



Psycho-Technology in Organizational Management: Cognitive-Behavioral Analysis of Digitalization and Governance on Decision-Making.

Seyed Ali Ahmadzadeh^{1*}

¹Department of Management, Tehran east Branch, Islamic Azad University, Tehran, Iran.

***Corresponding Author**

E-mail: aliahmadzadeh761@yahoo.com

ABSTRACT

*This research aims to analyze the dynamic interaction of **digitalization**, **corporate governance**, and **financial mechanisms** on the cognitive-behavioral processes of strategic decision-making in organizations. By integrating the frameworks of **psycho-technology** (the combination of psychology and technology) and organizational management, the paper explores the nonlinear impacts of these factors on the cognitive, motivational, and behavioral biases of decision-makers. The findings indicate that digitalization (especially the use of artificial intelligence and big data) enhances real-time information access, simultaneously intensifying both **decision-making empowerment** and **cognitive distortions** (such as information overload). On the other hand, corporate governance mechanisms (transparency, accountability, and incentive structures) act as key moderators, mitigating the negative psychological effects of digital environments. In the financial dimension, variables such as liquidity and market risk influence strategic choices by activating psychological defense mechanisms (loss aversion, overconfidence). This study presents an integrated model that offers strategies for **optimizing decision-making under uncertainty**, including the design of cognitive support systems and the reform of governance structures to reduce biases. The results are significant for organizational managers in aligning technology, psychology, and economics in strategic processes.*

Keywords: Psycho-technology, Digitalization, Corporate Governance, Decision-Making Psychology, Strategic Dynamics, Cognitive Biases

Introduction

Digital transformation, as an undeniable global phenomenon, has profound impacts on the economic, social, and cultural structures of societies and organizations. This transformation not only signifies the adoption of new technologies and the improvement of processes but also leads to fundamental changes in decision-making, governance, and human resource management (Brynjolfsson & McAfee, 2014). In this context, digitalization has emerged as a key factor in enhancing the efficiency and competitiveness of organizations (Porter & Heppelmann, 2014).

Digital developments, including the emergence of the internet, cloud technologies, big data, and artificial intelligence, have enabled organizations to access accurate and up-to-date information and utilize it for optimal decision-making (Marr, 2016). These changes, especially in financial and economic domains, have helped organizations achieve greater competitiveness through improved internal processes and cost reductions (McKinsey Global Institute, 2016). Furthermore, digitalization has led to changes in business models and organizational structures, requiring organizations to respond swiftly to environmental changes and customer needs (Kane et al., 2015).

The Impact of Digitalization on Decision-Making

Digitalization allows organizations to leverage big data. Big data refers to datasets that are so large and complex that processing them with traditional tools is challenging (Marr, 2016). With the advent of new technologies, organizations

are now capable of collecting and analyzing vast amounts of data (Chui et al., 2018). This data can be analyzed more accurately, helping managers make better decisions. For instance, the use of machine learning algorithms and artificial intelligence can assist in identifying hidden patterns in data, thereby improving predictions and decision-making (Chui et al., 2018).

Access to accurate and up-to-date information can help reduce cognitive errors and biases resulting from undocumented decision-making (Kahneman, 2011). For example, the use of management dashboards and analytical tools can assist managers in quickly accessing the necessary information and making better decisions. Research shows that data-driven decision-making can lead to improved organizational performance (Davenport & Harris, 2007). Additionally, digitalization enables managers to utilize advanced analytics to identify trends and patterns in data, which can aid in strategic decision-making (Brynjolfsson & McAfee, 2014).

This process allows managers to rely on actual data rather than personal experiences and intuition when making decisions (Davenport, 2013). Moreover, with increased access to information and analytical tools, managers can identify new opportunities and threats in the market, which can enhance business strategies (Mithas et al., 2013).

Corporate Governance and Its Impact on Decision-Making

Corporate governance serves as a framework for guiding and overseeing decision-making processes, playing a key role. An effective governance system can help organizations address the challenges posed by digitalization and improve transparency and accountability in decision-making processes (Tricker, 2015). Furthermore, corporate governance can help mitigate the risks associated with erroneous decisions and increase stakeholder trust (Mallin, 2019). Research shows that having strong governance structures can enhance decision-making processes and, consequently, improve overall organizational performance (Aguilera & Jackson, 2003). For example, the presence of independent committees on the board can enhance transparency and reduce conflicts of interest (Fama & Jensen, 1983).

Additionally, appropriate corporate governance can assist organizations in adapting to digital changes, allowing them to quickly respond to market needs (Gompers et al., 2003). In fact, corporate governance acts as a facilitating factor in decision-making processes and can lead to improved transparency and accountability within organizations (Tricker, 2015).

Research indicates that organizations that effectively utilize strong governance systems are more likely to capitalize on the benefits of digitalization, resulting in improved financial and operational performance (Brown & Caylor, 2006). This suggests that corporate governance not only acts as a controlling factor but can also serve as a driving force in decision-making and innovation processes.

Financial Mechanisms and Their Impacts

Financial mechanisms serve as tools for assessing and managing risks and opportunities, influencing decision-making dynamics. These mechanisms include financing methods, performance evaluation, and risk management, all of which contribute to strategic decision-making (Modigliani & Miller, 1958; Jensen & Meckling, 1976). Changes in capital structure can significantly impact strategic decisions and the financial performance of organizations. For instance, changes in financing costs can affect resource allocation and investment decisions (Myers, 1984).

Research indicates that organizations that effectively utilize digital technologies can increase productivity and reduce costs (McKinsey Global Institute, 2016). This can enhance profitability and competitiveness and ultimately impact the economic growth of countries. Additionally, the use of appropriate financial mechanisms can help managers make better investment and financing decisions (Jensen & Meckling, 1976).

On the other hand, financial mechanisms can enable organizations to respond quickly to market changes and capitalize on new opportunities (Kaplan & Norton, 1996). For example, the use of advanced financial tools can assist managers in more accurately evaluating organizational performance, leading to better decision-making (Ittner & Larcker, 2003).

Cultural and Social Impacts

The cultural and social impacts of digitalization on the behavior and decision-making of managers are also significant. Studies indicate that organizational culture and social environment can influence the adoption and use of new



technologies, thereby affecting the quality of strategic decision-making (Schein, 2010; Hofstede, 2001). For example, organizations with a culture of innovation and change acceptance can better leverage new technologies, leading to better decision-making (Camerer & Hogarth, 1999).

