

Evaluation of the Factors Affecting the Purchasing Decisions of Accounting Package Programs ¹

Muhasebe paket programlarının satın-alma kararlarını etkileyen faktörlerin değerlendirilmesi

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doi: 10.5505/iuyd.2017.46330

Choosing the appropriate accounting software is an important issue for many organizations. Due to the fact that choosing the wrong accounting software causes great financial loss, the process of purchasing accounting package programs needs to be well planned. The factors affecting purchasing decisions of accounting package program in general terms will be evaluated within the scope of this study. As a result of the study, the most important criterion for accounting professionals is the security. In addition, the D brand package program has the highest weight.

Keywords: Accounting, Accounting package programs, Purchasing

Jel Codes: M10, M40, M41, D80.

Uygun muhasebe yazılımını seçmek birçok organizasyon için önemli bir konudur. Yanlış muhasebe yazılımını seçmenin büyük mali kayıplara neden olması dolayısıyla, muhasebe paket programlarının satın alınma sürecinin iyi planlanması gerekmektedir. Bu çalışma kapsamında da genel hatları ile muhasebe paket programı satın alma kararlarını etkileyen faktörler değerlendirilmiştir. Çalışma sonucunda, muhasebe meslek mensupları için en önemli kriterin güvenlik olduğu ortaya çıkmıştır. Ayrıca, D marka paket program öne çıkmıştır.

Anahtar Kelimeler: Muhasebe, Muhasebe paket programları, Satın-alım

Jel Kodları: M10, M40, M41, D80.

¹ This article is a revised and extended version of the paper presented at the 8th International Congress on Entrepreneurship (2017-Balıkesir) and contained in the congress book.

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1. INTRODUCTION

The selection of accounting package programs, which are among the standard tools in the field of accounting today, has of great importance. To find what the correct software an organization needs takes a certain amount of time. With this study, it is aimed to calculate the weights of the factors that are effective in the selection of the accounting package program and to calculate the weights of the package program alternatives depending on these weights.

2. COMMERCIAL SOFTWARE FOR ACCOUNTING AND ACCOUNTING PACKAGE PROGRAMS IN TURKEY

Due to their ability to process and use information, computer technologies are great assets for various departments as well as accounting departments of the enterprises. Commercial software products have become systems developing within accounting by enabling integrated decision support systems besides registration, classification, summarization and reporting (Güney and Özyiğit, 2015: 281). In general terms, accounting package programs are "less complex programs that assist in the extraction of trial balance sheets, income statements and balance sheets at the end of the month with the help of the Uniform Accounting Plan published in the General Communiqué on Accounting System Implementation with the help of basic and auxiliary accounts"(Ömürbek and Bekçi, 2006: 78).In simpler terms of accounting information system, accounting package programs are software that archive and processes accounting transactions in functional modulus (Pulakanam and Suraweera, 2010: 100). Even though general accounting programs allow bookkeeping, declarations and statements to be prepared quickly and cheap, integrated systems have started to be used in planning, control and decision support because of the inadequacy of these programs (Güney and Özyiğit, 2015: 281).

Today, there are various accounting package programs under many names and brands are available, package programs specially made for the businesses can also be used. While ready-made packages are preferred in accounting departments, there are also special software accounting packages that are preferred by businesses that have their own accounts department (Çetin and Eren, 2015: 86).

Upon transition to computerized accounting in Turkey during similar periods of the world, the use of information technology has increased since 90s. Thus, package programs providing either all business functions, or only accounting programs or accounting and control applications are being used (Sarıççek, 2013: 88-889). There are about 20 accounting package programs being used in Turkey. The most preferred accounting program is ETA (Çetin and Eren, 2015; ETA, ty). Following ETA, there come other accounting programs such as Netsis, LKS, Mikro, Orka, Nisa, Axasoft, Demsoft, Akinsoft, Asyasoft, Tilasoft, Cesasa, Türev, Luca, Netadam, Diaand Basecom countable.

3. ADVANTAGES OF USING APPROPRIATE ACCOUNTING PACKAGE PROGRAMS

Technological developments affecting accounting order have allowed the system to be transferred to the computers. Accounting package programs offer various benefits in terms of records, books, documents, documentation, archives and personnel (Güney and Özyiğit, 2015: 291). In general, Schwartz (2007: 13-14) groups the advantages of using an accounting

package programs aiming to improve the productivity and accuracy of the accounting department in terms of cost savings, integration of two or more systems and better reporting or inquiry functions due to the need for less personnel.

Accounting programs help accountants or business owners to create sales forecasts, economic business models and other decision-making tools. They also automate the financial information of the business by restricting mistaken data by the people, while offering standard defaults and mathematical validation process.

These processes ensure that the accounting books of the company are always in balance and do not violate pre-determined conditions. Small business accounting software packages are the basic programs considering the accountant. Small business owners can electronically transfer this information to the public accountant for the tax office. Electronic transfer of information is more accurate and timely than accounting books (Ghasemi et al., 2011: 115).

Since choosing package program is of great importance, using the wrong program may cause many damages. As a result of the fact that the business data cannot be processed in a correct and practical way, correct information cannot be evaluated at the right time in the decision making stage and therefore the business cannot provide optimum benefit (Demir, 2015: 413).

4. FACTORS AFFECTING ACCOUNTING PACKAGE PROGRAM PURCHASING

As discussed in the literature, there are certain factors that affect the purchase of the accounting package program by users. Reviews in the relevant literature also show that these factors affect the purchasing behavior of users at certain levels. It is often the senior managers who decide which accounting package to use.

West and Shields (Abu-Musa, 2004: 7 in 1998) regards the option of accounting software as a strategic decree, and at this point strategic choice for future needs is about choosing a strategic partner to find the best package program. It is also about having the flexibility to meet future needs rather than meeting current needs. The goal is not to select and deploy new software package by top management, but to acquire the commitment to technology that provides organizational change (Abu-Musa, 2004: 6-7).

