THE ROLE OF COLLABORATION IN THE CAPITALIST ECONOMY: THE DIGITAL TURN

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ABSTRACT

THE ROLE OF COLLABORATION IN THE CAPITALIST ECONOMY: THE DIGITAL TURN

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This thesis contributes to the history of economic thought by showing what is missing in mainstream competition theories explaining the actual functioning of capitalism: collaboration. The thesis proposes two original synthesis on the practices of competition and collaboration together in the markets. In this context a new concept has born: coopetition. The thesis pushes the frontiers of the traditional Schumpeterian analysis to understanding of the functioning of the digital economy. Mechanisms related to FinTech and streaming sectors have demonstrated that collaboration strategies play a critical role in developing a market power and increasing profit.

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Keywords: Digital economy, Innovation, Collaboration, Competition, Coopetition

ÖZ

KAPİTALİST EKONOMİDE İŞBİRLİĞİNİN ROLÜ:
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Bu tez, kapitalizmin gerçek işleyişini açıklayan ana akım rekabet teorilerinde eksik olanı göstererek ekonomik düşünce tarihine katkıda bulunur: iş birliği. Tez, piyasalarda rekabet ve iş birliğinin birlikte uygulanmasına ilişkin iki orijinal sentez önermektedir. Bu bağlamda yeni bir kavram doğmuştur: işrekabet. Tez, dijital ekonominin işleyişini anlamak için geleneksel Schumpeterci analizin sınırlarını zorlamaktadır. FinTech ve dijital akış sektörleriyle ilgili mekanizmalar, iş birliği ve işrekabet stratejilerinin bir pazar gücü geliştirmede ve kârı artırmada kritik bir rol oynadığını göstermiştir.

Anahtar Kelimeler: Dijital ekonomi, İnovasyon, İşbirliği, Rekabet, İşrekabet

To my precious son, for being my source of happiness and inspiration.

To my beloved husband, for your support and encouragement.

And to my dear family, for your love and constant support throughout this journey.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AEs	: Advanced Economies
AI	: Artificial Intelligence
APA	: American Psychological Association
API	: Application Programing Schemes
AR/VR	: Augmented Reality and Virtual Reality
B2B	: Business to Business
B2C	: Business to Consumer
ECLAC	: European Commission for Latin America and the Caribbean
EMDEs	: Emerging Market and Developing Countries
ENIAC	: Electronic Numerical Integrator and Computer
GPT	: General Purpose Technologies
IORs	: Interorganizational Relationships
IoT	: Internet of Things
IT	: Information Technology
MSP	: Multi-sided Platforms
NAFTA	: North American Free Trade Agreement
NGOs	: Non-Governmental Organizations
OECD	: Organization for Economic Co-operation and Development
PPP	: Public-Private Partnerships
PWC	: Price Waterhouse Cooper
SBO	: Turkish Republic Strategy Budget Office
SDG	: Sustainable Development Goals
TTOs	: Technology Transfer Offices
UN	: United Nations
UNIVAC	: Universal Automatic Computer
UNSPA	: United Nations Public Service Awards
WEF	: World Economic Forum
WIPO	: World Intellectual Property Organization

CHAPTER 1

INTRODUCTION

This thesis reassesses the fundamental dynamics of the modern capitalist economy. It analyzes how the relationship between competition and cooperation has transformed with the rise of the digital economy. Competition theories have historically played a central role in explaining the development of capitalism. However, these theories are particularly inadequate in the face of the complex structures of the digital age. The increasing prominence of cooperation as a strategy alongside competition represents a significant change in economic growth and innovation processes. This study, consisting of six main chapters, addresses this transformation with an interdisciplinary approach, offering a comprehensive perspective through both theoretical frameworks and sectoral examples.

1.1. The Thesis

The main objective of this research is to examine the complex dynamics between competition and collaboration in modern economic structures, especially in the context of digital economies. Although competition is still one of the fundamental dynamics of capitalism, collaboration is also of great importance that cannot be ignored. In the digital age, companies and institutions achieve greater success both by competing and collaborating. Therefore, the role of collaboration must be considered in order to understand the modern dynamics of capitalism. In this thesis, the term collaboration is preferred to describe the term joint work. This is because in the literature, especially in the digital economy turn of the capitalist era, the term “collaboration” is more commonly used. This term covers a broader range of issues associated with the digital economy, such as complex relationships among multiple actors as well as partnerships

that necessitate creative processes and new ideas from both sides. The word cooperation, unlike collaboration, relates to more discrete and voluntary forms of coming together, while collaboration implies closer dependence between parties involved and towards relatively longer-term objectives of today's digital markets. By studying both theoretical frameworks and practical case studies, this thesis aims to provide a comprehensive understanding of the changing roles of competition and collaboration.

The structure of the thesis is as follows: **the first part** summarizes the basic theories of competition and prepares the ground for the next segment of our research, highlighting why the topic we have chosen is significant. It also introduces some major themes as well as concepts concerning what will be covered in future sections. In **the second part,** we will touch on the question, "Is only competition important?" and examine how the concept of competition is defined in the economic literature. In this context, we will examine the understanding of competition in classical and neoclassical economic theories and evaluate the effects of these approaches on the modern economy. Finally, we will discuss the role of competition in economic growth and analyze how important this relationship is in today's economies.

Furthermore, the third chapter reviews Schumpeter's ideas, particularly in light of digital economic perspectives, and highlights the limitations of his theories when applied to the digital age. In this context, the chapter integrates evolutionary economics to provide a more contemporary view of economic development. Additionally, t**he fourth chapter** explores various definitions and impacts of collaboration, arguing that this concept has often been overlooked in economics literature. We also investigate how collaboration can be understood from theoretical perspectives in fields beyond economics, with a focus on its relevance in today's digital economy, including the streaming sector and Fintech. **The last chapter** presents policy recommendations followed by a conclusion section. In this section, applicable policy recommendations are presented in light of the findings obtained in the thesis and summarized. The conclusion section evaluates the purpose of the thesis and reveals the contributions and limitations of the research.

1.2. Overview of the Research

The capitalist system emerged in Western Europe in the second half of the 16th century as a result of capital accumulation along with colonialism (Gençoğlu, 2020, p. 237). Capitalism is essentially aimed at making a profit (Marx, 1867, p.247). It is a system based on production, exchange of goods and services, private property, capital accumulation, and use for large profits. Since the 16th century, capitalism has evolved over time and transformed the economic and social processes in the world. Classical economists Adam Smith (1776), David Ricardo (1976), Karl Marx (1867), and others have studied the capitalist process and conducted studies on it. Smith was the first economist to argue that free competition uses resources with maximum efficiency. Later, David Ricardo brought a new dimension to competition with his theory of comparative advantage. Marx says that the end of capitalism will end with the greed of competition and the system will collapse on its own.

Schumpeter, from the evolutionary institutional economics school, unlike classical economists, drew attention to the dynamic features of capitalism and made the closest explanations to today's economic system a century ago. When we examine the basic microeconomics books (Mankiw, 1991; Dorman, 2014; Shapiro, 2018), we see that the functioning of the capitalist system is built on competition. On the contrary to Smith (1776), Schumpeter (1942) argues that the capitalist system will maintain its dynamic structure by renewing itself through the process of "creative destruction" (Schumpeter, 1942, p. 83). The big difference between Smith and Schumpeter concerns how they maintain capitalism forever. Smith contends that capitalism will remain balanced via free markets and competition, whereas Schumpeter argues that capitalism can only continue if there is unending innovation and creative destruction (Smith, 1776, p. 423; Schumpeter, 1942, p.84).

This study aims to highlight one of the most important issues which economists ignore. The capitalist system continues to focus on profit-making and faces new competition driven by a desire to accumulate capital. However, there is an essential reality in the digital era. Collaboration is often more profitable than the competition and is both

desirable and essential for modern capitalism. Today, any single individual, institution, firm, or even country can survive by applying only competition especially. In the digital era, just competition alone has become insufficient to explain economic processes. This transformation process, often referred as digitalization, is a technological evolution that has created profound effects not only on business processes but also on social structures, economic models, and cultural interactions, leading to radical changes on a global scale. To understand its implications, it is essential to consider the historical and evolutionary trajectory of digitalization.

1940s-1950s: The emergence of the first electronic computers initiated the digital information processing revolution (Goldstine, 1972). Machines such as Electronic Numerical Integrator and Computer (ENIAC) and Universal Automatic Computer (UNIVAC) replaced manual calculation methods and increased the capacity to process large data sets.

1960s: With the emergence of Moore's Law, the rapid miniaturization and decreasing cost of microprocessors enabled the spread of digital devices (Moore, 1998, p.82). Digitalization gained momentum towards the end of the 20th century, shaping the concept of the information economy (Ceruzzi, 2003, pp.10-19).

1970s-1980s: The development of personal computers (PCs) transformed digital technology into a household phenomenon. IBM introduced its first PC in 1981, which became a cornerstone for the industry's rapid expansion (Campbell-Kelly, Aspray, & Ensmenger, 2013, p.197). Additionally, the proliferation of user-friendly operating systems, such as Microsoft Windows (launched in 1985), accelerated the adoption of digital tools by individuals and institutions. This era not only popularized computing but also reshaped economic structures by laying the foundation for the information economy. In general, since the mid-1970s, major changes have been observed in organizational and market structures in the global economy. Organizational changes began before the diffusion of information technologies, but they have interacted with these technologies. Shaped by goals such as flexibility, coping with uncertainty, and lean production, these transformations have triggered restructuring processes in various areas, from production to the workforce. However, different technological and organizational trajectories have evolved in different ways to adapt to new economic conditions and technologies. (Castells, 2010, p.165).

1990s: The Internet RevolutionThe advent of the Internet in the 1990s revolutionized global information access. Innovations such as e-mail, web browsers (e.g., Netscape Navigator in 1994), and e-commerce platforms like Amazon (founded in 1994) and eBay (1995) redefined economic models and consumer behavior (Schneider, 2017). The Internet's ability to connect millions of users created new business opportunities and fundamentally altered communication dynamics. This period also witnessed the emergence of the "dot-com boom," highlighting the transformative potential of digital networks (Castells, 2001).

2000s: The turn of the millennium brought a new wave of digital transformation driven by mobile technologies and data analytics. The proliferation of smartphones, particularly with the launch of Apple's iPhone in 2007, integrated digitalization into individuals' daily lives (West & Mace, 2010). Application ecosystems such as the App Store (introduced in 2008) created entirely new revenue models and reshaped consumer behavior (Cusumano, 2011). At the same time, advancements in cloud computing and big data technologies allowed businesses to optimize decision-making processes and scale operations efficiently (McAfee & Brynjolfsson, 2012). Social platforms such as Facebook (2004), Twitter (2006), and LinkedIn (2003) further transformed business dynamics and societal interactions, exemplifying the far-reaching impact of digitalization (Boyd & Ellison, 2007).

The next phase of digitalization, often referred to as Industry 4.0, has further transformed businesses and society. Technologies such as the Internet of Things (IoT), artificial intelligence (AI), and automation have revolutionized production processes, making them more efficient and cost-effective. These developments have also expanded the scope of digital platforms, integrating them into diverse sectors such as healthcare, education, transportation, and finance. Subscription-based services (e.g. Netflix, Spotify) and sharing economy platforms (e.g. Uber, Airbnb) have become emblematic of this change, demonstrating how digitalization continues to reshape economic models. Network effects lead on digital platforms foster the emergence of monopoly or oligopoly structures. They have disrupted price-competitive markets and traditional theories based on free market equilibria, which rely on accurate and perfect price information. Data is now called the oil of the 21st century (The Economist, 2017). Just as oil was a vital resource for the industrial revolution and the economic

growth of the 20th century, data is also at the center of today's digital economy and innovation. Data enables companies to make strategic decisions (Mayer-Schönberger & Cukier, 2013). Data-based analyses enable the development of new business models and technologies, and thus, the economic value of data is increasing (The Economist, 2017). Traditional competition theories focus on price competition, product differentiation, and economies of scale (Porter and Heppelmann, 2014). Companies that can use data effectively can better understand consumer behavior. Therefore, having large data sets has become a fundamental competitive element of the information economy (McAfee and Brynjolfsson, 2012).

Digitalization has changed how firms and consumers interact (Rochet & Tirole, 2003). With the development of the digital economy, new market structures have emerged which have different dynamics from traditional ones. In most cases, these new structures contain network effect elements, platform economies, and data-driven business models. These market structures are characterized differently from what was envisaged by classical economics' concept of competition.

The platform economy has developed as a business model that restructures the processes of creating, sharing and consuming value and the emergence of digital technologies. Platform economy entails a business model that allows for value-adding interaction between external producers and consumers but also an open, participatory infrastructure through which such engagements occur (Parker, Jiang, & Van Alstyne, 2016, s. 258). The main purpose of this model is to create value for all entities by making matches between users and facilitating the exchange of goods, services, or social currencies. Platforms use the power of information technologies to eliminate time and space boundaries, thus accelerating proliferation and optical range. Unlike traditional business models, platforms do not rely on the enterprise's internal resources. Instead, they rely on contributions from external actors. (Parker, Van Alstyne, & Choudary, 2016, p. 256) Unlike traditional business models, platforms are not based on the business's internal resources but on external actors' contributions. These external actors interact through the platform by assuming the roles of producers and consumers, and in this process, value creation, exchange, and consumption processes

occur thanks to the opportunities offered by the platform. The basis of the platform economy is the elimination of intermediaries (gatekeepers) frequently encountered in traditional business models. For example, Amazon's Kindle platform eliminates the role of editors in the publishing process of books and offers a model based directly on reader feedback. Correspondingly, Airbnb has disrupted the traditional hotel industry by creating accommodation services for housing units that are provided by users without any physical presence. On this line however, the platform economy directly links up producers with consumers via digital technologies thereby leading to a huge amount of wealth creation in this process Unlike conventional companies, platforms depend upon external resources and create an ecosystem that works with inputs from them like these external resources and create an ecosystem that operates with the contributions of these external resources. As a result, the platform economy is characterized by attributes intended to revolutionize business and economy as well as the society at large.

Multi-sided platforms (MSP) are business model that operate a physical or virtual place that brings together different groups and allows them to interact (Evans & Schmalenseee, 2016, p. 5). Market operations are observed between platforms, users, sellers and other stakeholders. With the digital economy, and each group mutually benefits from their participation in the platform (Rochet and Tirole, 2003). Platforms can attract users from both sides of the market and bring them together to interact with each other. For example digital marketplaces like business-to-business (B2B) platforms come together buyers and sellers but still encourage both parties to contribute towards its success. B2B marketplaces make it easier for firms to trade with one another, thereby reflecting new competitive dynamics in the digital economy. For instance, Amazon started off as an ordinary retailer. However, it gradually became a multi-sided platform model allowing third-party sellers to deal directly with consumers through its website (Westberg, 2024). In this model, Amazon sells its own products and allows other sellers to reach a broad customer base on the platform. The discussion on platforms and collaboration highlights that modern platforms embed networks facilitating various collaborative opportunities. These platforms allow individuals and organizations to connect, share resources, and co-create value in ways

not possible with traditional production methods. For instance, platforms like GitHub enable software developers to collaborate by sharing code, providing feedback, and improving each other's work (Dabbish et al., 2012, p.1279). This embedded network fosters a collaborative environment where diverse talents can contribute to and improve the final product. This opportunity provided by platforms enhances knowledge generation and interactive learning.Consequently, as the digital economy continues to evolve, the significance of collaboration within these platforms becomes increasingly evident. Traditional notions of competition are being redefined, underscoring the necessity of cooperative strategies that leverage the strengths of multiple actors within the marketplace. There is a more nuanced understanding of how collaboration operates within MSPs, emphasizing its critical role in driving innovation and fostering economic growth.

Furthermore, today's new production methods differ hugely from the traditional production approach, where multiple outputs are transformed into inputs. In contrast, a single final product, such as an automobile, is produced using inputs such as fuel, labor, and energy. These new production systems, especially with the influence of the information economy and digitalization, include multiple interactions and feedback mechanisms (Brynjolfsson and McAfee, 2014). For example, in software development, the code written by programmers can serve as both an input and an output; it can be reused and improved in the resulting software product. This increases the complexity of production processes. The concept of competition alone is insufficient to explain the dynamics of these production systems. Today's production processes can be explained with network effects and economic models (Shapiro and Varian, 1999). In this context, new economic theories are needed to understand production systems' multi-dimensional structure and dynamics.

This thesis will emphasize the critical role of "collaboration". Despite its significance, collaboration is not taught in universities in basic economics education-and is absent from mainstream economic literature. However, it has become mandatory in the company culture and is also vital in international relations.

1.3. Concluding Remarks

In this introduction, we have laid the foundations for understanding the complex interplay between competition and cooperation in the digital economy. Traditional economic theories generally emphasize competition as the main driver of capitalist growth. However, the evolving nature of the modern economy clearly emphasizes the increasing importance of cooperation. Network effects and multilateral interactions particularly amplify this change in today's digital platforms and new production models, where traditional economic dynamics must be redefined.

The thesis outlines that more than competition alone is needed to explain economic activity in the 21st century. Cooperation strategies embedded in digital platforms and supported by the data-centric structure of modern markets play an essential role in promoting innovation and sustainable economic growth. The following sections will begin with examining traditional competition theories, addressing the contributions and limitations of Schumpeter's (1942) views. It will address contemporary understandings of cooperation in the context of modern capitalism. It will provide an in-depth analysis of these evolving dynamics.

This research aims to illuminate how cooperation complements competition and contributes to the stability and adaptability of economic systems. The final sections will synthesize these insights and offer actionable policy recommendations, emphasizing the need for a balanced approach that integrates competition and cooperation to thrive in the digital age.

CHAPTER 2

DOES ONLY COMPETITION MATTER?

This section examines the place and historical development of competition in economic theories. Classical and neoclassical perspectives ranging from Adam Smith's (1776) invisible hand theory to David Ricardo's (1976) concept of comparative advantage are examined in detail. However, the inadequacies of these approaches are revealed in light of the changes brought about by the digital economy. In particular, network effects and data-driven business models in platform economies offer new economic dynamics that go beyond the traditional understanding of competition. The section also discusses the limitations of competition and the reflections of these limitations in the digital age through the theories of thinkers such as Marx and Schumpeter.

2.1. Defining Competition in Economics

Competition is one of the most fundamental and most debated issues in the field of economics. The concept of competition can be defined in general terms as the struggle of two or more actors to obtain a certain goal or a limited resource (Porter, 1980). According to Michael Porter (1980), competition is one of the fundamental elements that determine market dynamics and greatly affects the strategic decisions of businesses. The subject of competition concerns every discipline that examines society and is at the forefront of the subjects examined by economics. However, when we consider capitalism and modern society today, we realize that competition as a single concept is no longer appropriate for describing many economic phenomena. This inadequacy has become more apparent, especially with the rise of the digital economy and platform economies. Traditional competition theories cannot fully explain the economic effects of digital platforms and network effects (Shapiro and Varian, 1999).

For this reason, we argue that new economic models and collaboration strategies should be examined.

2.2. Classical and Neoclassical Views on Competition

In standard microeconomics books (Mankiw, 1991; Varian, 2014), competition theory is one of the main topics that neoclassical economists focus on. Classical economists such as Adam Smith, David Ricardo, and John Stuart Mill, in their seminal works from the 19th century, touched on the competition concept (Smith, 1776; Ricardo, 1817; Mill, 1848). Adam Smith described the competition as an 'invisible hand' guiding resources to their most efficient use (Smith, 1776). Ricardo and Mill highlighted it is essential for economic growth and resource distribution (Ricardo, 1817; Mill, 1848). In contemporary markets, competition is an activity where companies try to outdo others in various aspects, including customer loyalty and market share profitability. Firms compete with one another so as to perform better than competitors. Competitive advantage is achieved when operating better than any other firm within a given market space. In a competitive environment, cement firms strive for excellence through quality products/services delivery optimization of prices, plus maintaining strong ties with customers, among many other factors. Competition is believed to be a major driver behind economic growth and innovation (Pindyck and Rubinfeld, 2018; Mankiw, 1991). At the microeconomic level, competition determines firms' pricing, production, and marketing strategies. Pindyck and Rubinfeld (2018) define competition as the process in which multiple firms compete to attract consumers' attention and increase their market share within a market. At the macroeconomic level, competition is considered a factor that increases economic growth and productivity. Blanchard (2017) defines competition in the macroeconomic context as the interactions of economic actors that promote economic growth through productivity and innovation. Krugman and Wells (2020) state that competition is a mechanism by which countries and firms achieve economic development and increase welfare by competing in global markets. Therefore, competition is considered a fundamental element that promotes economic growth and innovation at both microeconomic and macroeconomic levels. Classical economists, especially Adam Smith (1776), have created their theories by focusing on the concept of competition. Smith argues that

competition is the cornerstone of economic systems and ensures the effective operation of market mechanisms. The central role of competition in economic theories is closely related to market efficiency and economic growth (Smith, 1776, pp. 15-18). Smith, in his work *An Inquiry into the Wealth of Nations*, written in 1776, argued that social order and welfare result from free competition in a rapidly growing economy (Smith, 1776, pp. 456-459). According to him, a free market economy will lead to the betterment of people's lives and even bring about social order. He highlights that competition is the most basic building block of an economic setup (Smith, 1776).

2.3. Competition in Economic Growth

According to Smith, competition is a fundamental mechanism that encourages economic growth and ensures that this growth is for the public good. Competition encourages firms to be more productive and innovative, which accelerates economic growth. Economic growth benefits society by increasing general welfare (Smith, 1776, pp. 212-215, 234-238). This is why organizations have always had to engage in a fierce race aimed at reducing their expenses while boosting productivity with advanced technologies used. These efforts increase the sustainability and speed of economic growth. The economic and social changes made in the 17th and 18th centuries transformed the power of landowners into a market economy, enabling the participation of large segments of society. These changes ended rural stagnation and forced all individuals to compete (Smith, 1776, pp. 538-555).

It is claimed that Smith, in his work *An Inquiry into the Wealth of Nations* (1776), revealed the two basic functions of competition in the economic system: balance and imbalance (Richardson, 1976: 350-351; Tanyeri, 2000: 308). Competition is defined as the way of achieving equilibrium through the efficient allocation of resources in the economy. With free competition, there would be an effective distribution of resources in the economy since it encourages the free movement of production factors and ensures that supply equals demand. Economic activity can be seen as a process of efficient resource allocation, but it can also be evaluated as a capital accumulation process aimed at producing and reproducing goods for the purpose of making a profit.

Smith, assuming that the main purpose of economic activity in a capitalist society is to make a profit, considers competition as an efficient resource allocation process that brings the economy to balance, while on the other hand, he accepts it as a process that allows capital owners who compete with each other to make more profit to continue capital accumulation and economic development.

In his work, *The Wealth of Nations* (1776), the first task of free competition is to balance supply and demand in markets by ensuring that factors of production move freely from one production area to another. The second task of competition is seen as the discovery of new markets, new production techniques and new forms of work organization together with the capital accumulation process, thus, the development of the division of labor, technological advances and structural changes. The internal changes triggered by developments in the accumulation of capital and division of labor, the imbalances caused by these changes and the limits of the economic structure are of critical importance in understanding the dynamics of the capitalist economy. On the one hand, capital accumulation leads to increased production capacity and promotes economic growth, however, on the other hand, this process results in division of labor becoming more specialized and differentiated. These changes in division of labor, however, require the adoption of new technologies and methods of production. However, this kind of restructuring is often characterized by internal imbalances, for instance, while rapid growth in some sectors stagnates other sectors it will create imbalances in the labour market as well as resource distribution (Tanyeri, 2000).

Smith states that people are more successful in obtaining the help they need by considering their own interests rather than relying on the kindness of others (Smith, [1759]2002, pp. 96-97). Every individual should naturally focus on their own interests first and not risk their own interests at the expense of others, as they can take better care of themselves. However, Smith emphasizes that people should not harm others while pursuing their own interests. This perspective suggests that in a competitive environment, cooperation, and mutual benefit increase when individuals act in accordance with mutual interests. When an individual pursues his own interests, he can benefit society more effectively than those who aim to serve society (Smith, 1776,

p.14). Moreover, Smith observes that individuals who prioritize trading for the benefit of society rarely achieve the highest returns. In contrast to this view, which is not common among traders, Adam Smith's "invisible hand" theory argues that people unknowingly help society through their selfish interests (Smith, 1776, p.594). According to this theory, when individuals support domestic industry and direct their capital to achieve the highest value, they only think of their own security and profit. However, in pursuing these personal goals, they unintentionally contribute to social welfare. He also states that individuals can be more effective when they pursue their own interests than when they seek societal gains. While encouraging self-interests in society, according to Smith's theory, can lead to benefits for all members, it is also important to recognize the crucial role that cooperative effort and collective solidarity play in shaping broader social and economic outcomes (Smith, 1776, p. 30-31).

Smith (1776) explains the need for collaboration in human social and economic life and how this collaboration is achieved. In other animal species, individuals generally become independent when they mature and do not feel the need to seek help from another creature. However, humans almost constantly need each other's help. According to Smith, it is futile to base this help solely on the benevolence of others. A human being is more likely to be successful if he can turn the interests of others to his own advantage. In other words, when a person requests something from another, he appeals to their interests; he shows them that it is to their advantage to do what is requested. This also explains the basis of collaboration. When we expect food from a butcher, a brewer, or a baker, we assume that they act in their own interests, not in the interests of others. People do not tell others about their own needs but about the benefits they will receive. In this case, cooperation is based on the principle that individuals benefit from each other while trying to maximize their own interests (Smith, 1776, p. 30-31).