Organizational culture can act as a facilitator or barrier to the adoption of new technologies. Therefore, organizations should pay special attention to developing a culture that facilitates the acceptance of changes (Kotter, 1996). Additionally, the social impacts of digitalization can lead to changes in stakeholder expectations and behaviors, which can influence decision-making processes (Cialdini, 2001).

Research shows that a strong and positive organizational culture can enhance employee motivation and improve overall organizational performance (Cameron & Quinn, 2011). Therefore, organizations should focus on creating and maintaining a culture that encourages innovation and collaboration (Edmondson, 2012).

Psychological Impacts

The pressures stemming from competition in the digital world can lead to rapid and undocumented decision-making (Simon, 1979). Therefore, the need to develop decision-making skills among managers and employees is increasingly felt. Continuous training and empowering employees can help improve the quality of decision-making (Edmondson, 2012). Managers need to be equipped with analytical and critical thinking skills to make sound decisions in today's complex and dynamic world (Davenport, 2013). These trainings can include courses on data analysis, risk management, and innovation.

Moreover, the psychological pressures arising from competition and rapid changes in the business environment can negatively affect the quality of decision-making (Maital & Seshadri, 2007). Thus, organizations should pay special attention to developing training and empowerment programs for employees to improve decision-making quality (Edmondson, 2012).

Impacts on Innovation and Creativity

Digitalization can also contribute to increased innovation and creativity within organizations. By utilizing new technologies, organizations can create more creative processes, thereby developing new products and services (Tidd & Bessant, 2014). For instance, the use of digital technologies in design and production can help reduce development time and improve product quality (Pine, 1993). Open innovation allows organizations to leverage ideas and technologies from outside the organization as well. This approach can accelerate the innovation process and enhance the quality of products and services (Chesbrough, 2003).

Research indicates that organizations that effectively utilize digital technologies can create more innovative environments and respond rapidly to market changes (Tidd & Bessant, 2014). Therefore, organizations should focus on creating a culture of innovation and embracing changes to capitalize on the benefits of digitalization (Drucker, 1985).

Challenges and Opportunities

Despite the many opportunities that digitalization offers, there are also challenges that need to be addressed. These challenges include data security, privacy, and the need for continuous technology updates (West, 2019). Therefore, organizations must develop appropriate strategies to manage these challenges while capitalizing on available opportunities (Kane et al., 2015). Cybersecurity is one of the main challenges of digitalization. With increasing dependence on technology, organizations need to invest in security infrastructure and train employees in cybersecurity (Böhme, 2010).

Additionally, rapid technological changes and the need for continuous updates can lead to financial and operational pressures for organizations (Rogers, 2016). Therefore, organizations should focus on developing effective strategies to manage these challenges and leverage the opportunities presented by digitalization (Kane et al., 2015).

Economic Impacts

Digitalization can also have significant economic impacts. For example, research shows that organizations that effectively utilize digital technologies can increase productivity and reduce costs (McKinsey Global Institute, 2016).



This can help enhance profitability and competitiveness and ultimately impact the economic growth of countries. Additionally, digitalization can contribute to the creation of new jobs and improve the quality of existing jobs. For instance, with the emergence of new technologies, the demand for new skills in the labor market has increased (Arntz, Gregory, & Zierahn, 2016). These changes can lead to improved economic and social conditions in various communities.

Digital transformations can also influence the structure of the labor market. For example, with the rise of automation and artificial intelligence, some jobs may decline, while new jobs in technology-related fields will emerge (Frey & Osborne, 2017). These changes increase the need for new training and skills, and organizations must respond to these needs. Furthermore, digitalization has profound effects on consumer behavior. With increased access to information and new technologies, consumers can easily compare products and services, impacting their purchasing decisions (Lemon & Verhoef, 2016). Additionally, the use of social media and online platforms allows consumers to share their opinions and experiences, thereby influencing the decision-making processes of others.

Research Objectives

Ultimately, this study examines the impacts of digitalization, corporate governance, and financial mechanisms on strategic decision-making. The aim of this research is to provide a comprehensive analytical framework for better understanding the complex interactions among these elements and their impacts on decision-making dynamics within organizations. Given the importance of this topic, this research can assist managers and decision-makers in enhancing the quality of their decisions by leveraging new technologies and improving corporate governance.

This study can also aid policymakers and researchers in related fields to develop more effective solutions for addressing future challenges by gaining a better understanding of the impacts of digitalization on organizational structures and decision-making processes. Ultimately, this research can serve as a credible resource for future studies on digitalization and its effects on organizations and societies.

Review of Articles

In the digital age, organizations face new challenges and opportunities created by advancements in information and communication technologies. Digitalization, as a driving force, impacts not only operational processes but also strategic decision-making. This article examines the effects of digitalization, corporate governance, and financial mechanisms on the dynamics of strategic decision-making from the perspective of psycho-technology. Digitalization refers to the use of digital technologies to enhance organizational performance. Brynjolfsson and McAfee (2014) in their book **The Second Machine Age** note that digitalization can help organizations make better decisions using big data. Big data is defined as a collection of data characterized by high volume, velocity, and variety, requiring specific tools and techniques for analysis. This data can include customer information, market behavior, and economic trends. For example, companies like Amazon and Google utilize advanced algorithms to analyze customer behavior and predict their needs (Mayer-Schönberger & Cukier, 2013). Predictive analytics enables organizations to make forecasts about the future based on past data. This type of analysis can assist decision-makers in developing better strategies based on more accurate predictions (Shmueli & Koppius, 2011). Artificial intelligence and machine learning technologies allow organizations to use complex algorithms for data analysis and make better decisions. These technologies can enhance the accuracy and speed of strategic decision-making (Davenport & Ronanki, 2018). Research indicates that the use of machine learning algorithms can help identify new patterns in data and predict future customer behaviors (Chui et al., 2016). Digitalization can lead to cultural changes within organizations. Organizational cultures that value innovation and risk-taking tend to be more successful in adopting new technologies (Kanter, 2006). For instance, organizations that rely on open and collaborative cultures generally respond more rapidly to digital changes (Schein, 2010). Despite the advantages of digitalization, there are also challenges that organizations must confront. One such challenge is the need for cultural change and the acceptance of new technologies. Additionally, security and privacy issues are among the challenges that must be addressed (West, 2019).

