

“NEW APPROACHES TO THE MANAGEMENT OF ORGANIZATIONS”

Editors: Prof. Dr. Ali Akdemir & Assoc. Prof. Dr. Volkan Hacıoğlu

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PREFACE

We are adding a new publication to our New Approaches to Management of Organizations Series. After the International Congress on Management of Organizations, which we managed to institutionalize, we made it a tradition to publish selected papers as chapters in a book. In a way, both the congress and our book publication after the congress became institutionalized.

In the book, on the one hand, there are sections reflecting the management principles valid for each category-type of organization; and, on the other hand, there are also sections explaining management issues specific to the institution and type of institution. In this book, there are sections and topics in the context of the categories of Management from Conceptual and Theoretical Perspective, Management from Thematic-Thematic Perspectives, and Management from Institutional Perspectives.

While information technologies dominate generations and digitalization, it also dominates management as well as the topics of this book. We think that we have produced a useful work of scientific reference. Of course, appreciation, evaluation and criticism are left for the discerning readers.

Thanks to the publishing house that published our book, Dr. Cumali Yaşar who contributed to the design, Prof. Dr. Özgür Topkaya and Research Assistant Deniz Kaynak.

May 10, 2025, Istanbul

Prof. Dr. Ali Akdemir,
Assoc. Prof. Dr. Volkan Hacıoğlu

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Assoc. Prof. Ülkü Gezer

INTRODUCTION

The idea to design a book titled *New Approaches to Management of Organizations* with the sub-title *From the perspective of 4 Ks of Management* emanates from the formulation of 4 Ks of management. The 4 Ks of management developed by Prof. Dr. Ali Akdemir expresses four chief topics—categories of management. The formulation of 4 Ks comprised of initial letters of Turkish words that makes up four chief categories of management translated as follows:

K1: [Kavramsal ve kuramsal açıdan yönetim]: Management from the conceptual and theoretical viewpoint

K2: [Konusal açıdan yönetim]: Management from the thematic viewpoint

K3: [Kurumsal açıdan yönetim]: Management from the institutional viewpoint

K4: [Kurumlararası yönetim ilkelerinin geçişkenliği açısından yönetim]: Management from the viewpoint of transitivity of inter-institutional management principles

With K1 we mean all concepts and theories in the field of management. For example, organization, NGO, local governments, municipalities, management, management, leadership concepts, etc.

In K2, we express the management topics produced from theories in management and anonymized in terms of theme. For example; Management in Terms of Leadership, Management in Terms of Motivation, Management in Terms of Career, Management in Terms of Functions, etc.

In K3 as management from the institutional viewpoint we mean thematic institutions:

- Management for profit-oriented institutions
- Management for non-profit institutions

By for-profit institutions we generally mean businesses and cooperatives, and in particular family businesses, manufacturing businesses, and tourism businesses.

By non-profit institutions we mean NGOs, public institutions, local governments, international organizations, political parties, and special management issues in these institutions.

K4: Management from the viewpoint of transitivity of inter-institutional management principles. K4, we explain the transition of management principles from profit-oriented institutions to non-profit institutions; and the transition of management principles from non-profit institutions to profit-oriented institutions. For example, the applicability of principles such as efficiency and effectiveness in enterprises to NGOs, as well as the applicability of the public benefit principle in public institutions to enterprises.

In this context, with the concept of management of organizations, we mean the diversity – categories of organizations. As we mention about the management principles that are valid in all organizations in the world (profit and non-profit), we also explain the management principles specific to the institutions in the context of institutions.

In our book titled *New Approaches to Management of Organizations: From the Perspective of 4 Ks of Management* sections are included within the framework of the 4 Ks of Management:

- Sections related to the K1 of Management
- Sections related to the K2 of Management
- Sections related to the K3 of Management
- Sections related to the K4 of Management (This section is omitted from the current print of the book because of the unavailability of appropriate papers.)

Content of the book consists of separate chapters each of which dealing with a specific topic in the management of organizations as follows.

Akram M. Alhamad et al. wrote a conceptual paper on students' satisfaction.

Oben Ürü and İbrahim Arı conducted a research agenda on the relationship between perceived authentic leadership and resistance to change.

Remziye Kolcu and Cüneyt Dirican carried out the data and bibliometric analysis on women entrepreneurship, women leadership and women management.

Safia Bendjebar et al. analyzed learner attention with Webgazer.Js in E-Learning system and searched answer to the question "How Can Webcam-Based Eye Tracking Assess Student Attention in Online Learning?"

Mohammad Nizar Khair Eddin Thaher and Aylin Erdoğan focused on the importance of digital marketing after the period of Covid-19 pandemic shock.

Hakan Öztürk Pestel analyzed the relationship between selected locations' economic development level and organizational leadership model through pestel analysis.

Doğan Başaran explored the impact of social media crisis management on customer trust and corporate reputation with the case study of Starbucks Türkiye.

Tuğbay Burçin Gümüş and Gülnihal Yaşar searched for the effect of strategic leadership and team play on corporate resilience by a comprehensive research in the software industry.

Metin Kaya inspected outsourcing in foreign trade policies and international market entry strategies.

Ahmet Baybars Gögez examined the sustainable regional development and investment strategy document for Türkiye.

Gürol Özcüre and Nimet Eryiğit evaluated the European Union's irregular migration management policy and Türkiye in terms of leadership within the framework of crisis management.

Burcu Yıldız undertook a bibliometric study on the civil aviation sector transformed by artificial intelligence.

Ülkü Gezer examined leadership in art and design education.

K1- MANAGEMENT FROM CONCEPTUAL- THEORETICAL ASPECTS

A Conceptual Paper on Students Satisfaction Towards USR and Instruments for Questionnaire.

Akram M. Alhamad¹, Mustafa Akyürek², Abdullah Mahfoud Salem Baadhem³, Fajar Surya Ari Anggara⁴

Abstract

The issue of University Social Responsibility (USR) is currently evolving. This fact demands the sensitivities of the universities to be responsible for responding to these social problems. The universal concept of social responsibility has been applied to companies, but every organization, including universities, must be socially responsible for society and the environment. In implementing the USR, the first step universities should take is to build awareness of the importance of having USR in these universities and establish an outstanding commitment to creating student satisfaction. The USR concept might have an impact on student satisfaction. This study's purpose is to identify practical strategies that universities can use in their social responsibility activities for the student's satisfaction.

Further research on USR is required. The outcomes of this study will be helpful to university policymakers and stakeholders. A conceptual framework has been developed to examine the impact of the USR on student satisfaction. Future studies can empirically test the concept based on our contribution to learning more about how USR affects student satisfaction.

Keywords:

University Social Responsibility; Students Satisfaction; Karabuk University.

¹ akramalhamad@karabuk.edu.tr, Faculty of Business, Karabuk University, Turkey.

² mustafaakyurek@karabuk.edu.tr, Faculty of Business, Karabuk University, Turkey.

³ abdullahmahfoudh@unimap.edu.my, Faculty of Business and communication, Universiti Malaysia Perlis, Malaysia.

⁴ 2138212037@ogrenci.karabuk.edu.tr, Faculty of Business, Karabuk University, Turkey.

1. Introduction

Social responsibility is becoming increasingly popular in small and large institutions in Turkey and worldwide. Charity, philanthropy, social-marketing programs, sponsorships, and other corporate social responsibilities (CSRs) are frequently used interchangeably. However, the above terms cannot be considered synonymous with the term under our consideration, USR. Furthermore, the following concepts can be found in the global scientific and business works of literature: "Business Ethics," "Corporate Social Policy," "Stakeholder Management," "Corporate Sustainability," "Socially Responsible Investment," and so on (Akhmetshin & Gayazova, 2017; Alhamad, A. M., Junoh, & Eneizan, 2019; Alhamad, Osman, Manaf, Abdullah, & AlShatnawi, 2015). Various universities are developing a variety of USR models (J. Ali et al., 2021; Larrán et al., 2018; Sánchez-Hernández & Mainardes, 2016), but these models have never been tested at Karabuk University,

Turkey. It is critical to empirically test and analyze the organizations that manage the USR elements, especially from students' perspectives (Vázquez et al., 2016; Faraj & Alhamad, 2022; Abd Alia & Alhamad, 2022; Alhamad, Junoh, & Salha, 2019; Akram et al., 2022).

According to Goldstein, 2014, the scope of Social Responsibility as a concept has not been fully explored. Universities worldwide must embrace social responsibility as an inherent part of their operations and adapt their teaching methods, education, and training efforts accordingly (M. Ali et al., 2021). Finally, the study reviewed the relationships between USR and a Higher Education Institution's student satisfaction at Karabuk University, Turkey. This paper was adopted by (Gallardo-Vázquez et al., 2020) to identify relevant university practices on university students' satisfaction and participation in CSR activities.

2. Literature Review and Proposition Development

2.1. University Social Responsibility

Profits and nonprofit organizations have a social responsibility to the social and natural environment. Higher education institutions bear a social responsibility towards the community and the environment. Universities must undertake social responsibility activities to have a direct positive impact on societies. USR is a work to contend with in universities with varied aims since it is one of the techniques that higher education institutions can apply to promote a decent standing and ranking. USR, as CSR is in the business environment, is the higher education institution's responsibility to "work in a practical way founded on monetary, social, and ecological standards, to adjust the assorted interests of partners."

It is reasonable to assume that the USR is a social responsibility of the higher education institution and that it should be carried out to demonstrate concern for the environment and government assistance for the local areas and surrounding networks for the activities of the higher education institution. The practice followed by an educational establishment of higher learning in seeking options to accrue benefits while limiting natural impacts to aid in progress and sustained improvement that modifies benefits, the climate, and the local places. As a result, economic development concentrates on advantages and the climatic and governmental support of the surrounding networks (ALHAMA et al., 2023).

USR in Pakistan, as shown by (J. Ali et al., 2021), stated that people worldwide face a pandemic problem with COVID-19. USR research in Spain conducted by (Gallardo-Vázquez et al., 2020) reviews the newly revealed USR trend. With conditions of originality and value, this study emphasizes specific stakeholders, including university students (Larrán et al., 2018).

Vázquez et al. (2016) determine what factors influence college students' satisfaction when consuming educational services via USR. Overall, the perception of USR positively affects student satisfaction, which is partly mediated by an evaluation of the quality of university services. Service quality and customer satisfaction are highly correlated (Vásquez et al., 2015; Alhamad, A. M., Ahmed, E. R., Akyürek, M., & Baadhem, A. M. S., 2023). USR in

Portugal was analyzed based on research results by collecting data from 903 high-education students. The findings validate this USR explanatory model and its impact on the quality of service and student satisfaction in higher education. Concerning the USR effect, the findings show that, from a student's perspective, USR contributes most directly to quality education via the cognitive impact of USR, which is related to research. The findings of this study also support those strategies aimed at promoting sustainable development, such as announcing responsible universities as antecedents of service quality and student satisfaction (Santos et al., 2020).

Brazil (Sánchez-Hernández & Mainardes, 2016) determined whether the University takes a perspective and involves students in its strategy to maximize its positive impact on society. A sample of 392 students in a Business Management course at universities yielded a positive result. Furthermore, internal social entrepreneurs at these universities emerged as change agents, ensuring the development of endogenous responsibilities.

2.2. Students Satisfaction

Student satisfaction in Germany was studied (Moosmayer & Siems 2012) by combining both perspectives to investigate the relationship between value-oriented education and student satisfaction—a survey of 191 business students at a German university. The United Kingdom (Poon, 2019) analyzed that teaching and learning-related factors significantly build student satisfaction in the UK environment. Other factors influencing student satisfaction that are statistically significant are assessment, feedback, and organization.

According to Jiewanto et al. (2012), the impact of SERVQUAL on WOM Intention is mediated by student satisfaction. Purposive sampling techniques were used to distribute the questionnaire to 140 students. The findings revealed that SERVQUAL had a positive impact on student satisfaction and the University's image, which in turn had a positive impact on WOM Intention. SERVQUAL and student satisfaction, on the other hand, hurt WOM's intentions. This study helps Universitas Pelita Harapan, Surabaya, and other private universities improve their SERVQUAL.

In Malaysia, student satisfaction was analyzed by (Mansor et al., 2012); data was collected via a questionnaire from 179 respondents at MARA University of Technology's Faculty of Office Management in Puncak Alam, Selangor. Pearson's Correlation Coefficient was used to test all hypothetical relationships. The findings revealed that the HSQM elements positively and significantly related to student satisfaction. The physical environment of the faculty, in particular, is the most essential factor that contributes to student satisfaction. In summary, to remain competitive in this global environment and increase student satisfaction, the University must improve the quality of its services.

Maamari and Majdalani (2019) analyzed student satisfaction in Lebanon involving 283 students using a self-reporting questionnaire. The findings revealed that the main factor that will improve students' emotional intelligence is not, as most scholars believe, teachers' emotional intelligence, but classroom interactions. Practical implications – This paper suggests that universities hire emotionally intelligent teachers who emphasize improving students' emotional intelligence. Colleges will improve their classroom situation by improving their students' satisfaction. Northern Nigeria (Abdullahi & Wan Yusoff, 2019) analyzes the effect of academic facilities based on students' experiences and satisfaction with physical and non-physical facilities. Building components, such as DV, consist of physical and non-physical building constructs related to the impact of facilities on student satisfaction, as in Nigerian universities.

In Pakistan (Bilal et al., 2021) analyzed the work engagement of college teachers to invest in a practical approach and instill student satisfaction and competence. This study looks at teachers' engagement as a predictor of student satisfaction. Refer to (Qazi et al., 2021) also analyzed student satisfaction in Pakistan. They used convenience sampling to collect data from 387 Pakistani students in higher education institutions. SmartPLS software was used to analyze the data. The findings show that social contributions, research and development,

and university service quality significantly impact a university's reputation and student satisfaction. However, the environment, student guidance, and university trust significantly impact the University's reputation, whereas leadership and university heritage significantly impact student satisfaction.

In India (Chaudhary & Dey 2021) studied student satisfaction based on undergraduate students (n= 419) from four colleges affiliated with a university in Delhi, India. The study discovered that students' perception of academic service quality significantly impacts the sustainable practice of the University and student satisfaction. A survey instrument was developed based on FGD with teachers and students from the top ten private CBSE-affiliated schools in the National Capital Region of Delhi, India. Based on student satisfaction analysis, results showed that student engagement is stated as a significant predictor (Maini et al., 2021). According to Seeber and Horta (2021), students are more satisfied with their supervisor's relationship when they share similar research interests. They also discovered significant differences in satisfaction levels between disciplines and more satisfaction when the supervisor is heavily involved. Thus, USR is an essential antecedent of student satisfaction.

3. Methodology

3.1. Sample and Data Collection

This study's targeted population was students at Karabük University, Turkey, who were enrolled during the current academic year to provide homogeneity to data collection and subsequent analysis. It comprised Turkish and international students, amounting to 52,000 students, with 16 faculties, two institutes, five colleges, and nine vocational high schools, based on the statistics published by Karabük University (2022). It is a representative sample, collecting students from all the disciplines in degrees, master's, and doctorate students offered at the said University during that academic year. This way, there was a comprehensive representation of students in all the studies offered by the University.

3.2. Measures

This study used 20 measurement items to assess USR and student satisfaction, using past research measurement items adopted from Larrán Jorge et al., 2012a, 2012b, 2012c; Pérez et al., 2013; Vallaeys et al., 2009; Weber et al., 2004; and in evaluating it as Capelleras and Vergés (2001) analysis scales, including items adapted from Beerli Palace. More specifically, for the 20 measurement items selected, each item was 7-point scaled.

4. Discussion

Literature findings collected from this study have provided exposure to the impact of the USR as the element in an increase in student satisfaction in the Karabuk University education sector. The USR measures methods for assessing their impact because of the diverse and varied nature of initiatives used to this end. Universities integrate education, research, and community services. Universities should shift their focus from supplemental projects to testing, especially student satisfaction. Findings on student satisfaction revealed that when the USR is combined with student satisfaction, students can maximize their good impact on society. In a university setting, the social responsibility aspect of Karabuk University, like other organizations, is that it must fulfill the satisfaction of students (Abdullahi & Wan Yusoff, 2019; Bilal et al., 2021; Jiewanto et al., 2012; Sánchez-Hernández & Mainardes, 2016). The studies under this theme aim to clarify the transition from CSR to USR by displaying the applied social responsibility system. Universities, in their capacity as small cities, contribute to environmental pollution through research and development activities. CSR is an ongoing moral position regarding the organization, market, and general public's attitudes (Tahmoures

Hasan Gholipour, 2012). CSR is an auspicious subject for the University Karabuk as a Higher Education Institution, and they should invest in their short to long-term strategic plan. The findings also suggest that students' participation summarizes student satisfaction, attitudes, and behavior toward social responsibility. The role of Karabuk University's USR is to promote the restoration of society's trust and link to demonstrate another type of organization capable and interests of society (J. Ali et al., 2021). Positively, a university, like any other organization, should be able to respond to societal responsibility. Students' perceptions of university social responsibility, of which only internal management has an impact (Santos et al., 2020; Vázquez et al., 2016; Vázquez et al., 2015). In some countries, such as Turkey, universities gain a competitive advantage through social responsibility activities (Vázquez et al., 2016; Vázquez et al., 2015; Sánchez-Hernández & Mainardes, 2016), and universities should be aware of the importance of USR. A university with a business school can potentially serve a region's economy. Karabuk University's Faculty of Business academic community has a role in increasing economic resources to carry out academic and social responsibility activities. The academic community of Karabuk University's Faculty of Business can encourage economic improvement activities, especially in the community around the campus. Students get satisfaction when mentoring plays a role in strengthening the sustainable environment of the Karabuk area. Strengthening the economic aspect can be done by studying the economic pattern of the community and the obstacles to community development. From these results, a form of strengthening the community's economic aspects was published as training to strengthen business combined with tourism and the creative economy of the Karabuk area.

5. Implications

If empirical evidence supports the stated prepositions, the importance of University Karabuk's Social Responsibility Practices and Student Satisfaction will be highlighted. As a result, the expected findings can assist University Karabuk's management in making the best decisions and taking the necessary corrective steps to improve University Karabuk's Social Responsibility Practices and Student Satisfaction, resulting in higher returns.

6. Recommendations and Limitations

Universities are challenged to take a relevant stance on academic research. Universities must cultivate relationships with organizations and authorities. Social learning refers to accepting appropriate information to support the University's social responsibility programs and increase student satisfaction. Furthermore, universities should collaborate with related organizations to create an interdisciplinary effort.

Universities should organize large-scale initiatives to inculcate USR culture and awareness among their students, as well as broadcast successful efforts and their good impacts work presented in this research to promote positive attitudes among students' public opinion. This report is based on a literature review as the foundation for future research into qualitative or quantitative data methods. Limited sources from journals are related to students' satisfaction, attitudes, behaviors, and university social responsibility from 2012 to 2021. The breadth of this study suggests that educational bodies other than schools, such as colleges and universities, be included. More studies should be done to acquire data from students; however, the opinions of lecturers and stakeholders may have already been considered.

To begin with, the literature review that underpins this study hypothesis is based mainly on a tiny pool of existing empirical studies on USR, as the factors that contribute to an improvement in student satisfaction in the Karabuk University education sector are limited in scope. As a result, it is suggested that more research be conducted in the future before generalizing the findings of this study. Second, there is no empirical testing of this research framework model. Future studies should empirically test the proposed framework based on

the findings of this study. The empirical findings would undoubtedly make a significant addition to organizational learning.

7. Conclusion

University Karabuk can use the USR self-determination framework to evaluate social responsibility initiatives. Universities' social responsibility milestones can be summarized in student satisfaction, attitudes, and behavior toward social responsibility. A socially responsible university projects environmentally responsible behavior consistent with university values. This highlights the importance of universities developing a practical approach to social responsibility and a marketing strategy and tool kit to highlight University Karabuk's Social Responsibility initiatives for student satisfaction.

In conclusion, this conceptual paper delved into a crucial aspect of higher education – student satisfaction towards University Social Responsibility (USR) initiatives and the design of instruments for a comprehensive questionnaire. Exploring students' perceptions and contentment with USR programs is integral to enhancing the overall quality of education and institutional engagement. Through an in-depth analysis of existing literature, this article highlighted the multifaceted dimensions of student satisfaction and the pivotal role USR plays in shaping these perceptions.

Formulating a well-structured questionnaire is imperative to gather accurate and relevant data on students' attitudes, expectations, and experiences related to USR initiatives. This paper underscored the significance of employing appropriate survey methodologies and validated measurement tools to ensure the reliability and validity of collected responses. By delineating potential dimensions and constructs that can be encompassed within the questionnaire, the article provides a foundation for future research endeavors in this domain.

Furthermore, the article sheds light on the intricate interplay between student satisfaction, institutional commitment to USR, and its societal impact. It emphasized that a positive student perception of USR can foster a sense of community engagement, social responsibility, and ethical values – qualities that contribute not only to students' holistic development but also to society's greater welfare.

In summary, this conceptual paper serves as a stepping stone for educators, researchers, and institutions to comprehensively understand the dynamics of student satisfaction toward USR initiatives. By acknowledging the importance of well-designed survey instruments and the multifaceted nature of student perceptions, this article encourages further investigation into refining and optimizing USR programs to better align with student expectations and societal needs. Ultimately, pursuing enhanced student satisfaction within USR empowers individuals and the community, fostering a more responsible and responsive educational landscape.

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K2- MANAGEMENT FROM THEMATIC-THEMATIC ASPECTS

A Research Agenda on the Relationship between Perceived Authentic Leadership and Resistance to Change

İbrahim ARI

Istanbul Arel University, Turkey
ibrahimariakademik@gmail.com

F. Oben ÜRÜ

Istanbul Arel University, Turkey
obenuru@arel.edu.tr

ABSTRACT

The strategic significance of leadership style in the effective management of contemporary organizations has been widely demonstrated in numerous academic studies. Rapid technological advancements and the increasing environmental dynamism surrounding today's organizations have led to accelerated changes, compelling organizations to adapt in the shortest possible time. One of the major challenges managers face in facilitating such adaptation and ensuring that planned changes are successfully implemented is employees' resistance to change.

Although a wide range of methods and studies have been proposed to eliminate resistance to change, it is rarely possible to eradicate it completely. At this point, what becomes crucial is managing this resistance effectively, thereby completing the change process in the shortest time and with minimal harm. Authentic leaders—characterized by their transparency in relationships with employees, self-awareness, internalized moral perspective, and balanced processing of information—are expected to be more capable of managing resistance to change effectively.

This study aims to propose a comprehensive model that explores the impact of perceived authentic leadership on resistance to change, while also examining the moderating roles of organizational formalization, environmental dynamism, and the perceived quality of leader-member exchange.

Keywords: Authentic Leadership, Resistance to Change, Formalization, Leader-Member Interaction Quality, Environmental Dynamism

1. Introduction

For organizations, the successful and optimal implementation of the change process plays a critical role in achieving the desired outcomes. In today's dynamic world, managers assume a strategic role in managing change. One of the most fundamental components, indeed the cornerstone, of the change process is planning. A key element that must not be overlooked in this planning phase is the employees themselves. Numerous studies have indicated that while the change process involves uncertainties for organizations and managers, it also evokes anxiety and concern among employees. This concern becomes particularly pronounced when the change significantly affects employees' work processes or their tangible and intangible resources. In such cases, managing employee resistance to change becomes the most challenging aspect of the entire process.

Although extensive research has been conducted on reducing resistance to change, the consensus in the literature suggests that it is rarely possible to eliminate resistance entirely. Therefore, instead of aiming for complete eradication, organizations should prioritize managing the process in a way that minimizes resistance as much as possible.

Transparent communication of the goals and benefits of change, fostering employee internalization, and even involving some employees directly in the change process are all critical criteria for effective change management. In addition, the manager must feel a strong

sense of ownership over the process and address any personal reservations during the planning phase.

Given these considerations, the responsibility for effectively managing resistance inevitably falls on the managers of organizations. At this point, the leadership qualities demonstrated by the manager function as a metaphorical switch that determines the course of the process. Authentic leadership has emerged in recent years as a prominent conceptual framework in leadership and organizational behavior literature. This leadership style emphasizes a leader's ability to act in alignment with personal values, beliefs, and emotions, adopt an ethical stance, and foster meaningful relationships with employees (Avolio & Gardner, 2005, pp. 315–338). The positive influence of authentic leadership on various organizational outcomes such as job satisfaction, organizational commitment, and employee performance has been widely acknowledged (Walumbwa et al., 2008, pp. 89–126). However, the role of authentic leadership in reducing resistance to change remains underexplored. Given their transparency, self-awareness, internalized moral perspective, and balanced information processing, authentic leaders are believed to play an effective role in managing resistance to change.

Another important factor in reducing resistance to change is the quality of the leader's interaction with followers. It is anticipated that leaders who foster positive and high-quality interactions with their followers may moderate the level of resistance exhibited by employees.

Furthermore, the degree of formalization in an organization, characterized by clearly defined rules, procedures, regulations, and workflows, also directly affects how work is performed. From this perspective, it is essential to examine whether formalization plays a moderating role in the relationship between leadership and resistance to change.

It is also evident that organizations operating in sectors with high environmental dynamism experience change more frequently. Industries such as technology, biochemistry, transportation, and services exemplify such sectors. In particular, the air transportation industry, which is characterized by rapid technological advancements, human-centered change, and intense competition, requires strategic leadership to manage change effectively. In such a dynamic context, the adoption of an appropriate leadership style gains strategic importance.

This proposed research agenda targets employees in the civil aviation sector, with the sample consisting of flight crews, including both cabin and cockpit personnel. The characteristics of employees, who collectively constitute the organizational knowledge base, are increasingly diverse in the modern workplace. These characteristics are often linked to generational differences, as individuals within the same age cohort tend to share common values, emotions, behaviors, and cognitive patterns (Akdemir, 2018). Consequently, examining generational shifts alongside managerial issues could enrich the research. In particular, it is worth exploring whether the evolving work styles of newer generations impact their leaders and whether this influence manifests as resistance. This research agenda has been designed to explore these critical questions.

2.Theoretical Framework

2.1Authentic Leadership

Authentic leadership can be explained through theoretical approaches such as social learning theory and leader-member exchange theory. Social learning theory suggests that individuals learn by observing the behaviors of their leaders and model these behaviors (Bandura, 1977). Authentic leaders act as role models for employees and thus enable employees to adopt ethical behaviors. Leader-member interaction theory emphasizes the impact of the quality of the relationship between the leader and

the employee on the organizational attitudes and behaviors of employees (Graen & Uhl-Bien, 1995).

The concept of authentic leadership is grounded in the belief that leadership is not merely a tool for achieving effective outcomes, but a deeply personal and ethical process rooted in the leader's internal values and moral principles. Emerging in the early 2000s as part of the Positive Organizational Behavior movement, authentic leadership emphasizes leaders' psychological well-being, ethical conduct, and the development of genuine relationships (Luthans & Avolio, 2003).

Luthans and Avolio (2003) describe authentic leadership as the development of a unique leadership style that is capable of inspiring others. This style necessitates honesty, both toward oneself and toward others. Similarly, Gardner et al. (2005) conceptualize authentic leadership as ethical leadership rooted in harmony between the leader's internal and external self.

Authentic leadership comprises four core components: self-awareness, balanced processing, internalized moral perspective, and relational transparency.

1. **Self-Awareness:** This refers to a leader's ability to recognize their own emotions, values, strengths, and weaknesses, and to act in accordance with that self-understanding. Self-awareness allows leaders to establish a consistent link between their identity and leadership style (Kernis, 2003: 1–26). Authentic leaders, through a deep understanding of themselves, form more effective and meaningful relationships.
2. **Balanced Processing:** This involves objectively analyzing relevant information and considering diverse viewpoints before making decisions (Gardner et al., 2005: 343–372). Leaders with this quality are more likely to make fair and unbiased decisions by integrating their own judgment with input from others.
3. **Internalized Moral Perspective:** Leaders with an internalized moral perspective make decisions that are aligned with their core ethical values, resisting external pressures and influences (Walumbwa et al., 2008). This quality ensures consistency and integrity in leadership practices.
4. **Relational Transparency:** This reflects a leader's openness in expressing thoughts and feelings in a genuine, honest, and trustworthy manner. It contributes to the development of credibility and trust within organizational relationships (Gardner et al., 2005).

Authentic leadership has been associated with several positive organizational outcomes, including enhanced job satisfaction, organizational commitment, and employee performance. Leaders who engage in trust-based, transparent relationships with their employees foster greater adaptability to organizational change (Avolio & Gardner, 2005: 315–338). Furthermore, authentic leaders play a critical role in cultivating an ethical workplace culture, thereby enhancing employee morale and motivation (Walumbwa et al., 2008).

By remaining grounded in their values, authentic leaders also serve as inspirational figures in guiding employees toward shared organizational objectives. This style of leadership increases followers' trust and helps to minimize organizational conflicts and disagreements (Ilies, Morgeson, & Nahrgang, 2005).

Therefore, it is anticipated that leaders who demonstrate authentic leadership characteristics will play a crucial role in reducing resistance to change one of the most prevalent sources of conflict during transformation efforts by fostering trust, ethical clarity, and employee engagement throughout the process.

2.2 Resistance to Change

Resistance to change is widely considered one of the most significant obstacles to change processes in organizations. This resistance stems from the tendency of individuals or groups to preserve the status quo and their concerns and fears regarding change (Piderit, 2000: 783–794). Resistance to change can occur at cognitive,

emotional, and behavioral levels and can significantly slow down or prevent organizational change processes (Kotter and Schlesinger, 2008).

Individuals who resist change are often afraid of uncertainty, prefer to maintain the status quo, and remain wary of the potential risks that change may bring. This resistance can make it difficult to implement organizational innovations and can become one of the biggest challenges that leaders face in this process (Ford, Ford, & D'Amelio, 2008).

Resistance to change refers to the desire of individuals or groups to preserve the status quo and avoid the uncertainties that change may bring (Çakır, 2017). This concept includes the psychological, emotional, and behavioral reactions experienced by individuals in the process of organizational change. Although resistance is generally considered a negative phenomenon, in some cases it can serve as a warning for organizations to manage a more careful and planned change process (Demirtaş, 2003).

Resistance to change can lead to several negative consequences in organizations. These consequences include decreased productivity, reduced job satisfaction, and weakened organizational commitment. In addition, operational difficulties such as prolonging the change process and increasing costs may also arise due to resistance (Eren, 2015).

If resistance cannot be managed, it may lead to internal conflicts and organizational unrest. This situation may result in a decrease in trust among employees and lower levels of motivation (Şimşek, 2010: 98–113). However, if resistance is handled appropriately, organizations can manage this process in a more planned and successful way.

Managing resistance to change is critical to the success of the change process. In this process, leaders and managers need to understand employees' concerns and encourage their participation in change. Strategies such as effective communication, employee involvement in the change process, and training programs play an important role in reducing resistance to change (Yüksel, 2006).

Furthermore, ensuring the participation of employees in the change management process and taking their opinions into account can help to develop a positive attitude towards change. In this context, transparency and open communication at every stage of the change process are fundamental in reducing resistance (Koçel, 2015).

2.3 Formalization

Formalization refers to the set of written rules, procedures, and standards designed to govern the functioning of an organization. This concept encompasses specific guidelines that define how an organization carries out its operations and shapes employee behavior (Pugh et. al., 1969: 115–126). Formalization and its degree emerge as a result of organizational learning, whereby past experiences are codified into structured rules and procedures (Aslan, 2020).

Formalization plays a critical role in enabling organizations to adapt to both internal and external environmental conditions (Eren, 2015). As organizations grow in size and complexity, formalization becomes increasingly important for ensuring coordination and control (Hall, 1968: 92–104). However, excessive formalization may constrain organizational flexibility, particularly when rapid adaptation to environmental dynamics is required (Burns & Stalker, 1961).

2.4 Environmental Dynamism

Environmental dynamism is the frequency of changes in the environment in which the firm operates and has a market, such as customer demands, technology, competitive structure, economic, social and political policies (Ürü et. al., 2016). Duncan (1972) defines environmental dynamism as the level of uncertainty and complexity in the external environment in which an organization operates.

Especially the rapid increase in globalization and technological innovations has further increased the importance of environmental dynamism (Koçel, 2015).

Environmental dynamism is a factor that directly affects organizations' strategic decisions and structural arrangements. High environmental dynamism requires organizations to develop more flexible and adaptive strategies. Organizations operating in such environments need innovation, fast decision-making ability and flexible organizational structures in order to gain competitive advantage (Miller, 1988:280-308).

Moreover, environmental dynamism can directly affect the performance of organizations. In an uncertain and rapidly changing environment, organizations should quickly review their existing strategies and develop innovative solutions when necessary (Tushman and O'Reilly, 1996). This is vital for organizations to maintain their competitive position.

2.5 Leader - Member Exchange

Leader-member exchange (LMX) is a key concept in organizational behavior and leadership theories. It refers to the individualized relationships that leaders establish with each of their subordinates, based on the premise that leaders do not interact with all members in the same way but instead form varying levels of relationships (Graen & Uhl-Bien, 1995). The LMX theory explains the leadership process through the lens of dyadic interactions between leaders and followers, emphasizing the quality of communication and mutual expectations (Ürü et al., 2013).

