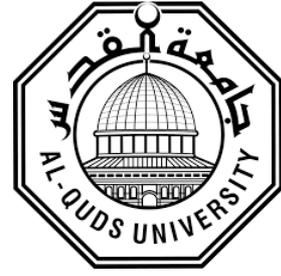


**Deanship of Graduate Studies
AL-Quds University**



**The reality of service business digitalization in the
Palestinian service sector**

Rajwan Ibrahim Ahmad Ghnimat

M.Sc. Thesis

Jerusalem – Palestine

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**The reality of service business digitalization in the
Palestinian service sector**

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**A thesis is Submitted in partial fulfilment of requirements
for the degree of Master in Business Administration from
the Institute of Business and Economics – Al-Quds
University**

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AL-Quds University
Deanship of Graduate Studies



Thesis Approval

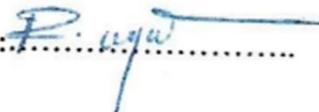
**The reality of service business digitalization in the
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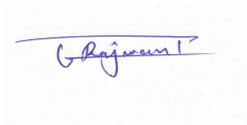
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Jerusalem - Palestine
1443AH- 2021

Declaration

I certify that this thesis is submitted for the degree of Master, in the result of my own research, except where otherwise acknowledged, and that this study (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed:

A handwritten signature in blue ink, appearing to read "Rajwan Ibrahim Ahmad Ghnimat", is written over a horizontal line. The signature is contained within a light gray rectangular box.

Name: Rajwan Ibrahim Ahmad Ghnimat

Date: 11/01/2022

Dedication

To my beloved mother, who did not hesitate for a moment to support and encourage me towards education and development. The encouragement she had provided is unmatched!

To my professors who taught me throughout my master's journey, especially my supervisor Dr. Salwa Barghouthi, who supported me and provided valuable advice and guidance that had the greatest impact on completing this master's thesis. To my best friend Muhammad Elayan, who is unparalleled in giving and love, who stood by me with his wonderful advice in scientific research. And to my friend Marwan Alloushi, who never left my memory, and who left a beautiful imprint in my life. To my fiancée and companion in my path, who supported me in my last touch, Mawaddah Abu Radwan. Thank you with all my heart.

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At the beginning, praise be to God, good and blessed praise in which he guided me and was with me from the beginning until I reached what I am now. He gave me the opportunity, determination, and strength to do my research. His continuous grace and mercy were with me throughout my life.

Next, I would like to express my thanks and gratitude to my supervisor, Dr. Salwa Barghouti, for her unconditional dedication. Her knowledge and endless support were great asset from which I learned plenty. I also appreciate all her contributions of time and ideas.

In addition, I would like to express my deep love and thanks to my lovely mother because she was always pushing force behind me for success. She was the only one who taught me that life is a challenge that needs strength and patience, either to stand helpless in front of a storm, or to fight with all courage and wisdom. The rest of my family thank you all!

Finally, I would like to thank my fiancé Mawadda Abu Radwan who stood beside me and has lifted my spirits so that the final touches of this thesis could be on her ideas and suggestions. I would also like to thank the examinees for their observations and modifications that contributed to the development of this thesis. Thanks are due to everyone who contributed to this work and to those who look to the future with hope.

Abstract

The main objective of this study is to investigate the reality of digitalization in the service businesses in the Palestinian service sector, so that the study population is the enterprises that are considered service businesses in the Palestinian service sector, and they are approximately 40,484 enterprises (PCBS, 2018). A random sample of 250 employees working in the service sector was selected. Various large, medium, and small service business enterprises in West Bank have been selected. The study used descriptive exploratory approach which depends on studying a specific phenomenon at a specific time as in reality and provide an insight into the potential of applying digitalized systems in the Palestinian service sector specifically in West Bank - Palestine. An E.questionnaire was used as a tool for data collection, 250 e-questionnaires were distributed upon employees in the Palestinian service sector and the responses were 81. The E.questionnaire included 5 main areas.

Based on the statistical outputs regarding digital financial systems, the results showed that there is a statistical significance of the existence of digital financial systems arranged in descending order from the highest agreement to the lowest agreement, which is the existence of digital software programs of billing, accounting, budgeting, and payroll management. As for the existence of digital HRM systems, there was no statistical significance regarding the existence of digital systems in human resources management. As for the existence of digital supply chain management, it was found that there is no statistical significance proving the existence of digital systems in the supply chain located in those target enterprises. For digital marketing systems, the greatest reliance was on social media to market products or services, as this was the only marketing tool that had statistical significance in these enterprises. Finally, regarding the availability of infrastructure requirements, the percentage of the availability of these requirements was 74.1%, which is a moderate percentage in the Palestinian service business sector.

In light of the study results, the study came up with the following recommendations:

1. Increasing investment in infrastructure requirements is necessary for digital transformation in particular; Scanners, barcode readers, electronic cards / payments.

- 2 . Providing different departments with software packages that implement various digital financial operations, human resource management, supply chain and marketing.
- 3 . Increase the awareness level of human resources on the importance of digital transformation and emphasizing its role in managing risks and facing challenges as the case in facing the Corona pandemic.
- 4 . Holding workshops and training courses to improve knowledge and skills related to human resources on digital programs and modern technologies.
- 5 . Focus more on developing websites and social media profiles to reach more customers.
- 6 . Keeping abreast of modern technologies and digital programs around the world.
- 7 . More in-depth research should be carried out in the future in the field of digitalization.

Key Word: Digitalization, Palestinian service sector, digital systems, IT infrastructure.

واقع رقمنة الأعمال في القطاع الخدماتي الفلسطيني

إعداد: رجوان إبراهيم أحمد غنيمات

إشراف: الدكتورة سلوى البرغوثي

ملخص الدراسة :

الهدف الرئيسي من هذه الدراسة هو التحقق من واقع رقمنة الأعمال الخدماتية في القطاع الخدماتي الفلسطيني، بحيث تكون مجتمع الدراسة من المنشآت التي تعتبر منشآت خدمتية في القطاع الخدماتي الفلسطيني التي يقارب عددها ٤٠٤٨٤ منشأة (PCBS, 2018). تم اختيار عينة عشوائية مكونة من ٢٥٠ موظف يعملون في القطاع الخدماتي الفلسطيني في مختلف الشركات والمنشآت في الضفة الغربية بحيث كانت عدد الاستجابات ٨١. تم التركيز على المنشآت الخدماتية الكبيرة والمتوسطة والصغيرة. استخدمت الدراسة المنهج الوصفي الاستكشافي، حيث تم استخدام الاستبانة كأداة لجمع البيانات بحيث اشتملت الاستبانة على 5 مجالات رئيسية.

أظهرت النتائج بناء على المخرجات الإحصائية فيما يتعلق بالأنظمة المالية الرقمية أن هناك دلالة إحصائية على وجود الأنظمة المالية الرقمية مرتبة بترتيب تنازلي من الموافقة الأعلى إلى الموافقة الأدنى وهو وجود برامج رقمية خاصة بالفواتير وبرامج رقمية خاصة بالمحاسبة والميزانية وبرامج لإدارة الرواتب. أما فيما يتعلق بوجود الأنظمة الرقمية في الموارد البشرية لم يكن هناك أي دلالة إحصائية فيما يتعلق بوجود أنظمة رقمية في إدارة الموارد البشرية، أما بالنسبة لوجود إدارة سلسلة توريد رقمية تبين أنه لا يوجد هناك أي دلالة إحصائية تبرهن وجود أنظمة رقمية في سلسلة التوريد الموجودة في تلك المنشآت. بالنسبة لأنظمة التسويق الرقمية، كان الاعتماد الأكبر على وسائل التواصل الاجتماعي لتسويق المنتجات أو الخدمات حيث كانت هذه الأداة التسويقية الوحيدة التي لها دلالة إحصائية في هذه المنشآت. وأخيراً فيما يتعلق بمدى توفر متطلبات البنية التحتية كانت نسبة توفر هذه المتطلبات 74.1% وهي نسبة معتدلة في قطاع الأعمال الخدماتية الفلسطيني.

في ضوء النتائج التي توصلت إليها الدراسة، لخصت الدراسة مجموعة من التوصيات التالية، أهمها:

1. زيادة الاستثمار في متطلبات البنية التحتية اللازمة للتحويل الرقمي بشكل خاص؛ الماسحات الضوئية، قارئات الباركود، البطاقات الإلكترونية /الدفع.
2. تزويد الأقسام المختلفة بحزم برامج تنفذ مختلف العمليات المالية الرقمية وإدارة الموارد البشرية وسلسلة التوريد والتسويق.
3. بناء الوعي بالموارد البشرية بشأن أهمية التحويل الرقمي والتأكيد على دوره في إدارة المخاطر ومواجهة التحديات كما هو الحال في مواجهة أزمة كورونا.

4 . عقد ورش عمل ودورات تدريبية لتحسين المعرفة والمهارات المتعلقة بالموارد البشرية حول البرامج الرقمية والتقنيات الحديثة.

5 . التركيز بشكل أكبر على تطوير مواقع الويب وملفات تعريف وسائل التواصل الاجتماعي للوصول إلى المزيد من العملاء.

6 . مواكبة التقنيات الحديثة والبرامج الرقمية في جميع أنحاء العالم.

7 . إجراء المزيد من البحوث المتعمقة في مجال الرقمنة في المستقبل.

الكلمات المفتاحية: الرقمنة، قطاع الخدمات الفلسطيني، الأنظمة الرقمية، البنية التحتية في مجال تكنولوجيا المعلومات.

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Chapter I

1.1 Introduction

1.2 Brief About the Palestinian Service sector

1.3 Problem Statement

1.4 Study Questions

1.5 Study Objectives

1.7 Study Significance

1.1 Introduction

In the last two decades, the digital transformation appeared as a vital research topic for companies all over the world (Piccinini, Gregory, and Kolbe 2015). Regarding the definition of digital transformation, it is a combination of digital technologies and new business methods within all areas, resulting a big and obvious changes in industries, jobs, and how it provides value to clients (Ismail, Khater, and Zaki 2017). To produce the capability to make new ways of creating value in digital world, there are aspirations toward different culture, strategies and structure (Matt, Hess and Benlian 2015).

Digital transformation improves the relationships between stakeholders and the governmental sector and the relationship between customers and companies by improving the quality of goods, services provided to customers, so they match and even exceed their expectations as well (European Commission, 2013).

The new digital technologies have improved their data, communications, and technologies of connections. The process of production, storage, and selling became faster, and more effective (Ibem & Laryea, 2014). As a result, many firms start taking in consideration the importance of digital change, thus they can meet the customer needs and can increase business profits. (Westerman, Calmejjane, & Bonnet, 2011).

Many companies have successfully adopted new digital technologies such as Apple, Amazon, and Netflix. It has kept pace with development and modern solutions so that it can compete in the business world. One of the main reasons why companies cannot compete and therefore will lead to drop out of the market is the fact that they did not keep pace with modern development and kept using traditional ways. In other words, remained the same without trying to adapt and develop may cause lots of loss and elimination out of the market. Companies are facing a challenge; they need meet the requirements of the market by focusing on the desires of customers. This can be achieved by adapting modern digital technologies. On another hand, they must be able to compete with the other companies or competitors, for example by offering a better price performance ratio. (Westermann, Calmejjane, & Bonnet,2011).

Digital transformation can be classified in five sectors. First, improvements in productivity in which design and enhancing processes become faster and more precise. Second, the quality with high resolution measuring of production (Jane, Seo, Lee, Kim 2019). Third, the cost, where the data handling and dealing with production processes in all stages. Fourth, the customization of products, the digitalized machines can provide customer customization through going deep in customers' needs and desires to achieve competitive prices (Barni, Carpanzano, Laudolfi, Pedrazzoli 2019). Last but not least, the modernization of the work environment. The company must not only assure a safe work environment but also offer an optimized modern workspace (Agnew 2019).

There are many advantages to the adoption and implementation of advanced technologies by companies including the ability to create added value (Smith and Correa 2005; Hitt and Brynjolfsson 1996) and digitalize internal systems and processes. (Caldeira et al. 2012; Mukhopadhyay, Kekre, and Kalathur 1995), and the hype made by SME entrepreneurs around social business (Turkina 2018). Consequently, there are many other popular technologies created recently for progressive implementation by enterprises, for example "big data" analytics, machine learning, social business intelligence, Internet of Things (IoT) and blockchain technology (Arnold, Kiel, Voigt 2016; Turkina 2018; Beck. et al. 2017). (Ikpe, Didier & Dong-Heon, 2020)

Businesses faces many challenges and difficulties that are usually restricted by some limited resources such as budget, time, knowledge, and information which impedes the process of adopting modern technologies and restricts the process of benefiting from the initial advantages of using modern technologies.

Consequently, when examining the concept of "cutting-edge technologies", companies regardless of their sizes- find it challenging to differentiate between "must-have technologies" and "should-have technologies" that improve competitive advantage and let them compete with competitive forces exist in the market (Laudon 2019). Upon examining such a context, some primary and serious questions arise for companies about the decision-making process and how to make decisions regarding the involvement of modern, developing, and cutting-edge technologies: How much technology costs? What is the required training? Will the technology be able to use the business current processes and operations activities? At first glance, it may seem that

these questions do not have a direct relationship with big companies, but rather represent the bases in a small organizational context as an example (Ikpe, Didier & Dong-Heon, 2020).

1.2 Brief about the Palestinian service sector.

Since the middle of the previous century, the global economy has experienced an accelerated growth in service activities. It should be noted that the contribution of services to global GDP increased from 55% to 70% during the period 1977-2007, which led to a structural change for many countries towards service-based economy (Falah, 2013).

The Palestinian economy is highly dependent on service activities. In 2012, the service sector accounted for 57% of real GDP and 62% of total employment. Regionally, Gaza's economy appears to be more service-dependent. Specifically, the service sector makes up 62% of its Gross domestic product relative to 56% in the West Bank. The service sector in Gaza employs 77% of the total workforce, compared to 55% in the West Bank. The dominance of the service sector in Palestine raises a vital question about its ability to promote economic growth, especially in considering the low contribution of other sectors, in most manufacturing industries (Falah, 2013).

The founding of the Palestinian Authority in 1994 did not change the excessive dependence of the Palestinian economy on the service sector. In fact, the share of services expanded at the expense of the trade sector manufacturing and agriculture. Until 2012 in the West Bank, the share of the service sector of GDP grew yearly by 0.28%, while the share of the trade sector manufacturing and agriculture experienced a decreasing trend. Service employment also increased at an annual rate of 0.75%. Similarly, the share of service sector of GDP and employment in Gaza increased at an annual rate of 0.9% and 1.4%, successively. As in West Bank, Gaza's trade sector has experienced a declining trend (Falah, 2013).

In 1970s, the Palestinian service sector has encountered many limitations and malformations that hindered its evolution. Till the mid-1990s, many service sectors such as research and development, financial and telecommunications sectors were either non-existent in Palestine, or were very insignificant. Other sectors for instance

air and sea transport are still lacking. In the last two decades, after the 1993 Oslo Accords, both the private and public sectors have made great efforts as an attempt to improve and reorganize the service sector. This has led to an increase in the influence of the service sector, especially in GDP and employment, as well as rapid evolution in some service sectors like the public sector, mailing services and telecommunications. (Morrar & Gallouj, 2016).

Structural limitations in the Palestinian service sector are not controlled by public policy that exist in the economic law. This policy gap appeared during the occupation period, stick on after the Oslo Accords. Unlike other developing or emerging countries e.g., India, Malaysia or the Gulf states, the Palestinian Authority does not set up any public policy to support the development of service sectors broadly or any strategic capital and knowledge services where ICT can play an outstanding role in driving growth in productivity (Morrar & Gallouj, 2016).

The Palestinian service sector is going through high economic crises because of the outbreak of Corona virus that contributed to moving the Palestinian economy from bad to worse before the pandemic. Considering the global health crises, and to avoid a total shutdown of economic activities, service sectors started using specific technologies that were considered less necessary in the past for them like different kinds of technologies such as virtual reality that became decisive to avoid any sudden shutdown of the universe economy (Ting et al. 2020). (Ikpe, Didier & Dong-Heon, 2020).

In addition, in the past few months, the world has turned upside down, and it is no longer as what we knew! As the emergence of COVID-19 had the largest and most important impact to the closure of many economic sectors, including companies, factories, and shops. COVID-19 put the business world at a real risk. Our life has been paused for a while! The current crises the world is experiencing is unprecedented since the Great Depression. Countries were and are still in defiance with this emerging virus, so that they need to deal with it through preventive health measures to reduce infection and to know the extent of the virus's repercussions on all life aspects.

1.3 Problem Statement

In my opinion, digital transformation is expected to have an impact on all walks of life and even societies. In the manufacturing industry, value creation procedures change as information technologies and communication merge with the processes of production. This change could open the door for efficiency gains, and gains in new business paradigms. Therefore, companies work hard to ensure a successful and fast forward progression. To ensure a successful transformation, firms should understand barriers which hinder or even stop digital transformation.

Digital transformation involves new methods of combining services and products. New business paradigms such as digital platforms appear. To achieve better competitive advantages, enterprises can use real-time data to control and enhance processes so they can predict major long-term gains in productivity and efficiency by applying digital transformation. In addition, when working conditions improved, this also affect employees' roles, skills, and job descriptions.

Based on (Parviainen et al, 2017), the researchers focused on the importance of digitization and its role in changing societies and businesses through the adoption of digital technologies by institutions in the operational environment to reach the highest levels of benefit from digitization and its application in a way that reduces production costs and increases profits.