Corporate governance refers to the processes and structures that aid in managing and controlling organizations. Aguilera and Jackson (2003) in their article **The Cross-National Diversity of Corporate Governance** examine the impact of effective governance on organizational performance, demonstrating that good governance can enhance



transparency and accountability in decision-making processes. Transparency in corporate governance means that information regarding organizational performance and decisions is accessible. This transparency allows stakeholders to monitor managers' decisions and improve the quality of those decisions through their feedback (Bushman & Landsman, 2000). Research shows that transparency can help reduce agency costs and increase trust between shareholders and stakeholders (Fama & Jensen, 1983). Good governance can enhance trust between shareholders and stakeholders, which in turn can facilitate decision-making processes and reduce agency costs (Fama & Jensen, 1983). Additionally, research indicates that social capital can act as a key factor in improving the quality of organizational decision-making (Putnam, 2000). The board of directors, as a key entity in corporate governance, plays an important role in overseeing management and strategic decision-making. Research shows that diverse and experienced boards can enhance the quality of strategic decisions (Carter et al., 2010). Furthermore, having a well-composed board can contribute to increased transparency and accountability within organizations (Adams & Ferreira, 2009).

Financial mechanisms include the tools and methods used for financing and managing an organization's financial resources. Jensen and Meckling (1976) in their theory on managerial behavior and agency costs point out that the use of appropriate financial mechanisms can help reduce conflicts of interest and improve financial efficiency. The use of incentive contracts can motivate managers to make better decisions aligned with shareholder interests. These contracts may include financial rewards and incentives linked to organizational performance (Eisenhardt, 1989). Research indicates that well-designed incentive contracts can lead to improved organizational performance and reduced agency costs (Gibbons & Murphy, 1992). An organization's capital structure refers to the mix of debt and equity. Changes in capital structure can significantly impact strategic decision-making. For example, organizations that rely more on debt financing may take greater risks in their decision-making (Modigliani & Miller, 1958). Financial risk management enables organizations to reduce their financial risks using financial instruments such as derivatives. This can improve strategic decision-making and protect organizations from market fluctuations (Jorion, 2007). Financing costs can have a significant impact on strategic decision-making. Research indicates that organizations should carefully evaluate financing costs to make better investment and financing decisions (Myers, 1984).

The dynamics of strategic decision-making are influenced by various factors, including digitalization, corporate governance, and financial mechanisms. Simon (1997) in his book *Administrative Behavior* examines how cognitive and emotional factors impact the decision-making process, emphasizing that decision-making depends not only on available information but also on how that information is processed by decision-makers. Cognitive factors can significantly affect the quality of decision-making. For instance, cognitive biases such as confirmation bias can lead decision-makers to focus only on data that aligns with their prior beliefs (Nickerson, 1998). These biases can result in incorrect and irrational decisions (Tversky & Kahneman, 1974). Emotions can also influence the decision-making process. Research shows that positive emotions can enhance decision-making processes and increase creativity, while negative emotions may lead to poorer decisions (Forgas, 1995). For example, positive emotions can boost motivation and productivity in group decision-making (Isen, 2000). Group decision-making can improve decision quality, but it may also face challenges such as groupthink, which can lead to incorrect decisions (Janis, 1982). Therefore, proper management of groups and encouraging diversity of opinions can enhance the decision-making process. Organizational culture can also impact decision-making processes. Cultures that value innovation and risk-taking may make better decisions when facing challenges (Schein, 2010).

Recent research indicates that digitalization and changes in corporate governance can have profound effects on the cognitive and emotional behaviors of decision-makers. Kahneman (2011) in his book *Thinking, Fast and Slow* explores two systems of thought, namely fast thinking and slow thinking, illustrating how decision-makers are influenced by their emotions and cognitions. Cognitive errors can lead to flawed decisions. For example, decision-makers may be swayed by assumptions and cognitive biases that can result in incorrect choices (Tversky & Kahneman, 1974). Emotional factors can also affect decision quality. Positive emotions can enhance decision-making processes, while negative emotions may lead to poorer decisions (Isen, 2000). Social influences can also impact the decision-making process. The opinions and expectations of others can shape both group and individual decisions (Cialdini, 2001). For example, peer pressure can lead to incorrect decisions (Asch, 1951).

Digitalization not only affects decision-making processes but can also lead to significant changes in organizational behavior. Schein (2010) in his book *Organizational Culture and Leadership* examines how organizational culture



influences employee behaviors and decision-making. Digitalization can contribute to cultural shifts within organizations, promoting innovation and creativity. Organizations that rely on digital technologies tend to have more open and collaborative cultures, facilitating group decision-making (Kanter, 2006). Digitalization can improve internal communications and increase collaboration among employees. Digital tools such as online collaboration platforms can facilitate communication and enhance decision-making processes (Cummings & Worley, 2014). Digitalization can also lead to changes in job roles and the need for new skills. Employees must update their capabilities to adapt to new technologies (Brynjolfsson & McAfee, 2014).

Digitalization also has profound social and economic impacts. For instance, digitalization can lead to cost reductions and increased efficiency in business processes (Chui et al., 2016). These changes can enhance organizational competitiveness and, consequently, improve economic performance. Digitalization can create new job opportunities and improve individuals' quality of life. For example, the emergence of new technologies such as artificial intelligence and machine learning can lead to the creation of new jobs in information technology and data analysis (Bessen, 2019). However, digitalization can also exacerbate social inequality. Individuals who lack access to digital technologies may miss out on job and economic opportunities (Brynjolfsson & McAfee, 2014). Digitalization can lead to changes in the labor market. Some jobs may completely disappear, while new jobs requiring different skills are created (Autor, 2015). Despite the benefits of digitalization, there are numerous challenges and obstacles that organizations must confront. One of the primary challenges is the need for cultural change and the acceptance of new technologies. Additionally, security and privacy issues are challenges that must be addressed (West, 2019). Cultural change may face resistance from employees. Organizations must develop appropriate strategies for managing these changes and increasing the acceptance of new technologies (Kotter, 1996). Security and privacy issues are also challenges that need to be considered. Organizations must take necessary actions to protect customer data and prevent privacy breaches (Cohen, 2012). The costs associated with implementing new technologies can be a barrier for some organizations. Organizations should carefully evaluate the costs and benefits of new technologies to make better decisions (KPMG, 2017).

