



# The Distinction Between in Cloud Computing of Small and Medium-Sized Enterprises in The Field of E-commerce

## Rozdiely v zdieľaných technológiách malých a stredných podnikov v oblasti ektronického obchodu

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### Abstract

*This study explores the nuanced landscape of cloud computing adoption within small and medium-sized enterprises (SMEs) operating in the dynamic field of e-commerce. As businesses increasingly turn to cloud solutions to enhance their operational efficiency and competitiveness, examining the distinct challenges and opportunities faced by SMEs in contrast to larger enterprises is imperative. The research delves into the specific nuances that differentiate cloud computing practices between SMEs and explores the impact of these differences on their e-commerce operations. This study aims to provide valuable insights into optimising cloud strategies tailored to SMEs' unique needs and constraints in the e-commerce domain through a comprehensive analysis of case studies, empirical data, and industry trends. Ultimately, the research seeks to contribute to a deeper understanding of the evolving landscape of cloud computing in the context of SMEs, offering practical implications for enhancing their digital infrastructure and fostering sustainable growth in the ever-evolving e-commerce landscape.*

*In order to thrive in the current competitive landscape, small and medium-sized enterprises must adjust to the realities of Internet commerce. In essence, the issue is SMEs need more access to financing, which limits their ability to compete. Due to the SMEs' current circumstances, it is now essential for them to open markets through e-commerce, which has made a more reliable digital platform necessary. In today's competitive economy, going up to international markets is no longer required; SMEs should be able to complete tasks faster. The fundamentals of information systems for SMEs, which will serve as the foundation in this direction, are financial and understood in the sense that SMEs ought to be compelled to use them. Cloud computing for SME e-commerce aims to clarify the need in this research setting.*



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*Cloud computing platforms' benefits to small and medium-sized enterprises (SMEs) are becoming increasingly important.*

**Keywords :** *SMEs, Financials, Cloud Computing, E-Commerce, Global Competition*

## **Abstrakt:**

*V tejto štúdií sa skúmajú nuansy prijatia cloud computingu v malých a stredných podnikoch (MSP) pôsobiacich v dynamicknej oblasti elektronického obchodu. Keďže podniky sa čoraz viac obracajú na cloudové riešenia s cieľom zvýšiť svoju prevádzkovú efektívnosť a konkurencieschopnosť, je nevyhnutné preskúmať odlišné výzvy a príležitosti, ktorým MSP čelia na rozdiel od väčších podnikov. Výskum sa zaoberá špecifickými nuansami, ktoré odlišujú postupy v oblasti cloud computingu medzi MSP, a skúma vplyv týchto rozdielov na ich prevádzku elektronického obchodu. Cieľom tejto štúdie je poskytnúť cenné poznatky o optimalizácii cloudových stratégií prispôbených jedinečným potrebám a obmedzeniam MSP v oblasti elektronického obchodu prostredníctvom komplexnej analýzy prípadových štúdií, empirických údajov a trendov v odvetví. V konečnom dôsledku sa výskum snaží prispieť k hlbšiemu pochopeniu vyvíjajúceho sa prostredia cloud computingu v kontexte MSP a ponúka praktické dôsledky na zlepšenie ich digitálnej infraštruktúry a podporu udržateľného rastu v neustále sa vyvíjajúcom prostredí elektronického obchodu.*

*Ak chcú malé a stredné podniky prosperovať v súčasnom konkurenčnom prostredí, musia sa prispôbiť realite internetového obchodu. V podstate ide o to, že malé a stredné podniky potrebujú lepší prístup k financovaniu, čo obmedzuje ich konkurenčnú schopnosť. Vzhľadom na súčasnú situáciu MSP je teraz pre ne nevyhnutné otvoriť si trhy prostredníctvom elektronického obchodu, čo si vyžiadalo spoľahlivejšiu digitálnu platformu. V dnešnom konkurenčnom hospodárstve už nie je potrebné vystupovať na medzinárodných trhoch; MSP by mali byť schopné rýchlejšie plniť úlohy. Základy informačných systémov pre MSP, ktoré budú slúžiť ako základ v tomto smere, sú finančné a chápané v tom zmysle, že MSP by mali byť nútené ich používať. Cieľom cloud computingu pre elektronický obchod MSP je objasniť túto potrebu v tomto výskumnom prostredí. Prínosy platforiem cloud computingu pre malé a stredné podniky (MSP) sú čoraz dôležitejšie.*