Purchasing the most appropriate accounting software package has become one of the most critical decisions for many organizations in the rapidly changing business world. For this reason, the accounting package chosen by an organization should be the software that will best serve its current needs and be easily adapted to its future needs. Selecting the right package will not save money, and choosing the wrong package will cause waste of time and money (Abu-Musa, 2004: 2).

Collins (1999) stated some questions need to be answered before choosing the right accounting package, and sorted the questions that need to be answered as the following:

- ✓ Does the software provide individualization?
- ✓ Is the vendor financially sound and reliable and able to provide the technical resources that your organization needs?
- ✓ Can the product provide financial reporting?
- ✓ Does product technology exist and meet any future needs?
- ✓ Does the product fit for the business?

- ✓ Since e-commerce has become very important, does the package provide web integration?
- ✓ Is it easy to use?
- ✓ How much is the price?

In addition to this, although in many studies a list of evaluation criteria is presented the specific software package; it is not easy to publish a common list. Software evaluation criteria are not clearly given in details.

According to Jadhav and Sonar (2009: 562), accepted criteria are subject to the evaluator's own interpretation. For this reason, a criterion accepted by a writer is not included in the work of another researcher. Although the functional criteria for software selection varies from software to software, the criteria regarding the cost, product (vendor), and quality may be common and be used to select any software package

According to Abu-Musa (2004: 6), certain important factors must be taken into consideration before purchasing an accounting software package. Before investing in any accounting software package, it is expected that business requirements will be taken into consideration and the accounting software to be purchased will meet the present and future needs of the business. Abu-Musa (2004) noted that four main factors that are expected to affect end-user requirements for accounting software packages:

- ✓ Current requirements
- ✓ Future requirements
- ✓ Business type
- ✓ Business size

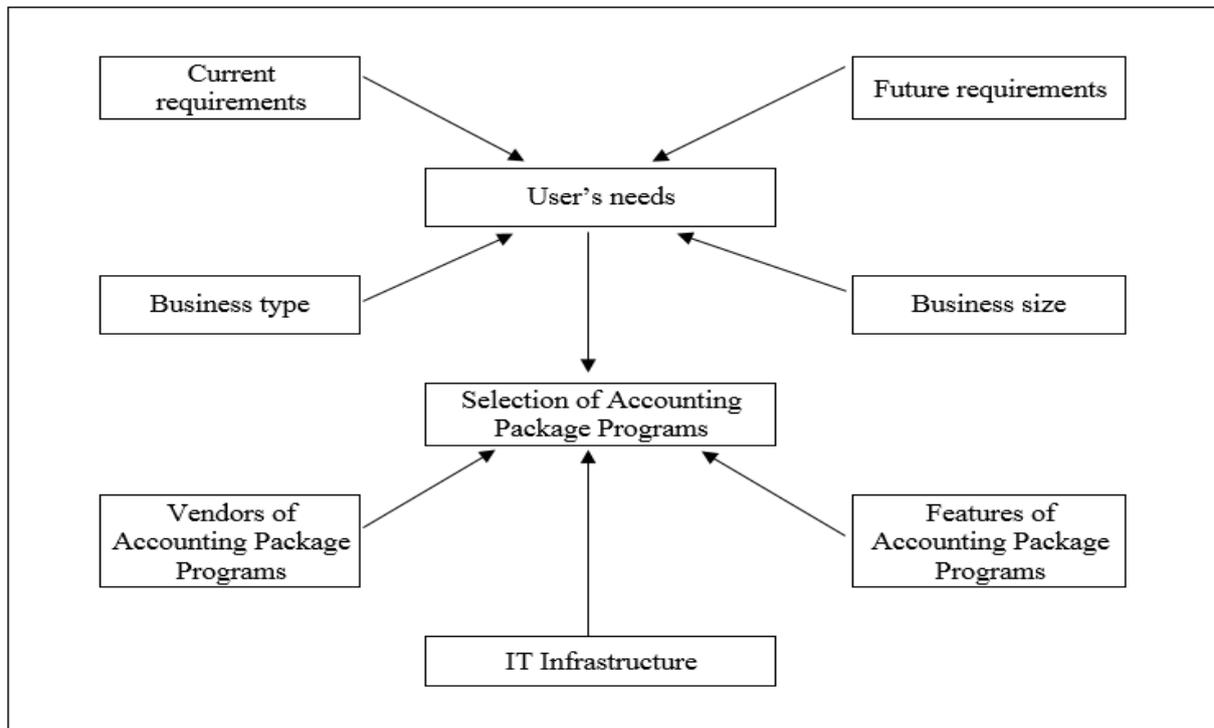


Figure 1. Selection of Accounting Package Program (Source: Abu-Musa, 2004: 6)

In compliance with the current requirement, the company should first identify problems with the existing system. Before deciding that new software is necessary, the company must be sure whether the latest version could run on the correct system. Identifying problems in the current system will help the company determine what to look for in a new package. All employees should be given opportunity to explain their problems with the

The number of people expected to use the accounting software at the same time is also an important factor for purchase decision. Almost all top accounting software publishers provide retail pricing regarding eight core modules (general ledger, account receivables, payroll, stock, order entry, business cost and system management) for 1 user, 5 users, 10 users, 25 users and 100 users. Retail pricing.

For this reason, enterprises should select the appropriate accounting software package according to the expected number of users who can use accounting software at the same time. The businesses or more users anticipating increasing number of operations will require a scalable database to manage their growth, which can significantly increase the cost of software and significantly affect the usual variables of application and support (Abu-Musa, 2004: 8).