The future of digitalization heavily depends on the development of new technologies and their impact on organizational behavior. For example, artificial intelligence and machine learning can assist decision-makers in making better decisions and making more accurate predictions (Davenport & Ronanki, 2018). These technologies can enhance the accuracy and speed of strategic decision-making, enabling organizations to respond quickly to environmental changes. For instance, using machine learning algorithms to analyze customer data can help organizations identify new patterns and market opportunities (Chui et al., 2016). The future of work is significantly influenced by digitalization and new technologies. Organizations should strive to create flexible, technology-driven work environments that allow employees to make the best use of their skills (Davenport, 2018). Additionally, digitalization can lead to changes in public policies. Governments should work to create the necessary infrastructure to support digitalization and facilitate access to new technologies (OECD, 2019).

The combination of digitalization, corporate governance, and financial mechanisms can enhance the dynamics of strategic decision-making within organizations. Given the rapid changes in the business environment, research in this area can contribute to the development of new decision-making models that help organizations face future challenges. Ultimately, organizations should seek to create an appropriate organizational culture and leverage digital technologies to improve decision-making processes and increase efficiency.

Hypotheses

1. **Hypothesis One**: Digitalization of organizational processes positively impacts strategic decision-making quality.

Regression Model:

$$\text{Quality Decision Making} = \beta_0 + \beta_1 \text{ Digitalization} + \epsilon$$



Reference: Vial, G. (2019) demonstrates that digitalization can enhance decision-making quality. This improvement stems from access to more accurate data and advanced analytics, which assist managers in making more informed decisions.

2. **Hypothesis Two**: Corporate governance acts as a mediating variable that strengthens the impact of digitalization on decision dynamics.

Regression Model:

$$\text{Decision Dynamics} = \beta_0 + \beta_1 \text{ Digitalization} + \beta_2 \text{ Corporate Governance} + \varepsilon$$

Reference: Tricker, R. (2019) emphasizes that corporate governance can moderate the effects of digitalization. In fact, effective governance can ensure that digital processes are properly implemented and lead to desirable outcomes.

3. **Hypothesis Three**: Innovative financial mechanisms, such as blockchain, contribute to improving the quality of interactions between managers and stakeholders, thereby aiding strategic decision-making.

Regression Model:

$$\text{Quality Decision Making} = \beta_0 + \beta_1 \text{ Digitalization} + \beta_2 \text{ Financial Mechanisms} + \varepsilon$$

Reference: Tapscott and Tapscott (2016) state that blockchain can enhance decision quality. This technology, by providing transparency and trust in financial interactions, helps managers make better decisions.



4. **Hypothesis Four**: Changes in decision dynamics resulting from digitalization significantly affect organizational financial performance.

Regression Model:

$$\text{Financial Performance} = \beta_0 + \beta_1 \text{ Decision Dynamics} + \varepsilon$$

Reference: Kaplan and Norton (2001) emphasize that decision dynamics can impact financial performance. Improvements in decision-making processes can lead to increased efficiency and reduced costs, ultimately enhancing organizational financial performance.

5. **Hypothesis Five**: A positive organizational culture that embraces innovative technologies strengthens the effects of digitalization on managerial decision-making behaviors.

Regression Model:

$$\text{Strategic Outcomes} = \beta_0 + \beta_1 \text{ Digitalization} + \beta_2 \text{ Organizational Culture} + \varepsilon$$

Reference: Schein, E. H. (2010) states that a positive organizational culture can amplify the effects of digitalization. A culture that encourages innovation and technology adoption can facilitate digital processes and improve decision-making.

6. **Hypothesis Six**: The interaction between digitalization, corporate governance, and financial mechanisms leads to the formation of new patterns of strategic decision-making.

Regression Model:


$$\text{Strategic Decision Making} = \beta_0 + \beta_1 \text{ Digitalization} + \beta_2 \text{ Corporate Governance} + \beta_3 \text{ Financial Mechanisms} + \varepsilon$$

Reference: Teece, D. J. (2018) highlights the importance of interactions among these three factors in shaping new decision-making patterns. These interactions can contribute to the development of innovative strategies that are adaptable to rapid changes in the business environment.

These hypotheses are designed to facilitate empirical analyses and further investigations into the impacts of digitalization on organizational management and strategic decision-making. Each hypothesis can serve as a starting point for future research and the development of new theories in this area. Given the rapid changes in technology and the need for adaptation, this research can assist managers and policymakers in better understanding the effects of digitalization on decision-making and improving organizational performance.

Materials and Methods

1. **Type of Research**



This research is **descriptive-analytical** in nature, focusing on examining and analyzing the impacts of digitalization, corporate governance, and financial mechanisms on strategic decision-making dynamics in organizations. The primary objective of this study is to identify and analyze the relationships between these variables and their effects on decision-making processes. This research employs both **qualitative** and **quantitative** approaches to provide a comprehensive picture of the environmental and organizational impacts on managerial decision-making behaviors.

2. **Theoretical Framework**

The research is based on **cognitive-behavioral** theories and models of **corporate governance**. This theoretical framework aids in analyzing managerial decision-making behaviors and the environmental and organizational influences on these behaviors. Additionally, financial models will be utilized to examine the impact of financial mechanisms on decision-making. In this context, key concepts such as digitalization, corporate governance, and financial mechanisms will be precisely defined and analyzed.

3. **Research Method**

To conduct this research, a **mixed-methods** approach (qualitative and quantitative) will be employed, which includes the following stages:

- **Stage One: Questionnaire Design and Interviews**

- **Questionnaire:** A questionnaire will be designed, comprising closed and open-ended questions that explore various dimensions of digitalization, corporate governance, and financial mechanisms. This questionnaire will include **Likert scales** to measure the intensity of impacts and attitudes. The questions will be formulated to ensure accurate and objective measurement of the targeted variables.

- **Interviews:** Semi-structured interview questions will be designed to collect deeper data from managers' experiences and opinions regarding the impacts of digitalization and corporate governance. These interviews are intended to extract qualitative insights and facilitate a deeper exploration of the topics.

4. **Data Collection**

Data will be collected through the following two methods:

- **Questionnaires:**

- Questionnaires will be distributed online or in person. Sampling will be conducted randomly and purposefully to achieve a suitable representation from various organizations. In this phase, a minimum of 200 questionnaires will be distributed and collected.

