Şeker & Safa, 2021; Thuttoli & Ahmed, 2022). Additionally, e-documents facilitate the determination of the tax base and tax collection. In this regard, Communiqué No. 509 lists the benefits of e-documents as increasing the speed of taxpayers' transactions, increasing compliance with tax laws, and preventing informal (shadow) economic activities.

However, the e-accounting system is not without its problems. As highlighted in the literature review section of this study, previous research identifies significant drawbacks of e-accounting applications, such as a lack of skilled personnel, infrastructure issues, and insufficient training. By surveying the views of practicing accountants, this study aims to provide a more recent assessment of these obstacles. In fact, past empirical studies on the subject in Turkey have rarely been conducted in major, industrialized cities. By collecting survey data about the drawbacks of e-accounting applications from Istanbul, Turkey's wealthiest and largest province, this study seeks to determine whether accounting professionals in industrialized cities share similar perceptions of e-accounting-related problems as their colleagues in more rural provinces.

The subsequent section of this study will provide a literature review on the drawbacks of e-accounting applications. Following this, the research methodology and the results of the analysis will be presented. Finally, the study will conclude with a discussion of the findings.

2. Literature Review

A growing body of literature has examined the digitalization of accounting, with various studies focusing on different aspects of the subject. One such study by Marinagi et al. (2015) investigated the adoption and utilization of electronic invoices (e-invoices) among Greek companies. Through the application of a questionnaire to 42 businesses, it was found that the use of e-invoices was not widespread, and companies were generally unaware of the benefits associated with electronic invoicing. Conversely, a study by Amidu et al. (2011) explored the attitudes of managers from 58 Ghanaian SMEs towards e-accounting applications, revealing that these applications were perceived to reduce costs and save time.

Some other studies have presented positive perspectives on e-accounting from accounting professionals. For instance, Kulak (2019) conducted a survey among professional accountants in Malatya, Turkey, to assess their opinions about digitalization in accounting. While the implementation of digitalization was regarded as a legal obligation, the survey results indicated that the transition to digitalization enhanced work performance and reduced workload. Similarly, Tekbaş (2018) demonstrated that surveyed accountants were aware of digital advancements and were supportive of and prepared to adapt to these developments. Bayraktar & Yıldırım (2017) aimed to determine the e-document adoption level of professionals in Karabük province, Turkey, finding that the level of acceptance for e-document applications was moderate, with 54% of the surveyed accountants using e-ledgers and e-invoices. Further, Yıldırım (2020) concluded that respondents in Kırıkkale province, Turkey, received adequate training on e-accounting applications and possessed sufficient knowledge about these applications. Bozkurt (2020) conducted a study on 54 professional accountants in Yozgat, Turkey, to examine their opinions on e-ledger and e-invoice applications, with the survey results suggesting that e-accounting applications were beneficial, provided reliable data, and enabled easy and fast access to desired information at any time. Using the same dataset, Ulusan & Bozkurt (2021) found that more than half of the professionals used e-accounting applications and closely

followed developments in this area.

However, certain limitations of e-accounting applications have been highlighted in the literature. Noronha & Kulkarni (2012) identified a lack of qualified personnel as a significant barrier to adopting digitalization in accounting among Indian accountants. Yıldırım & Güney (2012) surveyed 104 professional accountants in Erzurum, Turkey, to determine the challenges they faced in electronic accounting transactions. They reported problems with accessing the Revenue Administration web portal due to inadequate infrastructure, delays in updating software following changes in regulations, and insufficient software knowledge among accountants. Gönen & Solak (2017) sought to identify the challenges faced by accounting professionals in İzmir, Turkey, during the digitalization process. Their findings suggested that digitalization increased workload and incurred additional costs for professionals.

Elçin et al. (2018) aimed to identify the issues encountered by accounting professionals during the transition to digitalization. A survey was administered to 389 professionals who actively used digital products, and the results indicated that problems associated with system malfunctions, increased workload, and a lack of qualified personnel emerged during the digitalization process. Karasioğlu & Garip (2019) confirmed the lack of qualified personnel as a major issue in their study of 138 accounting professionals in Karaman, Turkey. In a similar vein, Kulak (2019) identified increased personnel costs and issues related to technological infrastructure as significant limitations in a survey of professional accountants in Malatya, Turkey. Tanç & Deniz (2020) examined 208 accounting professionals in Hatay province, Turkey, and found that the most common problems associated with digital transformation in accounting were inadequate technological infrastructure and insufficient knowledge. Bozkurt (2020) also emphasized the issue of insufficient infrastructure in his study of 54 professional accountants in Yozgat, Turkey.