The type of work is also an important factor in the selection of the accounting package program. Accounting software packages can be divided into two main types: general accounting software and customized accounting software. Customized accounting software is designed specifically to fit needs of certain users, especially of the Public Accounting (Abu-Musa, 2004: 8). Therefore, enterprises should consider some factors such as the size of the business, the structure of the industry and the business volume while selecting the accounting software.

Abu-Musa (2005: 92) stated that besides the expectations of the users, there are some effective factors in accounting package programs. Accordingly, the second major factor affecting the selection of accounting software packages is the characteristics of those packages. Key features of the accounting software package include; customization capabilities, financial reporting, account number structure, web features and e-commerce, foreign exchange, supported databases, product modules, eight core module prices, vendor's programs, customer numbers, number of links, third party, programming languages and security of the accounting software (Abu-Musa, 2005).

Muhrjala and Ogundeji (2014) collect the factors that may be effective in the selection of the package program under 5 main groups similar to the evaluation of Abu-Musa. These elements are the determinants of the selection of commercial accounting software and they clearly include commercial, technical, operational, security and strategic elements (Muhrjala and Ogundeji, 2014). The basic criteria that Muhrjala and Ogundeji (2014) dealt with in their study are collectively shown in the table below.

Table 1. Factors Affecting Accounting Package Program Purchasing (Source: Muhrtala and Ogundeji, 2014)

Factors	Variable
Operational	Accounting and reporting support, Accounts System Structure, Multi-currency platform, Product Modules (collective and real time processing support), Transactions Processing / Restriction features, Event Triggered Reporting and reduced transaction errors, Automatic reconciliation of book items and Data Validation
Commercial	Web Features and e-commerce, Price of core modules, Initial purchase cost and maintenance costs, Multi-user module platform, Last used reference, Seller Reliability
Technical	Database Support, Vendor Programs, Scalability, Link to the Third Parties, Programming Language, Hosting, IT Environment and Infrastructure, Technical Support
Security	Internal Logical Access Security, Web-enabled / e-commerce-connected security, Strong authentication and verification, Procedures
Strategic	Possible commercial expansion in the future, Partnership and Strategic Alliances, Multi-Business Integration, Large Privileged Regulations, Future Mergers and Acquisitions, Multi-product and / or service expansion arrangements

In the survey conducted by Muhrtala (2014) in Nigeria, it has been revealed that the use of accounting software by companies is mainly due to operational, commercial and security concerns. Muthaiyah, Raman and Lambard (2003) stated that large firms often have a resource advantage of receiving consultancy services to designate a specific task or give advice on hardware and software acquisition in choosing an accounting package program. Apart from that, the first three criteria sought by most businesses when choosing accounting software are listed as the cost, features and ease of use.

Accounting software products vary in cost depending on the features selected. Most providers also use subscription models for different types of packages, and some also offer free versions with basic functionality or limits regarding the number of users and clients. Therefore, the cost of the accounting package program is among the factors that should be considered during selection of the program.

Apart from these, service quality is also an important factor following the purchase. For effective and efficient use of the software, the training and software provided at the time of purchase must be continuously updated according to the changing technology, legal regulations and conditions.

It is also expected that an accounting package program will be user friendly. User-friendly accounting software, however, can pose significant risks to the security and integrity of the computer, communication systems, data and management information. Although many organizations do not realize the importance of computer security, until unauthorized changes are made in a payroll file or any other thing; it is a great risk to leave it unprotected as it may be the most valuable asset of a Corporation. Hence, when choosing the accounting software package, organizations should not ignore the importance of information security in the light of computer fraud, hackers, computer viruses and other security threats (Abu-Musa, 2004: 2).

5. LITERATUR SURVEY

Bastı and Boyar (2012) suggested that "reporting ability" and "being compatible with TAS / TFRS" are the first outstanding criteria in selection of accounting package program as a result of their research on selection of accounting package programs by the corporations in Turkey by using Analytical Network Process (ANP) method. Following these criteria, "ease of use of the menus" and "speed of adaptation to legislative changes" are important in the selection of the accounting program (Bastı and Boyar, 2012).

Demir (2015) found in his study on accounting package program preferences that SMEs do not prefer very cheap or very expensive programs, instead they prefer the ones with reasonable and annual ownership cost. According to a study that revealed that Vega program is the most preferred, the modules that the program has are of importance for companies (Demir, 2015).

In their study on accounting program preference of the accounting professionals in Konya, Çetin and Eren (2015) found that ETA is the most preferred program. They listed the criteria effective in evaluating package programs as support services such as being fast, increasing work efficiency, easy to use, clear and understandable, keeping information secure, improving work performance, ease of operation control, reasonable annual usage and service fees (Çetin and Eren, 2015).

The study conducted by Tunca et al. (2015) also examined the preferences of the accounting package program through major decision-making methods. According to this, the ability to report the criterion values, the ease of use of the menus, the warning and information system have become the most important criteria in program's value (Tunca et al., 2015).

5.1. Development and Use of Internet

We can define the Internet as a communication network that connects multiple computers with each other via the TCP / IP protocol and the importance of which increases day by day in the whole world. The Internet initially emerged as a communicative structure aiming to share data between computers by establishing an end-to-end communication network (Carpenter, 1996). However, it has become a structure based on the dissemination of contents thanks to its developing structure and equipment and devices developed on the basis of the internet (Laudon and Traver, 2012). One of the most important reasons for the rapid growth of the Internet and its acceptance by consumers has been to provide consumers with the environment required for effective information gathering about the product and to make their purchasing decisions easier. Thus, conventional shopping methods have been replaced by modern shopping methods, in which speed and information come to the forefront (Gönen and Yüçetürk, 2013). Shopping in the virtual environment offers many advantages such as saving time, comfort and convenience for the customers and in terms of those engaging in sales process, it provides opportunities as high customer and optimum cost of investment and sales (Yükçü and Gönen, 2009).

