Digital Transformation Model, Based on Grounded Theory

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Abstract
Given the emergence of Digital Transformation from Industry 4.0 and the rapid dissemination of technological innovations as well as their impact as a strong driving force in new businesses, efforts should be made to identify the dimensions of this core factor as rapidly as possible. Providing a comprehensive overview of all aspects of the model .The purpose of this article is to provide insights into the state of the art of digital transformation in the last years and suggest ways for future research. This analysis is like a mapping of the subject literature into categories, so that with the help of a number of experts the evolutionary trends can be identified and further researched .In this way, with a deeper understanding of the subject, we have attempted to identify existing gaps . The findings suggest that organizations of all sizes must adapt their business strategy to the realities of digital transformation. This will largely lead to changing business processes as well as managing operations in a new and more intelligent tool-based way. Based on this research, organizations will evolve not just on their own, but on the whole value chain, and this will clearly change the way they produce and deliver value. Organizations can develop their digital ecosystem by creating and developing innovation centers and using open innovation strategy, and as a result, link their digital business to a value chain. Also in this article, we have identified the main categories and subcategories by examining the sources and using the grounded theory approach, as well as determining the relationship between them. Finally, we completed the work by identifying the digital transformation model as the central phenomenon of research.

Keywords: Digital Transformation; Business Strategy; Organization Change; Technology Management.

1- Introduction

The main research question started from this issue: What is the model of digital transformation for organizations, based on what factors and how? Therefore, while identifying indicators and components, we created a model to show the interaction of influential components in the process of digital transformation for organizations. Today, the world is realizing a big change, a change centered on evolving innovations and technologies that will have a profound impact on people's lives, the structure and thinking of organizations, and even the interactions of countries. Understanding this change and timely accompanying this change seems to be essential for all organizations of all sizes. The advent of new and powerful digital technologies, digital platforms and digital infrastructure has transformed innovation and entrepreneurship in significant ways. Beyond opening up new opportunities for innovators and entrepreneurs, digital technologies have wider implications for value creation and development [1]. But digital transformation (DT) is a process by which people can adapt themselves to modern technology. As digital technology becomes more prevalent (automation, cameras, sensors, touch screens, artificial intelligence, etc.), there will be more pressure on companies to make more profit [2]. Digital transformation in the field of industry (also known as industry 4.0 or smart manufacturing) at both the professional and academic levels has increased interest in and interest in production, but is still in its infancy and in-depth research Needs more and more. Even with the current and potential benefits of digital production that are very significant, in terms of improved productivity, sustainability, customization and flexibility, only a limited number of companies have been able to adopt interim strategies to achieve superior performance and utilize this and formulate their position [3].

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We know that research to understand digital transformation requires combining multiple themes and cross-level analysis, embracing ideas and concepts from multiple contexts and disciplines [1]. The main purpose of this study is to identify the dimensions of digital transformation and to examine the different domains of its impact and ultimately to prepare a Grounded theory model to provide an appropriate analysis of the digital transformation process for future studies. The innovation of this article in preparing a comprehensive model has included all dimensions for digital transformation in which 9 categories, 24 sub-categories and 152 open coding have been used to determine the more accurate relationship between the components of the model. In the past, a model with these dimensions was not provided.

2- Background Research

We know that the disruption caused by digital conditions is transforming all industries, leading to new business models based on new technologies. Industry 4.0 is therefore a model for understanding and using digital disruption and interference. Industry 4.0 offers include vertical and horizontal integration of value chain, digital services, digital transformation of products, digital transformation of production equipment, digital transformation of factories, and digital transformation of supply chains [4]. The "Industry 4.0" factories have machines that are powered by wireless connectivity and sensors, connected to a smart system that can visualize and decide on the entire production line. In essence, industry 4.0 is a trend towards automation and data exchange in technologies and production processes that include physical and cyber systems, IoT, IIoT, cloud computing, cognitive computing and artificial intelligence [5]. Systematic risks are also essential to be able to execute Industry 4.0 comprehensively. The economic, environmental and social risks posed by the implementation of Industry 4.0 in the field of SMEs need to be addressed. In addition, the technical, IT and political or legal risks arising from the concept are very important [6].