**Kľúčové slová:** *Malé a stredné podniky, financie, cloud computing, elektronický obchod, globálna konkurencia*

## **1. Introduction**

Small and medium-sized enterprises are often established with limited capital. Although it is a big step in entrepreneurship, it has led to many financial problems. This is the reason for the low level of education. On the other hand, SMEs generally have low levels of education and may hesitate to take action. Adaptation to today's market competition Most entrepreneurs who cannot provide for themselves lose their sustainability for similar reasons. The important thing is more an enterprise as to euthanasia. The way to do this is to adapt to today's conditions. The continuity of SMEs will be realised primarily through their effective participation in the digital world. Many transactions are now done online, saving us many costs in the long run. There are also many conveniences and benefits regarding time, space, labour, etc. Cloud systems have started to be perceived as digital salvation for SMEs with the advantages they provide in these respects. The Cloud, which has many other benefits such as e-commerce that allows SMEs to reach consumers across borders, incentives for more productive software, processing power, and rapid shaping according to needs,

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constitutes a pool for SMEs when realised on the internet. SMEs, which cannot open up sufficiently in foreign trade, mainly due to limited financial and communication opportunities, can now participate in e-commerce faster with Cloud Systems. Thus, SMEs reaching global markets through e-commerce also contribute to social financing.

This study presents the importance of e-commerce for SMEs, with the difference between cloud computing systems. For this purpose, by utilising the research in the literature, the reasons why SMEs should give importance to e-commerce and the opportunities offered by Cloud Computing to SMEs in this direction are supported by research data. The data revealed the necessity of Cloud Computing for SMEs.

The contribution of this study to the literature is that although the importance of cloud systems for SMEs is expressed on many platforms, the literature still needs to be improved. The scattered and few studies on the subject should be brought together, and studies on the importance and necessity of cloud systems for SMEs should be increased. In the following sections of the study, cloud systems are explained after reviewing the literature and examining the vital place of SMEs in e-commerce. The research carried out in the field is included again.

By utilising the research data on the subject, conclusions have been tried to be reached, and suggestions have been presented. The fact that Cloud Systems are still very new in our country requires a very long time to include a quantitative method in the research. This is among the limitations of the study.

## **2. A CASE STUDY ON E-COMMERCE FOR SMES**

E-commerce has the greatest impact on SMEs. The virtual environment provides significant opportunities for SMEs as opposed to large-scale businesses. One of the biggest problems of small businesses has been the lack of marketing channels that would enable them to reach the target audience to sell their products. They will be helpless against global production and sales companies if they cannot adapt to the new order. This is where the Internet provides SMEs an effective and inexpensive marketing channel, enabling them to target millions of individuals and organizations worldwide. In the case of the Internet, SMEs will have the opportunity to enter many markets and offer products to these markets without having to make high investments and expenditures [1]. The Internet has made the world as easily accessible as a small village. E-commerce, which is just one of the opportunities it provides, has caused a paradigm shift in the traditional concept of commerce, which operates under the threat of time and space that human beings are accustomed to. Many entrepreneurs around the world have started to implement e-commerce business models to take advantage of this opportunity and compete better. E-commerce

practices in Turkey have closely followed this trend [2]. Looking at the principles of e-commerce, the concept of e-commerce in Turkey emerged in 1992. In 1992, the Electronic Fund Transfer between the Central Bank and banks it first manifested itself in Turkey [3]. The most crucial problem of SMEs today is financing. On the one hand, the expenses such as stationery, communication, and marketing costs incurred by these enterprises, which have financing problems, increase the existing financing problem even more. From this point of view, SMEs will be able to save money by significantly