As a result of the widespread use of the Internet, information technology has developed and new approaches have emerged in the field of computers. The structure developed in this way has introduced enterprises to a new structure of information, communication and job sharing (Sevli, 2011).



Figure 2. Internet, Computer and Developing Structure (Source: MasivaTürk, 2016)

Today, this rapidly evolving structure has made the internet and the information technology that emerged with the internet indispensable in our lives. Nowadays, it is impossible to think a world that cannot reach information and the technology developed with the information has emerged a social structure that can be reached every moment and everywhere. Developments affecting social life and the structure to such extent have forced enterprises to meet new technologies. Being able to adapt virtualization and developing technology promptly and make maximum use of these technologies have emerged as a compulsory requirement to gain a competitive advantage in business (Hacıismailoğlu, 2011). One way of achieving these advantages is seen as software in technology and internet age.

5.2. A Brief Look into the World of Software

We can define the software as programs which aims to shorten the business processes of the parts by enabling electronic parts to communicate with each other, to provide communication and to perform various tasks to increase productivity (YazılımNet, 2017). Software-related developments as sorted out by O'Hagan and Mangiron (2013) as from the 1949s:

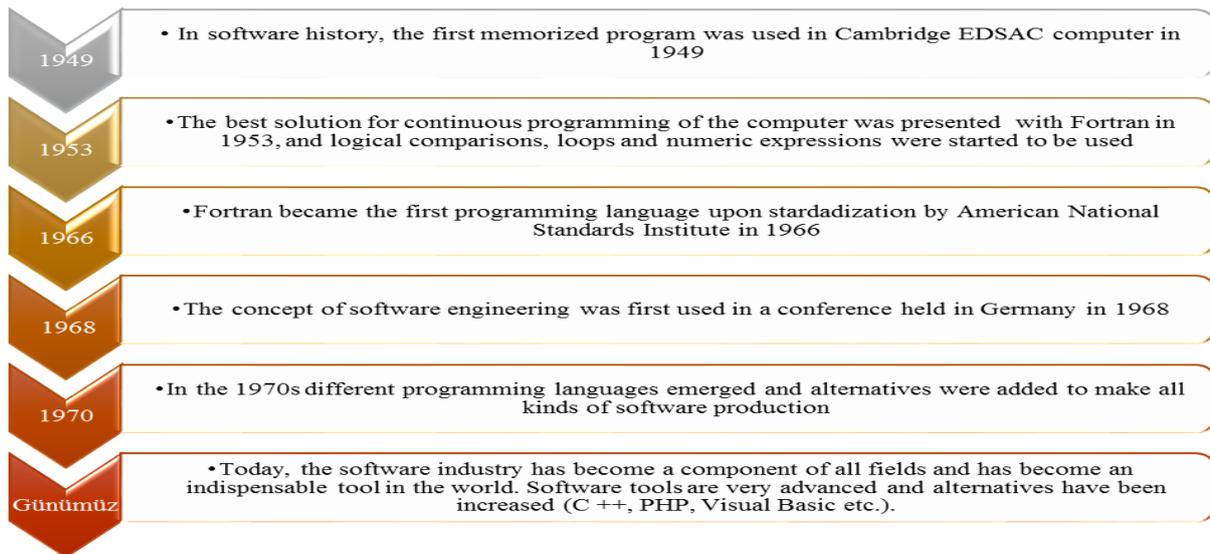


Figure 3. Developments in Software World (since 1949)

As can be understood from Figure 3, the software world, which started to develop in 1949s, has become an indispensable part of both people and institutions today, while it only affected the life after the 1970s.

Without doubt, it is the transition of the governments to electronic environment for their applications that forces institutions to use software as indispensable items (Yürekli, Gönen and Şahiner, 2016). Compulsory applications such as electronic billing and e-government may be given as examples of these applications. Accounting software is also very important in the world that is integrated with such software.

In accounting, Enterprise Resource Planning (ERP) systems express the software department of information technology (Demir and Bahadır, 2006). Enterprise Resource Planning software can also be expressed as an information system which combines all the units of enterprises and processes all the functions related to these units in harmony (Yürekli and Şahiner, 2016). ERP is very popular among businesses because it is a software that combines a central database and an application. In accounting software, Netsis, an İzmir based company and German SAP ERP may be shown as examples.

The advantages that companies gained with technology affect the development of companies, the accounting department, and indirectly the future of accountants. In developing companies, data has vital importance. In this context, while cloud computing provides new business models, it is inevitable that it will form the basis of the change effect in the future of the economy (Nixon, 2012).

5.3. Cloud Computing and Concept of Cloud Accounting

As the Internet develops and the opportunities it provides to the users expand, new concepts and practices emerge. The data plays a very important role in these applications. With the Internet, advanced applications of Web 2.0 and 3.0 have gained importance, and advanced business applications have started to be prepared (Atay, 2010). Cloud computing systems emerged as a new concept and applications today (Sevli, 2011).

When the concept of cloud computing is considered in terms of the enterprises, it can be expressed as information and communication services that can be easily used for management and assignment to the relevant person or units as it is arranged according to the fields needed by the resources shared by all units. In other words, cloud computing can also be expressed as a general concept (Koyuncu, 2011) that expresses information and communication technology services that can be obtained independently through Internet from time and space according to the needs.

As it is understood from the definition, cloud computing, which offers such important opportunities to businesses, has become very popular because it reduces the costs of traditional computing among the enterprises. As stated in the study conducted by Yapıcı (2010), the International Data Association (IDC) stated that the share of cloud computing expenditures of enterprises increased rapidly and reached to 44.2 billion dollar market in 2013. This data is very important in that it indicates that cloud computing is a concept that must be caught and tracked for prospective businesses.