Digital transformation includes new elements that deserve sufficient attention and interesting challenges for future research. Specifically, when managers need to adapt their business strategy to digital realities by integrating new technologies into their business models [7]. The understanding of digital transformation can be distinguished by focusing on the following: technology first, strategy second, technology and strategy third. Organizations in the third group will understand the importance of integrating the different aspects of digital transformation, so that new technology is implemented and associated organizational change is complemented by a separate digital strategy through transformation strategy [8]. On the other hand, the digital transformation and innovation of the resulting business model fundamentally alters consumer expectations and behaviors and disrupts the performance of many small markets [9]. In addition, the intellectual property system, along with the immense potentials available as digital tools, includes data and knowledge on complementary capital, labor, natural resources and other processes that are constantly changing, leading to restructuring of supply chains [10].

In the business models sector, digital transformation is an ongoing process of applying new digital technologies to the everyday life of an organization that is agile as a key mechanism for strategic reshaping of business models in parts of (1) the organization, (2) a collaborative approach, and finally (3) will bring culture [11]. In recent years, companies in almost all industries have undertaken a number of initiatives to discover the benefits of digital and to use technologies and exploit their benefits. These changes have often affected the evolution of key business functions, products, processes, and organizational changes. Corporate governance structures and concepts need new management approaches to manage these collections. Transformations are an important approach to formulating digital transformation strategies. The potential benefits of digitization are enormous and include increased sales or productivity, innovation in value creation and other forms of customer interaction. As a result of this change, entire business models can be transformed or replaced [12]. Digital transformation is described as a new business model or as a transformation. A digital transformation project involves implementing digital capabilities to support the business model. The changes resulting from this change affect the entire organization, especially the operational processes, resources, and internal operations, which are in fact coordinated and based on the intensive cooperation and interaction of external users in optimizing work habits and methods [13]. And in order to digitize the product, you need to analyze the size of the company or its core size. Similarly, it is interesting that the patterns of B2C companies are quite different from those of B2B models for success [14]. The four main tasks that the industry faces are: enhancing customer experience, improving business processes, delivering new products, and preparing to compete with other industries [15]. Digital transmission is accelerating by two key drivers in the industry: cloud services and resource virtualization, as key building blocks in cyber systems that integrate IT-OT principles, models, platforms and integration requirements Digitally produced, they focus on the concept of Industry 4.0, with a focus on the "future industry" [16].

The institutional perspective is also a very applicable lens for the study of digital innovation and transformation. In digital transformation, we mean the effects of a combination of several digital innovations that make new actors, structures, practices, values and beliefs that change,

replace or complement the existing rules of play in organizations and contexts. From this perspective, three types of new formalities for digital transformation have been identified that include: digital organizational forms, digital institutional infrastructures, and digital building blocks [17]. Despite the increasing importance of digital transformation and the concept of malicious innovation, strategy literature still lacks a more complete picture of how organizations committed to their business models after this disruption [18]. However, scientific research and innovation management practices have emphasized the important role of individual competencies in addressing the challenges of digital transformation. However, this sector still lacks sufficient empirical studies, and preliminary results show that individuals' high growth in cognitive and metacognitive skills enhances a company's digital transformation processes. But surprisingly, social competences have only a small effect [19].