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reducing their transaction, communication, and marketing costs through the Internet and electronic commerce [4]. In this context, the aim of the study conducted by Bulut, Öngören, and Engin [5] is to reveal the frequency and level of use of electronic commerce among SMEs within the borders of Istanbul province, which is a large industrial city, for what purpose, the benefits expected from such commercial activities and the difficulties encountered. As a result, it can be said that the interest of small and medium-sized enterprises in e-commerce within the borders of Istanbul province is less than necessary. The scope of the study aims to reveal the importance of electronic commerce, electronic document management, and electronic signature applications for SMEs, to determine at what level these applications are made and what needs to be done, to determine the problems encountered in the process of providing the infrastructure of the applications and to develop solutions for these problems. In line with the stated objectives, the research hypothesis is; "SMEs' successful and efficient realization of trade activities in the electronic environment depends on having a strong infrastructure in electronic commerce, electronic document management, and electronic signature applications and benefiting from these applications." The hypothesis was determined as follows and confirmed with the literature review [6]. As the Internet has become a global network, e-commerce has begun to turn everywhere the Internet reaches into a market, radically changing the form of trade and business activities. While this situation provides consumers with easy access to products, the dimensions of competition for businesses have changed, and creating customer loyalty has become more challenging. In this direction, this study aims to determine the factors that affect customer loyalty towards e-commerce. Within the scope of the study, consumers' evaluations of e-commerce were taken, and which factors are more effective in influencing loyalty to e-commerce sites were investigated. From the findings obtained from the research, it was determined that the most vital relationship with customer loyalty is customer satisfaction [7].

Electronic commerce has become an essential element of economic activities. E-commerce, which is rapidly expanding in Turkey and the world, has become a reflection of product marketing, sales, and the earnings of companies from these products [8]. Many e-commerce activities involve buying, selling, hiring, planning, and recruiting to support other businesses and internal processes companies with trade [9]. E-commerce brings a new configuration to business life. It changes the classical understanding of trade and competition conditions. Now, as in all countries, companies in Turkey have to participate in e-commerce activities to increase their sales volumes [10]. In Karakaya's study [11], information about e-commerce applications was also given, with the development of e-commerce with technology. The effects of e-commerce on companies and consumers in the Internet world are also emphasized. E-commerce is gradually developing in different sectors. As a result, e-commerce should be made widespread by increasing its use in many more sectors. SMEs have tried to make initiatives in this field and have started to show themselves in e-commerce. With the increasing importance of e-commerce, companies have been working in various fields and have started to take steps to use e-commerce in the right way. E-commerce is as strategically important to the information revolution as railroads were to the industrial revolution. Electronic commerce rapidly changes the economy, society, politics, methods, strategies, and needs, creating a different rise. While with the industrial revolution, humanity dominated geographical distances in the new order created by the railroad, electronic commerce has eliminated distances.

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Markets have globalized and become a single market, and the interdependence of countries has increased. Every business that produces or sells in regional markets has to be open to global competition and competition knows no borders anymore. In electronic commerce, there are no local companies or distant geographies. Where to produce, where to source the factors of production, and where and how to sell the product or service are essential decisions in the business world, but what the business does and where it does it will no longer be the determining factors [12]. Karamasa and Acilar [13] examine the critical success factors for small businesses in e-commerce through a literature study. The studies show that the essential aspects of success that enable small businesses to be successful in e-commerce can generally be handled in terms of internal, external, and technological dimensions. Within the scope of the reviewed literature, it can be said that critical success factors in e-commerce can be differentiated according to the size of the business, the sector in which the company is located, and the country of operation. In another study, Acilar [14] examines the effect of the sectors in which SMEs operate on Internet usage. As a result of the data analysis, it is determined that there are various differences in the use of the Internet among the sectors within the scope of the research.

When the Internet usage for sales purposes of the SMEs participating in the research is analysed according to the sectors in which they operate, it is determined that most of the enterprises in all three sectors within the scope of the research do not use the Internet for sales purposes. According to the findings, SMEs use the Internet rather than electronic commerce for communication and information research purposes. Öztürk and Başarı [15] investigated the development of the New Economy, which is assumed to have emerged in the USA, and the growing electronic commerce in the world and Turkey made an evaluation for Turkey and tried to offer various policy recommendations. It is concluded that Turkey is not too late to follow these developments; however, it should take the necessary steps urgently and decisively to take its place in the new world order that the new economy may shape. E-commerce creates revenue streams, reduces costs, and enables better inventory management. The internet streamlines the traditional business process by facilitating a single commerce, content, and community destination.