As for (Priyono et al, 2020), the study indicated the ability of medium and small companies to transform the business model into a digital model in light of the challenges that resulted from the Corona epidemic by adopting modern technological techniques so that companies continue to provide their services and products to be sure that their policies are in line with existing challenges.

Regarding the appearance of Corona Pandemic, the importance of digital technologies became clear at this stage, especially during the lockdown. They made our lives faster and easier and contributed to helping companies maintain a certain level of doing some activities and accomplish many missions. Recent studies have shown that internet traffic is increasing by 60% from 2019 to 2020, this is due to the increased demand on

video conferences, which increased by 120% compared to the general situation before COVID-19 epidemic. (Soto-Acosta, 2020).

COVID-19 and the resulting shutdown have accelerated, predicted, and amplified the impact that technology can have on some organizations' business model. Moreover, many small businesses have also been able to improve on new technologies to adapt and benefit from their business model (Vaccaro et al. 2020; Puddister and Small 2020). The most common examples contain personal training or tutoring and customer advice and run virtual video platforms like Zoom or Webex (Puddister and Small 2020). Likewise, restaurants have become depending on providing take away services and produce food for delivery in what are known as “dark kitchens,” powered by online meal ordering (Pantelidis 2010). (Ikbi, Didier and Dong-hyun, 2020).

In the business world, service sector is seen as a change in the perception of how things should be thought, finished, and made to be introduced to customers. The paradigm shift of service sectors can create or eliminate entire departments. In some situations, old equipment is sold or recycled, whereas millions or even billions of dollars of new equipment need to be purchased. Interacting well to a group of digitalization requirements would have a lot to do with the long-term success of a business. For example, the case of the assembly line that created a substantial paradigm shift in the auto industry world and all other areas of production as well.

Considering the above mentioned, the researcher will examine and discusses the reality of business digitalization in the Palestinian service sector especially its requirements, obstacles, and the existence of using digital systems in enterprises in the service sector. It is shown that digitalization in the service sector is due to the emergence of a new type of resource - a large amount of specific information about stakeholders. The areas of digitalization in the service sector are indicated. The use of digital technologies affects cost reduction and sales growth and has a significant impact on the formation and use of the intellectual capital of service enterprises.

1.4 Research Questions

Based on previous studies, the study found out the necessity of examining the reality and existence of digitalization in the workplace of enterprises in the service sector in Palestine that has been a motivation to look deeply in the Palestinian service business environments, and the obstacles that affect the implementation of digitalization in that sector, so the main research question of the study is as follow:

What is the reality of the service business digitalization in the Palestinian service sector?

Therefore, the following research sub-questions can be derived as the following:

1. What are the needed infrastructure requirements, supporting services and applications in the transformation process?
2. What is the readiness level in the Palestinian Service Business Sector for transformation?
3. What is the availability of digitalized financial services in the finance department of the service business?
4. To what extent does the service business use Human Resource Management (HRM) digitalized systems regarding employees?
5. To what extent does the enterprise apply digitalization in the supply chain management?
6. What is the reality of using digital marketing in the business marketing department?

1.5 Study Objectives

Based on the research problem and looking at previous research that emphasizes the importance of business digitalization and through the definitions of the concept of digitalized business in the upcoming theoretical framework, the main objective of this study is to **examine the reality of business digitalization in the Palestinian service sector** which may motivates local and international investors to adopt new digital business systems in the Palestinian business environment. To these two ends, the study has the following objectives:

1. To determine the infrastructure and supporting services needed to digital transformation.
2. To examine the readiness level of Palestinian service sector to transformation.
3. To identify the availability of digitalized financial services in the service business.
4. To identify the use of HRM digitalized systems in relation to employees.
5. To examine the existence of digital systems regarding supply chain processes.
6. To examine the use of digital marketing in the marketing department.

1.6 Study Significance.

The source of inspiration for this thesis was to know the availability of digitalization in the Palestinian service sector, and what are the infrastructure requirements needed to achieve digitalization in Palestinian service businesses. With this thesis, the researcher was keen to reach a deeper understanding of the availability of digitalization in the various departments in the service business, in how digitalization was employed, and what components required to be available in the enterprise in order to digitalize the business model and thus digitalize all the processes necessary to achieve the goals and aspirations of the enterprise. The importance of the study (from a scientific point of view) lies in determining the possibility of moving the company's business model from traditional to digital. As for the (practical point of view), it helps companies that intend to move to digital systems to implement their goals and tasks, or to help companies that (recently adopted digitalization in their business model) keep pace with modern technologies so that the company maintains its sustainability or increases its profits and even reduces the costs of production.

Chapter 2

Theoretical Framework and Literature Review

2.1 Theoretical Framework

2.1.1 The concept of Digitalization

2.1.2 The difference between Digitalization and Digitization.

2.1.3 Digitalization of Financial Services Management.

2.1.4 Digitalization of Human Resource Management.

2.1.5 Digitalization of Supply Chain Management.

2.1.6 Digitalization of Marketing Management

2.1.7 IT Infrastructure Requirements

2.2 Literature Review

2.2.1 Foreign Studies

2.1 Theoretical Framework.

Digitalization has affected almost all areas of the economy from production process to the final process which is the consumption. The process of distributing goods has been changed by the influence of the internet, mobile devices, and seamless communication. Where companies today have a high ability to reach customers wherever they are and enable new customers to reach them. Where the customer can access the various offers wherever and whenever they are. This, in turn, contributed to the transition of the economy from an economy based on geographical areas to a truly global economy, and the result is the presence of different technology companies wherever it is. (Soto-Acosta et al., 2020).

Nowadays, any project that employs digital technologies might be classified as a digital transformation of this project. In fact, there are many digital projects that use digital technologies, but at the same time, they cannot be described as digital transformation projects. But this digital change can be considered as benefits and goals that companies seek to achieve without the need for a complete digital transformation. Companies are using digital technologies in an attempt to speed up business operations, reduce costs, or increase profits. In sum, these projects cannot be considered totally transformative (Soto-Acosta et al., 2020).

Whatever the technological frontier, digital transformation means radical changes in business (Fitzgerald et al., 2014). It is clear that digital transformation means making major changes that can be seen in the business model of each enterprise. The Corona epidemic has accelerated the transition to the digitalization of businesses such as restaurants, education, retail and wholesale. There is no doubt that remote education existed before the emergence of the pandemic, but the Corona epidemic has contributed to a rapid digital transformation at the level of classical schools so that they can continue their activities during or after the closures, but in new exceptional conditions.

Regarding the outcomes on how colleges and schools have achieved digital transformation for their business during the lockdown that to be suitable. On the other side, traditional businesses that were selling online did not succeed to offer their delivery service on time during the lockdown as a result of the missing internal processes transformation that are necessary to fulfill the high demand.

Digital transformation involves the process of creating new business models of enterprises to have meaningful changes at all levels and that not supposed to eliminate the existing models. In contrast, digital transformation is able to match the new digitalized business models with the existing one. Digitalization has also an impact on book publishers through offering new digital books that contains digital content such as eBooks, educational content, and audiobooks. Nowadays, there are many traditional businesses using traditional print format and sell their products on internet or physical distribution channels.

The world of digital business is changing and improving every year. But the traditional print business is also important and cannot be eliminated because the enterprise can use it as an alternative process when they face new challenges related to digitalization application. Book publishers for example, are able now to merge the traditional business models with new digital ones to the existing print contribution. Enterprises can beneficially use digitalization by distinguishing the differences business models. So, the enterprises need to position the traditional business models to improve new values offers by exploiting new opportunities appear in the market. At the same time, they also need to use new business models efficiently to enhance value propositions to developing markets to let them survive (Soto-Acosta et al., 2018)

Digitalization has several components that contribute to achieving the enterprise goals through increasing the power of acceleration towards digitizing information and obtain better results in line with the customers' needs and desires.

According to (Shpak et al. 2020), the key components of digitalization can be summarized as the following: cost structure, consumer sections, sources of income, sales channels of goods and services, relations structure with consumers, key partnerships, categories of resources, categories of activities, categories of business processes, etc.

(Tolkachev et al. 2020) identify digitalization components as the start to develop due to the need to control large flows of information created during the operation of a complex of devices that provide modern equipment. Between these components Broadband Internet and electronic data exchange, cloud services and big data are characteristics of

the industrial exploitation of digital streams. Likewise, digital components are sometimes added without an obvious understanding of customer needs and without a value proposition that is unique to the customer (Parida et al. 2019). The researchers think that digitalization has a vital contact with the following concepts: value creation, value delivery and value capture.

The continuous increasing computing power enable formerly unimaginable business performance – but only if you manage digital technologies properly so that it offers real value through completely new business processes. Many enterprises recognize that they are not appropriately prepared to achieve the full value of digitalization and they even create problems more than benefits. A machinery enterprise, for instance, automated the final assembly of a certain product line to know later that this did not fix their cycle time issues. The actual issue was the quality of their invoices of material which led to many absent parts will come out in long waiting times during the final assembly, with or without modern digital technologies. This is coherent with the findings of a study by BPM-D, Widener University, and the Universidad de Chile with over 200 organizations around the world. More that 55% of the respondents responded that it is a main challenge to identify the suitable opportunities apply improvements through digitalization. Furthermore, most enterprises strive with their slow decision making and the whole resistance to change. The key obstacles organizations see for digitalization is shown in the following figure (Kirchmer, 2019)



Kirchmer, M., Franz, P., Lotterer, A., Antonucci, Y., Laengle, S.: The Value-Switch for Digitalization Initiatives: Business Process Management. BPM-D Publications, Philadelphia, London, 2016.

Figure 2.1: digitalization obstacles (Kirchmer et al, 2016)

There are many technical and technological obstacles that face SMEs when adopting new digital technologies. First, technologies that can be classified as a core to the digital servitization are both mixed and compound, as they include Internet of things (IoT), big data and analytics, cloud computing, cyber security, varied and augmented reality, advanced developed solutions, additive manufacturing, imitation of connected machines, and artificial intelligence (Paschou et al ,2018). SMEs are financially restricted and they do not have the technical resources readily exist, and cannot easily promote and adopt digital technologies (Mittal et al , 2018).

Additionally, digital service contributions must be supported by a static and consistent technical infrastructure to be presented economically (Ierch and Gotsch, 2015). Finally, SMEs might face technological issues related to their product offerings, since the presence of digital technologies into their offerings may require a different and specific redesign.

2.1.1 The concept of Digitalization.

According to (Hagberg et al, 2016) 'digitalization' refers generally to the combination of digital technologies into retailing, as in the following definition. Digitalization is an Integration of digital technologies into everyday life by digitization everything surrounds us and can be digitized' (Businessdictionary.com). (Clerck, 2017) defines digitalization as the usage of digital technologies and data to generate revenues, utilize business, replace or transform business processes and construct an environment for digital business, so we consider digital information as a core. The industrial management literature identifies the digitalization as the phenomenon of smart connected machines where information and digital technologies power (Lerch & Gotsch, 2015), (Parida et al, 2015). (Machekhina, 2017) consider digitalization as a transformation of all information kinds (text, sound, visuals, video, and other data from different resources) into the digital context. (Yoo et al, 2010) define digitalization as a transformation of current socio-technical structures that were mediated by non-digital handicrafts or relationships into ones that are mediated by digitized handicrafts and relationships with modern embedded digital capabilities. (Perez, 2015) defines digitalization as it is not the outbreak of a new revolution, but the widespread collaboration of digital innovations in all economy and society. (Gaspar et al, 2014) define digitalization as it is the process of spreading general-purpose technology.

The latest similar phenomenon was electrification. Digitalization of products and services limit distances between people and things, increases mobility, it makes network effects crucial, it permitted the use of data to such an extent as it licenses the satisfaction of customer needs. It opens adequate opportunities for innovation, investment, and generate new businesses. By going forward, it will be one of the most important factors of sustainable growth. (Eling & Lehmann, 2018) describe digitalization as a combination of the analogue and digital worlds with new technologies that improve customer interactions, the availability of data and business process. (Sari & Lorentz, 2019) explain that digitalization is defined as the way many fields of social life are reorganized around digital communication and media infrastructures. In short, digitalization may be defined as the use of digital technologies.

2.1.2 The difference between Digitalization and Digitization.

(Sari & Lorentz, 2019) indicated that past contributions have mixed digitalization and digitization. Therefore, digitalization refers to the technology of digitalizing information. (Ringenson et al, 2018) support this difference between definitions and find them useful for highlighting the distinction between the technological conditions required for digitally related social change “digitization” and the real change “digitalization”.

The English language permits for a distinction of the two concepts of digitization and digitalization which already encloses two dimensions applicable on manufacturing. Regarding the definitions of the Oxford English Dictionary (OED) the concept “digitization” can be found in 1950s in conjunction with computers as “the action or process of digitizing; the transformation of analogue data such as images, video, and text into digital form”. At that time, the term “digitalization” is defined as “the adoption or growth in use of digital or computer technology by an organization, industry, country (OED, 2016). Depending on this OED definition, Brenner and Kreiss define the term “digitization” as the material process of transforming individual analogue streams of information into digital bits, and they understand digitalization as the way in which many areas of social life are restructured around digital communication and media infrastructures” (Brenner & Kreiss, 2014).

2.1.3 Digitalization of Financial Services Management.

1. The Concept of Financial Services.

Modern service products are important to the future growth and success for financial organizations. Facing quickly growing markets, more extreme competition from home and abroad, and dynamic customer needs, bank, insurance companies, brokerage houses, and others have been responding with a countless new product in the past few years.

The industrial service sector and financial services represent an increasingly significant growth sector in the economy, as a result, few research has discussed the secrets to new

products success for new financial services. On the other hand, industrial products have received much attention, and many insights have been added into success and failure features, enhanced screening techniques, and better new product management performs. Unfortunately, the new product developer in the financial services sector can only generalize these results and they might have some applicability to the financial industry. (Cooper and Brentani, 1991).

According to (Asmundson and Irena, 2012), they define financial services as the economic services offered by the finance industry, which includes a wide range of businesses that manage money, such as credit unions, banks, credit-card enterprises, insurance enterprises, accountancy enterprises, consumer-finance enterprises, stock brokerages, investment funds, individual managers, and some enterprises that are sponsored by the government.

Financial services can also be defined as the products and services provided by institutions like banks of different kinds for the facilitation of many financial transactions and other related activities in the world of finance such as loans, insurance, credit cards, investment opportunities and money management, providing information on the stock market and other matters like market trends (Base, M.K,2021).

To connect the financial services and digitalization. Digitalization has significantly forced many traditional businesses especially for the communication industry, the entertainment, media sector, and the financial industry. Digitalization of banking business segments has a great impact on the financial industry that made it upside down such as financing, asset management, and payments. In the last century, banks were able to involve digital financial innovations like Internet banking, and they have established new digital technological infrastructures, for example SWIFT or TARGET2-Securities. Nevertheless, most of the financial innovations were engaged in the digital back end of banks where clients only indirectly can benefit from them. The digitalization of front-end services has generated opportunities for new enterprises. The arising players in the financial sector are called FinTechs, a shortcut for start-ups that commercialize technological financial innovations. Despite of these new start-ups are a differentiated group with various interests and business plans, they all share one thing in common: they undertake tasks and functions that were traditionally reserved for banks (Puschmann, 2017).

2. Digitalized Financial Services.

Information and communication technology has a great role on improving digital financing. The fact of delivering financial services through digital resources of service provision has been progressively emphasized by governments, development partners, and service suppliers themselves as a great step towards financial inclusiveness (Gabor & Brooks, 2017). Providing services like mobile banking has offered easy ways for electronic transfer payment to the financially excepted people as this method can help to avoid theft and financial crimes that are related to cash transactions and reduce the risk of loss. Digital financing seems to be a suitable solution for those financially and socially eliminated (GSMA, 2017). The way to support financial inclusiveness will handle the challenges of access to finance that may likely obstruct the development of SMEs.

Financial providers should continue spreading awareness among people through the existing financial services beyond credit services, that are common and well known. The world is turning digital, so financial service providers should encourage their customers to use digitalized financial services, which are cheap, secure with low risk. The Bank of Uganda, for example, is the supervisor of financial brokers, it should monitor these organizations on costs of loans. SMEs should be innovative when producing goods to pave the way to a competition at both domestic and foreign markets. (Eton et al. 2021)

Digitalization is known as “Game-Changer” in terms of extension of IT World. As this made services suitable and cheap for payments and transfer funds when needed. This led to literacy level for digital platform that showed a good level of influence in terms of households generally. Digital financial services (DFS) concentrate on reaching out to its customers as quick as it can; consequently, banks are working its technology to offer better service to their customers. DFS can help to the Urban-Rural flow significantly. It has the possibility to affect the economy at the high rate.

It is obviously seen now DFS has opened the potential for growth of financial services through channels all over the world. A mixture of digitalized services with finance could be called Financial Inclusion which circles around affordability and beneficial

applications to meet customers' needs like transactions, payments, savings, credit, and insurance. It can reach excluded or different kind of population. Digital financial services (DFS) help to deliver basic financial services to people through effective instruments needed for innovative technologies such as mobile phones, electronic wallet as an establishment to have a platform for digital payment services. The main objective of providing knowledge about financial services to people is in how to go digital, this can be done through teaching them how to recognize or be familiar with the advantages and disadvantages of digital financial services in upcoming future. (Rai and Trivedi, 2015)

3. The benefits of digitalized financial services to business.

The improvement of digital technologies contributes to the manufacture's understanding of the consumers' needs and expectations at the stage of exploiting goods and services. These permits businesses start using both cost-based and results-based approaches to evaluate the competitiveness of products (Fedulova, 2018). On the other hand, the traditional finance focusses generally on decreasing the cost of goods and services offered to consumers. Businesses also need to observe, measure, and analyze the economic results that came out through using the product and services by investigating the consumers' feedback. This will lead to a clear understanding of consumer needs that motivate enterprises to compete more effectively in the market (Lambert, 2017).