Smith (1776) states that people can succeed by considering their own interests rather than expecting the help of others only from their benevolence. According to this perspective, cooperation emerges spontaneously at the points where the interests of individuals intersect and ensure the survival of society. Smith's theory of how

individuals contribute to social good by pursuing their own interests should be evaluated in a context that is compatible with the long-term effects of collaboration and collective action. Thus, Smith's idea that individual interests can boost public interest combined with the positive consequences of collaboration on future societal structure lays the foundation for sustainable economic and social development.

The principle of comparative advantage is attributed to David Ricardo, who theorized it in his work titled *On the Principles of Political Economy and Taxation,* published in 1817. This theory predicts that countries produce in the areas where they are most productive and sell these products to their trading partners. The theory of comparative advantage encourages countries to trade by focusing on goods that they can produce at a comparatively lower cost. This increases efficiency in international trade and maximizes global economic welfare (Voinescu & Moisoiu, 2015, pp. 512-521). According to Ricardo, competition allows countries to use their resources most effectively, allowing them to be more competitive in international trade. Specialization of countries increases production efficiency and provides a more mutually beneficial and fair economic relationship between trading partners.

Ricardo's (1817) emphasis on competition complements Smith's theories (1776) and reveals the importance of economic collaboration and specialization. Ricardo's theory is still valid today as one of the pillars of globalization. His theory is based on the assumption that factor mobility between countries is limited. (Ricardo, 1817, p. 128). However, in modern economies, factors of production extend beyond labor to include capital, technology, invention, and knowledge. It also plays a crucial role in production processes. Ricardo's theory assumes the limited factor mobility between countries. However, capital and knowledge have become more mobile today, and technological convergence between countries has increased.

As a result, the shift from low-value-added products to high-value-added products increases the share of added value in production and economic growth, emphasizing the importance of competitive structure and openness to the outside world (Yurttancıkmaz, Kabadayı & Emsen, 2014). Technological innovations and the

continuous evolution of knowledge-based products challenge Ricardo's (1817) static comparative advantage theory.

In this context, although the role of competition in the functioning of capitalism is important, competition alone is insufficient to explain all the dynamics of capitalism. In this thesis, we will discuss that the concept of collaboration, beyond competition, also plays an important role in the functioning of today's capitalism. If economic activity is accepted as a capital accumulation process, it is obvious that free competition is not a process that only eliminates the difference between profit rates and balances the market. At this point, Karl Marx's (1894) analysis of capitalism's internal contradictions and crisis tendencies are of critical importance in understanding the limits of competition and the dynamics of capitalist production.

In the third volume of Karl Marx's *Das Kapital* (1894), the tendency for profit rates to fall and its effects on capitalist production were examined in detail (pp. 171-181). Marx saw this tendency as one of the internal contradictions of capitalism and argued that these contradictions could lead to crises. The process of capital accumulation is directly related to the decline of profit rates, and capitalists constantly turn to new production techniques, markets, and work organizations to stop this tendency. However, according to Marx, these efforts only deepen the internal instabilities of capitalism. As capital accumulation increases, fixed capital (such as machines and factories) is incorporated more into the production process, which causes labor to be used relatively less and, therefore, surplus value to decrease. The decrease in surplus value leads to a decrease in profit rates. However, this competitive pressure may not be sufficient for long-term sustainable development. Therefore, collaboration and competition should be emphasized to achieve economic welfare.

The development of technology and efficiency advantages during those periods has become more explicit than at any other stage in the 21st century, but the dynamic nature of technology and efficiency advantages go beyond classical economics. In the digital economy, the level of connectivity and integration is totally different from traditional production processes. Digital products and services are required to be

adaptable on a daily basis to changing demands from customers and market conditions. Competitive advantage must, therefore, rest not only on cost and price advantages but also on innovation, flexibility, and rapid adaptation capabilities.

Competitive advantages have now become more complex and dynamic in today's economy, where value is increasingly driven by information, data analytics, and digital services. The transition from low-value-added products such as basic agricultural commodities or raw materials to complex digital products increases added value in production and leads to faster economic growth. This economic transformation will reshape production processes and economic growth and has set new criteria for the comparative advantages of countries in the digital age.

However, measuring the value of digital products and services is more difficult compared to traditional commodities (goods). This is largely due to the complexity of these products and services. In the traditional economy, a product output (bread, computers, fans, etc.) was obtained from several inputs (labor, workers' time, fuel, materials, buildings, equipment, etc.).

In this context, competitive structure and openness to the outside world play an important role. Businesses now need to compete not only in the local arena but also on a global level. The importance of collaboration on economic benefit and social welfare is not sufficiently considered. Competition has a negative impact on long-term stability and social dynamics since it is structured around immediate interests as opposed to long-term ones.

The spread of the digital economy has laid the foundation for a new economic structure in which collaboration is possible. We argue that new economic structures sustain economic activities not only through competition but also through collaboration and partnerships. From this, we have demonstrated that classical economics is not enough to explain the present day's economic structure. While classical economists define competition as a mechanism that ensures the efficient distribution of resources (Smith, 1776; Ricardo,1817; Mill, 1848), Schumpeter (1942) sees competition from a different

perspective. According to Schumpeter, competition does not only manage existing resources. It also triggers the process of innovation and creative destruction processes (Schumpeter, 1942, p.83). The widespread sharing of technology and information enables entrepreneurs to develop new business models and competition to become more dynamic. Therefore, competition stands out as a factor that moves the economy forward and provides continuous innovation.

Schumpeter believes that markets are defined by monopolistic competition rather than perfect competition. He argues that firms prefer differentiation when determining pricing strategies rather than offering identical commodities at the same prices (p.79). According to him, this differentiation strategy not only creates a short-term competitive advantage but also contributes to the long-term growth potential of the economy by fostering dynamism in markets. The efforts of firms to create their own market areas ensure that the economy is in a constant transformation process; this transformation offers markets both innovation and sustainable growth opportunities (p.82). According to Schumpeter, economic growth is the result of a cyclical development process, and the recessions in these cycles are not the failure of capitalism but a natural part of the renewal process (Schumpeter, 1983, p.19).

The economy is rapidly growing with explosions of innovations and entrepreneurship; when these innovations reach saturation, the recession begins. These intermittent investments created by innovations provide the basic conditions for cyclical currencies and long-term growth. Thus, even periods of recession increase productivity and pave the way for sustainable growth (p.20). This process means that innovative initiatives transform existing market structures and replace old products and processes with new ones. Schumpeter questions the sources of growth; he argues that the transition from the “economic cycle” to “evolution” is due to “innovations.” Schumpeter explains the emergence of economic cycles in his book *Theory of Economic Development* (1912), where he developed the concepts of “entrepreneurs” and “innovations.” According to Schumpeter, entrepreneurs create changes by recognizing market opportunities and organizing resources effectively. Innovations stand out as Schumpeter's fundamental factor in growth. The effects of innovations on economic growth are closely related to

Schumpeter's concept of "creative destruction" (Schumpeter, 194, p.26). This concept refers to the continuous internal revolutionizing of the economic structure. The process of creative destruction occurs with the destruction of economic activities and the emergence of new ones. When innovations emerge, new markets and demand arise.

This process affects the formation and development of economic cycles. Schumpeter states that cyclical movements emerging through innovations reveal the power of dynamic changes in economic and industrial activities. As innovations occur intermittently over time, "there is no reason to suppose that there will be a single wave-like movement affecting economic life" (Schumpeter 1935, p. 7). Some cycles may be short, while others require more time to exert their full effect. Kondratieff introduced the theory of 'Long Waves' in his work *The Long Waves in Economic Life* (1925). This theory suggests that major technological innovations and structural transformations cause economic cycles of 40-60 years. The Kondratieff cycle is an important theoretical framework that explains the long-term effects of major technological innovations or economic changes on economic growth and transformation (Kondratieff, 1925) These cycles result from major innovations such as the steam engine, the railroad, and electrical engineering (Slim,2019). Long-term economic growth emerges as a result of this continuous cycle of innovation and competition. This approach has put forward an original interpretation of growth that he calls "evolution" since 1912 (Schumpeter, 1912, p. 106). Schumpeter states that Marx (1867) viewed economic evolution as "a different process produced by the economic system itself" (Schumpeter, 1937, p. 166).

These fluctuations always occur in either an instantaneous or delayed relation to each other" (Schumpeter, 1935, p. 3). The prosperity stage is characterized by increased investment and demand through clusters of innovations. First, credits and capital goods create inflation. Then, the increase in the amount of additional goods leads to deflation, which triggers a depression with the beginning of credit payments. During this stage, many companies fail due to the decrease in profit opportunities. In other words, innovations cause the extinction of existing companies and job losses.

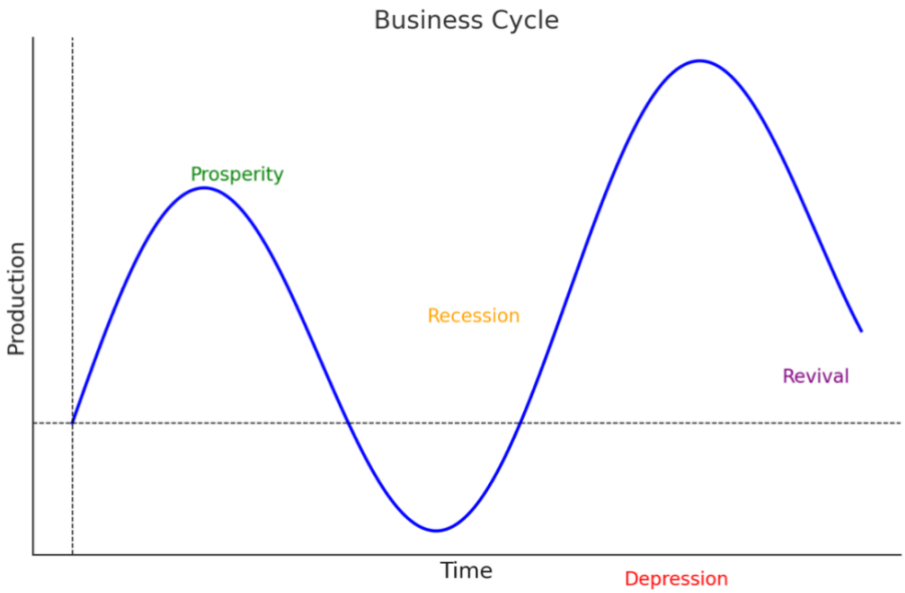


Figure 1. The Cycle (Own illustration inspired by Schumpeter 1935, p.7)

In addition, the phenomenon of imitation leads to saturation in the market, reducing monopoly rents, which in turn causes a decrease in investment and a decline in economic activity. The crisis can only be overcome with new waves of innovation, demonstrating the strong cyclical effect of the process of creative destruction.

2.4. Concluding Remarks

As a result, in the context of the digital economy, we see that classical economic theories, including Schumpeter's (1942) own framework, are inadequate for fully capturing the complexities of modern economic processes. Schumpeter's theory of creative destruction offers valuable insights into the cyclical nature of economic change driven by innovation. However, while Schumpeter emphasized competition as the primary driver of economic growth, the digital economy emphasizes the importance of cooperation and collective innovation.

The rapid pace of technological advances and the interconnections of businesses in the digital age mean that economic development today often stems not from competition alone but from cooperation across sectors and actors.

Contrary to Schumpeter's creative destruction, in the 21st century, instead of a one-way disruption of old structures, we now observe an ongoing evolution of industries through shared knowledge, open-source platforms, and inter-firm collaboration.

Integrating cooperation with competition should be recognized as a fundamental aspect of innovation in today's interconnected, fast-paced environment. As the digital economy continues to evolve, it becomes clear that economic growth and technological advancement are driven not only by competition but also by synergies created by collective efforts across industries and sectors. In the next section, we will examine the scope of the digital economy and analyze its impacts on industries, markets, and societal structures. We will examine the key defining trends of the digital economy, such as technological advances, digital platforms, and the rise of data-driven decision-making. We will also look at the expansion and societal impacts of the digital economy, focusing on how technological growth is reshaping not only businesses but also societal structures and everyday life. Finally, we will shed light on competitive and collaborative strategies by discussing the digital economy and market dynamics. This section will comprehensively understand how collaboration, competition, and innovation are intertwined in the digital age.

CHAPTER 3

SCHUMPETER CREATIVE DESTRUCTION AND DIGITAL ECONOMY

Joseph Schumpeter’s theory of creative destruction provides an important conceptual tool in explaining the innovation and transformation processes of the capitalist system. However, this section emphasizes that the digital economy has different dynamics than Schumpeter envisioned. It is argued that the concept of creative destruction has evolved into a mechanism that is not only a destructive process in the digital age, but also shaped by cooperation and transforms existing structures. In the age of digitalization, technological innovations are seen to occur not only through the efforts of individual entrepreneurs or large companies, but through networks focused on cooperation and sharing on a global scale. These processes allow for the emergence of a model that aims not only at economic gain but also at social and technological integration.

3.1. Collaboration Over Disruption: Schumpeter in the Digital Era

Schumpeter's theory, while focusing on the traditional understanding of competition, may reflect a quasi-ignorance regarding the effects of collaboration and collective creation on economic success in the context of the digital economy. Schumpeter foresees that economic development and innovations will destroy old structures and create new and innovative structures. However, in the digital economy, collaboration often transforms old structures instead of destroying them.

The concept of "creative destruction" was first introduced by Joseph Schumpeter in *Capitalism, Socialism and Democracy* (1942). Schumpeter’s viewpoint on innovation mainly resides in innovations experienced during the Industrial Revolution. He generally defines innovations as radical changes in production processes, products, or

services. Schumpeter believes that entrepreneurs and large firms are the key agents in this process, revolutionizing the economy by exploiting untested technological possibilities.

> *"Capitalism, then, is by nature a form or method of economic change and not only never is but never can be stationary."* (Schumpeter, 1942, p. 82)

This quote emphasizes that innovation inherently disrupts and transforms existing structures. This means that innovations and technological advances will create instability for existing industries and companies. This process is a natural part of economic growth and development and requires constant transformation and renewal. The digital economy is characterized by rapid technological advances and continuous innovations. Schumpeter emphasizes how entrepreneurs constantly search for new inventions, creating better products or services (Schumpeter, 1942, p. 132). In this context, entrepreneurs have shaken the balance and encouraged economic change by innovating. Entrepreneurs bring innovation to life by implementing newly generated ideas and technologies in the market.

Schumpeter thought that innovations were limited to the actions of individual entrepreneurs or large firms. Entrepreneurs change production processes using new technologies or inventions, develop new products, or produce existing products in new ways. Schumpeter distinguishes between invention as the creation of new ideas and innovation as making these ideas for commercialization.

In the digital age, innovations are not only disruptive. They involve more integrated processes, such as new value-creation models and data-based strategies. While Schumpeter emphasized the power of competition in capitalism, it has contributed to our deep understanding of the nature of this competition. However, while Schumpeter's focus was primarily on innovation and entrepreneurship, collaboration and partnerships have become increasingly important in today's digital economy. Contrary to Schumpeter's view, innovation in the digital economy does not lead solely to disruption; instead, it often results in the transformation of existing structures through collaboration, which in turn increases profitability through collective efforts.

Technological advances, particularly in the digital age, create value while lowering costs (Overby and Audestad, 2018). When information and communication technologies are at the center of disruptive innovation, the market often shifts from the production of physical goods to the production of digital goods and services. Market sectors such as media, telecommunications, and finance have been significantly affected by these disruptive innovations based on ICT (Grossman, 2016). Nevertheless, through correct usage, technologies can offer a sustainable competitive advantage by producing assets that embody knowledge that may be captured through digitalization. Technological advances enhance the value of information technology and decrease costs associated with the commoditization process. Despite huge investments into technology, the value of technological assets that tend to become outdated rapidly might drop. However, information has increasing cumulative value. In other words, the more information we have, the more valuable it is. With the widespread use of digital technologies, new business models such as inter-enterprise collaboration and the shared economy have emerged. Modern businesses are turning to collaboration initiatives in order to be more successful in the digital economy. The digital economy fundamentally changes the traditional understanding of competition and emphasizes the importance of collaboration and partnership. This has always existed in capitalism but was not sufficiently recognized.

Information asymmetry between producers and consumers can lead to imbalances in the market (Overby & Audestad, 2018, p. 7). In contrast to material production, digital products have negligible production costs. Thanks to digital technologies, production costs are approaching zero when viewed from the perspective of classical economics. However, intangible costs are still greater than zero. Unlike in the past, today's globalization process is more complicated and rapid. Nonetheless, interconnectivity can lead to economic development; hence, trade, communication, and travel have reached unprecedented levels (Zekos, 2022, p. 72). Advances in information technology (IT) have expanded collaboration, making it possible for businesses to work with partners globally. For instance, technological advancements like cloud computing, which are essential for virtual communication tools and digital business platforms, have transformed how businesses work together. This has provided actors

with access to a wider talent pool and a more diverse business partner network. In the digital age, economic activities are carried out not only through competition but also through collaboration and partnerships. Digital technologies have rapidly transformed for over twenty years, reaching nearly half of the world's population and causing radical changes in society. This progress has been quicker than any other technological advance in history (UN, 2020).

However, while these advances are fundamentally changing the way businesses collaborate globally, they also highlight a significant shift in the nature of innovation that extends beyond Schumpeter's traditional framework. The digital economy has introduced new dynamics that go beyond Schumpeter's focus on individual entrepreneurs or large firms. Today, innovation often emerges through collective efforts, such as open-source projects and digital platforms where collaboration plays a central role. This shift highlights that innovation is no longer the result of individual creativity alone but is increasingly driven by shared knowledge and collective processes.

Schumpeter's (1942) ideas have provided a basis for the subsequent development of innovation theory. The evolutionary economics approach (1980s) argues that the basic dynamics of economic growth are closely related to innovation and technological change (Erdil & Pamukçu, 2015). Influenced by Joseph Schumpeter's concept of "creative destruction," this approach argues that competition between firms is a driving force that accelerates innovation processes. Richard Nelson and Sidney Winter in their seminal work *An Evolutionary Theory of Economic Change* (1982), have emphasized how innovation processes in the economy are shaped by the routines (p.16) and adaptations (p.154) of micro-level actors (firms, individuals) within the framework of evolutionary economics. Nelson and Winter (1982) have stated that technological progress is a cumulative (p.3) and collaborative process and that innovation is not only due to individual inventions but also to continuous learning through interactions between institutions (Fagerberg & Verspagen, 2002). They have also drawn attention to the importance of technological competition as the basis of evolutionary economics. According to Nelson and Winter (1982), innovations can intensify at certain time

intervals and cause waves of growth in sectors, and this process helps us understand the evolutionary dynamics of economies (Fagerberg & Verspagen, 2002). In this sense, the views inherited from Schumpeter, especially the fact that the success of innovative firms contributes to expansion by attracting imitators, is one of the main themes of evolutionary economics.

Nelson and Winter (1982) argued that innovation is not limited to individual inventions but rather a continuous learning process shaped by basic routines and adaptation in institutions. Nelson and Winter emphasized that innovation is a cumulative and collaborative process and argued that this process is how economies develop. Their evolutionary economic theory suggests that economic changes do not progress in a straight line but are cyclical. According to this approach, economies develop in long-lasting cycles that expand and contract at certain periods. The Kondratieff cycle is an important theoretical framework that explains the long-term effects of major technological innovations or economic changes on economic growth and transformation (Louçã, 2020). These cycles usually begin with the emergence and spread of major technological innovations and show their effects in waves that fundamentally change the economy.

In this context, Freeman (1987) takes Nelson and Winter's ideas a step further, emphasizing that cycles lead to not only economic but also social and institutional transformations (Freeman, 1987). According to Freeman, each major wave of technological innovation causes significant changes not only in the business world but also in different areas of society. For example, events such as the Industrial Revolution or the digital transformation in the modern age represent periods of expansion that deeply affect not only the economy but also lifestyles, methods of doing business, and social institutions.

As a new technology or innovation spreads throughout the economy, social institutions and structures must adapt to these innovations. However, since this adaptation process takes time, the economy can sometimes oscillate between cycles of expansion and contraction. As technology advances, these imbalances between old structures and

new requirements can manifest themselves in the form of stagnation and conflict in the economy. In relation to this view, Dosi et al. (1988) emphasize the role of technological change as the center of these cyclical patterns in economic theory and provide important information on how developments in economic dynamics are directed.

Freeman's (1987) contributions are of great importance at this point. Building on Schumpeter's (1942) theory of innovation, Freeman advanced the understanding of how innovations occur within systems. Freeman developed national innovation systems (Freeman, 1987, p. 4). Freeman's work showed how cooperation between government, industry, and academia fostered economic growth and that technological developments were the product of collective efforts within an ecosystem, not just individual entrepreneurs. In other words, the existence and importance of cooperation in the economy cannot be ignored. In the next section, we will examine the scope of the digital economy in more detail. We will see how digital transformation is not just a technological advancement but also a process of reshaping business models and economic relations.

3.2. Digital Economy and Its Scope

The 21st century is a time of technological rise and digitization, with the economy experiencing exponential growth and innovations driving the present. The term "digital economy" was first used in 1994 by Don Tapscott in his book *Digital Economy: Promise and Danger in the Age of Network Intelligence* (1994). In this book, Tapscott explained how modern technologies, especially the Internet, have transformed the business world through their impact on products, services, processes, marketing, and other operational activities.

Digital technologies are now a reality that enriches interactions between individuals, firms, and even countries. One of the effects of digitalization is that the area in which social relations are conducted has changed, and therefore, the way these relations are organized has changed; relations have ceased to be strictly regional and have become

“global” or “meta-regional” (Slaughter, 2004). It refers to the change in the place where social relations are carried out and the change in the way these relations are organized. The widespread use of digital technologies affects many areas of businesses, from production to marketing, supply chains to customer relations.

The digital economy encompasses the role played by various components of IT, including hardware, software, applications, and telecommunications, in the internal operations of organizations, transactions between organizations, and interactions between individuals and organizations (Malecki and Moriset, 2010). The technologies that form the basis of the digital economy go beyond the internet and personal computers. IT is found in a variety of devices such as mobile phones, GPS units, and digital cameras, as well as in everyday consumer products such as washing machines, cars, and credit cards, as well as industrial products such as computer numerically controlled machine tools, lasers, and robots. Only 30-40% of microprocessors are used in consumer electronics (which includes computers, smartphones, tablets, and portable devices). The remaining percentages are followed in decreasing order by automotive, industrial automation, networking and communication, medical, and healthcare systems (Grand View Research, 2024). Evaluating the current performance of the digital economy plays a vital role in determining the functioning of governments, businesses, and civil society organizations (Digital Cooperation Organization, 2024).

The digital economy can be defined as a pyramid (Figure 2). At the top end of the pyramid are silicon foundries and semiconductor industries, which are highly important. This sector is not large, but it consists of various products like consumer electronics, motor vehicles, machinery, and industrial equipment. The second level of the pyramid includes the computer and telecommunications industries. These sectors are considered the “core sectors” of the digital economy. The third level represents the “main body” of the digital economy and includes production and service activities based on digital technologies. People in these sectors spend most of their working time on computers and telecommunications devices. In the manufacturing sector, such as the automobile or aircraft industries, e-commerce, media and entertainment, and financial services are prominent in the service sector. The base of the pyramid consists

of sectors where digitalization is slow or, at most, partial: agriculture, fishing, and mining (Figure 2).

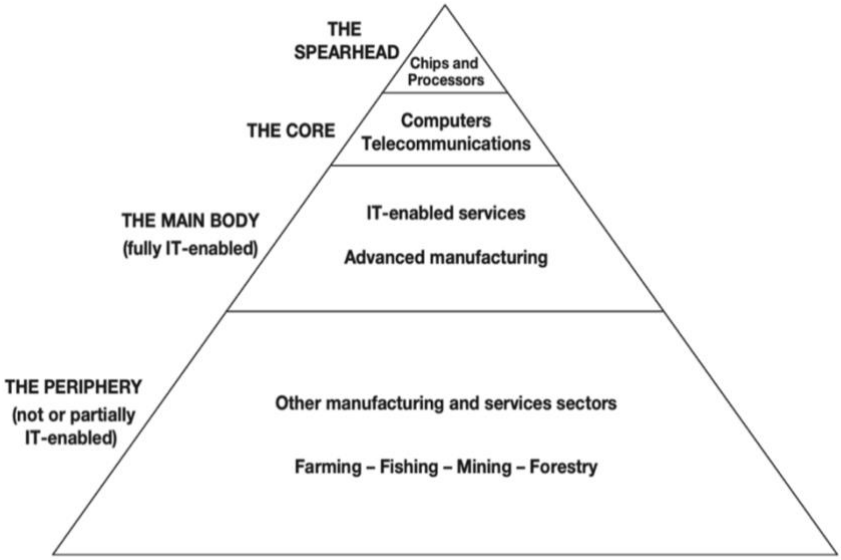


Figure 2. The pyramid of the digital economy (Malecki and Moriset, 2010, p. 6).

Today, there have been rapid advances in information and communication technologies (ICTs), which have resulted in a significant increase in the role of collaboration strategies within an economy. These technological advancements have made collaboration widespread, transcending limitations posed by traditional competition theories, thus having the potential for more comprehensively explaining economic transformations. Traditionally, competition theories have focused on achieving market equilibrium through free competition. However, the dynamics of the digital age emphasize the critical effects of collaboration and partnerships on economic success. In particular, big data analytics, artificial intelligence (AI), and other digital technologies are transforming economic performance by increasing collaboration among businesses and creating new business models. Through these technologies, firms can develop stronger relationships that involve sharing data, joint R&D projects, and integrating supply chains. (Sjödin et al., 2021, p. 579-580)

Therefore, it is essential to understand collaboration tactics rather than concentrating on competitive theories alone in solving the complex and dynamic framework of the

digital economy. Collaborations are important for innovation and sustainability development in a digital economy. For example, businesses can utilize data analytics and AI tools to respond faster to market changes and use their resources more wisely. Such things as big data analytics assist companies in having a better understanding of customer behavior so that they can optimize their strategies.