The quality of leader-member interaction denotes the depth and character of the relationship between a leader and an individual subordinate. These relationships can range from low-quality (characterized by formality, limited interaction, and task-oriented communication) to high-quality exchanges (marked by mutual trust, support, and open communication) (Dansereau, Graen, & Haga, 1975). In high-quality relationships, leaders tend to provide more resources, constructive feedback, and emotional support. In contrast, low-quality exchanges are often restricted to formal obligations and limited collaboration (Graen & Scandura, 1987).

High-quality LMX relationships foster organizational citizenship behaviors, encouraging employees to go beyond their formal job descriptions and contribute voluntarily to organizational success (Ilies et al., 2007). Conversely, low-quality LMX relationships may heighten employees' perceptions of unfairness, potentially leading to dissatisfaction, disengagement, and workplace conflict (Scandura, 1999).

3. Research Design and Methodology

3.1 Theoretical and Practical Contribution of the Research Agenda

The primary theoretical contribution of this research agenda is to examine the effect of perceived authentic leadership on resistance to change, while also investigating the moderating roles of organizational formalization, environmental dynamism, and leader-member exchange within a comprehensive conceptual model. This study aims to address a significant gap in the existing literature by integrating these variables into a unified framework.

On a practical level, the research seeks to raise awareness among organizational leaders regarding the importance of perceived authentic leadership, formalization practices, environmental dynamism, and the quality of leader-member interactions—particularly in organizational contexts where employee resistance to change is prevalent during transformation processes.

3.2 Research Population

The population of this study consists of approximately 35,000 flight crew members employed by airline companies operating scheduled passenger flights in the civil aviation sector in Turkey.

According to the definition provided by the Directorate General of Civil Aviation (DGCA) the regulatory authority responsible for civil aviation in Turkey, flight crew includes the captain pilot, other pilots, flight engineers, and cabin crew who are collectively responsible for the operation and control of the aircraft (DGCA, DGCA 6A, 2020).

The pilot is defined as an individual who operates and controls an aircraft for recreational, private, or professional purposes. The Pilot-in-Command refers to the pilot with overall responsibility for the aircraft during flight, possessing the necessary qualifications and authority. The Second Pilot, also known as the co-pilot, supports the operation of multi-crew aircraft in accordance with type-specific regulations (Erdem, 2018:14).

The cabin crew, on the other hand, are personnel certified and trained by airline operators to ensure passenger safety and security throughout the flight, excluding cockpit crew and technical personnel (DGCA, SHT CC, 2016).

The estimated population size of 35,000 is based on the combined total of cabin crew from the two largest airlines (by number of cabin staff) and the licensed cockpit crew reported in the DGCA's 2023 annual report. In cases where data cannot be retrieved from all operators, the total population figure will be proportionally extrapolated using parameters from national and international civil aviation organizations. Based on these estimates, the total research population may reach up to 40,000 individuals.

4. Research Model, Development of Propositions and Sub-Problems

4.1 Research Model

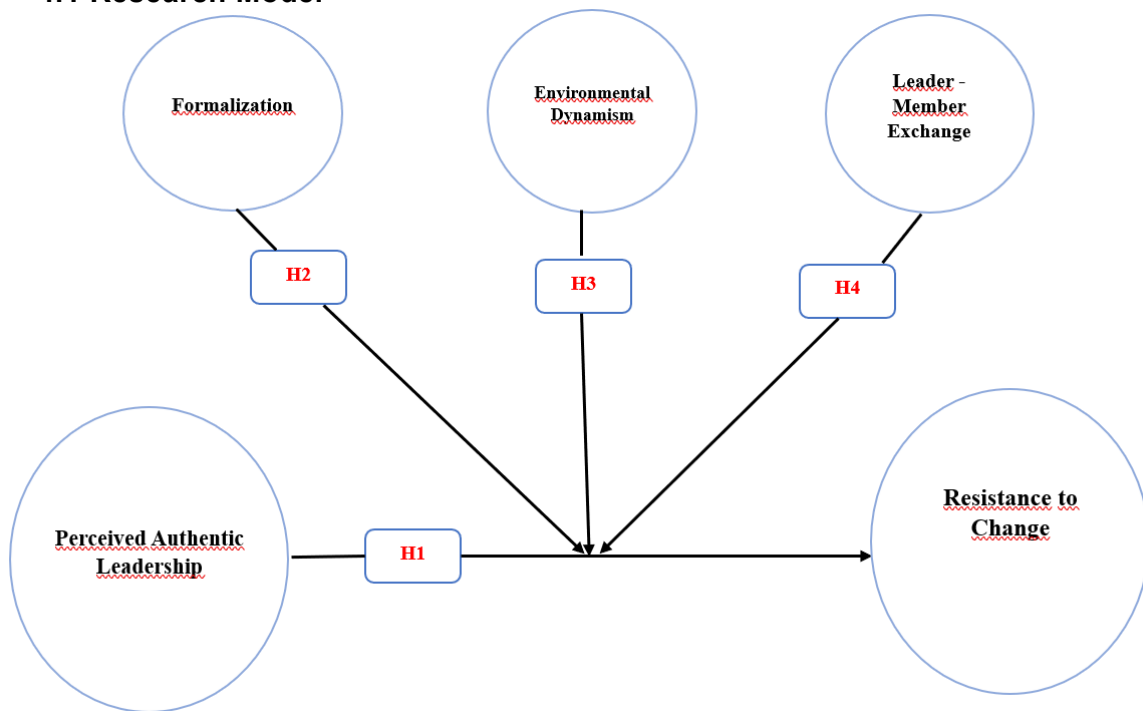


Figure 1: Research Model

4.2 Propositions

Proposition 1: There is a negative relationship between perceived authentic leadership and resistance to change.

Proposition 2: Formalization moderates the relationship between perceived authentic leadership and resistance to change. Specifically, higher levels of formalization weaken the negative relationship between perceived authentic leadership and resistance to change.

Proposition 3: Environmental dynamism moderates the relationship between perceived authentic leadership and resistance to change. Specifically, higher levels of environmental dynamism weaken the negative relationship between perceived authentic leadership and resistance to change.

Proposition 4: Leader–member exchange moderates the relationship between perceived authentic leadership and resistance to change. Specifically, higher levels of perceived leader–member exchange strengthen the negative relationship between perceived authentic leadership and resistance to change.

4.3 Sub Problems

1. The levels of perceived authentic leadership differ according to participants' demographic characteristics.

1.1 The levels of perceived authentic leadership differ according to participants' gender.

1.2 The levels of perceived authentic leadership differ according to participants' age.

1.3 The levels of perceived authentic leadership differ according to participants' marital status.

1.4 The levels of perceived authentic leadership differ according to participants' educational background.

1.5 The levels of perceived authentic leadership differ according to participants' tenure.

1.6 The levels of perceived authentic leadership differ according to participants' experience in the sector.

1.7 The levels of perceived authentic leadership differ according to the length of time participants have worked with their current managers.

2. The levels of resistance to change differ according to participants' demographic characteristics.

2.1 The levels of resistance to change differ according to participants' gender.

2.2 The levels of resistance to change differ according to participants' age.

2.3 The levels of resistance to change differ according to participants' marital status.

2.4 The levels of resistance to change differ according to participants' educational background.

2.5 The levels of resistance to change differ according to participants' tenure.

2.6 The levels of resistance to change differ according to participants' experience in the sector.

2.7 The levels of resistance to change differ according to the length of time participants have worked with their current managers.

3. The levels of perceived formalization differ according to participants' demographic characteristics.

3.1 The levels of perceived formalization differ according to participants' gender.

3.2 The levels of perceived formalization differ according to participants' age.

3.3 The levels of perceived formalization differ according to participants' marital status.

3.4 The levels of perceived formalization differ according to participants' educational background.

3.5 The levels of perceived formalization differ according to participants' tenure.

3.6 The levels of perceived formalization differ according to participants' experience in the sector.

3.7 The levels of perceived formalization differ according to the length of time participants have worked with their current managers.

4. The levels of perceived environmental dynamism differ according to participants' demographic characteristics.

4.1 The levels of perceived environmental dynamism differ according to participants' gender.

4.2 The levels of perceived environmental dynamism differ according to participants' age.

4.3 The levels of perceived environmental dynamism differ according to participants' marital status.

4.4 The levels of perceived environmental dynamism differ according to participants' educational background.

4.5 The levels of perceived environmental dynamism differ according to participants' tenure.

4.6 The levels of perceived environmental dynamism differ according to participants' experience in the sector.

4.7 The levels of perceived environmental dynamism differ according to the length of time participants have worked with their current managers.

5. The levels of leader–member exchange differs according to participants' demographic characteristics.

5.1 The levels of leader–member exchange differ according to participants' gender.

5.2 The levels of leader–member exchange differ according to participants' age.

5.3 The levels of leader–member exchange differ according to participants' marital status.

5.4 The levels of leader–member exchange differ according to participants' educational background.

5.5 The levels of leader–member exchange differ according to participants' tenure.

5.6 The levels of leader–member exchange differ according to participants' experience in the sector.

5.7 The levels of leader–member exchange differ according to the length of time participants have worked with their current managers.

5. Discussion and Conclusion

In today's rapidly changing and uncertain business environment, effectively managing change processes is essential for organizations to achieve sustainable success and maintain a competitive advantage. This is particularly critical for businesses operating in highly dynamic environments, such as the civil aviation sector, where the successful management of change plays a pivotal role in organizational survival and growth. In this context, reducing employee resistance to change, one of the most significant barriers to successful transformation, remains a key priority for organizations.

This research agenda aims to address an important gap in the literature by examining the impact of perceived authentic leadership on resistance to change, while exploring the moderating roles of formalization, environmental dynamism, and leader, member exchange. It is proposed that the core components of authentic leadership, self-awareness, balanced processing, internalized moral perspective, and relational transparency, can facilitate more positive employee attitudes toward change and help decrease resistance levels. The ethical and transparent leadership behavior exhibited by authentic leaders can foster trust among employees and ease their adaptation to change processes.

Formalization is expected to play a significant moderating role in the relationship between authentic leadership and resistance to change. In organizations with high levels of formalization, clearly defined rules and procedures may reduce uncertainty, thereby encouraging employees to accept change more readily. However, it is also important to recognize that excessive formalization can hinder flexibility and make adaptation to change more difficult. Therefore, an appropriate level of formalization is considered a critical factor in the effective implementation of change initiatives.

Environmental dynamism also has a defining influence on this relationship. Organizations that operate in rapidly changing and uncertain environments must be more agile and open to transformation. Authentic leaders are believed to mitigate resistance and sustain organizational competitiveness by guiding their teams effectively in these conditions. In this regard, the ability to understand and manage environmental dynamism is vital to the success of change efforts.

Leader - member exchange serves as a key facilitator in the relationship between authentic leadership and resistance to change. High-quality interactions, characterized by

mutual trust, support, and open communication, can enhance employees' trust in their leaders and promote stronger commitment, which in turn may lead to more favorable perceptions of change. Such relationships are instrumental in alleviating employee concerns and reducing resistance.

Flight crews in the civil aviation sector, who represent the target population of this research agenda, are well-suited for the exploration of these dynamics due to the high-stress and high-uncertainty conditions under which they work. The findings of this study are expected to contribute not only to the academic literature but also to managerial practice. In particular, recommendations aimed at developing authentic leadership capabilities and enhancing leader - member exchange may help organizations manage change processes more effectively and successfully.

In conclusion, this research agenda seeks to provide strategic insights into how organizations can better navigate change by examining the effects of perceived authentic leadership, formalization, environmental dynamism, and leader - member exchange on resistance to change within a holistic framework. The findings will not only have implications for the civil aviation industry but may also inform change management practices across a broad range of organizational contexts. Ultimately, the study aims to produce valuable outputs that can support leaders and managers in better understanding and addressing employee resistance to change.

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Data and Bibliometric Analysis on Women Entrepreneurship, Women Leadership, Women Management ⁵

Remziye Kolcu

remziyekolcu@arel.edu.tr

ORCID No: <https://orcid.org/0009-0006-1702-0886>

Cüneyt Dirican

cuneytdirican@arel.edu.tr

ORCID No: <https://orcid.org/0000-0001-6622-3926>

Abstract

The main purpose of this study; it is to observe whether the place of women in the business world is seen in the academic (science) literature under the headings (keywords) of leadership, entrepreneurship and management and whether it has been adequately examined with the macro developments that have strong effects in recent years such as "COVID-19, digital economy (Industry 4.0) and sustainability". In this way, starting from two basic points; determining whether the subjects of entrepreneurship, leadership and management are examined in academic studies specific to "women" and seeing their place in major economic events will provide important insight into both future studies and the business world. In this regard, our research was realized in the "Web of Science (WoS)" and "Scopus" databases by performing queries with keywords related to the subject, certain constraints and filters. In this way, the literature was reviewed on women entrepreneurship, women leadership, women manager and their place in main macroeconomic trends, and then descriptive (mixed) analysis and bibliometric analysis were carried out with data analysis, which is the method of the research.

As a finding, although the number of studies in English-based articles has increased over the years, they remain insufficient within the entire literature on "leadership, entrepreneurship, management". It was observed that the publishers that stand out in both databases with keywords and this research topic are "Gender in Management" and "International Journal of Gender and Entrepreneurship" journals. While the keyword "entrepreneurship" stands out in the "Web of Science (WoS)" database, the word "women" and combinations of our keywords with it stand out in the "Scopus" database. While the USA and England, India are seen as the countries where the most studies are conducted, Spain and Canada follow; it is noteworthy that Malaysia (Indonesia, Nigeria) stands out in studies and citations and it is interpreted that they show more interest in academic studies and topics on these subjects. Although there are some prominent authors (and clusters), no (one) prominent author with the same names is seen in both databases. The number of studies was low as expected at the start of the research. In terms of (socio-economic) macro developments, the examination of women in terms of leadership, management, and entrepreneurship dimensions was even less. These findings have concretely and clearly shown the need for more quantitative and qualitative studies on how women are affected by these processes in the business world, what place they have and what kind of contribution they make, especially under headings such as "COVID-19, sustainability, digitalization, Industry 4.0".

⁵ This book chapter is an expanded version of the abstract (summary paper) presented by the first author Remziye Kolcu and the second author Cüneyt Dirican at the 3rd International Congress on Management of Organizations, in Istanbul on 1-3 November 2024, and published in the Congress Book of Abstracts (Proceedings, October 2024, Ed. Ali Akdemir et al, pp.152-154). The authors' contribution to the study is equal.

Keywords: Leadership, Entrepreneurship, Management, Women, Sustainability, Digital Economy, COVID-19

1. Introduction

Female entrepreneurship, female leadership and female management issues are important topics in the field of business, management and organization. It was aimed to see whether the place of women in the professional world in the fields of business and economy before and after 2020 (pandemic) was adequately addressed in the academic literature.

Studies conducted in recent years in the field of business administration draw attention to the importance of women being in top positions. Studies highlighting the important role of women entrepreneurship on social development and economic growth (Koch and Kuckertz, 2024), the critical impact of women leaders on sustainable development (Shinbrot, et al., 2019), and the fact that women managers provide significant power for positive change in companies towards long-term sustainability and social responsibility (Larrieta-Rubín de Celis et al., 2015) stand out. These studies are within the scope of explaining the success of women in managerial positions in the business world. However, despite all this, it has been stated that female managers find very little space in the literature (Aaltio and Huang, 2007). For this reason, within the scope of this research, we wanted to understand the place of women management, women entrepreneurship, and women leadership in the literature. There are major (black swan) developments that have come to the fore globally in recent years. Our research questions tried to answer whether these main socio-economic trends such as COVID-19, digital economy (Industry 4.0) and sustainability have been examined together with the topics of "female entrepreneurship", "female leadership" and "female management" and whether they have gained a place in the literature.

In this regard, it was decided to carry out the research with descriptive (mixed quantitative and qualitative) analysis, exploratory data analysis and bibliometric analysis. As an expected result, since the studies in the "Web of Science (WoS)" and "Scopus" databases are few in number, it is obvious that conducting more studies on these topics nationally and internationally will provide significant gains to institutional and academic life.

2. Literature Review

Although there are different studies on women-related topics such as the glass ceiling, women's employment, women on the board of directors, and working mothers, as well as other studies from the human resources dimension such as performance, motivation, and organizational behavior, especially in the field of business, management, and organization, it is important for gender equality to study the concepts of leadership, entrepreneurship, and management in detail in terms of the place of women in the business world.

There are studies in the literature that aim to analyze the relationship between female entrepreneurship, female leadership, and female management issues with the main macro trends (developments) in the field of business and economy in recent years. Some of these studies are summarized in Table 1., Table 2., Table 3. and Table 4. Women's place in the business world is not limited to leadership, entrepreneurship, and management, as the pandemic, digitalization, and sustainability are not the only main economic trends globally in recent years. For example, different topics such as space economy or female workers may be the subject of study. However, in this study, filtering was done to narrow the scope.

Table 1. Case studies on women entrepreneurship in business administration

Authors (Year)	Methodology	Findings and Conclusion
Venkatesh, Shaw, Sykes, Wamba and Macharia (2017)	Field Quasi Experiment	Attention was drawn to the importance of technology and social networks for the success of women entrepreneurs.
McAdam, Crowley and Harrison (2019)	Interpretive case study methodology (Semi-Structured Interview)	Digital technologies have been found to provide a “safe space” that allows women to engage in entrepreneurship in environments where women are not free. For future research, it has been suggested women entrepreneurs and economic factors and transformations should be further investigated.
Shukla, Kushwah, Jain and Sharma (2021)	PLS-SEM	It has been revealed that female entrepreneurs must have information and communication technologies skills in digital entrepreneurship. For future studies, it is recommended to focus on women entrepreneurship and technology, internet and digitalization skills, and to carry out studies in the different regions.
Raman, Subramaniam, Nair, Shivdas, Achuthan and Nedungadi (2022)	Bibliometric Analysis	The contributions of women entrepreneurs to sustainable development have been revealed. It has been suggested that the effects of COVID-19 and sustainable development goals be further studied in the field of women entrepreneurship. By touching on the importance of digitalization and e-commerce issues in women entrepreneurship, It has been stated that socio-political and socio-cultural factors should be examined.
Bağış, Kryeziu, Kurutkan and Ramadani (2023)	Bibliometric Analysis Performance Analysis	The role (impact) of women entrepreneurship on the maintenance and development of family businesses has been revealed. It is suggested to study technology and innovation issues, female entrepreneurship and cultural and social influences for future research.
Jiang, Jiang and Chen (2024)	Bibliometric Analysis	The prominent themes in China regarding women entrepreneurship are; social capital; technology and finance; gender stereotypes/inequalities and startup performance; cultural and institutional influences; and entrepreneurship perceptions/attitudes. For future studies, it was suggested to focus on issues of entrepreneurship barriers, women's digital entrepreneurship, cultural values.

Koch and Kuckertz (2024)	Bibliometric Analysis	It has been found that women's entrepreneurship studies have increased in recent years and economy and sustainability issues stand out as two main themes in women's entrepreneurship studies. The significance of women entrepreneurship on social development and growth is emphasized. For further studies, it is suggested to support sustainability studies in women entrepreneurship.
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Source: Created by the author(s) with data obtained from the literature review.

Examples from the literature point to the need for more studies on women entrepreneurship. It would not be wrong to infer the importance of public incentives, supports and loans for entrepreneurship in terms of women's employment. The place of women in digital initiatives, commonly known as start-up companies, should be examined more in academia, especially in Türkiye. Women entrepreneurship and social responsibility in non-governmental organizations, corporate entrepreneurship and impact investing can also be among the topics to be examined.

Table 2. Case studies on women leadership in business administration

Authors (Year)	Methodology	Findings and Conclusion
Gipson, Pfaff, Mendelsohn, Catenacci and Burke (2017)	Literature Review	It has been stated that there are obstacles arising from gender discrimination and prejudices in the selection of women to leadership positions, it has been stated that female leaders tend to demonstrate democratic leadership and transformational leadership styles more, and female leaders have been evaluated in terms of development and performance. It is highlighted that is necessary to examine the literature in order to understand women's leadership experiences for future studies.
Moreno-Gómez, Lafuente and Vaillant (2018)	Statistical Analysis (Panel Data Models)	It has been stated that women existence at the top of the (corporate) organizational hierarchy positively affects business performance. It is highlighted that with women in senior management positions and on boards of directors, the quality of the organizational body of the company will increase and there is a positive relationship between company performance and gender diversity.
Shinbrot, Wilkins, Gretzel and Bowser (2019)	Text Analysis (Grounded Theory)	Emphasis was placed on the contribution of women leadership to sustainable development. Overcoming the various difficulties and obstacles faced by women leaders with the right policies and its potential to contribute on the impact of women's leadership on social, environmental and economic sustainable environment was highlighted.
Bruce, Cavgias, Meloni and Remigio (2022)	Regression Discontinuity Design	The success of female leaders during the COVID-19 crisis period is revealed.
Wilson and Newstead(2022)	Textual Analysis NVIVO	It has been found that effective leadership requires a logical combination of a number of virtues. The virtue practices of women leaders during the COVID-19 crisis period have been shown how to benefit from them and how to use them in practice.

Amorelli and García-Sánchez (2023)	Statistical Analysis	Due to the economic consequences caused by COVID-19, it has been stated that it is one of the most important external factors that must be addressed for companies. It has been stated that, in the face of "glass ceilings" that prevent women from accessing powerful positions, it will be easier for companies to achieve their goals if women are included in the boards of directors. Sustainability goals of businesses can be achieved by women being in leadership positions and it was emphasized that taking part in the boards of directors would contribute to its performance.
Lakshmy and Kumar (2023)	Bibliometric Analysis	It was seen that the number of articles on women's career aspirations and female leadership is low and these topics should be studied for future research. In the literature, the obstacles faced by female leaders are discussed, but it has been suggested that internal factors should also be studied along with external factors.

Source: Created by the author(s) with data obtained from the literature review.

Studying leadership qualities more in female managers is also an important gain for the business world.

Table 3. Case studies on women management in business administration

Authors (Year)	Methodology	Findings and Conclusion
Aaltio and Huang (2007)	Q-method	It has been stated that female managers find little space in the literature. It was emphasized that women should overcome the obstacles they face in their career development. Women who want to reach top positions in the field of information technologies can benefit from comprehensive technological transformations and in this field the importance of a women's needs-oriented organizational culture was emphasized.
Bektur and Arzova (2022)	Statistical Analysis (Panel Data Models)	It has been shown that the existence of female directors on boards of directors conduces positively to the financial performance of companies. It was stated that since women are not adequately represented on boards of directors, these issues should be addressed in future studies.
Linehan and Scullion (2008)	Semi-Structured Interview	It has been stated that the presence of women in international governance is still low. It has been emphasized that female managers face obstacles in establishing networks and mentoring in male-dominated networks, and that these obstacles negatively affect the career development of female managers. It has been stated that reducing these barriers and increasing women's networking and mentoring opportunities will help women and it will increase their international experience and career development.
Larrieta-Rubín de Celis, Velasco-Balmaseda, Fernández de Bobadilla, Alonso-Almeida and Intxaurburu-Clemente(2015)	Questionnaire (Survey)	It has been found that a new reason for women to be in management positions is the expansion of gender equality and social responsibility initiatives. It has been stated that having women at the head of corporate social responsibility departments will contribute to the spread of gender equality. It has been stated that female managers provide significant power for change in companies towards long-term sustainability and social responsibility.

Erdirenelebi, ini, Ertürk and Baykal (2022)	Semi-Structured Interview Content Analysis	It has been stated that COVID-19 is an important theme of the period and causes serious consequences in business life. It was found that bans during the COVID-19 period increased the work-life conflict of female managers. Conflict in work-life areas has led to a decrease in the productivity of female managers and an increase in stress and anxiety. For future studies, it was stated that these situations necessitated the re-examination of the human resources management processes.
Monteiro, García-Sánchez and Aibar-Guzmán(2022)	Statistical Analysis	It has been found that the abundance of female managers in businesses provides improving effects on workplace conditions, employees' skills and knowledge, the promotion of the protection of human and workers rights. The existence of women in managerial positions and teams helps companies' for increasing their social responsibility performance.
Ghardallou and Abaalkhail (2024)	Statistical Analysis (Panel Smooth Transition Regression Model)	It has been found that company sustainability may decrease when the proportion of female managers increases up to a certain threshold, but when it exceeds this threshold, the effects change positively. It has been found that after exceeding a certain percentage, female participation and representation increases the financial sustainability of the company. It has been concluded that the necessity of increasing gender diversity and increasing the ratio of women in managerial positions will affect the sustainability and company performance in a positive way. It is suggested to examine the relationships between gender diversity and corporate social responsibility for future studies.

Source: Created by the author(s) with data obtained from the literature review.

It is important to examine the place of women in corporate performances taking authority and responsibility in the business world. More studies on women in middle and upper level management, including women on the board of directors, will similarly shed light on important gains in corporate life.

Table 4. Case studies on main (macro/major) developments (trends) in the field of business administration

Authors (Year)	Methodology	Findings and Conclusion
Brenner (2018)	Literature Review Conceptualization	It has been stated that digitalization affects the global economy in every direction and this creates the need for greater sustainability in the business world. Companies are facing ongoing digital transformation as technology, competition and business strategies change radically. For those reasons the need to focus on sustainable business models has been revealed.
Brammer, Branicki and Linnenluecke (2020)	Theoretical and Conceptualization	It has been demonstrated that COVID-19 profoundly affects all aspects of global economic and social life. It has been revealed how COVID-19 affects the business world and society through socialization theory. The research shows how the anxiety created by the pandemic moves from within the government to the civil sphere, putting pressure on society, leading to uncertainty and long-term consequences.
Lee, Wang, Desouza and Evans (2021)	Case Analysis	It has been shown how digital transformation can be used during the pandemic period. Pay attention to the strategic direction of digital technologies has been withdrawn.
Pinzaru, Zbucnea and Anghel (2020)	Literature Review	The effects of COVID-19 on the field of business have been revealed. The need for businesses to rethink their organizations during the pandemic process, accelerating digitalization and the importance of organizational agility were emphasized. It has been emphasized that in this period, which is considered as the "new normal", collaborations and technological developments come to the fore and the need for companies to adopt them. It was stated that virtual teams, digital solutions and collaboration platforms will remain valid for businesses in the future, and it was emphasized that the adoption of digital technologies will highlight leadership and organizational culture factors. It has been found that the use of big data and artificial intelligence will increase to improve business

		processes, therefore investing in employees' digital skills and integrated work. For future studies, it has been suggested to focus on COVID-19 effects on innovation, efficiency, teamwork, remote working and collaborations.
Raghavan, Demircioğlu and Orazgaliyev (2021)	Conceptual Framework	With COVID-19, changes caused by the "new normal" on organizations and employees have been found. Digitalisation, remote working and work-life balance have been identified as prominent issues. It was emphasized that businesses should implement employee-oriented policies in order to adapt to this "new normal". For further studies, it is suggested to examine the effects on employees, organizations, and countries with bibliometric and systematic analyzes of COVID-19.
Yeganeh(2021)	Meta-synthesis	Themes caused and increased by COVID-19 have been found. Increasing social responsibilities of companies, large companies becoming stronger in economic and social fields, growing social and economic impact of technology companies, rapid innovations in technology and business methods, and organizational structures becoming more flexible are the prominent themes and identification of new business forms.
Ajmal, Khan, Shad, AlKatheeri and Jabeen (2022)	Structured Interview Survey Factor Analysis (EFA & CFA)	The strategic responses of businesses to the socio-economic and technological changes that emerged as a result of the historical change caused by COVID-19 have been revealed. It has been stated that the importance and necessity of new technological resources such as artificial intelligence, digital platforms and big data are increasing. Attention was drawn to the importance of flexible solutions that allow businesses to adapt to every aspect, from facilities that ensure social distance to corporate changes integrated with human resources.

Elavarasan, Pugazhendhi, Shafiullah, Kumar, Arif, Jamal, Chopra and Dyduch (2022)	Hybrid Analysis	The relationship between sustainable development goals and the COVID-19 pandemic has been demonstrated.
Khan, Ahmad and Majava (2021)	Literature Review Thematic Analysis	In the context of Industry 4.0, sustainability contributes to circular economy goals and it has been found that it provides social, economic and environmental benefits by developing sustainable business models.
Agarwal, Swami, and Malhotra (2024)	Literature Review	The importance of artificial intelligence and smart technologies during the pandemic process has been emphasized. Attention was drawn to the importance of digital technologies that are used in all areas, such as work and daily life, except for healthcare and education.

Source: Created by the author(s) with data obtained from the 33 literature review.

In addition to the increasing frequency of unsystematic risks called black swans (such as earthquakes and pandemics), financial fluctuations and crises in the global economy create perfect storms with transformations in the technological field. It is very valuable to examine these main socio-economic developments in the business world specifically for women.

3. Materials and Methods

a. Research method literature

In our study, we will try to identify different dimensions of academic studies about women entrepreneurship, women management and women leadership, analytically and quantitatively / qualitatively, and describe them qualitatively, with numerical data obtained from certain well-known databases. In this context, the research method of our study was discussed in two basic ways. In this analysis made from the exploratory dimension, both descriptive (quantitative and qualitative with mixed method) analysis (data analysis and description) and bibliometric analysis (science mapping technique) methods were used. Numerical information obtained in different dimensions / breakdowns from the widely accepted "Web of Science (WoS)" and "Scopus" databases, which are considered to be among the most prestigious databases in the academic literature, was retrieved through their search engine queries on the relevant databases' own pages, using keywords related to the

topics of research. The results coming from the databases in this way were evaluated and discussed both by descriptive (qualitative and quantitative mixed) analysis in the form of data analysis with the databases' own analysis reports, and by downloading the obtained data and analyzing it bibliometrically (scientific mapping) with the VOSviewer program. The literature on research methods is briefly given below.

"Bibliometric analysis is a technique that provides a macroscopic overview of the broad academic literature" (Van Nunen, Li, Reniers & Ponnet, 2018).

"Bibliometric analysis is an analysis approach that helps understand global research trends in a specific field through academic studies" (Alsharif, Salleh, & Baharun, 2020).

Bibliometric analysis is a term related to broader terms such as "infometrics" and "scientometrics", similar to the related term "webometrics". It offers the opportunity for quantitative analysis of written works. In addition to metrics such as country, author, and citation that bibliometric analysis offers, different social media metrics such as downloads, page ranking, and bookmarks have also begun to be used. In the analysis, quantitative measurements are obtained with keywords. Recently, bibliometric analysis performed with auxiliary programs has become easily possible thanks to the query and reporting infrastructures of databases such as "Web of Science (WoS)" and "Scopus". In addition, auxiliary (utility) programs such as Gephi, HistCite, Scholarometer are also used (Ellegaard & Wallin, 2015).

Although the bibliometric analysis method is similar to meta-analysis, it can also be confused with meta-analysis and systematic literature review methods. While the meta-analysis method can analyze a large number of works like bibliometric analysis, the systematic literature review method is meaningful for more in-depth (niche) analyses in 40 or fewer works. Although bibliometric analysis is not new, it has been rapidly increasing in recent years. It should be used in large data sets and when the scope of the research is wide (Donthu, Kumar, Mukherjee, Pandey & Lim, 2021).

In meta-analysis, auxiliary (utility) programs such as the "PRISMA" protocol or "Jamovi" are used (Eser & Aksu, 2022).

Qualitative data analysis can take four different forms: *"Theme, Descriptive, Content and Analytical Generalization"* (Günbayı, nirvanasosyal.com, 2019).

Qualitative research reaches information by induction. Glaser and Strauss are important and first authors who introduced the concept of "grounded theory" with their work in 1967 and stated that the information hidden among social facts should be discovered by using the data obtained in the research. The qualitative data collection method is basic and supportive. It can be done in three stages, such as reflecting the data as it is, finding and interpreting the

key factors with systematic analysis. It can be done with different methods and techniques such as "*Phenomenological Analysis, Descriptive Analysis, Content Analysis, Discourse Analysis, Grounded Theory and Constant Comparison Analysis, Ethnomethodology*" (Özdemir, 2010).

"Descriptive analysis is the analysis of the findings and their interpretation after the data is obtained and classified within the framework of the cause-and-effect relationship" (İlgin, 2022).

The descriptive analysis process consists of four steps. After the framework is created, the data is processed, and after the findings are defined, the interpretation phase begins (Karataş, 2015).

Descriptive analysis does not require detailed distinction or categorization on the data obtained in the qualitative data analysis method. Descriptive analysis is defined as the description of the research topic, summarization and interpretation of the findings through demographic data (Baltacı, 2019).

Descriptive content analysis is explained as a systematic analysis and the act of bringing together data to determine general trends and results on a subject or discipline (Akyürek, 2022).

In quantitative data analysis techniques, frequency distributions are examined in descriptive statistics. Quantitative variables are used to describe quantities, and qualitative variables are used to describe features for classification. Quantitative data are analyzed with descriptive and procedural statistics. Frequencies and distributions are used in summarizing data (Kaya, Anonymous, ET: 2024).