Digitalized financial services have many advantages that have been taken in consideration over the past few decades until it has become a vital universal phenomenon. In China, for instance, DFS improved much later than elsewhere, with development beginning in the late 1990s as the financial services sector updated and developed the overall process of economic liberalization. Similarly, recent developments in digital finance such as internet payment services and peer-to-peer (P2P) lending started to appear only in the middle of the previous decade. Innovations in DFS in China in addition to internet banking and electronic payments are even more new phenomenon, dating only from 2010. However, in many ways, China is facing a "last mover" advantage in the context of DFS and now emerge to be developing more rapidly than most other competencies. Many elements have contributed to this quick

development, including technological innovation, rapidly growing use of digital devices and the change on consumer behavior, large growth of DFS providers, and the policy objective of the Chinese cabinet to improve financial inclusion through digital finance to support growth and boost greater innovation (Zhou et al. 2015)

2.1.4 Digitalization of Human Resource Management.

1. The concept of human resource management.

Human resource management is defined as a strategic and consistent approach to the management of an enterprise's most valued assets that are the people working there who individually and collectively participate to the achievement of objectives (Armstrong, 2006).

Storey (1989) thinks that HRM can be viewed as a 'set of interrelated policies with an ideological and philosophical underpinning'. He recommends four aspects that create the meaningful version of HRM:

1. a specific constellation of beliefs and assumptions.
2. a strategic purpose in informing decisions about people management.
3. the central contribution of line managers; and
4. adoption upon a set of 'levers' to form the employment relationship.

MODEL OF HRM.

The matching model of HRM is one of the first obvious statements of the HRM concept was made by the Michigan School (Fombrun et al, 1984). They believed that HR systems and the organization structure should be managed in a way that is fitting with organizational strategy.

Human resource management has a vital contribution in any enterprise. And in this case, many enterprises have improved their digital technologies as a need to operate them in different processes in different departments. This has led to an improvement in production, distribution processes for example at a high rate. To sum up, human resources is able now to exploit new opportunities when implementing operations (Abdul Azeez, 2017).

Additionally, human resource management means the ability to control the work and even people to achieve the planned objectives, and therefore it is very important for any enterprise to employ human beings efficiently. HRM is an initial step to start and grow new enterprises (Boxall et al, 2010).

According to (Collings et al, 2019): HRM is the process of managing human beings through monitoring their performance individually and collectively. This comprehensive definition clarifies all issues related to work contracts or conditions that to be agreed through implementing the process of recruitment and selections. In addition, the definition covers all matters linked to employees working areas that are not mentioned in the work contract. As a result, workplace will be a more comfort to employees because it meets employee's needs and desires.

2. Digitalized HRM.

IT plays an important role in offering new opportunities and competitive advantages that any enterprise seeks to obtain. HR role focuses on changes that might appear in the workforce structure or attitudes. It also enhances the relationship between the employer and worker in addition to a rapid response to the new HR technologies. In this condition, there is a high chance to shift toward digital world. Nowadays, HRMS is largely used in many enterprises regardless their sizes because it benefits the enterprise to effectively implementing process (Mahfod et al, 2017).

Digital human resource management is considered as a part of human resources programs that combine many systems or processes required to a successively

monitoring the processes of human resource management. HRM software is base for businesses to run necessary functions like storing employee's data, payroll management, recruitment, administration support and supervising employees' performance (Wikipedia, 2021).

DHRM is a combination of software programs that merge the HRM and information technology together through specific software. DHRM has many advantages on HR processes such as recruiting new employees, payroll management, performance monitoring, and collecting all the information needed about old or new employees within an enterprise (Rietsema, 2021).

3. Benefits of digitalized HRM to business.

Any enterprise can obtain the superior advantages of such a system through exploiting faster and accurate techniques to easily access all the necessary information for example: employees, saving costs, relieving HR managers from administrative tasks, simple access to HR data, standardizing HR processes Within the organization, more consistent and up-to-date information about employees' characteristics such as their performance. In sum, using the human resource management system, a significant positive impact on the operations of the entire organization can be observed, since its application enhances the efficiency and effectiveness of work (Berber, 2018).

According to the well-known popular HRM system contributor (Rietsema, 2021); The existence of human resource management software will handle human resource practices among successful enterprises. The researcher has noticed that there are some enterprises in any industry that have succeeded without the need of human resource robotics. For instance, easy access to a mobile phone has a huge role in transforming modern human resources departments, setting information, and managing tasks in front of employees and managers. The digital human resource department has contributed to the effective disposal of bureaucracy and the settlement of many companies.

A DHRM can help SMEs to increase their growth and productivity. Here are some extra benefits to organizations to when using DHRM platform:

- Employees will be able to deal with certain written tasks such as their personal information input, as it is the responsibility of HR professionals.
- A DHRM has a built-in data security, including authentication measures that restrict access to authorized users and protect enterprise's data.
- Most DHRM platforms allow users to customize their workflow to implement the organization plans and get the best user experience.
- company managers will be able to schedule reminders and automated emails through DHRM, making it easier to communicate better and save managers time tracking responses.

2.1.5 Digitalization of Supply Chain Management.

1. The concept of supply chain management.

If you run a small business that offers a few products or small services, the chances you probably will have a small number of suppliers. You can manage your supplier orders and deliveries through using a mobile phone or a fax machine. But if you manage an enterprise that produces more complex products and services, in this case, you will have hundreds of suppliers, and each supplier will have his own key of suppliers and so on. Surprisingly, you are in a condition where you will need to organize the activities of hundreds or even thousands of other businesses to produce your products and services to their final shape. Supply chain management (SCM) systems can be an answer to the problems that facing supply chain complexity.

(K. Laudon & J. Laudon, 2013) define the enterprise's supply chain as a network of enterprises and business processes of getting raw materials, transforming these materials into finished products, and distributing final products to customers. It combines suppliers, manufacturing plants, distribution channels, retail outlets, and customers to supply goods and services from the initial stage to the consumption stage. The flow of materials, information, and payments processes can go through the supply chain in both directions.

Supply Chain Management involves all activities of planning and management in sourcing and procurement, transformation, and all logistics related to management

activities. Significantly, it involves selection and collaboration with channel partners, which might be suppliers, agents, third party service contributors, and customers. Basically, supply chain management combines supply and demand management within and across the business. (CSCMP, 2020)

(Lu, 2012) indicates that defining supply chain management can be both simple or very difficult. It is simple because it is so exceptionally known and experienced in most of businesses. It is also very difficult because the definition must cover what supply chain management has reached so far and wide. So, the definition can be presented as the following: Supply chain management is simply and ultimately the business management, whatever it may be in its definite context, which is supposed and enacted from the relevant supply chain perspective.

2. Digitalized Supply Chain Management.

ESCM systems control the information flow among elements of supply chain in order to to get best decisions in terms of how much and when to purchase, produce and ship. (K. Laudon & J. Laudon, 2013).

ESCM software compose of planning and fulfilling of supply chain. By providing connectivity among different countries the internet technology has played a great role in increasing the universal sharing of supply chains. Enhanced communications among the members of supply chain has proved that the efficacy of customer response and demand-driven model are now an easy result (K. Laudon & P. Laudon, 2013).

ESCM systems intend to merge all the partnerships in terms of goods and services in all fields to inform the customer. Improving quality, reducing costs and tendency to specialized manufacturing for better competitive achievements all are targets of ESCM. planning , sourcing , producing , delivering and providing for returns are supply activities which are handled conveniently within an incorporated supply chain to Guarantee the Maximus use of shared resources (Ingram, 2019).

3. The Benefits of DSCM to Business.

Companies seek to increase the ability to control the supply chain and motivate suppliers to provide services more quickly and on time. This, in turn, will increase competition between companies, which will require companies to develop digital business models. The company should focus on transforming traditional processes into digital processes to increase efficiency and effectiveness.

(Wagner and Sweeney, 2010) indicated that digital supply chain management has many benefits, including:

1. Enhance transparency and reduce manufacturing costs.
2. It enables the company to compare the expenses generated by the traditional supply chain with the expenses of the new digital supply chain.
3. Companies will be able to coordinate products with different suppliers to get innovative manufacturing ideas from all parties contributing to every stage of the supply chain.
4. The supply chain provides greater speed in the purchase and payment processes, so that there will be the possibility of electronic payment instead of cash payment.
5. The digital supply chain provides logistical plans that help companies develop effective management plans.

4. Digitalized Supply Chain Management Model.

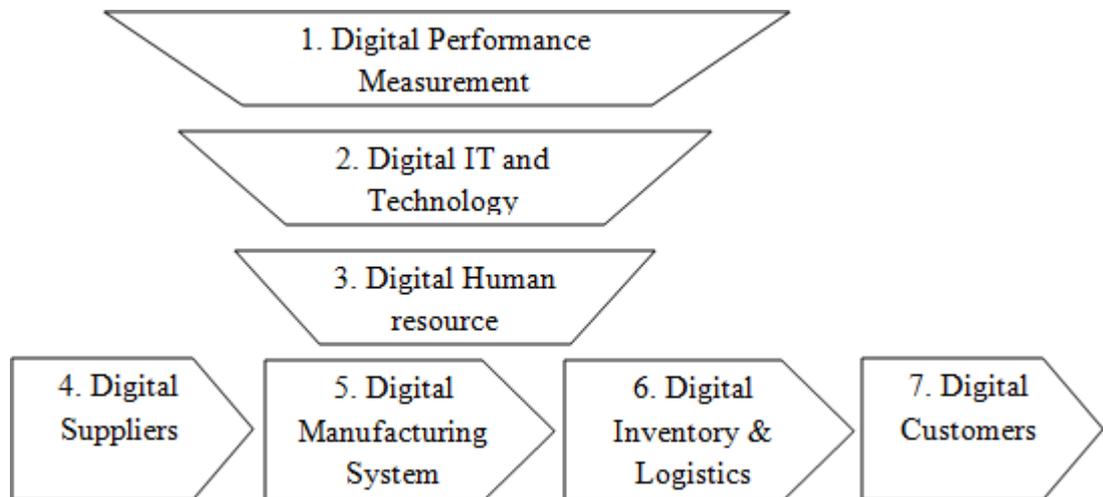


Figure (2.3). Seven dimensions of digital supply chain management. (Agrawal & Narain, 2018)

(Farhani et al, 2017) suggested that the supply chain consists of a group of important activities that are implemented to purchase raw materials needed for manufacturing and convert these materials into final products by going through a series of processes to reach the final consumer. Where the products are stored in the inventory of finished products that are ready to be served, sold, and delivered to the final consumers. The researchers divided the supply chain management process into seven dimensions: suppliers, production, inventory, logistics, customers, information technology, human resources, and performance measurement.

2.1.6 Digitalization of Marketing Management.

1. The concept of marketing management.

The American Association of Marketing define marketing management as "the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services in order to create, exchange and satisfy individual and organizational objectives." (Grönroos, 1989).

A distinct view of marketing as a management discipline (rather than an economic activity) emerged in the 1950s (Drucker 1954; McKittrick 1957), though marketing management had certainly been evolving as a practice for some time, with origins as a form of support for the sales function. This transition was marked by two major developments: first was the perspective of the marketing concept as a management philosophy emphasizing customer orientation, and the second was the integration of quantitative methods and behavioral science into the marketing discipline. Two significant environmental trends drove this transition, one in the marketplace and one in education. (Webster Jr, 2005).

Marketing management is the organizational discipline which focuses on the practical application of marketing orientation, techniques and methods inside enterprises and organizations and on the management of a firm's marketing resources and activities.

Marketing management employs tools from economics and competitive strategy to analyze the industry context in which the firm operates. These include Porter's five forces, analysis of strategic groups of competitors, value chain analysis and others. (Porter, 1998).

In competitor analysis, marketers build detailed profiles of each competitor in the market, focusing on their relative competitive strengths and weaknesses using SWOT analysis. Marketing managers will examine each competitor's cost structure, sources of profits, resources and competencies, competitive positioning and product differentiation, degree of vertical integration, historical responses to industry developments, and other factors.

Marketing management often conduct market research and marketing research to perform marketing analysis. Marketers employ a variety of techniques to conduct market research, but some of the more common include:

- Qualitative marketing research, such as focus groups and various types of interviews
- Quantitative marketing research, such as statistical surveys
- Experimental techniques such as test markets
- Observational techniques such as ethnographic (on-site) observation.

Marketing managers may also design and oversee various environmental scanning and competitive intelligence processes to help identify trends and inform the company's marketing analysis (Wikipedia, 2021).

- Marketing strategy.

Two customer segments are often selected as targets because they score highly on two dimensions:

1. The segment is attractive to serve because it is large, growing, makes frequent purchases, is not price sensitive (i.e. is willing to pay high prices), or other factors; and
2. The company has the resources and capabilities to compete for the segment's business, can meet their needs better than the competition, and can do so profitably (Clancy et al, 2000).

The implication of selecting target segments is that the business will subsequently allocate more resources to acquire and retain customers in the target segments than it will for other, non-targeted customers. In some cases, the firm may go so far as to turn away customers who are not in its target segment. The doorman at a swanky nightclub,

for example, may deny entry to unfashionably dressed individuals because the business has made a strategic decision to target the "high fashion" segment of nightclub patrons.

In conjunction with targeting decisions, marketing managers will identify the desired positioning they want the company, product, or brand to occupy in the target customer's mind. This positioning is often an encapsulation of a key benefit the company's product or service offers that is differentiated and superior to the benefits offered by competitive products (Reis & Trout, 2000). For example, Volvo has traditionally positioned its products in the automobile market in North America to be perceived as the leader in "safety", whereas BMW has traditionally positioned its brand to be perceived as the leader in "performance".

Ideally, a firm's positioning can be maintained over a long period of time because the company possesses, or can develop, some form of sustainable competitive advantage (Porter, 1998). The positioning should also be sufficiently relevant to the target segment such that it will drive the purchasing behavior of target customers (Reis & Trout, 2000). To sum up, the marketing branch of a company is to deal with the selling and popularity of its products among people and its customers, as the central and eventual goal of a company is customer satisfaction and the return of revenue.

2. Digital marketing.

Given the importance of early and rapid transaction development, digital marketing as a concept highlights a set of profile processes that embrace all the digital channels available to promote a product or service, or to build a digital brand (Kotler et al, 2007). From the economic practice, digital marketing originally developed around web sites to later show robustness by redirecting traffic to the advertising industry, bidding sites (eBay, for example) etc. According to Mark Sceats, digital marketing is feasible through the Internet as a working and display environment (Kalyanam & McIntyre, 2002).

If we consider the usefulness of digital marketing in e-business, then it is necessary to consider the concept of a group of CISCO specialists, according to which the term includes all the activities that are designed and developed in a business via the Internet,

to identify, attract, win, and make loyal the customers (Banerjee, 2016) by the marketers and sales team staff.

The uniqueness of digital marketing is given by some specific and relational features included in seven operational functions, namely: personality; confidentiality; customer service; the community; security; sales promotion (Sareno, 2020)

Digital marketing has created and will lead to key changes not only in business, but also in customer behavior. In order to be operational, this type of marketing provides a unique platform for companies to identify and understand customer requirements and create opportunities for them based on time and place. It also reduces costs by eliminating unnecessary transactions (Kiang et al, 2000).

Over the last decade, digital marketing has evolved continuously and rapidly. This is evidenced by the intensive use of the internet by many companies in the world, mainly for advertising or corporate promotion. Other companies have fully utilized and fully accessed in their functional system all the possible facilities of the Internet, considered a modern means absolutely necessary in the design and development of business specific to the digital age (Kiang et al, 2000).

3. Components specific to digital marketing.

The mutations of the current stage of the integrated economy to the information society determine the rapid evolution of digitization in all areas of business. This allowed experts to intervene in the elucidation of the scope of Internet marketing, considering it as part of digital marketing. Under these circumstances, shaping digital and online marketing is to ensure the success of traditional marketing by moving from ads published in daily newspapers to Facebook and PPC campaigns (Aston, 2011). In this context, tools related to digital marketing also facilitate the design and development of transactions within supply chains.

According to the analysis and evaluation of the specialists there is a difference between the digital marketing and the marketing on the internet marked out and materialized in the planning and successful development of the business. Internet marketing is therefore a subsystem of digital marketing, the most important component of it. As a

result, most of the digital marketing actions are placed in the content of internet marketing (Figure 2.4).



Figure (2.4): Structure of digital marketing (www.reliablesoft.net)

4. The benefits of digital marketing.

If regular marketing creates demand, digital marketing leads to the creation of demand using the power of the Internet as an interactive environment that allows currency exchange and, moreover, the exchange of value. An Internet business can get value in the form of time, attention and support from the consumer. For the user, value can be added as entertainment and utility. The reciprocity of the transaction is what is important here - in other words, exchange is a two-way street that benefits both sides simultaneously. The Internet has changed the world in which the transaction ends and the transactions are realized. It's not just a new marketing channel, it offers a new paradigm for how consumers connect with brands and with each other (Minculete & Olar, 2018).

The Internet does not change the optics of the principles of efficiency in designing and conducting business through the digital environment. To this end, brands build their loyalty through users who love their products or services. Users fall in love with products and services when they adapt to their needs as opposed to serving the brand. More than any other type of marketing, digital marketing is measurable. This gives the brand the ability to build optimized profile experiences designed specifically for consumers (Minculete & Olar, 2018).