Similarly, AI applications reduce costs and increase efficiency by automating and optimizing production processes. Joint R&D projects contribute to the development of new products and services by increasing the innovation capacity of businesses. Supply chain integration, on the other hand, provides efficiency in supply processes by enabling businesses to work more closely and harmoniously with each other. Such collaborations are key to achieving competitive advantage and sustainable growth in the digital economy(Singh, Garg, & Sachdeva, 2018, p. 149-161).

3.3. Opportunities and Challenges Of Digital Economy

The digital economy has transformed traditional business models and operations with rapid technological advances such as 5G networks, the Internet of Things (IoT), AI, and cloud computing. This hyper-connected world provides numerous benefits by encouraging innovation, collaboration, and economic efficiency. However, there is a darker side to the digital economy that could raise concerns about social inequality, surveillance, and distribution.

3.3.1. The Promise of the Digital Economy

The implementation and integration of advanced digital technologies such as 5G mobile networks, IoT (Internet of Things), cloud computing, AI, big data analytics as well as robotics indicate that we are moving from a hyperconnected world into digitalized economies and societies. In other words, the new reality is characterized by an overlapping traditional economy with this one. In this new reality, the traditional economy overlaps and integrates with the digital economy, which brings innovative approaches to business models, production, organization, and governance. This

convergence results in a new, digitally intertwined system where models from both realms interact, creating more complex ecosystems that are currently experiencing organizational, institutional, and regulatory transformations (ECLAC, 2018).

Innovation occurs more effectively through collaboration. Research and development projects are handled more comprehensively and in depth thanks to the sharing of knowledge and experience. This allows companies to achieve much more than they could do by relying solely on their own internal resources. Collaboration also allows for the sharing of risks. In this way, large projects that a single company may have difficulty undertaking become more manageable with the contribution of more than one company (Powell, Koput, and Smitt-Doerr, 1996).

Another important advantage of collaboration is that it creates faster and more effective learning processes by increasing knowledge sharing. Knowledge sharing helps firms gain a competitive advantage by accelerating innovation, especially in technology-intensive sectors (Dyer and Singh, 1998). Collaboration networks encourage the flow of knowledge between firms, allowing firms to benefit quickly from new knowledge (Uzzi, 1997). Collaboration allows firms to become more flexible and adaptable and to respond quickly to changes in the market (Teece, Pisano, and Shuen, 1997).

Digital transformation is an event that causes radical changes in every area of the global economy, enabling businesses to work more efficiently, increase productivity, and develop completely new and enriching business models. In particular, innovations such as artificial intelligence, big data analytics, and blockchain technology offer significant opportunities to increase the efficiency of businesses, reduce costs, and improve customer experience. One of the most striking features of the digital economy is that the marginal cost of digital products is zero (Overby & Audestad, 2018, p. 78). This allows companies to offer digital services for free or at lower costs, and from a Neoclassical perspective, leads to the creation of large-scale markets driven by efficiency and competition. Rapid innovations in the IT field are constantly introducing new technologies and are radically changing the way individuals and

businesses work by increasing productivity and optimizing resource allocation. While the flow of information was primarily physical in the old economy and relied on tangible media such as paper documents, printed materials, or physical mail. In contrast, the digital economy converts all information into digital formats represented by binary code (ones and zeros), enabling instantaneous transmission and processing over digital networks. This shift has led to what is often referred to as the "knowledge economy," in which information serves as a critical resource for economic activity. Information technology (IT) has facilitated this transformation, providing a variety of opportunities for innovation, efficiency and connectivity across industries and sectors. IT has provided various opportunities that allow markets to expand on a global level (Dicken, 2007).

The increasingly evident features of the digital economy reflect the transformation of the modern economic structure. These features include digitalization, where data generation and analytics and digital products and services come to the fore; connectivity elements such as network effects and the Internet of Things (IoT); flexibility, including agile business models and remote working opportunities; platform economy, characterized by multi-sided markets and ecosystem development; cross-border transactions such as global access and cross-border e-commerce; innovation supported by continuous technological innovations and R&D investments; customer-centricity, which offers personalized experiences with customer data; digital payment systems and the use of cryptocurrencies (Sasikumar and Sersia, 2020, p. 337).

In addition, intangible assets are crucial for the functioning of the digital economy; these include mobile users and job roles, non-necessity for local personel, trust in data quality and effective use of big data; network effects based on user participation collaboration; two parties located at different parts of the market using multilateral business models; monopolistic or oligopolistic tendencies within certain business models due to reliance on network effects; low barriers for entry plus fluctuations caused by rapid technology advancement which mark out the traits that now characterize a typical digital economy.

3.3.2. The Dark Side of the Digital Economy

Despite these advantages listed above, the digital economy has several problematic aspects. One of the most significant concerns is the rise of surveillance in society. As digital technologies permeate every aspect of life, vast amounts of data are being collected from users. Corporations and governments have unprecedented access to personal information, raising ethical questions about privacy and control. This data is often used to monitor behavior, track movements, and influence consumer decisions, creating a world where individuals are constantly under surveillance (Zuboff, 2019, p.10).

As of 2024, there are approximately 5.17 billion active social media users globally. The most popular platforms are Facebook, includes 3.07 billion monthly active users; YouTube, with 2.53 billion; WhatsApp, with 2 billion; Instagram, with 2 billion; and TikTok, with 1.60 billion (Statista, 2024). Social media platforms and tech giants have been criticized for using algorithms to manipulate users and increase engagement through the use of personal data. The amount of data produced by social media is rapidly increasing every year. These users create trillions of data on a daily basis. A large amount of content is produced, especially through video platforms and messaging applications. For example, more than 1 billion hours of video are watched daily on YouTube, and TikTok users spend billions of minutes on the platform in total (DataReportal, 2024). Social media produces petabytes of data every month. This data is formed by users' photos, videos, messaging, sharing, and interactions. Platforms can direct target audiences more effectively by using this data for advertisements and marketing campaigns. At the same time, the data flow on social media platforms is used to analyze individuals' digital traces, and meaningful information is obtained through big data analysis systems. There are many problems in social media where there is so much data traffic. Cyberbullying is a situation where individuals, especially young people, are targeted on social media platforms and exposed to online harassment. Such behaviors can negatively affect mental health. Addiction to social media use can cause addiction in individuals. The constant search for notifications and interaction can negatively affect real-life relationships.

Violation of privacy: personal information shared by users can be used by malicious people. Data leaks or hacking situations can threaten privacy.

Emotional manipulation: social media algorithms can highlight content that will increase certain emotional reactions of users, which can create psychological effects.

User Data Abuse: social media platforms collect user data and conduct targeted advertising. This situation increases the risk of users' personal information being abused. Misinformation and propaganda, as well as social media, allow misleading information to spread rapidly. This situation can increase social polarization and lead to decisions being made based on false information. Facebook algorithms played a major role in Trump's victory in the 2016 elections. Trump's campaign team used Facebook's data analytics and targeting features to deliver ads tailored to specific demographic groups. Algorithms prioritized content based on engagement, helping Trump's attention-grabbing posts spread quickly (Bogost & Madrigal, 2020).

Another major problem is the increasing income inequality in the digital economy. Although technology creates new job opportunities, these opportunities are often concentrated in areas that require high skills and education. This results in lower wages for workers in low-skilled jobs and increased income inequality. As a result, despite employment growth, significant wage differences are deepening income inequality (Tian & Xiang, 2024). The digital divide between those who can access and benefit from digital technologies and those who cannot continue to widen, leaving entire communities behind.

Additionally, the rise of automation and artificial intelligence (AI) has triggered mass unemployment. While digital technologies are increasing productivity, they also threaten to replace human labor in a variety of sectors. Jobs in manufacturing, retail, and even services are increasingly being automated, leading to widespread concerns about the future of work. According to a 2023 World Economic Forum (WEF) report, up to 83 million jobs could be eliminated by automation by 2027 (WEF, 2023),

particularly in roles that involve repetitive or manual tasks. In contrast, an estimated 69 million new jobs are expected to emerge, driven mainly by technological advances and a focus on sustainability. This shift could lead to structural unemployment as significant workforce segments struggle to find new employment opportunities in an increasingly digital world.

3.4. Key Defining Trends of the Digital Economy

Understanding the essential components of the digital economy and how these components interact with each other is critical to seeing how modern business models and technological advances collaborate. It was generally considered a reliable belief that the growing marketplace would absorb all products created (Molenaar, 2022, p.21). As digital transformation accelerates, one of the most significant changes is the shift from supply-driven to demand-driven business models is one of the most significant changes. Today's technological advances allow companies to respond more quickly to changes in demand. Information flows instantly throughout the supply chain, allowing the entire chain, from direct material suppliers to manufacturers and retailers, to adapt more quickly; this is called supply chain visibility. Marketing plays a key role because demand determines the supply chain's target, and supply-side capabilities support and sustain that demand. While the supply chain focuses on material supply, the demand chain targets market demand (p.23). In this new era, customer needs and preferences are prioritized, and businesses adjust their strategies based on real-time data and analysis.

These technologies enable companies to more accurately predict demand, optimize supply chains, and create personalized customer experiences (pp.45-50). Companies that leverage data-driven insights can strengthen their competitive position by responding quickly to market changes.

In addition, platform business models have become a dominant force in the digital economy. Platforms like Amazon and Netflix facilitate transactions between users and allow businesses to collect large amounts of data (p.46). This will enable them to better understand and predict customer needs. Platform-based ecosystems emphasize the

importance of increased collaboration and compatibility between players in the market, as companies aim to offer more comprehensive solutions to respond to consumers' changing demands. However, the digital economy is promoting customer-centricity. Companies increasingly focus on creating value by offering products and services tailored to customers (p.62). This has replaced traditional, uniform approaches with more agile and flexible models that can quickly adapt to consumer preferences and technological developments.

As a result, the digital economy represents a structure in which demand-driven models are at the forefront, and advanced technologies and business innovations help companies stay competitive. This shift in focus toward demand-driven strategies is crucial in understanding the critical defining trends of the digital economy. Figure 3 below visually summarizes these trends, highlighting emerging new business models, defining trends, and the technologies that shape them.

Figure 3. *"Accelerating the Digital Economy*," (Nazir, 2021)

When the defining trends of the digital economy are examined, modern business models are gaining ground over traditional business models. E-governance applications have enabled the online provision of public services and increased citizens' access.

Similarly, e-commerce is an expanding segment in the digital economy influenced by greater internet penetration levels among populations globally. Such global e-

commerce components like marketplaces have advantages and disadvantages for sellers and customers (Kawa & Wałęsiak, 2019). While marketplaces offer growth opportunities to online retailers, they also reduce the need to invest in a separate sales platform or have legal expertise.

With the development of the digital economy, economies of scale are becoming more important. This is due to the critical role of factors such as digital policies and laws, digital infrastructure, data analytics, and digital capabilities. Digitalizing laws and strategies speed up businesses' digital transformation, while digital infrastructure and data analytics enhance operating efficiency and reduce costs. Firms must be competent in digital skills because they enable them to use technology efficiently, thus gaining a competitive advantage.

Business-to-business (B2B) and business-to-customer (B2C) commercial marketplaces trade goods and services through electronic platforms. Such platforms offer secure environments for both sellers and buyers. With the widespread adoption of digital technology, organizations can achieve economies of scale more effectively. Especially in the e-commerce sector, digital platforms and marketplaces allow businesses to expand their customer base and reduce costs. These platforms allow businesses to enter the market quickly, avoiding high start-up costs and thus enabling them to continue their operations on a broader scale (Kawa & Wałęsiak, 2019).

The superiority of digital business models over traditional business models has brought about the restructuring of services and a greater emphasis on user experiences. The rise of industry ecosystems has increased cross-sector interactions and intensified collaborations. Technological developments that strengthen the digital economy's infrastructure have accelerated this transformation. For instance, 5G technology has dramatically enhanced data transmission speed, resulting in quicker and more reliable connections. While cloud computing enables information storage and access over the Internet, IoT allows devices to interconnect via the Internet within areas like smart homes, smart cities, and industrial automation. While artificial intelligence enables computer systems to exhibit human-like intelligence, big data analytics has made it possible to obtain meaningful information by analyzing large amounts of data.

Augmented reality (AR) and virtual reality (VR) have enriched user experiences by integrating digital information into the physical world. On the one hand, cybersecurity has ensured that online systems are protected together with digital information; on the other hand, robotics has transformed production processes, including those in the service sector, using automated techniques.

Strategies and regulatory frameworks that support the digital economy ensure the healthy progress of digital transformation. At the same time, technological infrastructure and data analytics increase the efficiency and cost-effectiveness of business processes. Digital skills facilitate the adaptation of the workforce to digital transformation, ensuring the sustainability of the digital economy. All these components and trends comprehensively explain how the digital economy is taking shape and the key factors underlying this transformation.

3.5. The Expansion of the Digital Economy and Its Societal Impacts

The growth of the digital sector has been instrumental in triggering economic expansion over the past few years. This shift toward the digital world reveals a situation that profoundly affects society, not only in the context of digital technology (Balcerzak & Pietrzak, 2017). The development of the digital economy can be explained by general-purpose Technologies, which elicit micro and macro-level productivity enhancements.

These technologies can be applied across several sectors, leading to an acceleration in microeconomic productivity growth and a long-term increase in macroeconomic productivity. Experience over the last three decades has shown that the development of the digital economy can be effectively utilized on condition that complementary technologies are implemented. General-purpose technologies (GPT) such as electricity, steam engines, and the internet affect the development of complementary innovations, creating positive externalities and network effects of investment. This mechanism is critically important for achieving long-term growth, especially for economies at the technological frontier.

At the microeconomic level, the potential impact of investments in digital economy infrastructure on productivity growth is most beneficial when associated with intangible investments in human capital and organizational resources. In addition, these advantages should be accompanied by substantial structural changes in the institutional environment within which companies operate (Balcerzak & Pietrzak, 2017).

Digital technology has completely transformed the ways individuals relate and share information. Social media platforms and digital communication tools facilitate instant connectivity among people worldwide (Castells, 2010). These have resulted in growing social networks and connectedness between persons. However, this progress has also led to privacy concerns and the separation of communities through technology (Boyd & Ellison, 2007). Integrating digital technologies into educational systems is changing learning methods and teaching approaches. E-learning platforms and digital education tools ensure increased student access and flexibility (Selwyn, 2016). Furthermore, age competencies, such as one's skill in accessing information, are critical to an individual's success in the information society (Van Dijk, 2005).
Labor market dynamics are profoundly shaped by the digital economy, too. Automation, artificial intelligence, and digital platforms have transformed traditional business models, creating new employment opportunities while causing some professions to become extinct (Brynjolfsson & McAfee, 2014). This situation might contribute to skills mismatching or job insecurity within labor markets. Therefore, policies for continuous education plus re-skilling are important for managing the effects of digitization on the labor force(Arthur, 2015).

Digital inclusion and access are some of the societal implications of digital technology. The digital divide refers to different levels of access to and use of technology among segments of society. It can deepen socioeconomic gaps and affect how much people can benefit from a digital economy (Van Dijk, 2005). Infrastructure investments, digital literacy training, and access policies are crucial to increasing digital inclusion (Helsper, 2012).

3.6. Digital Economy and Market Dynamics

In classical economic theories, free competition ensures market equilibrium and that the motivation of individuals to pursue their interests contributes to society's welfare. In an article published in Scientific American in 1990, Brian Arthur stated that many dynamics prevent the market from settling into the equilibrium state predicted by traditional economic theories (Arthur, 1990).

Traditional economic theory is based on the assumption of diminishing returns. Economic actions cause negative feedback, eventually resulting in a predictable balance between prices and market shares. This feedback stabilizes the economy by offsetting major changes through its reactions. For instance, high oil prices during the 1970s promoted energy preservation and increased the exploration of oil, which led to the expected fall of prices by the early 1980s. According to conventional theory, equilibrium implies the "best" outcome possible under current conditions: the most efficient use and allocation of resources (Arthur, 1990, p. 92). However, this picture often does not reflect reality.

In many parts of the economy, balancing forces do not operate. Instead, positive feedback magnifies the effects of small economic changes; the economic models that describe these effects differ greatly from conventional ones. Diminishing returns imply a single equilibrium point for the economy, while positive feedback-increasing returns create many possible equilibrium points. There is no guarantee that the chosen economic outcome will be the best among many alternatives. Furthermore, when random economic events select a particular path, that choice may be locked in despite the advantages of the alternatives. Arthur’s (1996) model shows that the market can lock in to a technology because of the increasing returns to adoption, even if there are superior alternatives. This is explained by path dependency, where small initial advantages can make a big difference (Arthur, 1996) It would be appropriate and meaningful to call this situtation a “luck out” because it is entirely a matter of chance which technology becomes dominant. If a product or country "lucks out" in a competitive market, it may maintain or even increase its advantage.

It no longer ensures predictable shared markets. Increasing returns are processes that reinforce themselves, so people who strategic or have the luck to be advantaged gain even more advantage. In contrast, those who lose advantage become even more disadvantaged (Arthur, 1996).

Such self-reinforcing processes are driven by positive feedback that magnifies the slight, early advantages of one among a set of competitors, eventually crowding out other competitors (Arthur, 1994). In such winner-take-all markets, history is very important. Small causes in early history can have large effects, a clear sign of nonlinear systems. Moreover, economists argue that the winner may not even be able to offer consumers the best possible alternative (Arthur, 1994). Advocates of increasing returns argue that static factors and dynamic processes must be considered to fully understand clustering. Static factors include the geographic attractiveness of a location in the absence of other firms. Dynamic processes refer to the history of entrepreneurs' initial decisions to choose a particular location, as well as firms' decisions to adopt that location to gain the benefits of being close to firms that do their business (Arthur, 1994).

The geographical attractiveness of the location and the actions of entrepreneurs evolve together, making the location more attractive over time (Krugman, 1995). These clustering and location dynamics in traditional economies may maintain a certain state of equilibrium. However, the dynamics of the digital age have increased the necessity of carrying out economic activities in a balanced manner. In this context, it has become important to balance economic activities not only through competition but also through collaboration and partnerships.

The rapid and continuous development of digital technologies has made the effect of positive feedback in markets even more evident. This situation calls for dynamic economic systems with multiple balancing points and always changing structures. In this regard, collaboration and strategic partnerships are becoming paramount if sustainable growth and equilibrium are attained within the digital economy (Arthur, 1990, pp. 92-99).

The success of the digital economy is shaped by collaboration rather than competition. This new collaboration-based approach provides a wider range of economic and social benefits. Thus, collaboration between individuals, businesses, and countries has become more attractive and has enabled them to gain a competitive advantage. In this context, there has also been a change in competitive strategies due to the impact of digital economies on collaboration. In addition to globalization and the intensification of competition, individuals, institutions, countries, and international organizations are taking more care of collaboration to win some competitive advantages. Collaboration at the global level enables various actors to combine their resources to produce innovative solutions and achieve sustainable development goals. In this context, the synergy provided through collaboration allows individuals and institutions to gain a more effective position in the global market.

3.7. Concluding Remarks

Schumpeter's (1942) theory of creative destruction has been influential in shaping our understanding of innovation and economic change. However, in the context of the digital economy, its focus on competition and individual entrepreneurship ignores an increasingly important element: collaboration. While Schumpeter emphasized the disruptive nature of innovation, where old structures are demolished to make way for new ones, the digital economy shows that innovation can transform and adapt existing structures through collective effort rather than outright destruction. The rise of digital platforms, cloud computing, and global virtual collaboration highlight the evolving nature of innovation, where businesses and individuals work together across borders to create shared value. This collective creation enabled by digital technologies challenges Schumpeter's traditional view that innovation is driven solely by competitive forces. In today's digital environment, partnerships, ecosystems, and collaboration networks play a key role in stimulating innovation and economic growth, often transforming industries without the need for radical disruption. In addition, the contributions of evolutionary economists such as Richard Nelson and Sidney Winter, as well as Freeman's (1987) concept of national innovation systems, emphasize the importance of cumulative learning and institutional collaboration in driving

technological progress. Freeman's work, in particular, shows that innovation is not the result of individual efforts alone but emerges from an integrated system involving government, industry, and academia. Consequently, while Schumpeter's theory remains a cornerstone of economic thought, the digital economy requires a broader perspective—one that encompasses both competition and collaboration. The dynamics of the modern economy are characterized not only by the destruction of old structures but also by their transformation through collaboration, knowledge sharing, and interconnectedness. This shift reflects the evolving nature of capitalism, where collaboration is as vital as competition in driving innovation and growth.

CHAPTER 4

COLLABORATION: BEYOND COMPETITION IN THE DIGITAL ECONOMY

This chapter examines the concept of collaboration within a theoretical framework and highlights its critical role in the digital economy. Collaboration has significant impacts not only on economic growth and innovation processes, but also on social structures. This chapter examines the dynamics of collaboration at micro and macro scales in comparison with coordination and cooperation. It reveals the practical dimension of collaboration in the digital economy with examples of Netflix's collaboration strategies.

4.1. The Importance of Collaboration

The purpose of our thesis is to emphasize the importance of collaboration. Today, it is as crucial as competition, which has long been the prevailing concept. In this sense, it is vital that all definitions provided by literature with respect to "collaboration" should be considered and framed properly using them. Individuals, businesses, and economic actors are looking for ways to create more value and achieve sustainable success by working together instead of competing. Collaboration is a form of interaction in which individuals or groups work together to achieve a common goal, perform a specific activity, or produce a product (Keyton, 2017). It occurs within teams or groups, but some collaborations can involve hundreds of people. Collaborations exist in all sectors, from for-profit companies to non-profit organizations, from non-governmental organizations to government agencies. Collaborations can also occur between neighborhoods, cities, states, regions, countries, and continents. Collaboration can contribute to increasing total welfare by encouraging efficient use of resources among economic actors. In other words, collaboration is as important as competition in today's

technological world. This situation is not a situation where competition has completely disappeared from the economy, but it continues to take place through collaboration.

4.2. Collaboration, Coordination and Cooperation

The terms collaboration, coordination, and cooperation are often used interchangeably in the literature, and it is important to examine the distinction between these terms in detail. The correct separation of these terms contributes to the understanding and management of collaboration processes in both academic and practical terms. Collaboration's meaning is described as "working together," "a joint venture," "working jointly with others," "joining forces," "working in partnership," "pooling resources," "acting as a team," and "cooperating with one another." According to research, the concepts of collaboration, coordination, and cooperation play an important role in the basis of relationships between actors. However, there are uncertainties regarding the definitions of these terms and a lack of common understanding in the literature.

Castaner and Oliveira examined the definitions of three terms in nine leading journals between 1948 and 2017 in their study *Collaboration, Coordination, and Cooperation Among Organizations: Establishing the Distinctive Meanings of These Terms Through a Systematic Literature Review* (2020). These definitions include three interactional dimensions of collaboration, cooperation, and coordination at different levels: attitude, behavior, and outcome. The systematic review confirmed the confusion and lack of consistency in existing definitions.

This study is the first systematic study to examine the use and definitions of the terms collaboration, cooperation, and coordination in the context of international collaborations (IORs) (Castaner and Oliveira, 2020). This study has provided us with a detailed examination of the usage and definitions of the terms collaboration, cooperation, and coordination in the IOR literature in order to support the main argument of our thesis.

It was thought that studies based on Latin etymology would be helpful in clarifying collaboration, coordination, and cooperation (Salvato et al., 2017). However, the modern usage of these terms may have changed over time. For example, coordination is Latin for "cum ord inare", meaning to organize or arrange with others. This definition emphasizes a particular type of joint action or organization. Cooperation, on the other hand, derives from the Latin "cum operare", meaning to work together with others. Some researchers, such as Salvato and others (2017), define cooperation with the broader concept of joint action. It comes from the Latin "cum laborare", meaning to work together with others. Cooperation means working together towards a goal agreed upon by two or more people. However, the different meanings between "laborare" and "operare" are still unclear. The use and meanings of the terms may have changed over time. Therefore, it is important to consider the definitions and usages in modern literature to fully understand these three terms.

Castaner and Oliveira's (2020) study aimed to reduce the conceptual confusion between the terms collaboration, coordination, and cooperation by systematically examining their use and definitions in the IOR literature. The analysis addresses two main issues; first, which of the three interactional dimensions (attitude, behavior, and outcome) are emphasized in the definition of a particular term and second, to reveal the differences in the dimensions included in the terms collaboration, cooperation, and coordination. When the results of the analysis (p. 14) are examined, it is seen that the behavioral dimension stands out in all of them when the references made in each of the three dimensions in these three terms are examined. However, the outcome dimension is generally associated with cooperation, collaboration is included only in one of the first definitions (Edstrom, Hogberg, & Norback, 1984), while coordination is not included in any definition. Authors generally evaluate these three terms in terms of behaviors, while emphasizing attitudes less. This is perhaps because attitudes are considered more at the interpersonal level (Zaheer, McEvily, & Perrone, 1998). In this context, the behaviors mentioned in the definitions of coordination and cooperation are largely similar; they overlap in terms of resource sharing, exchange, pooling, and joint action. In addition, it can sometimes be difficult to separate the meaning of the results from the behaviors. For example, Hardy et al. (2005, p.58) define

interorganizational collaboration as “the product of sets of conversations that draw on existing discourses.” While the concept of product suggests a result, the definition also includes behaviors such as conversation and dual communication that lead to that result.