Organizations are using digital technologies to change the paths of value creation and change the conditions of competition. To this end, they must implement structural change and overcome the obstacles that hinder their efforts to evolve. Because they have more information with digital technologies, their computing, communication and connectivity creates new forms of collaboration between actors and distributed networks. In doing so, they also create dependencies among actors whose interests may not be fully aligned. Digital technologies influence the strategic implications of digital transformation and the dynamic interaction that occurs between companies and their environments [20]. Digital transformation can also come from the integration of end-to-end systems that are separate from one another in the traditional value chain or in the digital ecosystem of the larger IT industry and through IoT. Digital transformation will potentially affect the workforce. It is challenging to build the skill and pay gap between skilled digital workers and workers in their more traditional role in industry, especially in emerging economies [21]. Changing the industrial production paradigm, digitizing business processes, reconfigures every aspect of the organizational and operational activities throughout the value chain, and manufacturing companies need to take a systematic approach by mapping digital roadmaps to address job opportunities throughout the value chain [3]. However, the application of technology alone is not enough, but to gain the benefits of digitalization, it requires business model innovation such as making changes to advanced jobs and service models. Specifically, the challenges of creating value, delivering value and the components of a business innovation value capture model need to be understood more fully as well as how to align these components in creating a sustainable industry [22]. Successful implementation of innovation practices that ensure effective value creation throughout the supply chain includes: (1) changing the mind and developing an innovation strategy and communicating it to all members of the supply chain; (2) seeing evolution as a long-term process and evolutionary innovation as a cycle, which will be implemented after several tests (3). Functional and inter-organizational [23]. Process improvement is the most added value in the Business Process Management (BPM) cycle. With the mature knowledge, many approaches have failed due to lack of guidance on how to make the process better. Given the diversity of emerging digital technologies, organizations are not only facing the black box of process improvement, but there is also uncertainty about digital technologies [24]. Many customers are also facing a digital transformation process that will lead to partial or fully virtual processes, compliant enterprise structures and digital business models. Virtualization promises innovative opportunities for optimum performance and service delivery, thereby strengthening the competitive position [25]. Digital transformation calls for a redefinition of economics, labor, and democracy for humanity. AI-based devices may take over key areas of human work, reorganize supply chains, induce platform economics, and alter the participation of economic actors in the value chain. Digital transformation defines knowledge and data as the main variables of economic, capital, labor and natural resources. Digital data and technologies will produce a major capital and fuel in the subsequent profitability process, and traditional democratic processes can be (intentionally or unintentionally) replaced by digital technologies [10].

Digitalization promises to change tax management faster than the tax law itself will change. These changes include systems analysis, big data, and ongoing process automation. Although digital transformation will be challenging for taxpayers, the benefits are also significant. In this way, examining legal, ethical issues is important together. With the development of big data technology, automation, artificial intelligence, security and blockchain, all of these changes will affect tax management [26]. In reporting from traditional business to government (B2G), can use the conceptual lens of the institutional function of examining how traditional business reporting to government and how digital reporting is to replace it and try to reduce it [27]. The very dynamic success of the global expansion of digital multinationals is largely due to the widespread use of platform-based business models. Customer behavior patterns and expectations have become more sophisticated as the boundary between traditional industries fades in favor of digital leaders and consumers. In this environment, dynamic multinational activities are currently on the path to digital transformation [28]. In the economic field, banks are still distant from digital banking because they still lack the key jobs and technical bases to implement digital banking. Likewise, digital culture is a lost asset in banking [29]. We know that fin techs are a new segment of the financial market that is made up of a

combination of technology and financial services. This section focuses on financial services and innovation. Innovations come under the heading of research, blockchain and security with a strong emphasis on this area, and represent the most sensitive aspects of the current global issue of digital transformation [30]. The digitalization of banking services based on new technology empowers banks to respond to new customer demands, and the banking sector has undergone major changes [31].