The current practices of digital marketing are both for the benefit of the advertiser and the consumer. Under these circumstances, the advertiser usually gains time, attention and support from the consumer, who in turn can receive value in the form of real benefits. It turns out, obviously, that the Internet has dramatically transformed the usual sale process and how both the buyer and the seller interact with one another. Now customers have a lot of options, influence and real power over the Internet, because brands are promoted by means appropriate to electronic transactions in potential markets. To this end, traditional marketing agencies have had to adapt their new practices and expand their digital marketing operations (Minculete & Olar, 2018).

From a consumer's perspective, the use of information communication technologies offers a number of benefits, including efficiency, convenience, richer and participative information, a broader selection of products, competitive pricing, cost reduction, and product diversity (Bayo-Moriones & Lera-Lo'pez, 2007). Online social networking tends to enhance these benefits, as consumers are able to communicate more proactively. For example, through online social networking, individuals can seek out others' opinions about specific products. In doing so, consumers have been shown to value peer judgments more than firm promotions, indicating a shift in the locus of persuasive power (Berthon, Pitt, Plangger, & Shapiro, 2012; Pitt, Berthon, Watson, & Zinkhan, 2002).

2.1.7 IT Infrastructure Requirements

Table (2.1) Infrastructure Requirements

Enterprises Hardware Requirements	Customers/Suppliers Requirements
Server Firewall PC/Laptop/Smartphone/Tablet Internet LAN Printer Scanner Barcode Reader	PC/Laptop/Smartphone/Tablet Internet Printer Scanner Barcode Reader Electronic wallet (payments).
Enterprises Software Requirements	
Operation System WEB platform Data bases Electronic wallet (payments).	

2.2 Literature review

2.2.1 Foreign Studies

In this section the researcher presents foreign studies dealing with the concept of business digitalization and the results came out through these studies.

1. Parviainen et al, 2017: (Tackling the digitalization challenge: how to benefit from digitalization in practice).

The aim of this paper is to clarify digitalization, and how it has been identified as one of the primary trends that are changing society and business. Digitalization causes changes to companies due to the adoption of digital technologies in the institutions or in the operating environment. This paper discusses digitization from the point of view of the various case studies conducted to collect data from several companies. The paper also describes the first version of the digital transformation model, drawn from the synthesis of these industry cases, illustrating a starting point for a systematic approach to address digital transformation. A case study research approach has been used to better understand digital transformation, as case studies often examine complex and unrepeatable conditions and, in this way, gather information to create new knowledge. Moreover, Grounded Theory has been applied to analyze the collected data and to develop theory from the data. The research concluded that changes were considered at the process, organizational and business domain levels. Changes can be new possibilities for doing things more effectively or more affordably, but they can also be disruptive to the company's existing operations, as digitalization has fundamentally changed the business opportunities of the company. This paper explains a starting point for a systematic approach to address digital transformation that will help companies analyze the effect of digitalization and the steps needed for their own environment.

2. Rachinger et al, 2019: (Digitalization and its influence on business model innovation).

The purpose of the study demonstrates that increased digitalization has affected various business activities including corporate business models (BMs) by enabling various new forms of cooperation between companies resulting in new product and service offerings as well as new forms of corporate relationships with customers and employees. At the same time, this digitalization has put pressure on companies to think about their current strategy and explore new business opportunities systematically, specifically in the early stages. While research on digitalization in the context of BMs is now gaining increased interest, the research gap remains in this area because the number of experimental insights is limited. Qualitative empirical data was collected from 12 key informants working in two distinctive industries: automobile and media industries. An investigation was conducted to examine the differences and similarities between how digitalization affects the value creation, proposition and capture of the company, as well as how companies deal with the challenges posed by increased digitalization. The study's results show that while digitalization is generally considered important, the value proposition itself as well as the position in the value network determine the perceived available options for business model innovation (BMI) by digitalization. Furthermore, organizational capabilities and employee competencies have been identified as future challenges that are going to be faced by both industries.

The results also showed that representatives of the media and the automotive industries are aware of the pressures and opportunities of digitalization in relation to BMI; However, its application and exploitation remains a challenge. This study contributes to the current body of knowledge by providing empirical insights into the context of digitalization and BMI. This research concluded that modern theoretical methods have been applied to explore digitization and BMI. As a sample, representatives of the automotive industry and the media in Austria-Hungary were selected and participated in semi-structured interviews. The conclusion has shed light on how the studied industries deal with the impact of digitalization, noting the similarities and differences in their behavior towards BMI and comparing them.

3. Bouwman et al, 2018: (The impact of digitalization on business models).

This paper aims to explore how digital technologies have forced small and medium-sized enterprises (SMEs) to reconsider and experience their business models and how this contributes to their innovation and performance. An empirical study was conducted on 338 European small and medium-sized companies that actively use social media and big data to innovate their BMIs. Through the results issued by four in-depth studies conducted after companies participating in the field of BM, social media is strongly correlated with innovative strategic drivers. And that any potential technological disruption will affect social media, which in turn will reflect on the overall performance of the business. The study concluded that it is important to understand the mechanism of BMI's work to develop clear strategies and implement them effectively. This study provided a clear understanding of how digitization works in the BMI world. At the same time, the authors of this study realize that their field of research was somewhat limited. Thus, the goal is to anticipate the performance of companies in the future and how these companies can implement strategic plans in light of the existing technological challenges.

4. Henriksson et al, 2019: (All Change or Business as Usual? The Discursive Framing of Digitalized Smart Accessibility in Sweden).

Few years ago, ideas related to digitalization have gained prominence in the modern transportation policy agenda. Based on an analysis of the discourse of the digitization agenda in Swedish transport policy, this paper examines the ongoing formative phase of the emerging policy and planning area for digitalization and smart mobility. It also examines and critically debates the current discursive framing for digitalization in current transport policy and planning and takes into account the perspectives and meanings related to “smart” mobility and accessibility that are elaborated in the Swedish transport sector’s strategic plans and policies. The empirical focus is on transport strategies and official reports that have been developed at the national level. The main findings point that digitization is framed as a rapid and unstoppable process of transformation, which will lead to a range of positive results such as reduced climate emissions, reduced congestion, improved accessibility, and a smoother and more resource-efficient transportation system. According to the ideas and assumptions enhanced in the current discourse, this transformation can only happen through a

stronger participation of business enterprises. This governing strategy, or lack of governing strategy, makes it vague in how transport policy objectives are balanced against market and innovation concerns, and it also risks delegating a transition to sustainable mobility to less formal and less transparent policy areas that run parallel to, and partly outside, the development of planning processes and strategy-making.

The researchers conclude that what they see in the policy documents is a "post-political" policy agenda in which major political conflicts disappear. Referring to Mouffe (2005), who emphasizes conflict and opposition as important parts of democracy, they argue that there is a need to develop policy discussion so that conflicts and difficulties emerge more clearly.

5. Priyono et al, 2020: (Identifying digital transformation paths in the business model of SMEs during the COVID-19 pandemic).

The aim of this study was to analyze how small and medium businesses (SMEs) are coping with environmental changes due to the COVID-19 pandemic by following the transformation of the business model powered by digital technologies. To achieve this aim, multiple case study design with qualitative analysis were used to investigate the data gained from interviews, observation, and field visits. Seven small and medium-sized manufacturers from Indonesia were selected using the theoretical sampling technique, with the goal of achieving a certain degree of variance to allow the researchers to implement replication logic. The analysis shows that SMEs embrace a different degree of digital transformation, which can be summarized in three paths, depending on the companies' contextual factors. First, SMEs with a high level of digital maturity that respond to challenges by accelerating the shift towards digital businesses; Second, SMEs that have liquidity issues but have a low level of digital maturity and have decided to digitalize only the sales function; And finally, small and medium businesses that have very limited digital knowledge but are backed by a high level of social capital. This last group of companies solves the challenges by finding partners with excellent digital capabilities. The qualitative case study method allows the researchers to make an in-depth and detailed analysis, but the generalizability is poor. To address this limitation, future research could use a survey covering diverse industries to test the proposed theory that resulted from this study, so that generalizability can be confirmed. The conclusion shows a presentation on SMEs that follow three different

main paths towards a digital business: accelerating digitalization, digitalizing sales functions, and finding digital partners to reach the market. The decision to choose one of the three digital transformation paths is determined by the current digital maturity level, learning culture, digital technology adoption history, etc. The selected pathway is also dynamic in nature. Once a company sets a pathway for digital transformation, there will be external changes that will push companies to readjust their planned path.

6. Botos et al, 2020: (Digitalized business processes—assessment and opportunities of Hungarian agri-food companies).

This study investigates the agri-food supply chain, which is a priority for stakeholders because it is safe and secure. Information technology provides a set of solutions that can contribute to the development of the food supply chain from the stage of production to the stage of consumption. Digital technologies contribute to the development of internal business processes, improving relationships between all business parties, and achieving business goals quickly and accurately, such as rapid value-added services. The researchers analyzed the different activities of food producers and consumers, by providing technological solutions to all parties. The analysis was based on descriptive statistical methods and Mann-Whitney test. The results are based on the fact that consumers focus more on the components of the product than on the product itself. The study summarized the necessity of introducing digital technologies to all stages of the food supply chain to obtain better results in the food business environment.

7. Bygren, 2016: (The digitalization impact on accounting firms' business models).

The study discusses the technological revolutions that occurred in the past when markets and business environments emerged. Technological revolutions have increased with the growth of digital markets in the current era. The study continued that digitalization affected the Swedish economy in terms of its impact on various industries and businesses. This, in turn, has led to an increased demand on industries in the physical or digital markets. Technological revolutions contribute to creating new business models to enterprises to gain competitive advantages and increase the market

share. Thus, the goal of the study was based on the importance of developing a digital business model for the accounting industries. The study conducted a multiple case study by conducting interviews with various accounting companies to clarify the mechanism of achieving digital accounting business models and to clarify the ingredients and obstacles that could face the process of moving towards the new digital business model. The study concluded on the importance of digitalization and its great role in influencing all business structures by transforming all traditional processes into faster and less expensive digital processes.

8. Neamțu, 2019. (The impact of digitalization on business sector development in the knowledge economy).

In the last century economic progress has made the world look smaller, shortened distances, and increased the efficiency in how the "time" resource is used. Currently, due to technological progress, change and diversification of means of communication, we can call or chat with another person in every corner of the world, regardless of distance. Furthermore, technology imports raise living standards and provide improvements to the service sector. The digital revolution is not only present, but also expanding every day. Knowledge fundamentally transforms every sector of our economy - from health to transportation, energy and beyond. The scope, scale, and presence of these disruptive innovations are truly unprecedented. The aim of this study is to present theoretical approaches related to the information society and its measurement in Romania and in the European context based on specific indicators. By analyzing these indicators, the researchers try to show the position of their country at the world level in terms of information and communication technologies. In order to comparatively analyze the state of ICT and its impact on the business sector, two main indicators of this field were analyzed - the State ICT Development Index (IDI) and the DESI Index.

The study concluded that Europe's economy is experiencing a slight decline, and even if it maintains its positions in terms of modern information technology and innovation, it remains in a stagnant state, as it has been overtaken by the economies of the East. After analyzing the situation in Romania regarding the level of ICT in the country, it was noted that regardless of whether IDI or DESI values have increased in recent years, IT spending in GDP is still low in comparison with the EU-28 average. The

development of the information society infrastructure is still insufficient and needs reforms. Another obstacle to business development in Romania is the high-level tariffs for access to ICT infrastructure and new laws adopted by the government, which leads to a decline in the economic development of the country through ICT and business fronts.

9. Sun et al, 2020: (When digitalized customers meet digitalized services: A digitalized social cognitive perspective of omnichannel service usage).

With the spread of digital technologies, various services have been growing digitally. Especially to the marketing department, multichannel has gradually been replaced by omnichannel, which aims to tightly integrate all physical and digital channels. Although omnichannel has received a lot of attention, there is still a dearth of research that theorizes about the multifaceted effects of digitization on omnichannel. Thus, this study extends Social Cognitive Theory (SCT) to the digital context and contextualizes the digital client and digital environment as mobile identity and channel integration quality, successively Furthermore, based on the self-regulatory process of human agency, the researchers integrate multichannel self-efficacy, satisfaction, and habit as activators of interpreting client conscious (ability and expectation beliefs) and subconscious (automatic behavioral propensity) in the decision-making process under an omnichannel setting. To test the proposed hypotheses, the researchers carried out an online survey to collect data from omnichannel customers in China. Specifically, Dianping, is one of the largest domestic service platforms in mainland China with over 200 million active users in a month and over 20 million work as retailers. The study concluded that digitization has fundamentally overhauled corporate retail deployments and individuals' shopping patterns, accelerating the shift from multichannel to omnichannel.

10. Chowdhury, 2015: (Service logic in digitalized product platforms: a study of digital service innovation in the vehicle industry).

The incorporation of technology into the processes used to manufacture products leads to the creation of digital products, which in turn will lead to the creation of new digital services. Digital services contribute to the development and growth of the company, which in turn will contribute to value creation for the company. This thesis discusses the relationship between the digitalization of the automotive industry and the extent to which digital services are provided alongside digital products at the same time. In order for digital services to be available, the company must have the necessary technological infrastructure to provide digital products and then digital services. There are challenges facing the process of implementing technology in companies, as managers face difficulty in developing strategies to generate digital services through existing digital products. This is due to a shortcoming in the process of creating value for digital services in light of the available digital products. The study focused on the necessity of developing hypotheses in the field of architecture and how to create value in digital product platforms there. The study relied on a qualitative research approach regarding the extent to which the automotive industry sector is able to provide new digital services.

This study concluded that service premises in digital product platforms aim to shed light on the main aspects of innovation in digital service. The main aspects were the dimensions of value, architecture, and productivity. Visualizing service infrastructures in digital product platforms offers new insights into digital service innovation research that has implications on future practice and research.

11. Li et al, 2021: (Exploring IT/IS proactive and knowledge transfer on enterprise digital business transformation (EDBT): a technology-knowledge perspective).

Digital transformation needs to investigate the reality of digital businesses in this era. The study relies on social technology based on ETHICS theory to show the relationship between the information technology and social knowledge techniques in how they interact in the digital transformation process. The researchers have carried out 173 surveys in among enterprises in and they have tested the conceptual model

experimentally using structured equation model and SPSS. The target sample were many individuals who work in different sectors such as industrial, service, and agricultural sectors. The results came out as the social knowledge has an impact on the process of applying information technology in the enterprise as the codification knowledge has supported the possibility to use information technology efficiently and reduce obstacles to a successfully transformative digitalization.

12. Schwertner, 2017: (Digital transformation of business).

There is a relationship between the process of digital transformation in various businesses and the technologies available in the work environment to integrate digital technologies of all kinds. This requires the presence of some necessary techniques for digital transformation, such as: cloud storage, mobile phones. Managers use digital strategies to foster a culture of innovation by reducing risks surrounding the process of digitization. This, in turn, pushes companies to achieve a greater competitive advantage and thus obtain a higher market share. Technologies (which constitute an important factor in the corporate infrastructure) contribute to companies gaining higher returns and profits and setting a clear vision for the company. There are many challenges facing businesses, such as insufficient infrastructure and technology. The study conducted a survey to measure the risks involved in adopting information security issues, such as insufficient knowledge to control new technological systems. The study concluded that companies seek to adopt unexpected changes related to the digitization of business, and therefore companies must develop clear plans and prioritize by making sure that there are financial resources and sufficient experience among employees to deal with the new digital operations in the company.

13. Kozina, 2019: (Digital organizations and digital transformation. Economic and Social Development).

Digital business transformation refers to the continuous application of digital technologies that focused on designing innovative business strategies and business models, and new management methods to provide customers with better products and

services, especially the experience to use them. There is a different methodology for evaluating a company's maturity in digital business transformation. The main purpose of this paper is to describe how to manage the digital transformation of business and to apply a framework for assessing the digital possibilities of a company within Croatian business practices. The framework outlined in the paper helps companies include in the assessment all the critical aspects of management required to perform digital business transformation. According to the framework, there are six areas of digital capabilities that companies can value. In this paper, the transformation capability of a production firm is evaluated by the nine aspects of management. Referring to the research results, it can be concluded that risk management has a low maturity level, while other aspects of management have a better maturity level between 2 and 4. There are many clarifications for these results. Here are some of them: The process of digital transformation is a very complex process that requires sufficient competencies and knowledge, relevant organizational structure, responsibilities, communications, modern architecture and business modeling tools, modern project management methods, risk management, as well as strong relationships with quality standards. Moreover, the outlined framework assists companies in how to manage the implementation of the digital transformation process and identify the necessary improvements.

14. Remane et al, 2016: (Discovering New Digital Business Model Types-a Study of Technology Startups from the Mobility Sector).

The researchers identified and formally built new business model configurations through systematic analysis of a comprehensive data set of emerging technology companies from the US mobility sector. They found that in order to adequately account for the new digital logic, 14 types of digital business models must be added to the existing groups: application developer, independent product/robot manufacturer, data analytics provider, third-party service integrator, and IT-enabled self. Service Provider, IT Oriented Service Provider, Manufacturer of Connected Physical Products, Manufacturer of Communication Devices for Physical Products, mobilized Service Provider, P2P Merchandise Sharing Platform, P2P Information Sharing Community, P2P Service Provider Platform, Sensor Information Vendor, and Sensor- Enabling Service Innovator. The aim of this research was to determine new types of digital

business models that have grown from the application of innovative digital technologies. To do this, the researchers analyzed companies from the personal mobility sector, including the automotive and passenger transportation industries. By analyzing this sector rather than the entire economy, the researchers can compare the digital technologies employment in specific business models in much greater detail. On the other hand, the analysis of all companies can be either too complex and potentially confusing, or relatively superficial and deleted important details. The study concluded that the business model concept is a powerful tool for linking technological innovations with the effective value creation logics. However, current research on different types of digital business models has not been updated for many years even though the penetration of digital technologies has expanded exponentially. Therefore, the researchers have systematically analyzed the business models of the latest emerging technology companies in the personal mobility sector and identified new digital business logics that cannot be understood with the existing types of digital business models. Thus, they have formalized these new business model configurations into digital business model types to update the current research for recent technological advances. Consequently, the results help to better understanding the nature of digital transformation that appeared in digital business models and provide practice with a tool for business model innovation.