An important conclusion here is whether each term should be associated with a specific dimension or a combination of dimensions. The connection between each term and a specific interactive dimension will strengthen the discriminative validity. However, researchers have consistently emphasized the behavioral dimension in the definitions of collaboration, cooperation and coordinate. In light of this information, we can say the following by focusing on the interactive dimensions included in the terms collaboration, cooperation and coordinate, which are the reasons why the concept of collaboration is at least as important as competition in today's economy. It allows companies to use their resources more efficiently through resource sharing and joint action. Sharing resources contributes to reducing costs and increasing efficiency. For example, research and development projects carried out between different companies allow for the sharing of costs and the reduction of individual expenses. This contributes to the faster development and marketing of new products (Hagedoorn, 1993).

4.3. The Complexity of Collaboration and Theoretical Frameworks

The 21st century is a time of technological rise a collaboration among individuals, businesses, nonprofit organizations, health and education institutions, and even governments is becoming more common as a powerful strategy for achieving a goal that would be impossible if they worked independently. However, defining collaboration is complex, and bringing together actors to collaborate and analyzing the outcomes of collaboration is often a difficult process. Wood and Gray’s *Toward a Comprehensive Theory of Collaboration* (1991) helps to understand this complexity by showing how collaboration can be approached from various perspectives. The article identifies six major theoretical perspectives on collaboration: resource dependence, corporate social performance/institutional economics, strategic

management/social ecology, microeconomics, institutional/negotiated order and political (Table 1). Resource dependence theory emphasizes the need for organizations to access the resources they need to survive. Corporate social performance and institutional economics theories explain how organizations negotiate and shape the institutional structures and norms they operate in (Powell & Dimaggio, 1991). On one hand strategic management theory along with social ecology theories study how organizations react towards environmental factors that they encounter while making strategic choices whereas microeconomic theory explains individual as well as institutional decision making within economics framework, where else institution theory together with negotiated order theory, describes negotiation processes through which organization operate within them hence constructing institutional structures and rules they are enclosed in . Finally political theory examines power relations plus political processes on which cooperation depends, these six theories provide a comprehensive view of coordination and alliances (Wood & Gray, 1991).

Table 1. Research Questions at the Organization and Domain Levels (Wood and Gray, 1991, p.8).

Research Questions at the Organization and Domain Levels

Theoretical Perspective	*Organization-Level Questions*	*Domain-Level Questions*
Resource dependence	How can environmental uncertainty be reduced without increasing dependence?	When do stakeholders adopt collaborative alliances?
Corporate social performance/institutional economics	How does a firm control and respond to its stakeholder network?	What is the role of business as a social institution?
	What is the firm's role in solving social problems and issues?	How are responsibilities for solving social problems allocated among actors?
Strategic management/social ecology	How can firms reduce threats and capitalize on opportunities within their environment?	How do partners in an alliance regulate their behaviors so that collective gains are achieved?
Microeconomics	How can an organization achieve efficiency in its transactions with other organizations?	How can collectivities overcome impediments to efficiency in their transactions?
Institutional/negotiated order	Why do organizations adopt certain structural configurations?	How do alliances interact with institutional environments?
	How do organizations achieve legitimacy with institutional actors?	Are alliances shaped by institutional environments or vice versa?
Political	Who has access to power and resources that affect the organization?	Who has access to power and resources that affect the domain?
	Who does and does not benefit from the distribution of power and resources that affect the organization?	Who does and does not benefit from the distribution of power and resources within the domain?

Lewis's (2006), work is an inclusive examination of the literature on collaboration that highlights areas where literature converge and diverge in terms of defining collaboration. Therefore, Lewis's definitions and the relationships between these definitions provide a strong basis for explaining that collaboration as important as

competition by revealing the various dimensions of collaboration. Furthermore, Lewis (2006) conducted a study that aimed to identify points of convergence and divergence by comprehensively analyzing the collaboration literature so that organizational communication scholars could conduct their studies in this field more systematically and in depth. He presented an analytical review of the collaboration literature from 1995 to 2005.

Focusing on collaboration definitions, he identified five main points of convergence. The first point emphasize that definitions of collaboration focused on action and doing (Gould, Osborn, Krein, & Mortenson, 2002); problem solving (Barren, 2000; Berg et al., 1998; Kumpulainen & Kaartinen, 2003; Rudawsky, Lundgren, & Grasga, 1999; Young & Flower, 2001); working, playing, and creating (Macduff & Netting, 2000; Wilczenski et al., 2001); discussion (Barge, 2002; Wilcenski et al., 2001); decision making (Keyton and Stallworth, 2003; Young and Klingle, 1996); learning (Barge, 2002; Ellingson, 2003; Lesser and Storck, 2001; Wilczenski et al., 2001) and sharing of information/resources/expertise (Breu and Hemingway, 2002; Gross et al., 2004; Kumpulainen and Kaartien, 2003; Wenger and Synder, 2000; Young and Flower, 2001).

Second, the definitions collaboration include the relationships between people; this implies that individuals or other institutional units work together or jointly (Henneman, 1995; Macduff & Netting, 2000), "non-hierarchical" relationships (Hardy, Phillips, & Lawrance, 2003; Tschannen, 2004). Lewis considers these relational qualities as "the perceptions or attitudes of participants toward one another" (2006; p. 219) rather than a structural requirement.

Third, he noted that the scholarly literature converges on some aspects of the equality of participants through collaborative interactions. In some cases, these definitions of collaboration directly address the need to avoid status and power differences by ensuring equality. Equivalence is increased in terms of roles (Barron, 2000), status (Tschannen, 2004), and the value of expertise or contributions. This equality is also perceived as valuable by participants.

The fourth convergence is the emphasis on process. The term process appears in many definitions (Barge, 2002; Hardy et al., 2003; Macduff & Netting, 2000; Meiners & Miller, 2004; Mohr et al., 1996; Stohl & Walker, 1996).

Finally, Lewis (2006) described the informal and voluntary nature of collaborations that emerge. He argued that collaborations are not forced, but processes into which people enter "freely and without coercion." Furthermore, the process is owned and constructed by the actions of the participants (2006; p. 220). There are also references to concepts such as "self-organization" (Breu and Hemingway, 2002), "informality" (Wenger and Synder, 2000), and "voluntary participation" (Hardy and Phillips, 1998; Mohr et al., 1996).

As for points of difference; Lewis (2006) noted that the dimension of time is either defined or absent. Scholars who adopt a communicative flow would prefer that time be addressed, explicitly or implicitly, through other processes. The second point of difference, some definitions assume that there is a difference of starting point between the participants in the process. Cooperation will only occur if the parties have different views or ideas to reconcile Taylor (2002) defined "the reconciliation of the different interests of the parties." The third and final point of difference concerns the special emphasis on common/collective goals rather than an explicit focus on "outcomes" or the satisfaction of individual needs (Breu & Hemingway, 2002; Gross et al., 2004; Henneman, 1995). Some definitions focus on common and shared goals, with little or no mention of individual goals. These points of convergence and divergence in the 34 definitions of cooperation identified by Lewis (2006) highlight that, despite the existence of a considerable amount of cooperation research, there are significant differences in the ways that scientists approach and examine cooperation. Following Lewis's work that highlights the diversity in the collaboration literature and the commonalities and differences in this literature, moving on to Elinor Ostrom's (1990) important contributions on the collaborative commons would be a meaningful step towards addressing the concept of collaboration in a broader context. Ostrom's work not only helps us understand the different definitions and theoretical approaches to collaboration in the literature, but also shows how it can be made sustainable in

practice and how communities can effectively manage common resources. Ostrom's research on the governance of the commons provides an important foundation for examining the role of collaboration in economic and social spheres and its applications in the digital economy.

Elinor Ostrom's (1990, 2010) studies on common-pool resources criticize single-centered state or market-based solutions. Sustainable governance processes and community-based cooperation are among the important concepts she brought to economics literature. Ostrom opposed the concept of the *"tragedy of the commons*" first proposed by Garrett Hardin (1968). Ostrom predicted the inevitable overuse of common resources. She stated that factors such as social trust, common norms and polycentric governance can promote sustainable governance (Ostrom, 1990, p. 30).

In Ostrom's work *Governing the Commons* (1990), she deeply examines cooperation, community-based governance and polycentric governance styles. In this work, she determines the basic rules for governing the commons. Ostrom abandons the assumption that individuals are rational individuals who always look out for their own interests and states that there may be different motivations to ensure the sustainability of the commons. The individual in his understanding is not a rational individual who is devoid of the emotions of traditional economics; he is an individual who can develop different behavioral patterns according to his position, the conditions he lives in and the values she has. He argues that individuals and communities can act beyond rationality, with trust and cooperation. In traditional economic theories, it is assumed that individuals always act in line with their own interests. However, Ostrom argues that individuals can develop collaborative solutions within the framework of mutual trust, local context, and social norms (Ostrom, 1990; Poteete, Janssen, & Ostrom, 2010)

Ostrom's theory of the commons contributes to our understanding of the increasing importance of collaboration in the digital economy. In the digital age, information, data and digital platforms can be seen as resources to be managed like commons. Actors in the digital economy, especially multinational technology companies and

platform operators, are trying to manage commons through information sharing and collaboration. An important emphasis in Ostrom's work is that commons require collaboration not only at the local level but also on a global scale. In his article titled *Polycentric System for Coping with Collective Action and Global Environmental Change* (2010), Ostrom argues that polycentric governance systems can provide more effective management of complex commons such as global environmental problems. Ostrom's understanding of cooperation and community-based governance also provides a suitable model for the management of these digital commons (Hess and Ostrom, 2003). In the digital economy, cooperation and coordination mechanisms in which many different actors act together are necessary to ensure the sustainability of the digital commons. The sustainable management of digital commons, information, data, digital infrastructures should be based on trust between communities and flexible, polycentric governance systems (Ostrom, 2010; Poteete, Janssen & Ostrom, 2010).

4.4. The Dynamics of Collaboration at Macro and Micro Scales

When we look at the theoretical framework in economics, the picture emerges that standard microeconomics books do not give enough space to the concept of collaboration. We see that collaboration is only considered in the context of game theory in the analysis of oligopolistic and duopolistic markets (Mankiw, 1991, pp. 358-365; Arnold, 2008, pp. 246-261). Game theory helps us understand how to model the strategic behavior of firms and possible collaboration or conflicts in such markets. However, there is no comprehensive definition or review of collaboration in the macroeconomic literature. Although the subject of collaboration has not been sufficiently addressed in the economics literature, it is essential to emphasize that this area is a crucial topic of discussion.

There are different dynamics at play in collaboration which exert considerable influence over socio-economic interactions; these dynamics differ substantially at macro and micro scales. At the microeconomic level, collaboration is generally evaluated as strategic partnerships between firms, cartels or agreements between other

actors in the sector. These types of collaborations are strategic steps taken to increase market power, reduce costs or develop innovative solutions.

On the macroeconomic level, collaboration refers to trade agreements between countries, coordination, and political harmony between international financial institutions or governments. For example, international trade deals, multinational corporate partnerships, R&D consortia are some examples of such collaborations that foster innovation and economic growth. This creates an opportunity for more efficient resource utilization through enhanced sharing of information and improved competitive performance (Porter & Millar, 1985). The North American Free Trade Agreement (NAFTA), for instance, eliminated all trade restrictions between Canada, Mexico and the United States while also introducing regulations on cross-border investments, trade in services together with environment and labor standards (Krugman et.al 1987). Such international treaties serve to facilitate economic partnership by eradicating barriers to trade, encouraging access to raw materials markets, technological innovations, and ensuring long term economic growth and stability as partaking nations develop (Bhagwati, 2004, p.288).

The transformation of scale to micro-level collaboration highlights its importance for economic dynamics. For instance, the Fintech industry represents a notable case where modern internet technologies intersect with the financial sector. At the micro level, this intersection enables specifix partnerships within the Fintech ecosystem, fosterin innovation and addressing market demands efficiently.

Service providers, combine their capabilities and collaborate effectively to introduce new products and services, reduce costs, and ensure compliance (Gomber, 2017). A prominent example of such collaboration is the partnership between Fintech companies and traditional banks. These partnerships integrate digital wallets and mobile payment systems into banking infrastructures, making financial transactions more convenient and secure. This also includes collaboration within the Fintech ecosystem to establish standards and develop new applications in emerging areas such as blockchain technology and artificial intelligence. These collaborative efforts not

only spur innovation but also demonstrate the tangible benefits of inter-firm partnerships at the micro-level.

Advancements in digital communication technologies mean that these interactions can take place between people or teams that are too small to be noticed but have an increasingly important role moving forward. For example, social media platforms and online collaboration tools, micro-scale collaborations facilitate rapid information exchange and the emergence of innovative solutions, contributing to social changes and local economic transformations.

To fully comprehend the multi-dimensional nature of collaboration -an aspect infrequently explored in economic literature- there is a need to draw insights from other disciplines. The interdisciplinary approach helps us understand collaboration from various perspective, such as sociology, psychology, business management, and information technology. For instance, the collaborative dynamics in Fintech can benefit from insights into user behavior (psychology) or the organizational structures that enable successful partnerships (business management). Understanding what happens when different disciplines engage with each other enables us to view collaboration differently, with implications for both micro- and macro-levels of society. At both levels, collaboration aims for mutual gain and sustainability rather than pure competition in the long term.

4.5. Collaboration in the Capitalist Era

Business shifted towards collaborative practices lately where firms seek to collaborate. This can be attributed to several factors. To begin with, globalization has risen competition among international markets, driving companies to look for the differentiating their competitive advantage. Through collaboration, firms can achieve a stronger presence and greater effectiveness across diverse markets (Porter, 1980, pp. 31-40).

The rapid development of technology and globalization mean that competition between individuals and firms is no longer only at the individual level, but also at the level of alliances and networks. Firms need different expertise and resources to develop innovative solutions. Collaboration encourages innovation by providing

access to these resources (Chesbrough, 2003). Collaboration allows companies to reduce their costs and use their resources more efficiently. In particular, collaboration in areas such as R&D, production and distribution provides economic benefits by sharing costs (Dyer and Singh, 1998, p. 664). Collaboration plays a vital role in the modern business world in terms of achieving sustainable competitive advantage, efficient use of resources and producing solutions. Globalization and technological developments make it insufficient to focus solely on individual success. Instead, the collective power gained through collaborations and networks has become a critical factor in revealing their success in the long term.

New knowledge generation stands out as the most important driving force of collaboration processes. Additionally, during collaboration, parties learn from each other, improve their skills, and expand their knowledge. Especially in today's rapidly changing information and technology age, the production and sharing of new knowledge is one of the main elements that encourage collaboration in order to gain competitive advantage and offer innovative solutions. Naomi Ellemers' study (2020) emphasizes the positive effect of collaboration on new knowledge production. Easy and fast access to information and the ability to use this information in a practical way make collaboration the main engine of new knowledge production. Ellemers emphasizes the vital role of scientists collaborating more, especially in times of global crisis such as COVID-19. Collaboration requires the rapid integration of insights from different fields of knowledge in solving such crises. However, Ellemers states that competitive structures in academic institutions can hinder collaborative efforts that will strengthen new knowledge production. She argues that more space should be given to collaboration in order to sustainably produce high-quality knowledge in the scientific world (Ellemers, 2020, p.3). The research conducted by Andreas Pyka, Nigel Gilbert and Petra Ahrweiler (2007) shows how new knowledge production is supported by collaborative networks, especially in knowledge-intensive industries. According to Pyka and his colleagues, collaborative networks play a key role in knowledge production processes in today's knowledge-intensive industries. Through these networks, actors share knowledge with each other. Thus, they enable them to produce new knowledge more effectively and quickly. Therefore, new knowledge production is supported not only by individual efforts but also as a structure that brings

together different skills and resources within a collaborative ecosystem (Pyka, Gilbert & Ahrweiler, 2007, pp.667-693). The agent-based simulation model developed by Pyka and others shows how firms in innovative industries can provide more effective knowledge production through collaborative knowledge sharing. It is stated that in areas such as biotechnology, the flow of knowledge between actors is optimized through collaborative networks, which accelerates the emergence of innovative products and services. In this context, new knowledge production is not only a result of collaboration, but also a source of motivation (Pyka, 2007, p.670).

Vassiliki Papatsiba (2013) examined the epistemic role of collaboration in knowledge production processes. According to Papatsiba, the knowledge production process is not only the result of individual efforts. Knowledge production offers the opportunity to reach higher quality and more accepted knowledge through collaboration. Especially large projects and interdisciplinary collaborations accelerate new knowledge production by bringing together different knowledge sources. Such collaborations enable researchers to develop more comprehensive and effective solutions by benefiting from different areas of expertise in line with a common goal. In this context, knowledge production is considered as a process that develops in collaboration, and collaboration is positioned as one of the main driving forces of knowledge production (Papatsiba, 2013, pp.436-440).

As a result, new knowledge production and collaboration have dynamics that support each other. Ellemers, Pyka and Papatsiba's analyses show that knowledge production is not a result that individuals or institutions can achieve alone, but rather is strengthened through collaborative processes. New knowledge production occurs faster and in a broader perspective through collaboration, making knowledge production the main element that encourages collaboration. In today's knowledge society, we can say that new knowledge production is both a result of collaboration and its strongest motivation. Collaborative processes create a wider knowledge pool by sharing individual knowledge with the community, and the new knowledge obtained from this process encourages new collaborations for more advanced knowledge production. According to Dyer and Singh (1998), there are three main complementary reasons for collaboration in the modern age: gaining competitive

advantage (p. 662), reducing cost and increasing efficiency (pp.662-663), and sharing knowledge & information (p. 665). First, inter-firm sales provide sustainable competitive advantage through routine sharing of living assets and information. Second, these collaborations help to use existing resources more effectively and reduce costs. Finally, collaboration fosters exchanging knowledge & information (Dyer & Singh, 1998).

Small and medium-sized enterprises (SMEs) benefit significantly from collaboration, which plays a key role in fostering innovation, enhancing learning, improving production processes, driving product development, and establishing new market connections (Erdil, 2015). SMEs can strengthen their innovation capabilities, gain cost advantages and increase their competitive advantage by collaborating with other SMEs and large companies (Cooper and Kleinschmidt, 2001, p. 238). Such collaborations provide SMEs with access to the extensive resources and technical knowledge offered by large companies. Especially in an environment where technology is rapidly evolving and customer expectations are constantly changing, these collaborations are of critical importance in supporting new product development processes (Cooper, 2000, pp. 28-44). Business model innovation (BMI) refers to a company's innovative change of its customer value proposition, revenue stream or operational processes (Hidayat, et al, 2020, p.4426). For SMEs, this is of strategic importance to gain competitive advantage and adapt to changing market conditions. For BMI activities, firms must develop the capacity to acquire and process knowledge (Hidayat, et al, 2020, p.4432). In addition, SMEs must develop their strategic resources such as dynamic capabilities and external knowledge management capacities to be successful in BMI.

Strategic partnerships established by SMEs with large companies help overcome the difficulties encountered in the product development phase. Large companies provide market access and financial support to SMEs, while SMEs provide more flexible and innovative solutions, thus gaining mutual benefits from these collaborations (Campbell and Cooper, 1999, pp. 507-519). Such partnerships allow large companies to expand their market influence and help SMEs reach a wider customer base. For

example, collaborative efforts between large companies and SMEs in the manufacturing and technology sectors provide SMEs with innovative solutions and adaptability, while large companies gain market access and financial stability (Bouwman et al., 2016, p. 4430; Müller, 2019, p. 4431).

Collaborations between SMEs increase the competitiveness of these companies by encouraging the sharing of innovative knowledge and skills. Strategic collaborations between SMEs allow both parties to benefit by encouraging the joint use of resources and the exchange of information. In addition, partnerships established by SMEs with large companies are also of great value. Thanks to these collaborations, SMEs not only gain access to wider resources, but also have the opportunity to strengthen their innovative processes by gaining market knowledge (Kale, Singh and Perlmutter, 2000, pp. 217-237). These collaborations provide financial support to SMEs and allow them to benefit from the market experience of large companies.

Strategic alliances play an important role in the knowledge acquisition and technological development processes of SMEs. The relational capital created in these alliances is based on trust and mutual respect. Relational capital supports the learning processes of both parties and helps to protect the unique assets they have. For example, collaborations established with large companies facilitate SMEs' access to innovative processes and enable them to manage uncertainties in the market more effectively (Kale et al., 2000, pp. 220-225).

Collaborations between SMEs and partnerships between SMEs and large companies are of great importance in terms of promoting innovation and increasing competitive advantage, especially in dynamic and technology-driven markets. Although small and medium-sized enterprises are important actors of economic activities, they may face difficulties in implementing innovations due to their limited resources and capacities (Hock-Doepgen et al., 2020, p. 4431; Pucihar et al., 2019, p. 4430). Collaborations allow SMEs to overcome these limitations, increase their access to external knowledge, expand their resource base and improve their strategic flexibility (Miroshnychenko et al., 2020, p. 4428).

In addition, collaborations among SMEs contribute to knowledge sharing, resource pooling and joint problem-solving processes, helping these enterprises compete more effectively in the market. Research shows that business model innovation (BMI) is a strategic approach that many SMEs adopt to maximize these partnerships, and they leverage each other's strengths, especially in response to market and technology fluctuations (Gatautis et al., 2019, p. 4431; Liao et al., 2019, p. 4429).

To conclude, SME collaborations and partnerships between SMEs and large firms are critical in promoting sustainable business model innovation and increasing resilience to changing economic conditions.

Innovation is driven by tech giants such as Apple and Samsung through collaborations in different areas. Important partnerships have been established, especially in the supply chain. An example of this is that Samsung supplies key components such as OLED screens and processors for Apple's iPhone models. This means that both companies can manufacture and launch good quality products. While Apple utilizes Samsung's high-tech manufacturing capacity, Samsung too derives a sales analysis from partnering with a major customer like Apple (Kwok & Lee, 2015, p.2).

Similarly, in the automotive sector, companies such as Toyota and BMW have joint projects to both provide cost advantage and develop environmentally friendly technologies. For example, these two companies collaborate on fuel cell vehicle systems, platforms for sports vehicles, and lightweight construction technologies. In addition, joint research and development of new generation battery technologies such as lithium-air batteries are included in the scope of these collaborations (BMW Group & Toyota Motor Corporation, 2012). Moreover, in recent years when climate problems have emerged, collaboration plays a critical role in terms of innovation, efficient use of resources and sustainable growth. collaboration allows companies and individuals to combine their resources and expertise to achieve common goals. This makes it possible to produce innovative solutions, increase efficiency and ensure long-term sustainability. Instead of short-term gains focused on by competition, collaboration provides a more solid foundation for long-term success and stability.

Collaboration has become a market launch for not only companies but also countries. The global economy is complex and its structure keeps changing dynamically with respect to international parts making it difficult for countries to achieve long-term benefits through collaboration. For instance, NAFTA (North American Free Trade Agreement) was an agreement to allow free trade among the United States, Canada and Mexico which became effective on January 1st 1994. The main goal of the accord was to foster economic integration between these three countries by getting rid of barriers to trade and investment thereby promoting economic growth within the region. The success of NAFTA demonstrates how important international cooperation/integration is to economic development and welfare. (Hufbauer & Schott, 2005; Villareal & Fergusson, 2017).

After the examples of collaboration mentioned above, it would be useful to consider how collaboration plays a role in different areas, such as the digital media and entertainment sector. Global media giants, especially Netflix, use strategic collaborations at the international level to develop innovative solutions and achieve sustainable growth in a competitive market.

4.6. Netflix's Collaboration Strategies and Monopoly Power

Netflix started out as a firm that rented DVDs in 1998. Due to the explosive offering of video content on streaming media technology, Netflix transitioned from a DVD rental service to a video-on-demand (VOD) platform. Since 2023, Netflix has a market share of approximately 27% of the global content catalog (Statista, 2023). Netflix is one of the examples of collaboration and competition intertwined in the digital economy. Netflix collaboration strategies aimed at denying monopolistic power.

Marx's (1867) analysis of the contradictions in the capitalist system provides an important framework for understanding Netflix's business model. The contradiction of production and ownership: While Netflix collaborates with independent producers in content production, it monopolizes this production by gaining complete control over the platform. This reflects Marx's contradiction between the socialization of production and the concentration of ownership in private hands (Yalçıntaş, et al.,

2012). While Netflix uses the labor of content producers, it analyzes user behavior with the data obtained and uses this information only for its own benefit. Similarly, Netflix has built its content empire by collaborating with a wide range of global and regional content providers. These collaborations help Netflix not only expand its content catalog but also gain access to exclusive rights that further strengthen its position (Hsiao, 2024). Such indirect market consolidation through content partnerships allows Netflix to effectively increase its competitiveness without making full acquisitions. Netflix's expansion into over 190 countries has solidified the company's global market leadership. By targeting regional audiences with local content, Netflix has expanded its market share and increased its competitiveness (Saqd, 2013).

Netflix's shift to digital streaming has involved content presentation and data management. This approach allows Netflix to manage not only the content that users consume but also the way they consume it, making it difficult for smaller competitors to offer similar personalized experiences. By controlling both content and user interaction, Netflix solidifies its position in the market and reduces the potential for competition (Parker et al., 2021). By analyzing user behavior and offering tailored content suggestions, these technologies help Netflix maintain its competitive edge (Hsiao, 2024). While Netflix has not sought to outright acquire streaming platforms like Mubi or HBO Blue, its partnerships with content creators and other distributors have created a content monopoly. This collaborative approach, similar to Zuckerberg's strategy, has allowed Netflix to dominate the industry without the need for full-scale acquisitions. Like Meta, Netflix has been able to maintain its market dominance through a combination of content acquisition, viewer engagement, and technological control.