For SMEs, e-commerce provides benefits such as reduced costs, time savings, reduced inventory costs, and electronic processing of transactions such as writing and checking invoices, which were previously done manually. By keeping customer information in a database, e-commerce allows businesses to track better customer behaviour, market to each customer individually based on their buying habits and respond more quickly to their trends [16]. SMEs need to be inventive, adaptable, and able to effectively use electronic commerce tools to export their products to overseas markets. They also need to be able to operate in a constantly changing environment [17]. Kalaycı [18] discussed the economic effects of e-commerce and stated that e-commerce will reduce transaction and research costs, accelerate business processes by increasing competition, and increase business productivity. Wong [19], in his study on the factors affecting e-commerce in Singapore, mentioned that information systems and communication infrastructure, national workforce trained in information technologies, the existence of official institutions to provide regulation, the adequacy of financial and legal legislation and government incentives for e-commerce will improve e-commerce. Based on the international data, Caselli and Coleman [20] found

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that GDP has a determining effect on the volume of e-commerce transactions. Gibbs et al. [21] found a very high correlation between GDP and e-commerce transaction volume data from 33 countries and that the GDP variable explains more than 50% of the variance in the e-commerce transaction volume variable. Kalaycı [4] emphasized in his research that despite the benefits of using information technologies and e-commerce, small businesses cannot participate in the e-commerce process sufficiently due to technological inadequacy, lack of qualified personnel, and lack of sufficient information about the benefits of e-commerce. Thus, while participation in e-commerce decreases, small businesses miss essential opportunities such as lower costs, higher productivity, access to a broader market, and improved relationships with consumers and suppliers. In addition, many small firms use their website as an online brochure today, while very few use it to sell products. Thus, e-commerce allows SMEs to access international markets more quickly and cheaply than traditional trade. SMEs will benefit from this opportunity to the extent of their capabilities and economic power. The changes and opportunities created by electronic commerce are seen as an opportunity for small and medium-sized enterprises, which have an essential share in national economies, to succeed in competition. Large-scale companies cannot respond quickly to the needs of the market and the rapid changes in needs due to technological developments due to their cumbersome structures. Small and medium-sized enterprises are flexible. SMEs, which previously had barriers to entry and had meager chances of competing, can have more say in the market as electronic commerce reduces these factors to an equal level for all firms. The volume of e-commerce is increasing significantly every day, even beyond forecasts. Although e-commerce proliferates, the share of e-commerce volume in total trade still needs to grow. E-commerce allows potential customers to learn about products being marketed worldwide and enable new producers to enter world markets. The introduction of lower-priced and higher-quality products increases competition among producers and reduces the cost of all commercial transactions [22].

While companies that supply raw materials with traditional trade methods have to work with many intermediaries, e-commerce companies can purchase directly from the supplier by eliminating intermediaries. The elimination of intermediaries in the value-added chain with e-commerce reduces firms' costs in the supply process. In many OECD member countries, it has been determined that the intermediaries in the supply chain add an average of 33 percent difference in the factory selling price until the product reaches the consumer [23].

It is reported that 5% of the total retail sales volume in the US is realized through e-commerce, and this form of trade proliferates [24] Many giant international businesses fulfil all their logistics needs over the Internet. First of all, giant automobile manufacturers, including General Motors, Ford, BMW, Renault, and Peugeot, came together and announced that they would make all their material purchases from the supplier industry through the e-commerce site they established. Then, prominent military and civilian aircraft manufacturers such as Boing and Airbus announced that they would purchase from suppliers electronically.

Finally, giant oil companies such as BP Amoco, Exxon, Shell, and ELF have announced that they have established the necessary system infrastructures to realize all their purchases over the Internet. Underlying all these efforts is creating an infrastructure that will enable buyers and sellers to reach each other easily and

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communicate their demands quickly and effectively, thus ensuring that the most suitable product can be purchased at the best price. In this case, SMEs that stay away from the electronic environment will remain outside the supply chains of these enterprises, and it will become virtually impossible for them to survive [25]. E-commerce is a broad notion that encompasses a wide range of industries nowadays. Advertising, marketing, sales, ordering and payment transactions, customer support services, security, delivery of goods and services, banking, online public services, customs transactions, foreign trade transactions, and so on appear to be acceptable categories within e-commerce [24].