With the growth of technology, organizations are also experiencing massive changes in the design and leadership of their work. Change in life - work and health, use of information and communication technology, performance and management of talent and organizational hierarchy. In addition, two dimensions of macro-level change have evolved with a focus on work structure and leadership [32]. In the area of senior management, despite the importance of healthy partnerships between CEOs and CIOs in organizations for effective business and information technology alignment, we still have little information on how to compare aspects of mutual understanding between them and how they can collaborate and build a unique perspective [33]. In the field of health in the healthcare ecosystem, the digital transformation of health services requires more advanced information technology competence that integrates directly with service users, residents, patients and their relatives in providing care services and creating value [34]. Collection, analysis and management of clinical data with electronic applications has already been widely used. But digitizing medical records along with the principles of electronic medical data management, in addition to enhancing efficiency and reducing treatment costs, ensures clinical effectiveness across all medical institutions and provides a good opportunity for structural transformation efforts in the field of health with digital transformation [35].

With the exchange of information, humans and intelligent objects are able to make common decisions on a broader, higher quality field [36]. And smart, interconnected products are transforming the industry. Live smart products must be (1) integrated at different levels of organizational strategy, including policy, intelligence, control, performance and communication channels, (2) modeled (3) integrated at different levels of organizational strategy. And digital transformation should not lead to separate investments in smart technologies [37]. Future human scenarios and subsequent work and robotics life highlights the need for a robotic roadmap that covers key aspects of industrial and service robotics, including three important areas: the future of robotic technology, digitization and technology. Analyzes ICTs in the key economic, social and political challenges of digital transformation [38]. In the domain of identity, the virtual identity model is also presented as a multi-dimensional concept involving several levels. Virtual identity building is based on a variety of macro- or community-based factors, including narrative scripts, virtual intimacy, virtual community, and virtual instrument culture [39]. In the field of security, a growing synergy between IoT and social technologies is helping to advance the physical cyber-social systems. The integration of new technologies faces key challenges related to information security and privacy [40].

Knowledge sharing in networks also seems to have not received much attention so far. Therefore, integrating the vision of key areas of knowledge, strategy, and innovation and information security management with the aim of identifying the requirements of knowledge protection in the era of digital transformation has been considered. In this regard, both (1) the threat of leakage and exploitation by unauthorized persons, and (2) the threat of unavailability and destruction, are significant challenges for internal and external threats. What makes these threats more difficult to address is the digital transformation that constantly changes the operating landscape of organizations and stimulates the development of complex networks in which organizations participate [41]. There is a significant relationship between variables of organizational culture, knowledge sharing and organizational innovation [42]. Also, in knowledge management of the three dimensions of effectiveness (knowledge acquisition effectiveness, knowledge sharing effectiveness, and knowledge application effectiveness), knowledge acquisition effectiveness has a significant positive effect on innovation [43].

3- Methodology

In data collection, this paper follows a systematic literature review approach that is closely adhered to. A set of scientific approaches that aim to limit systematic error (bias), mainly by trying to identify, evaluate and combine all studies in this field [44]. To reduce the impact of systematic error, we adopted two different approaches. A quantitative approach focusing on content analysis from the research literature and database of selected articles from WOS and a second approach involving qualitative data-based analysis of data-driven methodologies that consisted of articles, interviews, and expert and expert analysis in the field. (Table 1) Data search was conducted on 4 to 12 September 2019. In the data analysis and analysis of the data using the Grounded theory method, open coding was used for key points and themes and consequently the classification of concepts.

The purpose of the Grounded theory method is to produce a theory in the form of a set of related hypotheses obtained through continuous data comparison. In fact, researchers who use the data theory method identify the main concerns of participants and express how they address them. In the Grounded theory method, instead of using data to test the

theory, data is used to create the theory. This method involves a coherent action that leads to the emergence of conceptual categories. These interrelated categories provide a theoretical explanation of the actions that are addressing the main concerns of the participants in the core area of study. Grounded theory analysis involves the transfer of concepts to theories and theories being explored. And coding is optional.