4.6.1. Netflix's and Amazon Web Services

Strategic alliances and investments in technology have reinforced Netflix's dominance in the digital content sector. By greatly assisting the business with data and content management, its usage of the Amazon Web Services (AWS) platform, in particular,

has been essential to satisfying the demands of its growing user base. AWS's cost-effectiveness, simplicity of launch, and flexibility made it the perfect choice to satisfy Netflix's expanding customer base. Through AWS, Netflix has been able to offer premium video distribution services since 2022 and has swiftly constructed the infrastructure required to give customers access to continuous experience (Amazon, 2022).

However, this collaboration did not only provide a support service. At the same time, Netflix, which competed with Amazon's own content enrichment platform, Amazon Prime Video, grew rapidly using AWS and increased its market payout. This combined an example of how collaboration and competition can work.

This procedure illustrates the competitive and cooperative dynamics present in the digital economy. Netflix's efficiency with AWS supports the potential of collaboration while at the same time strengthening how this collaboration creates a competitive landscape (Amazon, 2022). The digital economy is shaped not only by technological innovations, but also by path dependency resulting from historical events and past choices. Path dependency describes how small decisions made in the past drive future development (Yalçıntaş, 2006). The partnership between Netflix and AWS demonstrates how past investments support today's collaborative models. Path dependency enables new collaborative models to emerge, even as current systems limit innovation. As a result, the Netflix and Amazon example provides an important case study for understanding the complex relationship between collaboration and competition in the modern business world. The use of AWS has been critical for Netflix in managing its data, supporting content distribution, and scaling operations to accommodate its growing user base. In order to satisfy its growing infrastructure demands, AWS offered Netflix a scalable and affordable solution.

Nonetheless, this partnership between Netflix and AWS is an illustration of a sophisticated partnership in which two competing businesses cooperate to generate advantages for both parties. Although Netflix depended on AWS to meet its technological requirements, Amazon Prime Video, Amazon's own streaming service,

was also threatened by Netflix. This mutually beneficial connection demonstrates how cooperation and competition may coexist, a feature of the digital economy. Amazon, on the other hand, has increased AWS's reach by taking advantage of the rising demand for infrastructure services, while Netflix has used AWS's services to lower operating expenses and increase its investment in content creation (Parker et al., 2021). Netflix's success has been supported by its strategic technology investments, including its partnership with Amazon Web Services (AWS). The use of AWS has been critical for Netflix in managing its data, supporting content distribution, and scaling operations to accommodate its growing user base. AWS provided Netflix with a scalable, cost-effective solution to meet its expanding infrastructure needs, allowing Netflix to enhance its video streaming capabilities and provide uninterrupted service globally (Amazon, 2022).

However, this collaboration between Netflix and AWS is a complex example of two competing companies working together to create mutual benefits. While Netflix relied on AWS for its technology needs, it also posed a competitive threat to Amazon's own streaming service, Amazon Prime Video. This symbiotic relationship highlights how collaboration can coexist with competition, a hallmark of the digital economy. Netflix leveraged AWS's services to reduce operational costs, allowing it to invest more in content production; Amazon, on the other hand, has expanded AWS's reach by capitalizing on the growing demand for infrastructure services (Parker et al., 2021).

4.6.2. Netflix and Technofeudalism

Technofeudalism is characterized by the transformation of the capitalist economic system, where traditional market dynamics and profit motivations are replaced by digital platform dominance that extracts rents through data control and user dependency. Varoufakis describes technofeudalism as a stage where "capitalism is dead… its dynamics no longer govern our economies" (Varoufakis, 2021). Netflix's role as a technofeudal lord can be derived from Varoufakis' discussions of cloud capital, where he argues that the new form of capital that has emerged in the last two decades is more potent than its predecessor, driven by the privatization of the internet by America's and China's Big Tech (Varoufakis, 2021). Similarly, Nick Srnicek's analysis in *Platform Capitalism* (2017) highlights how platforms have become central

to the current capitalist system by collecting and controlling vast amounts of data. This shift has transformed the way users interact with technology, affecting not only media consumption but also deeply embedded in social interaction and cultural participation. Srnicek argues that these platforms are restructuring capitalism by creating new business models that use extensive user-generated data, thus creating new forms of economic and social dependency (Srnicek, 2017, p.9)

This transformation has been described as a move towards 'platform capitalism', where companies such as Google, Facebook and Amazon dominate not only because they provide services but also because they control data, a critical asset in the digital economy. This control allows these platforms to optimize user experiences and create new economic opportunities, but also poses challenges related to privacy, data security and the potential for monopolistic dominance. The dominance of streaming platforms like Netflix or Spotify highlights this shift, and illustrates a broader shift from traditional capitalist structures to what some theorists describe as 'technofeudalism', where data is the new currency.

These platforms rely on ongoing user participation to collect data, which feeds algorithms that personalise content, further addicting users to their services. This cycle increases platform dominance over traditional industries, shifts the focus of economic power and redefines cultural and social norms around technology use.

4.6.3. Netflix's Collaboration with Antitrust Implications

The rise of digital giants like Netflix, Amazon, and Google has presented new challenges to traditional antitrust policies. Historically focused on price and output effects, these policies have struggled to adapt to platforms that are evolving with network effects and data-driven services (Kahn,2018). For Netflix, which has evolved from a DVD rental service to a global streaming leader, its competitive advantages lie in exclusive content and economies of scale that strengthen its market position. The power of Netflix and other digital platforms often comes from network effects, where the value of the service increases as more users join. This can create winner-take-all

dynamics that make it difficult for new entrants to compete. While platforms like Blockbuster have failed to adapt, Netflix has leveraged technological innovations and user data to personalize recommendations and optimize its content offerings. Critics argue that existing antitrust frameworks may not adequately address the unique nature of digital markets. Traditional analyses that focus solely on price are less effective when services are offered for free or at minimal cost, as seen on subscription-based or ad-supported platforms (Kahn, 2018). Calls for reform include considering factors such as data monopolization and the ability to exclude competitors through exclusive agreements.

Historic antitrust cases involving Microsoft and Facebook show that regulators can act to limit monopolistic practices, but only after platforms have gained significant power. Addressing antitrust in the Netflix context requires developing legal standards that account for network effects, data control, and the dual nature of business models. Policies should encourage fair competition while leaving room for innovation and consumer choice. The collaborative relationship between Netflix and Amazon Web Services (AWS) has fueled discussions about monopoly power and antitrust concerns in the digital economy. While this partnership benefits both companies by ensuring Netflix maintains a seamless user experience through reliable infrastructure, it has also raised concerns about market concentration. The 2020 hearings of the U.S. House of Representatives Committee on Policy Proposals and Regulation on Digital Marketplace Competition highlighted the inadequacy of existing laws to fully address the complexities of digital platforms, including those exemplified by Netflix (U.S. House of Representatives, 2020, p. 6). The discussions emphasized the importance of reviewing antitrust approaches to consider vertical integration, data use policies, and acquisitions of new competitors.

Based on the Sherman Act of 1890, U.S. antitrust policy focuses on preventing monopolistic behavior and protecting consumer welfare. Netflix's significant investments in original content and pricing strategies have led some analysts to question whether its practices restrict competition. While this expansion has provided consumer benefits such as diverse programming and improved viewing experiences,

critics argue it may reduce market innovation in the long run. The 2020 Policy Recommendations and Regulation Judiciary Committee on Digital Market Competition hearings raised questions about the adequacy of existing laws to address the challenges posed by modern digital platforms, including Netflix. These discussions emphasize the need for antitrust policies to address traditional monopolistic behavior while also considering the effects of vertical integration, data use policies, and the acquisition of potential competitors.

4.7. Concluding Remarks

This chapter emphasizes not only the importance of competition but also the importance of collaborating efforts with other players in the economy. This involves the cooperation of individuals, businesses, and other economic actors to reach set objectives. Such collaboration can take the form of teams, organizations, or countries, and it saves resources and improves the quality of life. Indeed, competition exists, but its effectiveness can be enhanced by cooperation that allows for the collective advancement of goals.

The terms cooperation, coordination, and collaboration are often used interchangeably in the literature. However, it is imperative to separate these concepts to fully appreciate the process of cooperation. Operation means working together to achieve common objectives, while coordination and collaboration mean interaction and organization.

The complexity of cooperation is explored from a variety of theoretical perspectives. As one of the theories of cooperation, Wood and Gray's (1991) theory offers a wide angle that outlines many factors that can be regarded in cooperation. However, there are hardly any studies that focus on cooperation concerning much more than game theory and oligopoly markets, which tend to be mostly taken for cooperation-oriented strategic alliances. The transition to more collaborative approaches in the capitalist, globalized, and more advanced technological world can be attributed to the balance of the firm's diversification or inter-firm cooperation. More firms appreciate

competition, over competitive business resource scarcity. This creates space for collaboration, which speeds up innovation, cuts costs, and strengthens business competitiveness. This section shows that strategic partnership enables the achievement of business objectives in most cases, particularly within digital economies. The adoption of collaborative modes of working cannot be seen as a replacement for competition alone; instead, it promotes efficiency and enhances the ability to remain competitive, which is a necessity in today's business environment.

CHAPTER 5

COOPETITION: IN BETWEEN COMPETITION AND COLLABORATION IN THE DIGITAL ECONOMY

This chapter analyzes “coopetition” strategies, where competition and collaboration coexist. The theoretical foundations of coopetition are examined in the context of game theory, complementary assets, and business ecosystems. It discusses how applications such as open banking, blockchain technology, and digital payment systems increase the effectiveness of coopetition strategies, with examples, particularly from the Fintech sector. The chapter shows how coopetition balances innovation and competitiveness in the digital economy.

The coopetition concept, which combines elements of competition and cooperation, has deep historical roots in the economic activities of traditional villages in Italy. The development of small businesses in Italy offers essential lessons from the perspective of the "coopetition" model, in which cooperation and competition are balanced. The characteristics of these businesses challenge the classical definitions of modern industrial organizations. These organizations contain dynamics that intertwine competition and cooperation. Small businesses in central and northeastern Italy, especially in the Emilia-Romagna region, compete strongly but work in dense cooperation networks. Firms subcontract to each other according to their areas of expertise or collaborate on joint projects. These partnerships make it possible to invest in innovation that would be too large for a single firm. In the late 1960s and early 1970s, in particular, large firms began to outsource production to small businesses in order to circumvent labor costs and strict labor laws. (Piore & Sabel, 1981, p.18) Although the role and contribution of trade unions in economic operations are often overlooked, their influence has been significant, particularly in regions like Emilia-Romagna. These unions have played a role in protecting labor rights and supporting

small businesses' success (Piore & Sabel, 1981, p. 24). The historical ties between trade unions and left-wing political parties facilitated this cooperation. They made strategic calculations aimed at balancing workers' interests with economic growth. However, this relationship is complicated by ideological and historical factors that explain why trade unions support cooperation with small firms (Piore & Sabel, 1981, p. 27). Initiatives by local governments, such as the establishment of industrial parks, encourage small businesses to share resources and develop joint projects (Piore & Sabel, 1981, p. 41). Such infrastructures create an environment that allows firms to cooperate while maintaining their competitiveness. In the context of cooperation, these partnerships between firms support rapid market adaptation and innovation. Large firms in Italy had difficulty coping with direct labor costs due to increasing labor rights and labor restrictions imposed by unions.

In the 1970s, decentralization of production occurred in response to the restrictions faced by large-scale factories. (Piore & Sabel, 1981, p.5) Large firms created more flexible production processes by working with smaller units. Small businesses were seen to use general-purpose machines and a workforce with broad skills to adapt quickly to market changes. This formed the basis of a collaborative structure and increased their competitive advantage in production. (Piore & Sabel, 1981, p.38)

Small businesses constantly innovate in their product development processes, often doing so in an environment where they learn from each other and share technical solutions. For example, engineers, technicians, and craftsmen from different fields worked closely with each other to optimize production techniques and design new products.

Small businesses in Italy provide a competitive advantage by producing high-quality and original products rather than low-cost labor. Especially in the fashion, shoe, and motor industries, the innovative structure of these businesses has provided a significant advantage in the international market (Piore & Sabel, 1981, p.2). Firms show resistance against large businesses by using common machinery, sharing technology, and cost-cutting partnerships. This solidarity contributes to the sustainability of the

local economy and reduces economic imbalances between regions. Italy's traditional family businesses and craft culture played an important role in providing labor and capital. However, it is seen that these traditional structures were not sufficient on their own for success, and modern cooperative entrepreneurship and legal regulations were also effective . Initially, the strict regulations created by labor movements and unions in large factories encouraged small firms to form more flexible structures (Piore & Sabel, 1981, p.30). In later periods, the sustainable development of these firms was supported by the unions' cooperation with modern small businesses and the protection of labor.

In this context, the competitive and collaborative production models of Italy's small businesses constitute a valuable example for other industrialized countries. Understanding the historical and structural factors behind Italy's success in balancing competition and cooperation provides a foundation for exploring the broader concept of coopetition.

Coopetition refers to a situation where two or more rival firms compete and cooperate at the same time (Bengtsson & Kock, 2003). This concept allows firms to both collaborate and produce innovative solutions and increase their market share by competing in an environment where the boundaries between strategic alliances and competitive practices are blurred (Luo, 2007).

Business is often described as a war: to defeat competitors, to put suppliers in a difficult position, and to capture customers (Brandenburger & Nalebuff, 1997, pp .18). In contrast, coopetition can be used as a strategy to maximize profit and long-term success. This strategy allows firms to use both competitive and collaborative dynamics to achieve a sustainable competitive advantage (Walley, 2007; Luo, 2005). In this perspective, there are winners and losers. In the words of Gore Vidal, “It is not enough to be successful, others must fail.” However, in today’s business world, it is necessary to listen to customers, work with suppliers, form teams, and even form strategic partnerships with competitors.

In fact, most businesses succeed when others succeed. For example, as Microsoft develops powerful software, demand for Intel chips increases, and as Intel produces faster chips, Microsoft software becomes more valuable. This is mutual success, not mutual destruction. In business, competition and collaboration go hand in hand: collaboration in creating a pie, competition in dividing it. The concept of coopetition was introduced by Raymond Noorda in 1995 and has since found wide resonance in academic literature and the business world. As Noorda put it: *"You have to compete and cooperate at the same time."* For this reason, the term "co-opetition" was adopted. Park and Gynawali (2014) developed the concept of coopetition further, focusing on the strategic dynamics in which collaboration and competition are intertwined. In these studies, they have detailed how coopetition works at both institutional and sectoral levels.

The concept of coopetition is of great importance, especially in sectors where technological innovations are intense. In these sectors, businesses need to cooperate with each other to gain competitive advantage and offer innovative solutions. These sectors face challenges such as shortened product life cycles, R&D investments, and the integration of multiple technologies. In this context, firms need to cooperate with each other to gain a competitive advantage and offer innovative solutions (Park & Gynawali, 2014).

Research on coopetition has witnessed a lack of theoretical support for it (Felzensztein et al., 2019). It has also been observed that knowledge is displaced and fragmented because it is a combination of two different phenomena, such as competition and collaboration. Both have different sets of justifications and theories associated with them (Rouyre and Fernandez, 2019). According to the literature study *A review of coopetition and future research agenda* (2018) conducted by Menna, Dhir, and Sushil, they concluded that the two theories, game theory, and resource-based view (Bahoo et al., 2020; Rajala and Tidström, 2021), lead to the combined phenomenon of collaboration.

However, they also stated that there are not only two theories related to collaboration. There are other theoretical routines such as paradox theory, network theory and transaction cost economics. Competition between competitors, that is, competition between firms, is based on the sector and the firms operating (Peng et al., 2018; Chai et al., 2019). Competition between firms is a separate field of study to understand such dynamics (Chiambaretto et al., 2020). The competitive behavior of a firm is explained by various characteristics related to the sector it is in (Chiao et al., 2020). Factors, drivers and results like these add real dimension and explain why, what and how coopetition happens (Crick and Crick, 2021).

Moreover, most organizations have realized that relying on their own resources is not enough for more significant innovation performance (Lee et al., 2019). The accumulation of knowledge over the years is essential. Since coopetition formation is dynamic, it is difficult to understand its causes or drivers; the methodology allows such paradoxical relationships to be understood. In the study of Menna, Dhir and Sushil (2018), they aimed to capture the essence of coopetition by analyzing the literature on various parameters to measure the depth of studies at different stages. The keywords "coopetition" or "co-opetition" were searched in the "ISI Web of Sciences" database. Thus, it provides citation data on articles dating back to 1950 (Alon et al., 2018).

Since competitive and cooperative forces are fundamentally conflicting in nature, they also work against each other, especially when one of these forces is excessive. Building on this basic idea, recent studies have shown the importance of trying to balance the intensity of competitive and coopetition at the dual level to achieve innovation benefits (Park, Srivastava, & Gynawali, 2014).

However, firms often enter into multiple alliances simultaneously and, therefore, have to manage their alliance portfolios (Hoffmann, 2007; Jiang, Tao, & Santoro, 2010). Because collaboration is paradoxical (Chen, 2008) and dynamic (Das and Teng, 2000; Luo, 2007), managing collaboration is difficult (Pellegrin-Boucher, Le Roy, and Gurău, 2013). When companies enter into such relationships, tensions arise because managers have difficulty understanding and managing the conflicting demands arising from the opposing forces of competition and collaboration (Gnyawali et al., 2012). Companies vary in their ability to manage collaboration tension because some

companies are more exposed to collaboration tension and may learn how to manage it over time. Drawing on the literature on organizational learning (Inkpen & Tsang, 2007) and capabilities (Eggers & Kaplan, 2013), it is suggested that a firm's experience with coopetition will help it better understand coopetition and establish routines and practices to effectively manage coopetition (Menna, Dhir, & Sushil, 2018).

A different approach, taken by Dagnino and Rocco (2009), examines how the current economic and financial crisis has increased the importance of coopetition strategies. This crisis emphasizes the need for competing firms to develop joint solutions and makes this strategy more attractive in an environment where credit funding opportunities are diminishing. Coopetition helps firms reduce their costs by offering the opportunity to share the gains from joint efforts. In other words, when resources are abundant, firms may engage in competition and accept potential loses. However, in resource-scarce environments, cooperation becomes advantageous, and firms rely on mutual support.

The distinction between strategic alliances and coopetition is not clear. Coopetition can be considered as an extension of alliances established between firms and emphasizes collaboration. While strategic alliances analyze only the alliance itself, coopetition includes the effects of comprehensive competition on a wider range of products and services (Luo, 2007).

Coopetition is widely applied, especially in high-tech industries. Sectors such as telecommunications, consumer electronics, media and video games are among the areas where coopetition strategies have been successfully applied (Chen, Li, & Dvorak, 2006). Coopetition can be observed at local, regional and national levels. These levels help us to understand how collaboration and competition occur at different scales (Arsenault & Castells, 2008).

Coopetition has also been studied from a platform perspective. Platforms allow firms to exploit contributions from other network players, leading to strategies that

coordinate network activities. This is particularly important where coordination and appropriation gains are possible and promote value creation.

The coopetition perspective accepts that a structure emerges in where both value creation and value sharing processes occur. These processes take place within the interdependence between firms, with competitive and cooperative dynamics existing simultaneously. In this context, a new strategic collaboration model is developing between firms. This model expresses a structure where competition and collaboration are interconnected and where companies will provide mutual benefit. This strategic collaboration allows companies to produce more sustainable and innovative solutions in times of crisis (Dagnino & Rocco, 2009).

5.1. Game Theory and Coopetition

In the real world, companies or countries are interdependent, and their behavior affects others. Coopetition can be defined as a system of actors with overlapping interests and goals. This strategy is characterized by common interest and goal convergence (Czakon, 2010). Coopetition optimizes access and distribution of resources and core competencies. The best course of action for a company depends on the strategies that other companies will adopt. Each company's attitude is determined by the predictions it makes by anticipating the actions of rival companies. This situation is characteristic of a game that expresses the interdependence of the interests of different players and can lead to conflict or collaboration situations (Brandenburger & Nalebuff, 1997, p. 26).

Game theory is an important tool used to analyze these dynamics. In the framework of cooperative games, the value created by vertical chains between suppliers, companies and customers is examined. The value created by a particular actor is calculated by subtracting the value created by all players in the vertical chain except the questioned player, taking into account the value created by all players in the vertical chain. It provides the emergence of the concept of complements and complementors and suggests including these actors in a new model (Brandenburger & Nalebuff, 1997, p.

144). Game theory is an approach that models how a pie is divided and shared. These insights have an important place throughout coopetition. Traditional economics assumes that the structure of markets is fixed and sees people as simple stimulus-response machines. (Brandenburger & Nalebuff, 1997, p. 9). Sellers and buyers assume that products and prices are fixed and optimize production and consumption accordingly. Traditional economics works well in established and mature markets; however, it cannot capture the creativity of people in finding new ways to interact. In game theory, nothing is fixed. The economy is dynamic and constantly evolving. Players create new markets and take on multiple roles. They innovate and do not accept products or prices as fixed.

5.2. Complementary Assets and Capabilities in Coopetition

The main theme of collaboration is to create the value that can be obtained. This method of creating value may differ for each business. However, one of the strategies emphasized by coopetition is to cooperate with actors called "complementors" (Brandenburger & Nalebuff, 1997, p. 34). Complementors are people who make your products and services more valuable, unlike competitors. This concept is of great importance especially for the pioneers of the information economy. For example, hardware needs software; the Internet needs high-speed telephone lines. A single person or organization cannot establish the infrastructure of the new economy alone; this structure is a system consisting of many complementary elements.

In this context, studies by scholars such as Adner and Kapoor (2010) and Lavie (2006) specifically address how collaboration creates value through interdependencies in ecosystems. Adner and Kapoor (2010) examine the impact of technological and organizational interdependencies on firm performance in innovation ecosystems and state that a firm's success depends not only on its own resources but also on the innovation capabilities of external actors. In these ecosystems, a firm's success depends not only on its own internal capabilities but also on the collaboration of complementary actors both up and down the value chain. For example, Airbus' development of the A380 model is dependent on contributions from external actors

such as airports, regulators, and simulator manufacturers, beyond the firm's own engineering capabilities (Adner & Kapoor, 2010, p. 307).

Lavie (2006) extends the theory of resource-based competitive advantage in the context of strategic alliances, arguing that a company's competitive power is based not only on its own resources but also on the complementary assets provided by other firms it partners with. According to Lavie, the synergy between a company's internal resources and the complementary assets it obtains in its partnerships offers the opportunity to create "rents" through the alliance. Thus, developing strategic relationships with complementors allows companies to achieve competitive advantages that they cannot achieve on their own.
This perspective aligns with Brandenburger and Nalebuff's (1997) assertion that competition and cooperation are not mutually exclusive. Their view emphasizes the strategic importance of complementary assets. To optimize performance, firms must develop and manage these strategic relationships with complementors. These assets contribute not only to value creation but also to the firm's competitive position in its industry.

Understanding the current state of an industry is crucial for both new and established companies, as it helps identify the strengths and weaknesses of the industry. There are various analytical frameworks for assessing industries and competition within industries. One of the most widely used methods is Michael E. Porter's "Five Forces" analysis (1980), which includes the intensity of competition, threat of substitutes, bargaining power of suppliers, threat of new entrants, and bargaining power of customers.

In this context, the "*Value Network"* model developed by Brandenburger and Nalebuff (1997) becomes particularly important. This model addresses two of the five forces outlined by Porter, specifically the company's suppliers and customers. It provides a horizontal dimension that includes players with whom the company does not directly transact but with whom it interacts. These players are alternative sources from which customers can buy products or suppliers can sell resources. In this framework, complementors are entities that offer complementary products or resources. The Value

Network clarifies the roles of these players and recognizes that a single actor can simultaneously assume multiple roles within the network (Brandenburger & Nalebuff, 1997). In this context, understanding the dynamic interactions within the Value Network model is important to grasp how organizations can strategically position themselves within broader business ecosystems. As firms collaborate with complementors, they not only create value but also influence their position within the ecosystem.

5.3. Coopetition and Business Ecosystems

Coopetition is a key feature of business ecosystems where it refers to the process of firms collaborating with each other while at the same time competing against one another. This strategy helps companies maintain their competitive advantage and yet, at the same time, create joint value. A business ecosystem, according to Moore (1993), is a structure that comprises different but loosely affiliated participants. In this sense, coopetition becomes an integral part of such ecosystems since on one hand organizations are involved in creation with others, maintaining and developing their own position on another side (Hannah & Eisenhardt, 2017).

In business ecosystems, however coopetition plays a significant part in knowledge sharing and combined innovation. The findings by Riquelme-Medina et al. (2022) show that direct impacts of coopetition on firm performance are not expected but rather through mediating variables such as absorptive capacity and supply chain agility. Thus coopetition can enable companies reinforce their positions within markets and therefore enhance value creation through collaboration (Bengtsson & Kock, 2003).

However, implementing a coopetition strategy carries inherent risks, often leading to tensions among participating firms. Such strategies could lead to opportunistic behavior and information leaks especially when it concerns sharing of competing firms' information (Wu, 2014; Gnyawali & Park, 2011). In this context, absorptive capacity is pertinent to how well businesses manage these risks. Absorptive capacity in strategic management theory involves processes by which organizations access knowledge from external sources or partners, thereby improving the efficiency of

cooperative arrangements between firms that form separate entities (Cohen & Levinthal, 1990). For instance, Cohen and Levinthal explain absorptive capacity as the ability to convert external knowledge into internal resources suitable for rewarding purposes.