### **3. EVALUATION OF THE DIFFERENCES OF CLOUD COMPUTING SYSTEMS ON THE DIGITAL PLATFORM**

Cloud computing is based on the principle of renting computing resources such as processing power and storage space as much as needed at the time they are required. As a result of the independence of applications and infrastructure from each other and the control of data from a single center, it offers an infrastructure where controlled access to data is possible from anywhere allowed, capacity can be increased or decreased quickly when necessary, and the use of resources can be easily controlled and reported. The lease in question is not server-based but usage-based. Just like electricity from electricity networks, information resources are used when needed, and no fee is paid when not required. The invoicing process is automatic, and just like the payment of electricity bills, the invoice for the use of IT resources is paid in a single payment at the end of the period. Thanks to cloud computing, instead of organizations owning local computing resources, these resources can be hosted remotely and rented only when needed [26]. Common characteristics of Cloud Computing are large scale, homogeneity, virtuality, flexibility, low cost, decentralization, service orientation, advanced security. Using applications as a service over the cloud requires less resource and capital investment than owning and managing their own servers on their premises. This is why it is the ideal solution for SMEs. When you choose the right vendor, usability or security issues arising from unsupported open-source solutions are no longer a concern. According to a survey conducted by Gardner among IT companies in 2010, cloud computing, virtualization, and Web 2.0 were the top three leading IT technologies. The definition by Mell and Grance from the US National Institute of Standards and Technology (NIST) is the most widely cited definition by other publications. According to this definition, cloud computing is "a model that provides on-demand and convenient network access to a shared pool of configurable computing resources (such as networks, servers, storage, applications, and services) that can be rapidly acquired and released with little management effort or service provider interaction" [27].

Berkeley University academics have done significant work in the field of cloud computing. In a Berkeley University publication cited by many publications, cloud computing is described as follows: "Cloud computing refers both to applications delivered as services over the Internet and to the hardware and system software in the data centres that provide those services. The services themselves have long been called software as a service, which is why we prefer to use that term. We refer to the data centre hardware and software as the cloud" [28]. The OECD defines cloud computing

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as follows: "Cloud computing is a service model for computing services based on a set of computing resources that can be accessed flexibly, on demand, with low management effort" [29]. Individual users, small or medium-sized enterprises, large companies or organizations can all benefit from cloud services. The star of cloud computing, used to reduce traditional IT costs in businesses, has shone in the last five years. International Data Association (IDC) research has revealed worldwide growth. In information and communication technologies, the share of cloud computing expenditures has increased yearly, reaching 44.2 billion dollars in 2013. The sector's rapid growth is the most crucial reason for IT providers to focus on the cloud model. This is five times more than the traditional IT distribution model [30].

In countries such as the European Union, the USA, the UK, Germany, South Korea, and Japan, studies on cloud computing are being carried out at the policy level. It is observed that countries generally have a positive attitude towards cloud computing, but also emphasize some of the risks of cloud computing and try to create solutions for them. In this context, the study adopted the methods of examining world examples and determining the current situation in our country through questionnaires and oral interviews as research methods. As a result of the study, it was concluded that a public cloud computing infrastructure should be established, and recommendations and evaluations at strategic, legal, and technical levels were included. In addition, a cost-benefit analysis on the use of cloud computing in public information systems was carried out by utilizing the results of the survey by making various suggestions on issues such as possible usage areas of cloud computing, mitigation of the risks of cloud computing, and the role of cloud computing in public investment and tender processes.

Cloud computing consists of two main components. The first is the delivery of applications as a service over the Internet. The application offered over the Internet can be an e-mail client or an operating system. This component is called Software as a Service. Renting Software as a service over the Internet instead of purchasing it as a package is not an innovation that came with cloud computing but is a method that has been used in the past. The second component is the computing infrastructure on which the applications run, but whose details are not crucial for the applications. This infrastructure is called the cloud. Multi-tenancy is the virtualization of resources and renting them to many customers over the same infrastructure. Virtualization of resources is also associated with cloud computing [28]. In addition, with cloud computing, businesses do not have to set up a system room to store financial information, which is a significant cost item for them, and do not have to have UPS, generators, fire extinguishers, security devices, and access devices for it. Since cloud computing services have a "pay-as-you-go" structure like electricity and telephone services, they create another cost advantage for businesses [31].