With the development of computer technologies, data analysis and descriptive statistics methods are developing rapidly. Statistics, as a data science, is based on measurements of people and their characteristics. These characteristics can be found quantitatively or qualitatively. Although qualitative characteristics are seen as non-numerical units, they can be ranked and classified. Nowadays, it is possible to observe and classify many different units, for example, by using the survey method, and present them in the form of relationship, contingency and feature tables. Technological developments cause the data to increase rapidly, increasing the need for multidimensional data analysis. In this way, descriptive statistics methods allow the analysis of many quantitative and qualitative data (Mazmanoğlu, 2020).

b. Purpose and questions of the research

The main purpose of this study and research is to understand the studies conducted in the

academic 36ajör36türe in recent years on the place of women in the business 36ajör from the perspectives of leadership, management and entrepreneurship. In addition, it is desired to see the academic studies on these in the light of macro developments. It is to try to identify areas open to development with the findings categorized by data analysis and bibliometric analysis.

- a. What has been the development over the years in academic studies on women leadership, prominent universities and authors on this subject, types of studies and, if any, directories/indexes in which they are included, research areas, languages used, sustainable development goals, if any?
- b. What has been the development over the years in academic studies on women management (manager), prominent universities and authors on this subject, types of studies and, if any, directories/indexes in which they are included, research areas, languages used, sustainable development goals, if any?
- c. What has been the development over the years in academic studies on women entrepreneurship, prominent universities and authors on this subject, types of studies and, if any, directories/indexes in which they are included, research areas, languages used, sustainable development goals, if any?
- d. How have these three basic concepts/definitions regarding the place of women in the business 36ajör “COVID-19, digitalization (Industry 4.0), sustainability” developed in the same scope/details of the study along with these titles following 36ajör (economic) developments?

c. Database selection and methodology

In our research, since we wanted to see studies conducted on women's place in the business world from a certain cross-section based on internationally prestigious databases, "Web of Science (WoS)" and "Scopus" were used as databases. The basic steps of the research were as follows in the light of the basic principles and processes of the relevant analysis methods.

- a. The purpose, scope and method of the research have been determined.
- b. Analysis method and relevant databases have been determined.
- c. Keywords have been determined within the scope and limitations.
- d. Queries were made in databases and data were obtained.
- e. The data was analyzed and converted into graphics in the MS Excel program, the data was downloaded in a format suitable for the VOSviewer program and analyzed in the program.

- f. Data were analyzed with exploratory mixed analysis (quantitative and qualitative) and scientific maps were created.
- g. The findings were analyzed, discussed, interpreted and conclusions and recommendations were drawn.

d. Limitations of the research

In our research, the “Web of Science (WoS)” and “Scopus” databases were used. Our research topic is to analyze academic studies / research conducted in order to see the place of women roles and existences in the business world, especially in the light of the socio-economic (macro) developments called black swan in recent years and technological developments within the scope of the digital economy and their reflections on sustainability. When it comes to the place of women in the business world, since there can be many main and sub-headings of study, focusing the scope of our study on certain headings is inevitable in order to see and understand the importance of the subject and the main trends and major headings. In this direction, the entrepreneurial role (boss / capitalist), managerial role and leadership qualities of women in the professional corporate world constitute the basic scope of our research. For example, other competencies expected of a manager (such as result-orientedness, strategic thinking) other than leadership skills (competence) were excluded from the scope of our research. Similarly, for the role of capitalist or boss, the entrepreneurship dimension, which has gained significance in recent years and has come to the fore in the business world, was preferred, and other dimensions were excluded. By the same logic, only the management dimension was included in the scope, not the different titles and roles of women in the business world. Since the aim of our study is to understand the international dimension rather than the national studies in line with this main scope, national databases (and indexes/directories) were again excluded from the research. Since there are many different international databases (and indexes/directories), our research was conducted in two databases (“Web of Science – WoS” and “Scopus”), which are considered prestigious in the academy in recent years and preferred in many respects. Apart from “bibliometric analysis, data analysis, descriptive analysis”, there are different types of quantitative (and qualitative) analysis such as “meta-analysis, functional data analysis, scientometrics, webometrics”. In our research, the research method was carried out as both descriptive analysis (quantitative and qualitative mixed method), data analysis and bibliometric analysis (science mapping). Naturally, it may be possible to obtain different data in light of this information for queries on different dates. Likewise, if different databases are included or analyzed, different research results may be obtained. Similarly, it may be possible to reach different results with different keywords.

In the light of this general information, in order to reach the results of the research topic to be obtained from foreign studies / works in international sources (mainly and generally), it is necessary to use "English" keywords. However, since it is possible to obtain different results at the time of query in singular and plural uses of the word "woman" in English, both keywords were taken into account. In this context, the keywords "women entrepreneurship" and "woman entrepreneurship" were used for "female entrepreneurship". Due to the intensive use of the word entrepreneurship together with "start-up" in recent years, the keywords "women start-up" and "woman start-up" were also used, taking into account the use of the word. Similarly, the keywords "women leadership" and "woman leadership" were used for "female leadership". Considering that the English word "leader" could also be used in the usage, the keywords "women leader" and "woman leader" were also taken into consideration. With a similar logic, in addition to "women manager" and "woman manager" for "female management", the keywords "women management" and "woman management" were also taken into account as keywords in the query fields of the research.

During the query, the conjunction "or" was used in the "and / or" section in the "Web of Science (WoS)" and "Scopus" databases, since it was desired to see all studies / works containing these keywords above. Since the presence/use of these keywords anywhere in the studies/works is of interest to the research topic, the "All Fields" query criterion in the "Web of Science (WoS)" database and the corresponding "Article Title, Abstract, Keywords" query criterion in the "Scopus" database were preferred. In order to obtain accurate data regarding the scope by using the keywords together, the keywords were queried "in quotes". Otherwise, if any word in the keywords is included in the studies/works in these databases, it may be included in the results and may mislead the research result. For example, studies that only include the words "leadership" or "management" may be included in the data set, and since they do not include the word "woman", an academic inquiry into the place of women in the business world will not reflect the correct results.

When questioning the place of women in the business world in terms of leadership, management and entrepreneurship dimensions in these two international databases, it is possible to find many sections and subheadings (e.g. glass ceiling, performance, etc.). However, since the place of women in the business world cannot be seen independently of the main socio-economic developments (trends) of recent years, it was also desired to look at its intersection with the keywords "COVID-19", "digital economy (Industry 4.0)" and "sustainability". Another dimension of our research is the current situation of women in management, entrepreneurship and leadership in these main trends that have shaped the agenda in recent years. However, since there may be too many keywords in these main headings, our first research topic, the words "women leadership", "women entrepreneurship"

and “women management”, were queried with the English equivalents of the keywords “COVID-19”, “Digital Economy”, “Industry 4.0” and “Sustainability”, this time with the conjunction “and”. Other uses of these keywords (for example, “sustainable development” or “pandemic”) were not used to avoid spreading the scope of the research too much and extending the topic. Naturally, it is possible to derive keywords in different ways and different results can be obtained with them. However, there is a title called limitations of the research in the research method for this reason.

In our research, the results coming from the database are data obtained from accepted and approved studies and works such as articles, papers, books and book chapters from academic journals. Therefore, "Ethics Committee" approval was not sought separately within the scope of the research method followed.

The findings of our research, within all this explanatory and enlightening information, scope and limitations, are as follows. The data of our research were obtained from the relevant databases as of 15.09.2024.

4. Findings – Analysis

4.1 Process of conducting research inquiries:

Within the scope of our research, “Web of Science (WoS)” and “Scopus” databases were searched in their own search engine with the keywords used in the queries as follows:

a. Corresponding keywords (in English) used “in quotation marks” with the conjunction “Or”:

“women entrepreneurship” or “woman entrepreneurship”;

“women start-up” or “woman start-up”;

“women leadership” or “woman leadership”;

“women leader” or “woman leader”;

“women manager” or “woman manager”;

“women management” or “woman management”

b. The equivalent keywords (in English) regarding the main headings of socio-economic development used “in quotation marks” with the conjunction “And” and the keywords above:

“COVID-19”, “Digital Economy”, “Industry 4.0” and “Sustainability”

In this way, the query screens in both databases are given below as “Figure 1.” and “Figure 2.”

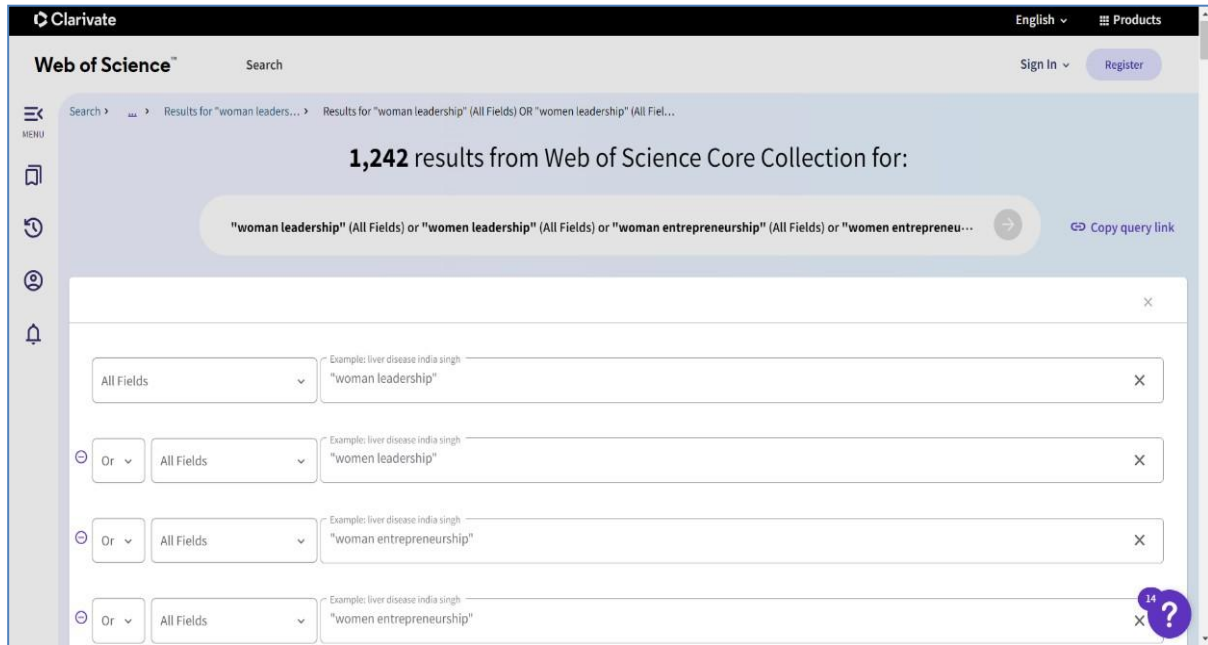


Figure 1. Web of Science database search engine query screen with keywords containing “woman” and “or” conjunction in all fields

Source: Web of Science Database, www.webofscience.com, Access Date: 15.09.2024

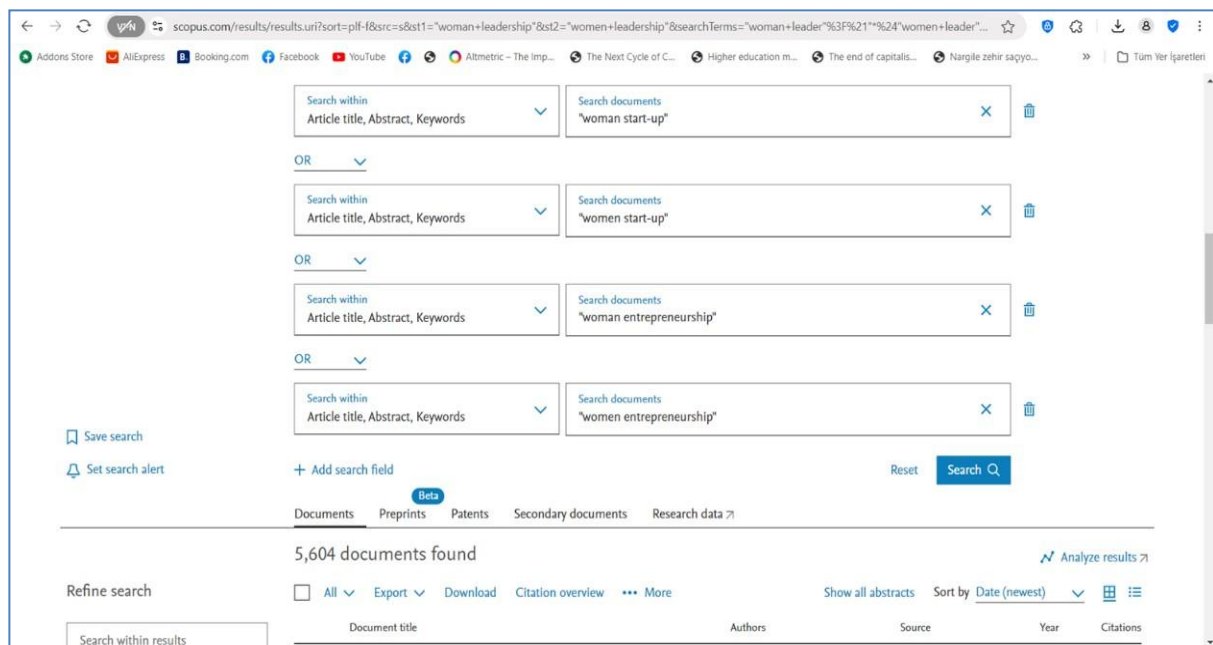


Figure 2. Scopus database search engine query screen with keywords containing “woman” and “or” conjunction in title, abstract, keywords fields

Source: Scopus Database, www.scopus.com, Access Date: 15.09.2024

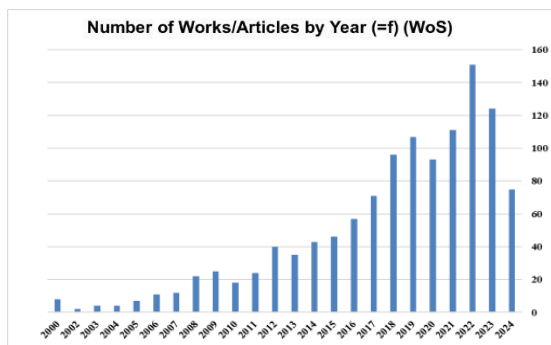
4.1 Analysis of data set

4.1.1 Analyses from Web of Science database

a. Descriptive data analysis and data analysis findings

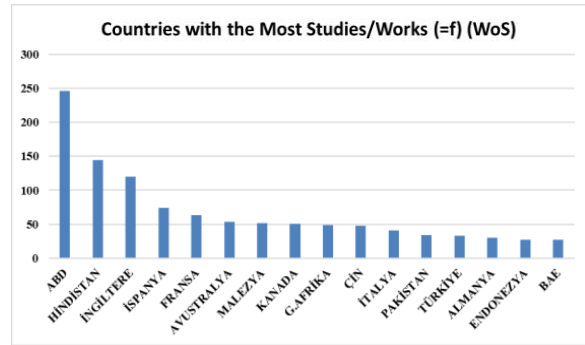
- i. It was observed that 276,475 data (studies / works) were returned when 12 of the keywords were used BUT not in quotation marks as in article 4.1.a., and 29,187 data (studies / works) were returned with the keywords "women x (leadership + manager + entrepreneurship)". However, in this way, when keywords without quotes are used, it has been observed that studies outside the scope of our research have also been included, since each word (phrase) is scanned separately in the database. Since our research topic is studies on the place of women in the business world, studies outside the scope were excluded and keywords were used in quotation marks in the query search engine of the database. Our research was filtered in this way to remain within the relevant scope.
- ii. When the above 12 keywords related to women were searched in all fields together with the conjunction "and" and the keyword "COVID-19" in the database, 1,241 studies / works (data) were obtained. When the above 12 keywords related to women were searched in all fields together with the conjunction "and" and the keyword "Digital Economy" in the database, 1,241 studies / works (data) were obtained. When the above 12 keywords related to women were searched in all fields together with the conjunction "and" and the keyword "Industry 4.0" in the database, 1,241 studies / works (data) were obtained. When the above 12 keywords related to women were searched in all fields together with the conjunction "and" and the keyword "Sustainability" in the database, 1,241 studies / works (data) were obtained. The fact that these numbers are the same as each other after all the queries made with keywords reveals a very important finding. There are insufficient academic studies on the major socio-economic developments in recent years and the place of women in the business world, and how they are affected by these topics or how much and what kind of contribution they make to these topics have not been sufficiently researched academically.
- iii. 1,242 studies / works (data) were obtained with the keywords in article 4.1.a. According to the results returned categorically in the form of data analysis of the relevant database, 959 of them are articles. 328 of them are in the field of management and 425 of them are in the business category. 394 of them are in the SSCI index, 480 of them are in the ESCI index. The predominant language used is English, as expected, with 1,168 studies. 246 studies are from the USA, 144 studies are from India, 120 studies are from the UK, and 33 studies are from Türkiye. 102 studies were published by Elsevier, 112 by Springer Nature, and 233 by Emerald. 249 of them were under the title of "Gender

Equality” from the sustainable development goals. After 2012, an acceleration in the number of publications was observed, but it has only recently started to exceed 100 on an annual basis. The categories selected from the data coming from the “Web of Science (WoS)” database through data analysis are visualized in the graphs below according to the years with the highest frequency, countries, types, universities with the most studies, major branches of science and publishers.



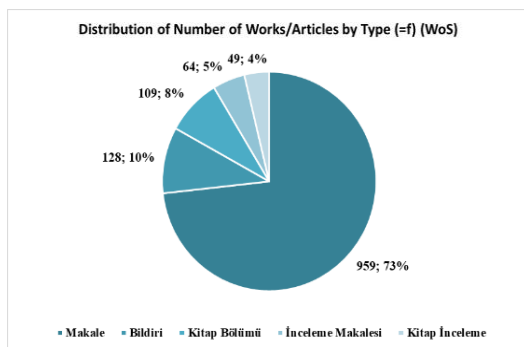
Graph 1. Number of works/articles by year (=f) (WoS)

Source: Created by the author(s) using data from the WoS database.



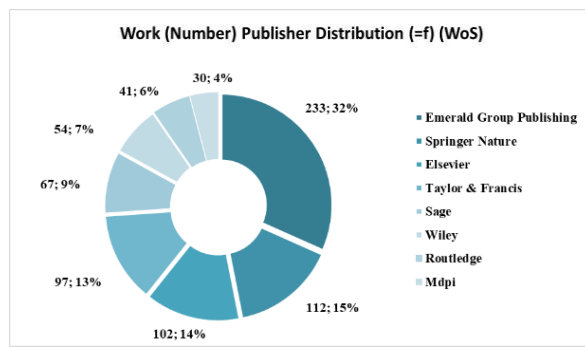
Graph 2. Countries with the most studies/works (=f) (WoS)

Source: Created by the author(s) using data from the WoS database.



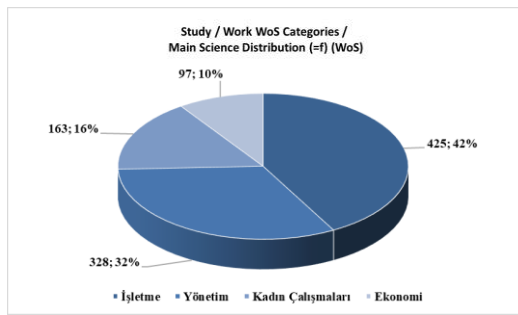
Graph 3. Distribution of number of works/articles by type (=f) (WoS)

Source: Created by the author(s) using data from the WoS database.



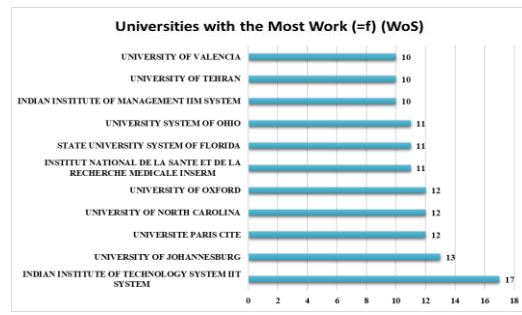
Graph 4. Work (number) publisher distribution (=f) (WoS)

Source: Created by the author(s) using data from the WoS database.



Graph 5. Study/work WoS categories / main science distribution (=f) (WoS)

Source: Created by the author(s) using data from the WoS database.



Graph 6. Universities with the most work (=f) (WoS)

Source: Created by the author(s) using data from the WoS database.

b. Bibliometric analysis findings:

The data of 1,242 studies/works obtained in this way were analyzed with the VOSviewer utility by downloading the data of the fields to be analyzed for bibliometric analysis.

These data in the ".txt" file obtained with "export" after the "Web of Science (WoS)" database query were analyzed with bibliometric mapping in the VOSviewer version 1.6.19 utility program.

i. Co-Author analysis

In the analysis of authors with at least 2 publications and 2 citations, 188 out of 3,011 authors meet this criterion, but only 1 author with more than 10 publications (producing the most studies/works) was identified. However, 8 authors with over 200 citations and 12 authors with over 100 citations were seen. Among these authors, 18 stand out as co-authors in terms of clustering and the network analysis is shown in Figure 3. The author layer map without taking clustering into account is shown in Figure 4.

ii. Author citation analysis

Considering that 157 of the 3,011 authors have at least 2 publications and 5 or more citations (84 of them are densely clustered), the concentration map of the links of these authors to each other according to weighted citations, without taking clustering into account, is shown in Figure 5. It is understood that different names stand out from the authors in the co-author analysis.

iii. Keyword (word) analysis

When the keywords of the obtained data were analyzed, 253 thresholds were found where at least 3 of the 2,911 keywords were similar. When examined as a layer analysis,

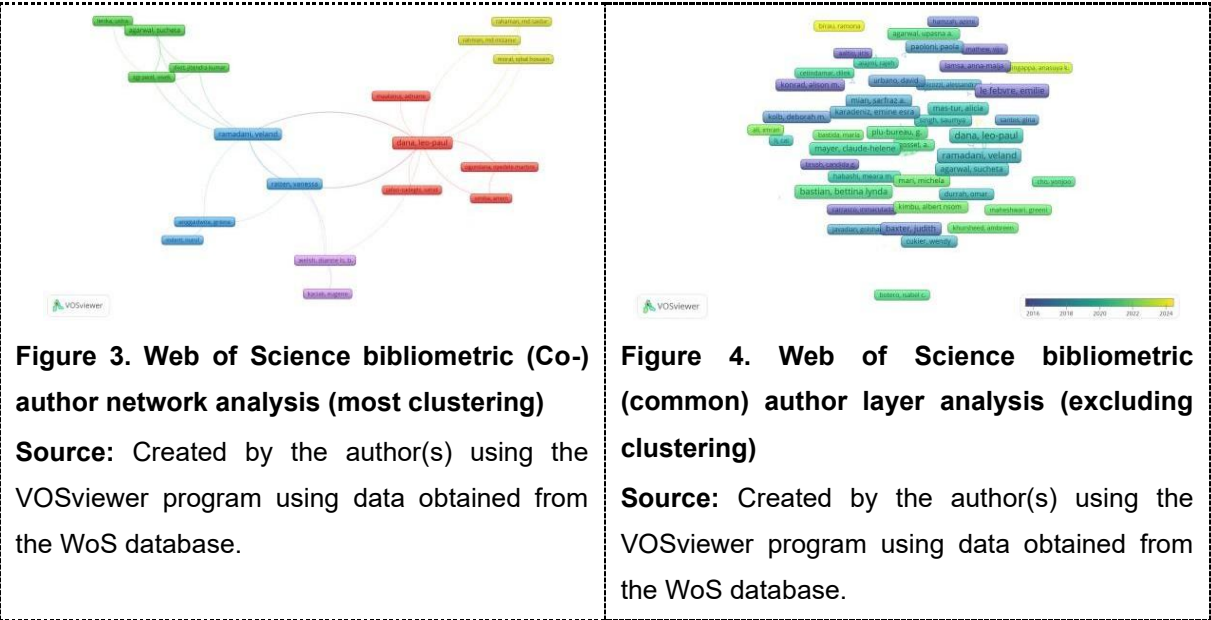
the word “women entrepreneurship” stood out, while the word “women leadership” was used in the second weight, as seen in Figure 6.

iv. **Country citation analysis**

In the network analysis of countries with more than 5 publications and studies with at least 5 citations, it was seen that 56 out of 113 countries met these criteria and 55 of them stood out in terms of the strength of the links. It is noteworthy that these countries include the United Arab Emirates, Malaysia, Pakistan and Nigeria. In Figure 7, although the leadership of the USA, India, England, Spain, Malaysia and Australia can be seen, the fact that Germany, Italy and Russia are not at the forefront among the countries that produce the most work/artwork can be seen as another striking indicator.

v. **Bibliographic journal matching**

The density map of journal matching with at least 3 publications and 3 citation criteria is shown in Figure 8. It was understood that 67 cluster matches were stronger out of 72 matches. It was seen that “Gender in Management” journal was the leading journal according to citations. “Sustainability” was also seen in the front. According to the strength of the links, 3 other journals with the word “entrepreneurship” in them were in the first 3 places.



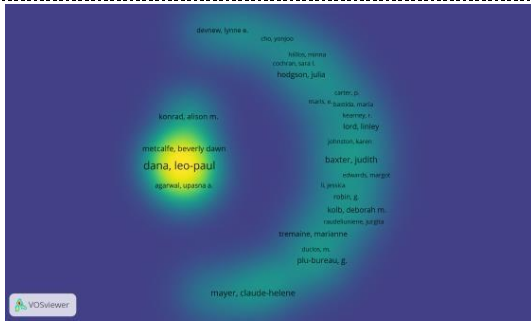


Figure 5. Web of Science bibliometric author citation density analysis

Source: Created by the author(s) using the VOSviewer program using data obtained from the WoS database.

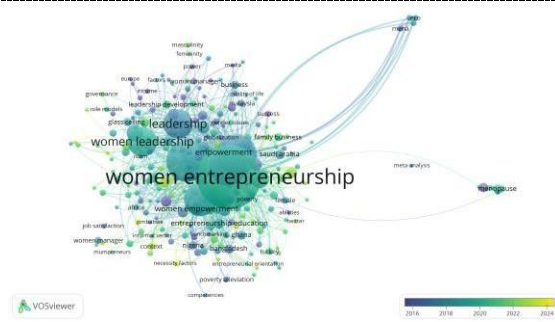


Figure 6. Web of Science bibliometric keyword (word) layer analysis

Source: Created by the author(s) using the VOSviewer program using data obtained from the WoS database.

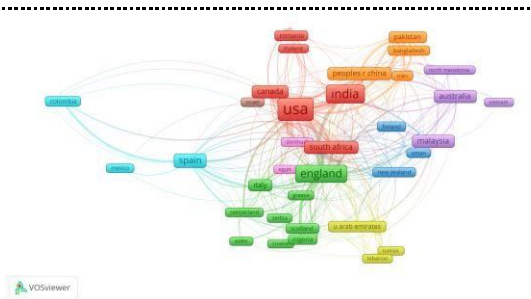


Figure 7. Web of Science bibliometric country citation network analysis

Source: Created by the author(s) using the VOSviewer program using data obtained from the WoS database.



Figure 8. Web of Science bibliographic journal matching density analysis

Source: Created by the author(s) using the VOSviewer program using data obtained from the WoS database.

4.1.2 Analyses from Scopus database

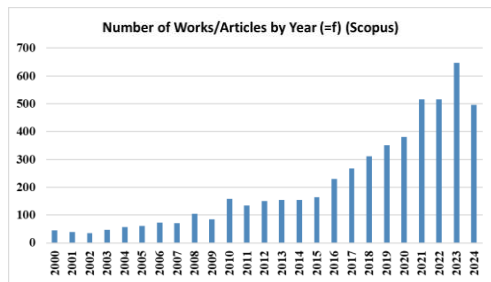
a. Descriptive data analysis and data analysis findings

i. It was observed that 204,013 documents (studies / works) were returned in the field ("Article Title, Abstract, Keywords") in the same way as in the WoS search (article 4.1.a), BUT not in quotation marks. However, in this way of using keywords, it has been observed that since each word (phrase) is scanned separately in the database, studies outside the scope of our research have also been included. Since our research topic is studies on the place of women in the business world, studies outside the scope were excluded and keywords were used in quotation marks in the query search engine of the database. Our research was filtered in this way to remain within the relevant scope.

ii. When the above 12 keywords related to women were searched with the

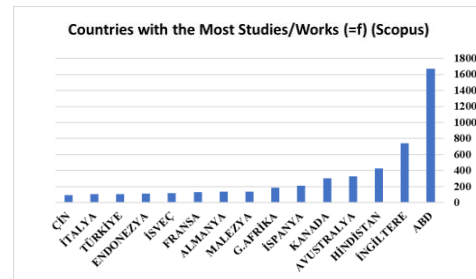
conjunction “and” together with the keyword “COVID-19” in the “Scopus” database (“Article Title, Abstract, Keywords”), 187 studies / works (data) were obtained. When the above 12 keywords related to women were searched in all fields together with the conjunction “and” together with the keyword “Digital Economy” in the database (“Article Title, Abstract, Keywords”), 11 studies / works (data) were obtained. When the above 12 keywords related to women were searched in all fields together with the conjunction “and” and the keyword “Industry 4.0” in the database (“Article Title, Abstract, Keywords”), 5 studies / works (data) were obtained. When the above 12 keywords related to women were searched in all fields together with the conjunction “and” together with the keyword “Sustainability” in the database (“Article Title, Abstract, Keywords”), 152 studies / works (data) were obtained. As a result of these queries made with all these keywords, a very important finding emerges, as in the WoS database. The inadequacy of academic studies on the major socio-economic developments in recent years and the place of women in the business world has also been confirmed in the "Scopus" database. How women's place in the business world is affected by these topics or how much and how they contribute to the pandemic period, the digital economy, and the field of sustainability has not been sufficiently researched academically.

- iii. iii. In case of scanning in all fields with the keywords in article 4.1.a., 35,952 studies/works (data) were obtained. HOWEVER, since it was observed that some of these studies might be irrelevant to our research topic due to the query feature of “Scopus”, the query field of the scan was filtered and the scan was performed in the “Article Title, Abstract, Keywords” field. In this way, when the keywords in article 4.1.a. were scanned, 5,604 studies/works (data) were obtained. According to the results returned categorically in the form of data analysis of the relevant database, 3,761 of them were articles, 1,018 of them were book chapters. 2,989 of them were in the field of social sciences, 2,612 of them were in the category of business, management and accounting. 127 of them are in the “International Journal of Gender and Entrepreneurship” (similar to the WoS findings, in the first ranks), 115 of them are in the “Gender in Management” journal, and 93 of them are in the “Woman in Management Review” journal. The predominant language used is English, as expected, with 5,430 studies. 1,674 studies are from the USA and 741 studies are from the UK. After 2008 and 2015, an acceleration in the number of publications was observed, and after 2021, it will be over or around 500 per year. The categories selected from the data obtained categorically from the "Scopus" database through data analysis are visualized in the graphs below according to the years, countries, types, universities, majors and journals with the highest frequency.



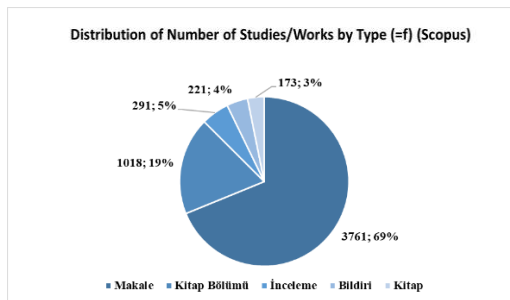
Graph 7. Number of studies/works by year (=f) (Scopus)

Source: Created by the author(s) using data from the Scopus database.



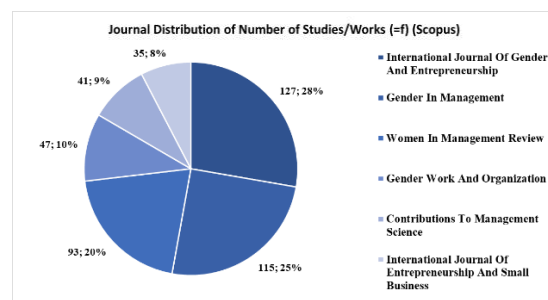
Graph 8. Countries with the most studies/works (=f) (Scopus)

Source: Created by the author(s) using data from the Scopus database.



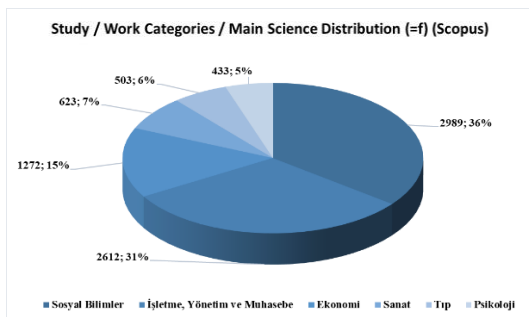
Graph 9. Distribution of number of studies/works by type (=f) (Scopus)

Source: Created by the author(s) using data from the Scopus database.



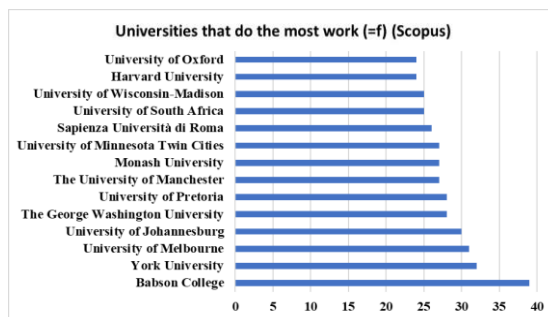
Graph 10. Journal distribution of number of studies/works (=f) (Scopus)

Source: Created by the author(s) using data from the Scopus database.