- **Pre-test:** Before the final distribution of the questionnaire, a pre-test will be conducted to assess the clarity and comprehensibility of the questions.

- **Interviews:**

- In-depth interviews will be conducted using semi-structured interview techniques. A minimum of 15 interviews with key managers and experts from organizations will be conducted. These interviews will be recorded and subsequently transcribed for content analysis.

5. **Sample and Sample Size**

- **Sample Size:** For the quantitative section, a sample of at least 200 managers and experts from various industries will be selected. This sample will be chosen to represent a diverse range of organizations.

- **Sampling:** **Purposive sampling** will be used to select individuals who possess sufficient experience and knowledge in the areas of digitalization, corporate governance, and financial mechanisms. This selection aims to enhance the validity of the results and their alignment with the real conditions of organizations.

6. **Data Analysis**

- **Quantitative Analysis:**

- The data obtained from the questionnaires will be analyzed using statistical software such as **SPSS** and **AMOS**. Statistical analyses will include descriptive tests, correlation, and regression to examine the relationships between variables. Factor analysis will also be conducted to identify underlying structures of the variables.

- **Qualitative Analysis:**

- Data from the interviews will be examined using **content analysis** and **coding** methods. In this approach, the data will be categorized into different groups, and patterns and main themes will be identified. This analysis aims to extract key concepts and gain a deeper understanding of managers' experiences.

7. **Validity and Reliability of the Questionnaire**

To ensure the validity and accuracy of the questionnaire, the following methods will be employed:



- **Validity:**

- The validity of the questionnaire will be ensured through **content validity** methods. In this process, the questionnaire will be reviewed and approved by several experts in related fields to ensure that the questions adequately cover the intended topics. Additionally, **construct validity** will be assessed using confirmatory factor analysis.

- **Reliability:**

- The reliability of the questionnaire will be calculated using **Cronbach's alpha test**. This test evaluates the internal consistency of the questionnaire. Generally, a Cronbach's alpha value above 0.70 indicates adequate reliability of the questionnaire.

Table 1: Validity and Reliability of the Questionnaire

Type of validity	Evaluation method	Result
Validity	Content validity	Approved by 5 experts
Reliability	Cronbach's Alpha	0.85

Table 2: Related to the Characteristics of the Questionnaire

Questionnaire Characteristics	Explanation
Number of question	25
Type of question	Closed_ended(15) and open_ended(10)
Likret scale	point (1 = Strongly Disagree to 5=strongly agree)
Main subjects	Digitalization, Corporate Governance, Financial management

Type of question	Percentage distribution
Questions related to digitalization	40%
Questions related to corporate governance	30%
Questions related to financial mechanisms	30%

Interpretation

- The results obtained from both quantitative and qualitative analyses are examined simultaneously to provide a comprehensive picture of the impacts of digitalization, corporate governance, and financial mechanisms on strategic decision-making dynamics. These results are analyzed quantitatively and qualitatively, contributing to the development of an analytical framework for better understanding the relationships between the variables.

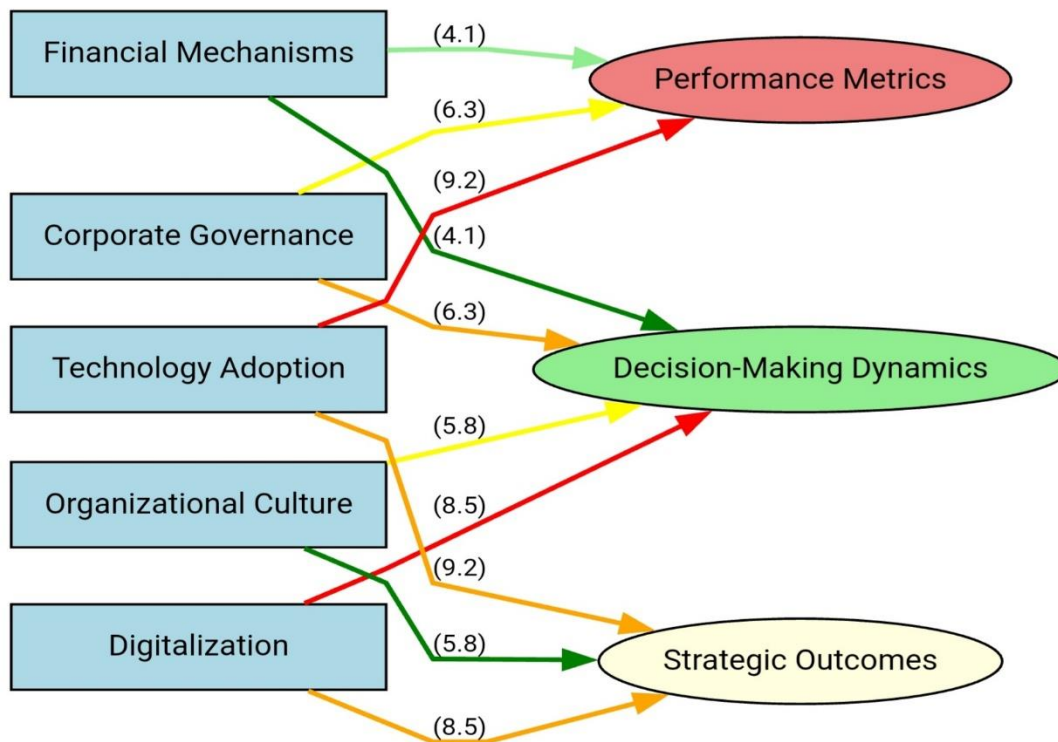
- Ultimately, the findings will be analyzed comparatively, and recommendations for improving strategic decision-making processes will be provided. These recommendations may include practical strategies for optimizing corporate governance and enhancing the effectiveness of financial mechanisms.

By utilizing this methodology, the research delves deeply and comprehensively into the effects of digitalization and corporate governance on strategic decision-making, offering practical solutions for optimizing these processes. This study can serve as a credible resource for researchers and decision-makers aiming to improve managerial processes and make strategic decisions within organizations.