15. Laudien & Pesch, 2019: (Understanding the influence of digitalization on service firm business model design: a qualitative-empirical analysis).

This paper concentrates on an analysis in how the digitization of the service company is reflected in the business model design. The researchers benefit from a selective research approach that combines insights from digitization research, service company research, and business model research. Through the background of nine in-depth case studies including 41 interviews covering a three-year from 2014 to 2017, the researchers identify four typical business models for a digital services company. Our findings show that the implementation of digital technologies and the digitalization of businesses are helping service companies overcome obstacles of traditional service-related businesses. Digital technologies are helping to speed up service processes and to decouple the strong relationship between human activities and services. The research data also explain that service companies can improve service availability and service

efficiency in this era. Interestingly, the researchers do not observe any impact of the ongoing digitization on the knowledge base related to services for businesses. Changes in the knowledge base reflected only to digital knowledge. They use an inductive qualitative research design. Such a design is useful and appropriate for dealing with new and complex topics (Graebner et al. 2012). The findings come as an aid to service companies to better deal with the necessities of change brought by digitalization as the researchers reveal the factors that determine the design of successful service company digital business models that are reflected in four of the service company digital business models. The researchers provide a new perspective on digital business models for service companies and emphasize the uniqueness of digital business models for service companies and how these models are established. The study concluded that digitalization affects the design of business models. Interestingly, the observed effect is not as drastic as predicted. It appears that service companies are taking advantage of digitalization to improve traditional ways of value creation, value delivery, and value capture. Service companies are slightly adjusting their strategies and following their business models to align with the requirements of digitization. This modification appears to be stable, through a one-time response to changing ecosystem conditions.

16. Holmlund et al, 2017: (Digitalization challenging institutional logics: Top executive sensemaking of service business change).

The study figures out the mental models of the senior executive team members in a selected retail bank. The focus is on how each member of the executive team understands the market situation and changes regarding interactions between clients and the bank in the current situation where traditional banking practices are in danger of becoming obsolete. The researchers used all executive team members interviewed individually in August 2014 in what do they think about challenges in the services business. The paper uses an abductive research approach. The findings show that mental models were largely dominated by internal banking issues, and the process of modifying services to change customer preferences was considered as a major challenge. The Analysis of the research showed that executive team members identified the same business challenges, but their interpretations of the meanings and implications toward the challenges were various. Mental models are likely to be hidden, stable, and rarely to be elaborated explicitly. There was a clear prevalence of mental models in

terms of content. The limited focus on customers was the starting point for business development and renovation. The study concluded that there are at least two important missions for the improvement of the incumbent bank in the context of changing and adjusting the customer relationship. First, through a shift in executives' mental models, where the drastic step is to refocus on the customer by starting to think about how the bank engages in the customer's process rather than the customer's involvement in the bank's operations. Second, the elements that are firmly depending on in the current provider-oriented business model are perhaps the most difficult to change. For the CEO, the main challenge is the formation and coordination of the senior management team, both the structural and dynamic capabilities of the team.

17. Oborin, 2019: (Digitalization of business processes in the field of food services as a factor in improving the food security of the region. In Proceedings of the 1st International Scientific Conference “Modern Management Trends and the Digital Economy”).

The study discusses the digitalization of the business operations of food service companies and the impact of this trend on improving food security in the area. The purpose of the article is to investigate the effects of the digitalization of the food industry in improving the food security in the area. The objectives of the study are to consider the theoretical underpinnings of shaping food service business operations; To mark up their role in the production cycle; to analyze indicators of food services in the Perm region; to develop a business operations model based on digital technologies that might have a positive effect on food security in that region. The study describes the business process and its characteristics in the field of production and management. The author considers the types and characteristics of business operations in the field of food services, their content, and objectives. The author studies the role of the digitalization of business processes in the system and management cycle, the influence on the main results that characterize successful activity in the services market. The article introduces indicators of the food service industry and an evaluation of the dynamics and problems at a regional level. The researcher presents a set of measures to improve the business operations of food service companies based on digital technologies that have a positive effect on food security in the region. Statistical analysis, modeling of social and economic processes, systemic and situational approaches were used as research methods. The study concluded that the business process is a global management and

production technology for business improvement and control. The field of public catering is developing dynamically, so increasing the efficiency of regional enterprises has a complex positive impact: high-quality customer service, increasing profitability of management objects, receipt of funds in budgets at all levels. The formation and implementation of an effective concept of business process management, and the consistent implementation of the complex of all structural components of the restaurant business, including information and computer technologies, lead to the successful implementation of the enterprise's practices in the field of catering.

18. Androniceanu et al, 2019: (Digitalization clusters within the European Union).

The study discusses the concept of "digitalization" as it is a strategic investment for countries as well as for institutions to promote development by increasing efficiency and productivity and achieving significant savings. The aim of this research is to identify clusters of digitalization and analyze the factors and effects of digitalization in the European Union. The study is based on 10 indicators from 29 European countries. The researchers used the EUROSTAT database for the year 2018. The selected indicators are processed using the k-means algorithm to get five groups. The authors collected data on 10 indicators, from the Eurostat 2018 Digital Economy and Society database in various areas of digitalization (Katz et al., 2014; Kotarba, 2017). The results of the research show significant differences between the EU member states and the clusters. Based on the identified indicators and key parameters, the authors describe digitalization in the European Union countries and carry out original processing using the k-mean algorithm. According to the latest report published by the European Commission, Romania and Bulgaria, which form one cluster, show the least changes in the digital sphere, while the Scandinavian countries, which all belong to another cluster, are on the other end of the spectrum. The study concluded that governments of least digital countries, in cooperation with the European Commission, need to take initiative to implement a digital strategy to digitize the business workplace and accelerate national progress (Liu et al., 2019; Parida at al., 2019; Sulkowski and Kaczorowska-Spychalska, 2018).

19. Ingaldi et al, 2021: (Assessment of the digitization of the service provision process in enterprises from the SME sector with use of the CIT method).

This paper investigates the role of Industry 4.0 that motivated companies of all types to become interested in changes related to the automation and digitization of their processes. The Internet, better and smaller devices encourage customers to use electronic services and online shopping. Therefore, service organizations that have benefited from the digitization of the service delivery process have been able to meet these requirements. The problem may be the fact that many service enterprises are enterprises from the SME sector, which means that they do not have enough funds to introduce changes, which may also lead to difficulties in achieving the suitable level of digitization. The aim of this paper was to evaluate the digitization of the service delivery process in companies from the SME sector in Poland and the Czech Republic. While doing this research, an innovative approach to a method called the Critical Incident Technique (CIT) was selected and used. The research allowed to determine whether the service institutions operating in the network have correctly used the digitization process they have undergone, and how the process of providing electronic services is evaluated by customers. Because of the survey, it was possible to identify the problems encountered by customers, which arouse their strong dissatisfaction. The Critical Incident Technique (CIT) was used as a research method, and it is one of the most famous methods for assessing the quality of services. The study concluded that the Industrial Revolution 4.0 and its tools such as digitization and automation of processes in companies have become a challenge that all companies must face. In the case of service organizations, digitization also applies to the service delivery process. This is possible due to a properly designed website through which customers can place their orders. They participate in this process themselves, and in this case, they do not have to call the service provider. They must choose the product, payment method and delivery by themselves. After completing the ordered product, they must be able to return or file a complaint. Therefore, a properly organized process of providing electronic services will lead to a high evaluation of their performance and, accordingly, affect the level of customer satisfaction.

As the results of reviewing all previous studies that all emphasized the importance of digitalization in businesses and how it provides efficiencies to business operations. The most important conclusions that can be summarized as follow:

1. Digitalization is not about turning existing processes into digital versions but rethinking current operations from new perspectives enabled by digital technology.

2- Through digitization, it is possible to anticipate the performance of companies in the future and increase the ability of companies to implement strategic plans in light of emerging technological challenges.

3- There are many small and medium-sized companies that follow 3 main paths to achieve digitalization in their digital operations, the most important are digitalization acceleration, digitalizing sales functions and finding digital partners to reach the market.

4- Digitization contributes to achieve better results in the food business environment through digital technologies that are in place at every stage of the food supply chain.

5- There are many obstacles that stand in the way of achieving digitalization, such as insufficient development of infrastructure, customs tariffs, and new government laws regarding the telecommunications sector and the economy.

7- Digitization has a great impact on retail operations and individuals' shopping patterns, which led to an acceleration of the shift from traditional shopping patterns to modern digital shopping patterns.

8- Due to digitalization, the consumer is now able to participate in the process of manufacturing and distributing processes using digital technologies, such as submitting a request for an amendment to the customization of a product he wants and being part of the decision-making process.

Based on the examination of previous studies, this confirms the researcher the need to know the reality of digitalizing service business in Palestine and how it can be applied

in light of the difficult political, economic and health conditions. What are the implications of having real digital businesses in the Palestinian work environment and its reflection on the Palestinian economy as a whole.

Chapter III

Methodology

3.1 Research Method

3.2 Data Sources

3.3 Research Population

3.4 Research Sample

3.5 Variables Description of Research Sample

3.6 Research Tool

3.7 Test of Validity and Consistency

3.8 Research Procedure

3.9 Statistical Processing Tool used for Questionnaire Analysis

3.1 Research Method

For the purposes of conducting this research, the study adopted exploratory descriptive approach which depends on studying a specific phenomenon at a specific time as in reality and provide an insight into the potential of applying digitalized systems in the Palestinian service sector specifically in West Bank - Palestine. The data gained is based on primary and secondary sources. The area of research is wide, the required information has been gained from different locations.

To better get clear idea about digital business, the study has investigated many various studies that study the business digitalization locally and internationally to have - by the end a suitable secondary data. The study has also used a survey as a primary data to increase the possibility to have accurate answers to the study objectives and questions. Accordingly, questionnaire has been used as a tool for data gathering from a sample consisting of several service businesses in West Bank.

3.2 Data Sources

The researcher used two types of data gathering:

Primary sources: The researcher did a questionnaire that target all parties who work in the Palestinian service sector in various departments of service business to have responses about the existence of digitalization in different departments processes and operations.

Secondary Sources: The researcher has relied on the secondary data to build the theoretical framework through examining the foreign studies worldwide that appeared the literature review section. These studies were journals, books, and theses.

3.3 Research Population

Research population contains all enterprises that are considered service businesses in the Palestinian service sector. These enterprises approximately 40,484 (PCBS, 2018).

3.4 Research Sample

A Convenience sampling (also known as availability sampling) was used where it is a specific type of non-probability sampling method that relies on data collection from population members who are conveniently available to participate in study. Google forms and questions can be mentioned as a popular example for convenience sampling (BRM, 2021) , the following table (3.1) clarifies the sample size of different business sizes. According to the European model (OECD, 2021) enterprises can be categorized in different groups according to their size; for this purpose, different criteria may be used such as number of persons employed. But the most important criterion in the statistics is the number of persons employed:

- a) Micro enterprises: fewer than 10 employees.
- b) Small enterprises: 10 to 49 employees.
- c) Medium-sized enterprises: 50 to 249 employees.
- d) Large enterprises: 250 or more employees.

Table (3.1): Sample distribution relative to research population

Enterprise	Number of respondents	Percentage (%)	The Degree of use of any e-business tools
Micro(<10)	26	25	Average
(11<Small<49)	36	34.6	Average
(50< Medium<250)	24	23.1	High
Large(>250)	18	17.3	High
Total	104	100	

Most of the **service business in the Palestinian service sector** were covered and some responses gained were incomplete or not well-suited with the study criteria. In this case, the researcher has left some enterprises as they were submitting few responses that cannot be generalized and may affect the statistical results. so, the researcher has eliminated those enterprises.

3.5 Variables Description of Research Sample:

The following table (3.2) shows the distribution of the sample relative to demographic variables of the study:

Table (3.2) Sample Distribution Relative to Personal Variables

Variable	Level	Frequency	Percentage (%)
Gender	Male	48	59.3%
	Female	33	40.7%
Academic Qualification	Less than Bachelor	11	13.6%
	Bachelor	48	59.3%
	Graduate studies	22	27.2%
Working with enterprise/company	Less than 5 years	32	39.5%
	5 – 10 years	23	28.4%
	11 – 15 years	11	13.6%
	More than 15 years	15	18.5%
Number of employees	Less than 10	20	24.7%
	11 – 49	21	25.9%
	50 to less than 250	18	22.2%
	250 and more	22	27.2%
working department	HR	9	11.1%
	Finance	24	29.6%
	Marketing	11	13.6%
	IT	11	13.6%
	Logistics	5	6.2%
	Other	21	25.9%

3.6 Research Tool:

Questionnaire:

An E. questionnaire was developed regarding “**The reality of business digitalization in the Palestinian service sector**”. The questionnaire consists of three sections:

- **First section:** consist of characteristics related to the respondents themselves (Gender, Academic Qualification, work experience, number of employees, working department)

- **Second section:** consists of series of items that contain 4 dimensions as follow:

- 1- **Digital financial systems** (6 items).
- 2- **HRM digitalized systems** (7 items).
- 3- **digital supply chain management** (6 items).
- 4- **digital marketing management** (5 items).

- **Third Section:** measures the Infrastructure Requirements.

The total number of questions for the second section is 24. To the researcher used a Likert scale to get responses as follows:

Table (3.3): 5-Points Likert Scale (Reverse Coding)

Category	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Code	5	4	3	2	1

Table (3.4): Likert Scale (Correction Key)

Mean Value	Degree
More than 3.66	High
2.34 – 3.66	Medium
Less than 2.33	Low

For the **third section**, the measurement of Infrastructure Requirements carried out as respondents selected a score from a 3rd scale as follows:

Ranking

1	2	3
yes	No	N/A

3.7 Test of Validity and Consistency:

Validity of the Tool:

The researcher developed a study in its preliminary form; the questionnaire has been validated by specialists such as university lecturers. They were asked for their ideas and suggestions concerning the following: the precision of the questions, and the simplicity of the way of introducing the question. Notes and corrections were made consequently.

Pearson correlation was used as a validity tool that shows high significantly values that indicate consistency of the questionnaire as the following:

Table (3.5) Pearson Correlation of Questionnaire Segments

No.	R Value	P-Value	No.	R Value	P-Value
1	.879**	0.000*	13	.817	0.000*
2	.880**	0.000*	14	.826	0.000*
3	.857**	0.000*	15	.849	0.000*
4	.845	0.000*	16	.820	0.000*
5	.842	0.000*	17	.865	0.000*
6	.881	0.000*	18	.860	0.000*
7	.789	0.000*	19	.841	0.000*
8	.811	0.000*	20	.822	0.000*
9	.841	0.000*	21	.853	0.000*
10	.804	0.000*	22	.819	0.000*
11	.846	0.000*	23	.771	0.000*
12	.865	0.000*	24	.788**	0.000*

*Correlation is significant at the 0.05 level (2-tailed).

All R values are positive which indicate a positive relationship and correlation between the sections of the questionnaire; the P-values are also highly significant, which indicate the uniformity and validity of the tool.

Tool reliability:

The researcher verified the reliability of the tool through calculating the total value of the consistency using Cronbach Alpha, the result showed that the tool has a consistency that meets the purpose of this study, Cronbach Alpha had a score of (0.981) which indicate that the tool is consistent.

Table (3.6): Cronbach Alpha for dimensions and overall score

Dimension	N of items	Consistency Score
Digital financial tools	6	0.952
HRM digitalized systems	7	0.943
digital supply chain management	6	0.944
digital marketing existence	5	0.916
Overall Score	24	0.981

3.8 Research Procedures.

After the researcher validated the research tool through validity and consistency tests, the questionnaire was submitted electronically, a convenient sample of 81 responded to the questionnaire the researcher used SPSS for the analysis.

3.9 Statistical Processing Tool used for Questionnaire Analysis:

Table (3.7): Statistical Tools

Statistical Tools	Notes
Numbers and percentages	Description of the variables of the personal study by clarifying the number and percentage of responses to the questionnaire paragraphs.
Means	To determine the degree of agreement or disagreement for each question
Standard Deviations SD	To measure of the amount of variation or dispersion of questionnaire answer to mean value.
CV	To determine Coefficient of Variation
T-test	To determine if there is a significant difference
P-Value	To determine statistical significance
Pearson Correlation	To Test of Validity and Consistency
Cronbach Alpha	To ensure the consistency of the research tool

SPSS v.20 (Statistical Package for Social Sciences).

Chapter IV

Statistical Analysis and Discussion

The sample data collected by the researcher using the questionnaire (appendix) will be analyzed using SPSS 18.0, through the following statistical tests:

- Descriptive Statistics: Frequencies and Percentages will be used for analysis of the personal information of the participants (demographic variables) and for that to infrastructure requirements.
- Mean and Standard Deviation will be used for assessing the levels of agreement and disagreement to the variables of different dimensions of the study.
- One sample T- Test will be used to find out if there are statistical differences between the samples means of variables of different dimensions and the test value.

(81) e-questionnaires were distributed upon employees in the Palestinian service sector.

Cronbach's alpha test for the study variables in the questionnaire had a **total value of (98.1%)**, with its value for each of the main dimensions being as illustrated in Table (1).