Graph 11. Study/work categories / main science distribution (=f) (Scopus)

Source: Created by the author(s) using data from the Scopus database.



Graph 12. Universities that do the most work (=f) (Scopus)

Source: Created by the author(s) using data from the Scopus database.

b. **Bibliometric analysis findings:**

The data of 5,604 studies/works obtained in this way were analyzed with the VOSviewer utility by downloading the data of the fields to be analyzed for bibliometric analysis.

These data in the “.csv” file obtained by “export” from the “Scopus” database were analyzed by bibliometric mapping in the VOSviewer version 1.6.19 utility program.

i. **Co-Author analysis**

In the analysis of authors with at least 2 publications and 2 citations, 258 out of 5,121 authors meet this criterion. There is 1 author with over 1,000 citations, 2 (many) authors with over 500 citations, and 6 (many) authors with over 300 citations. Among these authors, 258 stand out as clusters and are shown in the network analysis in Figure 9 according to the number of documents. The number of documents of 4 authors (clusters) is more than 5. However, the number of citations of the first author with the most documents is 11. The layer map according to the number of citations of the authors in the cluster is shown in Figure 10.

ii. **Author citation analysis**

Considering that 228 out of 5,121 authors have 2 publications and 5 or more citations, the concentration map of the links of these authors to each other according to weighted citations is shown in Figure 11. It is understood that different names stand out from the authors in the co-author analysis.

iii. **Keyword (word) analysis**

When the keywords of the obtained data were analyzed, 1,024 thresholds were found where at least 3 of the 8,950 keywords were similar. When examined as a layer analysis, the layer analysis in which the words "gender" and "women" are dominant is seen in Figure 12.

iv. **Country citation analysis**

In the network analysis of countries with more than 5 publications and studies that have received at least 5 citations, it was seen that 87 out of 233 countries met these criteria and 2 of them (USA, UK) stood out in terms of the strength of documents and citations. These were followed by India, Australia, Canada, Spain and South Africa, respectively. The citation network analysis is shown in Figure 13.

v. **Bibliographic journal matching**

The density map of journal matching with the criteria of at least 3 publications and 3 citations is shown in Figure 14. While 373 out of 2,531 matches met the criteria, it was understood that 361 clusters were stronger. Similar to the WoS finding, “Gender in Management” and also “Women in Management Review” journals are found to be the

leading journals in terms of research. However, “International Journal of Gender and Entrepreneurship” journal is seen in the first place with 127 publications and 3,828 citations.

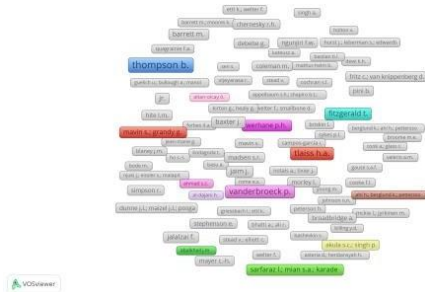


Figure 9. Scopus bibliometric (common) author network analysis (most clustering)

Source: Created by the author(s) using the VOSviewer program with data obtained from the Scopus database.

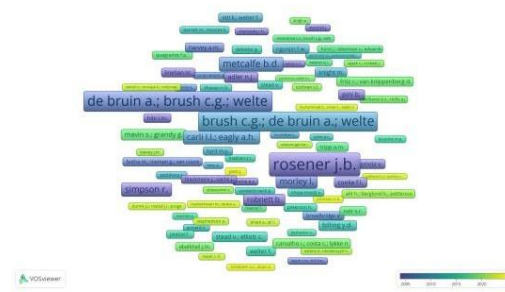


Figure 10. Scopus bibliometric (common) author layer analysis (excluding clustering)

Source: Created by the author(s) using the VOSviewer program with data obtained from the Scopus database.

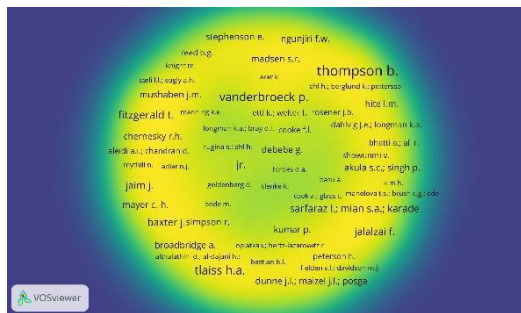


Figure 11. Scopus bibliometric author citation density analysis

Source: Created by the author(s) using the VOSviewer program with data obtained from the Scopus database.

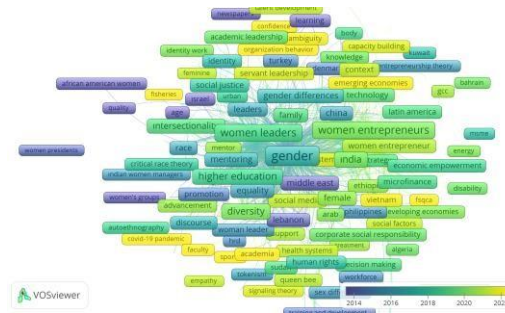
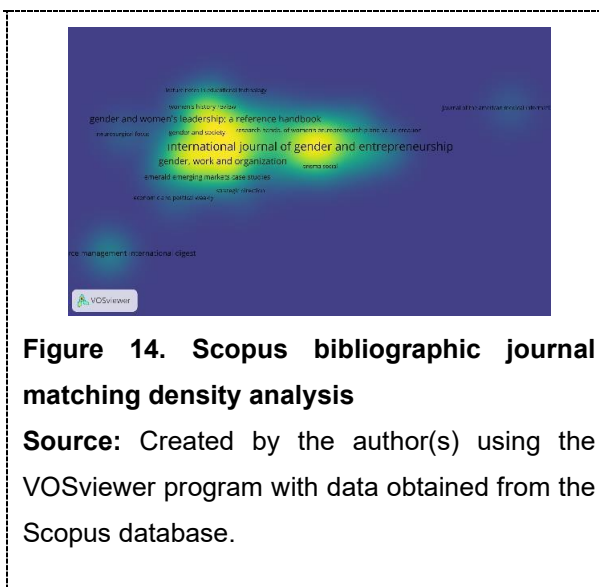
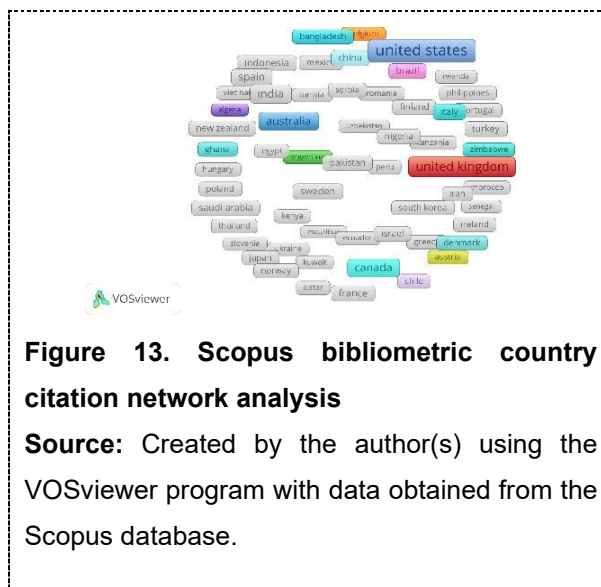


Figure 12. Scopus bibliometric keyword layer analysis

Source: Created by the author(s) using the VOSviewer program with data obtained from the Scopus database.



5. Conclusion and Recommendations

The main purpose of this study is to understand the current status of some specific titles in the academic literature in "women"-based studies by filtering the topics examined from many sections in the field of business and economics. As a filter, it was aimed to see the development and categorical distribution of academic studies on the place of women in the business world, mostly in administrative titles such as leadership, management and entrepreneurship. In addition, after the rapid developments and changes after 2000, it was also aimed to understand the place and interaction of women in the business world in major socio-economic headings (developments) that left significant marks on humanity, businesses and economies, especially before and after 2020 (pandemic).

In this context, descriptive (and procedural) analysis and bibliometric analysis were preferred among different analysis methods in the literature review, and these topics were queried with relevant English keywords in internationally prestigious databases. In order to obtain findings appropriate for the purpose, the information obtained within the constraints and filters was analyzed by categorically graphing with data analysis and important scientific maps were created. For this purpose, "Web of Science" and "Scopus" databases were used.

In the light of categorical data and findings, it is seen that although the number of studies on "women entrepreneurship, women leadership, women management" in both databases has increased over the years, it is not sufficient in the entire literature. Similarly, there are much fewer studies on the intersection of the main trends of "COVID-19, digital economy, Industry 4.0, sustainability" and these topics. While this is a development opportunity, it can be interpreted as the findings on concepts such as the glass ceiling also exist

academically in terms of the place of women in employment and the business world. Although the USA, England and India are the countries that take the lead in studies, the existence of publications and citations from countries such as Malaysia (Indonesia) can be seen as a sign that the interest and need in the subject is increasing. The studies are mostly articles and in English. There is no university with more than 40 studies, well-known universities such as Harvard are generally not in the top 10. Although some prominent authors are seen, the number of citations for some is very low compared to the number of publications. "Gender in Management" journal was seen as the joint lead Publisher in both databases, and it was seen that the keywords "entrepreneurship", "managers", "women" and "gender" could be important in terms of searches.

As a result, it has been clearly seen from these analyses and findings that further studies on women's managerial workforce and place in the business world under the titles of women's management, women's leadership and women's entrepreneurship will contribute to the business world and academia in many ways. It would be expected that examining the same issues from the perspective of major socio-economic events would also yield significant gains from a conjunctural perspective. Although it is not the scope of this research, queries made with keywords on the "Google Academic" Turkish pages and the "DergiPark Academic" database show that the number of studies is small within the general cluster in these titles such as "Web of Science" and "Scopus". This offers an opportunity for future studies in Turkish, and also provides important opportunities for international studies to inform the world about the place of women in the Turkish business world.

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- In this study, MS Excel, VOSviewer and Google Translate program were used. The text is converted from the expanded version in Turkish to English. The English translation has been checked and edited by the authors, paying attention to the originality / genuineness of the text. The authors' contribution to the study is equal. There is no research method that requires Ethics Committee approval. Artificial intelligence support was not used.
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Analyzing Learner Attention With Webgazer.Js In E-Learning System

***Safia BENDJEBAR**

LabSTIC Laboratory; University 8 May 1945 Guelma, P.O. Box 401; 24000 Guelma, Algeria
bendjebar.safia@univ-guelma.dz

Sirine TOUAHRI

University 8 May 1945 Guelma, P.O. Box 401; 24000 Guelma, Algeria
serinetouahri01@gmail.com

Yacine LAFIFI

LabSTIC Laboratory; University 8 May 1945 Guelma, P.O. Box 401; 24000 Guelma, Algeria
laf_yac@yahoo.fr

Adil BOUGHIDA

LabSTIC Laboratory; University 8 May 1945 Guelma, P.O. Box 401; 24000 Guelma, Algeria
boughida.adil@univ-guelma.dz

Abstract

Online education lacks effective tools to measure learner concentration. Eye-tracking technology, proven in fields like psychology and marketing, offers a solution. By capturing and analyzing eye movements, we can gain insights into how learners engage with digital content.

Our study employed WebGazer.js to collect and analyze eye-tracking data during online learning sessions. We developed a new attention metric based on speed, fixation, and saccade patterns. Our system, E-track Learning, utilizes a webcam to capture eye movements in real-time. Through this research, we aim to equip educators with tools to identify student engagement levels.

1. Introduction

In recent years, e-learning has become a cornerstone of higher education, offering flexible learning opportunities. While technology has facilitated content delivery and interaction, most online systems rely heavily on static student profiles, such as age and prior knowledge. To address this limitation and create more dynamic learning environments, researchers have turned to personalized adaptation, exploring cognitive factors like learning styles and strategies [1].

Observing learners' eye movements and monitoring their behavior is an effective method for assessing these differences. In fact, analyzing eye movements proves to be a valuable way to understand their level of understanding and knowledge assimilation, as it can reveal important information about the cognitive processes underlying their actions.

The purchase of eye-tracking companies such as OculusVR, EyeFluence, GazeHawk, and WebGazer, as well as the partnership between Tobii and Microsoft to introduce eye-tracking support, signifies the emergence of a new human-computer interaction era [2]. In the education field, these methods can improve the learning process and recommend the best content to suit a specific learner.

Papoutsaki et al. [3] developed an open-source JavaScript library named WebGazer.js. It consists of two main components: a pupil detector that looks for the pupils' position in the webcam stream and a gaze estimator. They used common webcams, already present in desktops and laptops, and combined them with user interactions to incorporate them into any web page. This component can help the instructor detect difficulties in a learner's comprehension and observe signs of a loss of concentration.

For this purpose, we have integrated WebGazer.js into our e-learning system. This powerful JavaScript library allows us to capture learners' eye movements, providing a valuable indicator of their attention during online courses. By analyzing the obtained data, such as speed rate, fixation, and saccade frequency, we can gain insights into how learners process information and interact with learning materials' content.

Several research questions can therefore be asked:

- How does the integration of WebGazer Eye tracking enhance learner interaction within e-learning platforms?
- What specific eye-tracking metrics obtained from WebGazer are most indicative of effective attention during e-learning activities?

This research is part of the PRFU project "Tracking and analyzing learners' behavior in a digital learning environment using artificial intelligence techniques and learning analytics".

In this research paper, we have two main contributions:

1. The proposition of a new structure of online content to increase learner attention and knowledge retention;
2. The modeling of the learners' effective attention from his eyes.

The remaining structure of this paper is as follows: Section 2 discusses a review of literature related to our study. Section 3 describes the proposed approach and explains the metrics used to evaluate its effectiveness. Section 4 includes the detailed working of the implementation. Section 5 concludes the paper and highlights the prospects for future work.

2. Literature Review

Diagnostic eye-tracking applications have vast potential for designing adaptive e-learning environments. This involves examining how learners interact with the graphical interface of e-learning platforms and their educational components [2].

Eye tracking can infer various information, such as user attention levels, stress, relaxation, problem-solving, learning outcomes, and concentration. This information is based on indirect measures such as fixation numbers and duration, gaze position, and blink rate [4].

These metrics can be used to adapt the content according to the learner's performance in problem-solving. For instance, if an eye-tracking system detects high fixation duration for a learner, researchers may infer that the learner is encountering challenges in information extraction [5].

Nugrahaningsih et al. [6] tried to recognize learning styles by observing how students look at the materials. Three gaze metrics were extracted: percentage of fixation duration, percentage of fixations, and average fixation duration.

Charoenpit and Ohkura [7] addressed students' problems in online systems. They found that e-learning needs interactive content to track learners and increase motivation. They used

three different models to extract eye features, such as Russell's circumplex [8], Shen [9], and Kort's learning spiral [10].

Molina et al. [11] explore using eye tracking to assess usability and accessibility in Human-Computer Interaction and Educational Computing, considering human factors and individual differences. It proposes guidelines and measures for eye-tracking assessments, leveraging insights into users' visual behavior to infer psychological processes.

These studies show that eye tracking can be applied in any area; it differs according to the objective and the data available [12]. Until now, very few datasets are available online that integrate eye tracking in e-learning. For this purpose, we have proposed using this technology to analyze eye movement data.

3. Description of The Structure Of The E-Track Learning System

The E-Track learning system uses monitoring and tracking the progress and the performance of learners. This system has the same structure as the previous online system developed by Bendjebar and her colleagues [13].

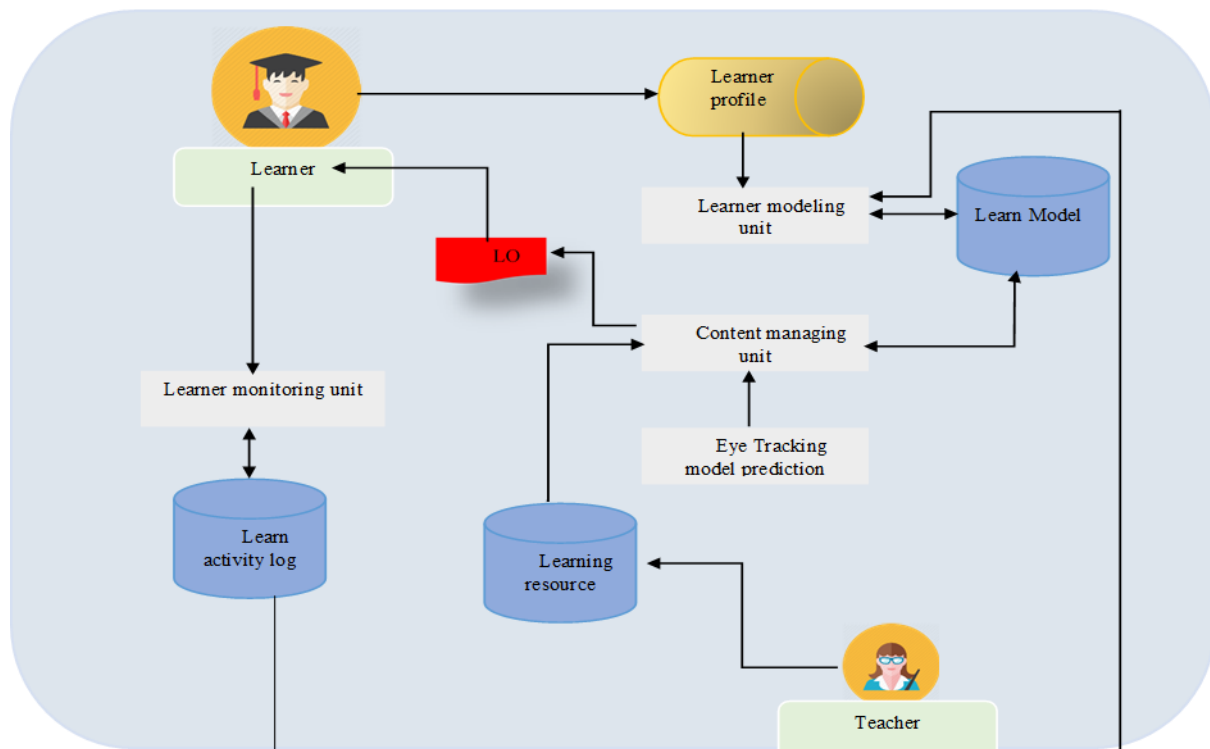


Figure 1: An Eye-Tracking Integrated Learning Platform

The proposed system is composed of four main modules:

1. Learners modeling unit: It is responsible for managing the learner's profile, which contains dynamic and static data about all the learner's actions.
2. Learner monitoring unit: it refers to a component designed to track and observe learners' behaviors, and interactions within an educational context. This unit was defined in our previous work [13].
3. Eye Tracking model prediction: The WebGazer system offers a solution by utilizing eye tracking technology to predict student attention based on their eye movements. This

model leverages data captured from students' interactions with online content, providing insights into their levels of attention.

4. Content managing unit: To provide a solid foundation for understanding the main principle, we'll first explore the content structure in the following section.

3.1. The content structure

A learning session S refers to a structured period during which learners engage in a series of learning object C .

$$S_L = \bigcup_{i=1}^N C_i$$

This content contains the descriptive feature vector (Vdf) and the analysis feature vector (Vaf) which are merged to represent a single content. This combination is achieved through a simple concatenation operation, as follows:

$$C = Vdf \oplus Vaf$$

3.2. The learner's attention

The core principle of our content efficiency approach is maximizing learner attention. This is supported by a well-established psychological model [14]. In this work, a local and global attention of each learner was extracted to help teachers to analyze learner behavior.

3.2.1. The Local Attention (La)

The local attention represents the learner's attention level when they

$$La(C, L) = \frac{EA}{CD}$$

- $La(C, L)$ represents the degree of attention for a certain content (C) by a specific learner (L).
- CD : represents the content difficulty level.
- EA : represents the Effective Attention vector, which contains various characteristics that influence the attention of the learner: the average speed, number of fixations and number of saccades. The vector could be a combination of weighted values for each characteristic:

$$EA = w1.Speed + w2.Fixation + w3.Saccade / w1 + w2 + w3$$

Where:

- $w1, w2, w3$: are weights assigned to each characteristic, indicating their relative importance.
- $Speed, Fixation, Saccade$: are the values of respective characteristics

➤ The calculation of speed

To calculate the average speed of eye movement, we propose to multiply the speed of eye

movement for each measurement by the duration of that measurement. Then, we need to add up all of the products and divide by the total number of durations.

$$\text{Average speed} = \frac{\sum_{i=1}^n (\text{Speed}_i \times \text{Duration}_i)}{\sum_{i=1}^n \text{Duration}_i}$$

➤ *The number of fixations*

The number of fixations refers to the number of times a user's eyes stop briefly on a specific part of the screen for a given period of time [18]. This factor is important in eye tracking because it can provide insights into how learners are paying attention to and processing information. For example, a high number of fixations on a particular area of the screen could indicate that the learner is having difficulty understanding the information presented there. fixation durations are around 200–300 ms long [15].

The number of fixations Algorithm

```
// Define random intervals for x and y values
var randomXInterval = [200, 300]; // pixels
var randomYInterval = [200, 300];
//Function to check if coordinates are within the specified intervals
function isWithinInterval(coord, interval) {
    return coord >= interval[0] && coord <= interval[1];}
// Check if fixations are within the specified intervals
if (isWithinInterval(xPrediction, randomXInterval)) {
    xFixationsCount++; }
if (isWithinInterval(yPrediction, randomYInterval)) {
    yFixationsCount++; }
```

➤ *The number of saccades*

A saccade is defined as the number of rapid eye movements between different parts of the page, which can indicate the speed at which one reads or searches for information [16; 17].

The number of saccades Algorithm

```
var threshold = 0.3; // This can be adjusted based on your needs
totalSaccadeCount=0;// Initialization
// Check if the actual speed exceeds a threshold to be considered a saccade
if (speed > threshold) {
    totalSaccadeCount++;
}
```

3.2.2. The Global Attention (GA)

The Global Attention GA takes into account the local attention for each content and provides a consolidated measure of the user's attention throughout the session. The formula for calculating GA during an entire session is given as:

$$GA(S, L) = \frac{\sum_{i=1}^n LA(C_i, L)}{n}$$

Where:

- $GA(S, L)$: represents the global attention for the entire session S by a specific learner L .
- $LA(C_i, L)$: represents the local attention for a specific content C_i within the session by the learner L .
- n is the total number of contents within the session.

Example

Let's consider a learning session (S) with three contents ($n=3$) and their corresponding local attention values for a specific user (L):

- $LA(C1, L)=0.8$
- $LA(C2, L)=0.6$
- $LA(C3, L)=0.7$

Now, we can use the formula to calculate the global attention for the entire session:

- $GA(S, L)=(0.8+0.6+0.7)/3$
- $GA(S, L)=0.7$

4. Implementation of E-Track Learning system

To validate the proposed approach, we implemented three distinct spaces: a learner space, a teacher space, and an administrator space. These spaces cater to the specific needs of each user group. Figure 2 showcases an interface from the E-Track Learning system within the learner space, specifically demonstrating how to integrate the eye-tracking technique in our online learning system.

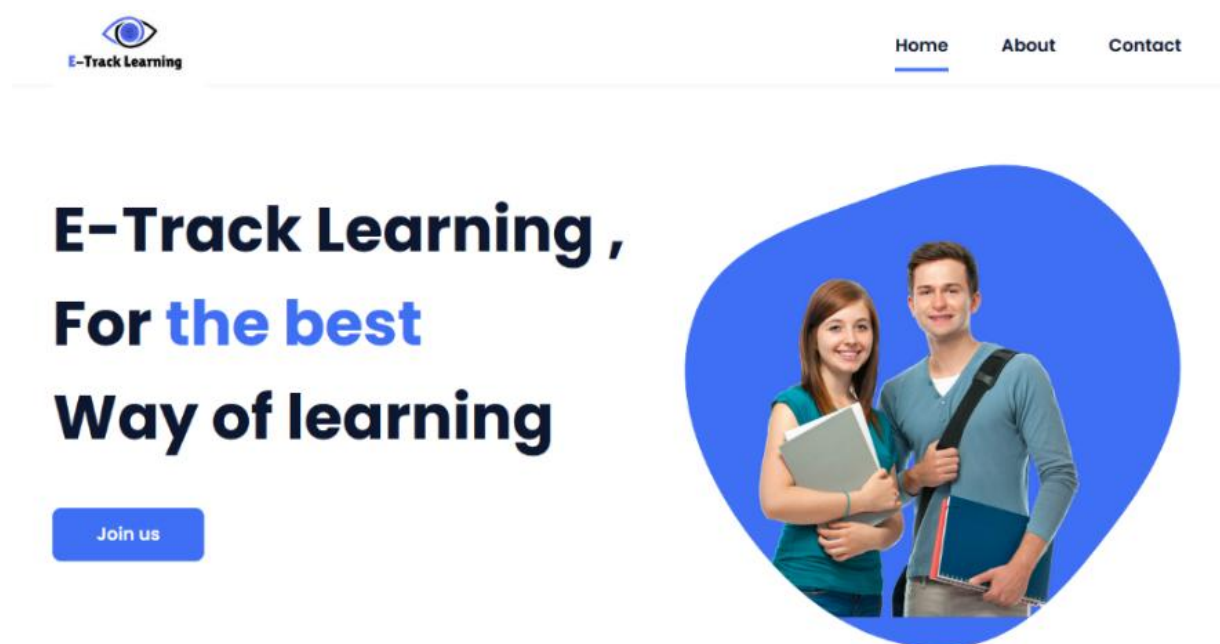


Figure 2: The interface of the E-Track Learning system

The next figure illustrates the learner space as it appears when a learner accesses the

course and online test.

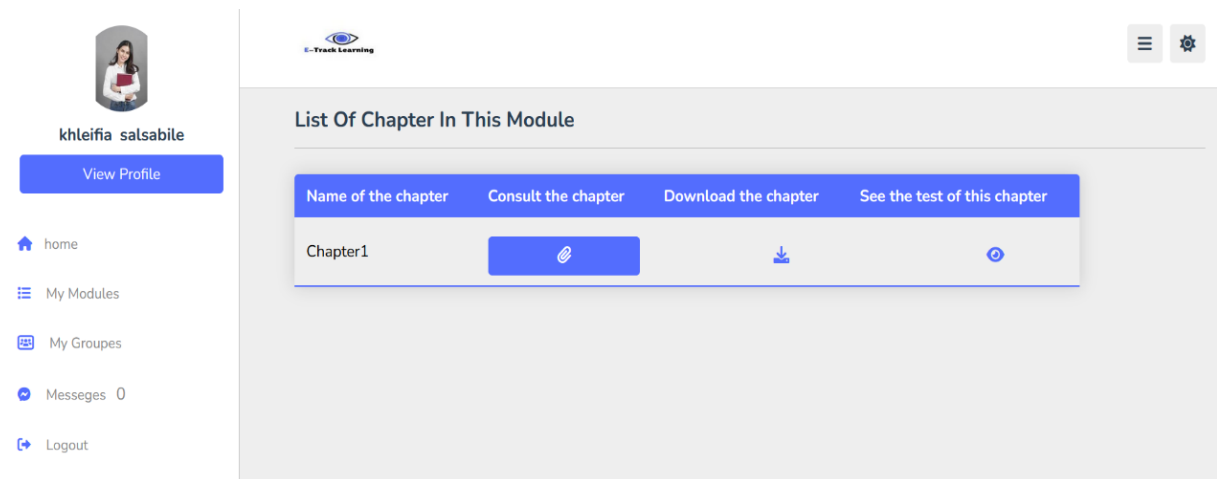


Figure 3: The access in the online course from learner space

Figure 4 displays the interface from the learner space. It shows how we can capture effective attention features such as the speed of eye movement, the number of fixations, and saccades when the learner engages with the course content (text, video or audio). The red point represents the predicted position of the learners' eye gaze.

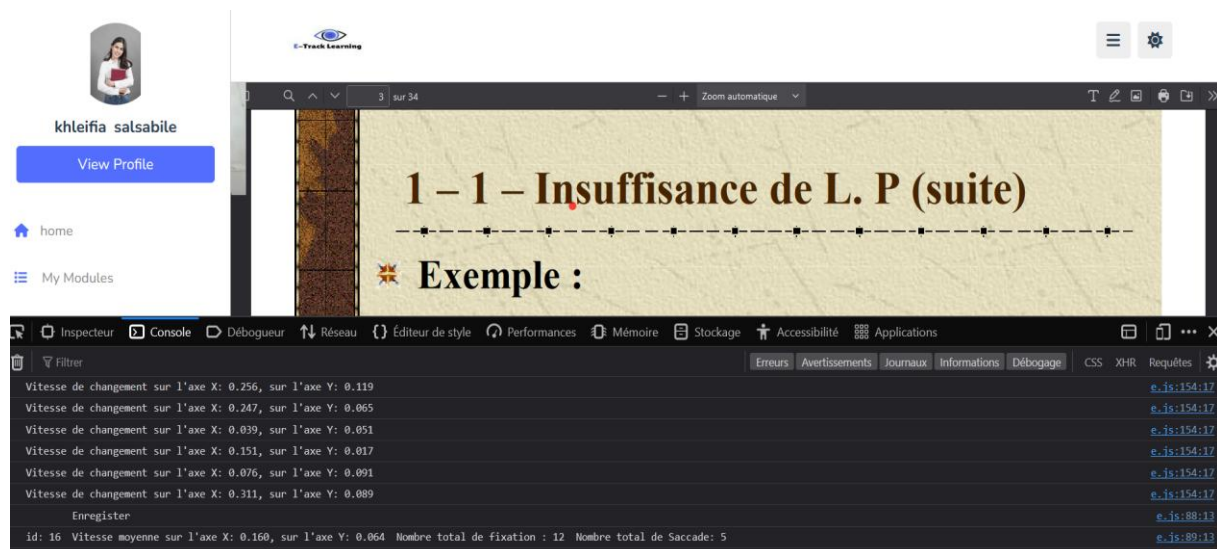


Figure 4: Measuring the effective attention in learner space.

5. Experiment

After the implementation of the system, we tested its reliability and satisfaction of the learners about the use of the various functionalities offered by E-Track Learning. 26 students from the Department of Mathematics at Guelma University (Algeria) were selected randomly for the experiment. The platform offers all the necessary resources and communication tools to

detect the attention of each learner.

5.1. Methodology

In the first step, the learners are enrolled in the system and they are validated by the teacher. During the experimental period, we selected the structure machine unit to detect the learner attention at the platform. A set of pedagogic resources were selected.

After the utilization of the system, a questionnaire is submitted to the students. It was created to see the effect and usefulness of the online system and extract the main challenges that have been faced by the students during the experimental period.

5.2. Results and discussion

The following figures illustrate some examples of students' responses to some questions in the questionnaire.

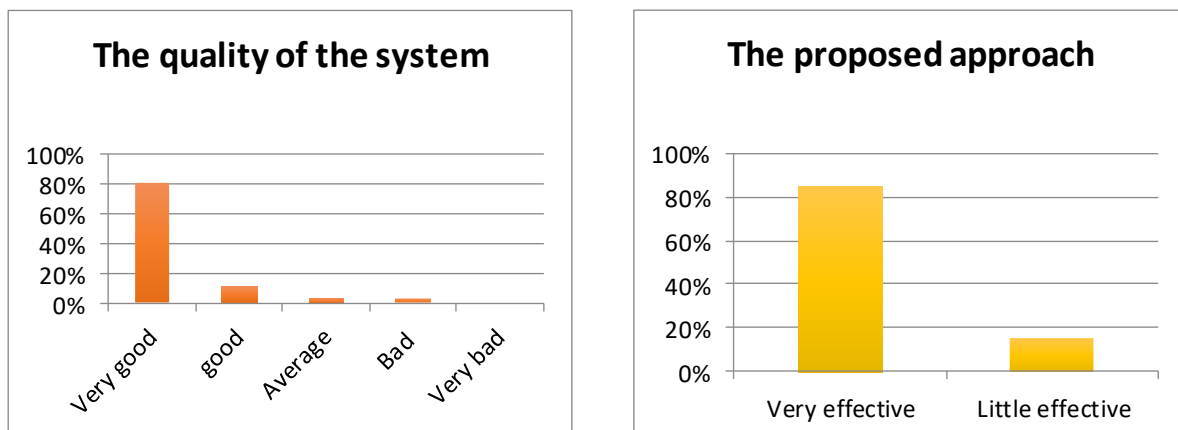


Figure 5. Usability testing

After using the system, we collected and analyzed the students' answers on the questionnaires submitted to them (figure 5). About the quality of the system, the results show that the majority of students (more than 80% of them) indicated that they enjoyed using the online system. Whereas, less than 3% of students reported that this system is bad.

In the term of the effectiveness of the proposed approach, the results are positive where 22 students found that using this type of system is very effective, while 4 students found that this approach is little effective.