Cloud computing is essential not only in terms of cost reduction but also in terms of environmental responsibilities. Green Computing provides computing services with less energy. Accelerates software development and testing phases. It offers the opportunity to develop and test your software in various environments. Thus, it improves the quality of the software. From a hardware perspective, cloud computing offers new features in three respects. It gives the impression of having unlimited resources readily available at the time of need. This means that customers do not have to predict future resource utilization. Customers do not need to make any initial usage



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commitments. Thus, firms can start with a small amount of resources and increase the allocated resources when the need for resources increases without an intermediary. Using computer resources on a short-term basis on a usage-based pricing basis when needed (e.g., charging for processing power on an hourly basis, charging for storage space on a GB basis, etc.) and releasing them when no longer needed allows servers and storage space to be used for other purposes when not in use [32].

In January 2011, the Expert Working Group on Cloud Computing established within the European Commission published a report entitled "The Future of Cloud Computing: Post-2010 Cloud Computing Opportunities in the European Union" report was published in January 2011. In this report [33], opportunities and threats for the European Union in the field of cloud computing were discussed, and potential R&D topics were mentioned. In March 2012, the same group published the report "Developments in Cloud Computing: Research on the Future of Cloud Computing" was published by the same group in March 2012 (Schubert and Jefferey, 2012: 2-5), and in this report [34], a European Cloud Research Agenda was set out, focusing on new developments in cloud computing that have emerged since the publication of the first report. The US has advanced e-commerce, electronic signature, and cybercrime laws and is a pioneer in the fight against global cybercrime. It is a party to various international agreements on data privacy and copyrights, but the lack of agreed general laws on these issues causes some legal uncertainties. If these legal uncertainties are resolved, the prevalence of cloud computing in the country is expected to increase further [35].

Being fast has become the top priority for companies to stand out in global competition. Organizations can achieve this speed by reducing expenditures in information systems through cloud computing. Businesses that want to benefit from cloud computing to succeed in factors such as speed, flexibility, quality, and low cost increase their investments in this subject every year. With cloud computing, organizations have the flexibility to get almost all their information technology needs in a 'service' model. The most important reason for the widespread use of Cloud Computing is that instead of investing high amounts for IT infrastructures, companies can purchase business applications of more than one company as a service at affordable prices from service providers that can run secure web services on virtual infrastructures. The ability of SMEs to perform their activities efficiently in the new environments offered by information and communication technologies depends on a reasonable determination of the methods to be followed in establishing the infrastructure of the systems, selecting application programs, and realizing activities. Wrong choices and practices in this change process may cause losses to SMEs and, thus, to the national economies [6]. The development of data centers around the world, easier and cheaper access to internet infrastructure, the development and widespread use of mobile devices force organizations to invest in cloud infrastructure [36].

Small and medium-sized companies may move to cloud software-as-a-service (SaaS) and public or public cloud. Large companies can create their own private clouds or hybrid clouds. Public organizations, on the other hand, can create and use the public cloud - public cloud - open to everyone [37]. Shortly, Cloud Computing will be significantly preferred for standard applications such as messaging and collaboration, customer relationship management, as well as application and test environments that companies need. In the next stage, critical business applications can

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be used over cloud computing, with the necessary security mechanisms determined. In this way, trade between companies will occur entirely in the virtual environment, and all processes, such as ordering, purchasing, and payment/collection, will take place on Cloud Computing infrastructures.

## 4. Conclusion

Small and Medium Enterprises constitute a substantial proportion of the world economy with the employment and similar opportunities they create. Therefore, SMEs' continuity is essential for social and global financing. Cloud Computing Systems create a financial abyss for SMEs established with limited capital with the opportunities they provide. The literature review shows that SMEs' participation in e-commerce is necessary for their continuity, but more is needed to be fast and effective in e-commerce. Today, adaptation to the digital environment is one of the main factors that keeps businesses alive. The cost factor in Information Systems is significant for SMEs with limited financing and digital inadequacy. In this context, Cloud Computing Systems, especially the 'pay-as-you-go' policy, processor speed, creating a system room for financial information within its structure, and the number of opportunities it offers, is a financial basis for SMEs. Today, it is necessary to reach consumers across borders and reach them as soon as possible. Based on the research data, the necessity of Cloud Computing Systems for Small and Medium Enterprises has been revealed, along with the infrastructure and opportunities it provides. Therefore, the difference created by Cloud Computing Systems for faster and continuous e-commerce is a financial and digital salvation for SMEs. Small and medium-sized enterprises (SMEs) have particular challenges like scarce resources, insufficient experience, and worries about scalability that influence how they adopt and use the cloud. Notwithstanding these obstacles, small and medium-sized enterprises exhibit resilience and flexibility by utilizing cloud solutions to enhance their e-commerce processes, foster innovation, and effectively contend in the virtual marketplace. It is critical for SMEs to understand the strategic significance of cloud computing as the e-commerce industry changes and to create customized strategies that meet their unique goals and priorities. Investing in staff training, forming strategic alliances, and working together with cloud service providers can help SMEs fully utilize cloud technology to propel growth and sustainability. Essentially, the differences in cloud computing for SMEs in the e-commerce space highlight the necessity of having a detailed grasp of their particular needs and limitations. SMEs may take advantage of new opportunities, maintain their competitiveness, and prosper in an increasingly digitally-focused business climate by adopting a deliberate and flexible approach to cloud adoption.