Table (4.1): Cronbach’s alpha test values for each dimension of the study

	Dimension	Number of Items	Cronbach’s Alpha Value (%)
1st	Digital Financial systems	6	95.2
2nd	HRM Digitalized Systems	7	94.3
3rd	Digital Supply Chain Management	6	94.4
4th	Digital Marketing Management	5	91.6

Since the total Cronbach’s alpha test value and all sub-values shown in table (1) are higher than 70%; then all of the elements were considered reliable, and the researcher continued to the next step that is Statistical Analysis of the gathered data.

Part I: Sample Description (Personal Information):

Personal information of the participants included the following five factors:

a. Gender

As illustrated in **table (2) & chart (1)**, 48 of the participants were males with the percentage of (59.3%), and 33 of the participants were females with the percentage of (40.7%).

Table (4.2): Sample description - Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	48	59.3	59.3	59.3
Valid Female	33	40.7	40.7	100.0
Total	81	100.0	100.0	

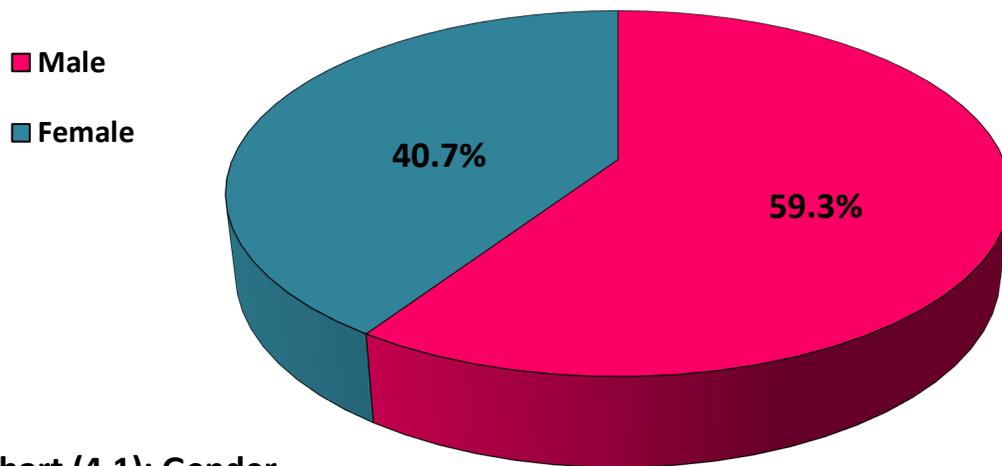


Chart (4.1): Gender

b. Academic Qualifications:

Table (3) & chart (2) describe the sample academic qualifications; in which the sample was divided into three categories; 11 participants having less than Bachelor's degrees with a percentage of (13.6%), 48 participants having Bachelor's degrees with a percentage of (59.3%), and 22 participants having higher studies degrees with a percentage of (27.2%).

Table (4.3): Sample description - Academic Qualifications

Academic Qualifications	Frequency	Percent	Valid Percent	Cumulative Percent
Less than BA	11	13.6	13.6	13.6
Bachelor	48	59.3	59.3	72.8
Higher Studies	22	27.2	27.2	100.0
Valid Total	81	100.0	100.0	

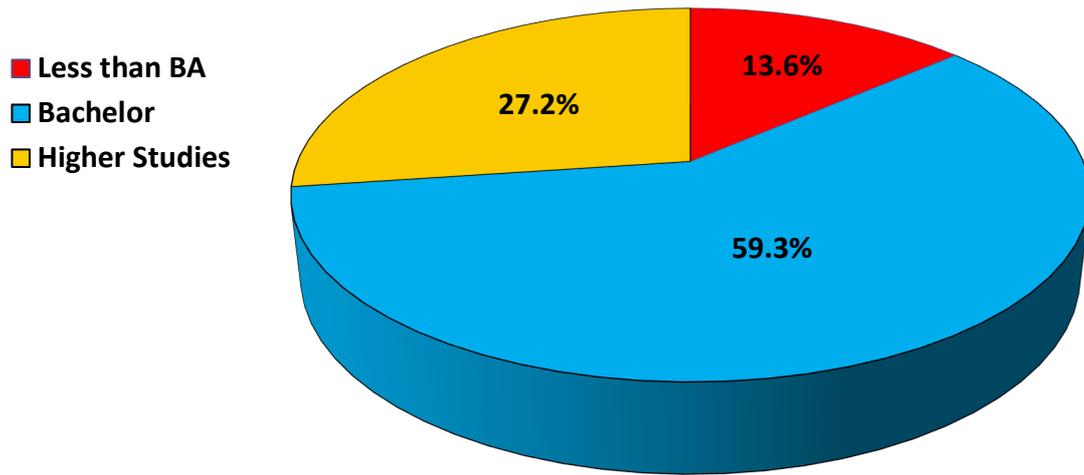


Chart (4.2): Academic Qualifications

c. Years of experience with the Current Company:

Years of work experience of the participants at their current companies and as described in table (4) & chart (3) included the following: less than 5 years (32 participants with a percentage of 39.5%), 5 to 10 years (23 participants with a percentage of 28.4%), 10 years to 15 years (11 participants with a percentage of 13.6%), and 15 years or more (15 participants with a percentage of 18.5%).

Table (4.4): Years of working experience with the current company

Experience	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 5 years	32	39.5	39.5	39.5
Between 5 to 10 years	23	28.4	28.4	67.9
Valid Between 10 to 15 years	11	13.6	13.6	81.5
For 15 years and more	15	18.5	18.5	100.0
Total	81	100.0	100.0	

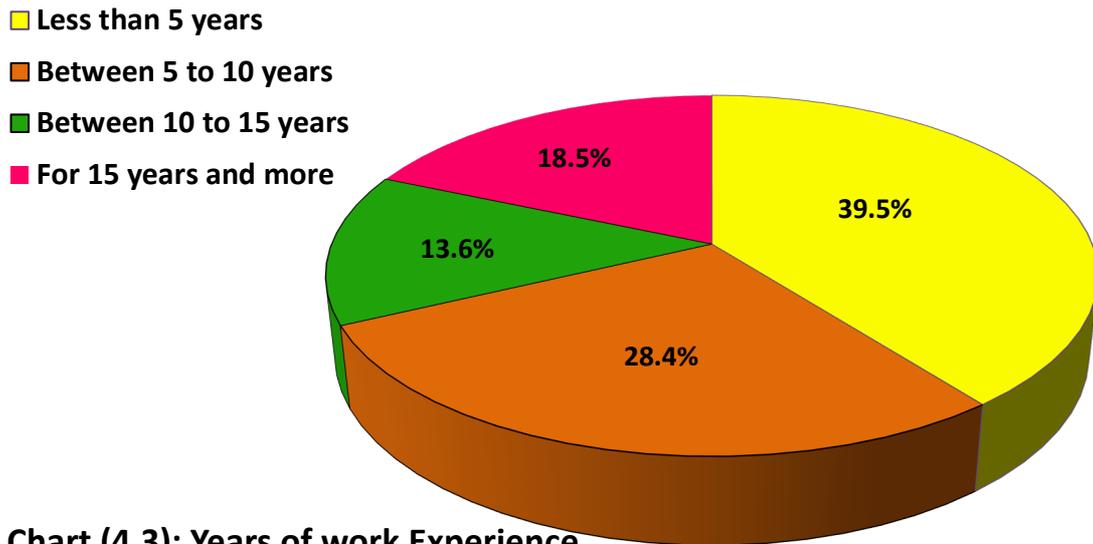


Chart (4.3): Years of work Experience

d. Number of Employees:

The number of employees of each company and as detailed in **table (5) & chart (4)** varied between; 20 participants working at companies of less than 10 employees (24.7%), 21 participants working at companies of 11 to less than 50 employees (25.9%), 18 participants working at companies of 50 to less than 250 employees (22.2%), and 22 participants working at companies of 250 employees or more (27.2%).

Table (4.5): Number of Employees

Number of employees	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 10	20	24.7	24.7	24.7
Between 11 to less than 50	21	25.9	25.9	50.6
Valid Between 50 to less than 250	18	22.2	22.2	72.8
They are 250 or more	22	27.2	27.2	100.0
Total	81	100.0	100.0	

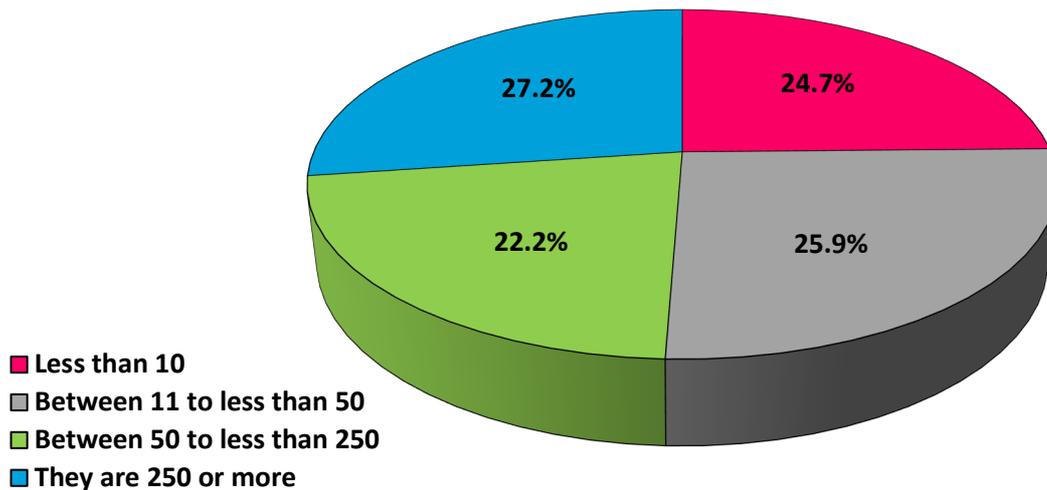


Chart (4.4): Number of Employees

e. Departments:

As **table (6) & chart (5)** demonstrate according to departments at which the participants work, there were 9 participants working in Marketing department (a percentage of 11.1%), 24 participants working in Logistics department (a percentage of 29.6%), 11 participants working in Finance department (a percentage of 13.6%), 11 participants working in IT department (a percentage of 13.6%), 5 participants working in HR department (a percentage of 6.2%), and 21 participants working in Planning department (a percentage of 25.9%).

Table (4.6): Departments at which the participants worked

Department	Frequency	Percent	Valid Percent	Cumulative Percent
Marketing	9	11.1	11.1	11.1
Logistics	24	29.6	29.6	40.7
Finance	11	13.6	13.6	54.3
IT	11	13.6	13.6	67.9
HR	5	6.2	6.2	74.1
Planning	21	25.9	25.9	100.0
Total	81	100.0	100.0	

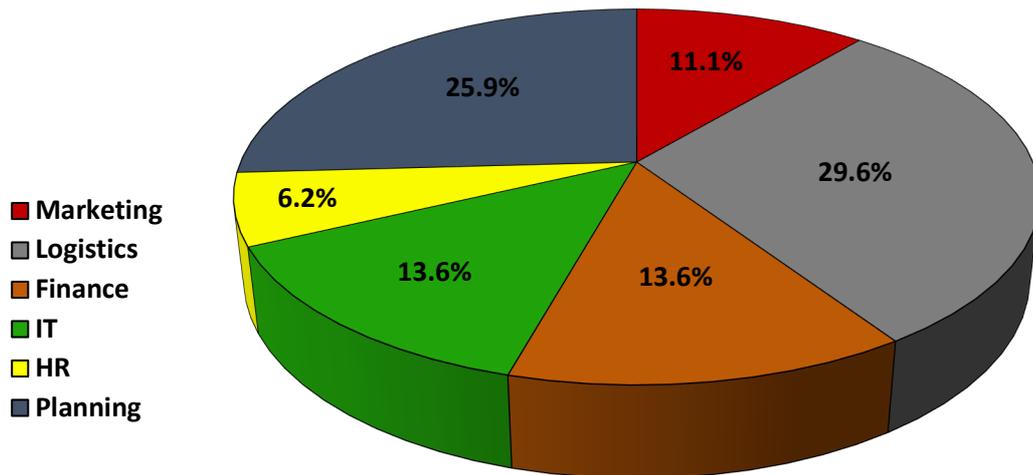


Chart (4.5): Departments where the participants work

Part II: Dimensions of the Study:

This part includes a discussion of the Descriptive Statistics and One-Sample T-test of the four dimensions of the study; arranged in a manner that follows the questionnaire of the study.

1st Dimension: Digital Financial systems

Table (7) detailing the participants' answers regarding "variables related to digital financial systems "; show that the answers for **all the statements** lent toward (agreement) with **low to moderate percentages varying from 45.7% to 61.7%** and had **moderate degrees of variation** according to CV values.

As for the one sample T-test results illustrated in table (7); the sig. (2-tailed) P-values were less than ($\alpha \leq 0.05$) for **all of the statements except for the two statements highlighted with red in the table**, this indicates **rejecting the null hypothesis** "that there are no statistical difference between the sample means of **digital financial**

systems variables and the test value (3)", and **accepting the alternative hypothesis** that there are significant statistical differences in these statements. However, as for the sig. (2-tailed) P-value for the red highlighted statements: **"the Enterprise/company has Cash Flow Management Software" & "the enterprise/company has Tax Preparation Software"**; its value is higher than ($\alpha \leq 0.05$) indicating the **acceptance of the null hypothesis** in the two statements.

2nd Dimension: HRM digitalized systems

From **Table (8)** showing the participants' answers regarding **"variables related to HRM digitalized systems"**; it is found that the answers for **most of the statements (highlighted with blue)** lent toward **(disagreement)** with **low percentages varying from 41.9% to 48.1%**. It's also found that; **all of the statements in the table had moderate degrees of variation.**

The answers for the **statement not highlighted** in table (8); **"The enterprise/company has automatic time tracking software to monitor staff working hours"** had a moderate **percentage of agreement (55.6%)**. As for the **statement highlighted with orange**; **"The employees have the motivation to learn how to use the new digital systems"**, the answers for **both agreement and disagreement had the equal percentages of (42.0%)**.

The one sample T-test results in the same table (8); show that the sig. (2-tailed) P-values were higher than ($\alpha \leq 0.05$) for **all of the statements**; this indicates **the acceptance of the null hypothesis** "that there are no statistical difference between the sample means of **HRM digitalized systems variables** and the test value (3)"

Table (4.7): Descriptive Statistics and One-Sample T-test for "Digital Financial Tools" (1st Dimension) variables

#	Statement	Strongly Disagree		Disagree		Don't Know		Agree		Strongly Agree		Agreement Percentages	Mean	SD	CV	T*	Sig.**
		F	%	F	%	F	%	F	%	F	%						
(1)	The Enterprise/company has accounting software programs	1	1.2	27	33.3	6	7.4	16	19.8	31	38.3	58.1	3.60	1.329	36.9	4.10	0.000
(2)	The Enterprise/company has budgeting software programs	16	19.8	10	12.3	8	9.9	19	23.5	28	34.6	58.1	3.41	1.547	45.4	2.37	0.020
(3)	The Enterprise/company has invoicing software program	7	8.6	20	24.7	4	4.9	24	29.6	26	32.1	61.7	3.52	1.388	39.4	3.36	0.001
(4)	The Enterprise/company has payroll management software	9	11.1	20	24.7	6	7.4	21	25.9	25	30.9	56.8	3.41	1.430	41.9	2.56	0.012
(5)	The Enterprise/company has Cash Flow Management Software	12	14.8	21	25.9	6	7.4	19	23.5	23	28.4	51.9	3.25	1.479	45.5	1.50	0.137
(6)	The enterprise/company has Tax Preparation Software	13	16.0	20	24.7	11	13.6	22	27.2	15	18.5	45.7	3.07	1.385	45.1	0.48	0.632

*T: One-Sample T-Test

**Sig.: Sig. (2-tailed)

Table (4.8): Descriptive Statistics and One-Sample T-test for "HRM digitalized systems" (2nd Dimension) variable

#	Statement	Strongly Disagree		Disagree		Don't Know		Agree		Strongly Agree		Agreement Percentages	Mean	SD	CV	T	Sig.
		F	%	F	%	F	%	F	%	F	%						
(1)	The enterprise/company uses E. recruitment when hiring new employees	10	12.3	24	29.6	16	19.8	21	25.9	10	12.3	38.2	2.96	1.249	42.2	-0.27	0.790
(2)	The enterprise/company has employees' on boarding software	9	11.1	30	37.0	9	11.1	21	25.9	12	14.8	40.7	2.96	1.299	43.9	-0.26	0.798
(3)	The enterprise/company has a software to monitor and measure the workforce performance	12	14.8	26	32.1	10	12.3	20	24.7	13	16.0	40.7	2.95	1.350	45.8	-0.33	0.743
(4)	The enterprise/company has automatic time tracking software to monitor staff working hours	12	14.8	20	24.7	4	4.9	20	24.7	25	30.9	55.6	3.32	1.499	45.2	1.93	0.057
(5)	The enterprise provided training programs to employees in how to deal with the new systems	7	8.6	30	37.0	11	13.6	21	25.9	12	14.8	40.7	3.01	1.260	41.9	0.09	0.930
(6)	The employees have the motivation to learn how to use the new digital systems	13	16.0	21	25.9	13	16.0	26	32.1	8	9.9	42.0	2.94	1.278	43.5	-0.44	0.665
(7)	The employees have the knowledge /experience to deal with the new digital systems	9	11.1	28	34.6	15	18.5	21	25.9	8	9.9	35.8	2.89	1.204	41.7	-0.83	0.409

3rd Dimension: Digital Supply Chain Management

Regarding "variables related to digital supply chain management" and as shown in **Table (9)**; it is found that the answers for **all the statements except the statement highlighted with blue** lent toward **(agreement)** with **low percentages varying from 44.4% to 46.9%**, and that **all the statements in the table had moderate degrees of variation**.