6. Conclusion and future work

In this work, we have integrated an eye tracking component for understanding learner attention. It allows us to adapt teaching methods and educational content to maximize the effectiveness and success of each learner. This is a key principle in education. Educators can create more effective learning environments and experiences by understanding how learners learn. This can lead to improved student engagement, motivation, and achievement. To achieve our objectives and answer the research questions posed in the introduction, we first proposed a new structure of the content. This structure may enhance the interactivity

and adaptability of learning experience from eye tracking data.

Our study showed that these models can be used to identify learners who are engaged and not engaged with the online system. In future work, we propose to detect the engagement of each student in this system. It will allow us to create a rich dataset suitable for use as input for a machine learning algorithm.

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How Can Webcam-Based Eye Tracking Assess Student Attention In Online Learning?

***Safia BENDJEBAR**

LabSTIC Laboratory; University 8 May 1945 Guelma, P.O. Box 401; 24000 Guelma, Algeria
bendjebar.safia@univ-guelma.dz

Sirine TOUAHRI

University 8 May 1945 Guelma, P.O. Box 401; 24000 Guelma, Algeria
serinetouahri01@gmail.com

Yacine LAFIFI

LabSTIC Laboratory; University 8 May 1945 Guelma, P.O. Box 401; 24000 Guelma, Algeria
laf_yac@yahoo.fr

Adil BOUGHIDA

LabSTIC Laboratory; University 8 May 1945 Guelma, P.O. Box 401; 24000 Guelma, Algeria
boughida.adil@univ-guelma.dz

Abstract

Eye-tracking technology has become an essential tool in educational research, providing valuable insights into student learning processes. However, interpreting eye movement data remains a significant challenge due to its complexity and high volume. Understanding how learners visually engage with digital content is crucial for optimizing e-learning experiences.

In this study, we employed WebGazer.js, a browser-based eye-tracking tool, to collect and analyze student eye movement data during online learning sessions. We developed a novel attention metric based on fixation count, fixation duration, and saccade patterns to assess learner engagement more effectively. Our system, E-Track Learning, leverages real-time webcam-based eye tracking to monitor visual attention without requiring specialized hardware. By integrating these eye-tracking metrics into online learning environments, our approach provides educators with actionable insights into student engagement levels. This research contributes to the development of adaptive learning systems capable of detecting attentional fluctuations and tailoring educational content to individual needs, ultimately enhancing the overall learning experience.

Keyword: Eye-Tracking, Eye movements, Effective Attention, Student behavior, Saccade, Fixation.

Özet

Göz izleme teknolojisi, öğrenci öğrenme süreçlerine ilişkin değerli içgörüler sağlayarak eğitim araştırmalarında önemli bir araç haline gelmiştir. Ancak, göz hareketi verilerinin yorumlanması karmaşıklığı ve yüksek hacmi nedeniyle önemli bir zorluk olmaya devam etmektedir. Öğrencilerin dijital içerikle görsel olarak nasıl etkileşime girdiğini anlamak, e-öğrenme deneyimlerini optimize etmek için çok önemlidir.

Bu çalışmada, çevrimiçi öğrenme oturumları sırasında öğrenci göz hareketi verilerini toplamak ve analiz etmek için tarayıcı tabanlı bir göz izleme aracı olan WebGazer.js'yi kullandık. Öğrenci katılımını daha etkili bir şekilde değerlendirmek için sabitleme sayısı, sabitleme süresi ve göz hareketi desenlerine dayalı yeni bir dikkat metriği geliştirdik. Sistemimiz E-Track Learning, özel donanım gerektirmeden görsel dikkati izlemek için gerçek zamanlı web kamerası tabanlı göz izlemeyi kullanır.

Bu göz izleme metriklerini çevrimiçi öğrenme ortamlarına entegre ederek, yaklaşımımız eğitimcilere öğrenci katılım seviyeleri hakkında eyleme geçirilebilir içgörüler sağlar. Bu araştırma, dikkat dalgalanmalarını tespit edebilen ve eğitim içeriğini bireysel ihtiyaçlara göre uyarlayabilen uyarlanabilir öğrenme sistemlerinin geliştirilmesine katkıda bulunur ve sonuçta genel öğrenme deneyimini iyileştirir.

Anahtar kelimeler: Göz Takibi, Göz hareketleri, Etkili Dikkat, Öğrenci davranışı, Sakkad, Sabitleme.

1. Introduction

In recent years, e-learning has become a fundamental component of higher education, providing flexible learning opportunities. Although technology has enhanced content delivery and interaction, many online systems primarily depend on static student profiles, such as age and prior knowledge. To overcome this limitation and foster more dynamic learning experiences, researchers have focused on personalized adaptation, investigating cognitive factors like learning styles and strategies [1].

Tracking learners' eye movements and analyzing their behavior provides an effective means of assessing individual differences. Examining eye movement patterns offers valuable insights into their comprehension and knowledge assimilation, as it uncovers key cognitive processes that influence their learning actions.

The purchase of eye-tracking companies such as OculusVR, EyeFluence, GazeHawk, and WebGazer, as well as the partnership between Tobii and Microsoft to introduce eye-tracking support, signifies the emergence of a new human-computer interaction era [2]. In the

education field, these methods can improve the learning process and recommend the best content to suit a specific learner.

Papoutsaki et al. [3] developed an open-source JavaScript library named WebGazer.js. It consists of two main components: a pupil detector that looks for the pupils' position in the webcam stream and a gaze estimator. They used common webcams, already present in desktops and laptops, and combined them with user interactions to incorporate them into any web page. This component can help the instructor detect difficulties in a learner's comprehension and observe signs of a loss of concentration.

For this purpose, we have integrated WebGazer.js into our e-learning system. This powerful JavaScript library allows us to capture learners' eye movements, providing a valuable indicator of their attention during online courses. By analyzing the obtained data, such as fixation and saccade counts, we can gain insights into how learners process information and interact with learning materials' content.

Several research questions can therefore be asked:

- How does the integration of WebGazer Eye tracking enhance learner interaction within e-learning platforms?
- What specific eye-tracking metrics obtained from WebGazer are most indicative of effective attention during e-learning activities?

This research is part of the PRFU project "Tracking and analyzing learners' behavior in a digital learning environment using artificial intelligence techniques and learning analytics".

In this research paper, we have two main contributions:

1. The proposition of a new structure of online content to increase learner attention and knowledge retention;
2. The modeling of the learners' effective attention from his eyes.

The remaining structure of this paper is as follows: Section 2 discusses a review of literature related to our study. Section 3 describes the proposed approach and explains the metrics used to evaluate its effectiveness. Section 4 includes the detailed working of the implementation. Section 5 concludes the paper and highlights the prospects for future work.

2. Literature Review

Diagnostic eye-tracking applications have vast potential for designing adaptive e-learning environments. This involves examining how learners interact with the graphical interface of e-learning platforms and their educational components [2].

Eye tracking can infer various information, such as user attention levels, stress, relaxation, problem-solving, learning outcomes, and concentration. This information is based on indirect

measures such as fixation numbers and duration, gaze position, and blink rate [4].

These metrics can be used to adapt the content according to the learner's performance in problem-solving. For instance, if an eye-tracking system detects high fixation duration for a learner, researchers may infer that the learner is encountering challenges in information extraction [5].

Nugrahaningsih et al. [6] tried to recognize learning styles by observing how students look at the materials. Three gaze metrics were extracted: percentage of fixation duration, percentage of fixations, and average fixation duration.

Charoenpit and Ohkura [7] addressed students' problems in online systems. They found that e-learning needs interactive content to track learners and increase motivation. They used three different models to extract eye features, such as Russell's circumplex [8], Shen [9], and Kort's learning spiral [10].

Molina et al. [11] explore using eye tracking to assess usability and accessibility in Human-Computer Interaction and Educational Computing, considering human factors and individual differences. It proposes guidelines and measures for eye-tracking assessments, leveraging insights into users' visual behavior to infer psychological processes.

These studies show that eye tracking can be applied in any area; it differs according to the objective and the data available [12]. Until now, very few datasets are available online that integrate eye tracking in e-learning. For this purpose, we have proposed using this technology to analyze eye movement data.

3. Description Of The Structure Of The E-Track Learning System

The E-Track learning system uses monitoring and tracking the progress and the performance of learners. This system has the same structure as the previous online system developed by Bendjebar and her colleagues [13].

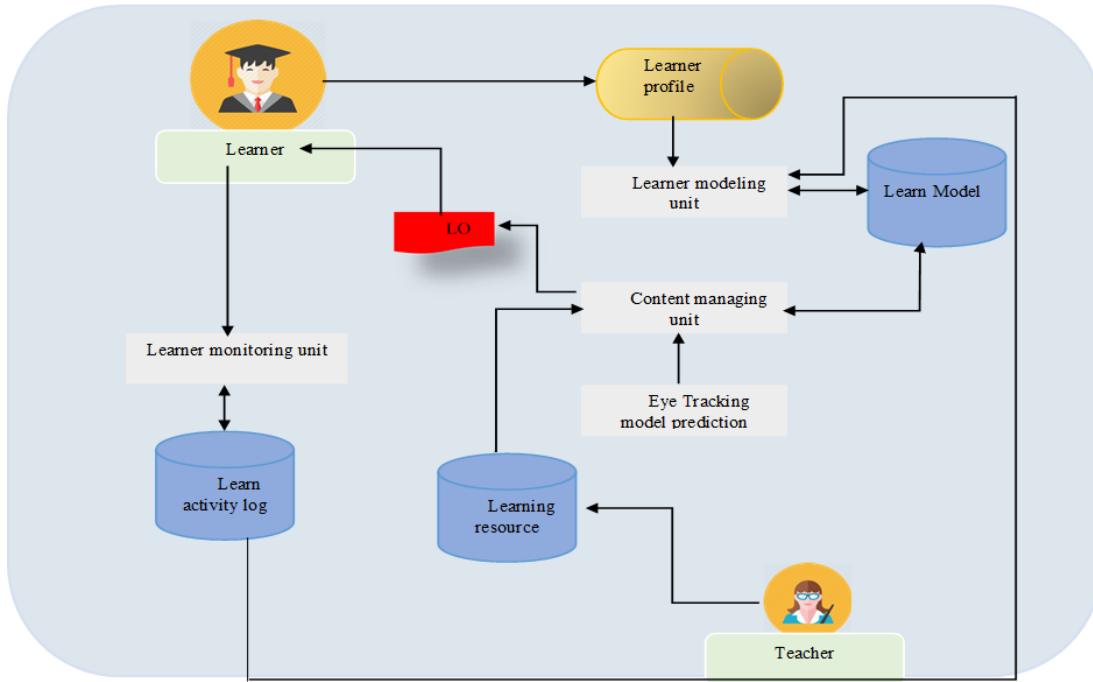


Figure 1: An Eye-Tracking Integrated Learning Platform

The proposed system is composed of four main modules:

1. Learners modeling unit: It is responsible for managing the learner's profile, which contains dynamic and static data about all the learner's actions.
2. Learner monitoring unit: it refers to a component designed to track and observe learners' behaviors, and interactions within an educational context. This unit was defined in our previous work [13].
3. Eye Tracking model prediction: The WebGazer system offers a solution by utilizing eye tracking technology to predict student attention based on their eye movements. This model leverages data captured from students' interactions with online content, providing insights into their levels of attention.
4. Content managing unit: To provide a solid foundation for understanding the main principle, we'll first explore the content structure in the following section.

3.1. The content structure

A learning session S refers to a structured period in which learners interact with a series of learning objects C , designed to facilitate knowledge acquisition and skill development.

$$S_L = \bigcup_{i=1}^N C_i$$

3.2. The learner's attention

The fundamental principle of our content efficiency approach is to optimize learner attention, which is grounded in a well-established psychological model [14]. WebGazer.js offers a solution by providing a way to track eye movements, allowing for a more nuanced understanding of learner attention. It operates in real-time, making it suitable for applications in e-learning where immediate feedback is valuable. By analyzing where learners are looking on the screen, educators can gather data on which parts of the content attract attention and which do not.

Once the data is collected, it can be analyzed to identify patterns in learner attention. Key metrics to consider include:

Fixation count: The number of times a person looks at specific areas of the screen.

Saccade count: a saccade is defined as the number of rapid eye movements between different parts of the page

3.3. Metrics interpretation

3.3.1. Key Insights from Saccade Count Analysis

- Higher Saccade Count: Indicates frequent shifts in gaze, suggesting exploration, scanning, or difficulty in processing visual information. Often observed in tasks requiring complex visual searches or high cognitive demand.
- Lower Saccade Count: Suggests sustained attention and focus on specific areas of interest. Typically found in well-structured reading tasks or when viewing familiar content.
- 3.3.2. Key Insights from Fixation Count Analysis
- Higher Fixation Count: Suggests increased cognitive processing, indicating that the content requires more effort to understand. Often observed in complex problem-solving tasks, detailed visual analysis, or unfamiliar information.
- Lower Fixation Count: Indicates quick information processing or familiarity with the content. It can be linked to skimming behavior or efficient visual search strategies.

4. Implementation of E-Track Learning system

To validate the proposed approach, we implemented three distinct spaces: a learner space, a teacher space, and an administrator space. These spaces cater to the specific needs of each user group. Figure 2 showcases an interface from the E-Track Learning system within the learner space, specifically demonstrating how to integrate the eye-tracking technique in our online learning system.

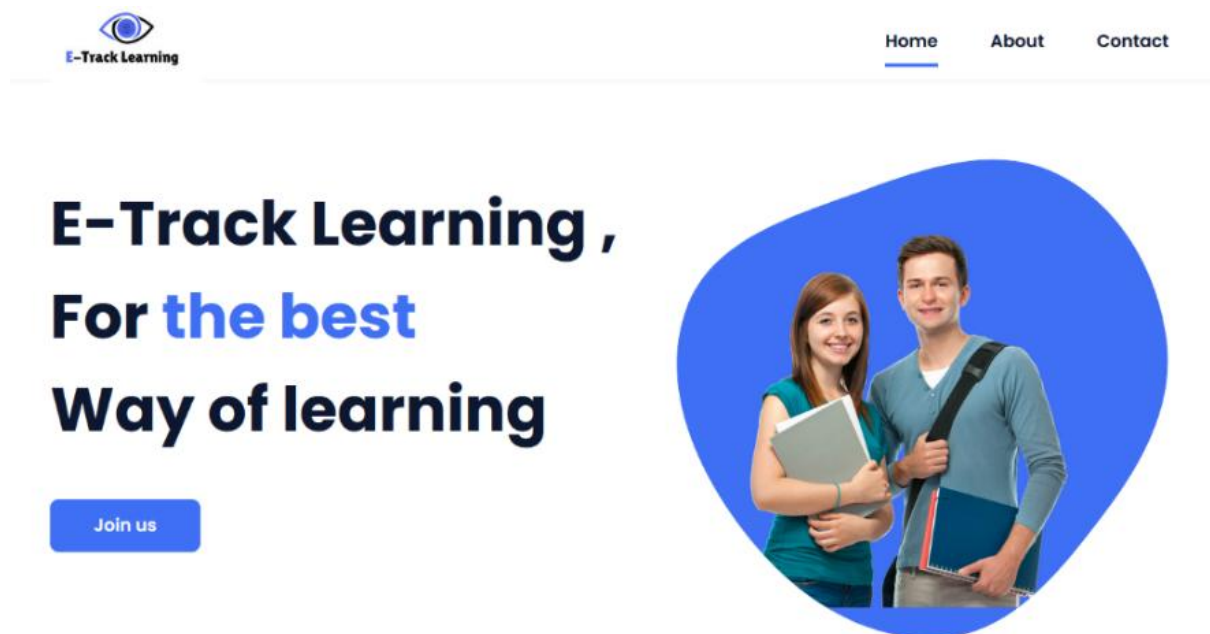


Figure 2: The interface of the E-Track Learning system

The next figure illustrates the learner space as it appears when a learner accesses the course and online test.

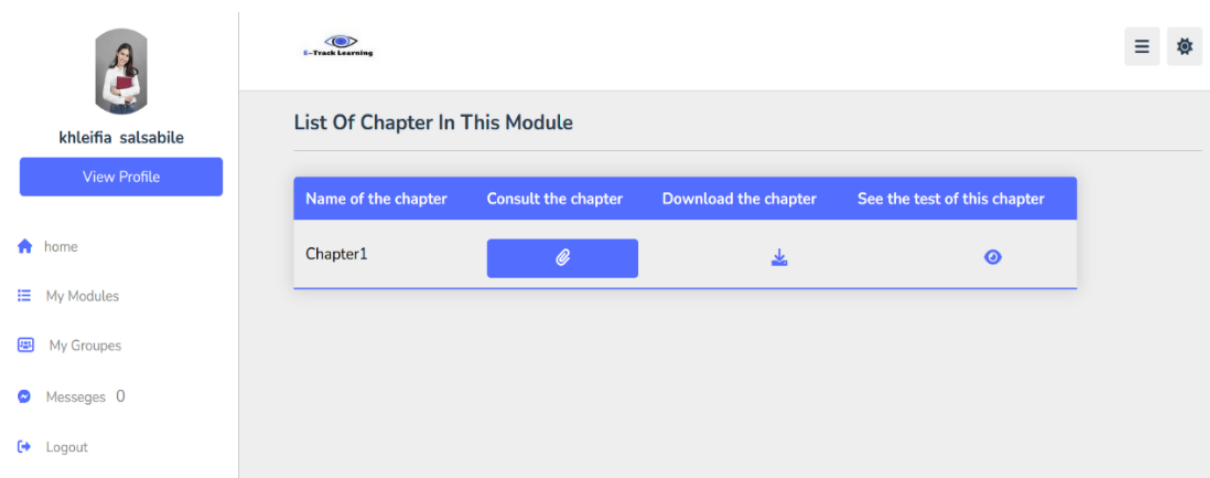


Figure 3: The access in the online course from learner space

Figure 4 displays the interface from the learner space. It shows how we can capture effective attention features such as the speed of eye movement, the number of fixations, and saccades when the learner engages with the course content (text, video or audio). The red point represents the predicted position of the learners' eye gaze.

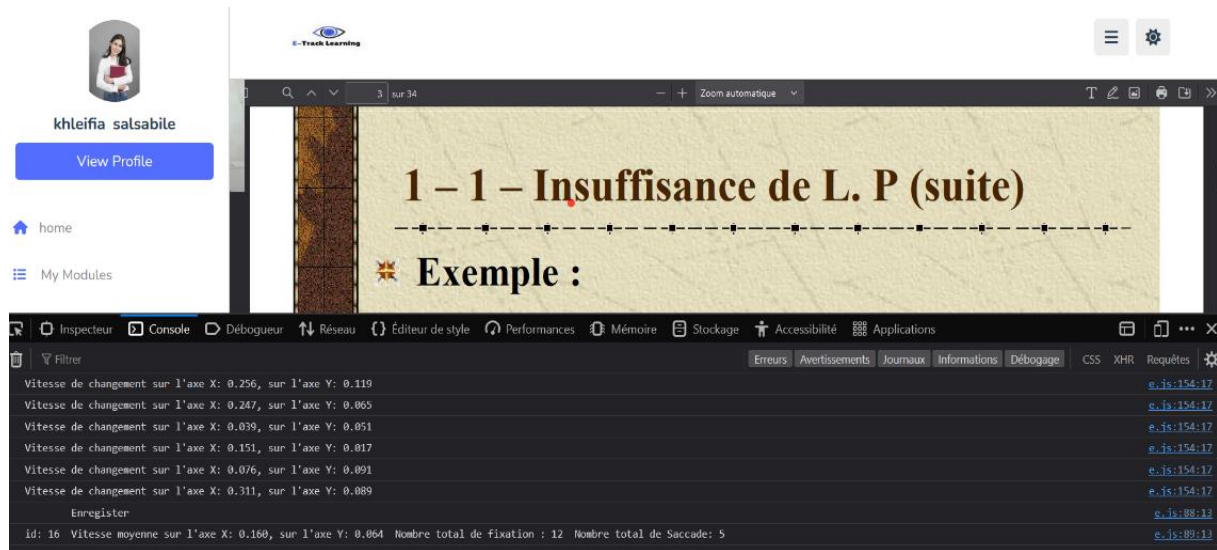


Figure 4: Measuring the effective attention in learner space.

5. Experiment

After the implementation of the system, we tested its reliability and satisfaction of the learners about the use of the various functionalities offered by E-Track Learning. 26 students from the Department of Mathematics at Guelma University (Algeria) were selected randomly for the experiment. The platform offers all the necessary resources and communication tools to detect the attention of each learner.

5.1. Methodology

In the first step, the learners are enrolled in the system and they are validated by the teacher. During the experimental period, we selected the structure machine unit to detect the learner attention at the platform. A set of pedagogic resources were selected.

After the utilization of the system, a questionnaire is submitted to the students. It was created to see the effect and usefulness of the online system and extract the main challenges that have been faced by the students during the experimental period.

5.2. Results and discussion

The following figures illustrate some examples of students' responses to some questions in the questionnaire.

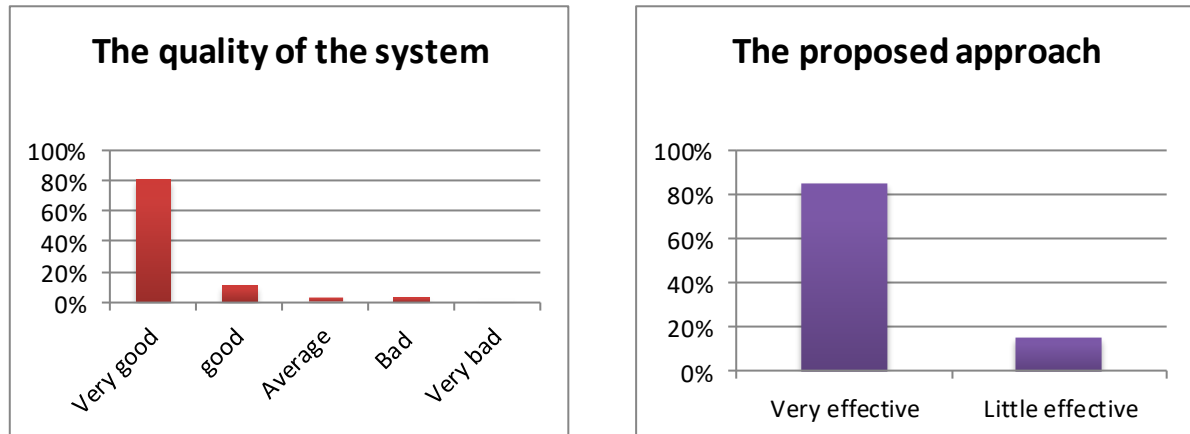


Figure 5. Usability testing

After using the system, we collected and analyzed the students' answers on the questionnaires submitted to them (figure 5). About the quality of the system, the results show that the majority of students (more than 80% of them) indicated that they enjoyed using the online system. Whereas, less than 3% of students reported that this system is bad.

In the term of the effectiveness of the proposed approach, the results are positive where 22 students found that using this type of system is very effective, while 4 students found that this approach is little effective.

6. Conclusion and future work

In this work, we have integrated an eye-tracking component to understand learner attention, enabling us to adapt teaching methods and educational content to maximize individual learner effectiveness and success. Understanding how learners learn is a key principle in education, allowing educators to create more effective learning environments and experiences. This, in turn, can lead to improved student engagement, motivation, and achievement. To achieve our objectives and answer the research questions posed in the introduction, we first proposed a new content structure designed to enhance the interactivity and adaptability of the learning experience based on eye-tracking data.

Our study showed that these models can be used to identify learners who are engaged and not engaged with the online system. In future work, we propose to detect the engagement of each student in this system. It will allow us to create a rich dataset suitable for use as input for a machine learning algorithm.

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The Importance of Digital Marketing After The Pandemic

Mohammad Nizar Khair Eddin THAHER

İstanbul Arel Üniversitesi
moh.aldhaher@gmail.com

Doç. Dr., Aylin ERDOĞDU

İstanbul Arel Üniversitesi
aylinerdogdu@arel.edu.tr

Abstract

This research paper presents a set of precise opinions that in turn analyzes current and future trends in the field of digital marketing, which has become one of the topics of most interest to organizations. Therefore, this research paper aims to identify the challenges facing digital marketing during the Corona pandemic and to identify the most prominent digital marketing strategies used during and after the pandemic period, in addition to identifying the role of digital marketing strategies during the pandemic. This paper is based on a review of the literature found on approved and documented websites in various scientific fields, such as research, dissertations, and scientific articles. The results of this paper indicate that the Corona pandemic has shed light on the importance of digital marketing, which has greatly contributed to improving trade and enhancing the development movement in the business environment and organizations during and after the pandemic period. The paper showed that the world faced many challenges during the Corona pandemic related to the promotion of traditional marketing activities, which was a catalyst for both institutions as well as for the public, which has become linked to digital media in this period more than ever before through social media platforms, digital media platforms, and others. The results of this paper also indicate that digital marketing faced many challenges due to it being a new and unfamiliar method of marketing, in addition to the public's preoccupation with learning about developments in the pandemic. Digital marketing also faces a number of other challenges, most notably the lack of awareness of marketing and e-commerce among merchants and customers, in addition to the spread of electronic crimes such as account piracy and others that reduce the public's enthusiasm for electronic marketing. The results of the paper also indicate that digital marketing plays a prominent role in communicating with customers and attracting them, which in turn works to invest in digital changes and transformations and technological development and employ them optimally in these difficult circumstances.

Keywords: Digital Marketing, Challenges, Strategies, Pandemic, Social Media And Business Environment.

1. Introduction

The rapid advancement of technology has transformed marketing practices, and this transformation accelerated further in the wake of the COVID-19 pandemic. Digital marketing, already a growing trend, became an essential survival tool for businesses, including restaurants, during and after the pandemic. With social distancing measures and lockdowns reshaping consumer behavior, restaurants had to rely heavily on online strategies such as social media marketing, search engine optimization (SEO), email marketing, and online

advertising to maintain connections with their customers. These strategies enabled restaurants not only to enhance their brand visibility but also to facilitate online ordering, deliveries, and other digital interactions that became crucial during this period (Albarq, 2022). In the Kingdom of Saudi Arabia, where the restaurant sector has experienced substantial growth due to changing consumer preferences and increased disposable incomes, the effective implementation of digital marketing after the pandemic became even more critical. As more consumers turned to digital platforms for dining information, ordering, and reviews, restaurants that adopted robust digital marketing strategies were able to better navigate the challenges brought on by the pandemic and drive financial recovery and growth. However, there remains a critical gap in empirical research regarding the specific impact of these digital marketing strategies on the financial performance of restaurants in the post-pandemic context (Albarq, 2022)

Despite the evident importance of digital marketing, empirical research examining its direct impact on financial performance, especially within the restaurant industry, remains limited. Existing studies often highlight the benefits of digital marketing but do not fully explore how these strategies translate into measurable financial results. Understanding this relationship is vital for restaurant operators who aim to optimize their marketing investments and improve their financial health.

2. Review Of Literature

The COVID-19 pandemic significantly reshaped how businesses, particularly restaurants, engage with consumers, forcing an accelerated shift toward digital platforms. In the post-pandemic landscape, digital marketing has become more essential than ever for restaurant survival and growth. With lockdowns, social distancing measures, and changing consumer behaviors, restaurants have had to rely heavily on digital strategies such as social media marketing, search engine optimization (SEO), email marketing, and online advertising to connect with customers, maintain brand visibility, and drive sales.

One of the most impactful strategies after the pandemic is social media marketing, which allows restaurants to engage with their audience in real-time. During the pandemic, platforms like Instagram and Facebook became crucial for restaurants to share updates, promotions, and safety measures, helping to retain customer loyalty. Research indicates that engaging content shared on social media can significantly enhance brand visibility and customer retention (Liu et al., 2020). Search engine optimization (SEO) also gained prominence as consumers increasingly turned to online searches for takeout, delivery, and restaurant reviews. Restaurants that employed effective SEO practices saw higher website traffic, translating into more customer inquiries and online orders (Smith & Smith, 2021). The importance of SEO only grew during the pandemic as digital space became more competitive, making it essential for restaurants to optimize their online presence.

Email marketing emerged as another key strategy, enabling restaurants to maintain ongoing communication with their customers during periods of uncertainty. Personalized email campaigns, offering updates on operational changes, safety protocols, or exclusive offers, proved instrumental in keeping customers engaged.

Research suggests that restaurants using targeted email marketing after the pandemic experienced improved customer retention and repeat visits (Johnson, 2022). Content marketing also played a vital role in strengthening customer relationships post-pandemic. By

sharing valuable content such as recipes, cooking tips, and restaurant news, restaurants were able to create a sense of community and foster loyalty among customers who could no longer dine in as frequently (Doe, 2021). Finally, online advertising, including pay-per-click (PPC) campaigns and social media ads, became even more essential after the pandemic, as restaurants sought to reach specific audiences and boost online orders. Targeted online ads provided a significant return on investment, particularly when customized to local consumer preferences (Brown et al., 2022).

The impact of digital marketing on financial performance has become even more pronounced in the wake of the pandemic. Financial metrics such as sales growth, profitability, customer retention, and business sustainability have been closely tied to effective digital marketing strategies. For instance, Patel (2021) found that restaurants leveraging social media marketing during and after the pandemic saw a 25% increase in monthly sales compared to those with minimal digital presence.

Digital marketing has also helped improve profitability by reducing the need for costly traditional advertising. Restaurants that adapted to more efficient digital strategies, such as social media and SEO, saw higher profit margins during the pandemic recovery phase (Williams & Green, 2023). Additionally, customer retention became a critical focus, with email marketing and personalized content driving improved retention rates by up to 30% (Turner, 2020).

While the benefits of digital marketing after the pandemic are clear, challenges persist. Many restaurants, especially small and medium-sized enterprises (SMEs), face resource constraints, lacking the budget or expertise to execute effective digital marketing campaigns (Khan et al., 2022). Technological challenges, such as adapting to new digital tools and platforms, also remain a hurdle for restaurant owners.

Moreover, the restaurant industry has become increasingly competitive as more businesses shift online. Standing out through unique digital marketing strategies is essential but difficult, as many restaurants compete for the same audience (Harrison, 2023).

However, the pandemic has also presented opportunities for innovation. The rise of online ordering and delivery services has opened up new revenue streams for restaurants that adapt their digital strategies (Lee, 2022). Additionally, the growing use of data analytics allows restaurants to better understand customer behavior, enabling more personalized marketing efforts and stronger customer engagement (Nguyen & Jones, 2021).

Despite the growing importance of digital marketing, gaps in research remain, particularly regarding its fiscal impact on restaurants in the post-pandemic era. While existing studies emphasize the effectiveness of digital marketing, there is limited empirical evidence linking these strategies to financial metrics, especially in regions like Saudi Arabia. This presents an opportunity for future research to explore how market differences influence the effectiveness of digital marketing strategies in the post-pandemic landscape.

Furthermore, many studies have focused on larger restaurant chains, often overlooking the unique challenges faced by independent restaurants and SMEs. Future research should address these disparities to provide a more comprehensive view of digital marketing's impact across diverse types of restaurants. By filling these gaps, the academic community can contribute to a deeper understanding of how digital marketing drives financial success in the post-pandemic restaurant industry.

In summary, the pandemic has highlighted the critical importance of digital marketing

strategies for restaurant survival and growth. As businesses navigate the new normal, investing in and optimizing digital marketing efforts is essential for driving financial performance, improving customer engagement, and ensuring long-term success.

3. Rationae For The Study

The rationale for this study stems from the transformative impact of the COVID-19 pandemic on the restaurant industry, particularly in Saudi Arabia, where digital marketing has become crucial for business survival and growth. As the pandemic reshaped consumer behavior, more individuals shifted to online platforms for food orders, restaurant information, and reviews. This shift has made it essential for restaurant owners to understand how digital marketing strategies affect financial performance in a post-pandemic world. Despite the widespread adoption of digital tools, there remains a gap in empirical research specifically examining the effects of these tools on the financial outcomes of restaurants in Saudi Arabia. This study aims to fill that gap by providing a detailed analysis of the relationship between post-pandemic digital marketing efforts and key financial metrics such as sales, profitability, and customer retention.

Given the significant growth of the restaurant industry in Saudi Arabia and the increasing reliance on digital marketing strategies after the pandemic, this research seeks to offer insights into the most effective digital marketing practices. By investigating the current state of digital marketing strategies utilized by restaurants in the Kingdom, the study will identify best practices tailored to the unique cultural and economic context of Saudi Arabia. This analysis will provide valuable guidance to restaurant operators who must navigate a highly competitive and increasingly digital marketplace (Davenport et al., 2020).

Additionally, the challenges faced by restaurant owners in implementing digital marketing strategies have been amplified by the pandemic. Identifying these obstacles—whether they arise from resource constraints, technological limitations, or intensified market competition—will be key to developing targeted solutions. Understanding these barriers will help stakeholders enhance the overall effectiveness of their marketing efforts and adapt to the post-pandemic reality where digital engagement is critical.

The significance of this study extends beyond academic research to practical applications for restaurant operators, marketers, and financial managers. The findings will offer actionable insights into how digital marketing can be leveraged to improve financial performance, helping restaurants recover and thrive after the pandemic. As the industry continues to evolve, the ability to effectively implement and optimize digital marketing strategies will be essential for sustaining growth and meeting the changing needs of consumers. Ultimately, this research will contribute to a broader understanding of digital marketing's role in enhancing financial performance within the restaurant sector, providing valuable guidance for practitioners seeking to navigate the post-pandemic digital landscape (De Haes et al., 2020).