For coopetition to be effective in business ecosystems, it is essential for firms to possess a robust absorptive capacity. This capability allows organizations to resist competitive pressures and effectively utilize information acquired through partnership. According to Riquelme-Medina et al. (2022), coopetition does not directly bring about enhanced firm performance, but it can create indirect effects through absorptive capacity and supply chain agility.
Another important aspect of coopetition is the co-creation of knowledge, which plays a critical role in how organizations collaborate and innovate within ecosystems. The ability to absorb information and share information becomes more crucial.

Von Hippel (2005) states that with the democratization of innovation, users can participate in the process not only as consumers but also as co-creators of innovations. Within innovation communities and innovation ecosystems, users producing information according to their own needs strengthens the co-creation of the knowledge process. The free sharing of information allows all members of the community to benefit and produce new information. This perspective is directly linked to the open innovation framework, which encourages the collective creation and sharing of information (Hippel, 2005).

According to Chesbrough (2003), open innovation is an approach based on companies effectively using external resources instead of relying solely on internal resources when producing innovations. This concept allows businesses to benefit from external knowledge and technologies and their own research and development processes. Thus, companies access a wider pool of information within their own borders and by collaborating with external sources (Chesbrough, 2003).

Open innovation further points out that information flows should be two-directional. Firms access outside knowledge and supply their own domestic knowledge and

technologies to world markets. This two-way flow of knowledge allows businesses to reduce costs, accelerate innovation processes, and reach a larger market. With this approach, businesses collaborate within innovation communities and ecosystems to carry out the knowledge creation process in a broader context. In such a co-creation environment, it is important for knowledge to have public good characteristics; thus, everyone in the community can access knowledge and knowledge resources are not limited (Hippel, 2005). Open source projects such as Linux are one of the successful examples of such collaborative knowledge creation processes and enable businesses to create value jointly with external stakeholders (Chesbrough & Appleyard, 2007).

Nambisan (2016) states that with the opportunities provided by digital infrastructure and platforms, entrepreneurship is now shaped more through collaborative knowledge production. Digital platforms expand entrepreneurial activities on a global scale, providing businesses with access to a wide range of expertise. This infrastructure encourages entrepreneurs and other stakeholders to work together to share knowledge and create common knowledge. In digital innovation processes in particular, the concept of co-creation of knowledge is applied in a framework where businesses and stakeholders mutually add value, and in this framework, both entrepreneurs and communities contribute to the development of new knowledge (Nambisan, 2016).

Given the ongoing discussions about business ecosystems, it's important to emphasize a key example: financial technology (Fintech). Fintech illustrates how innovators can compete while also forming partnerships. By leveraging competitive dynamics, the Fintech ecosystem shares resources and fosters collaborative knowledge generation, strengthening its competitive edge.

5.4. Coopetition in the Fintech Sector: Strategic Approaches and Applications

A combination of competition and cooperation, coopetition, is often observed in the Fintech sector. In today’s rapidly digitalizing economy, competing independently may be insufficient compared to the benefits of strategic collaboration. The rise of Fintech, spurred by the evolution of the digital economy, exemplifies how collaboration among competitors drives innovation and improves service delivery. Therefore, the Fintech

industry emphasizes an essential aspect of contemporary business ecosystems: active collaboration and shared knowledge creation.

Fintech is a combination of "finance" and "technology," which encompasses various emerging technologies to digitize financial services (Gomber, 2017, p. 540). Fintech helps businesses and consumers manage their financial operations faster and more efficiently using specialized software and algorithms. Fintech, which has a wide range of services such as mobile banking, insurance, cryptocurrency, and virtual reality, represents a rapidly growing and evolving sector (Gomber, 2017, p. 543).

Fintech applications are triggering a significant transformation in the banking sector. Technological innovations are revolutionizing many areas from customer interactions to operational processes of banks, while ensuring the provision of more efficient, secure and accessible financial services. Mobile banking, in particular, allows users to perform financial transactions more easily and quickly, while at the same time increasing the security and accessibility of transactions thanks to digital wallets and payment platforms (Gomber, 2017). The integration of blockchain and cryptocurrencies into banking systems eliminates intermediaries, increases transaction speed and reduces costs (Shoetan & Familoni, 2024). In addition, artificial intelligence (AI) and machine learning technologies provide great advantages for banks in terms of risk management and personalization of customer experiences. Digital banks are transforming competition in the sector by offering faster, lower-cost and flexible solutions against traditional banking models (Harsono, Suprapti, 2024). These innovative effects of Fintech increase operational efficiency, expand access to financial services and offer more customized experiences to customers. This transformation process enables the banking sector to be shaped according to the requirements of the digital economy and new perspectives for the future to emerge.
This chapter examines the strategic approaches and practices within the Fintech sector, focusing particularly on the symbiotic relationship between traditional financial institutions and technology firms. This relationship are based on a balance of collaboration and competition. Fintechs' collaboration with banks typically focuses on product development and maintaining their customer base. Banks, by leveraging

Fintechs' flexibility and technological expertise, can improve their customer service and operational efficiency. This duality, where competition and collaboration coexist, highlights the interdependence within the Fintech ecosystem.

For example, despite their vast resources and technological advantages, Big Tech companies collaborate with banks to better address the evolving customer needs and meet the regulatory challenges of the financial industry. This collaboration not only enhances innovation but also fosters a more agile response to market changes. It demonstrates that collaboration often complements competition in the sector.

Furthermore, many large banks invest directly in Fintechs or acquire some minority stakes in such companies to access innovative Technologies and maintain their market competitiveness (Harrasim, 2021, p.5). Meanwhile, Big Tech companies like Amazon and Google, which hold extensive user bases and global brand recognition, present both opportunities and challenges for traditional financial institutions. These companies compete with banks and engage in partnerships to create mutually beneficial strategies that enhance value for both parties.

Such a trend, though, is more pronounced in emerging markets and developing economies (EMDEs), where Big Tech companies expand into the financial sector. In contrast advanced economies (AEs), tend to exhibit greater competition between Big Tech companies and traditional financial institutions (Harrasim, 2021, p.7). The diverse range of Fintech solutions creates significant opportunities in regions with limited access to banking services. These markets, where banking infrastructure is often lacking, have the potential to experience significant financial expansion through digital solution offered by Fintech. in services. For example, mobile payment systems and digital wallets gained widespread traction in regions, such as Africa, Southeast Asia and Latin America.

A notable example of M-Pesa, the digital liberation success in Kenya, launched in 2007. It is mobile financial services that have transformed the banking landscape, particularly in terms of financial inclusion (Ndung'u, 2017, p.17). Before its

introduction, only 26.7% of Kenyans had access to formal financial services. By 2016, this figure had risen to over 75%, demonstrating M-Pesa's profound impact in reaching the unbanked population (Ndung'u, 2017, p.17). Its platform allows users to store money on their mobile phones and perform various transactions, including payments, transfers and withdrawals. Financial institutions in Kenya have since embraced M-Pesa, leveraging it to manage micro-accounts and grow their customer base. M-Pesa demonstrates how it can provide financial services to the unbanked universal. Fintech startups' collaborations with local competitiors allow these markets to transition to digital banking more efficiently and quickly. Such collaborations create social change and economic growth, while also providing healthy financial solutions and creating positive impacts on the local economy.

It is important to consider the different dimensions of collaborative competition in the Fintech sector. In this context, blockchain technology, digital payment systems, and B2B collaborations are examples of how Fintech companies and banks work together to develop innovative solutions and gain competitive advantage. Below, we will detail how collaborations in these areas emerged and their impact on the sector.

5.4.1. Open Banking and Data Sharing

Open banking is a strong example of coopetition that enables financial service providers to offer innovative and integrated solutions on a common platform. Open banking applications, which have developed as a result of regulations requiring banks to share data with third-party Fintech companies, facilitate access to financial services by offering customers a wider range of services (European Banking Authority, 2022).

In the digital transformation process, open banking has emerged as an important innovation in the banking sector. This concept allows banks and financial payment systems to securely share customers' rights with third-party service providers. Thanks to application programming interfaces (APIs), customers can access their own financial data, and this data becomes available to various financial service providers (Yıldırım, 2020, p.32).

Open banking enables customers to benefit from banking services more flexibly and manage their finances more effectively. At the same time, it increases competition in financial services and paves the way for the development of advanced solutions. For example, open banking through Fintech companies can offer more personalized and cost-focused services (Yıldırım, 2020, p.35).

Another important contribution of open banking is that it increases financial inclusion. Data sharing and collaboration can reduce the costs of financial services while reaching wider audiences. For example, platforms like Square and Zelle partner with traditional financial institutions to provide affordable and accessible payment solutions, especially for underserved communities. These partnerships increase financial accessibility, streamline transactions, and foster more inclusive financial systems.

5.4.2. Blockchain Technology and Coopetition

Blockchain technology is one of the most exciting innovations in recent history, notable for its extraordinary durability and adaptability. This technology helps maintain the distributed ledgers that make cryptocurrencies possible and are critical to the functioning of modern finance (Gomber, 2017, p. 459).

Regarding financing methods, public digital token sales are emerging as exciting alternatives to traditional methods. However, current implementations of blockchain technology are generally not optimized for these specific purposes. Working processes have had to adapt to fundamental limitations such as high transaction verification costs, slow confirmation times, relatively low transaction speeds, cyber theft, inefficiency, and energy-intensive operations. The fact that these limitations can be resolved over time reveals the flexible nature of the technology and its innovation potential.

In the Fintech sector, blockchain is seen as a rapidly developing area with the potential to bring revolutionary changes to banks (Gomber, 2017, p. 459). This model will implement smart contracts with data processed on the blockchain via sensors, and

money transfers will be made automatically. This makes it almost mandatory for banks to provide services via blockchain (Yıldırım, 2020, p. 48).

Although there are uncertainties and security concerns in the adoption process of blockchain technology, the importance of cooperative competition (coopetition) in this area is increasing. For example, the R3 blockchain consortium was established in line with its members' common belief and desire to cooperate in the development of blockchain technology (Kawasmi, Gyasi, & Dadd, 2020, p. 116). Such collaborative approaches are critical to accelerating technological innovations in the sector and encouraging standardization.

Although the decentralized and peer-to-peer structure of blockchain makes it difficult to integrate with regulatory processes, its potential advantages have the power to radically change banks' business models and value creation processes (Yıldırım, 2020, p. 55). Therefore, carefully examining the effects of blockchain technology in the financial sector helps in making strategic decisions in an environment where competition and cooperation are maintained simultaneously.

5.4.3. Digital Payment Systems

Digital payment systems are one of the most common application areas of collaboration in the Fintech sector. PayPal and Venmo, through their collaboration with banks, allow users to make direct payments from their bank accounts and transfer money more securely and quickly. These collaborations improve the user experience and increase customer satisfaction. For example, PayPal and Venmo's cooperation with banks allows users to transfer money more quickly and securely globally (McKinsey & Company, 2019). The increasing collaboration between banks and digital payment systems is a key feature of the evolving financial landscape. Through such collaborations, banks are now able to incorporate advanced technologies offered by fintechs into their operations ,leading to innovative digital payment solutions. For example, most of them have included mobile banking plus digital wallets, thus enabling customers to make transactions through their smartphones without any hitch. At the same time, traditional banks have partnered with fintech companies, which

assist them in maintaining strict safety measures while providing more sophisticated and user-friendly services.

Furthermore, this collaboration does not only include technology but also strategic partnership alliances wherein banks and Fintechs share resources, knowledge, and infrastructure as well. In such a dynamic environment where customer expectations are driven by advances in technology, this collaborative approach is essential if banks wish to remain competitive. This has resulted in a financial ecosystem where traditional banking services benefit from the agility and innovations of fintech startups, resulting in the production of new products within financial industries aimed at meeting evolving consumers' needs.

5.4.4. B2B Partnership and Complementarity in the Fintech Sector

With the evolving financial environment, collaboration between banks and fintech companies comes into play, improvising experiences that increase customer satisfaction by enabling users to make payments directly from their bank accounts and have money transferred more securely and at a more incredible speed. A perfect example is the partnership of PayPal and Venmo in banks, facilitating online money transfers on an international scale in a faster and much more secure way. There has been a disruption in the financial sector, wherein the integration of innovatory Fintech into the core operations has converted digital means of paying through the integration of advanced technologies from Fintech companies. For example, most traditional banks have embraced mobile banking and digital wallets, allowing customers to transact using smartphones conveniently. Through partnerships, banks will also be able to keep pace with high levels of security to ensure sophisticated yet user-friendly services.

This collaboration between banks and Fintech companies ranges from mere technological integration to strategic partnerships where the two entities share resources, knowledge, and infrastructure. As such, in this dynamic environment, the customer's expectations are increasingly driven by technological advances, so such

collaboration would be necessary to allow banks to remain competitive. The result will be a financial ecosystem where traditional banking services become agile and innovative with fintech startups, ultimately enabling new financial product development that meets changing consumer needs.

The interdependence of the bank and the fintech firm together follows the notion of complementarity by Brandenburger and Nalebuff (1997), in which each complements the other with core value for the overall value added. The possibility of cooperation rather than competition leads to developing a much stronger value chain. In a B2B setup, this is mainly a relation that considers data sharing, payment processing, and other financial services that facilitate financial service providers to deliver more customized and efficient solutions. An excellent example of open banking allows banks and third-party providers to innovate on shared customer data, personalizing financial systems to improve customers' experiences. These data sharing collaborations also bring about significant value additions in terms of improved customer experience and efficiency of financial services.

B2B partnerships are also important in payment processing and integration for the fintech sector. This kind of collaboration enables the financial service provider to handle the payment processes more functionally and improve customer service. Moreover, B2B collaborations allow fintech companies to improve their business performance by taking advantage of better deployment of resources and decreasing their costs. With different collaborating service providers of financial services in the development of joint solutions, for example, the service portfolio can be extended, Thus providing a competitive edge for the entities concerned. This collaborative approach implemented by the skills and resources of both banks and fintech companies value created by collaboration rather than competition.

As Section 5.1 has shown, this complementarity in the assets, skills, and capabilities of banks and technology companies provides the basis for these successful collaborations. According to Brandenburger and Nalebuff (1997), since the interdependence of several actors along the value chain is underlined, cooperation

between banks and fintech would surely create a more efficient, dynamic, and innovative financial system. Using their complementary roles for developing and innovating new financial products will spur the deployment for the benefit of consumers and increase the sector's overall competitiveness.

5.5. Concluding Remarks

This chapter has comprehensively examined the concept of coopetition, a strategic approach in which companies engage in both competitive and collaborative activities to achieve mutual benefits. This chapter has highlighted the critical role of balancing traditional competition and coopetition in the digital economy. In high-tech and rapidly evolving sectors such as fintech, coopetition allows businesses to navigate the complexities of technological advancement, shorten product development cycles, and manage the integration of multi-layered technologies. It has been shown that coopetition offers companies a way to effectively use their resources and minimize the risks associated with purely competitive or collaborative models. By fostering strategic alliances that balance both elements, firms can create value and maintain their competitive advantage in an environment characterized by uncertainty and rapid change. Furthermore, the role of coopetition in business ecosystems highlights the need for adaptive strategies that accommodate shared innovation and resource utilization. However, there are coopetition trends, such as managing coopetition tensions and preventing knowledge leakage. The key to successful implementation is the capacity to absorb knowledge. The ability to absorb and use existing knowledge enables partnerships to be effective and competitive pressures to be managed without compromising collaborative benefits. The insights from this chapter highlight that sustainable innovation and economic growth must be supported by a robust infrastructure. This includes legal frameworks, strategic policy interventions, and the development of trust between competitors who become collaborators. Such a balanced approach prepares firms to thrive in the complex environment of the digital economy and reinforces that competition and collaboration are complementary forces, not mutually exclusive, in modern economic structures.

CHAPTER 6

POLICY RECOMMENDATIONS AND CONCLUDING REMARKS

The final chapter integrates the findings of the thesis into a policy recommendation framework. Applicable policies are suggested to increase the impact of cooperation and competition strategies on economic growth and sustainability. It also focuses on how cooperation-oriented approaches can be encouraged within the complex structures of the digital economy. A general evaluation of the thesis is made, and the contribution of the thesis to the literature and the limitations of the research are revealed.

6.1. Policy Recommendations

Policy design provides a framework based on determining sectoral targets and overcoming obstacles (Erden-Topal, 2015). In the digital economy, administrative, economic and technical obstacles have been analyzed and national cooperation models have been developed to create data security and sustainable digital cooperation networks. The Covid-19 pandemic has significantly increased the demand for digital technologies and accelerated digital transformation processes. At this stage, major shifts are taking place in data management, digitalization of business processes, automation, and new business models, where big data analytics, IoT (Internet of Things), and AI take the lead in enhancing competitiveness. (SBO, 2023, p.8) Increasing collaboration between universities, industry, and the public in R&D and innovation processes, developing infrastructures that support open science and innovation, strengthening access to qualified labor, and solving problems such as brain drain are critical. At the same time, an approach that places society at the center and encourages joint development and participation should be adopted (SBO, 2023, p. 9). The focus of our thesis is to draw attention to situations where collaboration already exists, but its importance is not sufficiently appreciated. Our policy recommendations

have been categorized under ten main problems that are consistent with the main argument that has been identified. Policy instruments and policy solutions have been designed to solve each problem. The relevant policy recommendation (PR) and the instruments (PI) that can be used in these policies are listed in Table 2.

Table 2. Strategic Policy Recommendations for Enhancing Collaboration and Coopetition (Author's own table)

Problem	Policy Recommendation (PR)	Policy Implementations (PI)
1. Limited Understanding of the Value of Cooperation	Implement educational initiatives to increase awareness of the strategic importance of cooperation.	PI1: Collaboration Contribution Index (CCI)
		PI2: National Cooperation Awards
		PI3: Comprehensive Education and Media Campaigns
2. Weak Legal Framework for Collaborative Initiatives	Establish solid legal support systems for collaborations.	PI4: Simplified joint venture agreements.
		PI5: Expanded legal consulting services
		PI6: International certification program for collaborations.
3. Data Sharing and Privacy Concerns	Develop secure data-sharing mechanisms.	PI7: Legislation for secure data sharing.
		PI8: Support collaborative cloud services with enhanced security.
		PI9: Use blockchain solutions for transparency and privacy.
4. Insufficient Public-Private Partnerships	Encourage public-private partnerships (PPPs).	PI10: Initiate joint R&D financing.
		PI1: Establish national research centers including both sectors.
		PI2: Implement shared governance models.
5. Barriers to Cross-Border Cooperation	Reduce barriers to international cooperation.	PI13: Facilitate multilateral trade agreements with cooperation clauses.
		PI14: Establish international consortia.

Table 2.(continued)

		PI15: Introduce joint research visas.
6. High Costs of Collaboration Initiatives	Provide financial support for collaborative projects.	PI16: Offer tax breaks and financial incentives.
		PI17: Grant programs for tech initiatives. PI18: Low-interest loans for startups in joint projects.
7. Knowledge Silos Between Companies	Encourage knowledge-sharing networks.	PI19: Create digital platforms for communication.
		PI20: Implement government-funded knowledge-sharing conferences.
		PI21: Develop peer-to-peer learning programs.
8. Lack of Standardization in Collaborative Practices	Establish industry-wide collaboration standards.	PI22: Develop ISO-like certifications for collaborations.
		PI23: Establish industry councils.
		PI24: Create guidelines for transparent collaboration.
9. Resistance to Collaborative Business Models	Provide incentives for adopting collaborative models.	PI25: Reward successful initiatives.
		PI26: Pilot programs with benefits.
		PI27: Mentorship programs from successful companies.
10. Limited Collaboration in Technology Transfer	Facilitate collaboration in technology transfer between academia and industry.	PI28: Support tech transfer programs. PI29: Create university-industry partnerships. PI30: Shared intellectual property policies.

Problem 1: Limited Understanding of the Value of Cooperation

The strategic importance of collaboration in the digital economy is poorly understood. This situation is one of the obstacles to innovation and sustainable growth. Cooperation's advantages can be overlooked, especially in the business world, where competition-oriented economic models dominate. The dissemination of a culture of cooperation is important to provide innovative solutions and flexibility in the business world.

Policy Recommendation 1 (PR1): Implement educational initiatives to increase awareness of the strategic importance of cooperation. While collaboration plays an increasingly critical role in modern economies, many countries fail to recognize its value and integrate it into their strategic decision. To bridge this gap, a tool that accurately measures the economic and social impacts of collaboration is necessary. This tool aims to recognize the importance of collaboration and make this value visible as an index for measuring collaboration's economic and social contribution with concrete data. Such an index contributes to the promotion of collaboration by increasing awareness of collaboration and ensuring its recognition by decision-makers. In this context, it is of great importance to developing a tool such as the **"Collaboration Contribution Index."** This index aims to measure the economic and social impacts of collaboration using existing data from countries. In order to understand the level of collaboration in a country, the quality of the content should be assessed by conducting a textual analysis of the material outputs of collaboration initiatives. The formation of a system that assesses the economic value of collaboration and regularly informs the public and decision-makers about this will be another suggestion. This system will present specific information on the positive impacts of collaboration in terms of economic growth, innovation, productivity, and social welfare.

It is also obvious that the structure of patents is not a good reflection of cooperation, so new techniques are necessary to appreciate and encourage it.

Cooperation awards and incentives should be established at national and international levels to ensure that cooperation initiatives are recognized and encouraged. These

awards emphasize the importance of cooperation and ensure that successful cooperation models are introduced to the public and the value of cooperation becomes visible.

Research collaboration plays an important role not only in disseminating existing knowledge but also in generating new ideas (Akçomak et. al, 2015). These programs include global support for research and innovation in green technology, international peace cooperation, ICTs for development and classrooms for the future in public sector.

For instance, the Nobel Peace Prize is one of the most prestigious awards given to those who have tried to promote peace and social harmony at the international level. The United Nations Public Service Awards (UNPSA) recognize efforts to improve public services and increase public sector cooperation. The Horizon Europe Prizes, funded by the European Union, recognize innovative projects jointly by researchers from different countries and support international research collaborations. By encouraging and rewarding cooperation worldwide, such programs operate in a wide range of areas, from international cooperation and peace to public sector cooperation and innovation. Considering that various awards and programs that encourage cooperation are being successfully implemented worldwide, it is clear that such approaches need to be expanded. Such an initiative will strengthen local and international collaboration and significantly contribute to social, economic, and technological development. Encouraging cooperation is also strategically important in increasing global competitiveness and achieving sustainable development goals.

Emphasizing the critical role of cooperation in social and economic development is of great importance not only for economic literature but also for other academic disciplines and practical fields. In this regard, at national levels, comprehensive learning programs and media campaigns should be launched to the masses as ways of making them understand what collaboration means and increasing their social awareness of the subject. Such campaigns should focus on informing people about the

positive impacts cooperatives can create across all segments of society with the aim of developing cooperative culture among members of society.

Cooperation must be included as part of curricula, especially in educational institutions where students need to realize that they can benefit from it both individually and socially starting from childhood. In this context, entrepreneurial universities should be considered not only knowledge-producing institutions but also important actors in regional development and economic growth processes. Stronger connections should be established between the innovation policies of entrepreneurial universities and regional development strategies. As emphasized in the book *Innovation and the Entrepreneurial University*, (2018) universities can contribute to the development of regional innovation systems through technology transfer, knowledge dissemination and entrepreneurial activities. In particular, encouraging university-industry collaborations plays a critical role in achieving such integration Seminars, workshops, and conferences emphasizing how collaboration contributes to academic research and innovative tasks should be held by universities or research institutes. Further, collaboration can be developed, including skills through international projects as well as exchange initiatives among students/researchers at the global level.

The contribution of entrepreneurial universities to regional development is a critical factor for accelerating innovation processes in the digital economy. Research centers and technology transfer offices (TTOs) build strategic bridges for both knowledge sharing and commercial projects (Erdil et al., 2013).

Problem 2: Weak Legal Framework for Collaborative Initiatives

Without a strong legal infrastructure, collaborations can be hampered by legal disputes and complex processes. The legal uncertainties that businesses face when collaborating jeopardize the success of long-term projects or partnerships. Considering the importance of cooperation in economic, social, and technological development, it is a critical necessity to establish legal regulations that recognize and support these processes. A legal framework needs to be developed to recognize cooperation between

the public and private sectors legally, ensure the sustainability of these cooperations, and protect the rights of the parties. Such a legal framework can create an environment that encourages cooperation and establishes trust between the parties (Gleeson, 2018). For example, laws that clearly define the rights and obligations of the parties in public-private partnership (PPP) projects can increase the success of these cooperations.

Legal regulations should oblige to monitor and report on the cooperation: this will enable it to be taken into account in decision-making processes. Such an arrangement will ensure that cooperation is accepted as a mandatory strategy, not just an option (Carroll, 2015). The role of legal regulations in cooperation processes is increasingly appreciated nationally and internationally. However, such laws are confined primarily to some sectors and projects. Reporting on collaborations and project outcomes is required by the Horizon Europe program of the European Union. These reports will help evaluate the achievements of the project while shaping future research policies (European Commission, 2021). However, this exercise is limited to a particular program and not for every sector as a whole. The United Nations has established some mechanisms concerning monitoring and reporting of collaborations under the Sustainable Development Goals (SDGs) [1]. These mechanisms are project-based rather than being implemented on a global basis to serve as an overall obligation (United Nations, 2020).

Policy Recommendation 2 (PR2): Establish solid legal support systems for collaborations. The solution proposal is to simplify partnership agreements and provide legal consultancy services that facilitate processes. A certification program valid across countries that documents the legal compliance of collaborative projects should be established.

Problem 3: Data Sharing and Privacy Concerns

Data sharing plays a critical role in the success of collaborative projects, but security and privacy issues remain a concern. These issues limit the potential for collaboration,

[1] https://apps.who.int/gb/ebwha/pdf_files/WHA77/A77_31-en.pdf

especially in projects that require the processing of sensitive data. (Yalçıntaş & Yardımcı, 2020).