Grounded theory analysis involves the transfer of concepts to theories and theories being discovered. This process includes, open coding, axial coding Such as determining the Core category or phenomenon and determining the Causal conditions, determining the Strategies, determining the Context and Intervening conditions, determining the Consequences and selective coding. Foundation data sampling is a non-random and purposeful sampling and sampling continues until saturation and includes taking notes and discovering gaps at the beginning of research and first interviews, discovering comparisons and designing new questions and questions that are saturated Theoretically, it continues. The details of the research method and the steps to be followed are as shown in Figure 1.

Table 1. Research methodology

method	Description	Details
Quantitative method	Using literature review and analysis of selected past articles from the WOS database containing 1197 articles.	Use specialized vocabulary of the research subject. Pay attention to the most cited articles. Analysis of collected data based on selected parameters.
Qualitative method	Data analysis and analysis using the Foundation data method with expert interviewing (12 people)	Coding and linking to article content, extracting definitions, and common and applied approaches along with expert opinion.

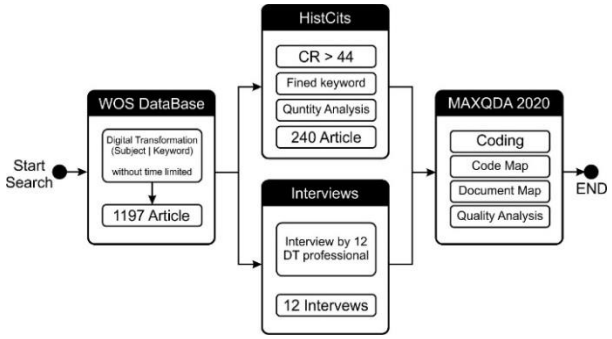

Fig 1. Details of the research method

To evaluate the Grounded theory, four parameters have been used adaptability, comprehensibility, generalizability and control. For audit validation (reliability and validity) of the theory and the final model, the research audit method has been used and the criteria of researcher sensitivity, sampling coherence, sample appropriateness, simultaneous data collection and analysis, have been the most important audit strategies.

4- Findings

4-1- Quantitative Analysis

Using keywords including digital transformation, business strategy, economics, business model, digital innovation, innovative services, technology and digital technology frameworks and primary refinement, the WOS suite of 1197 articles served as the main database .The following article was selected and initial analysis based on them. This number of articles was prepared by 3322 people and included a range of documentation from 1968 to September 2019 and the growing trend of articles from 2014 until now has accelerated. (Figure 2)

Schmidt R, Zimmermann A and Mohring M had the highest number of researches related to the subject in question. In terms of the number of internal citations to articles, four authors (Hess T, Benlian A, Matt C, and Wiesbock F) had the most internal citations in the research database and were the most influential individuals in the research database.

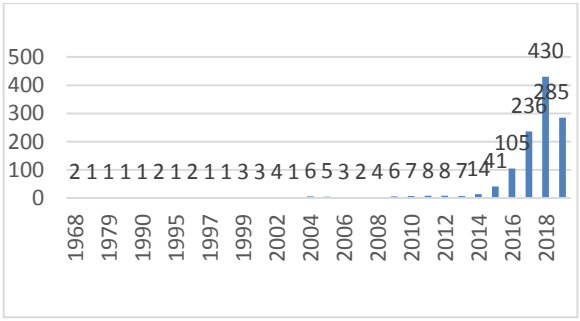

Fig 2. Year and number of articles published

Since 1968, 87 countries in the world have been writing in this field, ranking the number 25 in Germany with 252 and the United States with 146 second and Russia, or 111 among the most active countries in scientific development the subject of digital transformation in the world. Also the most commonly used keywords in all the selected databases of this research are vocabulary such as digital transformation, industry 4.0, data, business.

After preliminary statistical analysis, using HistCite software (Bibliometric Analysis and Visualization Software), 240 articles with the highest CR (Cited references> 44) were selected for content analysis using the Grounded theory method. After this step Source all 240 selected articles were prepared and injected into MAXQDA Analytics pro 2020 software for qualitative analysis.