Ekonomik koşulların ağırlaşması, rekabetin artması, işletmeleri daha başarılı, verimli, donanımlı, farkındalık yaratmaya zorlamıştır. Bir işletmedeki finansal yapıyı, üretim, pazarlama, sorunsuz yönetim gibi faaliyetleri bağımsız bir şekilde değerlendirme işlevi olan iç denetim işletmelere yarar sağlamakta destek olmaktadır.

İç denetim; geçmişe değil geleceğe odaklıdır. Geleneksel yöntemler yerine modern teknik araçlarla çalışır. Risk esaslı olarak planlanır ve yürütülür. İç denetim; denetimin tüm çeşitlerini kapsar.

Sonuç olarak kurumsal yönetim ve iç denetim birbirinden ayrılamayacak kadar yakın ilişkide olan unsurlardır.

4. Problem Statement And Research Objectives

-Despite the rapid growth of the restaurant industry in Saudi Arabia, there is a notable lack of empirical research examining the impact of digital marketing on financial performance. As the industry expands, restaurant owners encounter numerous challenges, such as maintaining customer engagement and managing operational costs. The dynamic nature of this sector underscores the need to explore both the direct and indirect effects of digital marketing on critical financial metrics, including sales, profitability, and customer retention (De Pelsmacker et al., 2018). This research seeks to address the pressing need for a comprehensive understanding of how digital marketing influences the financial performance of restaurants in Saudi Arabia. To achieve this aim, the research will focus on several key questions:

- First, it will investigate the current state of digital marketing strategies and techniques utilized by restaurants in the Kingdom.
- Second, it will identify the challenges that these establishments face when implementing digital marketing and assess how these challenges impact their financial performance.
- Finally, the study will evaluate the relationship between digital marketing strategies and the financial outcomes of restaurants in Saudi Arabia.

5. Methodology

In conducting this literature review, a systematic approach was adopted to ensure a comprehensive and relevant selection of sources that reflect the post-pandemic transformation of digital marketing. The focus was on peer-reviewed journal articles, conference papers, and reputable industry reports published in the last ten years, with a particular emphasis on studies from the period following the COVID-19 pandemic. This time was selected to capture the most current trends and findings in the field of digital marketing and its impact on financial performance, specifically within the restaurant industry, which was significantly affected by the pandemic.

Key keywords used in the search included "digital marketing," "financial performance," "restaurants," "Saudi Arabia," "post-pandemic," "social media marketing," "SEO," "email marketing," and "customer engagement." to refine search results and enhance the relevance of the literature reviewed. This targeted approach allowed for a more focused examination of studies that directly address the interplay between digital marketing strategies and financial outcomes in a post-pandemic context.

The databases utilized for the literature search included Google Scholar, JSTOR, Scopus, and Web of Science. These databases were chosen for their extensive collections of academic publications, their ability to provide access to high-quality, peer-reviewed literature, and their relevance to business and digital marketing studies. By leveraging these resources, the review ensured that the included studies were credible, current, and relevant to the specific research questions regarding the post-pandemic restaurant industry.

Inclusion criteria for the selected studies involved relevance to digital marketing strategies in the restaurant industry, empirical research focusing on financial performance metrics, publications in English, and studies conducted in Saudi Arabia or similar markets that

experienced significant digital shifts during the pandemic. These criteria ensured that the literature reviewed not only covered pertinent topics but was also applicable to the unique challenges and opportunities facing restaurants in Saudi Arabia after the pandemic.

Conversely, exclusion criteria included articles not related to digital marketing or financial performance, studies focusing solely on industries outside of the restaurant sector, and publications lacking empirical data or analysis. Studies published before the pandemic without consideration of post-pandemic shifts in consumer behavior and digital marketing trends were also excluded to maintain relevance to the current landscape. This filtering process narrowed the literature to the most relevant and informative studies.

The scope of this review centers on examining the interplay between digital marketing strategies and the financial performance of restaurants in Saudi Arabia in the aftermath of the pandemic. Specifically, the review will cover several key aspects: First, it will explore various digital marketing strategies employed by restaurants during and after the pandemic, including social media marketing, SEO, email marketing, content marketing, and online advertising. Each strategy's effectiveness and application within the restaurant industry will be analyzed in the context of the post-pandemic shift toward digital engagement.

Second, the review will focus on how digital marketing influences key financial metrics, such as sales growth, profitability, customer retention, and overall business sustainability, in a market recovering from the pandemic's effects. Empirical studies highlighting the correlation between these digital marketing strategies and financial outcomes will be assessed to provide a clearer understanding of their impact in a post-pandemic environment.

Finally, the review will investigate the familiar challenges faced by restaurant owners in implementing digital marketing strategies post-pandemic, such as resource limitations, technological barriers, and increased competition in digital spaces. Additionally, the review will explore opportunities for leveraging digital marketing strategies to enhance financial performance and adapt to the evolving demands of consumers. By outlining the selection criteria and scope of the review, this methodology ensures a thorough examination of the existing literature, paving the way for a deeper understanding of how digital marketing drives financial success in the restaurant industry after the pandemic.

6. ANALYSIS AND DISCUSSION OF STUDY

Digital marketing encompasses a range of strategies and tools designed to promote products and services through electronic devices. Each element plays a vital role in engaging consumers and driving business results. Here, we delve into some of the most important components of digital marketing, as outlined by Piccinini et al. (2015).

6.1. Online Advertising

Online advertising is a fundamental aspect of digital marketing, allowing businesses to communicate their products and services directly to consumers through various digital channels. This form of advertising leverages the internet to deliver relevant ads based on customer interests, ensuring that the messages resonate with target audiences. Publishers use their websites to highlight advertisements, offering users valuable information while promoting products. One of the significant advantages of online advertising is the level of control it provides to advertisers regarding budget allocation and scheduling (Fenech et al., 2019). By creating targeted, effective advertisements, businesses can maximize their reach and impact.

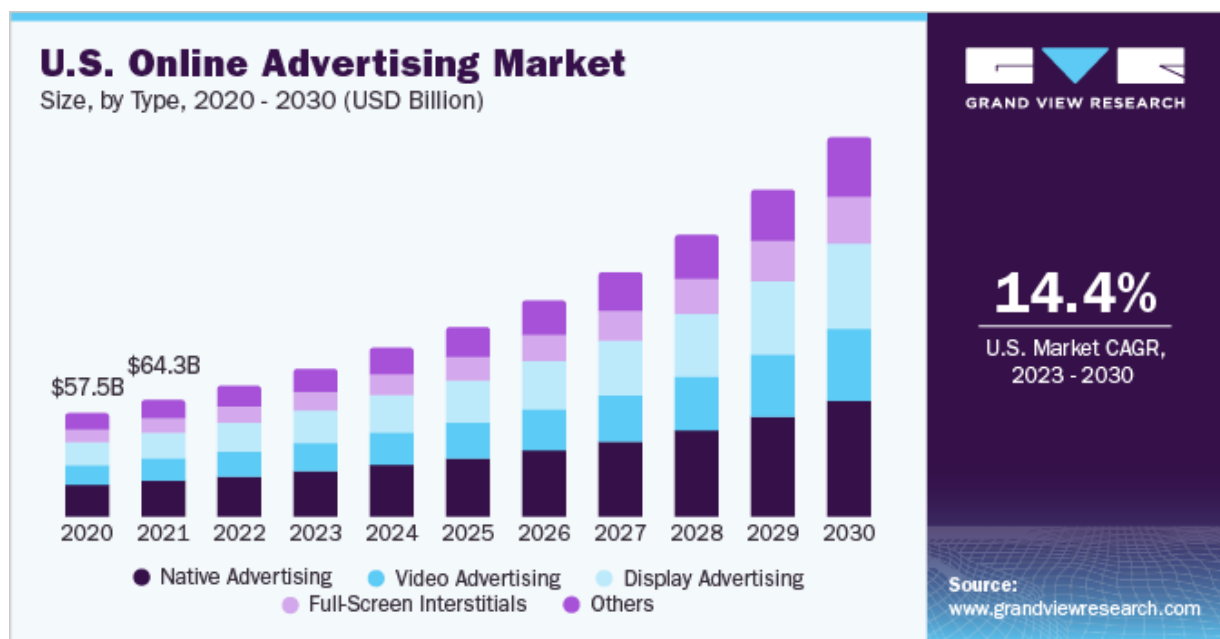


Figure 1 Online Advertising Market

(Source: <https://www.grandviewresearch.com/industry-analysis/online-advertising-market-report>)

6.1 Email Marketing

Email marketing is another powerful tool that involves sending promotional messages directly to current or potential customers. This direct digital marketing strategy fosters brand loyalty and trust by maintaining consistent communication with consumers. Email marketing is cost-effective compared to traditional advertising methods, making it an attractive option for businesses. By combining engaging visuals, compelling text, and direct links to products or services, companies can effectively capture the attention of their audience (Albukhitan, 2020). This personalized approach not only promotes products but also strengthens customer relationships, driving repeat business.

6.2 Social Media Marketing

In today's digital landscape, social media marketing is one of the most significant channels for reaching consumers. Platforms such as Facebook, Twitter, LinkedIn, and Instagram allow businesses to create and share content that promotes their products and services. According to Nielsen, users spend more time on social media than on any other online activity, highlighting its importance as a marketing medium. For instance, businesses can use Facebook to host events, run promotions, and engage with customers, while Twitter can be leveraged to boost brand visibility and recognition. LinkedIn serves as a professional networking site where companies can display their expertise and connect with industry professionals. Google+, while less prominent, provides a platform for integrating web content with its creators, enhancing visibility (Nicolás-Agustín et al., 2022; Kane, 2019).

6.3 Text Messaging

Text messaging, or SMS marketing, involves sending promotional messages directly to consumers' mobile devices. This method allows companies to convey information through text, images, videos, or voice messages. SMS gained traction in Europe and certain Asian markets in the early 2000s, providing a quick and effective way to communicate with customers. Businesses can use text messaging for various purposes, including order confirmations, shipment alerts, and real-time marketing communications. The immediacy of SMS campaigns leads to quicker responses and more meaningful engagement with customers, making it a valuable tool for gathering feedback and enhancing future offerings (Danneels & Viaene, 2022).

6.4 Affiliate Marketing

Affiliate marketing is a performance-based strategy in which businesses compensate affiliates for driving traffic or sales to their websites. This model includes four key players: the merchant (or brand), the network, the publisher (affiliate), and the customer. Affiliate marketing can be structured in two ways: a company can establish an affiliate program for others to join, or it can participate as an affiliate for another brand. The goal is to recruit affiliates who can tap into new markets, expanding the reach of the business. For example, a company that publishes an e-zine may find value in promoting its offerings through trusted affiliates, thereby reaching potential customers who may not have been aware of the brand (Bilyalova et al., 2020).

6.5 Search Engine Optimization (SEO)

Search engine optimization (SEO) involves enhancing a website's visibility in search engine results pages through unpaid or "organic" methods. The primary objective of SEO is to increase a website's ranking so that it appears higher on search results, ultimately driving more traffic. Effective SEO strategies can target various search types, including image searches, local searches, video searches, and industry-specific queries. By optimizing their online presence, businesses can ensure that they attract relevant visitors who are more likely to convert into customers (Morze & Strutynska, 2021).

Each element of digital marketing plays a crucial role in shaping how businesses connect with their audiences. From the targeted reach of online advertising and the direct engagement of email marketing to the vast networks of social media and the immediate impact of text messaging, these strategies collectively enhance brand visibility and drive

financial performance. Understanding and effectively implementing these digital marketing elements can provide businesses with a competitive edge in today's digital marketplace.

6.6 Advantages Digital Marketing Brings to Customers

With rapid advancements in technology, digital marketing has significantly transformed consumer purchasing behavior, offering numerous benefits to customers.

6.7 Marketing Capabilities

Marketing capabilities refer to the skills and competencies that individuals and organizations develop to combine and transform resources effectively in alignment with business objectives. These capabilities are cultivated through interactions among individuals, groups, and organizational systems, evolving into routines that drive marketing success over time (Wang et al., 2017).

Marketing capabilities exist at multiple organizational levels, from individuals to the corporate level. Individual marketing experts apply their specific knowledge to address marketing challenges, while their expertise can be integrated with that of other professionals within various functional teams. This integration process creates a hierarchy of competencies, leading to a comprehensive understanding of marketing dynamics within the organization (Rezaei, 2015).

Literature identifies four primary forms of knowledge-based processes at the business unit and corporate levels: specialized, architectural, cross-functional, and dynamic capabilities. These categories describe how marketing resources are acquired, merged, and transformed into value propositions tailored to target markets (Leisman et al., 2020).

6.7.1. Stay Updated with Products or Services

Digital marketing technologies allow consumers to stay informed about company offerings in real time. Nowadays, individuals can access the internet from virtually anywhere at any time, enabling them to receive continuous updates regarding products or services. Companies leverage this capability to share the latest information, promotions, and changes with their audience, ensuring that consumers are well-informed and can make timely purchasing decisions (Brosnan et al., 2023).

6.7.2. Greater Engagement

Digital marketing fosters increased consumer engagement by allowing customers to participate actively in a company's operations. Through interactive websites, customers can explore product information, make purchases online, and provide feedback or comments on their experiences. This level of engagement not only enhances customer satisfaction but also strengthens the relationship between the consumer and the brand, fostering loyalty and repeat business.

6.7.3. Clear Information About Products or Services

One of the primary advantages of digital marketing is the clarity it provides regarding

products and services. Unlike traditional retail settings, where information can sometimes be miscommunicated by sales personnel, the internet offers comprehensive and detailed descriptions that consumers can rely on when making purchasing decisions. This transparency reduces the likelihood of misunderstandings and empowers customers to make informed choices based on reliable information (Tekic & Koroteev, 2019).

6.7.4. Easy Comparison with Others

Digital marketing enables consumers to easily compare products and services across various providers. With multiple businesses selling similar offerings online, customers can assess prices, features, and reviews from the comfort of their homes. This capability significantly reduces the time and effort required to gather information, as consumers no longer need to visit multiple retail locations to evaluate options. Instead, they can efficiently conduct comparisons online, ensuring they get the best value for their purchases (Yasmin et al., 2015).

6.8 The Impact of Digital Marketing on Financial Performance

Digital marketing has become a cornerstone of business strategy across various industries, including the restaurant sector, where it plays a crucial role in enhancing financial performance. The impact of digital marketing on financial performance can be analyzed through several key dimensions, including increased sales, improved customer retention, cost-effectiveness, and enhanced brand visibility (Harrison, 2023; Johnson, 2022).

6.8.1. Specialized Marketing Capabilities

Specialized marketing capabilities refer to functionally focused methods employed within a company to combine and transform resources effectively. While these capabilities require coordination with other activities, the marketing function remains central. Specialized marketing skills are typically defined by tactical procedures related to the marketing mix, which includes product, price, communication, and distribution strategies.

6.8.2. Product Management

Product management encompasses the processes involved in modifying, maintaining, and delivering product and service offerings that meet consumer expectations. Effective product management relies on well-developed organizational routines to assess product performance and adjust offerings based on evolving customer needs and competitive dynamics (Darmawan & Grenier, 2021). This capability is crucial for ensuring that products resonate with consumers and align with market demands.

6.8.3. Pricing Management

Pricing is a critical element of the customer value equation, influencing both perceived quality and overall costs. Organizations with strong pricing management skills understand the impact of pricing on consumer perceptions of value, as well as the pricing strategies of competitors. Such businesses utilize this knowledge to develop effective pricing strategies and swiftly implement necessary adjustments, ensuring they remain competitive and relevant in the marketplace (Lahtinen et al., 2020).

6.9 Cost Efficiency of Digital Marketing Compared to Traditional Methods

Digital marketing has emerged as a more cost-efficient alternative to traditional marketing methods, revolutionizing how businesses allocate their marketing budgets. Traditional marketing approaches, such as print advertising, television commercials, and billboards, often involve significant upfront costs and require a considerable investment in creative production and placement. For example, producing a TV ad not only entails high production costs but also substantial fees for airtime, which can limit accessibility for small and medium-sized enterprises (SMEs) (Darmawan & Grenier, 2021). In contrast, digital marketing offers a variety of channels such as social media, email, and search engine advertising—that can be tailored to fit virtually any budget, allowing businesses to implement effective campaigns without incurring prohibitive costs.

One of the most significant advantages of digital marketing is its ability to provide measurable results. Unlike traditional marketing, where it can be challenging to gauge the effectiveness of a campaign, digital platforms offer analytics tools that enable businesses to track key performance indicators (KPIs) in real time. For instance, pay-per-click (PPC) advertising allows companies to pay only when a user clicks on their ad, ensuring that their budget is spent directly on engaging potential customers. This level of accountability enables businesses to optimize their marketing strategies based on performance data, leading to more effective spending and improved returns on investment (ROI) (Lahtinen et al., 2020).

Moreover, digital marketing allows for precise targeting, meaning that businesses can reach specific audiences based on demographics, interests, and online behaviors. This targeted approach minimizes wasted spending on broad advertising efforts that may not resonate with the intended audience, a common pitfall of traditional marketing. For example, a restaurant can use social media advertising to target local consumers interested in dining out, thereby increasing the likelihood of conversion and maximizing the impact of their marketing budget (Tekic & Koroteev, 2019).

Finally, digital marketing enables businesses to adapt their strategies quickly and efficiently in response to market changes or consumer feedback. In traditional marketing, modifying a campaign often requires considerable time and resources. In contrast, digital campaigns can be adjusted on the fly whether it's tweaking ad copy, reallocating budget to better-performing channels, or refining targeting parameters. This agility further enhances the cost efficiency of digital marketing, allowing businesses to remain competitive in an ever-changing marketplace (Wang et al., 2017).

6.9.1. Increased Sales

One of the most direct impacts of digital marketing on financial performance is the increase in sales revenue. By utilizing strategies such as search engine optimization (SEO), social media marketing, and online advertising, businesses can effectively reach a broader audience and convert potential customers into actual buyers. Research shows that companies with a robust online presence often experience higher sales figures compared to those that rely solely on traditional marketing methods. For instance, restaurants that actively engage with customers on social media platforms and maintain an updated website can attract more patrons, leading to increased foot traffic and higher sales (Brown, Smith, & Patel, 2022; Liu, Chen, & Wong, 2020).

6.9.2. Improved Customer Retention

Digital marketing not only aids in acquiring new customers but also plays a vital role in retaining existing ones. Through personalized email marketing campaigns, loyalty programs, and targeted promotions, businesses can foster a sense of loyalty among their customers. Maintaining ongoing communication allows companies to keep their audience informed about new products, exclusive offers, and events, which encourages repeat visits. Studies indicate that businesses that invest in customer engagement through digital channels often see a significant boost in customer retention rates, which directly correlates to improved financial performance (Johnson, 2022; Turner, 2020).

6.9.3. Cost-Effectiveness

Compared to traditional marketing methods, digital marketing is often more cost-effective. Businesses can achieve significant reach and engagement without the prohibitive costs associated with print advertising, television commercials, or physical promotional materials. For example, pay-per-click (PPC) advertising allows companies to set specific budgets and only pay for actual clicks, providing a more controlled and measurable return on investment (ROI). This cost efficiency enables restaurants and other businesses to allocate resources more effectively, optimizing their marketing spend to enhance overall profitability (Lahtinen, Dietrich, & Rundle-Thiele, 2020; Williams & Green, 2023).

6.9.4. Enhanced Brand Visibility

Digital marketing significantly enhances brand visibility and recognition. A strong online presence, bolstered by effective SEO strategies and active social media engagement, ensures that businesses are easily discoverable by potential customers. Enhanced visibility can lead to increased brand awareness, as consumers are more likely to choose brands they recognize. This recognition can translate into higher sales and, ultimately, improved financial performance. Additionally, positive customer interactions on digital platforms can contribute to favorable word-of-mouth marketing, further amplifying brand visibility and attracting new customers (Doe, 2021; Smith & Smith, 2021).

6.9.5. Data-Driven Insights

Digital marketing also provides businesses with valuable data and insights that can inform decision-making and strategy development. Tools like Google Analytics allow companies to track user behavior, engagement rates, and conversion metrics. By analyzing this data, businesses can identify trends, optimize their marketing strategies, and make informed decisions about product offerings and customer engagement. This data-driven approach enhances the effectiveness of marketing efforts and can lead to improved financial outcomes by ensuring that resources are directed toward the most effective strategies (Nguyen & Jones, 2021; Patel, 2021).

In summary, the impact of digital marketing on financial performance is multifaceted and profound. By increasing sales, improving customer retention, providing cost-effective marketing solutions, enhancing brand visibility, and offering valuable data insights, digital marketing serves as a critical driver of financial success. For businesses, particularly in the competitive restaurant industry, harnessing the power of digital marketing is essential for

achieving sustainable growth and profitability in today's digital landscape. As technology continues to evolve, those who adapt their marketing strategies accordingly will be best positioned to thrive.

6.10 The Impact of Social Media Marketing on Financial Performance

Social media marketing has become a vital component of contemporary marketing strategies, significantly influencing financial performance across various industries. By leveraging platforms such as Facebook, Instagram, Twitter, and LinkedIn, businesses can engage directly with their audience, enhance brand visibility, and drive sales. The impact of social media marketing on financial performance can be analyzed through several key dimensions: increased brand awareness, improved customer engagement, targeted advertising, and enhanced customer insights.

6.11.1. Increased Brand Awareness

One of the most immediate benefits of social media marketing is its ability to increase brand awareness. With billions of users actively engaging on social media platforms, businesses can reach a vast audience without the prohibitive costs associated with traditional advertising. By consistently sharing valuable content, promotions, and updates, companies can establish their presence in the digital landscape and foster recognition among potential customers. Research shows that brands with a strong social media presence can achieve higher levels of visibility, which can lead to increased inquiries, foot traffic, and ultimately, sales (Liu, Chen, & Wong, 2020).

6.11.2. Improved Customer Engagement

Social media marketing facilitates direct interaction between businesses and their customers, enhancing engagement and fostering a sense of community. This two-way communication allows companies to receive immediate feedback, answer customer inquiries, and address concerns in real time. Engaged customers are more likely to develop brand loyalty, leading to repeat business and higher customer lifetime value. Studies indicate that businesses that actively engage with their audience on social media experience improved retention rates, translating to positive financial outcomes (Johnson, 2022; Harrison, 2023).

6.11.3. Targeted Advertising

Another significant advantage of social media marketing is the ability to implement highly targeted advertising campaigns. Platforms like Facebook and Instagram offer sophisticated targeting options that allow businesses to reach specific demographics based on interests, behaviors, and geographic location. This level of precision ensures that marketing messages are delivered to the most relevant audiences, maximizing the likelihood of conversion. Research has shown that targeted advertising not only increases the effectiveness of marketing campaigns but also improves the return on investment, as businesses can allocate their budgets more efficiently (Khan et al., 2022; Patel, 2021).

6.11.4. Enhanced Customer Insights

Social media marketing also provides valuable insights into customer preferences and behaviors. Through analytics tools, businesses can track engagement metrics, such as likes,

shares, comments, and click-through rates, gaining a deeper understanding of what resonates with their audience. This data-driven approach allows companies to refine their marketing strategies, tailor content to meet customer needs, and make informed decisions about product offerings. By leveraging customer insights, businesses can enhance their financial performance by aligning their marketing efforts with market demands (Nguyen & Jones, 2021; Smith & Smith, 2021).

7. Conclusion

In conclusion, this study has explored the significant impact of digital marketing on financial performance, highlighting the various strategies that businesses can implement to enhance their marketing effectiveness and drive profitability. By examining the roles of social media marketing, SEO, email marketing, and other digital channels, it is evident that businesses that adopt a comprehensive digital marketing strategy are better positioned to engage customers, increase sales, and achieve sustainable growth. As the digital landscape continues to evolve, staying informed about emerging trends and technologies will be essential for companies seeking to optimize their marketing efforts and improve their financial outcomes.

Despite the valuable insights gained from this study, several limitations must be acknowledged. First, the research is primarily focused on the restaurant industry within the Kingdom of Saudi Arabia, which may limit the generalizability of the findings to other sectors or geographic regions. Future research could benefit from expanding the scope to include a broader range of industries and international contexts to provide a more comprehensive understanding of the impact of digital marketing on financial performance.

Second, the study relies on existing literature and data, which may introduce biases based on the availability and quality of sources. Some studies may have methodological limitations or may not fully capture the nuances of digital marketing strategies and their effects. Incorporating primary research, such as surveys or interviews with business owners, could provide richer insights and validate the findings.

Additionally, the rapid pace of change in digital marketing means that strategies and technologies can quickly become outdated. As new tools and trends emerge, the relevance of the findings may diminish over time. Ongoing research will be necessary to keep pace with these developments and assess their impact on financial performance continually.

Lastly, the study does not extensively address the challenges and barriers businesses face in implementing digital marketing strategies. Understanding these obstacles is crucial for developing effective solutions and support systems for companies looking to enhance their digital marketing efforts.

In summary, while this study contributes valuable insights into the relationship between digital marketing and financial performance, further research is needed to address its limitations and explore the evolving nature of digital marketing in a rapidly changing business environment.

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**Pestel Analysis In Location Selection for Organizations:
Analyzing the Relationship Between Location's Economic Development Level and
Organizational Leadership Model Through Pestel Analysis**

Hakan ÖZTÜRK

Istanbul Arel University, Türkiye

hakanozturk@arel.edu.tr

makelhakan@gmail.com

Abstract

Location selection is one of the most critical decisions for organizations in securing their future and achieving their goals. In this decision-making process, numerous factors with varying degrees of importance, along with multiple location alternatives, must be considered. This study examines the PESTEL analysis method in the decision-making process for location selection. Based on the findings, recommendations are provided at the end of the study. The interaction between organizations and environmental factors is discussed, analyzing how these factors influence growth decisions and location choices.

The relationship between organizations and their external environment is conceptually examined, while global environmental factors are assessed through PESTEL analysis. The impacts of political, economic, socio-cultural, technological, legal, and environmental factors on organizations are elaborated in detail.

Leadership is a critical element in organizational success, and various leadership models exist. The role of leadership models in determining how organizations respond to environmental factors and how they influence location selection is of particular importance. The extent to which environmental factors shape organizations' growth decisions and location choices should be analyzed within the framework of leadership models as an intermediary factor. In addition to PESTEL analysis, a comprehensive evaluation of the location selection decision-making process can be conducted using multi-criteria decision analysis methods and quantitative analysis techniques.

Keywords: Global Environmental Factors, Leadership Models, Growth Decisions, Location Selection, PESTEL Analysis, Strategic Decision-Making, Multi-Criteria Decision-Making

1. Introduction

In today's competitive business environment, organizations' strategic growth decisions are shaped not only by internal dynamics but also by external environmental factors. Among these factors, the economic development level of a chosen location stands out as a significant determinant. Location selection is a crucial strategic decision that affects organizations' market access, cost advantages, and long-term sustainability. Additionally, an organization's leadership model is a determining factor in this decision-making process. Leadership styles influence managers' risk perceptions, investment strategies, and organizational vision, thereby playing a key role in location selection.

PESTEL analysis is a strategic tool that enables organizations to systematically evaluate their external environment. The term "PESTEL" represents Political, Economic, Sociocultural, Technological, Environmental, and Legal factors. This analysis aids organizations in understanding the macro-environmental elements in which they operate and guides their strategic decision-making processes. Political factors include government policies, taxation systems, political stability, and state regulations, which directly impact the competitive environment. Legal regulations and policies that affect organizations shape their operational landscape. Economic factors encompass variables such as inflation, interest rates, exchange rates, economic growth rates, and unemployment, influencing everything from consumer spending to investment decisions. Socio-cultural factors include demographic structures, cultural trends, consumer behavior, and education levels, all of which directly impact organizations' marketing strategies and product development processes. Technological factors cover R&D activities, innovation levels, automation systems, and digital transformation, playing a crucial role in securing a competitive advantage for organizations.

Environmental factors involve sustainability, climate change, natural resource usage, and environmental regulations, while legal factors include labor laws, consumer rights, competition laws, and health and safety standards. Organizations' compliance with these legal frameworks ensures both adherence to regulations and fulfillment of their corporate social responsibilities. PESTEL analysis helps organizations develop proactive strategies by taking macro-environmental factors into account, allowing them to adapt to changing external conditions and achieve sustainable competitive advantages.

2. Limitations Of The Study

Although the PESTEL analysis used in organizations' location selection provides significant contributions to decision-making processes, it also has certain limitations. In addition to being based on subjective interpretations, PESTEL analysis is affected by factors such as the limited availability of data sources and the dynamic nature of environmental variables.

Therefore, to make the most informed decisions regarding location selection, it should be used in conjunction with and as a complement to quantitative methods, particularly multi-criteria decision-making techniques.

PESTEL analysis allows organizations to systematically evaluate external environmental conditions. However, this analytical method also has some limitations:

(1)Dependence on Subjective Interpretations: Since PESTEL analysis often incorporates expert opinions and qualitative assessments, its results may be subjective. Differences in interpretation may lead decision-makers to reach varying conclusions.

(2)Limited Data Sources: Particularly in developing countries or industry-specific contexts, accessing up-to-date and reliable data can be challenging. Incomplete or conflicting information on economic, social, and technological factors can affect the accuracy of the analysis.

(3)Dynamic Nature of Variables: Since PESTEL analysis is based on assessments made at a specific point in time, it may lose its relevance in rapidly changing environmental conditions. Sudden changes in political and economic factors, in particular, can negatively impact the validity of the analysis results.

(4)Lack of Strategic Foresight: While PESTEL analysis evaluates the current state of affairs, it provides a limited framework for predicting future changes. In cases where long-term uncertainties are high, this analysis may not offer sufficient guidance.

The study also has content-related limitations:

(1)The data used in this research were collected based on responses from senior executives working in organizations.

(2)The study is limited to the Electrical and Electronics and Energy sectors. A specific analysis was conducted within the electrical equipment industry. The product range of the sector, which can be defined as electrical measurement, control, and distribution systems and equipment, includes cables, transformers, switches and sockets, multi-socket outlets, smart building and automation systems, automatic circuit breakers, residual current circuit breakers, compact circuit breakers, residual current protected compact circuit breakers, industrial switching products, fuse boxes, electrical accessories, electronic meters, reactive power control relays, panel meters, and LED lighting products. The industry's product groups, market and competition conditions, and its status in Turkey and globally have been examined in detail.

(3)For location selection within the scope of this research, the following countries have been analyzed: Azerbaijan, the United Kingdom, Romania, Ethiopia, and Uzbekistan.

Country	Economic Classification
Azerbaijan	Emerging Economy
Ethiopia	Underdeveloped Country
United Kingdom	Developed Country
Uzbekistan	Emerging Economy
Romania	Developing Country

3. Literature Review

The studies in the literature on location and market selection have been examined. Numerous studies have utilized the PESTEL analysis, which generally focuses on the following areas:

- Determining organizational location,
- Supplier selection,
- Performance evaluation,
- Identifying the most suitable candidate in the recruitment process,
- Investment decision-making.

The selection of the most appropriate location for organizations directly affects operational efficiency. Studies in this field have demonstrated that PESTEL analysis is effective in determining the most suitable location in line with organizations' long-term strategic goals (Dunning, 2000). In particular, political stability, economic growth rates, and regulatory frameworks are among the key determinants of location selection.

A study conducted by Güneş (2021) found that firms operating in Turkey's manufacturing sector prioritize economic and technological factors in their location selection. Similarly, Porter (1990) emphasized the significance of geographic location, local market dynamics, and supply chain management within the framework of competitive advantage.

Supplier selection is a critical process for organizations in terms of cost management, supply chain continuity, and quality control. Studies utilizing PESTEL analysis have shown that legal regulations, environmental factors, and technological innovations play a decisive role in supplier selection. For instance, research conducted by Acar and Doğan (2019) revealed that firms in Turkey's automotive sector consider environmental factors and sustainability policies as key determinants in supplier selection. In particular, green production and environmental regulations drive firms to prefer suppliers with a low carbon footprint.

The performance evaluation criteria used to measure organizational success are significantly influenced by macro-environmental factors. Assessments conducted within the framework of

PESTEL analysis indicate that economic and technological factors have a decisive impact on business performance (Kaplan & Norton, 1996).

The literature suggests that PESTEL analysis has been integrated into performance evaluation processes concerning employee satisfaction, work efficiency, and market competition. Research indicates that technological advancements, such as digital transformation and Industry 4.0, have led organizations to adopt more analytical approaches in their performance evaluation processes (Parida, Sjödin, & Reim, 2019).

From the perspective of human resource management, PESTEL analysis is a significant strategic tool that can be employed in recruitment processes. The literature highlights the substantial impact of socio-cultural factors, technological advancements, and regulatory frameworks on human resource policies (Dessler, 2017). For instance, a study by Tariq, Jan, and Ahmad (2016) found that multinational companies consider factors such as labor laws, labor costs, and cultural dynamics when determining recruitment processes in different countries. Similarly, digitalization has increased demand for automation and AI-based evaluation systems in recruitment processes.