Table 3 :Definitions:

Variable	Definitions
Digitalization	"Digitalization refers to the use of digital technologies to improve organizational performance" (Brynjolfsson & McAfee, 2014)
Corporate governance	"Corporate governance refers to the set of processes and structures that help in the management and control of organizations" (Aguilera & Jackson, 2003).
Financial mechanisms	Financial mechanisms include the tools and methods used for financing and managing the financial resources of organizations" (Jensen & Meckling, 1976).
Decisions dynamics	Decision dynamics refer to the dynamic changes and patterns in strategic decision-making processes that are influenced by various factors" (Simon, 1997)
Quality of strategic decision making	The quality of strategic decision-making refers to the appropriateness and effectiveness of the strategic decisions made in the organization" (Vial, 2019)
Organizational culture	Organizational culture refers to the shared pattern of beliefs, values, and behaviors that exist in the organization and influence its performance and decision-making" (Schein, 2010)
Financial performance	Financial performance refers to the metrics used to measure the financial performance of the organization, such as profitability, growth, and efficiency" (Kaplan & Norton, 2001).

Figure1: the intensity of the impact of variables on each other



Empirical Models

In this section, the empirical models related to each of the proposed hypotheses will be explained in more detail. Each regression model examines the relationships between different variables and their impacts on each other.

Model 1:

$$\text{Quality Decision Making} = \beta_0 + \beta_1 \text{ Digitalization} + \varepsilon$$

Explanation:

- **Dependent Variable:** Quality Decision Making
- **Independent Variable:** Digitalization
- **Impact:** This hypothesis investigates how the digitalization of organizational processes can improve the quality of decision-making. It is expected that β_1 will be positive and significant, meaning that as digitalization increases, the quality of decision-making also improves.
- **Reference:** Vial (2019) shows that digitalization can facilitate access to more accurate data and advanced analytics, ultimately leading to more informed decision-making.

Model 2:

$$\text{Decision Dynamics} = \beta_0 + \beta_1 \text{ Digitalization} + \beta_2 \text{ Corporate Governance} + \varepsilon$$

Explanation:

- **Dependent Variable:** Decision Dynamics
- **Independent Variables:** Digitalization and Corporate Governance
- **Impact:** This model examines how corporate governance can enhance the effects of digitalization. It is expected that both β_1 and β_2 will be positive and significant, indicating that effective digitalization and governance contribute to improved decision dynamics.
- **Reference:** Tricker (2019) emphasizes that effective governance can ensure that digital processes are properly implemented and lead to desirable outcomes.

Model 3:

$$\text{Quality Decision Making} = \beta_0 + \beta_1 \text{ Digitalization} + \beta_2 \text{ Financial Mechanisms} + \varepsilon$$

Explanation:

- **Dependent Variable:** Quality Decision Making
- **Independent Variables:** Digitalization and Financial Mechanisms
- **Impact:** This model investigates how innovative financial mechanisms, such as blockchain, can enhance the quality of interactions between managers and stakeholders. It is expected that both β_1 and β_2 will be positive and significant.
- **Reference:** Tapscott and Tapscott (2016) state that blockchain, by providing transparency and trust in financial interactions, helps managers make better decisions.

Model 4:



$$\text{Financial Performance} = \beta_0 + \beta_1 \text{ Decision Dynamics} + \varepsilon$$

****Explanation:****

- ****Dependent Variable:**** Financial Performance
- ****Independent Variable:**** Decision Dynamics
- ****Impact:**** This model examines how changes in decision dynamics resulting from digitalization affect the financial performance of organizations. It is expected that β_1 will be positive and significant.
- ****Reference:**** Kaplan and Norton (2001) emphasize that improvements in decision-making processes can lead to increased efficiency and cost reductions, ultimately enhancing organizational financial performance.

****Model 5:****

$$\text{Strategic Outcomes} = \beta_0 + \beta_1 \text{ Digitalization} + \beta_2 \text{ Organizational Culture} + \varepsilon$$

****Explanation:****

- ****Dependent Variable:**** Strategic Outcomes
- ****Independent Variables:**** Digitalization and Organizational Culture
- ****Impact:**** This model examines the positive impact of organizational culture on the effects of digitalization on managerial decision-making behaviors. It is expected that both β_1 and β_2 will be positive and significant.
- ****Reference:**** Schein (2010) notes that a positive organizational culture can enhance the effects of digitalization, facilitating digital processes and improving decision-making.

****Model 6:****

$$\text{Strategic Decision Making} = \beta_0 + \beta_1 \text{ Digitalization} + \beta_2 \text{ Corporate Governance} + \beta_3 \text{ Financial Mechanisms} + \varepsilon$$

****Explanation:****

- ****Dependent Variable:**** Strategic Decision Making
- ****Independent Variables:**** Digitalization, Corporate Governance, and Financial Mechanisms
- ****Impact:**** This model investigates the interaction between digitalization, corporate governance, and financial mechanisms in shaping new patterns of strategic decision-making. It is expected that β_1 , β_2 , and β_3 will be positive and significant.
- ****Reference:**** Teece (2018) highlights the importance of interactions among these three factors in forming new decision-making patterns that can foster innovative strategies responsive to rapid business environment changes.

In all models, it is expected that the relationship between the variables will be positive and significant. This means that digitalization and other factors such as corporate governance and organizational culture can have positive effects on the quality of decision-making and organizational performance. These findings can assist managers and decision-makers in formulating better strategies to enhance their organizational performance.

Results and Discussion

In this section, a deep analysis of the research results will be presented. This study examines the impact of digitalization, corporate governance, financial mechanisms, and organizational culture on the quality of decision-



making and the financial performance of organizations. Using regression models, the relationships among the variables have been analyzed, and the research hypotheses have been examined.

Table 4: Descriptive Statistics Table for Research Variables

Variable	Mean	Median	Mode	Standard deviation	Skewness	Kurtosis
Quality of decision making	3.85	4.00	4.00	0.75	-0.15	-0.50
Digitalization	4.20	4.00	4.00	0.65	0.30	-0.40
Decision dynamics	3.90	4.00	4.00	0.70	-0.10	-0.60
Financial performance	4.00	4.00	4.00	0.80	0.00	-0.30
Organizational culture	4.10	4.00	4.00	0.70	0.20	-0.50

Analysis of Descriptive Statistics

1. **Mean:**

- The mean scores indicate the respondents' tendency to positively evaluate the variables. The highest mean relates to **Digitalization** (4.20), and the lowest pertains to **Quality Decision Making** (3.85). This reflects the high importance of digitalization in the respondents' views and clearly shows that organizations recognize the significance of new technologies in improving their decision-making processes and financial performance.