Recent empirical studies have further contributed to the discussion on digitalization in accounting. Ersoy (2022) surveyed 130 professionals in Aksaray Province, Turkey, and discovered that digitalization reduced the workload of professional accountants, increased their work performance, and provided secure data storage. However, the study also identified insufficient training for digital accounting applications, increased service costs related to digitalization, and a scarcity of qualified personnel as major drawbacks. Tekelioğlu (2022) focused on the digitalization perceptions of 353 professionals in Konya, Turkey. Although respondents considered digitalization necessary for their profession, they acknowledged that it increased their workload. Kavcı (2022) investigated the attitudes of professional accountants in Gaziantep, Turkey, towards e-accounting practices, finding that electronic accounting applications led to reduced labor and stationery costs, as well as facilitated secure data storage and easy access to information. In a study based on in-depth interviews with 30 professionals in Çanakkale Province, Topbaş (2023) explored the effects of digital transformation on the accounting profession. The results indicate that digitalization has positive effects in terms of quick access to the desired data, secure data storage, reduction both in the workload and in paper-stationery costs. On the other hand, the lack of qualified personnel and insufficient infrastructure system emerged as the major problems. In conclusion, the digitalization of accounting has been extensively studied in recent years, with researchers examining various aspects of the subject.

Overall, digitalization has been perceived as a positive development that enhances work performance, reduces workload, and provides reliable data. E-accounting applications, such as e-invoices and e-ledgers, have gained acceptance among professionals. However, the implementation of digital accounting practices has also revealed a number of challenges, including insufficient technological infrastructure, increased service costs, and a lack of qualified personnel. Further research is needed to address these limitations and to explore potential solutions that can facilitate the widespread adoption of digitalization in accounting.

3. Methodology

The objective of this study is to identify the challenges associated with digital transformation applications in accounting as perceived by practicing accountants in Turkey. Unlike previous studies in the literature, which have focused on smaller, less industrialized provinces, this investigation targets Istanbul—a city with a strong and diverse economy. By examining the experiences of accountants working in the largest and wealthiest city, this study aims to provide new insights into whether their perceptions of e-accounting limitations align with those of their counterparts in less industrialized areas.

To collect relevant data, a two-part questionnaire was developed, drawing from prior literature. The first part comprises questions on respondents' demographic characteristics and their experiences with digitalization, adapted from studies such as Gönen & Solak (2017), Bekçi et al. (2020), Ersoy (2022), and Karasioğlu & Garip (2019). Respondents were asked to select appropriate options in multiple-choice questions regarding their gender, age, education level, length of professional service, and number of clients served. Additionally, three multiple-choice questions were included to assess the number of official trainings respondents attended on digitalization, the frequency of errors made during digitalization processes, and their perceptions of the data storage quality of e-accounting applications.

The second part of the questionnaire features Likert-type questions designed to gauge respondents' evaluations

of the challenges related to digital transformation applications in accounting. These questions were formed based on studies such as Elçin et al. (2018), Tanç & Deniz (2020), Ersoy (2022), Karasioğlu & Garip (2019), Kavcı (2022), and Gönen & Solak (2017). A total of eight questions were developed to evaluate perceived limitations, including a shortage of qualified personnel, increased workload, rising costs, technical issues, software expenses, delayed software updates, infrastructure problems, and inadequate information provided to clients. Respondents were asked to rate statements such as, "There are problems accessing the Revenue Administration in an electronic environment," on a five-point scale ranging from "1=strongly disagree" to "5=strongly agree."

In January 2023, the dataset for this study was collected through face-to-face surveys conducted with 106 accountants working in Istanbul. Accounting offices located near one of the authors were visited for research purposes. Each accountant surveyed was initially informed about the study's purpose and then asked to complete the self-administered questionnaire. Out of the 106 questionnaires obtained from the accountants who volunteered to participate, six were discarded due to a significant amount of missing information. The remaining 100 usable questionnaires were analyzed using the SPSS software package.