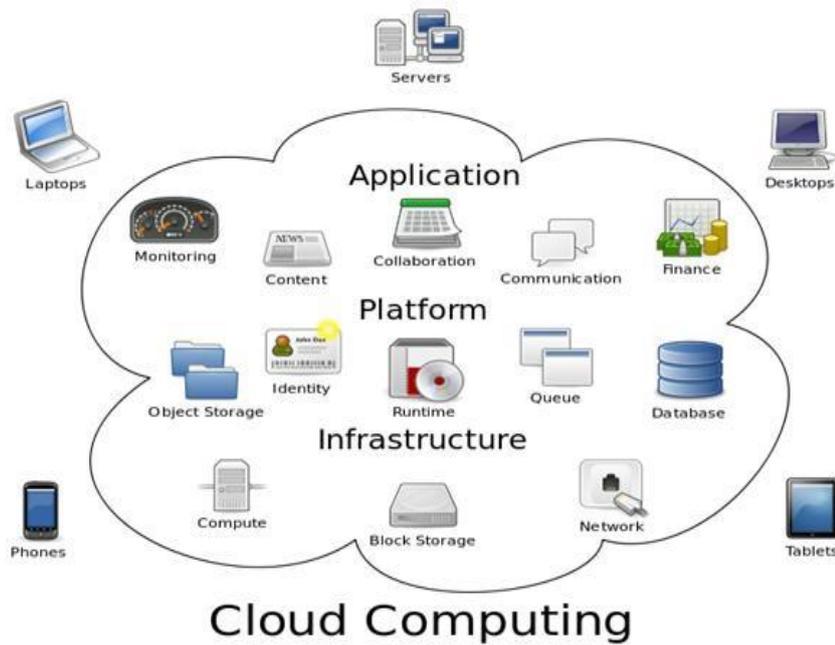


Figure 4. Cloud Computing; Infrastructure, Platform and Applications (Dralabay, 2014)

As can be seen in Figure 4, recently evolving web services are possible with virtualization Technologies in order to talk about cloud computing, an emerging technology (Seyrek, 2011). In addition, the cloud computing services and the hosted services are as follows (Seyrek, 2011):

- Infrastructure Service (Infrastructure as a Service–IaaS): It provides the user with a processor, memory storage and network services on which the user can install an operating system and other software
- Platform Service (Platform as a Service – PaaS): It is presented as an environment and a service for the development of new applications by the user; in brief, an application may be created for an employee working at the infrastructure of a corporation providing cloud service and enterprise may provide services for other users from its servers.
- Software Service (Software as a Service – SaaS): By keeping the software that institutions need within the servers of this institution, it enables the users to operate and run these software through these servers even if the software is not installed on their own computer

In addition to this, it is preferred due to the advantages that cloud computing brings to the institutions/corporations listed as the following (Höfer and Karagiannis, 2011):

- Requires virtual infrastructures,
- Lowers costs,
- Is flexible and editable,
- Easy Access and use.

Because of all these advantages, accounting is the primary field where cloud computing is used. The main purpose of accounting systems is to collect data and information both for internal and external users in order to carry out management, processing and evaluation , which is very important for the financial information used in the decision making process of the accounting system) (Butkevicius, 2009; Christauskasand Miseviciene, 2012). The corporations, especially those providing accounting package programs, increase their use of cloud computing day by day and take advantage of the facilities it provides. Thus, today, classical accounting programs are replaced by web-based accounting programs based on cloud computing (ElitaşandÖzdemir, 2014).

In the study conducted by Elitaş and Özdemir (2015), the differences between traditional accounting programs and cloud-based accounting programs are compared in Table 2.

Table 2. Comparison of traditional accounting programs and cloud-based accounting programs (Özdemir and Elitaş, 2015)

Classic accounting programs	Cloud-based accounting programs
Enter data manually	Enter data automatically
There is no remote access to the system	There is remote access to the system
Installation and updating is done manually	Installation and updating is done by remote access
There is no possibility to work independently from the workplace	There is an opportunity to work independently from the workplace
Backup is performed at the local terminal	The backup is performed in the cloud computing system and in the local terminal
Legislative changes are tracked individually	Legislative changes are tracked in the cloud computing system
Declarations are hand-filled and sent.	Declarations are automatically filled in and sent
Time losses are experienced in transactions	No time loss in transactions
Manual filling and sending of bills and other official documents	Web-based filling and sending of invoices and other official documents
Remote access is not available when business executives request financial data	Remote access is possible whenever business executives request financial data
There is no continuous communication with client firms in financial advisors	There is a continuous communication with the client companies in the financial advisors

It has been expressed by Christauskas and Miseviciene (2012) in a study that transition to cloud computing in accounting could be a new solution model for cost saving such as network management, hardware and software resources making up a significant part of the information technology in terms of small and medium sized enterprises.