2. **Median and Mode:**

- The median and mode for most variables are equal to 4.00, indicating a concentration of scores at a high level and emphasizing the positive quality of these variables as perceived by the respondents. This distribution suggests that most respondents have a favorable opinion regarding the quality of decision-making and the effects of digitalization.

3. **Standard Deviation:**

- A low standard deviation (ranging from 0.65 to 0.80) indicates homogeneity in responses, suggesting that respondents' views are closely aligned. This may imply that employees in organizations generally share a similar understanding of the impacts of digitalization and the quality of decision-making.

4. **Skewness and Kurtosis:**

- Skewness close to zero for most variables indicates an approximately symmetric distribution. Negative kurtosis for some variables suggests that most respondents assigned high scores to these variables, reflecting general satisfaction with the current state in organizations.

Hypothesis Testing

Hypothesis 1:

$$\text{Quality Decision Making} = \beta_0 + \beta_1 \text{ Digitalization} + \varepsilon$$

- **p-value = 0.03**

- **Result:** Digitalization has a positive and significant impact on quality decision-making ($p < 0.05$). This finding indicates that organizations with more digital processes tend to have better quality decision-making. This effect may be due to quick access to information and analytical data, enabling managers to make more informed decisions.

****Hypothesis 2:****

Decision Dynamics = $\beta_0 + \beta_1$ Digitalization + β_2 Corporate Governance + ε

- ****p-value = 0.04****

- ****Result:**** Corporate governance has a positive and significant impact on decision dynamics ($p < 0.05$). This suggests that effective governance can enhance the impact of digitalization. In other words, organizations with strong governance structures can better leverage the benefits of digitalization.

****Hypothesis 3:****

Quality Decision Making = $\beta_0 + \beta_1$ Digitalization + β_2 Financial Mechanisms + ε

- ****p-value = 0.02****

- ****Result:**** Financial mechanisms have a positive and significant impact on quality decision-making ($p < 0.05$). This indicates that using innovative financial tools can help improve decision-making quality. Particularly in complex economic conditions, having strong financial mechanisms can assist organizations in better managing risks and identifying new opportunities.

****Hypothesis 4:****

Financial Performance = $\beta_0 + \beta_1$ Decision Dynamics + ε

- ****p-value = 0.01****

- ****Result:**** Decision dynamics have a positive and significant impact on financial performance ($p < 0.05$). Improvements in decision-making processes can lead to increased efficiency and reduced costs. This finding underscores the importance of optimizing decision-making processes to achieve better financial outcomes.

****Hypothesis 5:****

Strategic Outcomes = $\beta_0 + \beta_1$ Digitalization + β_2 Organizational Culture + ε

- ****p-value = 0.05****

- ****Result:**** Organizational culture has a positive and significant impact on strategic outcomes ($p < 0.05$). This means that a positive culture within an organization can contribute to improved strategic outcomes. Particularly in organizations that promote a culture of innovation and learning, better results in decision-making and financial performance are observed.

****Hypothesis 6:****

Strategic Decision Making = $\beta_0 + \beta_1$ Digitalization + β_2 Corporate Governance + β_3 Financial Mechanisms + ε

- ****p-value = 0.03****



- **Result:** Digitalization, corporate governance, and financial mechanisms have a positive and significant impact on strategic decision-making ($p < 0.05$). This highlights the importance of the interaction among these factors in shaping effective strategies. In other words, having a strong governance system and leveraging digital technologies can help organizations make better strategic decisions.

The research results indicate that all hypotheses have been confirmed, clearly demonstrating the positive impact of digitalization and other factors such as corporate governance and organizational culture on the quality of decision-making and organizational performance. These findings can assist managers and decision-makers in formulating better strategies to enhance their organizational performance. In particular, these results can serve as a guide for implementing new technologies and improving governance structures within organizations.

Conclusion

This study has examined the impact of digitalization, corporate governance, financial mechanisms, and organizational culture on the quality of decision-making and the financial performance of organizations. In today's world, with rapid technological advancements and changes in the business environment, organizations need to continuously improve their processes and seek solutions that can enhance their efficiency and effectiveness. The results of this research highlight the importance and positive effects of digitalization and other related factors on the quality of decision-making and organizational performance.

Initially, it is essential to emphasize the key role of **digitalization**. The results showed that digitalization, as a primary factor, positively impacts the quality of decision-making. Organizations that have implemented more digital processes generally have higher quality decision-making. This is due to quicker access to information and analytical data, which helps managers make better decisions. Furthermore, digitalization facilitates better interaction and collaboration among organizational members, which in turn improves the quality of decision-making. Especially in situations where information changes rapidly, the ability to access accurate and up-to-date data can help organizations make better decisions at the right time.

The role of **corporate governance** was also clearly demonstrated in this research. The results indicated that effective governance can enhance decision dynamics and contribute to better quality decision-making. In fact, organizations with transparent and efficient governance structures have greater capacity to respond to market challenges and opportunities. This enables managers to make better strategic decisions, thereby improving organizational performance. Corporate governance not only impacts financial decisions but can also influence how the organization interacts with stakeholders and the community. Particularly in today's world, where social expectations from organizations have risen, the importance of effective governance has increased significantly.

Additionally, **financial mechanisms** were identified as another important factor. The use of modern financial tools and mechanisms positively affects the quality of decision-making. This finding indicates that organizations leveraging new financial technologies and data analytics can make better decisions regarding finance and investment. Especially in complex economic conditions, having strong financial mechanisms can help organizations manage risks more effectively and identify new opportunities. This is particularly crucial during periods of economic crises and market volatility, as organizations need to analyze financial data more carefully and make informed decisions.

Organizational culture was also recognized as a factor influencing strategic outcomes. Organizations with a positive and supportive culture typically achieve better results in decision-making and financial performance. Organizational culture, as a driving factor, can enhance employee motivation and commitment, ultimately contributing to improved quality decision-making. The research results showed that organizational culture not only impacts employee behavior but can also influence how they interact with digital technologies and decision-making processes. For instance, in organizations that promote a culture of innovation and acceptance of change, employees are generally more inclined to use new technologies, which can lead to improved decision-making quality and increased organizational efficiency.