## References

- [1] C. Kartal, *İnternet Ortamında Pazarlama: Elektronik Ticarete İlk Adım*, Ankara: Gazi Kitapevi, 2002.
- [2] U. Türen, Y. Gökmen and İ. Tokmak, "TÜRKİYE'DE E-TİCARET İŞLEM HACMİNİ ETKİLEYEN FAKTÖRLER ÜZERİNE BİR ARAŞTIRMA: BİR MODEL ÖNERİŞİ," *Savunma Bilimleri Dergisi*, vol. 10, no. 1, pp. 49-71, 2011.

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- [3] I. Aydemir, *Elektronik Ticaret Alanındaki Rekabet Sorunları P: 21*, Ankara : Rekabet Kurumu, 2004.
- [4] C. Kalaycı, “Elektronik Ticaret ve Kobi” lere Etkileri,” *International Journal of Economics and Administrative Studies* , vol. 1, no. 1, pp. 1307-9832, 2008.
- [5] Z. A. Bulut, B. Öngören and K. Engin, “KOBİLERDE ELEKTRONİK TİCARETİN KULLANIMI: İSTANBUL ÖRNEĞİ,” *Doğuş Üniversitesi Dergisi*, pp. 150-161, 2006.
- [6] M. J. Eslami, “Küçük ve Orta Boy İşletmelerde Elektronik Belge Yönetimi, Ankara Üniversitesi Sosyal Bilimler Enstitüsü Bilgi ve Belge Yönetimi Anabilim Dalı Yüksek Lisans Tezi,” Ankara, 2010.
- [7] C. Demireli and F. Dursun, “E-Ticarette Müğteri Sadakatinin Belirlenmesi Üzerine Bir Uygulama,” *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, vol. 38, 2013.
- [8] Ö. Canpolat, “E-Ticaret ve Türkiye” deki Gelişmeler,” Sanayi ve Ticaret Bakanlığı, Ankara, 2001.
- [9] G. Scheneider, *Electronic Commerce*, Thompson: Canada, 2010.
- [10] S. Özbay and S. Akyazı, *Elektronik Ticaret*, Ankara: Detay Yayıncılık, 2004.
- [11] T. Karakaya, “Küreselleşme Sürecinde E-Ticaretin Önemi ve Pazar Payı : İstanbul Commerce University, Master Thesis,” İstanbul, 2013.
- [12] P. Drucker, “Knowledge Workers,” *Exettutive Exelence*, pp. 12-14, 2002.
- [13] C. Karamasa and A. Acılar, “Küçük İşletmeler İçin E-Ticarette Kritik Başarı Faktörleri,” *Organizasyon ve Yönetim Bilimleri Dergisi*, pp. 4-8, 2011.
- [14] A. Acılar, “Sektörel Farklılığın Kobi” lerde İnternet Kullanımına Etkisi 4. Kobi”ler ve Verimlilik Kongresi,” *İstanbul Kültür Üniversitesi*, 7-8 December 2007.
- [15] S. Basari and L. Ozturk, “Yeni Ekonomi ve Elektronik Ticaret: Dünyadaki Gelişmeler ve Türkiye Açısından Bir Değerlendirme,” *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, vol. 16, no. 3-4, 2002.
- [16] C. Schulze and B. Jeffrey, “Don't panic! : Do e-commerce ; a beginner's guide to European law affecting e-commerce,” *European Commission's Electronic Commerce Team*, 2001.
- [17] H. Etemad and R. Wright, *Globalization and Entrepreneurship : Policy and Strategy Perspectives*, Edward Elgar Publishing, 2003.
- [18] C. Kalaycı, “Elektronik Ticaret ve Kobi” lere Etkileri,” *International Journal of Economic and Administrative Studies*, pp. 140-148, 2004.
- [19] P. K. Wong, “Global and National Factors Affecting E-Commerce Diffusion in