Investment decisions are largely driven by macroeconomic factors and industrial dynamics. Studies utilizing PESTEL analysis have identified political stability, economic growth rates, technological innovations, and regulatory frameworks as critical factors in investment decisions. For example, the internalization theory developed by Buckley and Casson (1976) highlights that firms assess existing economic and legal frameworks when making international investment decisions. More recent studies have shown that environmental sustainability and carbon emission regulations significantly shape investment decisions (Bansal & Roth, 2000).

Regarding corporate growth strategies, Ansoff conducted studies on market penetration, product development, and market expansion in his book *Corporate Strategy* (Ansoff, 1965). On the topic of diversification strategies, which involve expansion into new sectors or regions, Peng's research provides valuable insights (Peng, 2001).

There are studies on the role of location selection in multinational corporations' pursuit of corporate advantages, cost-reduction strategies, and responses to competitive pressures (Dunning, 2001).

The literature indicates that different industries prioritize different variables in location selection. In high-tech and R&D-intensive industries (e.g., biotechnology, artificial intelligence, renewable energy), developed countries are preferred due to their advanced innovation ecosystems, skilled labor force, and strong intellectual property rights (Lundvall, 2007). For example, companies such as Google and Amazon have concentrated their R&D investments in the United States and Europe. In contrast, in manufacturing industries (e.g.,

textiles, automotive, electronics production), developing countries are preferred due to lower labor costs, incentives, and flexible regulations (Meyer & Sinani, 2009). For instance, Apple has established production facilities in China.

Regarding the impact of economic development levels on location selection, economic development levels are among the fundamental factors determining a country's ability to attract investment (Dunning, 2001). Developed countries attract high-tech firms by offering R&D investments, innovation incentives, and a highly skilled workforce (Krugman, 1991). In contrast, developing countries stand out for companies seeking to reduce operational costs through low-cost production, expanding domestic markets, and flexible regulations (Meyer & Sinani, 2009).

In terms of the relationship between leadership models and growth decisions, leadership models play a critical role in shaping strategic growth processes (Bass, 1990).

- Transformational leadership fosters innovative strategies and encourages long-term growth. It is more inclined to invest in developed countries.
- Servant leadership is socially responsible, emphasizing sustainability and ethical investments. It tends to invest in high-impact social projects in developing countries.
- Autocratic leadership follows centralized decision-making processes and is cost-focused. It often invests in low-cost production facilities in developing countries (Bass & Riggio, 2006).

The literature demonstrates that PESTEL analysis serves as a crucial analytical tool in various areas, including location selection, supplier evaluation, performance management, recruitment processes, and investment decisions. Among the key findings is that economic, political, technological, and environmental factors significantly influence organizations' strategic decisions. Future studies focusing on the impact of digital transformation, sustainability policies, and global economic changes on PESTEL analysis will contribute significantly to the existing literature.

4. Materials and Methods

Global Environmental Factors - PESTEL Analysis for organizations to be managed effectively, it is essential to analyze environmental factors, interpret them in alignment with organizational objectives, and establish a foundation for strategic decision-making. One of the most commonly used analytical methods in this regard is the PESTEL analysis. This method is frequently employed in strategic management to examine internal and external environmental factors and assess their impact on organizations (Arabacı, 2010). As a crucial tool in strategic management, PESTEL analysis enables organizations to systematically

analyze environmental factors and serves as a critical guide, particularly in long-term strategic planning. It provides managers with the opportunity to anticipate the potential impacts of environmental variables on the organization.

This analytical approach aids organizations in understanding not only their current conditions but also the possible external environmental challenges they may face in the future. In this context, PESTEL analysis contributes to evaluating external environmental threats and opportunities, adopting strategic measures to gain a competitive advantage, and minimizing uncertainties.

The concept of PESTEL consists of six main factors: Political, Economic, Social, Technological, Environmental, and Legal. Originally developed as PEST analysis, this method was revised in the 1980s with the inclusion of the legal factor, evolving into its current form as PESTEL (Oktay, 2006). Through PESTEL analysis, organizations comprehensively assess environmental elements, gaining in-depth insights into political and economic developments, socio-cultural transformations, technological advancements, legal regulations, and environmental conditions that may impact them.

Advantages of PESTEL Analysis, PESTEL analysis provides several advantages for organizations (Peng & Nunes, 2007):

- It serves as an effective tool for cost assessments.
- It offers a mechanism to help organizations understand the direct and indirect effects of external environmental factors.
- It identifies the impacts of potential threats, enabling organizations to anticipate risks in advance.
- It supports and encourages strategic thinking within the organization.
- It allows organizations to assess the effects of entering national and global markets.

Disadvantages of PESTEL Analysis, Despite its benefits, PESTEL analysis also has certain limitations (Peng & Nunes, 2007):

- It may oversimplify information used in the decision-making process.
- If not conducted regularly, its effectiveness may decline over time.
- Due to time and cost constraints, organizational participation in the analysis process may be limited, negatively affecting decision-making.
- Accessing high-quality external environmental data may be challenging due to cost, time constraints, and legal restrictions.
- Many data points in the analysis are based on assumptions, posing the risk of subjective interpretation.

In conclusion, PESTEL analysis is a vital tool for organizations to thoroughly examine external environmental factors and support strategic decision-making. By enabling a systematic evaluation of political, economic, social, technological, environmental, and legal factors, it helps organizations achieve sustainable competitive advantage at both national and international levels. However, certain limitations and constraints associated with the analysis process should be considered. Challenges in accessing reliable information, potential time and cost constraints, and the risk of subjective interpretations necessitate a cautious approach to the analysis process. Therefore, PESTEL analysis should not be viewed as a standalone decision-making mechanism; rather, it should be integrated with other strategic analysis methods to form a comprehensive evaluation process.

5. Findings

This study examines the relationship between the use of the PESTEL method in location selection by organizations and the economic development level of the location as well as the leadership model. The results of the PESTEL analysis indicate that political and economic factors have a direct impact on location decisions, whereas social and technological factors exhibit indirect influences.

Economic indicators such as Gross Domestic Product (GDP), population size, urban population ratio, construction sector size, and expenditures on building materials are among the key determinants influencing location selection. In particular, high GDP growth rates, strong financial markets, and political stability create attractive business environments for firms. The growth rate of consumer spending in the building materials and equipment sector has emerged as another critical factor. Similarly, the market size and growth rate of the renovation sector highlight the necessity for the renewal of the existing building stock, thereby influencing strategic investment decisions. Additionally, the trade volume of low-voltage product categories and government investments in advanced technological products are also taken into consideration. High electricity access rates and infrastructure adequacy are other key factors in location decisions. However, exchange rate volatility and currency risk scores pose financial stability risks, while ease of doing business and simplified customs procedures are among the factors that directly influence investment decisions. Furthermore, proximity to Turkey provides logistical advantages, facilitating trade relations.

Moreover, the level of development of financial markets, political stability, and environmental sensitivity of countries are significant factors affecting organizations' long-term strategic location decisions. A holistic assessment of these factors during the location selection process will support successful and sustainable investments.

As a result of the PESTEL analysis, all factors were examined, and the following criteria were identified as key determinants in location selection:

- GDP (\$)
- Population (millions)
- Urban Population Ratio (%)
- Number of Households
- Turkey's Export Volume (\$ billion)
- Construction Sector Size (\$ billion)
- Consumer Expenditures in the Building Materials and Equipment Sector (\$ billion)
- Market Size of the Renovation Sector (\$ million)
- Trade Volume for GTIP Codes Covering Low-Voltage Product Categories (\$ million)
- GDP Growth Rate (%)
- Population Growth Rate (%)
- Proportion of Population Aged 25-54 (%)
- Urban Population Growth Rate (%)
- Construction Sector Growth Rate (%)
- Growth Rate of Consumer Expenditures in the Building Materials and Equipment Sector (%)
- Renovation Sector Growth Rate (%)
- Electricity Access Rate (%)
- Government Investment in Advanced Technological Products (%)
- Ease of Doing Business (0-100 scale)
- Expert's General Opinion and Overall Country Score (0-100 scale)
- High Environmental Sensitivity (0-100 scale)
- Exchange Rate Volatility – Currency Risk Score (0-100 scale)
- Positive Impact of Proximity to Turkey (0-100 scale)
- Ease and Speed of Customs Procedures (0-100 scale)
- Development Level of Financial Markets (0-100 scale)
- Political Stability Score (0-100 scale)

Through PESTEL analysis, the following factors influencing location selection were identified:

- Political Factors: The impact of government incentives, investment support, and tax advantages on organizations' location choices.

- **Economic Factors:** The importance of regional economic development levels in terms of cost advantages and market accessibility.
- **Socio-Cultural Factors:** The influence of employee qualifications, education levels, and cultural alignment on the management style of organizations.
- **Technological Factors:** The role of regions with advanced technological infrastructure in location decisions.
- **Environmental Factors:** The significance of sustainability policies and green environment models.
- **Legal Factors:** The role of labor laws, work standards, and incentives in shaping location selection.

This study highlights how PESTEL analysis serves as a systematic tool for evaluating external environmental factors and their role in organizations' strategic location decisions.

6. Discussion

The findings of this study largely align with previous research in the literature. In particular, studies on Porter's competitive advantage theory and leadership models emphasize the impact of economic development levels on organizational strategies. In this context, it is evident that location selection decisions should not be considered solely based on economic factors but also in line with organizations' leadership approaches and strategic objectives.

As observed in this research, multiple criteria play a role in strategic growth decisions related to location selection. This indicates that PESTEL analysis alone is insufficient and must be complemented with quantitative decision-making methods. Since each of these factors involves a certain level of subjective evaluation, incorporating multi-criteria decision-making (MCDM) methods such as Analytic Hierarchy Process (AHP), Data Envelopment Analysis (DEA), Fuzzy Logic, and TOPSIS can enhance the systematic and measurable nature of the decision-making process, especially in uncertain and dynamic environments. The effective use of quantitative methods allows organizations to focus not only on short-term returns but also on making long-term strategic decisions. Consequently, location selection shifts from being a cost-driven approach to a strategy that strengthens competitive advantage.

Quantitative methods, such as multi-criteria decision-making techniques, enable organizations to analyze location selection based on objective and measurable data. However, these methods have some fundamental limitations:

(1) **Data Quality and Accessibility:** The accuracy of quantitative models depends on the currency and reliability of the data used. Incomplete, incorrect, or outdated data can negatively affect the validity of results.

(2)Model Assumptions: Quantitative methods operate under certain mathematical assumptions. However, real-world conditions may not always align with these assumptions. For instance, cost-benefit analyses are based on the assumption that all costs can be precisely calculated, yet unpredictable economic fluctuations or political changes can influence these calculations.

(3)Neglecting Dynamic Factors: Quantitative methods often rely on static data, which may not fully account for changing factors over time. In location selection, long-term strategic variables (e.g., population mobility, technological advancements) can have different effects over time.

(4)Inability to Capture Intangible Factors: Since quantitative methods focus on measurable data, they may be insufficient in analyzing qualitative factors such as cultural, social, and political elements. Factors like organizational culture, leadership style, and human capital may not be fully captured within numerical models.

It is essential to recognize that data-driven analyses must always be aligned with organizations' cultural and managerial dynamics. For example, an economically attractive region may not be suitable in terms of organizational culture, potentially affecting the balance between leadership models and location selection in the long run. Leadership models are closely related to an organization's ability to adapt to environmental conditions. Organizations with a transformational leadership model tend to adapt more easily to innovative and dynamic markets, whereas those with an autocratic leadership model may be more successful in stable and structured economic environments. Therefore, strategic alignment between leadership models and location selection is a critical factor in decision-making.

This study demonstrates that PESTEL analysis identifies a wide range of criteria related to environmental factors in location selection, yet it also highlights the need for more detailed studies across different industries. While in the service sector, human resources and social factors play a dominant role, in the technology industry, R&D capabilities and innovation ecosystems are key determinants. Future research could contribute to this field by examining how leadership models influence location selection in a flexible and innovative manner across various industrial sectors.

The relationship between location selection and leadership models is both complex and critical. A comprehensive analysis of environmental factors is vital for organizations to achieve competitive advantage and long-term success. However, this alone is not sufficient. Future research should focus on sector-based analyses and the application of quantitative methods to provide a more detailed evaluation of this relationship.

7. Conclusion and Recommendations

This study has demonstrated that, in the location selection process, environmental dynamics play a crucial role, alongside economic factors. In strategic growth decisions, the PESTEL analysis provides an evaluation of the environmental factors, addressing all economic, legal, socio-cultural, technological, and ecological aspects of a location.

The research highlights that, in the location selection process, an integrated approach supported by multi-criteria decision-making methods should be adopted, rather than relying solely on PESTEL analysis or traditional economic indicators. Quantitative methods allow for a more objective and measurable decision-making process. The use of AHP, TOPSIS, and Fuzzy Logic can make the decision-making process more systematic. Through regression analysis, it can be determined whether there is a statistically significant relationship between the level of development of a location and organizational leadership models, and cluster analysis can reveal potential correlations between the leadership models and location selection criteria for organizations operating in different regions.

Leadership model and location alignment should be evaluated. It is essential to assess whether the leadership model adopted by organizations is strategically aligned with the selected location. Organizations with innovative and transformational leadership may benefit from operating in regions with developed entrepreneurial ecosystems, while organizations with a more traditional leadership style may find it more suitable to position themselves in stable and structured markets.

There is a need to increase sectoral and regional studies. The criteria for location selection may vary across different sectors. Therefore, in-depth analyses should be conducted in various fields such as the service sector, technology sector, and manufacturing sector, examining how location selection changes according to sector-specific needs. Moreover, regional comparative studies should be conducted by considering the economic and managerial dynamics of different countries. Location selection by organizations should not be based solely on cost advantages or the level of economic development.

The combined evaluation of quantitative analyses and strategic management approaches will allow organizations to make more informed and sustainable decisions. Future studies can contribute by offering more detailed analyses across different sectors and geographical regions, leading to a more comprehensive understanding of the relationship between location selection and leadership models. For future research, the following areas can be explored: how organizations can better integrate their leadership model and location selection strategies, the limitations of the study, alternative methodologies, and in-depth analyses with larger datasets.

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Exploring the Impact of Social Media Crisis Management on Customer Trust and Corporate Reputation: The Case of Starbucks Türkiye

Doğan Başaran

Ege University

Abstract

This study examines the impact of social media crisis management on corporate reputation, customer trust, and communication quality, focusing on Starbucks Türkiye consumers who participated in boycotts following the February 6 earthquake and the Palestine war. Using a sample of 348 individuals, the research analyzes how proactive and reactive crisis management strategies influence these factors, employing SmartPLS 4 for data analysis. The findings reveal that proactive crisis management, characterized by transparency and responsiveness, enhances corporate reputation and maintains customer trust. In contrast, reactive crisis management, often marked by delays and inconsistent messaging, tends to diminish trust and communication quality. The study also emphasizes the importance of effective communication quality management in building customer trust, which is crucial for a strong corporate reputation. However, the research indicates that communication quality alone may not significantly influence reputation due to its complex and multifaceted nature. The study suggests that organizations should prioritize proactive crisis management strategies to effectively navigate social media-driven challenges, while further research is needed to explore additional variables affecting the relationship between communication quality and corporate reputation.

Key words: social media, proactive social media crisis management, reactive social media crisis management, corporate reputation

1. Introduction

Effective crisis management is vital for an organization's resilience and long-term success, emphasizing the importance of proactive planning, efficient response tactics, and thorough post-crisis evaluations (Ciekanowski, 2023; Bryson et al., 2023). Key elements of successful crisis management include the management of information, strategic communication, and the integration of crisis protocols within the broader management framework (Sun, 2023). Organizations that are well-prepared for crises are better positioned to overcome them, highlighting the importance of regular reviews of crisis plans and comprehensive staff training. Strategic planning is crucial, necessitating a balanced integration of strategic foresight and crisis management to effectively address potential challenges (Weigand et al., 2014). By continuously monitoring the market environment and developing proactive crisis management strategies, organizations can strengthen their resilience, enhance stakeholder confidence, and improve overall performance.

Social media represents a broad category utilized to denote a new phase of Internet-based platforms centered on content generated or manipulated by users. Examples of such platforms include wikis, blogs, podcasts, and social networking sites (Instagram, Twitter, LinkedIn etc.) (Kaplan and Haenlein, 2010; Kietzmann et al., 2011). Social media has become a mundane communication medium in daily life, whether for customers or corporations, and thus plays a crucial role in corporate communication strategies (Urse and Tasente, 2022). During crises, individuals tend to perceive social media reporting as more trustworthy compared to traditional mass media crisis reporting (Riddel, 2024). The credibility of social media sources greatly impacts users' attitudes, the quality of information, public engagement, and the believability of information during emergencies. These platforms are

essential for spreading real-time information, connecting people, issuing alerts, and coordinating volunteer efforts during disasters, which in turn increases trust in the shared information. Additionally, perceived trust in social media positively affects users' intention to seek and share information, ultimately influencing their acceptance and usage of mobile social media (Wang and Xiong, 2022). This highlights the shift towards social media as a trusted source of crisis communication, emphasizing the importance of credibility and reliability in maintaining public trust and engagement during emergencies.

Corporate reputation is crucial for shaping stakeholder perceptions, nurturing customer loyalty, and achieving overall business success in today's competitive and transparent business environment. Scholars emphasize that a positive reputation is a valuable intangible asset that can provide enduring competitive advantages (Ang and Wight, 2009). Effectively managing corporate reputation involves understanding factors such as communication strategies and engaging with stakeholders (Doorley and Garcia, 2015; Gray and Balmer, 1998). Maintaining a positive reputation is vital for sustained success, enabling organizations to differentiate themselves from competitors, build credibility, and foster trust among stakeholders (Dowling, 2004). Corporate branding practices, focusing on brand identity, values, and positioning, are instrumental in cultivating a strong reputation that secures a lasting competitive advantage (Abratt and Mingion, 2022).

Trust is essential for building and maintaining relationships with customers, as it acts as a foundation for loyalty and satisfaction (Wah Yap et al., 2012). Customer trust is the belief held by consumers that service providers will consistently and dependably deliver on their commitments (Sirdeshmukh et al., 2002). High-quality service provided by businesses positively impacts customer trust, satisfaction, and loyalty, underscoring the necessity of maintaining high service quality standards to boost customer trust (Venkatakrisnan et al., 2023; Anderson and Swaminathan, 2011). Consequently, cultivating and sustaining customer trust is crucial for businesses to achieve customer satisfaction, loyalty, and long-term success. Despite its importance, establishing and maintaining customer trust faces numerous challenges. The rise of digital transactions has increased the complexity of trust management, as clients often interact with organizations without face-to-face contact (Ba and Pavlou, 2002). Additionally, data breaches and privacy concerns have heightened customer awareness of trust-related issues (Belanger et al., 2002). Restoring trust after it has been damaged is particularly difficult. Kim et al., (2009) noted that rebuilding trust requires significant commitment and transparency, yet some customers may never fully regain their trust in the organization (p. 401). To mitigate these risks, it is crucial to adopt proactive strategies for building trust, such as promoting transparent communication and demonstrating consistent ethical behavior.

Starbucks Türkiye has been chosen as a case study due to its relevance to both proactive and reactive social media crisis management. This research investigates how these crisis management strategies affect corporate reputation, customer trust, and communication quality management. The results emphasize the significance of proactive strategies in enhancing corporate reputation by promoting transparency and responsiveness, which are crucial for building trust and effectively managing public perception. In contrast, reactive crisis management tends to erode trust due to delayed responses and inconsistent messaging. Additionally, the study highlights the critical role of effective communication in sustaining customer trust, which in turn affects corporate reputation. However, it also notes that communication quality alone may not substantially influence reputation due to the complex nature of reputational constructs.

2. Crisis Communication Quality And Social Media Crisis Management

Crisis management theory underscores the significance of readiness, prompt reaction, and drawing lessons from previous crises. Pearson and Clair (1998) posit that a crisis can be defined as "an event of high impact but low probability that jeopardizes the sustainability of the organization, marked by uncertainty regarding its origins, consequences, and methods of

addressing it" (p. 60). This description highlights the erratic and unsettling characteristics of crises. The situational crisis communication theory (SCCT) developed by Coombs (2007) provides a framework for understanding how organizations should communicate during crises. SCCT suggests that the effectiveness of crisis communication strategies depends on the crisis type and the organization's crisis history. The theory posits that a well-crafted response can mitigate reputational damage and restore stakeholder trust.

Several factors contribute to the quality of crisis management. Key determinants include crisis preparedness, leadership, communication, and organizational learning. Effective crisis management begins with thorough preparation. According to Mitroff et al., (1987), crisis preparedness involves developing comprehensive crisis management plans, conducting regular risk assessments, and training employees. "Organizations that invest in crisis preparedness are better equipped to respond swiftly and effectively when a crisis occurs" (Mitroff, 2001, p. 27). Effective crisis leadership is crucial for guiding organizations through periods of uncertainty and ensuring stakeholder well-being (Newstead and Riggio, 2024). The personality traits of leaders, such as self-confidence and openness to new information, significantly influence the timeliness of crisis management actions (Oktay, 2024). The need for flexible leadership frameworks that can adapt to evolving circumstances highlights the balance between centralization and decentralization in crisis leadership (Kalkman, 2023). During crises like the COVID-19 pandemic, leaders play a vital role in maintaining stability and instilling confidence within their teams (Nizamidou, 2023). Additionally, leadership acts as a moderating factor in the effectiveness of human resource development strategies, such as leveraging internal corporate social networks, on organizational resilience and knowledge sharing during and after crises (Zhou, 2022). Competent crisis leaders must demonstrate decisiveness, empathy, and effective communication under pressure to provide stability and build trust among their teams and stakeholders. Learning from past crises is essential for continuous improvement. According to Elliott et al., (2000), organizations that analyze their crisis responses and implement lessons learned are more resilient to future crises. "Organizational learning ensures that mistakes are not repeated and that crisis management processes are continuously refined" (Elliott et al., 2000, p. 15). Studies (e.g., Gasana, 2024; McCharty, 2024; Kim, 2018; Haavisto and Linge, 2022) show that clear, consistent, and transparent communication is vital for managing a crisis. Coombs (2007) emphasizes that timely and accurate information helps manage stakeholder expectations and reduce misinformation. "Effective communication strategies can significantly mitigate the negative impact of a crisis on an organization's reputation" (Coombs, 2007, p. 164). Crisis communication strategies are essential in addressing unforeseen events like cybercrimes, natural disasters, and academic scandals, which can profoundly affect higher education institutions and organizations globally. By adhering to crisis communication principles, organizations can manage crises more effectively, reduce communication gaps, and foster trust with stakeholders and the public. Transparency, authenticity, and responsiveness are crucial elements of crisis communication, particularly in countering the challenges of fake news and maintaining organizational credibility in the digital age.

High-quality crisis management can have a profound impact on an organization's performance and stakeholder relationships. Managing crises effectively can mitigate financial losses and ensure business continuity. Research by Knight and Pretty (1997) indicates that companies with robust crisis management practices experience lower stock price volatility and recover more quickly from crises. "Financial stability is better maintained when crises are managed effectively, minimizing disruption and maintaining investor confidence" (Knight & Pretty, 1997, p. 11). Quality crisis management fosters trust among stakeholders by demonstrating the organization's commitment to transparency and accountability. According to Gillespie and Dietz (2009), stakeholders are more likely to maintain their trust in an organization that responds effectively to a crisis. "Trust is a critical asset that can be preserved through competent crisis management" (Gillespie & Dietz, 2009, p. 131). Effective crisis management can protect and even enhance an organization's reputation. Kim et al.,

(2009) found that prompt and sincere responses to crises positively influence public perceptions. "Organizations that handle crises well are often perceived as more trustworthy and reliable" (p.175).

Despite its importance, achieving quality crisis management presents several challenges. The unpredictable nature of crises makes it difficult to plan for every possible scenario (Shrivastava, 1993). Additionally, the rapid dissemination of information through social media can complicate crisis communication efforts, as organizations must manage both the crisis and the flow of information simultaneously (Aula, 2010). Maintaining stakeholder trust during a crisis is also challenging, particularly when the crisis involves ethical breaches or significant operational failures (Paine, 2003). Rebuilding trust after a crisis requires sustained effort and commitment to transparency and accountability. In the context of social media, high-quality crisis management becomes even more crucial due to the rapid spread of information and the heightened visibility of organizational actions. Social media platforms can amplify both the positive and negative impacts of a crisis, making it essential for organizations to respond swiftly and effectively. Companies with strong social media crisis management strategies can reduce the volatility of public perception and maintain stakeholder trust. Minimizing disruption and maintaining investor confidence are vital (Knight and Pretty, 1997), and this can be achieved by addressing crises transparently and promptly on social media.

Social media crisis management can be categorized into two approaches: proactive and reactive. Proactive crisis management entails implementing strategies before a crisis arises, such as monitoring social media for early warning signs and establishing communication protocols (Banyongen, 2023). In contrast, reactive crisis management involves responding to a crisis in real-time, using social media to share information, address concerns, and manage the situation as it develops (Babatunde, 2022). Effective crisis communication via social media is vital for preserving an organization's reputation and managing public perception during and after a crisis (Işık and Tatlı, 2024). Moreover, incorporating content and initiatives generated by citizens into crisis response efforts offers both advantages and challenges, highlighting the need for mutual trust between institutions and the public in crisis management (Rizza, 2023). Recognizing the role of social media in crisis communication is crucial for organizations to successfully navigate crises and safeguard their reputation and stakeholder relationships (Marsen, 2020).

2.1. Proactive Social Media Crisis Management

Social media has revolutionized communication, offering organizations a platform to engage directly with stakeholders. However, this immediacy also poses risks, as crises can unfold rapidly and publicly. Proactive social media crisis management (PSMCM) has thus become essential for organizations to mitigate potential damage and maintain their reputation. The significance of PSMCM cannot be overstated in today's digital landscape. Social media crises can arise from various sources, including customer complaints, misinformation, or employee misconduct. According to Coombs (2007), "the speed and reach of social media can amplify crises, making swift and effective crisis management essential" (p. 35). Moreover, the transparency and public nature of social media demand that organizations respond promptly and authentically to maintain stakeholder trust (Veil et al., 2011). Effective PSMCM involves several strategies, which can be broadly categorized into preparation, monitoring, and response.

Preparation is the foundation of PSMCM. Organizations should develop a comprehensive crisis management plan that includes social media guidelines and protocols. This plan should be regularly updated and include predefined responses for various crisis scenarios (Macnamara and Zerfass, 2012). Additionally, organizations should train their social media teams to handle crises effectively, ensuring they are familiar with the organization's values and communication style.

Continuous monitoring of social media channels is crucial for early detection of potential crises. Advanced monitoring tools can help organizations track mentions, keywords, and sentiment across various platforms (Pfeffer et al., 2014). By identifying emerging issues early, organizations can address them before they escalate into full-blown crises. As Jin et al., (2014) note, "real-time monitoring allows for immediate response, which is critical in preventing the spread of misinformation and controlling the narrative" (p. 73).

The response phase is critical in PSMCM. Organizations should aim to respond quickly, transparently, and consistently. According to Schultz et al., (2011), "a timely and transparent response can significantly reduce the negative impact of a social media crisis" (p. 22). It is important to acknowledge the issue, apologize if necessary, and provide accurate information to address the concerns of stakeholders. Additionally, engaging with stakeholders directly and personally can help rebuild trust and demonstrate the organization's commitment to resolving the issue. To ensure effective PSMCM, organizations should adhere to several best practices: maintaining a consistent tone and message, engaging with stakeholders, utilizing multimedia, and evaluating and learning from past crisis.

Maintaining a consistent tone and message is significant because consistency in communication helps build trust and credibility. Organizations should ensure that all responses align with their core values and messaging (Coombs, 2007). Whereas direct engagement with stakeholders shows that the organization values their concerns and is committed to resolving the issue. This can be done through public posts as well as private messages (Veil, et al., 2011). Incorporating multimedia elements such as videos, infographics, and images can enhance the effectiveness of crisis communication. These elements can help convey complex information more clearly and engage a wider audience (Pfeffer et al., 2014). Lastly, organizations should conduct post-crisis evaluations to identify strengths and weaknesses in their response. This analysis can inform future crisis management strategies and improve overall preparedness (Macnamara and Zerfass, 2012).

Proactive social media crisis management is a critical component of modern organizational strategy. Adhering to best practices and learning from past experiences can further enhance the effectiveness of PSMCM. As the digital landscape continues to evolve, the importance of proactive crisis management will only grow, making it an essential skill for organizations in all sectors. By preparing thoroughly, monitoring continuously, and responding effectively, organizations can mitigate the impact of social media crises and maintain their reputation. Thus, customer trust increases when the quality of crisis communication is positively affected. Therefore, we hypothesize:

H1: Proactive social media crisis management strategies positively impact crisis communication quality.

2.2. Reactive Social Media Crisis Management

In the realm of social media, crises can erupt with little warning, necessitating a swift and strategic response from organizations. Reactive social media crisis management (RSMCM) focuses on addressing crises after they have occurred, aiming to mitigate damage, restore trust, and learn from the experience.

RSMCM is crucial for maintaining an organization's reputation and stakeholder trust during and after a crisis. Social media's rapid dissemination of information can amplify crises, making timely and effective responses essential. Coombs (2007) emphasizes that "reactive crisis management is about damage control and managing the crisis fallout to prevent long-term reputational harm" (p. 56). Effective RSMCM can turn potential public relations disasters into opportunities for demonstrating accountability and responsiveness (Jin et al., 2014).

Effective RSMCM involves several strategies, which can be categorized into immediate response, engagement, and recovery. The immediate response is critical in RSMCM. Organizations must act swiftly to address the crisis, acknowledging the issue and providing initial information to stakeholders. According to Schultz et al., (2011), "a prompt

acknowledgment of the crisis can prevent misinformation from spreading and demonstrates the organization's commitment to transparency" (p. 24). The initial response should be clear, concise, and factual, avoiding speculation or defensiveness. Engaging with stakeholders during a crisis is essential to manage perceptions and maintain trust. Organizations should actively communicate with their audience, providing regular updates and addressing concerns directly (Veil et al., 2011). Personalized responses can be particularly effective in demonstrating empathy and understanding. As Pfeffer et al., (2014) note, "personalized engagement can humanize the organization and foster a sense of connection with stakeholders" (p. 120). The recovery phase involves ongoing communication and actions to rebuild trust and repair any damage caused by the crisis. Organizations should continue to provide updates on the resolution of the crisis and any measures taken to prevent future occurrences. Jin et al., (2014) suggest that "a transparent and proactive approach during the recovery phase can enhance the organization's credibility and restore stakeholder confidence" (p. 79). Additionally, organizations should conduct a thorough post-crisis evaluation to identify lessons learned and improve future crisis management strategies (Macnamara and Zerfass, 2012).

To ensure effective RSMCM, organizations should adhere to several best practices: establish a crisis response team, use consistent messaging, monitor stakeholder feedback, be transparent and honest, and follow up after the crisis. Establishing a crisis response team refers to forming a dedicated team that ensures a coordinated and efficient response. This team should include members from communication, legal, and operational departments (Coombs, 2007). Consistency in messaging across all platforms helps maintain clarity and credibility. Organizations should ensure that all communications align with their core values and crisis management plan (Veil et al., 2011). Monitoring social media channels for stakeholder feedback during a crisis allows organizations to address concerns promptly and adjust their response strategies as needed (Pfeffer et al., 2014). Transparency and honesty are critical in maintaining trust during a crisis. Organizations should provide accurate information and avoid misleading or minimizing the issue (Schultz et al., 2011). Finally, following up with stakeholders after the crisis demonstrates a commitment to resolution and continuous improvement. This can include providing updates on corrective actions and inviting feedback from stakeholders (Jin et al., 2014).

Reactive social media crisis management is a vital component of organizational resilience. By responding swiftly, engaging effectively, and maintaining transparency, organizations can mitigate the impact of social media crises and rebuild stakeholder trust. Adhering to best practices and learning from each crisis can enhance the effectiveness of RSMCM and prepare organizations for future challenges. In an era where social media can both create and resolve crises, mastering reactive crisis management is essential for sustaining organizational reputation and credibility. However, organizations may delay taking action or prefer to remain reactive. In this sense, reactive social media crisis management could potentially harm the quality of crisis communication and erode customer trust. Based on this observation, we posit that:

H2: Reactive social media crisis management strategies negatively impact crisis communication quality.

3. Corporate Reputation and Customer Trust

Corporate reputation is a multifaceted construct that has been defined and examined from various academic perspectives. According to Fombrun and Van Riel (1997), corporate reputation is "a collective representation of a company's past actions and results that describes the firm's ability to deliver valued outcomes to multiple stakeholders" (p. 10). This definition underscores the cumulative nature of reputation, shaped by historical performance and stakeholder experiences. The resource-based view (RBV) of the firm posits that corporate reputation is a valuable, rare, inimitable, and non-substitutable (VRIN) resource that can provide a sustainable competitive advantage (Barney, 1991). From this perspective,

reputation is seen as an intangible asset that enhances a firm's ability to attract customers, employees, and investors, thus driving long-term success.