4. Analysis Results

Table 1 presents the demographic characteristics of the accountants included in the study sample. Male accountants constitute 64 per cent of the sample, while female accountants represent 36 per cent. The majority of the accountants (65 per cent) are aged between 25 and 44 years.

Table 1. Sample characteristics

Demographic Characteristics	Variables	Frequency (n)	Percentage (%)
Gender	Woman	36	36.0
	Male	64	64.0
Age	24 and below	8	8.0
	25-34	34	34.0
	35-44	31	31.0
	45-54	16	16.0
	55 and above	11	11.0
Education Status	High School	4	4.0
	Associate (two-year) degree	11	11.0
	Undergraduate	70	70.0
	Master degree	15	15.0
	PhD	-	-
Duration of Professional Experience	5 years and below	16	16.0
	6-10 years	25	25.0
	11-15 years	19	19.0
	16-20 years	20	20.0
	21 years and above	20	20.0
Number of clients	30 and below	22	22.0
	31 -60	34	34.0
	61-90	14	14.0
	91-120	17	17.0
	121 and above	13	13.0

Source: Authors' compilation

As shown in Table 1, a significant proportion of respondents (70 per cent) hold undergraduate degrees. Accounting experience, when categorized in 5-year increments, is relatively evenly distributed among respondents. Furthermore, 78 per cent of the sampled accountants serve more than 30 clients.

Table 2 provides descriptive statistics regarding the digital transformation experiences of the sample. Forty accountants (40 per cent) have not received any official training on digitalization, while 37 per cent have attended fewer than three trainings. Within the sample, 66 per cent of the accountants have made five or fewer mistakes in the digitalization process, with 22 per cent reporting no errors. In terms of data storage quality, a vast majority (91 per cent) believe that digital transformation applications offer a secure data storage solution.

Accountants' evaluations of the limitations of e-accounting applications are ranked based on mean values in Table 3. The most critical issue, as perceived by the respondents, is the difficulty in accessing the Revenue Administration in an electronic environment (mean of 4.40). This technical infrastructure problem is followed by a human factor issue, with a majority of accountants (mean of 3.97) agreeing that a lack of qualified personnel presents a significant challenge in the digitalization process. Respondents also indicate that clients are not adequately informed about digital transformation applications.

As presented in Table 3, accountants believe that digitalization increases the cost of services (mean of 3.68). Alongside rising costs, an increased workload (mean of 3.60) is identified as another disadvantage of e-accounting

applications. Accountants largely confirm that they frequently encounter technical issues while using e-accounting applications (mean of 3.53). Additionally, the cost of accounting software required for digitalization is perceived as another drawback (mean of 3.52). Lastly, respondents do not think that legislative changes are timely integrated into the information system (mean of 3.51).

Table 2. Digital transformation attributes

Features	Variables	Frequency (n)	Percentage (%)
Number of official trainings attended on digitalization	Never	40	44.0
	1-3	37	37.0
	4-7	17	17.0
	8-11	6	6.0
Frequency of making mistakes in digitalization processes	Never	22	22.0
	1-5	44	44.0
	6-11	19	19.0
	12-17	9	9.0
	18-23	2	2.0
	24 and more	4	4.0
Data storage quality	Poor	9	9.0
	Moderate	31	31.0
	Safer	60	60.0

Source: Authors' Compilation

Table 3. Evaluations of drawbacks of E-accounting applications by accountants

Statements	Rank	Mean	SD
There are problems in accessing to the Revenue Administration in electronic environment.	1	4.4000	.86457
The lack of qualified personnel is an important problem in digitalization. process.	2	3.9700	1.10513
Clients are not adequately informed of digitalization processes.	3	3.9200	1.09802
Digitization increases the cost of services.	4	3.6800	1.09986
E-document applications increase the workload of accountants.	5	3.6000	1.33333
Constant technical problems are experienced in use of e-document applications.	6	3.5300	1.13222
Accounting software for digitization is expensive.	7	3.5200	1.15014
Legislative changes are not adapted to the information system on a timely manner.	8	3.5100	1.16771

The mean is the average on the scale of 1=strongly disagree to 5=strongly agree; SD=standard deviation
Source: Authors' Compilation