As for **the statement highlighted with blue** in the table; "**the company has a demand forecasting software**", it had a higher degree of **(disagreement)** with the **moderate percentage of (43.2%)**

The one sample T-test results detailed in table (9); show that the sig. (2-tailed) P-values were higher than ($\alpha \leq 0.05$) for **all of the statements (highlighted with red)**, indicating **the acceptance of the null hypothesis** "that there are no statistical difference between the sample means of **digital supply chain management variables** and the test value (3)", in all of the statements.

Table (4.9): Descriptive Statistics and One-Sample T-test for "Digital Supply Chain Management" (3rd Dimension)

#	Statement	Strongly Disagree		Disagree		Don't Know		Agree		Strongly Agree		Agreement Percentages	Mean	SD	CV	T	Sig.
		F	%	F	%	F	%	F	%	F	%						
(1)	The company has a demand forecasting software	7	8.6	28	34.6	14	17.3	21	25.9	11	13.6	39.5	3.01	1.230	40.9	0.09	0.928
(2)	The company has an import/export management software	15	18.5	17	21.0	12	14.8	25	30.9	12	14.8	45.7	3.02	1.369	45.3	0.16	0.871
(3)	The company has an inventory management software	9	11.1	21	25.9	15	18.5	21	25.9	15	18.5	44.4	3.15	1.305	41.4	1.02	0.310
(4)	The company has a delivery (shipping) management software	12	14.8	23	28.4	10	12.3	21	25.9	15	18.5	44.4	3.05	1.378	45.2	0.32	0.748
(5)	The company has a software digital supply chain	11	13.6	23	28.4	11	13.6	23	28.4	13	16.0	44.4	3.05	1.331	43.6	0.33	0.739
(6)	The company has any warehouse inventory management systems	8	9.9	22	27.2	13	16.0	23	28.4	15	18.5	46.9	3.19	1.295	40.6	1.29	0.202

4th Dimension: Digital Marketing Existence

The participants' answers regarding "variables related to digital marketing existence" are detailed in **Table (10)** and it's found that; **all of the statements in the table had moderate degrees of variation**. However, the answers for **all of these statements except the not highlighted one**; lent toward **(disagreement)** with **low percentages varying between 42.0% & 46.9%**.

In addition, and according to One Sample t-test results; the sig. (2-tailed) P-values were higher than ($\alpha \leq 0.05$) for these statements (**as highlighted with red**), which indicates **the acceptance of the null hypothesis** "that there are no statistical difference between the sample means of **digital marketing existence variables** and the test value (3)" in these statements.

As for the **not highlighted statement** in table (10); "**The enterprise/company relies on social media for marketing the products or services**", its answers lent toward **(agreement)** with the **moderate percentage of (54.3%)**, and the sig. (2-tailed) P-value for this statement was less than ($\alpha \leq 0.05$) which indicates **rejecting the null hypothesis and accepting the alternative hypothesis** that there are significant statistical differences.

Table (4.10): Descriptive Statistics and One-Sample T-test for "Digital Marketing Existence" (4th Dimension)

#	Statement	Strongly Disagree		Disagree		Don't Know		Agree		Strongly Agree		Agreement Percentages	Mean	SD	CV	T	Sig.
		F	%	F	%	F	%	F	%	F	%						
(1)	The enterprise/company relies on social media for marketing the products or services	5	6.2	26	32.1	6	7.4	27	33.3	17	21.0	54.3	3.31	1.291	39.0	2.15	0.034
(2)	The enterprise/company uses content marketing	16	19.8	18	22.2	17	21.0	19	23.5	11	13.6	37.1	2.89	1.342	46.4	-0.75	0.458
(3)	The enterprise/company uses search engine optimization (SEO) as a marketing tool	14	17.3	22	27.2	12	14.8	19	23.5	14	17.3	40.8	2.96	1.382	46.7	-0.24	0.810
(4)	The enterprise/company uses affiliate marketing to reduce marketing and promotion costs	16	19.8	21	25.9	17	21.0	18	22.2	9	11.1	33.3	2.79	1.301	46.6	-1.45	0.150
(5)	The enterprise/company uses email marketing tool to build strong relationships with customers	13	16.0	25	30.9	17	21.0	20	24.7	6	7.4	32.1	2.77	1.207	43.6	-1.75	0.084

Part III: Infrastructure Requirements:

Table (11) detailing the participants' answers regarding "**the existence of hardware requirements**" at the enterprises in which they work; shows that the answers for all requirements except the two highlighted lent toward (yes) with **high percentages varying from 82.7% to 88.9%**, and had **low degrees of variation** according to CV values.

However, it's found that for **the requirements highlighted with green in table (11)**; answers about "**Scanner**" lent toward (yes) with **the moderate percentage of (64.2%)** and those about "**Barcode reader**" lent toward (yes) with **the low percentage of (46.9%)**. It's also important to notice that **both of those highlighted requirements had moderate levels of variation** (Moderate CV values).

Table (4.11): Enterprises Hardware Requirements

Hardware Requirements	Yes		No		N/A		M	SD	CV
	F	P (%)	F	P (%)	F	P (%)			
Server	69	85.2	10	12.3	2	2.5	1.17	0.441	37.7
Firewall	67	82.7	13	16.0	1	1.2	1.19	0.422	35.5
PC / Smartphone / Tablet	72	88.9	9	11.1	-	-	1.11	0.316	28.5
Printer	72	88.9	9	11.1	-	-	1.11	0.316	28.5
Scanner	52	64.2	10	12.3	19	23.5	1.59	0.848	<u>53.3</u>
Barcode Reader	38	46.9	19	23.5	24	29.6	1.83	0.863	<u>47.2</u>

N/A: Not Available or Not Applicable F: Frequency P: Percentage M: Mean
SD: Standard Variation CV: Coefficient of Variation

Regarding the participants' answers about **"the existence of software requirements"** at the enterprises in which they work detailed in **Table (12)**; all answers had moderate degrees of variation according to CV values. And the answers for all requirements except the highlighted one lent toward (yes) with moderate to high percentages varying from 76.5% to 85.2%. As for **"Electronic Welt / Payments"** requirement highlighted with green in the table; it had answers that lent toward (yes) with the low percentage of (49.4%).

Table (4.12): Enterprises Software Requirements

Software Requirements	Yes		No		N/A		M	SD	CV
	F	P (%)	F	P (%)	F	P (%)			
Operation System	69	85.2	8	9.9	4	4.9	1.20	0.510	42.5
WEB Platform	65	80.2	13	16.0	3	3.7	1.23	0.507	41.2
Database	62	76.5	11	13.6	8	9.9	1.33	0.652	49.0
Electronic Welt / Payments	40	49.4	11	13.6	30	37.0	1.88	0.927	49.3

Regarding **"the existence of customer / supplier requirements"** at the enterprises in which they work and as shown in **Table (13)**; all of the participants' answers could be considered to have moderate degrees of variation according to CV values. And the answers for all requirements except the two highlighted lent toward (yes) with high percentages varying from 82.7% to 86.4%.

As for the two requirements highlighted with green in table (13); "Barcode Reader" & "Electronic Welt / Payments", the answers for both lent toward (yes) with the low percentage of (49.4%).

Table (4.13): Customers / Suppliers Requirements

Customers / Suppliers Requirements	Yes		No		N/A		M	SD	CV
	F	P (%)	F	P (%)	F	P (%)			
PC / Smartphone / Tablet	69	85.2	9	11.1	3	3.7	1.19	0.477	40.1
Internet	67	82.7	10	12.3	4	4.9	1.22	0.524	43.0
Printer	70	86.4	9	11.1	2	2.5	1.16	0.432	37.2
Telephone	70	86.4	7	8.6	4	4.9	1.19	0.503	42.3
Barcode Reader	40	49.4	14	17.3	27	33.3	1.84	0.901	49.0
Electronic Welt / Payments	40	49.4	8	9.9	33	40.7	1.91	0.951	49.8

Chapter V

5.1 Results

5.2 Conclusions

5.3 Recommendations

5.1 Results

Depending on the previous discussion of the data statistical analysis; the degree to which the study's objectives were achieved will be assessed through answering the study's questions. Since the first sub-question "What are the needed infrastructure requirements, supporting services and applications in the transformation process?" was answered through the literature review and theoretical framework, the discussion will start from the second sub-question, as follows.

Question (2): "What is the availability of digitalized financial systems in the finance department of the service business?"

The previous discussion of the statistical findings related to digitalized financial systems in table (7); showed that the participants **agreed** with the **Moderate mean percentage of {55.4%}** and a total mean (mean of means) of {3.4} that these systems exist at the enterprises and companies in which they work.

However, **the digitalized systems with a statistically significant existence** at these enterprises were the following ones (arranged in a descending order from the most highly agreed upon to the least):

1. Invoicing software program
2. Accounting and budgeting software programs.
3. Payroll management software.

Question (3): "To what extent does the service business use HRM digitalized systems regarding employees?"

According to the previous statistical analysis of variables related to HRM digitalized systems in table (8); **the participants agreed** with the **low mean percentage of {42.0%}** and a total mean of {3.0} that these systems exist at the enterprises and companies in which they work. In addition, **none of HRM digitalized systems had a statistically significant existence** at these enterprises.

Question (4): “To what extent does the enterprise apply digitalization in the supply chain management?”

Depending on table (9) and the previous discussion of the statistical findings related to variables of digital supply chain management; **the participants agreed with the low mean percentage of {44.2%} and a total mean of {3.1}** that the enterprises and companies in which they work apply digitalization in supply chain management. However, **none of the systems needed for a digitalized supply chain management had a statistically significant existence** at these enterprises.

Question (5): “What is the reality of using digital marketing in the business marketing department?”

According to the previous statistical analysis of the part concerned with variables related to digital marketing existence in table (10); **the participants agreed with the low mean percentage of {39.5%} and a total mean of {2.9}** that these systems exist at the enterprises and companies in which they work. However, **"Relying on social media for marketing the products or services" was the only marketing tool that had statistically significant existence** at these enterprises.

Question (6): “What is the readiness level in the Palestinian Service Business Sector for transformation?”

From tables (11-13) and the related discussion regarding the existence of infrastructure requirements at the enterprises in which the participants work; their answers showed the availability of each type of requirements as illustrated in table (14). In addition, requirements that had low availability; to which more attention to provide should be given by these enterprises and companies are specified at the same table.

Table (4.14): Availability levels of Infrastructure Requirements

Infrastructure Requirements	Availability Percentage	Level of Availability	Requirements with low availability
Hardware Requirements	76.1%	Moderate	Scanner & Barcode Reader
Software Requirements	72.8%	Moderate	Electronic Welt / Payments
Customer/Supplier Requirements	73.3%	Moderate	Barcode Reader, Electronic Welt / Payments
Total Level of Availability:	74.1%	Moderate	

According to table (14) and depending on the total level of availability of infrastructure requirements at which the participants worked shown in it; **infrastructure requirements are moderately available at the enterprises and companies of the Palestinian Service Business Sector with a percentage of (74.1%).**

5.2 Conclusion

Depending on the previous discussion of sub-questions; the answer for the main research question: "What is the reality of the service business digitalization in the Palestinian service sector?" could be summarized as following:

- Digitalized financial systems **fairly exist** at the enterprises and companies of the Palestinian service sector with a percentage of {55.4%}.
- HRM digitalized systems **poorly exist** at the enterprises and companies of the Palestinian service sector with a percentage of {42.0%}.
- Digitalization of supply chain management is **poorly applied** at the enterprises and companies of the Palestinian service sector with a percentage of {44.2%}.
- Digital marketing tools **poorly exist** at the enterprises and companies of the Palestinian service sector with a percentage of {39.5%}.
- Infrastructure requirements needed for digital transformation are **moderately available** at the enterprises and companies of the Palestinian Service Business Sector with a percentage of {74.1%}.

According to this, The Palestinian Service Business Sector could direct more attention to provide infrastructure requirements needed for digital transformation, nonetheless, these requirements are already moderately available at these enterprises and digital transformation could be carried out in reference to requirements. However, digitalization in reality poorly exists at these enterprises with a total percentage of (45.3%). And so, it could be deduced that even though the Palestinian service business sector is ready with the infrastructure requirements needed for digital transformation, **there is no substantial orientation towards digitalization in actual practice.**

5.3 Recommendations

The application of digitalization in all branches of service sector including social, personal, production and distribution needs availability of infrastructure requirements based digital technologies. Policies therefore need to be taken to reform the service business departments to ensure their output is consistent with the customer desires and wants. As a result, information technology is the base to restructure internal activities of the service business. Based on the conclusion, the following are the most important recommendations for the enterprises and companies of the Palestinian service business sector:

1. Investing more in infrastructure requirements needed for digital transformation especially; Scanners, Barcode Readers, Electronic Welt / Payments.
2. Providing the different departments with software program packages that carry out the different digital financial, HRM, supply chain, and marketing processes.
3. Building human resource awareness about the importance of digital transformation and emphasizing its role in risk management and facing challenges as COVID-19 pandemic.
4. Holding workshops and training courses to improve human resource knowledge and skills to cope with digital programs and modern technologies.
5. Focus more on developing websites and social media profiles to reach more customers.
6. Keeping up with modern technologies and digital programs all around the world.
7. Carrying out more in-depth research in digitalization in the future.
8. To invest more in technologies to follow up programs for employee's discipline.

References:

1. Lerch, C., Gotsch, M.: Digitalized product-service systems in manufacturing firms: a case study analysis. *Res. Technol. Manag.* 58(5), 45–52 (2015)
2. (PCBS, 2018) www.pcbs.gov.ps.
3. Abdul Azeez, S. (2017), Human Resource Management Practices and Employee Retention: A
4. Agrawal, P., & Narain, R. (2018, December). Digital supply chain management: An Overview. In *IOP Conference Series: Materials Science and Engineering* (Vol. 455, No. 1, p. 012074). IOP Publishing.
5. Akpan, I.J., Soopramanien, D. and Kwak, D.H., 2020. Cutting-edge technologies for small business and innovation in the era of COVID-19 global health pandemic. *Journal of Small Business & Entrepreneurship*, pp.1-11. <https://doi.org/10.1080/08276331.2020.1799294>
5. Akpan, I.J., Udoh, E.A.P. and Adebisi, B., 2020. Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic. *Journal of Small Business & Entrepreneurship*, pp.1-18. <https://doi.org/10.1080/08276331.2020.1799294>
7. Albukhitan, Saeed. 'Developing Digital Transformation Strategy for Manufacturing'. *Procedia Computer Science* 170 (2020): 664–71. <https://doi.org/10.1016/j.procs.2020.03.173>.
3. Androniceanu, A., Georgescu, I., & Kinnunen, J. (2019, April). Digitalization clusters within the European Union. In *Proceedings of the 33rd International Business Information Management Conference (IBIMA)* (pp. 1321-1331).
9. Anupam Banerjee, Modern Trends and Practices of E-Marketing: An Overview, *OSR Journal of Business and Management (IOSR-JBM)*, Special Issue - AETM'16, p. 16.
10. Armstrong, M. (2006). *A handbook of human resource management practice*. Kogan Page Publishers.
11. Asmundson, Irena (2012). "Financial Services: Getting the Goods". *Finance and Development*. IMF. Retrieved 8 September 2015.
12. Aston Business School, E-Marketing, Academic Year, 2011/12, pp. 24-25.
13. Base, M.K., (2021). Literature Review–Social Media Marketing Strategies.
14. Berber, N., Đorđević, B., & Milanović, S. (2018). Electronic Human Resource Management (e-HRM): A New Concept for Digital Age. *Strategic Management-International Journal of Strategic Management and Decision Support Systems in Strategic Management*, 23(2).
15. Bilan, Y., Rubanov, P., Vasylieva, T. A., & Lyeonov, S. (2019). The influence of industry 4.0 on financial services: Determinants of alternative finance development. *Polish Journal of Management Studies*.