4-2- Qualitative Analysis

Quantitative findings information was also used as the topic of the main discussions in the interviews with experts in order to examine the broader relationships between them in a more precise and accurate manner. We

also coded the content of 240 articles and, with the help of an expert team, identified 73 codes as variables and categorized them into 9 main code categories (Figure 3). In total, 32,146 codes were identified from the total number of articles and interviews and were marked in the articles and interviews.

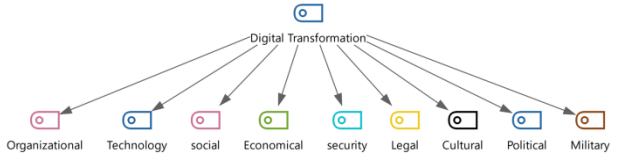

Fig 3. Classification of the main codes

Using the analysis tools available in MAXQDA software, we were able to analyze the data and their results as follows.

4-2-1- In Analyzing and Comparing the use of Codes in Both Categories

In the legal category, the most frequently cited word in the section on Governance is in the Interviews section on Regulations. In the interviews section, the importance of Legal cases is the same as that of Regulations (Figure 4).

	Articles	Interview	
Digital Transformation			
Legal			
Legal	19.0%	40.0%	19.1%
Claims	3.8%		3.8%
Intellectual Property	6.7%		6.7%
Governance	40.9%	20.0%	40.8%
Ownership	14.4%		14.3%
Regulations	15.3%	40.0%	15.4%
SUM	100.0%	100.0%	100.0%
N = Documents	128 (91.4%)	12 (8.6%)	140 (100.0%)

Fig 4. Level of use of legal subcodes in both categories

In both categories of articles and expert interviews, attention to economic issues is estimated to be twice that of the digital economy, and this could indicate the direct impact of digital transformation on the entire economy in addition to complementing the digital economy. In the security category, the overall topic of security has received the most attention in both categories, while the terms protection and cyber security are next in the articles. In the interviews section, cyber security was ranked higher than protection. In the technology category, both focus on the importance of the term digital transformation, with articles in the later stages of IT, followed by ICT, Digitalization and Big Data. But in the interviews, Cloud Computing, Automation and IoT are next. In the organizational category, in the article group, topics related to management, innovation, human resources, knowledge and strategic planning are the most referenced and in the interview group leadership, management, innovation, strategic plan and customer experience are more important. In the military category, only 24 articles referred to the use of digital transformation in the military industry, and no interviews were mentioned in the interview group. In the social category, subjects assigned to social issues had the highest number of referrals in both groups, followed by attention to health and ethics, respectively. It is noteworthy that in the interviews section there is no mention of ethical issues. In general, the study groups in the articles group had the highest level of exposure to the field of technology and then to technology, but in the interviews, the first was in the field of technology and the second was in the field of organization.

4-2-2- In the Rrelational Analysis Section of Codes and Information Content:

In the analysis of the relationship between the codes used in the legal category and the two groups of articles and interviews in general, although the emphasis was on the word "Governance", the most significant relationship was determined between "Regulation" and "Legal" and later between Legal and Governance. In this category, the terms IP and Claims are the most distant from the other codes in this category, indicating a less similarity with the rest of this code. In this domain, only one group with high similarity has been identified, consisting of 4 subjects: Governance, Legal, Regulation, Ownership.

Based on the software output (Figure 5) in the analysis of the relationship between the codes used in the technology category and the two groups of articles and interviews in total, the strongest links between the "Digital Transformation - ICT " codes and the subsequent steps between the "Digital Transformation - IT" and Digital codes "Transformation - Digitalization", "Cloud computing - Big data" and "ICT-IT". In this study, 4 areas with the most dependency were identified. In general, digital technologies, digital transformation, cloud computing, and industry-independent domain 4 can be mentioned.