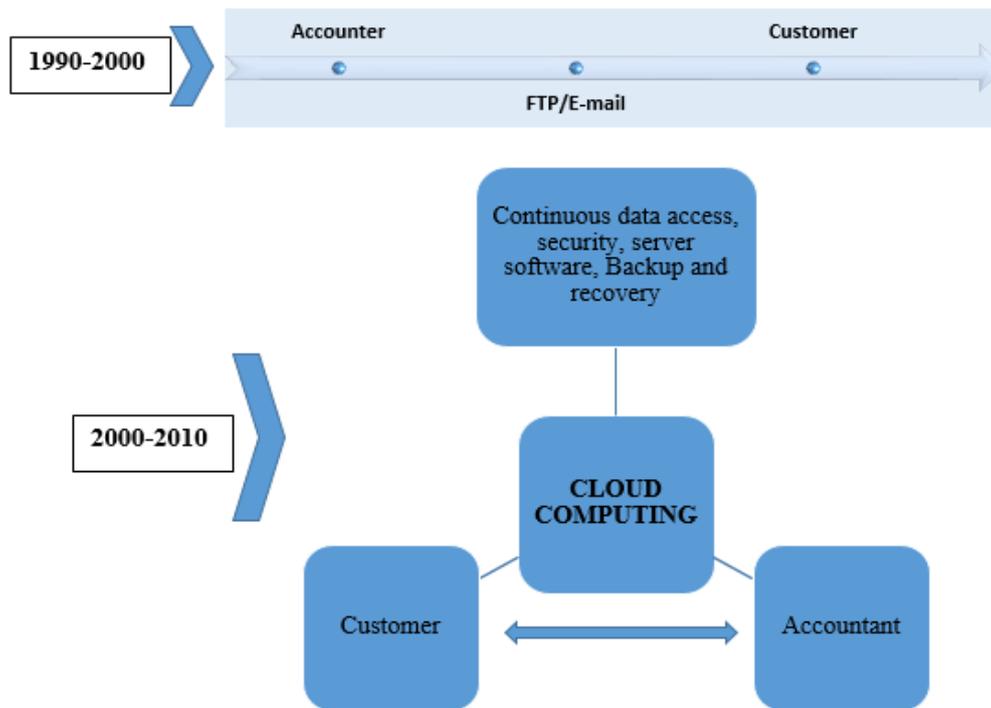


Figure 5. Change in Communication between the Client and the Accounting Company (Philips, 2012)

Some of the software based on cloud computing with all these advantages and used in Turkey are;

- LUCA, one of the most preferred accounting software in Turkey, is introduced as Turkey's first and only internet based Central Accounting and Commercial Package and Corporate Solutions System developed by TÜRMOB (Union of Public Accountants). This software aims to establish a standard for the implementation of the accounting profession by encouraging rapid adaptation of changes and developments in accounting profession in Turkey, using advanced technology and common software (LUCA, 2017)
- Another application is LOGO. LOGO is an accounting software to be operated in coordination with the e-Book application, which is published by the Revenue Administration Department (IOM) through the "General Communique on Electronic Bookkeeping", Tiger Enterprise, Tiger Plus and GO Plus products (LOGO, 2017).

In our country where accounting systems based on cloud computing and the internet are widely used; accountants and their clients can access to the system through fixed and mobile devices with their passwords and carry out the procedures. The data generated during these operations can be stored, making backup possible (Elitaş and Özdemir, 2014).

6. OBJECTIVE AND METHOD OF THE RESEARCH

The purpose of the study is to evaluate the factors that are effective in the purchase of accounting package programs and to calculate the weights of brand alternatives. The analytical hierarchy process (AHP) method developed by Saaty (1977) was used because the

objective of the study was to determine the weights of the alternatives according to the criteria

The first stage of AHP is the creation of a hierarchical structure including the factors (criteria) and alternatives (Figure 6). In the study, the classification of Muhrtala and Ogundeji (2014) was used to determine the factors. While selecting alternative package programs, the consideration was given to the most preferred / known brands throughout the country.

Within the scope of the study AHP comparison data were collected following face-to-face interviews that were conducted with 21 financial advisors. The consistency (CR <0.10) of the two comparison matrices given by each responder was checked. After the consistency test, the geometric mean of the values given by each responder was taken.

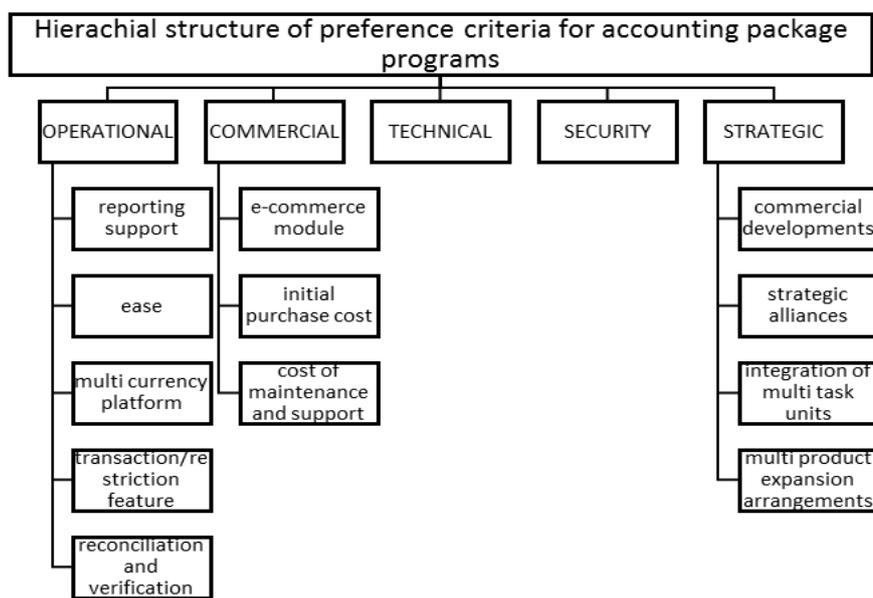


Figure 6. Hierarchical Structure of the Research

6.1. Calculations of Factor Weights

Table 3 contains the final binary comparison matrix of the main factors of all responders and their weights obtained in this direction. This matrix is obtained from the geometric mean of the binary comparison data of all responders. As can be seen from the W weight vector, while CR = 0.02 is the most important factor, the lowest factor is the commercial one.