# The Distinction Between in Cloud Computing of Small and Medium-Sized Enterprises in The Field of E-commerce

Görkem GÖK

---

- Singapore,” *The Information Society*, pp. 19-32, 2003.
- [20] F. Caselli and W. C. John, “Cross-Country Tecnology Diffusion: the Case of Computers,” *American Economic Review*, pp. 328-335, 2001.
- [21] L. G. Jennifer, L. K. Kenneth and D. Jason, “Environment and Policy Factors Shaping Global E-Commerce Diffusion: A Cross-Country Comparison,” *The Information Society*, pp. 5-18, 2002.
- [22] J. Strauss and R. Frost, *E-Marketing*, 7th Edition, New York: Prentice-Hall Inc, 2016.
- [23] E. M. Civelek and G. E. Sozer, *İnternet Ticareti: Yeni Ekososyal Sistem (YES) ve Ticaret Noktaları*, İstanbul: Beta Yayın, 2003.
- [24] C. K. Laudon and J. P. Laudon, *Management Information Systems: Managing the Digital Firm*, Pearson/Prentice Hall, 2010.
- [25] S. Ene, “Elektronik Ticarete Tüketicinin Korunması ve Bir Uygulama,” İstanbul, Pusula Yayınları, 2002, pp. 37-38.
- [26] M. R. Ozdas, *Bulut Bilişimin Kamuda Kullanımı Dünya Örnekleri ve Türkiye için Öneriler*, Ankara: T. C. Kalkınma Bakanlığı Bilgi Toplumu Dairesi, 2014.
- [27] P. Mell and T. Grance, *The Nist Definition of Cloud Computing Recommendations of the National Institute, United States of Standards and Technology, U. S. Department of Commerce, Special Publication 800-145: National Institute*, 2011, pp. Special Publication 800-145.
- [28] D. Cliff, *Remotely Hosted Services and „Cloud Computing“*, United Kingdom: British Educational Communications and Technology Agency (BECTA), 2010.
- [29] OECD, “Cloud Computing-Draft Final Report,” Report Num., DSTI/CCP/2011/19, October, Paris, 2011.
- [30] C. Yapici, “TUBISAD,” 13 09 2013. [Online]. Available: [http://www.tubisad.org.tr/Tr%20Library/Analizler/bulut\\_bilisim\\_dosyasi.pdf](http://www.tubisad.org.tr/Tr%20Library/Analizler/bulut_bilisim_dosyasi.pdf).
- [31] C. Elitas and S. Ozdemir, “BULUT BİLİŞİM VE MUHASEBEDE KULLANIMI,” *Muhasebe Bilim Dünyası Dergisi*, vol. 16, no. 5, pp. 5-16, 2014.
- [32] M. Armbrust, A. Fox, R. Griffith, A. D. Joseph, R. H. Katz, A. Konwinski, G. Lee, D. A. Patterson, A. Rabkin, I. Stoica and M. Zaharia, “Above the Clouds: A Berkeley View of Cloud Computing,” EECS Department University of California, Berkeley Technical Report No. UCB/EECS-2009-28, California, 2009.
- [33] L. Schubert, K. Jeffery and B. Neidecker-Lutz, “The Future of Cloud Computing Public Version 1.0,” European Commission, 2010.
- [34] L. Schubert and K. Jeffery, “Advances in Clouds - Research in Future Cloud Computing Public Version 1.0,” European Commission, Luxembourg, 2012.

## The Distinction Between in Cloud Computing of Small and Medium-Sized Enterprises in The Field of E-commerce

Görkem GÖK

---

- [35] BSA, “BSA Global Cloud Computing Scorecard : A Blueprint for Economic Opportunity,” BSA, 2012.
- [36] Ö. Yanar, “Güvenlik ve Gizlilik Temelinde ÜLUNHWOHÜHÖzel Bulut Depolama Çözümü (Private Cloud Storage),” Kuveyt Türk Katılım Bankası A.S, Konya, 2015.
- [37] O. Sanli, “Bulut Bilisim, MCT, MCAS, MCTS, Business management solution,” Istanbul, 2014.

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