Based on the software output, the analysis of the relationship between the codes used in the organizational category and the two groups of articles and interviews are the strongest links between the codes of “Management – Innovation”, “management – knowledge”, “Innovation – Knowledge”. The codes for Leadership and Digital skills are the most distant from other codes and are less similar to other codes in this category. In this study, two areas with the most interdependence were identified, the first consisting of management, knowledge and innovation, and the second area of customer experience, business process, business model, digital service.

Based on the software output in the analysis section of the codes used in the social category and in the two groups of articles and interviews, the strongest links were found between the Social - Health codes and in this study one area with the most dependency was identified which included Social and Health.

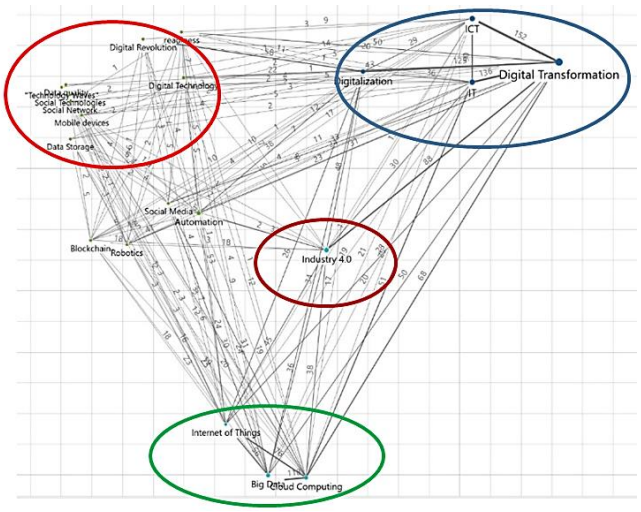

Fig 5. Relational analysis of subcodes and content of information in technology categories by MAXQDA 2020

In the cultural, political and military categories, for the existence of only one code, communication is not meaningful, and also based on the software output in the analysis of the relationship between the codes used in all three cultural, political and military categories and the sum of two groups of articles. And interviews were the most correlated between the Politic - Culture code, and the military with the most distance from the other two had the least relevance in the sources used to other categories in the category. Therefore, one area with the most dependency can be identified in this study, which is the same as Culture and Politics.

Comprehensive links between all the codes used in the research are shown in. In this figure, different batch codes are generated with different colors, the overall scattering of the identified code sets, and that in the paper research design. They have been used to illustrate the overarching consistency, similarity, and overall relevance of the topics used in the research project, based on a series of articles and interviews with experts. As can be seen in this design, the highest level of communication intensity is contained in the category of organizational and technology codes.

Overall, with Merge all the codes in each category can also identify the areas of influence and extent of communication between the main codes. The greater the linkage and the stronger the line between the two codes, the greater the degree of interdependence and influence these issues have on each other, while distinguishing two distinct domains, the degree of compression between the two categories of technology and organization can also be clearly seen.

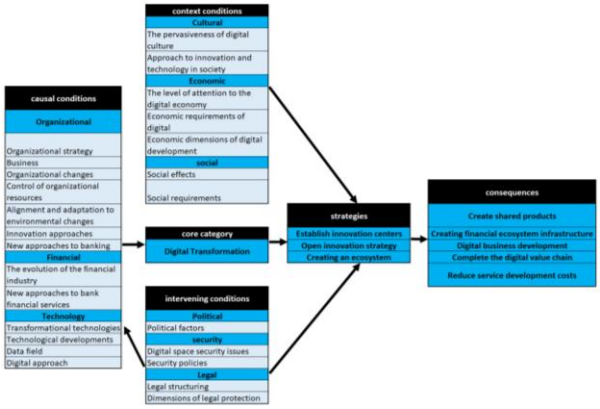

Fig 6. Digital Transformation visual coding paradigm (Model)

All open codes used in the research were categorized based on the characteristics defined for each category and their relationship was determined by creating categories and subcategories related to the central theme of the research (in axial coding). It continued to determine the causal conditions of digital transformation in the organizational, financial and technological sectors. For intervening conditions that affect causal conditions and strategies, security, political, and legal issues were used. In the field of contextual factors that directly affect the strategies, the cultural, economic and social parts of the research were used. (Figure 6)

Then, three main strategies in the face of digital transformation were identified as desirable. It has included the establishment of an innovation center in the organization, the use of an open innovation strategy in the organization, as well as the creation of an efficient ecosystem in the development of digital transformation.