Table 3. Binary Comparison Matrix and Weight of Main Factors

MAIN FACTORS	Operational	Commercial	Technical	Security	Strategic	W
Operational	1	2.89	0.76	0.35	1.44	0.180
Commercial	0.35	1	0.52	0.28	0.46	0.083
Technical	1.32	1.94	1	0.38	1.42	0.184
Security	2.82	3.58	2.66	1	2.73	0.409
Strategic	0.69	2.19	0.70	0.37	1	0.144

Table 4 shows the final binary comparison matrix of the sub factors of the operational factor and the weights obtained in this direction. As can be seen from the W weight vector, the most important sub-factor is CR=0.05 ease of use.

Table 4. Binary comparison of sub-factors and weights of operational factors

OPERATIONAL	Reporting	Ease of Use	Multi-currency	Restriction of Transactions	Reconciliation	W
Reporting	1	1.26	3.10	3.61	1.56	0.310
Ease of Use	0.79	1	3.67	2.84	4.35	0.343
Multi-currency	0.32	0.27	1	0.43	0.32	0.071
Restriction of Transactions	0.28	0.35	2.32	1	0.61	0.112
Reconciliation	0.64	0.23	3.09	1.65	1	0.164

Table 5 shows the final binary comparison matrix of the sub factors of the commercial factor and the weights obtained in this direction. As can be seen from the W weight vector, CR= 0.07, the most important factor is maintenance cost while the lowest factor is e-commerce.

Table 5. Binary comparison matrix of the sub factors of the commercial factor and the weights

COMMERCIAL	E-commerce	Initial Purchase	Maintenance	W
E-commerce	1	0.94	0.46	0.249
Initial purchase	1.06	1	1.17	0.352
Maintenance	2.18	0.85	1	0.400

Table 6 shows the final binary comparison matrix of the sub-factors of the commercial strategic factor and the weights obtained in this direction. As can be seen from the W weight vector, the most important factor is the commercial development, with CR = 0.01.

Table 6. Binary comparison matrix and weights of the sub-factors of strategic factor

STRATEGIC	Commercial development	Strategic alliance	Multi task unit	Multi products	W
Commercial development	1.00	3.60	1.79	2.33	0.447
Strategic Alliance.	0.28	1.00	0.84	1.06	0.162
Multi task unit	0.56	1.19	1.00	1.48	0.227
Multi products	0.43	0.94	0.67	1.00	0.164

7. CONCLUSION

As a result of the study, the most important criterion for accounting professionals is the security. As work of accounting professionals and the information they collect are highly confidential and require some limitations, it is an inevitable reality and an expected outcome

for the accounting professionals to define the most important factor is the security of the package programs they use.

The last and decision stage of the to the Netsis, Mikro, Eta and Luca packet programs were evaluated using binary comparison matrices according to the respective factors. In Table 7, the weights and final weights of the package programs according to the factors are given without specifying the brand.

Table 7. Final weights of the package programs according to the factors

Main and Sub Factors		Global Weights	A	B	C	D
OPERATIONAL	Reporting	0.056	0.177	0.158	0,070	0,595
	Ease of Use	0.062	0.083	0.085	0,279	0,553
	Multi-currency	0.013	0.531	0.194	0,095	0,180
	Restrictions of Transactions	0.020	0.146	0.135	0,645	0,074
	Reconciliation	0.030	0.083	0.083	0,083	0,750
COMMERCIAL	E-commerce	0.021	0.257	0.150	0,508	0,085
	Initial Purchase	0.029	0.125	0.125	0,125	0,625
	Maintenance	0.033	0.083	0.083	0,083	0,750
TECHNICAL		0,184	0.195	0.195	0.118	0,491
SECURITY		0,409	0.083	0.083	0.083	0,750
STRATEGIC	Commercial Development	0.065	0.285	0.380	0,245	0,091
	Strategic Alliance	0.023	0.277	0.218	0,138	0,367
	Multi task	0.033	0.219	0.232	0,421	0,128
	Multi product	0.024	0.247	0.211	0,344	0,197
W			0.147	0.143	0.152	0.558

As seen in the table, D brand package program has the highest weight and is in a superior position compared to the others. The weights of the other three brands are very close to each other. The fact that the security factor of the D brand is far more superior than the others has played a significant role in the emergence of general weights. This finding is an indication that the security factor is very important for the financial advisors in their preference for the package program.

It is a fact that the right investments made at the right time, as well as the integration of information technologies into the production systems of enterprises will make the businesses competitive in the international arena. Cloud computing technologies have an important place in terms of time and cost saving features as well as being the most important and most innovative of these investments.

REFERENCES

- Abu-Musa, A. A. (2004). The Criteria for Selecting Accounting Software: A Theoretical Framework. *University of Economics Prague, EEA 2004 Congress, King Fahd University of Petroleum and Minerals, Saudi Arabia*, 1-21.
- Abu-Musa, A. A. (2005). The Determinants of Selecting Accounting Software: A Proposed Model. *Review of Business Information Systems*, 9(3), 85-110.
- Bastı, M., & Boyar, E. (2012). Use of Analytical Network Process in Selecting Accounting Package Program. *Dumlupınar University, Journal of Social Sciences*, 34, 261-279.
- Butkevicius, A. (2009). Assessment of Theintegration of the Accounting Information System in Small and Medium Lithuanian Enterprises. *Ekonomika*, 88, 144-163.
- Carpenter, B. E. (1996). *Architectural Principles of the Internet*. Request for Comments.
- Collins, J. C. (1999). *How to Select the Right Accounting Software*. Online: <http://www.journalofaccountancy.com/issues/1999/aug/collins.html> (Date Accessed 12 February 2017)
- Çetin, H., & Eren, T. (2015). Accounting Program Preference of the Accounting Professionals: A study in Konya. *Ataturk University Journal of Faculty Administrative Sciences and Economics*, 29(1), 83-100.
- Christauskas, C., & Miseviciene, R. (2012). Cloud–Computing Based Accounting for Small to Medium Sized Business. *Engineering Economics*, 23(1), 14-21.
- Demir E. (2015). Criteria of Smes for the Selection of Accounting Package Programs and Their Awareness. *The Journal of Academic Social Science Studies*, 4, 411-424.
- Dralabay (2014). *Cloud Computing*. <https://dralabay.wordpress.com/2014/01/20/bulut-bilisim/> (Date accessed: 10.07.2017).
- Elitaş, C., & Özdemir, S. (2014). Cloud Computing and its Utilization in Accounting. *World of Accounting Science*, 16(2), 93-108.
- ETA (ty) Company profile. Online: http://www.eta.com.tr/sirket_profili.asp (Date accessed 10 February 2017)
- Ghasemi, M., Shafeiepour, V., Aslani, M., & Barvayeh, E. (2011). The Impact of Information Technology (IT) on Modern Accounting Systems. *Procedia - Social and Behavioral Sciences*, 28, 112 - 116.
- Gönen, S., & Yücetürk, G. (2013). An Application Regarding Review of Web Site Costs in Terms of Turkish Accounting Standards. *Journal of Politics, Economics and Management*, 1(2), 21-36.
- Güney, S., & Özyiğit, H. (2015). Use of Accounting Data in Management and Effect of Electronic Accounting Data on Management Decisions. *Electronic Journal of Social Sciences*, 14 (53), 279-297.