16. Boskovic, A., Primorac, D., & Kozina, G. (2019). Digital organizations and digital transformation. *Economic and Social Development: Book of Proceedings*, 263-269.
17. Botos, S., Szilágyi, R., Tóth, M., Ráthonyi, G., & Felföldi, J. (2020). Digitalized business processes—assessment and opportunities of Hungarian agri-food companies. *Journal of Agricultural Informatics (ISSN 2061-862X)*, 11(1), 34-44.
18. Bouwman, H., Nikou, S., Molina-Castillo, F. J., & de Reuver, M. (2018). The impact of digitalization on business models. *Digital Policy, Regulation and Governance*.
19. Boxall, P. & Purcell, J. & Wright, P. (2010), *The Oxford Handbook Of Human Resource Management*, Oxford Press.
20. Brennen, J., Kreiss, D.: Digitalization. In: Bruhn Jensen, K., Craig, R.T., Pooley, J., Rothenbuhler, E.W. (eds.) *The international Encyclopedia of Communication Theory and Philosophy*, pp. 1–11. Wiley, Chichester (2016).
21. Bygren, K. (2016). The digitalization impact on accounting firms business models.
22. Chowdhury, S. (2015). *Service logic in digitalized product platforms: a study of digital service innovation in the vehicle industry* (Doctoral dissertation, University of Gothenburg).
23. Clancy, Kevin J.; Peter C. Kriegafsd (2000). *Counter intuitive Marketing*. The Free Press. ISBN 0-684-85555-0
24. Clerck, J.: Digitalization, Digital Transformation: The Differences. i-SCOOP (2017).
25. Collings, D. & Wood, G. & Szamosi, L. (2019), *Human Resource Management a Critical Approach*, Routledge.
26. Cooper, R.G. and De Brentani, U., 1991. New industrial financial services: what distinguishes the winners. *Journal of Product Innovation Management*, 8(2), pp.75-90.
27. Council of Supply Chain Management Professionals(CSCMP), (2020), *Supply Chain Management Definitions and Glossary*, CSCMP.ORG
28. Dessler, G. (2011). *Human resource management twelfth edition*.
29. Eling, M., Lehmann, M.: The impact of digitalization on the insurance value chain and the insurability of risks. *Geneva Pap. R. I-ISS 43(3)*, 359–396 (2018).
30. Eton, M., Mwosi, F., Okello-Obura, C., Turyehebwa, A., & Uwonda, G. (2021). Financial inclusion and the growth of small medium enterprises in Uganda: empirical evidence from selected districts in Lango sub-region. *Journal of Innovation and Entrepreneurship*, 10(1), 123.
31. FALAH, B. (2013). *Structure of the Palestinian Services Sector and its Economic Impact*.
32. Gaspar, V., Collin, P., Devereux, M., Jim, H., Varrak, T., Walsh, M., Westberg, B.: *Commission expert group on taxation of the digital economy*. European Commission (2014).
33. Grönroos, C. (1989). Defining marketing: a market-oriented approach. *European journal of marketing*, 23(1), 52-60.

34. Hagberg, J., Sundstrom, M., & Egels-Zandén, N. (2016). The digitalization of retailing: an exploratory framework. *International Journal of Retail & Distribution Management*
35. Henriette, E., Feki, M. and Boughzala, I., 2016, September. Digital Transformation Challenges. In MCIS (p. 33). <https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1033&context=mcis2016>
36. Henriksson, M., Witzell, J., & Isaksson, K. (2019). All change or business as usual? The discursive framing of digitalized smart accessibility in Sweden. *Transportation Research Procedia*, 41, 625-636.
37. Ingaldi, M., Brožová, S., Slíva, A., & Brázda, R. (2021). Assessment of the digitization of the service provision process in enterprises from the SME sector with use of the CIT method. *THE POPRAD ECONOMIC AND MANAGEMENT*, 391.
38. Ingram, D. (2019), About Supply Chain Management Systems, www.smallbusiness.chron.com.
39. Junge, Anna Lisa, and Frank Straube. 'Sustainable Supply Chains – Digital Transformation Technologies' Impact on the Social and Environmental Dimension'. *Procedia Manufacturing* 43 (2020): 736–42. <https://doi.org/10.1016/j.promfg.2020.02.110>.
40. Kalyanam, K. & McIntyre, S., The e-marketing mix: a contribution of the e-tailing wars, *Journal of the Academy of Marketing Science*, 2002, 30(4), pp. 487-499.
41. Kiang, M. Y. et al., Marketing on the Internet- who can benefit from an online marketing approach? *Decision Support Systems*, 27(4), 2000, pp. 383-393.
42. Kirchmer, M. (2019). Digitalization Journey-The BPM-Discipline as Guide to Value.
43. Laudien, S. M., & Pesch, R. (2019). Understanding the influence of digitalization on service firm business model design: a qualitative-empirical analysis. *Review of Managerial Science*, 13(3), 575-587.
44. Laudon, K. & Laudon, J. (2013), *Management Information Systems Managing the Digital Firm*, Pearson Education Limited.
45. Li, J., Saide, S., Ismail, M. N., & Indrajit, R. E. (2021). Exploring IT/IS proactive and knowledge transfer on enterprise digital business transformation (EDBT): a technology-knowledge perspective. *Journal of Enterprise Information Management*.
46. Lu, D. (2012), *Fundamentals of Supply Chain Management*, Ventus Publishing.
47. Machekhina, O.: Digital of education as a trend of its modernization and reforming. *Revista Espacios* 38(40), 26–31 (2017).
48. Mahfod, J. & Noof, Y. & Khalifa, Y. & Al Madi, F. (2017), *Electronic Human Resource Management (E-HRM)*, *International Journal of Economic Research*.

19. Mergel, Ines, Noella Edelmann, and Nathalie Haug. 'Defining Digital Transformation: Results from Expert Interviews'. *Government Information Quarterly* 36, no. 4 (October 2019): 101385.
<https://doi.org/10.1016/j.giq.2019.06.002>.
20. Minculete, G., & Olar, P. (2018, June). Approaches to the modern concept of digital marketing. In *International conference Knowledge-based organization* (Vol. 24, No. 2, pp. 63-69).
21. Morley, J., Widdicks, K., Hazas, M.: Digitalisation, energy and data demand: the impact of internet traffic on overall and peak electricity consumption. *Energy Res. Soc. Sci.* 38(1), 128–137 (2018).
22. Morrar, R. & Gallouj, F. (2016). The growth of the service sector in Palestine: the productivity challenge. *Journal of Innovation Economics & Management*, 19, 179-204. <https://doi.org/10.3917/jie.019.0179>
23. Neamțu, D. M., Hapenciuc, C. V., & Bejinaru, R. (2019). The impact of digitalization on business sector development in the knowledge economy. In *Proceedings of the international conference on business excellence* (Vol. 13, No. 1, pp. 479-491).
24. Oborin, M. S. (2019, April). Digitalization of business processes in the field of food services as a factor in improving the food security of the region. In *Proceedings of the 1st International Scientific Conference "Modern Management Trends and the Digital Economy: From Regional Development to Global Economic Growth" (MTDE 2019), Yekaterinburg, Russia* (pp. 14-15).
25. OED Online, "digitization, n," Oxford University Press, Sep. 2016.
26. Parida, V., Sjödin, D., & Reim, W. (2019). Reviewing literature on digitalization, business model innovation, and sustainable industry: Past achievements and future promises.
27. Parida, V., Sjödin, D., Lenka, S., Wincent, J.: Developing global service innovation capabilities: how global manufacturers address the challenges of market heterogeneity. *Res. Technol. Manag.* 58(5), 35–44 (2015).
28. Parviainen, P., Tihinen, M., Kääriäinen, J., & Teppola, S. (2017). Tackling the digitalization challenge: how to benefit from digitalization in practice. *International journal of information systems and project management*, 5(1), 63-77.
29. Peillon, S. and Dubruc, N., 2019. Barriers to digital servitization in French manufacturing SMEs. *Procedia CIRP*, 83, pp.146-150.
30. Perez, C.: From long waves to great surges. *Eur. J. Econ. Soc. Syst.* 27(1–2), 69–80 (2015).
31. Philip Kotler, Hermawan Kartajaya & Iwan Setiawan. *Marketing 4.0. Moving from Traditional to Digital*, Published by John Wiley & Sons, Inc., Hoboken, New Jersey, 2017, p. 32.
32. Porter, Michael (1998). *Competitive Advantage (revised ed.)*. The Free Press. ISBN 0-684-84146-0.
33. Porter, Michael (1998). *Competitive Strategy (revised ed.)*. The Free Press. ISBN 0-684-84148-7.

54. Priyono, A., Moin, A., & Putri, V. N. A. O. (2020). Identifying digital transformation paths in the business model of SMEs during the COVID-19 pandemic. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 104.
55. Puschmann, T., 2017. Fintech. *Business & Information Systems Engineering*, 59(1), pp.69-76.
56. Rachinger, M., Rauter, R., Müller, C., Vorraber, W., & Schirgi, E. (2019). Digitalization and its influence on business model innovation. *Journal of Manufacturing Technology Management*.
57. Rai, K., & Trivedi, M. P. Determinants of Digital Financial Services: A review of literature.
58. Reinartz, W., Wiegand, N. and Imschloss, M., 2019. The impact of digital transformation on the retailing value chain. *International Journal of Research in Marketing*, 36(3), pp.350-366.
<https://www.sciencedirect.com/science/article/pii/S0167811618300739>
59. Remane, G., Hildebrandt, B., Hanelt, A., & Kolbe, L. M. (2016, June). Discovering New Digital Business Model Types-a Study of Technology Startups from the Mobility Sector. In *PACIS* (p. 289).

Review of Literature, *Journal of Economics, Management and Trade*.
70. Ries, Al; [Jack Trout](#) (2000). *Positioning: The Battle for Your Mind (20th anniversary ed.)*. [McGraw-Hill](#). [ISBN 0-07-135916-8](#).
71. Rietsema, D. (2021), Human Resource Management (HRM) System, Hr Payroll System. *Harvard Business Review* (2021), Information Technology, [hbr.org](#).
72. Ringenson, T., Höjer, M., Kramers, A., Viggedal, A.: Digitalization and environmental aims in municipalities. *Sustainability* 10(4), 1278-1–1278-16 (2018).
73. S. Brenner and D. Kreiss, “Digitalization and Digitization,” 2014
74. Salikin, N., Nordin, S. N., Anwar, I. F., & Abdullah, M. (2021). Digitalized Business Pivoting in Response to COVID-19 Pandemic.
75. Sareno Solutions, Digital Marketing Agency, E-MARKETING STRATEGY: 7 DIMENSIONS TO CONSIDER (THE E-MARKETING MIX), <https://www.sarenosolutions.com/e-marketing-strategy-7-dimensions-to-consider-the-emarketing-mix/>
76. Schwertner, K. (2017). Digital transformation of business. *Trakia Journal of Sciences*, 15(1), 388-393.
77. Shpak, N., Kuzmin, O., Dvulit, Z., Onysenko, T. and Sroka, W., 2020. Digitalization of the marketing activities of enterprises: Case study. *Information*, 11(2), p.109.
78. Soto-Acosta, P. (2020). COVID-19 pandemic: Shifting digital transformation to a high-speed gear. *Information Systems Management*, 37(4), 260-266.

79. Soto-Acosta, P., 2020. COVID-19 Pandemic: Shifting Digital Transformation to a High-Speed Gear. *Information Systems Management*, pp.1-7. <https://doi.org/10.1080/10580530.2020.1814461>
80. Srari, J., Lorentz, H.: Developing design principles for the digitalisation of purchasing and supply management. *J. Purch. Supply Manag.* 25(1), 78–98 (2019).
81. Sun, Y., Yang, C., Shen, X. L., & Wang, N. (2020). When digitalized customers meet digitalized services: A digitalized social cognitive perspective of omnichannel service usage. *International Journal of Information Management*, 54, 102200.
82. Tolkachev, S.A., Bykov, A.A., Morkovkin, D.E., Borisov, O.I. and Gavrilin, A.V., 2020. Digitalization of manufacturing in Russia, Belarus and the European Union. In *IOP Conference Series: Earth and Environmental Science* (Vol. 421, No. 3, p. 032041). IOP Publishing.
83. Wagner, C. & Sweeney, E. (2010), *E-Business in Supply Chain Management*, Technological University Dublin.
84. Webster Jr, F. E. (2005). A perspective on the evolution of marketing management. *Journal of Public Policy & Marketing*, 24(1), 121-126.
85. Wikipedia. (2021), E-commerce, en.wikipedia.org/wiki/E-commerce.
86. Yoo, Y., Lyytinen, K., Thummadi, V., Weiss, A.: Unbounded innovation with digitalization: a case of digital camera. In: *Proceedings of the Annual Meeting of the Academy of Management, AOM 2010* (2010).
87. Zhou, W., Arner, D. W., & Buckley, R. P. (2015). Regulation of digital financial services in China: Last mover advantage.
88. Zhu, R., & Zhang, J. (2021). Rebounding through the pandemic: towards the digitized and digitalized small hospitality business in China. *International Journal of Contemporary Hospitality Management*.

Appendices:

Appendix (A): Questionnaire



برنامج الدراسات العليا

كلية الأعمال والاقتصاد

The researcher is conducting a study titled “**The reality of business digitalization in the Palestinian service sector.**” in partial fulfilment of the requirements of obtaining a master's degree in Business Administration from Al-Quds University - Palestine. Please take into account the objectivity and credibility in filling out the questionnaire, knowing that full confidentiality will be taken into account and the data obtained will be used for the purposes of scientific research only. Thank you so much in advance.

يجري الباحث دراسة بعنوان "واقع رقمنة الأعمال في القطاع الخدماتي الفلسطيني". استيفاءً جزئياً لمتطلبات الحصول على درجة الماجستير في إدارة الأعمال من جامعة القدس - فلسطين. يرجى مراعاة الموضوعية والمصداقية في ملء الاستبانة للوصول لنتائج دقيقة تحقق هدف الدراسة. مع العلم أن السرية التامة ستؤخذ بعين الاعتبار وأن البيانات التي سيتم الحصول عليها ستستخدم لأغراض البحث العلمي فقط.

مع الشكر والاحترام ...

الباحث: رجوان غنيمات

البريد الإلكتروني: rajwanghniemat@gmail.com

إشراف: د.سلوى البرغوثي

Researcher: Rajwan Ghniemat

E. mail: rajwanghniemat@gmail.com

Supervisor: Dr. Salwa Barghouthi

First: Personal Information:

1. Gender:

- Male Female

2. Academic qualification:

- less than BA
 Bachelor
 Higher Studies

3. I have been working with this enterprise/company since:

- Less than 5 years from 5 to 10 years from 10 to 15 years 15 years and more

4. Number of employees:

- Less than 10 from 11 to less than 50 from 50 to less than 250 250 and more

5. In which department do you work:

- a. Marketing
- b. Logistics
- c. Finance
- d. IT
- e. HR
- f. Planning
- g. Others

Second: Questionnaire Areas

No.	Q.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Digital financial systems						
1	The Enterprise/company has accounting software programs. لدى الشركة برامج محاسبة رقمية.					
2	The Enterprise/company has budgeting software programs. لدى الشركة برامج رقمية لإدارة الميزانية.					
3	The Enterprise/company has invoicing software program. لدى الشركة برامج رقمية لإدارة الفواتير الصادرة والواردة.					
4	The Enterprise/company has payroll management software. لدى الشركة برامج رقمية لإدارة رواتب الموظفين.					
5	The Enterprise/company has Cash Flow Management Software. لدى الشركة برامج رقمية لإدارة التدفق النقدي					
6	The enterprise/company has Tax Preparation Software. لدى الشركة برامج رقمية لإدارة الضرائب.					
HRM digitalized systems.						
7	The enterprise/company uses E. recruitment when hiring new employees. تستخدم الشركة برامج رقمية لاستقطاب موظفين جدد.					
8	The enterprise/company has employees' onboarding software. لدى الشركة برامج رقمية لتدريب الموظفين.					
9	The enterprise/company has a software to monitor and measure the workforce performance. لدى الشركة برامج رقمية لمراقبة وقياس أداء الموظفين.					
10	The enterprise/company has automatic time tracking software to monitor staff working hours. لدى الشركة برامج رقمية تتابع لأوقات عمل الموظفين.					
11	The enterprise /company provided training programs to employees in how to deal with the new systems. توفر الشركة برامج رقمية تدريبية لتدريب الموظفين على كيفية التعامل مع الأنظمة الجديدة.					
13	The employees have the knowledge /experience to deal with the new digital systems. لدى الموظفين المعرفة/ الخبرة للتعامل مع الأنظمة الرقمية الجديدة.					

	digital supply chain management	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
14	the enterprise /company has a demand forecasting software. لدى الشركة برامج رقمية لتتبع توقعات الطلب					
15	the enterprise /company has an import/export management software. لدى الشركة برامج رقمية لإدارة الصادرات والواردات.					
16	the enterprise /company has an inventory management software. لدى الشركة برامج رقمية لإدارة المخزون.					
17	the enterprise /company has a delivery (shipping) management software. لدى الشركة برامج رقمية لإدارة عملية شحن المنتجات او الخدمات.					
18	the enterprise /company has a software digital supply chain. لدى الشركة برامج رقمية لإدارة شبكة الموردين.					
19	the enterprise /company has any warehouse inventory management systems. لدى الشركة					
	digital marketing existence	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
20	The enterprise/company relies on social media for marketing the products or services. تعتمد الشركة على شبكات التواصل الاجتماعي لتسويق المنتجات او الخدمات.					

21	<p>The enterprise/company uses content marketing. تستخدم الشركة التسويق بالمحتوى.</p>					
22	<p>The enterprise/company uses search engine optimization (SEO) as a marketing tool. تستخدم الشركة أداة تحسين محركات البحث لتحسين وترشيد المحتوى ليظهر في نتائج البحث مثل جوجل.</p>					
23	<p>The enterprise/company uses affiliate marketing to reduce marketing and promotion costs. تستخدم الشركة التسويق بالعمولة لتقليل تكاليف التسويق والاعلانات.</p>					
24	<p>The enterprise/company uses email marketing tool to build strong relationships with customers. تستخدم الشركة التسويق عبر البريد الالكتروني لبناء علاقات قوية مع الزبائن.</p>					

Infrastructure Requirements:

Enterprises Hardware requirements:

	Yes	No	N/A
Server			
Firewall			
PC\Smartphone /Tablet			
Internet			
Printer			
Scanner			
Barcode reader			

Enterprises Software Requirements:

	Yes	No	N/A
Operation System			
WEB platform			
Database			
Electronic wallet/ payments			

Customers/ Suppliers Requirements:

	Yes	No	N/A
PC\Smartphone /Tablet			
Internet			
Printer			
Scanner			
Barcode Reader			
Electronic wallet / payments			

Appendix (B): Names of Questionnaire Arbitrators:

	Name
1	Dr. Ahmad Hirzalla
2	Dr. Orouba Bargouthi
3	Dr. Jihad Jayousi
4	Dr. Nidal Darwish