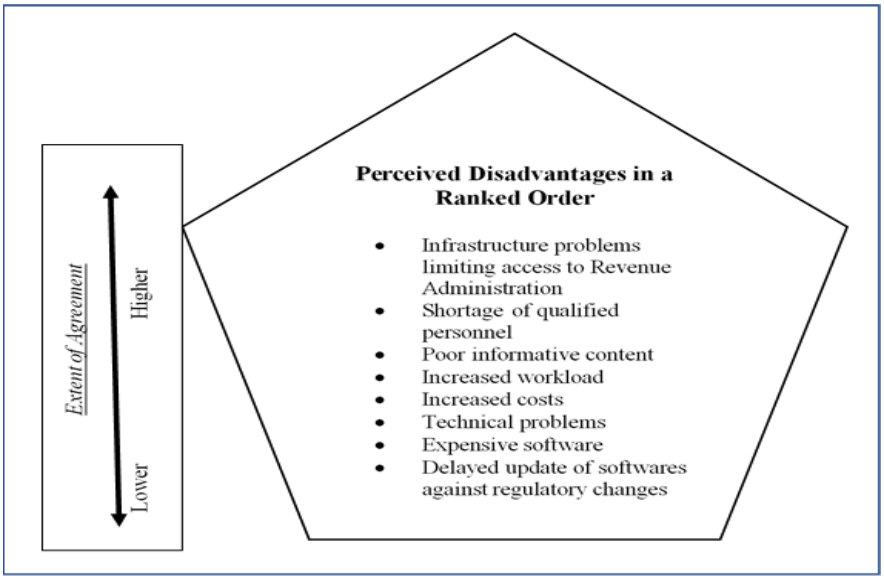

Figure 1. Perceived limitations of e-document applications
Source: Authors' Compilations.

Overall, the findings suggest that sampled accountants are mostly in their early and middle adulthood, with a majority holding undergraduate degrees. The sample includes both highly experienced accountants and newcomers to the profession. Despite serving a large number of clients and attending a limited number of official trainings on

digitalization, these accountants do not frequently make errors in digitalized operations.

Although e-accounting applications are viewed as secure data storage solutions, respondents perceive several obstacles to their effective utilization. The most prominent challenges include infrastructure issues and a lack of qualified personnel. Increased costs, workload, and technical problems are also among the difficulties experienced by accountants.

A concise visual representation of the obstacles, as perceived by the sampled accountants, is provided in Figure 1. The figure ranks the perceived importance of each disadvantage based on the extent to which participants agree with the statements.

As illustrated in Figure 1, the most critical obstacle is the infrastructure problem that limits access to the Revenue Administration system, followed by the perceived shortage of qualified personnel. Other notable challenges include the inadequate information provided to clients, increased workload, rising costs, and the existence of technical issues. In comparison, software costs and delayed software updates are regarded as less severe problems.

5. Conclusions

The pervasive influence of advances in information technology has significantly impacted various business sectors, including the accounting profession. Traditional manual operations have given way to the increasing use of computers for executing accounting functions. Consequently, digital transformation has led to the creation, storage, and dissemination of documents in electronic formats, collectively referred to as e-documents. This study aimed to evaluate the obstacles faced by accountants based in Istanbul, Turkey, when utilizing e-documents, such as e-invoice, e-archive, e-dispatchment note, and e-bookkeeping.

This study, as an attempt to evaluate the obstacles to using e-document applications, drew on the data from a questionnaire survey on 100 accountants in Istanbul. As the results of the study suggest the overwhelming majority of the respondents think that digital transformation applications in accounting provide secure data storage. This result supports the findings of Bozkurt (2020), Ulusan & Bozkurt (2021), Yıldırım (2020) and Gönen & Solak (2017). The findings reveal that the respondents are not exposed to heavy training, with slightly less than half of the accountants receiving no official trainings on digitalization. In spite of the lack of heavy training experience, majority of the respondents have made less than five mistakes in the digitalization process with slightly less than a quarter of the sample reporting no mistake experience.

In the opinions of the professionals regarding the problems encountered in the use of digital accounting applications, the major obstacle appears to be infrastructure problems limiting access of accountants to the system of Revenue Administration. This result is in conformity with the findings of Karasioğlu & Garip (2019). The lack of qualified personnel turned out to be the second major limitation in the study. This human factor problem is also raised by Ersoy (2022) and Karasioğlu & Garip (2019). The next problem as perceived by the respondents is that clients are not properly informed about the digital transformation practices. Consistent with findings by Ersoy (2022), Gönen & Solak (2017), Kulak (2019) and Demirdöven (2017), increase in service costs is another obstacle surfaced in the study.