Policy Recommendation 3 (PR3): Develop secure data-sharing mechanisms. The proposed solution is to develop legislation and technical infrastructures that will ensure safe data sharing. Sharing data presents a risk to nations. The development of local digital platforms to ensure national security can be considered an extension of import substitution industrialization. This approach prioritizes local economic development and data security while reducing external dependency (Yalçıntaş & Alizadeh, 2020).

Digital mercantilism requires the protection of data produced within national borders and the reduction of external dependency. In this context, national data should be protected and returned to the national economy to ensure data sharing and security. Local infrastructures need to be developed for secure data sharing (Yalçıntaş & Yardımcı, 2020) .

Transparency and security-enhancing solutions, such as blockchain technology, should be used to protect privacy in data sharing. This recommendation focuses on creating robust frameworks that facilitate data sharing while prioritizing data security and privacy. This approach will not only protect data but also create trust among collaborators, creating a more open and effective collaboration environment.

Problem 4: Insufficient Public-Private Partnerships

The lack of public-private partnerships is a significant economic and technological development opportunity. When public sector resources and private sector innovation power are combined, sustainable and large-scale projects are supported. Public-private partnerships (PPPs) are essential to advancing economic growth and technological development. These collaborations leverage the resources and regulatory capabilities of the public sector, combined with the innovation and efficiency of the private sector, to deliver sustainable, effective projects. However, insufficient collaboration between these sectors can lead to missed opportunities, limit innovation, and slow progress in a variety of industries.

Policy Recommendation 4 (PR4): Encourage public-private partnerships (PPPs). The solution proposal is to provide funding for joint R&D projects between the public and private sectors. Such initiatives can be supported through government grants and subsidies, particularly in areas such as renewable energy, digital infrastructure, and health innovation. Creating clear frameworks for PPPs can encourage private sector participation, ensuring mutual benefit and alignment with national economic strategies.

Problem 5: Barriers to Cross-Border Collaboration

International collaboration increases global competitiveness by accelerating the transfer of knowledge and technology. However, cross-border cooperation is challenging due to legal, logistical, and cultural barriers. Standards recognizing the importance of global-level collaborations and encouraging these types need to be developed. They aim to improve countries' ability to cooperate, enhancing effectiveness during these processes for more effective international development activities. Countries can use international cooperation standards to position themselves better vis-a-vis each other through cooperation to solve worldwide problems(OECD, 2019). Additionally, these standards heighten the transparency or accountability levels about internationally oriented cooperative operations, thus increasing sustainability for better outcomes.

The public-private partnership (PPP) model defines the rights and responsibilities of the parties by creating the legal framework of such projects. However, these legal regulations are usually limited to certain sectors and are not considered as a general cooperation incentive law (Acar, 2016). However, more comprehensive regulations are needed to increase the effectiveness of these collaborations despite the fact that PPP laws enable the public and private sectors to collaborate in line with common interests. Various framework programs have been designed by the European Union to promote cooperation among member countries. For instance, these include the Horizon Europe program, which has provided a legal structure as well as finances for encouraging international collaboration in research and innovation projects. Although

there are EU programs that recognize and support cooperation through some legislations, it is normally restricted to specific areas, thereby making it a non-comprehensive law promoting general cooperation (European Commission 2021).

Policy Recommendation 5 (PR5): Reducing barriers to international cooperation. The proposed solution is to encourage multilateral trade agreements and cooperation consortia to facilitate international cooperation. In addition, joint research visas can increase academic and professional participation in cross-country projects.

Problem 6: High Costs of Collaboration Initiatives

Collaborative projects often require high start-up costs, especially for small and medium-sized enterprises. These financial constraints can prevent promising collaborative initiatives from being sustained, stifle innovation, and slow the commercialization of new technologies.

Policy Recommendation 6 (PR6): Financial support should be provided for collaborative projects. The proposed solution is to offer tax breaks and financial incentives for collaborative projects. Governments can offer grant programs and low-interest loans specifically designed for innovative technology initiatives. Such financial support would enable SMEs to participate in partnerships, enabling a wider range of stakeholders to contribute to technological and economic growth.

Problem 7: Knowledge Silos Between Companies

Lack of knowledge sharing is one of the major obstacles to innovation and efficiency. Limited knowledge flow between companies blocks joint projects and synergy.

Policy Recommendation 7 (PR7): Encourage knowledge sharing networks. The solution proposal is to create digital platforms that will increase communication between companies and organize conferences for knowledge sharing. Additionally, encouraging knowledge-sharing networks to enhance research collaboration can play an important role. This includes establishing digital platforms, organizing knowledge-sharing events, and developing learning programs that support knowledge creation and dissemination. Government-supported in service learning programs can accelerate the flow of knowledge. Knowledge sharing and knowledge creation from knowledge

should be supported. Mass media campaigns should target the general public by demonstrating how cooperative activities affect different aspects of life such as economy, science, technology/environment etc. Success stories about joint actions could be communicated through various channels such as television stations; radios; digital formats involving videos etc.; platforms like Instagram; Twitter or Facebook et al. However, these campaigns ought not just to inform citizens at large but also stimulate diverse stakeholders like the business community or civil society groups, including even government offices, into increasing cooperative activities.

Problem 8: Lack of Standardization in Collaborative Practices

Lack of standards in collaborative projects can lead to disagreements and implementation errors. This negatively affects the effectiveness and sustainability of projects. Without common guidelines or certifications, cross-sector and inter-institutional collaborations may face challenges that hinder their success and sustainability.

Policy Recommendation 8 (PR8): Establish industry-wide collaboration standards. To address this challenge, an ISO-like certification system for cross-sector collaborations should be established. Industry councils should be established to define and codify best practices and ensure consistency and quality across collaboration initiatives. These standards will provide a framework for transparent operations, increase trust among partners, and encourage effective communication and implementation.

Problem 9: Resistance to Collaborative Business Models

Companies' resistance to adopting collaborative business models limits potential improvements in innovation and efficiency. A competitive business approach is an obstacle to long-term collaborations. Institutions and government bodies should develop policies that make it mandatory to integrate collaboration into their strategic plans. Such policies ensure that collaboration is not only an operational requirement but also a long-term strategic priority. Including collaboration in strategic planning

helps organizations gain a competitive advantage and support sustainable growth (Porter & Millar, 1985). In addition, this approach allows collaboration to be adopted as a fundamental component of corporate performance.

Collaboration-based performance indicators should be determined for public and private sector managers. These indicators should include criteria evaluating how effectively managers manage cooperation, among other criteria pertaining to how this cooperation contributes towards corporate objectives . To strengthen collaborative efforts in organizations across various departments, performance indicators must include elements like the successfulness of collaborative projects , the durability of partnerships, and innovation evaluations caused by collaboration.

Policy Recommendation 9 (PR9): Provide incentives for adopting collaborative models. To implement reward programs and pilot projects to encourage participation in collaborative initiatives. Mentorship programs can be organized with companies that adopt successful collaborative models.

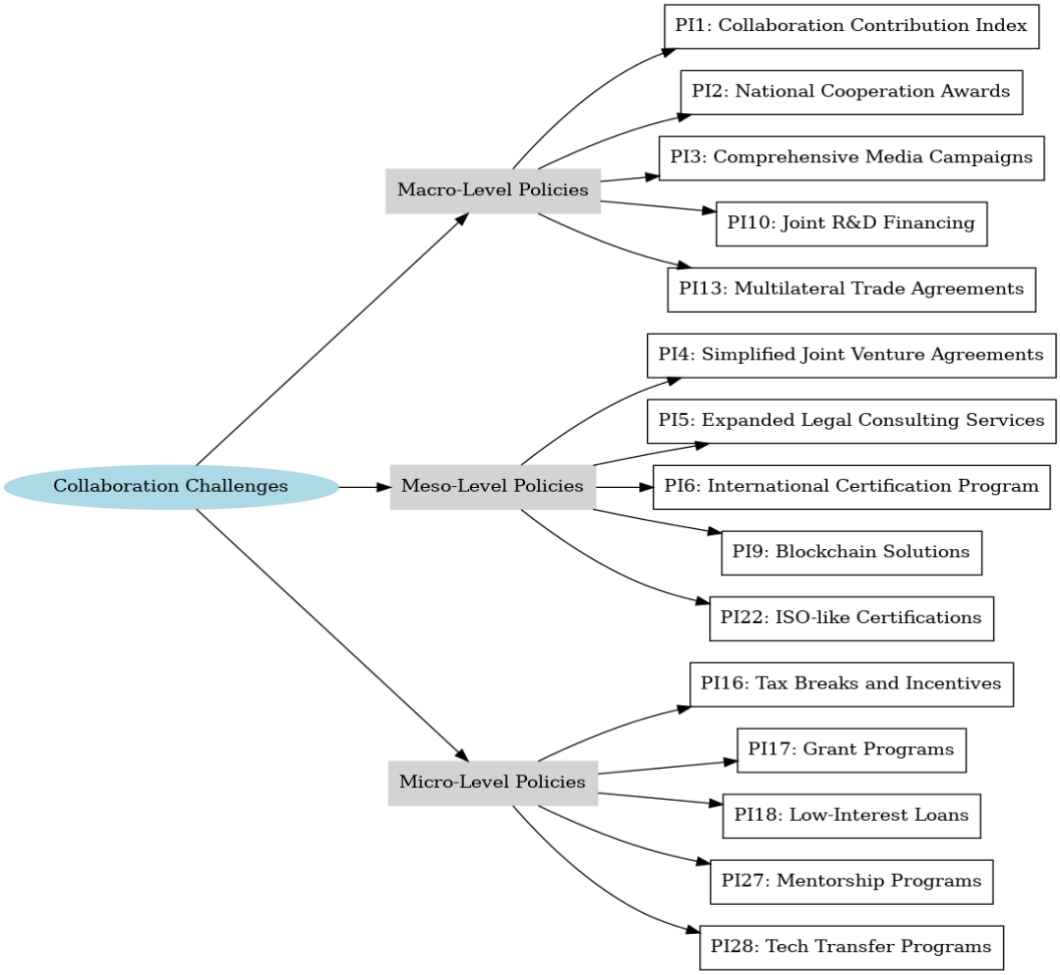
Problem 10: Limited Collaboration in Technology Transfer

A major obstacle to commercializing new technologies is the limited collaboration between academia and industry. This gap hinders the translation of research findings into marketable products or services, thereby preventing the creation of economic value from innovation. The lack of collaborative technology transfer between academia and industry makes it difficult to commercialize innovation, preventing new technologies from generating economic value.

Policy Recommendation 10 (PR10): Facilitate collaboration in technology transfer between academia and industry. Facilitating collaboration in technology transfer between academia and industry is crucial. Increasing funding and support for projects that foster partnerships between universities and technology companies is essential. Initiatives such as joint research grants and innovation incubators can help bridge the gap. In addition, developing shared intellectual property (IP) policies that protect the interests of all parties involved will ensure equal rights and motivate collaborative

participation. These measures will support knowledge transfer and ensure new technologies efficiently reach the market.

Figure 4. Policy level and type for enhancing collaboration and coopetition (Author's own figure)



The scale of application of policy instruments, their target audience and their impact are determined as macro, meso and micro levels:

Macro Level: These are instruments that aim to create broad effects at the national or international level. For example, policy instruments such as national research centers or legal regulations aim to increase the capacity for cooperation and cutthroat collaboration throughout the economic system.

Meso Level: These are more targeted instruments applied at the regional or sectoral level. For example, legal support for joint R&D projects or regional cooperation awards fall into this category.

Micro Level: They are applied at the local or institutional level and have direct effects for specific groups or individuals. For example, special consultancy services for SMEs are a micro-level policy instrument.

This classification forms the basis for assessing the scope and impact that each instrument can reach. The types of policies are determined according to the functional structure of the instruments and the method of implementation. This distinction provides a critical framework for evaluating how policy instruments are implemented and what goal they are designed to address.

6.2. Concluding Remarks

This thesis contributes to economics by showing what is missing in mainstream competition theories. The thesis presents a perspective that considers the relationship between competition and collaboration not only as a conflict but also as a complementary process. In particular, a new theoretical framework has been developed through the concept of coopetition, revealing how these two dynamics (competition and collaboration) are balanced in the business world.

This approach has added a new dimension to the traditional Schumpeterian theory of creative destruction, making the role of cooperation in economic transformations visible. The thesis has examined how the digital economy reshapes the dynamics of competition and cooperation in the context of platform business models, network effects, and data-driven production processes. In this context, it has provided an original contribution to the increasing importance of cooperation in the digital age by responding to existing gaps in the literature. This thesis comprehensively examines the complex dynamics of the digital economy and the evolving relationship between capitalist competition and collaboration. We show that collaboration has an important place in the functioning of capitalism, and this has become even more evident in the digital economy. Classic economic theories on competition have emphasized competition as a driving force for innovation and market efficiency. Although

competition remains one of the fundamental dynamics of capitalism, collaboration is also of great importance. Moreover, collaboration does not only enhance cooperation but also acts as a strong stimulant that makes it possible for companies and countries to greatly increase their competitiveness. Through working together strategically, they can then exploit shared resources; knowledge and innovation thus eventually positioning themselves better in the global market.

Our thesis is based on the fact that collaboration is not just supplement to competition but the very basis of economic success in the digital era. Our dissertation establishes that a digital economy can not be managed solely through competitive strategies; sustainable growth and innovation necessitate collaborative approaches. This view challenges traditional view which sees competition as sole engine of any other mode of development and instead highlights how cooperation fosters it.

Schumpeter's concept of creative destruction has long been accepted as a fundamental tool in explaining market dynamics (Schumpeter, 1942). The economic and social life is profoundly influenced by globalization and advancement in technology (Erdil et al., 2013). However, cooperation has also been necessitated by the development of digital technologies and increasing interdependence of the global economy (Castells, 2010; Bryjolfsson & McAfee, 2014).

The emergence of a digital economy has shown that only competition theories could not be sufficient for understanding the evolution of economic systems. Moving into the world of digital economy has altered how businesses compete against each other, with network effects, data analytics , and platform-based business models redefining competitive landscapes (Porter & Heppelmann, 2014). In this regard, Schumpeter's theory on creative destruction should be reevaluated in light of the digital economy. Schumpeter argued that capitalism was dynamic in nature as innovation through incessant renewal and change was vital to its growth (Schumpeter, 1962). However, the dynamics of the digital economy are more intricate and multi-layered (Arthur, 1990). Especially in Fintech, collaboration among firms is a key for innovation, efficient use of resources, and more stable markets. Survival and growth in the digital economy are not options without cooperation. In industries such as Fintech, where

technological change occurs at an unprecedented rate, and stakes are high, firms deploy collaborative strategies with one another to pool resources, share risks, and accelerate innovative solutions development processes (Arner, Barberis & Buckley, 2016).

There is a variety of opportunities that can be realized through collaborative strategies within the digital economy. One area is where companies collaborate with each other via digital platforms like Zoom, Google Cloud, Microsoft Azure, etc., for open innovations that foster teamwork and joint development projects. These collaborations are aimed at bringing innovative solutions to the market (Chesbrough, 2003). By deploying these platforms, companies connect teams across geographical boundaries, thus co-creating value in unimaginable ways. Moreover, our thesis explains that cross-border engagement requires collaboration. Technological changes within and among organizations confirmed this over time (Demir & Okan, 2009, p. 59). Collaborative efforts have become significant tools for economic growth and wealth creation. Collaborative efforts have become significant tools for economic growth and wealth creation.

In the digital economy, there exists an ever-changing environment between collaboration and competition where these two elements coexist. The results obtained from this study suggest that cooperation bears complementation with competition (Powell & Dimaggio, 1991). Furthermore, the advancement of market structures by means of digitization has made them too complex to be sustainable on the basis of competition alone (Rochet &Tirole, 2003). At this point, cooperation strategies stand out as an element that balances the limitations of competition and increases market success. Cooperation enables companies and countries to become more competitive, especially in areas such as data sharing, joint R&D projects and supply chain integration (Bryjolfsson & McAfee, 2014). Competition may work for short-term gains, but collaboration ensures long-term success in a market that leads to stability. Hence, companies and nations must adopt collaborative strategies if they want to survive in this period of the digital economy(McAfee & Brynolfsson, 2012). Such recommendations are not optional but rather essential tools for thriving in today's economic landscape.

This thesis has examined the increasing influence of competition and cooperation in a capitalist economy, more so in the modern digital era. Usually traditional economies as argued by Adam Smith (1776) and Joseph Schumpeter (1942) attributing economic closure for competition exalting in all other parameters. Yet the study has shown that these elements, which are sound in theory, do not exist in their soundness in the realities of today's economy characterized by digitalization in the technological environment. The tendency of mainstream economics to ignore the role of cooperation in competing strategies has evolved, and this has come to be viewed as a cooperating strategy with competition. Through various examples and theoretical insights, the conducted research has demonstrated that fair competition and collaboration are necessary for improving innovation, the development of sustainability, and the growth of economies. The presented policy recommendations are intended to facilitate the elaboration of economic policies that better account for cooperative approaches, including—but not limited to enhancing public-private partnerships, data exchange, provision of financial resources for cooperation, and harmonizing practices. Therefore, the study advocates changing the conventional way of thinking about the economy to understand that cooperation is a critical factor in building and maintaining economic stability and growth over time.

Future research is also necessary on policymaking and collaboration: it will look at how particular policies or incentive structures promote and maintain cooperation among the public and private sectors. Last but not least, comprehensive models that could forecast economic developments across sectors by considering coopetition is very much needed if economics is to be cohesive and functional. Doing this will enhance the academic debate in this field and enable political and business leaders to craft policies and strategies to promote development and creativity in complex and interconnected economies.

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APPENDICES

A. TURKISH SUMMARY / TÜRKÇE ÖZET

Bu çalışmanın temel amacı, modern ekonomik yapılar içinde rekabet ve iş birliği arasındaki karmaşık dinamikleri incelemektir. Kapitalizmin temel dinamiklerinden biri hala rekabet olsa da, iş birliği göz ardı edilemeyecek kadar büyük bir öneme sahiptir. Geleneksel olarak, rekabet ekonomik büyüme ve verimliliğin temel itici gücü olarak görülmüştür. Fakat, dijitalleşmenin etkisiyle piyasa yapıları dönüşmüş ve iş birliğinin önemi giderek artmıştır. Özellikle dijital platformlar, ağ etkileriyle firmaların sadece rekabet ederek değil, aynı zamanda iş birliği yaparak başarılı olacaklarını göstermektedir. Bu nedenle, modern kapitalizmin dinamiklerini anlamak için iş birliğinin rolü dikkate alınmalıdır.

Bu araştırma, günümüz dijital pazarlarının karmaşıklığını ve karşılıklı bağımlılığını tam anlamıyla yansıtamadığı düşüncesini ortaya koymaktadır. Teorik çerçeveleri ve pratik vaka analizlerini birleştirerek, rekabet ve iş birliğinin değişen rollerine dair kapsamlı bir anlayış sunmayı amaçlamaktadır. Özellikle dijital ekonomi bağlamında rekabet ve iş birliği arasındaki gelişen ilişkiye odaklanarak modern kapitalist ekonominin temel dinamiklerini tanıtmaktadır. Bu çalışma, rekabetin tarihsel olarak kapitalizmin temel ilkelerinden biri olmasına rağmen, dijital teknolojilerin yükselişinin bu dinamiği dönüştürdüğünü vurgulamaktadır. Ayrıca, iş birliğini en az rekabet kadar önemli hale getirdiğini ileri sürmektedir. Rekabet, yeniliği teşvik eden bir araç olmaktan çıkmış, iş birliği ile entegre bir mekanizma halline gelmiştir. Dijital ekonomideki ortak veri paylaşımı ve açık kaynak projeleri bu mekanizmalara örnektir. Firmaların bireysel avantajlarını korurken aynı zamanda toplu faydalar sağmalarına olanak tanımaktadır.

Tez, dijital çağda şirketlerin ve kurumların uzun vadeli hedeflere ulaşmak ve yeniliği yönlendirmek için rekabetin yanı sıra iş birliğinin de önemini giderek daha fazla fark ettiğini ileri sürmektedir. Özellikle yapay zeka, blok zincir ve büyük veri teknolojilerinin gelişimiyle daha belirgin hale gelmiştir. Bu değişim, iş birliğinden çok rekabeti önceliklendiren geleneksel ekonomi teorilerinin yeniden değerlendirilmesini gerektirmektedir.

Tezin yapısı, altı ana bölümden oluşacak şekilde düzenlenmiştir. İlk bölüm, temel rekabet teorilerine değinerek ve seçilen konunun önemini vurgulayarak temelleri atmaktadır. Sonraki bölümlerde incelenecek olan ana temaları ve kavramları tanıtmaktadır.

Tezin ikinci bölümü, rekabetin ekonomik başarının tek itici gücü olup olmadığını araştırmaktadır. Klasik ve Neoklasik görüşleri karşılaştırarak, ekonomi literatüründe rekabetin nasıl tanımlandığını incelemektedir. Klasik teoriler genellikle piyasa güçlerini ve bireysel çıkarları vurgularken, Neoklasik perspektifler denge ve verimliliğe odaklanmaktadır. Bu bölüm, bu geleneksel görüşleri eleştirerek, özellikle dijital bağlamda modern ekonominin karmaşıklıklarını anlamak için yetersiz olduklarını savunmaktadır. Ayrıca, rekabetin ekonomik büyümedeki rolünü ele alarak ve günümüz ekonomilerindeki önemini analiz etmektedir. Rekabetin inovasyonu ve verimliliği yönlendirebilmesine rağmen, aynı zamanda iş birliğini engelleyen tekelci davranışlara da yol açabileceğini vurgulanmaktadır. Tez, ekonomik kalkınmayı teşvik etmede hem rekabetin hem de iş birliğinin değerini kabul eden dengeli bir yaklaşımı savunmaktadır.

Tezin üçüncü bölümü, özellikle dijital ekonomi ışığında Joseph Schumpeter'in fikirlerini inceler. Schumpeter'in yaratıcı yıkım ve inovasyon teorileri incelenir ve dijital çağın karmaşıklıklarına uygulandığında sınırlamaları ortaya çıkarılır. Bölüm, hızla değişen pazarlarda uyarlanabilir stratejilere olan ihtiyacı vurgulayarak, ekonomik kalkınmaya daha çağdaş bir bakış açısı sağlamak için evrimsel ekonomiyi entegre eder.

Dördüncü bölüm, iş birliğinin çeşitli tanımlarını ve etkilerini inceleyerek, bu kavramın ekonomi literatüründe sıklıkla göz ardı edildiğini savunmaktadır. Bu bölüm, hızlı teknolojik gelişmelerin ve pazar değişikliklerinin işletmelerin yenilik yapmak ve rekabetçi kalmak için birlikte çalışmasını gerektirdiği dijital ekonomide iş birliğinin önemli olduğunu vurgulamaktadır. İş birliğinin kapitalist sistemdekini işleyişini ortaya koymak amacıyla dijital yayın sektörünün önce gelen aktörlerinden Netflix ele alınmıştır. Netflix üzerinden Teknofeodalizm kavramı açıklanmaktadır.

Beşinci bölümde, şirketlerin karşılıklı faydalar elde etmek için hem rekabetçi hem de işbirlikçi faaliyetlerde bulunduğu işrekabet kavramı ele alınmaktadır. Fintech şirketlerinin stratejik ittifaklar aracılığıyla teknolojik gelişmelerin ve pazar taleplerinin karmaşıklıklarını nasıl aşabileceğini göstermektedir. Şirketler, kooperatifi teşvik ederek ürün geliştirme döngülerini kısaltabilir, riskleri paylaşabilir ve genel pazar konumlarını geliştirebilmektedir.

Ayrıca, bölüm FinTech sektöründe başarılı B2B ortaklıklarının vaka çalışmalarını inceleyerek, iş birliğinin tüketicilere fayda sağlayan ve sektör büyümesini yönlendiren yenilikçi çözümlerin geliştirilmesine nasıl yol açtığını göstermektedir. Sonuç olarak, FinTech ortamında rekabet ve iş birliğini dengelemenin kritik rolü vurgulanmakta ve her iki unsuru da değer yaratmak için kullanan uyarlanabilir stratejilerin savunulması sağlanmaktadır.

Son bölümde, tezin bulgularını ekonomik büyüme ve sürdürülebilirlik için iş birliği ve rekabet stratejilerini geliştirmeyi amaçlayan bir politika önerileri çerçevesine entegre edilmektedir. Bölüm, özellikle dijital dönüşümü hızlandıran COVID-19 salgınının yarattığı zorluklar ışığında, dijital ekonomide iş birliği için destekleyici ortamlar yaratmanın önemini ana hatlarıyla belirterek başlamaktadır. Bu bölümde, iş birliklerini desteklemek için yasal çerçevelerin oluşturulması, kamu-özel sektör ortaklıklarının teşvik edilmesi ve güvenli veri paylaşım mekanizmalarının geliştirilmesi dahil olmak üzere belirli politika önerileri sunulmaktadır. Uluslararası iş birliğini kolaylaştıran ve sınır ötesi ortaklıklara yönelik engelleri azaltan mevzuata olan ihtiyaç vurgulanır.

Sonuç açıklamalarında, bölüm araştırmanın genel katkılarını ve sınırlamalarını değerlendirilmektedir. Yenilik ve ekonomik kalkınmayı yönlendirmede rekabet ve iş birliği arasındaki etkileşimin anlaşılmasının önemi yinelenmektedir. Bölüm, ortaya çıkan teknolojiler ve küresel ekonomik değişimler bağlamında bu kavramların gelişen dinamiklerini keşfetmek için daha fazla araştırma yapılmasını talep eder ve nihayetinde modern ekonomide hem rekabetin hem de iş birliğinin değerini kabul eden dengeli bir yaklaşımı savunur.