- Hacısmailoğlu, M. (2011). Cloud Computing, A due idea.
<https://www.xing.com/communities/posts/bulut-bilisim-zamani-gelmis-bir-fikir-1002724847> (Date accessed: 03.07.2017).
- Höfer, C. N., & Karagiannis, G. (2011). Cloud Computing Services: Taxonomy and Comparison. *Journal of Internet Services and Applications*, 2(2), 81-94.
- Laudon K., & Traver C. G. (2012). *E-Commerce 2013*, Pearson Higher Ed.
- LUCA (2017). LUCA Accounting Systems.
http://luca.com.tr/index.php?option=com_content&view=article&id=56&Itemid=30
(Date accessed: 10.07.2017).
- LOGO (2017). <http://www.logomuhasebe.com/> (Date accessed: 10.07.2017).
- Jadhav, A. S., & Sonar, R. S. (2009). Evaluating and Selecting Software Packages: A Review. *Information and Software Technology*, 51, 555-563.
- MasivaTürk (2016). History and Development of Internet in Turkey.
<http://masivaturk.com/turkiyede-internetin-tarihi-ve-gelisimi> (Date accessed: 10.07.2017).
- Muhrtala, O., & Ogundeji, M. G. (2014). Determinates of Accounting Software Choice: An Empirical Approach. *Universal Journal of Accounting and Finance*, 2(1), 24-31.
- Muthaiyah, S., Raman, M., & Lambard, L. (2003). E-Procurement in Accounting: A Macro Perspective of Selection Techniques. *The Review of Business Information Systems*, 7(1): 37-48.
- O'Hagan, M., & Mangiron, C. (2013). *Game Localization: Translating for the Global Digital Entertainment Industry*. John Benjamins Publishing
- Ömürbek, V., & Bekçi, İ. (2006). The Role of Information Technologies on Accounting Training: A Research about the Students Studying Computerized Accounting. *Overview to Accounting and Auditing*, 18, 75-94.
- Pulakanam, V., & Suraweera, T. (2010). Implementing Accounting Software in Small Businesses in New Zealand: An Exploratory Investigation. *Accountancy Business and the Public Interest*, 9, 98-124.
- Sarıççek, F. T. (2013). An Integrated Approach to Electronic Accounting Applications Supported with Information Technologies. *Organization and Administrative Sciences Journal*, 5(2): 79-90.
- Sevli, O. (2011). A Sample Application in Cloud Computing and Training. *Unpublished Master Thesis*, Süleyman Demirel University, Institution of Science, Isparta.
- Nixon, R. (2012). The Future of the Accounting Profession - 12 Future Predictions, Proactive Accountants Network. <http://proactiveaccountants.net> (Date accessed: 10.07.2017).
- Schwartz, S. (2007). Selecting Accounting Software.
Online: <http://softrak.com/pdf/sas.pdf> (Date accessed: 07.02.2017)

- Seyrek, İ. H. (2011). Cloud Computing: Opportunities and Challenges for the Enterprises. *Gaziantep University-Journal of Social Sciences*, 10(2), 701-713.
- Phillips B. A. (2012). How Cloud Computing Will Change Accounting Forever. <http://accountantsone.com/jobseekers/CloudComputing.pdf> (Date accessed: 02.07.2017).
- Tunca, Z., Aksoy, E., Bülbül, H., & Ömürbek, N. (2015). Selection of Accounting Package Program through AHP based TOPSIS and ELECTRE Method. *NiğdeUniversity, Journal of Faculty o Administrative Sciences and Economics*, 8(1), 53-71.
- Özdemir, S., & Elitaş, C. (2015). The Risks of Cloud Computing in Accounting Field and the Solution Offers: The Case of Turkey. *Journal of Business ResearchTurk*, 7(1), 43-59.
- Yazılım Net (2017). What is software? <http://www.yazilimnet.com/tr/blog/20/yazilim-nedir-> (Date accessed: 10.07.2017).
- Yükçü, S., Gönen, S. (2009). An Application Proposal Regarding Accounting of Electronic Commerce in Turkey. *Atatürk UniversityJournal of Faculty o Administrative Sciences and Economics*, 23(2), 1-12.
- Yürekli, E., Gönen, S., & Şahiner, A. (2016). An Evaluation on E-Invoice Application. *The Journal of Academic Social Science*, 35,290-302.
- Yürekli, E., & Şahiner, A. (2016). Study to Determine Corporate Resource Planning For Administrative Accounting. *International Economics and Business Journal*, 30, 282-289.