Similar to the results of the studies by Ersoy (2022) and Karasioğlu & Garip (2019), the respondents are of the opinion that electronic accounting applications increase the workload of professionals. Experiencing technical problems in e-document applications is perceived as another drawback by the respondents as in the study by Ulusan & Bozkurt (2021). Further perceived disadvantage, which is in agreement with the result of the study by Karasioğlu & Garip (2019), is the cost of the accounting software required to be used in the digitalization process, Finally, confirming the finding by Ulusan & Bozkurt (2021), the respondents do not think that the legislative changes are adapted to the information system in a timely manner.

To overcome the challenges identified in this study, nationwide initiatives should be undertaken to enhance digital transformation processes. This includes improving existing infrastructure, providing comprehensive training for both accountants and clients, and ensuring timely integration of legislative changes into accounting software programs.

It is worth mentioning that this research focused on accountants in Istanbul, the most populous and economically prosperous city in Turkey. Consequently, the findings might not be generalizable to the entire population due to the sampling method employed. Furthermore, the reliance on subjective assessments rather than observed behaviors could introduce biases and inconsistencies in the responses provided.

Future research should address the limitations of this study by employing a larger sample size and adopting a longitudinal approach to capture potential trends in the obstacles faced by accountants. Moreover, studies focusing on other regions and accounting practices could provide valuable insights that contribute to a more comprehensive understanding of the challenges and opportunities associated with digital transformation in the accounting profession.

Data Availability

The data used to support the research findings are available from the corresponding author upon request.

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Conflicts of Interest

The authors declare no conflict of interest.

References

Amidu, M., Effah, J., & Abor, J. (2011). E-accounting practices among small and medium enterprises in Ghana. *J. Manag. Policy Pract., 12*(4), 146-155.

Bayraktar, C. & Yıldırım, M. (2017). E-belge sistemleri üzerine davranışsal tutum ve kullanım niyetlerinin incelenmesi: Karabük ili muhasebe meslek mensupları örneği. *Muhasebe ve Finansman Dergisi, 75*, 95-113. https://doi.org/10.25095/mufad.399884.

Bekçi, İ., Apalı, A., & Engin, M. (2020). E-dönüşümün muhasebe meslek mensuplarinda memnuniyet düzeyi: Bursa ili örneği. *İnönü Üniv. Uluslararası Sosyal Bilimler De.*, *9*(2), 579-596.

Bozkurt, E. (2020). Muhasebede E-Fatura, E-Defter: Yozgat'ta Faaliyet Gösteren Muhasebe Meslek Mensuplarının E-Fatura, E-Defter Uygulamalarına Karşı Tutumları. [Doktora Tezi. Yozgat bozok Üniversitesi], Yozgat.

Brabetea, V. & Goagără, D. (2022). Digitalization – a danger to accounting professionals? *J. Corp. Gov. Insur. Risk Manag., 9*(1), 25-48. https://doi.org/10.51410/jcgirm.9.1.3.

Demirdöven, M. O. (2017). Muhasebede E-Fatura ve E-Defter; Türkiye'de E-Fatura E-Defter Sistemine Geçen İşletmelere İlişkin Bir Araştırma. [Yüksek Lisans Tezi. Trakya Üniversitesi], Edirne.

E-document. (2023). https://ebelge.gib.gov.tr/anasayfa.html.

Elçin, R., Gerekan, B., & Usta, M. (2018). E-fatura, E-defter ve e-arşiv uyglamlarına geçiş sürecinde yaşanan sorunlar: Serbest muhasebeci mali müşavirler üzerine bir araştırma. *Mali Çözüm Dergisi*, *28*, 13-42.

Ersoy, N. E. (2022). Muhasebe Bürolarında Çalışan Muhasebe Meslek Mensuplarının E-Dönüşüm Süreci Hakkındaki Görüş ve Beklentileri: Aksaray İli Örneği. [Yüksek Lisans Tezi. Kırşehir Ahi Evran Üniversitesi], Kırşehir.

Gönen, S. & Solak, B. (2017). Maliye bakanlığı e-dönüşüm sürecinin muhasebe meslek mensupları açısından değerlendirilmesine ilişkin bir alan araştırması. *Muhasebe ve Finansman Dergisi*, (76), 63-80. https://doi.org/10.25095/mufad.400219.