Kapitalizm, 16. yüzyılda Batı Avrupa'da sermaye birikimi ve sömürgecilikle birlikte ortaya çıkmış, Adam Smith (1776), David Ricardo (1817) ve Karl Marx (1867) gibi ekonomistler tarafından incelenmiştir. Bu süreçte, sermaye birikimi yalnızca ekonomik bir dönüşüm değil aynı zamanda toplumsal yapının da köklü değişimini beraberinde getirmiştir. Feodal sistemden kapitalizme geçiş ekonomik aktörler arasındaki ilişkileri yeniden tanımlamış ve piyasa merkezli bir ekonomik modelin temelleri atılmıştır.

Klasik ekonominin kurucusu Smith, rekabetin kaynakların en verimli şekilde kullanılmasını sağladığını savunan ilk ekonomisttir. Smith, rekabetin piyasa mekanizmalarının etkin çalışmasını sağlayan ve ekonomik büyümeyi teşvik eden temel bir unsur olduğunu savunur (Smith, 1776). Smith'e göre, bireylerin kendi çıkarlarını maksimize etmeye yönelik çabaları, sadece bireysel kazanç sağlamaz. Bu durum aynı zamanda toplumsal rehahı da artırır. Bu görüş, modern ekonominin birçok temel ilkesine ışık tutmuş ve piyasa ekonomisinin teorik altyapısını oluşturmuştur. Smith'in *Ulusların Zenginliği Üzerine Bir İnceleme* (1776) adlı eserinde, ekonomik dengenin ve sosyal düzenin serbest piyasa koşulları altında sağlanabileceği vurgulanır. Rekabetin ekonomik verimlilik ile ilişkisi, kaynakların etkin dağılımı ve sermaye birikiminin itici gücü olarak değerlendirilmektedir (Richardson, 1976; Tanyeri, 2000). Rekabetin ekonomik büyüme ve toplumsal refahın temel itici gücü olduğunu vurgulayan Smith, serbest piyasa ekonomisinin bireylerin kendi çıkarlarını gözetirken topluma da katkı sağladığı bir mekanizma olduğunu belirtir (Smith, 1776). Ricardo ise, karşılaştırmalı üstünlük teorisi ile uluslararası ticaretin ve rekabetin ekonomik anlamda yeni bir boyutunu ortaya koyar. Marx (1867), kapitalizmin açgözlülüğü nedeniyle kendi sonunu hazırlayacağını öngörerek, sistemin kendi içsel çelişkileriyle

yıkılacağını iddia eder. Marx'ın bu yaklaşımı, sermaye birikimi ve rekabet süreçlerinin kapitalist üretim tarzında yarattığı krizlere işaret etmektedir. Özellikle üretimin sosyalleşmesine yani büyük bir işçi sınıfının emeğini içermesine karşın, mülkiyetinin küçük bir kapitalist grubun elinde toplanması, kapitalist sistemin uzun vadede sürdürülemez olduğunu ortaya koyar. Evrimci kurumsal iktisat ekolünden Schumpeter (1942) ise, Klasik ekonomistlerin aksine kapitalizmin dinamik özelliğine dikkat çekmiş ve bugünkü ekonomik sisteme en yakın açıklamaları bir yüzyıl önce yapmıştır. Schumpeter'in yaratıcı yıkım (creative destruction) kavramı, inovasyonun ekonomik yapıları sürekli devre dışı bırakarak ekonomik büyümeyi hızlandırdığını savunur. Bu süreç, kapitalizmin yenilikçi özelliğini ve girişimciliğin ekonomik sistemdeki kritik rolünü öne sürmektedir.

Geleneksel rekabet teorileri genellikle fiyat rekabeti, ürün farklılaştırması ve ölçek ekonomileri gibi faktörlere odaklanır. Bu teoriler, firmaların piyasa paylarını arttırmak için maliyetlerini düşürme stratejilerini benimsemeleri gereğini savunur. Ancak bu yaklaşım, dijital ekonominin karmaşık yapısını anlamada yetersiz kalmaktadır. Veri çağında, rekabet avantajı veri temelli analizler ve büyük veri teknolojilerinin etkin kullanımı ile elde edilir (Porter ve Heppelmann, 2014). Dijital ekonominin temel özelliklerinden biri olan büyük veri, firmaların tüketici davranışlarını daha iyi anlamalarını ve buna göre strateji geliştirmelerini sağlar. Örneğin, veri analitiği araçları, firmaların müşterilerinin ihtiyaçlarına hızlı bir şekilde yanıt vermelerini ve ürün ve hizmetlerin kişiselleştirilmesini sağlamaktadır. Dijital ekonomi, teknolojilerin ve özellikle internetin iş yapış şekillerini köklü bir biçimde dönüştürdüğü bir sistemdir. Örneğin, ağ etkileri, bir ürün veya hizmetin değerinin kullanıcı sayısıyla orantılı olarak artmasını sağlar. Bu durum, fırmaların yalnızca kendi kazançlarını arttırmak değil, aynı zamanda müşterilerine daha fazla değer sunmak için iş birliği yapmalarını gerektirir.

Rochet ve Tirole (2003) platform ekonomisinin, kullanıcılar arasında etkileşim sağlayarak çok yönlü pazarların oluşmasına olanak tanıdığını belirtir. Platform ekonomisi, kullanıcıların sadece tüketici değil, aynı zamanda üretici rolü üstenebildiği bir ekosistem olarak tanımlanmaktadır. Bu durum, geleneksel piyasa dinamiklerini alt

üst etmektedir. Bu yeni yapıların temel özelliği, ekonomik sistemlerin verimli çalışması için iş birliğini zorunlu kılmasıdır. Bu bağlamda, platformlar aracılığıyla sağlanan veri paylaşımı, firmaların yenilikçi çözümler geliştirmelerine olanak tanır. Dijital ekonomide, iş birliği yenilikçiliği teşvik eder ve sürdürülebilir ekonomik büyümenin temel unsurlarından biri haline gelir. Dijital ekonominin düşük marjinal maliyet avantajı, firmların ürün ve hizmetlerini geniş kitlelere düşük maliyetlerle sunabilmelerini sağlar. Bu durum hem mikro hem de makro ölçekte ekonomik fırsatlar yaratır.

Dijital ekonominin birçok alanında, dengeleyici güçler işlememektedir. Bu durum pozitif geri bildirim mekanizmaları küçük ekonomik değişimlerin etkilerini büyütmektedir. Bu tür etkileri açıklayan ekonomik modeller, geleneksel modellerden büyük ölçüde farklıdır. Azalan getiriler, ekonomi için tek bir denge noktası öngörürken, pozitif geri bildirimle artan getiriler farklı denge noktalarının oluşmasına yol açar. Böylece, seçilen ekonomik sonucun farklı alternatifler arasında en iyisi olacağına dair garantisi yoktur. Rastgele ekonomik olaylar bir teknolojiyi seçtiğinde bu tercih daha üstün alternatiflerin mevcut olmasına rağmen kalıcı hale gelebilir. Arthur'un (1996) modeli, bir teknolojinin artan benimseme getirileri sonucunda piyasa tarafından tercih edilip kalıcı hale gelecileceğini göstermektedir. Bu durum, yol bağımlılığı ile açıklanmaktadır. Küçük başlangıç avantajları büyük farklar yaratabilir (Arthur, 1996). Bu durumu şans eseri öne geçme (luck out) olarak adlandırmak uygun olacaktır. Çünkü hangi teknolojinin baskın konuma geçeceği rastlantısaldır. Rekabetçi bir piyasada bir ürün veya bir ülke şanslı olduğu bir başlangıç yaparsa, avantajını koruyabilir.

Dijitalleşmenin getirdiği düşük marjinal maliyetler, şirketlerin geniş pazarlara erişimini kolaylaştırırken, yeni iş modellerinin ortaya çıkmasını sağlar. Bu durum, firmaların sadece rakipleriyle değil, tedarikçileri ve hatta müşterileriyle dahi iş birliği içinde olmasını gerekli kılar. Bu bağlamda, dijital ekonomide iş birliği, yalnızca bir rekabet stratejisi değildir. Aynı zamanda sürdürülebilirlik ve yenilik için bir zorunluluk haline gelmiştir.

Joseph Schumpeter'in (1942) "yaratıcı yıkım" teorisi, yenilikçiliği ve girişimciliği ekonomik büyümenin motoru olarak tanımlar. Bu teori, kapitalizmin sürekli dönüşümünü ve yenilik yoluyla eski yapıları yok ederek yeni ekonomik fırsatlar yarattığını vurgular. Ancak bu yaklaşım, dijital ekonominin ağ etkileri ve platform yapıları gibi daha karmaşık dinamiklerini açıklamakta yetersiz kalmaktadır. Dijital platformlar, yeniliği sadece yıkıcı değil, aynı zamanda dönüştürücü bir mekanizma olarak işler. Örneğin, Amazon Web Services (AWS) gibi platformlar, yalnızca teknoloji altyapısını dönüştürmekle kalmamış, işletmeler arasında iş birliği modellerinin yaygınlaşmasına da öncülük etmiştir. Bu durum iş birliğinin de rekabet kadar önemli bir faktör olduğunu gösterir. Bu bağlamda, Schumpeter'in yaratıcı yıkım yaklaşımı, dijital ekonominin işleyişini ve inovasyonun toplumsal etkilerini açıklamada yetersiz kalmaktadır.

Özellikle dijitalleşme, sınırların ötesine geçen ekonomik faaliyetleri kolaylaştırarak firmaların ortak hedeflere yönelik iş birliğini yapmasını teşvik etmektedir. Bu bağlamda, küreselleşmenin getirdiği rekabet baskısı, işletmeleri daha yenilikçi ve esnek iş birliği stratejiler benimsemeye zorlamaktadır.

Dijitalleşme ve küreselleşme, işletmeleri geleneksel rekabet anlayışından iş birliğine yöneltmektedir. Wood ve Gray (1991), iş birliğini, aktörlerin ortak bir hedefe ulaşmak için etkileşime girdiği karmaşık bir süreç olarak tanımlar. Rekabet ve iş birliğinin bir arada bulunması, pazar başarısını sürdüren dinamik bir etkileşim oluşturur (Powell ve Dimaggio, 1991). Özellikle ortak araştırma ve geliştirme (AR-GE) ve veri paylaşımında iş birliği, sınırlamaları ele alarak ve sonuçları iyileştirerek rekabeti tamamlar (Bryjolfsson & McAfee, 2014). AR-GE süreçlerinde yapılan işbirlikleri, bilgi paylaşımı ve maliletlerin bölüşülmesi sayesinde yenilikçi çözümlerin daha hızlı gerçekleşmesini sağlamaktadır. Bu nedenle, iş birliğinin tanımlanması ve analiz edilmesi, ekonomik aktörlerin uzun vadeli başarısını ve toplumsal refahı artırmak için kritik öneme sahiptir.

Michael Porter, rekabetin piyasa dinamiklerini belirleyen ve işletmelerin stratejik kararlarını etkileyen ana faktörlerden biri olduğunu belirtir. Günümüzde, dijital ekonomi ve platform ekonomileri, klasik rekabet teorilerinin yetersiz kaldığı bir zemin oluşturmaktadır. Rekabet, ekonomi literatüründe sıklıkla vurgulanan temel bir kavram

olup, aktörlerin belirli bir hedef veya sınırlı kaynağa ulaşmak amacıyla verdikleri mücadeleyi tanımlar (Porter, 1980). Shapiro ve Varian (1999), geleneksel ekonomik modellerin, ağ etkilerinin ve platformların ekonomik etkilerini yeterince açıklayamadığını öne sürer. Dijital ekonominin, ağ etkileri ve platform ekonomileri gibi dinamikleri, piyasalarda hem rekabeti hem de iş birliğini destekleyen bir yapı oluşturur. Bu durum, firmalar arasındaki rekabetin yerini, giderek daha çok iş birliğine dayalı bir stratejiye bıraktığını göstermektedir. Dijital teknolojilerin sağladığı esneklik, firmaların rekabetçi avantajlarını korumak ve geniş pazarlarda etkili olmak için iş birliği yapmalarına olanak tanımaktadır. Ortak hedeflere ulaşmak, kaynakları korumak ve yaşam kalitesini artırmak için işbirlikçi çabalar çok önemlidir. Rekabet ilerlemeyi yönlendirse de, iş birliği etkinliğini güçlendirir ve ortak hedeflere doğru kolektif ilerlemeye olanak tanır. İş birliği ekiplerde, organizasyonlarda ve sınırlar ötesinde kendini gösterir ve ekonomik faaliyetlere dengeli bir yaklaşım teşvik eder.

İş birliği, koordinasyon ve iş birliği kavramları literatürde sıklıkla birbirine karıştırılır. Ancak, iş birliğinin özünü anlamak için net bir ayrım yapmak önemlidir. İş birliği, ortak hedeflere ulaşmak için birlikte çalışmayı içerirken, koordinasyon ve iş birliği, paylaşılan organizasyon ve entegrasyonu içeren daha karmaşık etkileşimleri ifade eder. Wood ve Gray'in (1991) iş birliği teorisi gibi teorik perspektifler, iş birliğini anlamak için kapsamlı bir çerçeve sunar. Ancak, çoğu çalışma oligopol piyasalarındaki oyun teorisine ve stratejik ittifaklara odaklanma eğilimindedir ve daha geniş iş birliği dinamiklerini daha az keşfedilmiş halde bırakır.

İş birliğine geçiş, şirketlerin rekabet ve şirketler arası iş birliği arasında bir denge aradığı küreselleşmiş, teknolojik olarak gelişmiş bir dünyada giderek daha belirgin hale gelmektedir. Bu değişim, kaynak kıtlığının yenilikçi ve iş birlikçi stratejileri gerektirdiğinin kabul edilmesiyle yönlendirilmektedir. İşbirlikleri, özellikle dijital ekonomilerde daha hızlı inovasyonu, maliyet verimliliğini ve gelişmiş rekabeti teşvik eder. Tezimizin temel vurgusu, iş birliği rekabete bir alternatif değil, rekabetçi kalma kapasitesini artıran bir tamamlayıcıdır.

Oyun teorisi aslında rekabeti içeren stratejileri içermektedir. Gerçek dünyada şirketler veya ülkeler birbirine bağımlıdır ve birinin davranışı diğerini etkilemektedir. Rekabet, aktörlerin birbiriyle kesişen çıkar ve amaçlara sahip olduğu bir sistem olarak tanımlanmaktadır. Bu strateji, ortak çıkarların ve hedeflerin uyumlaştırılmasıyla karakterize edilir (Czakon, 2010). Girişimcilik yeterliliği, temel kaynaklara ve becerilere erişimi optimize eder. Bir şirketin en iyi hareket tarzı, diğer şirketlerin benimsediği stratejilere bağlıdır. Her şirket rakiplerinin hareketlerini tahmin ederek kendi konumunu belirler. Bu, farklı oyuncuların çıkarlarının karşılıklı bağımlılığını ifade eden ve çatışma veya işbirliği durumlarına yol açabilen bir oyun yapısına yol açar (Brandenburger ve Nalebuff, 1997). Oyun teorisi, pazarın sabit bir yapı olmadığı, oyuncuların yeni pazarlar yaratıp yenilik yaptığı, ürün veya fiyatların sabit sayılmadığı bir yaklaşımı benimser. Geleneksel ekonomiden farklı olarak oyun teorisi, ekonominin dinamik ve sürekli gelişen bir yapı olduğunu varsayar.

Oyun teorisi bu dinamikleri analiz etmek için önemli bir araçtır. İşbirliği oyunları çerçevesinde tedarikçiler, şirketler ve müşteriler arasındaki dikey zincirlerin yarattığı değer incelenmektedir. Bu analizde belirli bir aktörün yarattığı değer, diğer tüm aktörlerin yarattığı değer çıkarılarak hesaplanır. Bu bağlamda tamamlayıcı aktör kavramları geliştirilmiş ve bu aktörlerin yeni modellere dahil edilmesi önerilmiştir (Brandenburger ve Nalebuff, 1997). İşbirliğinin temel teması ulaşılabilir değer yaratmaktır. Firmaların rekabet stratejilerinden biri de tamamlayıcı aktörlerle işbirliği yapmaktır (Brandenburger ve Nalebuff, 1997). Tamamlayıcılar, bir şirketin ürün ve hizmetlerini daha değerli kılan aktörlerdir ancak rakip değildirler. Örneğin donanım yazılım gerektirirken, internet yüksek hızlı telefon hatlarına bağlıdır. Yeni ekonominin altyapısı tek bir aktör tarafından değil, birbirini tamamlayan birçok unsurun bir araya gelmesiyle oluşturuluyor.

Adner ve Kapoor (2010), inovasyon ekosistemlerinde teknolojik ve organizasyonel bağımlılıkların firma performansı üzerindeki etkisini incelemiş ve bir firmanın başarısının sadece kendi kaynaklarına değil aynı zamanda ortaklarının inovasyon yeteneklerine de bağlı olduğunu belirtmiştir. Örneğin Airbus A380 modelinin

geliştirilmesi, şirketin mühendislik kapasitesinin ötesinde, havaalanları, düzenleyiciler ve simülatör üreticileri gibi dış aktörlerin katkılarına bağlıdır.

Lavie (2006), bir şirketin rekabet gücünün yalnızca kendi kaynaklarına değil, aynı zamanda stratejik ittifaklardan elde edilen tamamlayıcı varlıklara da dayandığını ileri sürmektedir. Lavie'ye göre tamamlayıcı varlıkların bir şirketin iç kaynaklarıyla sinerjisi, işbirliği yoluyla ekonomik değer yaratma fırsatı sunmaktadır.

Dijital ekonomi bağlamında, rekabet ve iş birliğinin dengeli bir harmonisi olan işrekabet, firmaların kaynakları optimize etmelerini ve tamamen rekabetçi veya iş birliğine dayalı stratejilerle ilişkili riskleri azaltmalarını sağlayan stratejik bir yaklaşım olarak ortaya çıkmıştır. İşrekabet, özellikle hızlı teknolojik evrimin ve karmaşık sistemlerin rekabet ve ortaklık arasında bir denge gerektirdiği FinTech gibi yüksek teknoloji sektörlerinde değerlidir. Bu yaklaşım, paylaşılan inovasyonu kolaylaştırır, ürün geliştirmeyi hızlandırır ve başarı için kritik öneme sahip uyarlanabilir stratejileri teşvik eder. İş rekabeti, şirketlerin iş birliği yaptığı ve birbirleriyle rekabet ettiği bir süreç olarak iş ekosistemlerinin temel bir özelliğidir. Moore'a (1993) göre iş ekosistemleri farklı fakat gevşek bir şekilde birbirine bağlı katılımcılardan oluşur. Şirketler bu ekosistemlerde bilgi paylaşımı ve ortak inovasyon konusunda önemli bir rol oynamaktadır.

Riquelme Medina ve ark. (2022), iş rekabetinin firma performansı üzerindeki doğrudan etkileri yerine, özümseme kapasitesi (dış bilginin içselleştirilmesi) ve tedarik zinciri esnekliği gibi ara değişkenler yoluyla dolaylı etkiler yarattığını belirtmiştir. Ancak rekabetçi iş stratejileri aynı zamanda bilgi sızıntısı gibi riskler de taşır ve bu da özümseme kapasitesi kavramının önemini artırır.

Başarılı iş rekabeti için bilgi paylaşımı şarttır. Von Hippel (2005), yeniliğin demokratikleşmesiyle birlikte kullanıcıların yalnızca tüketici olarak değil aynı zamanda yeniliklerin ortak yaratıcıları olarak sürece katıldıklarını ileri sürmektedir. Açık inovasyon, şirketlerin yalnızca kendi kaynaklarına değil aynı zamanda dış bilgi

ve teknolojilere de erişmesine olanak tanıyarak inovasyon süreçlerini hızlandırır ve maliyetleri azaltır (Chesbrough, 2003).

Sonuç olarak rekabetçi iş stratejileri, şirketlerin bireysel olarak başaramayacakları yenilikleri iş birliği yoluyla gerçekleştirmelerine olanak tanıyor. FinTech sektörü gibi örnekler, şirketlerin rekabet ve işbirliğini birleştirerek nasıl yeni değer yarattığını göstermektedir.

Uzun vadeli kalkınma, işbirlikçi stratejilere dayanır. Rekabet kısa vadeli kazanımlar sağlarken, iş birliği istikrarı ve sürdürülebilir büyümeyi teşvik eder (McAfee & Brynolfsson, 2012). Rekabetin ve iş birliğinin simbiyotik doğasını tanımak, ekonomik istikrarı ve büyümeyi artıran politikalar oluşturmak için önemlidir. Tezin son bölümünde, dijital ekonomide rekabet ve iş birliği arasındaki dinamiklerin daha iyi anlaşılmasını sağlamak için politika önerileri sunulmakta ve tezin genel değerlendirilmesi yapılmaktadır. Dijital ekonomide iş birliğinin artırılması ve rekabetin sürdürülebilir bir şekilde yönetilmesi için öneriler sunulmaktadır. Politikalar, hem hükümetlere hem de özel sektöre yönelik stratejileri içermektedir. Dijital ekonomide iş birliğini arttırmanın temel taşlarından biri, dijital beceriler ve inovasyon odaklı eğitim sistemidir. İş birliğini teşvik etmek için üniversiteler, sanayi ve hükümet arasında daha etkili bilgi paylaşımı mekanizmalarının geliştirilmesi gerekmektedir. Özellikle dijital teknolojilerin etkin kullanımı ve açık inovasyon süreçkerine yönelik eğitim programları önerilmiştir.

Dijital platformlara ve veri paylaşımına ilişkin net düzenlemelerin yapılması gerekmektedir. Bu düzenlemelerin hem veri gizliliği hem de siber güvenlik açısından uluslararası standartlara uygun hale getirilmelisi gereklidir. Ayrıca küçük ve orta ölçekli işletmelerin (KOBİ) iş birliği süreçlerine katılımını teşvik edecek özel destek mekanizmaları sağlanmalıdır.
İş birliğini sağlayacak dijital altyapının oluşturulması önem arz etmektedir. Örneğin 5G ağlarının konuşlandırılması, blockchain teknolojilerinin desteklenmesi ve bulut tabanlı iş çözümlerinin entegrasyonu tavsiye ediliyor. Bu altyapılar özellikle iş birliği ve veri paylaşımı süreçlerini hızlandırarak ekonomik dönüşümü destekleyecektir.

Dijital ekonominin küresel doğası göz önünde bulundurularak, uluslararası iş birliğini destekleyen ve ülkeler arasında veri alışverişini kolaylaştıran düzenlemeler önerilmektedir. Ayrıca uluslararası kuruluşlar aracılığıyla dijital ekonominin sürdürülebilirliğine ilişkin ortak stratejiler geliştirilmelidir. Çok taraflı platformlar dijital ekonominin temel direklerinden biridir. Bu platformların iş birliği ve rekabet arasındaki dengeyi koruyarak ekonomik büyümeye katkı sağladığı iddia edilmektedir. Örneğin açık bankacılık uygulamalarının yaygınlaştırılması ve blockchain tabanlı sistemlerin FinTech sektörüne entegrasyonu teşvik edilmelidir.

Ortak araştırma ve geliştirme projeleri, iş birliği süreçlerini derinleştirmek ve yenilikçiliği artırmak için temel bir araçtır. Şirketlerin büyük veri analitiği ve yapay zeka araçlarını kullanarak daha etkin iş modelleri geliştirmeleri desteklenmelidir. Bu ortaklıklar özellikle finans ve teknoloji sektörlerinde yeni ürün ve hizmetlerin geliştirilmesine katkı sağlayabilir.

Geleneksel ekonomi teorileri dijital ekonominin dinamiklerini anlamakta yetersiz kalmaktadır. Bu nedenle dijitalleşmenin getirdiği iş birliği ve rekabet dengesi üzerine yeni teorik yaklaşımların geliştirilmesi gerekmektedir.
Sonuç kısmında ise tezin genel bulguları özetlenmekte ve dijital ekonomide iş birliği ve rekabet arasındaki ilişkinin yeniden tanımlanması gerektiği vurgulanmaktadır. Dikkate değer bulgular şunlardır:
Dijital ekonomi, geleneksel rekabet teorilerinin ötesine geçerek iş birliğinin ekonomik büyüme ve inovasyon üzerindeki etkisini ortaya koyuyor. İşbirliği sadece kısa vadeli ekonomik kazanımlar için değil, aynı zamanda sürdürülebilir kalkınma için de bir zorunluluktur. Tez, dijital ekonomide iş birliği kavramının önemini vurgulayarak literatürdeki önemli bir boşluğu doldurmaktadır. Rekabetin yanı sıra iş birliğinin de ekonomik süreçlere katkıda bulunduğuna dair güçlü bir argüman öne sürülmektedir.

Araştırma FinTech ve dijital yayıncılık sektörlerine odaklandığından bu bulguların genellenebilirliği konusunda dikkatli olunmalıdır. Ancak bu sektörlerin seçimi, dijital ekonominin en dinamik alanlarını temsil etmeleri nedeniyle bilinçli bir seçimdir.

Sonuçta dijital ekonominin geleceği rekabet ve iş birliği arasındaki dengeye bağlıdır. Bu tez, bu dengenin hem teorik hem de pratik olarak nasıl sağlanabileceği konusunda önemli noktaları sunmaktadır. Tez, dijital ekonomide iş birliğinin önemini ve politika yapıcıların bu konuda atması gereken adımları kapsamlı bir şekilde ortaya koyarak alana önemli katkılar sağlamaktadır.

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