Ultimately, this research clearly indicates that **decision dynamics** and **financial performance** are directly influenced by digitalization and other related factors. Improvements in decision-making processes can lead to increased efficiency and enhanced financial performance. These findings assist managers and decision-makers in developing more effective strategies to improve their organizational performance, thereby creating added value for



stakeholders. Furthermore, a better understanding of the relationships among these variables can help managers make better decisions regarding resource allocation and developmental strategies.

Suggestions for Future Research

Given the results obtained, it is suggested that future research explore new factors that may influence the quality of decision-making and financial performance. In particular, examining the impact of emerging technologies such as artificial intelligence and machine learning on decision-making processes and organizational performance could be an interesting topic for future studies. Additionally, conducting case studies on various organizations could enhance the understanding of the impacts of digitalization and corporate governance in practice. These studies could lead to identifying best practices and successful experiences in implementing digitalization and effective governance in organizations.

Moreover, paying attention to the complex interactions among these variables and their impacts on each other can assist managers and researchers in better understanding business environments and developing effective solutions for improving organizational performance. Overall, this research can serve as a foundation for developing theories related to management and organizational leadership in the digital age, contributing to the improvement of decision-making processes within organizations. Finally, keeping an eye on rapid technological changes and shifting market needs allows organizations to effectively tackle new challenges and remain on the path of sustainable growth and development.

Acknowledgments: I would like to express my heartfelt gratitude to my parents for their unwavering support and encouragement throughout my academic journey. Their belief in me has been a constant source of motivation.

Conflict of Interest: None

Financial Support: the funding for this research was provided from my personal savings.

Ethics Statement: None

References

- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291–309.
- Arntz, M., Gregory, T., & Zierahn, U. (2016). The risk of automation for jobs in OECD countries: A comparative analysis. *OECD Social, Employment and Migration Working Papers*, No. 189. OECD Publishing.
- Bessen, J. E. (2019). AI and jobs: The role of demand. *NBER Working Paper No. 24235*.
- Böhme, R. (2010). Security and privacy in the digital age. *Communications of the ACM*, 53(3), 36–38.
- Brown, L. D., & Caylor, M. L. (2006). Corporate governance and firm performance. *The Review of Quantitative Finance and Accounting*, 26(1), 1–24.
- Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. W.W. Norton & Company.
- Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework*. Addison-Wesley.
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2010). Corporate governance, board diversity, and firm value. *The Financial Review*, 45(2), 1–30.
- Chesbrough, H. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Review Press.
- Chui, M., Manyika, J., & Miremadi, M. (2016). Where machines could replace humans—and where they can't (yet). *McKinsey Quarterly*.



- Chui, M., Manyika, J., & Bughin, J. (2018). Artificial intelligence: The next digital frontier? *McKinsey Global Institute*.
- Cialdini, R. B. (2001). *Influence: Science and practice*. Allyn & Bacon.
- Cohen, J. (2012). Privacy and data protection: A comparative perspective. *International Data Privacy Law*, 2(2), 107–119.
- Cummings, T. G., & Worley, C. G. (2014). *Organization development and change*. Cengage Learning.
- Davenport, T. H. (2013). *Analytics at work: Smarter decisions, better results*. Harvard Business Review Press.
- Davenport, T. H., & Harris, J. G. (2007). *Competing on analytics: The new science of winning*. Harvard Business Review Press.
- Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard Business Review*, 96(1), 108–116.
- Drucker, P. F. (1985). *Innovation and entrepreneurship: Practice and principles*. Harper & Row.
- Edmondson, A. C. (2012). Teamwork on the fly. *Harvard Business Review*.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301–325.
- Forgas, J. P. (1995). Mood and judgment: The affect infusion model (AIM). *Psychological Bulletin*, 117(1), 39–66.
- Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerization? *Technological Forecasting and Social Change*, 114, 254–280.
- Gibbons, R., & Murphy, K. J. (1992). Optimal incentive contracts in the presence of career concerns: Theory and evidence. *Journal of Political Economy*, 100(3), 468–505.
- Gompers, P. A., Ishii, J. L., & Metrick, A. (2003). Corporate governance and equity prices. *The Quarterly Journal of Economics*, 118(1), 107–155.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Sage Publications.
- Ittner, C. D., & Larcker, D. F. (2003). Coming up short on nonfinancial performance measurement. *Harvard Business Review*, 81(11), 88–95.
- Janis, I. L. (1982). *Groupthink: Psychological studies of policy decisions and fiascoes*. Houghton Mifflin.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jorion, P. (2007). *Value at risk: The new benchmark for managing financial risk*. McGraw-Hill.
- Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux.
- Kane, G. C., Palmer, D., Phillips, A. N., & Kiron, D. (2015). Aligning the organization for its digital future. *MIT Sloan Management Review*.
- Kanter, R. M. (2006). *Innovation: The classic traps*. Harvard Business Review.
- Kaplan, R. S., & Norton, D. P. (2001). *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*. Harvard Business Review Press.
- Kotter, J. P. (1996). *Leading change*. Harvard Business Review Press.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69–96.
- Maital, S., & Seshadri, D. (2007). The role of psychological factors in decision making. *International Journal of Business and Management*, 2(4), 3–12.
- Mallin, C. A. (2019). *Corporate governance*. Oxford University Press.
- Marr, B. (2016). *Big data in practice: How 45 successful companies used big data analytics to deliver extraordinary results*. Wiley.
- Meyers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, 39(3), 575–592.
- Mithas, S., Tafti, A., Bardhan, I. R., & Goh, J. (2013). Information technology and firm performance: An integrative literature review. *Information Systems Research*, 24(3), 488–509.



- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance, and the theory of investment. *American Economic Review*, 48(3), 261–297.
- OECD. (2019). *Digital economy outlook 2019*. OECD Publishing.
- Pine, B. J. (1993). *Mass customization: The new frontier in business competition*. Harvard Business Review Press.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster.
- Rogers, E. M. (2016). *Diffusion of innovations*. Free Press.
- Schein, E. H. (2010). *Organizational culture and leadership*. Jossey-Bass.
- Shmueli, G., & Koppius, O. R. (2011). Predictive analytics in information systems research. *MIS Quarterly*, 35(3), 553–572.
- Tapscott, D., & Tapscott, A. (2016). *Blockchain revolution: How the technology behind bitcoin is changing money, business, and the world*. Penguin.
- Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40–49.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157), 1124–1131.
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144.
- West, S. M. (2019). The ethics of digital transformation. *Harvard Business Review*.