5- Concluding Remarks and Future Perspectives

Our review of the digital transformation model began with the use of WOS research on the phenomenon of digital transformation and utilized the rich literature available in these articles, and at each stage of our expert analysis, collaboration, and viewpoints on dimensions, requirements, Benefits as well as the challenges associated with digital transformation at different levels. In completing this paper, we attempted to analyze the key dimensions of digital transformation by identifying 73 codes in 9 categories and modeling the relationships between them.

Our findings emphasize that in terms of thematic correlation, the technology and organizational domains have the strongest relationship to the final model, constituting the first important and common domain of the model, and the economic, social, and cultural domains, while forming the next common domain with distance. There are more issues in the first area, and issues related to security and legal issues are more separate and more

distant than the two previous ones. After analyzing the bits of code in each batch, we obtain the final cumulative model of Merge interconnection of all batch codes so that we can visualize inter-batch relationships within a model. In the subcodes, the most general impact and use of vocabulary was related to management, innovation, digital transformation, community, economics, human resources and IT, respectively. The digital transformation code comes third after management and innovation, indicating the importance of the first two issues and the extent to which digital transformation is related to management and innovation. Likewise, the topic of cloud computing ranks 24, culture 26, business model 29, and value chain rank 37 out of the 73 codes examined in the article.

Given the underpinnings of Industry 4.0 and the growth of the digital transformation research and development process, it owes more to the 14th position. The maturity of industries and the entry of other areas of business, especially the service sector into digital transformation, seems to have shifted its focus from purely industrial, technical and robotics to human resources such as innovation, knowledge, and strategy. We also find in the literature that digital technologies and their technological innovations are still recognized as the beating heart of digital transformation. The role of technologies such as IoT, blockchain, virtual identity, Big data, and AI in driving this development is undeniable. But organizational approaches, such as changing business strategies and synchronizing the competitive position of companies with these developments, have had a broad role in the evolution of the digital transformation process and its organizational adoption. On the other hand, it can be argued that many of the articles studied in this study, which were also part of the research database, had a specialized, case-by-case look at digital transformation in the particular industry. An overview of digital transformation with a cumulative approach and moving from component to concept has received little attention.

According to the final model, establish innovation centers, Open innovation strategy, creating ecosystem strategies are useful in digital transformation. Also based on this research, create shared products, creating financial ecosystem infrastructure, Digital business development, Complete the digital value chain, reduce service development costs The most important consequences of digital transformation are the implementation of the introduced strategies.

In the practical suggestions section, we can use new strategies to implement digital transformation in organizations, such as creating innovation centers for the development of digital innovations, using open innovation in organizations to attract ideas and partner in product development with other actors. also mentioned the creation of a digital ecosystem for greater interaction with members of the value chain. All of this will help create a successful digital transformation process by developing shared products, digital business development, digital value chain development, as well as reducing the risk and cost of service development.

For further research, we believe that although we have made many efforts to better understand the field of digital transformation, this section still needs to be explored in a more comprehensive way. Also, the study of the functional interaction between each category or code related to one category with other categories and its positive or negative impact on the process of digital transformation in large-scale and small-scale systems has not yet been addressed.

In-depth research is also needed to develop digital business strategies and combine them with new technologies such as artificial intelligence, the Internet of Things and the blockchain. In this regard, coordination between the capabilities of the organization, upstream laws and coordination in digital ecosystems can be a comprehensive research topic.

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