Karasioğlu, F. & Garip, O. (2019). E-muhasebe uygulamaları kapsamında güncel sorunlar ve çözüm önerileri: Karaman'Da bir araştırma. *Selçuk Üniversitesi Sosyal Bilimler Meslek Yüksekokulu Dergisi*, *22*(2), 433-446.

Kavcı, T. (2022). E-Muhasebe Uygulamalarına İlişkn Muhasebe Mensuplarının Tutumları: Gaziantep İlinde Bir Araştırma. [Doktora Tezi. Hasan Kalyoncu Üniversitesi], Gaziantep.

Kulak, A. (2019). Muhasebe'de E-Dönüşüm. [Doktora Tezi. Gaziantep İnönü Üniversitesi], Malatya.

Marinagi, C., Trivellas, P., Reklitis, P., & Skourlas, C. (2015). Adoption and use of e-invoicing in Greece. *AIP Conf. Proc., 1644*(1), 279-286. https://doi.org/10.1063/1.4907848.

Noronha, M. R., & Kulkarni, A. R. (2012). Hindistan'da E-Muhasebe. *Ind. J Account., 42*(2), 1-10.

Öztürk, R. & Kula, V. (2021). A general profile of artificial ıntelligence adoption in banking sector: A survey of banks in Afyonkarahisar Province of Turkey. *J. Corp. Gov. Insur. Risk Manag., 8*(2), 146-157. https://doi.org/10.51410/jcgirm.8.2.10.

Sabuncu, B. (2022). Dijital dönüşümün muhasebe mesleğine etkileri. *Ömer Halisdemir Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, *15*(1), 103-115. https://doi.org/10.25287/ohuiibf.974840.

Şeker, Y. & Safa, H. (2021). Muhasebe meslek mensuplarının dijital muhasebe uygulamalarını kullanımlarına ilişkin bir araştırma. *Anadolu Üniversitesi Sosyal Bilimler Dergisi*, *21*(4), 953-972. https://doi.org/10.18037/ausbd.1039477.

Tanç, Ş. G. & Deniz, F. (2020). Muhasebe meslek mensuplarının muhasebe uygulamalarındaki e-dönüşüm sürecine ilişkin görüş ve beklentileri: Hatay ili örneği. *Selçuk Üniversitesi Sosyal Bilimler Meslek Yüksekokulu Dergisi, 23*(2), 622-636. https://doi.org/10.29249/selcuksbmyd.804296.

Tekbaş, İ. (2018). Dijitalleşmenin muhasebe mesleğine ve meslek mensuplarının bir araştırma ve yeni bir kavram üzerine etkileri: mali mühendislik. [Doktora Tezi. Okan Üniversitesi], İstanbul.

Tekelioğlu, Z. (2022). Muhasebe meslek mensuplarının dijitalleşme algısı: Konya ili örneği. [Yüksek Lisans Tezi.

Karamanoğlu Mehmetbey Üniversitesi], Karaman.
Thuttoli, M. M. & Ahmed, E. R. (2022). Information technology and E-accounting: Some determinants among SMEs. *J. Money Bus.*, *2*(1), 1-15. https://doi.org/10.1108/JMB-05-2021-0018.
Topbaş, N. (2023*).* Blokchain teknolojisi'nin muhasebe meslek mensupları üzerine etkisi: Çanakkale örneği. [Yüksek Lisans Tezi. Trakya Üniversitesi], Edirne.
Ulusan, H. & Bozkurt, E. (2021). Yozgat'ta faaliyet gösteren muhasebe meslek mensuplarının e-fatura ve e-defter uygulamalarına karşı tutumları. *J. Account. Tax. Stud.*, *14*(1), 1-44. https://doi.org/10.29067/muvu.699708.
Yıldırım, A. (2020). E-Dönüşüm Sürecinde,E-Muhasebe Uygulamaları: Muhasebe Meslek Mensupları Üzerinde Bir Araştırma. [Yüksek Lisans Tezi. Okan Üniversitesi], Kırıkkale.
Yıldırım, S. & Güney, S. (2012). Serbest muhasebeci mali müşavirlerin genel sorunları: Erzurum ili örneği. *Muhsebe ve Denetime Bakış*, *36*, 35-48.