As an intangible resource (Goldberg et al., 2003) corporate reputation is an important asset for the firms (Mahon, 2002). A strong corporate reputation can attract and retain talented employees, enhance customer loyalty, boost sales, secure funding, and improve overall organizational performance (Razak et al., 2023; Kibu et al., 2023). Corporate reputation is seen as a perception of a company's past actions and future potential, which impacts its attractiveness to key stakeholders compared to competitors (Arzberger, 2022). Research indicates that a strong corporate reputation is crucial for gaining a competitive edge, as it moderates the relationship between corporate social responsibility and organizational performance through trust and reputation, particularly in developing markets (Salam and Jahed, 2023). Effective communication strategies, particularly those employed by public relations professionals, are essential for firms to build and maintain positive relationships with stakeholders, which significantly contributes to a favorable corporate reputation. These strategies help in managing the flow of information between the organization and its stakeholders, ensuring that the firm's messages are clear, consistent, and aligned with its values and objectives. Through strategic communication, PR professionals can enhance trust, loyalty, and satisfaction among stakeholders, ultimately strengthening the firm's reputation and competitive position in the market (Lee, 2022; Desai, 2018). In today's digital era, the implementation of effective social media communication strategies is crucial due to its significant impact on audience engagement, public perception, and corporate reputation, which in turn influences tangible actions and decisions (Shvelidze et al., 2024). Research highlights that specific communication methods can enhance public satisfaction, create a positive brand image, and foster loyalty towards public services (Hsieh, And Li, 2008).

A positive corporate reputation yields numerous benefits, impacting various aspects of organizational performance. It increases investor confidence, employee attraction and retention, as well as the customer loyalty and trust. Investors consider companies with strong reputations as lower-risk and more likely to provide consistent returns, influencing their investment decisions (Fombrun & Shanley, 1990). A positive reputation can lead to higher stock prices and a lower cost of capital. On the other hand, corporate reputation significantly influences a company's ability to attract and retain top talent. A positive reputation enhances employer attractiveness, making it easier to recruit skilled employees (Turban & Cable, 2003). Additionally, employees of reputable companies tend to exhibit higher job satisfaction and organizational commitment (Dutton et al., 1994). Lastly, a strong reputation fosters customer loyalty and trust, which in turn leads to increased customer retention and brand advocacy. According to Reichheld and Schefter (2000), "loyal customers are less sensitive to price changes and more likely to recommend the company to others, thereby driving long-term profitability" (p. 107).

Despite its importance, managing corporate reputation presents several challenges. The advent of social media has amplified the speed and reach of information dissemination, making reputation management more complex (Aula, 2010). Companies must navigate the delicate balance between transparency and strategic disclosure while addressing the diverse expectations of multiple stakeholders (Barnett et al., 2006). Effective communication is essential for managing corporate reputation. Transparent and consistent communication helps build trust and credibility with stakeholders (Alsop, 2004). "Companies that communicate openly and honestly with their stakeholders are more likely to maintain a positive reputation, even in times of crisis" (Coombs, 2007, p. 163). Moreover, reputational damage can be difficult to repair. As Chun et al., (2005) note, "rebuilding a damaged reputation requires substantial time and resources, and the effects of reputational crises can linger long after the initial incident" (p. 247). Proactive reputation management, including continuous monitoring and engagement with stakeholders, is essential to mitigate these risks. Conversely, reactive management could potentially harm reputation. So, we posit:

H3: Proactive social media crisis management strategies directly affect corporate reputation positively.

H4: Reactive social media crisis management strategies have a direct negative impact on corporate reputation.

H5: Crisis communication quality affects corporate reputation.

Customer trust can be conceptualized as the belief held by consumers that a company will fulfill its promises and act in their best interest. According to Morgan and Hunt (1994), trust is defined as “when one party has confidence in an exchange partner’s reliability and integrity” (p. 23). This definition highlights the key components of trust: reliability and integrity. The theory of planned behavior (TPB) posits that trust plays a crucial role in shaping consumer intentions and behaviors (Ajzen, 1991). Trust reduces the perceived risk associated with purchasing decisions, thereby facilitating positive consumer actions. In the context of online transactions, Gefen et al., (2003) emphasized that trust mitigates the uncertainty and perceived risk, which are particularly high in electronic commerce.

Several factors contribute to the development and maintenance of customer trust. Key determinants include perceived competence, benevolence, integrity, and transparency. Competence refers to the belief that a company has the ability to deliver on its promises. Competence is one of the critical dimensions of trustworthiness (Kharouf et al., 2014; Mayer et al., 1995). Customers are more likely to trust companies they perceive as capable and knowledgeable in their field. Benevolence is the perception that a company genuinely cares about the well-being of its customers. Benevolence involves putting the customer's interests first (Sirdeshmukh et al., 2002; Doney and Cannon, 1997). Companies that demonstrate empathy and understanding can foster higher levels of trust. Integrity involves adhering to a set of principles and ensuring consistency between words and actions. McKnight et al., (2002) noted that perceived integrity is crucial for building trust, as it signals that a company is honest and ethical. Transparency in communication and business practices enhances trust by reducing information asymmetry. According to Rawlins (2008), transparency involves openness, clarity, and a willingness to share information. In this sense, companies that are transparent about their processes, policies, and potential issues are more likely to be trusted by customers.

A high level of customer trust yields numerous benefits, significantly impacting various aspects of organizational performance such as increased customer loyalty, positive word of mouth and enhanced customer satisfaction. Trust is a crucial determinant of customer loyalty. Chaudhuri and Holbrook (2001) found that trust positively influences both attitudinal and behavioral loyalty. Trustworthy companies enjoy repeat business and strong customer advocacy, leading to sustained revenue growth. Customers who trust a company are more likely to engage in positive word-of-mouth communication. Verhoef et al. (2002) showed that trust encourages customers to recommend a company to others, expanding the customer base and enhancing the company's reputation. On the other hand, negative experiences with a company can lead to negative word-of-mouth (Başaran and Ventura, 2021; Williams et al., 2012), damaging the company's reputation and eroding customer trust. Trust also contributes to overall customer satisfaction by making customers feel safe and valued. Sirdeshmukh et al. (2002) noted that trust reduces perceived risk and improves the overall consumption experience, leading to higher satisfaction levels. So, communication quality plays a vital role in increasing customer trust. From the perspective of social media crisis management, proactive strategies are crucial for enhancing customer trust (Jin et al., 2014; Gkouna et al., 2023). By effectively utilizing social media platforms during crises, organizations can address stakeholder concerns, minimize negative impacts, and uphold trust through timely and transparent communication. Conversely, reactive social media crisis management strategies can lead to a decline in customer trust (Rim and Ferguson, 2020). On the other hand, various research studies (e.g., Kerse, 2023; Keh and Xie, 2009; Song et al., 2019) indicate that there is a relationship between customer trust and corporate reputation. So, we hypothesize:

H6: Crisis communication quality affects customer trust.

- H7: Proactive social media crisis management strategies increase customer trust.
H8: Reactive social media crisis management strategies reduce customer trust.
H9: Customer trust affects corporate reputation.

4. Methodology and Findings

This study explores how the quality of crisis management and social media strategies influence customer trust and corporate reputation. Starbucks Türkiye is selected as a case study due to its relevance to both proactive and reactive social media crisis management. This approach is particularly fitting for examining these dynamics. Aforementioned before, proactive social media crisis management refers to the strategies and actions taken by an organization before a crisis occurs, aimed at preventing or minimizing the impact of potential crises on their reputation and stakeholders (Macnamara and Zeffass, 2012). Conversely, reactive social media crisis management involves strategies and actions taken by an organization in response to a crisis that has already occurred and is actively affecting the organization's reputation or stakeholders. It focuses on mitigating damage and restoring trust after the crisis has occurred (Coombs, 2007). Starbucks Türkiye has encountered both proactive and reactive social media crisis management strategies between 2022 and 2024. On February 6, 2023, Türkiye experienced devastating earthquakes centered in Kahramanmaraş, affecting 11 cities and causing widespread destruction. This event prompted a significant international cooperation effort to aid earthquake survivors, extending support not only within Türkiye but also globally. Many firms provided financial aid as well as products or services related to their respective industries. However, at the beginning of the relief efforts, Starbucks Türkiye faced boycotts because they did not announce any support activities. Despite the boycott they kept their silence for 3 days. Then, #starbucksboykot (#starbucksboycott in English) became the trending topic in Türkiye on X. Hence, the silence of the Starbucks Türkiye turned into a crisis for the organization. As public pressure grew, Starbucks Türkiye were forced to break its silence three days after the earthquake (Akçay, 2023, p. 264). Starbucks Türkiye had posted a tweet on X that states their condolences.

However, this message was late, and it didn't contain any information about support either financial or product or services. This condolence message was not enough for the customers and boycott campaign continued. A day later, on February 10, 2023, Starbucks Türkiye posted new explanation titled "of course we were there, we are there, and we will continue to be there" (Starbucks Türkiye, 2023) on X. Finally, four days after the earthquake, Starbucks Türkiye explained their support for the survivors, which serves as an example of reactive social media crisis management. Nowadays, Starbucks is facing another boycott due to the Palestine War. This time, it is not only a local boycott but also a global one. Nonetheless, this study aims to investigate Starbucks Türkiye. The claims were that Starbucks financially supports Israel to help them get armed. Starbucks Türkiye has learned its lesson this time and did not remain silent. They shared their position on Israel and the war, as well as their company mission and other relevant information, when the call for the boycott campaign started. Because the claims were that Starbucks financially support Israel to get them armed (Simon, 2011). Starbucks categorized their explanation under 6 main categories under the title of "Starbucks for the Record". These categories include: What has Starbucks said about the conflict in Israel and Gaza? Does Starbucks have a presence in the Middle East Is Starbucks a political organization?, What has Starbucks said about misinformation on social media?, Why did Starbucks file litigation against Workers United?, and What is happening with Starbucks and labor unions? (Starbucks, 2024). This serves as an example of proactive social media crisis management. Therefore, as noted, Starbucks Türkiye is the ideal case for investigating social media crisis management in terms of both proactive and reactive strategies. A model is developed to investigate the effect of social media crisis management on customer trust and corporate reputation as depicted in Figure 1.

**Proactive Social Media
Crisis Management**

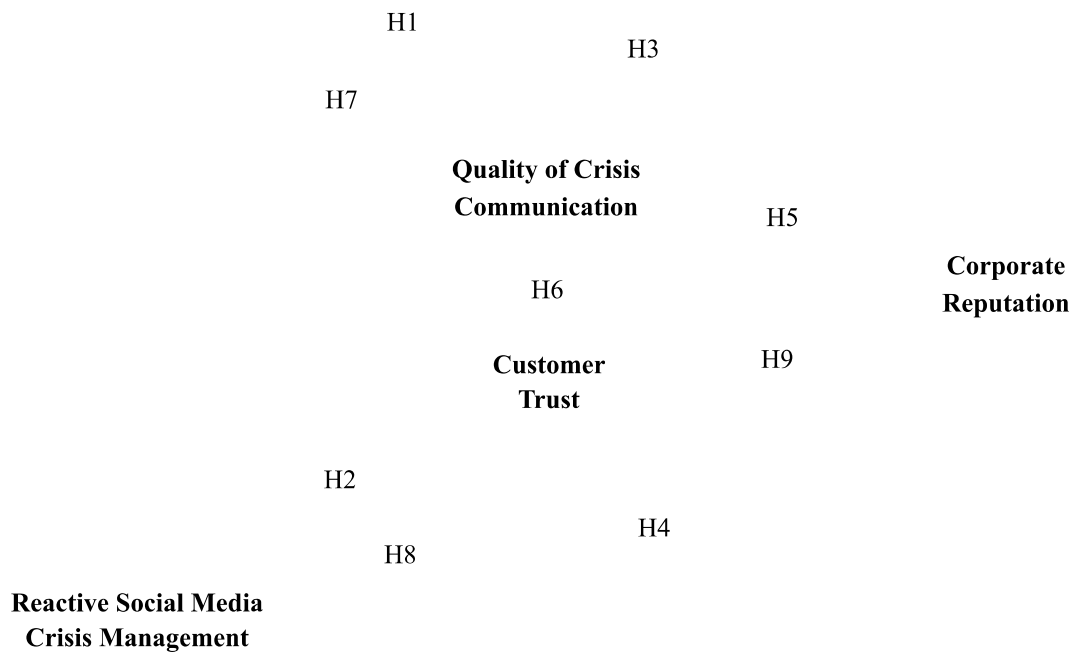


Figure 1: Analytical Model: The Relationship Between Social Media Crisis Management and Corporate Reputation

4.1. Sample and Data Collection

A population consists of all elements sharing at least one common characteristic, forming the entire universe under study (Malhotra, 2016). In this context, the population for this research includes all individuals who have previously consumed Starbucks and are participating in the boycott for the given reasons. The first question of the survey is “I have consumed Starbucks at least once” and the second one is “I boycotted Starbucks because of the February 6 earthquake or the war in Palestine”. The survey was terminated for those who answered 'no' to any of these questions. In addition, a sample refers to a subgroup of the population selected to participate in the study. To ensure the quality of the results, the sample size should be sufficiently large ($n > 30$) to allow for statistical inferences (Pina and Dias, 2021). An online survey is prepared by the researchers to collect data, and it was shared through social media platforms and e-mail. Statements were developed by the researchers based on the literature and Starbucks Türkiye’s social media post during the crisis, all employing a 5-point Likert scale from strongly agree (5) to strongly disagree (1). The study was conducted in İzmir, Türkiye between July and August of 2024. After pre-testing with 35 participants to enhance clarity and validity, data was collected from 348 individuals, with demographic details provided in Table 1.

Table 1: Demographic Profile of the Participants

Age	Mean=33.56 Standard Deviation=10.4562		
		Frequency	Percentage
Gender	Male	166	47.7%
	Female	182	52.3%

Marital Status	Single	187	46.3%
	Married	161	53.7%
Education Level	Elementary school	9	2.6%
	Intermediate school	54	15.5%
	High school	154	44.3%
	Graduate degree	131	37.6%
Income Status	Low	117	33.7%
	Middle	147	42.2%
	High	84	24.1%
Employment	Employed in public sector	47	13.5%
	Employed in private sector	99	28.4%
	Self-employed	89	25.6%
	Unemployed	17	4.9%
	Student	96	27.6%
Total		348	100%

Approximately 52% of the participants were female, and 48% were male. Participants ranged in age from 19 to 69 years, with a mean age of 33.55 years. About 38% of the participants held a graduate degree, 44% held a high school diploma, 15% held an intermediate school diploma, and 3% had an elementary school diploma. Regarding monthly income, approximately 38% of the participants had a low income (from less than 17,002 to 22,000), 42% had a middle income (from 22,001 to 37,000), and 24% had a high income (37,001 and more). In terms of occupation, the majority were employed in the public or private sector or were self-employed (63.94%), while 27.6% were students, and 4.9% were unemployed.

4.2. Data Analysis and Results

The data were analyzed using SPSS 25 and SmartPLS 4. All Likert scale measurements exhibited Skewness and Kurtosis values within the acceptable range of +1.5/-1.5, confirming normal distribution (Tabachnick and Fidell, 2013). Exploratory factor analysis with Varimax rotation was conducted to assess construct validity (Watkins, 2018, p. 220). The Kaiser-Meyer-Olkin (KMO) value of 0.818 and Bartlett's test results (5178.0, df=253, p=0.000), along with communalities exceeding 0.5, confirmed the appropriateness of the factor analysis. Factor loadings, which ranged from 0.722 to 0.968 (see Table 2), were considered satisfactory (Hulland, 1999). Variance-inflation-factor (VIF) values ranged from 1.401 to 3.970, indicating that the model did not suffer from multicollinearity issues (Hair et al., 2019), thereby meeting the established criteria.

Table 2: Factor Loadings of Each Statements

Factors	Statements	Factor Loadings
Proactive Social Media Crisis Management (PSMCM)	Starbucks Türkiye has a comprehensive crisis management plan.	0.907
	Starbucks Türkiye actively follows social media to be prepared for possible crisis situations	0.856
	Starbucks Türkiye has the foresight to manage crises.	0.799
Reactive Social Media Crisis Management	Starbucks Türkiye is not quick to provide clear and understandable information sharing on social media in	0.885

(RSMCM)		case of crisis.	
		Starbucks Türkiye cannot mobilize quickly on social media in a crisis.	0.881
		Starbucks Türkiye is slow to make transparent and honest disclosures on social media in crisis situations.	0.840
Communication Management (CMQ)	Quality	Starbucks Türkiye's communication was clear and easy to understand during these crises.	0.815
		The information Starbucks Türkiye shared during these crises was accurate and reliable.	0.812
		Starbucks Türkiye uses multiple communication channels during the crisis.	0.794
		The language used by Starbucks Türkiye during these crises was empathetic and understandable.	0.740
Customer Trust (CT)		Starbucks Türkiye demonstrates competence in handling crises.	0.871
		I am likely to remain loyal to Starbucks Türkiye even after a crisis.	0.815
		Starbucks Türkiye cares about its customers.	0.767
		Starbucks Türkiye is reliable and consistent in its actions.	0.761
		I think Starbucks Türkiye acted in my best interest.	0.722
Corporate Reputation (CRp)	Reputation	Starbucks is perceived as trustworthy by the Turkish public.	0.968
		Starbucks Türkiye has a strong and positive reputation.	0.904
		Starbucks Türkiye is seen as a leader in its sector.	0.884

Table 3 presents the reliability and validity assessment results. The measurement model's reliability and validity were evaluated using composite reliability (CR > 0.70) and average variance extracted (AVE > 0.50) (Wong, 2013; Ramayah et al., 2018; Henseler et al., 2009). The analysis demonstrated strong reliability (CR ranging from 0.870 to 0.942) and convergent validity (AVE ranging from 0.622 to 0.845), with all metrics surpassing the recommended thresholds (Hair et al., 2011). Cronbach's alpha values between 0.800 and 0.909, which exceed the minimum criterion of 0.60 (Hair et al., 2019), suggest strong internal consistency. The final analysis involved assessing the heterotrait–monotrait ratio (HTMT) (Hair et al., 2022; Henseler et al., 2015). All HTMT values were below 0.85 (Hair et al., 2022, 2019; Henseler et al., 2015), confirming discriminant validity.

Table 3: Composite reliability, average variance extracted, correlations and discriminant validity checks

Latent Variables	A	CR	AVE	1	2	3	4	5
1-CRp	0.909	0.942	0.845					
2-CT	0.850	0.891	0.622	0.432				
3-PSMCM	0.820	0.891	0.732	0.584	0.690			
4-CMQ	0.800	0.870	0.626	0.564	0.828	0.641		
5-RSMCM	0.838	0.902	0.755	0.720	0.719	0.724	0.766	

Model fit was assessed using the Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI). An SRMR value below 0.10 and an NFI value close to 1 indicate a satisfactory model fit (Hu and Bentler, 1998; Bentler and Bonett, 1980; Ding et al., 1995). Alongside a Chi-square value of 2897.409, the SRMR of 0.093 and NFI of 0.706 suggest that the model fit is acceptable. To assess the model's quality, a PLSpredict analysis was conducted using training and holdout samples to evaluate predictions from the PLS path model estimates (Shmueli et al., 2016; Hair et al., 2019, 2022). The Q^2 value, which must exceed zero, is used to measure predictive accuracy, with thresholds of 0, 0.25, and 0.50 representing small, medium, and large predictive significance in the PLS-path model, respectively (Geisser, 1974; Shmueli et al., 2016; Hair et al., 2019). The Q^2 values in this study, ranging from 0.432 to 0.477, indicate that the model has established predictive relevance. Additionally, the R^2 measurement evaluates the model's explanatory power, with values closer to 1 indicating stronger performance (Shmueli and Koppius, 2011; Hair et al., 2019; Henseler et al., 2009), and values of 0.75, 0.50, and 0.25 are considered substantial, moderate, and weak, respectively. Table 4 demonstrates the model's satisfactory predictive power, supported by Q^2 , and R^2 . Table 4, below, depicts the prediction power of model.

Table 4: Prediction Power of the Model

Latent Variables	R^2	Q^2
CRp	0.450	0.432
CT	0.596	0.477
CQM	0.447	0.439

Table 5 presents the results of the bootstrapping procedure, which used 5,000 subsamples ($p < 0.05$ and $t > 1.96$) to assess the significance of the path coefficient values (Hair et al., 2022; Becker et al., 2023). The findings indicate a significant relationship between reactive social media crisis management and corporate reputation ($\beta = 0.229$, $t = 3.708$, $p = 0.000$), customer trust ($\beta = 0.213$, $t = 3.708$, $p = 0.000$), and communication quality management ($\beta = 0.251$, $t = 4.936$, $p = 0.000$), supporting H1, H3, and H7. Communication quality management also has a significant impact on customer trust ($\beta = 0.455$, $t = 11.650$, $p = 0.000$), supporting H6. However, no significant relationship was observed between communication quality management and corporate reputation ($\beta = 0.258$, $t = 1.444$, $p = 0.149$), leading to the rejection of H5. Additionally, proactive social media crisis management has a positive and significant impact on corporate reputation ($\beta = 0.489$, $t = 6.222$, $p = 0.000$), customer trust ($\beta = 0.223$, $t = 4.485$, $p = 0.000$), and communication quality management ($\beta = 0.485$, $t = 8.562$, $p = 0.000$), indicating that H2, H4, and H8 are supported. Finally, customer trust has a significant impact on corporate reputation ($\beta = -0.144$, $t = 2.459$, $p = 0.014$), leading to the acceptance of H9.

Table 5: Structural Model Assessment

Relationship	Path Coefficients (β)	Standard Deviation	T Statistics	P values
CT->CRp	-0.144	0.058	2.459	0.014
RSMCM -> CRp	0.229	0.062	3.708	0.000
RSMCM->CT	0.213	0.042	5.045	0.000
RSMCM -> CQM	0.251	0.051	4.936	0.000
CQM->CRp	0.158	0.109	1.444	0.149
CQM->CT	0.455	0.039	11.650	0.000
PSMCM->CRp	0.489	0.079	6.222	0.000
PSMCM->CT	0.223	0.050	4.485	0.000
PSMCM->CQM	0.485	0.057	8.562	0.000

5. Discussions And Conclusion

This study investigates the effect of social media crisis management, both proactive and reactive, customer trust and communication quality management on corporate reputation. Based on the empirical results this study contributes to corporate reputation literature in terms of either social media crisis management and communication quality management or customer trust.

Echoing prior research on corporate reputation (e.g., Razak et al., 2023; Kibu et al., 2023; Arzberger, 2022; Salam and Jahed, 2023), this study reveals that proactive social media crisis management enhances corporate reputation, while reactive social media crisis management diminishes it. These findings suggest that being proactive before or during a crisis is crucial for building or maintaining corporate reputation. Proactive strategies entail being prepared ahead of or during a crisis by emphasizing transparency, authenticity, and responsiveness to tackle the challenges of misinformation and public scrutiny (Gasana, 2024). Conversely, relying on reactive crisis management can result in diminished credibility and trust among stakeholders, especially in today's digital era, where social media significantly influences public perception and organizational reputation (Triantafillidou, 2024). As a result, this study suggests that organizations should focus on proactive approaches to effectively manage crises driven by social media backlash, ultimately preserving their credibility and reputation over the long term. On the other hand, proactive social media crisis management is essential for maintaining customer trust and ensuring high-quality communication, especially in today's fast-paced digital environment. Proactive social media crisis management involves anticipating potential crises and developing strategies to address them before they escalate. This approach can significantly impact customer trust and communication quality. Proactive management can build trust by demonstrating transparency.

According to Zheng (2023) organizations that communicate openly and transparently during crises can enhance customer trust, as transparency reduces uncertainty and signals accountability. A quick and effective response can mitigate the adverse effects of a crisis. Coombs (2007) points that timely communication is crucial in crisis management, as it helps to control the narrative and reduce misinformation. Consistent messaging across platforms helps maintain credibility. As Coombs and Holladay (2014) suggest consistency in crisis communication helps reinforce organizational reliability and integrity, which are critical components of trust. Proactive management ensures that communication is clear and concise. Liu et al. (2011) emphasize that clear messaging is essential during a crisis to minimize confusion and ensure accurate information is conveyed to stakeholders, while Schultz et al. (2011) argue that engaging in two-way communication, which allows for feedback and interaction, is critical for enhancing communication quality, and Veil et al. (2011) highlight that utilizing multiple social media platforms can broaden the reach and effectiveness of crisis communication efforts. Therefore, proactive social media crisis management is essential for establishing and preserving customer trust and facilitating effective communication. Through emphasizing transparency, prompt replies, uniform messaging, precision, interaction, and leveraging diverse platforms, corporations can proficiently handle crises and bolster their image.

This study highlights the essential role of reactive social media crisis management in influencing customer trust, communication quality, and corporate reputation. Reactive social media crisis management entails addressing crises as they unfold, with the goal of quickly resolving issues and minimizing negative consequences. This strategy can have a substantial impact on customer trust, communication quality, and corporate reputation.

Delays in response, often characteristic of reactive management, can diminish customer trust. Coombs (2007) notes that a delayed reaction to a crisis can result in negative perceptions and loss of trust, as stakeholders may perceive the organization as unprepared or evasive. Authentic responses, including sincere apologies and corrective actions, can help rebuild trust, particularly when the organization takes responsibility for the crisis, as found by Claeys and Cauberghe (2014). The study shows that reactive strategies can undermine customer trust. Reactive management may also cause messaging inconsistencies, as Schultz et al. (2011) indicate that inconsistent messages across various channels can confuse stakeholders and weaken communication quality. Although challenging, a swift response is crucial. Stephens and Malone (2009) assert that effective reactive crisis communication involves the rapid dissemination of accurate information to counteract rumors and misinformation. Findings indicate that even within reactive strategies, accurate and consistent messaging enhances perceived communication quality. Additionally, effective reactive management can limit reputation damage. Colleoni et al. (2024) propose that a company's crisis response strategy greatly influences its reputation, as stakeholders assess the organization based on its response tactics. Social media plays a key role in shaping perceptions; Ott and Theunissen (2015) observe that these platforms enable organizations to engage directly with stakeholders, influencing perceptions and potentially reducing negative impacts on reputation. The study concludes that reactive social media crisis management significantly affects customer trust, communication quality, and corporate reputation. Although challenges such as delayed responses and inconsistent messaging can negatively impact these areas, authentic communication and prompt actions can mitigate damage and restore trust.

Effective management of communication quality is essential for developing and sustaining customer trust. This requires ensuring that communications are clear, consistent, and responsive to customers' needs. Clarity and consistency are crucial for building trust. Homburg et al (2010) emphasize that maintaining consistency across communication channels helps build trust by minimizing ambiguity and ensuring that customers receive dependable information. Responsiveness to customer inquiries and feedback is another key factor in enhancing trust. Grönroos (2007) points out that prompt and empathetic responses to customer issues demonstrate a company's commitment to satisfaction and strengthen trust. Customizing communication to address individual customer needs also fosters trust. Verhoef et al. (2010) note that personalized communication builds customer trust by showing that the company values and understands its customers. Therefore, effective communication quality management is shown to increase customer trust.

Moreover, customer trust is crucial in shaping a company's corporate reputation. A strong trust relationship with customers can enhance a company's reputation, while a lack of trust can harm it. Trust is a foundational element of a strong corporate reputation. Fombrun and Van Riel (2004) argue that trust forms the basis for a strong reputation, as it reflects the belief that the company acts responsibly and ethically. Trust also leads to customer loyalty and advocacy, which positively impact reputation. Doney and Cannon (1997) indicate that companies with high levels of trust are more likely to have loyal customers who become advocates, thus improving the company's reputation through positive word-of-mouth. Companies with a strong level of customer trust can better withstand reputational damage during crises. Laufer and Coombs (2006) suggest that trust serves as a buffer in crises, as customers are more inclined to give the company the benefit of the doubt and maintain a positive perception. Thus, effective communication quality management is key in establishing and maintaining customer trust, which in turn plays a vital role in shaping corporate reputation. By focusing on clarity, consistency, responsiveness, and personalization in communication, companies can build customer trust, leading to a stronger corporate reputation characterized by customer loyalty, advocacy, and resilience during crises.

Interestingly, the findings did not support the hypothesis that crisis communication quality affects corporate reputation (H5). This outcome could be attributed to several factors. First,

corporate reputation is a complex construct affected by multiple elements beyond communication quality, including product quality, corporate social responsibility, financial performance, and market presence. Fombrun and Van Riel (2004) state that corporate reputation results from a complex interaction of various organizational activities and stakeholder perceptions. Therefore, while communication quality is important, it may not be the most critical factor influencing reputation in this particular context. Additionally, the impact of communication quality on corporate reputation can differ across industries. In certain sectors, other factors may have a more significant role in shaping reputation. As noted by Dowling (2004), industry-specific dynamics can influence the relative importance of different factors that contribute to corporate reputation. For instance, in industries where product innovation or service reliability is crucial, communication quality might be of secondary importance such as the Starbucks, that is the case of present study, demonstrates innovation through its seasonal beverages and high-quality service (Oe and Deng, 2024; Naibaho, et al., 2023). Moreover, the effect of communication quality management on corporate reputation might be more long-term than immediate. Hall (1993) suggests that building a reputation is a long-term process, and changes in communication practices may not lead to immediate shifts in reputation. Consequently, while communication quality management is generally considered a key factor in shaping corporate reputation, the lack of support for this hypothesis in the study could be due to the intricate nature of reputation, industry-specific factors, and timing considerations. Further research could delve deeper into these aspects or examine additional variables that might mediate or moderate the relationship between communication quality and corporate reputation.

In conclusion, this study reveals that proactive social media crisis management plays a crucial role in enhancing corporate reputation and maintaining customer trust through effective communication strategies. Organizations are encouraged to adopt proactive measures, including transparent and consistent messaging, to preemptively address crises and mitigate misinformation. While reactive crisis management can still manage damage with prompt and authentic responses, it tends to undermine trust and communication quality when not executed swiftly and consistently. Moreover, the study highlights that while communication quality is vital for trust-building, its direct impact on corporate reputation may vary across industries and requires a long-term perspective. These insights suggest a need for further research to explore additional factors that mediate the relationship between communication quality and corporate reputation.

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The Effect of Strategic Leadership and Team Play on Corporate Resilience: Research In the Software Industry

Assist. Prof. Dr. Tuğbay Burçin Gümüş
Istanbul Gedik University
burcin.gumus@gedik.edu.tr

Gülnihal Yaşar
Istanbul Gedik University
gulnihalyasar2000@gmail.com

Abstract

In this research, the effect of strategic leaders in increasing institutions' resilience was discussed for institutions to survive and maintain continuity in a changing and developing economy, environmental conditions and increasing competitive environment.

The strategic role of leaders in institutions, the effects on the shaping of corporate culture by leadership, the evaluation of the competencies of the employees by the leadership, the role of leaders in the strategic planning and risk management processes, the determination of corporate resilience strategies by the leadership and the investigation of the effect of leaders on increasing corporate resilience, and the development of various suggestions as a result of the findings are the aim of the research.

The research was conducted in a software company with a dynamic and constantly changing external environment. The reason for choosing this company is the abundance of departments in its internal structure and the relationships between these departments, and the need for intense communication and communication. In addition, rapid technological developments in the software sector in which it operates require the company to have a heterarchical structure and adopt a matrix organizational structure. These features allow the research to be addressed from a broader and more in-depth perspective.

In the research, an induction analysis model based on a structured interview method from qualitative research methods was used. The research was carried out with the leaders who worked in an institution in the software sector in 2023-2024. In the research, the research questions prepared regarding the effect of strategic leaders on increasing corporate resilience were used as a data collection tool.

The research participants consist of six team leaders in the researched institution. Before the research questions were conveyed to the participants, questions were asked about the name, surname, age, gender, level of education, the department working in the institution, the year worked in the institution, the current position in the institution, the year of leadership role in the institution regarding the determination of demographic characteristics. Leaders assume leadership in different teams within the organization. Fourteen questions have been conveyed to team leaders about shaping corporate culture by leadership, developing the competencies of employees through leadership, leadership role within the scope of strategic planning and risk management processes, and determining corporate resilience strategies by leadership.

After the participants' answers to the research questions were collected, analyzed, interpreted and analyzed, the findings obtained for each question were explained.

From the findings, it was concluded that the strategic leaders in the institution had effects on the creation, implementation, supervision and conclusion of the long-term plans determined to implement the goals and objectives determined in line with the vision and mission of the institution, in the creation and maintenance of awareness, in the acquisition and implementation processes of strategic decisions, in the transformation of threats and crises into opportunities, to implement the goals and objectives determined in line with the vision and mission of the institution; It was concluded that to increase this effect for the benefit of

the institution, the ability, responsibility, knowledge and awareness of the leaders should be increased.

Keywords: Strategy, Strategic Leadership, Resilience, Institutional Resilience

Category Number: 2

Category Subject: Management in Terms of Leadership

Entrance

In the 21st century, institutions need to develop various strategies to survive and ensure their continuity in the advancement of science, development of technology, intensified competition conditions and globalizing economy. In order to adapt to internal and external environmental changes, to respond quickly and accurately to sudden and unexpected situations, to provide flexibility, to be able to make long-term plans in line with the determined goals and objectives considering the vision and mission of the institution, to ensure institutional adequacy, to be able to turn threats into opportunities, to create and implement strategic management processes, institutional resilience is required.

Planning and implementing all these activities and studies, taking strategic decisions for the benefit of the institution, establishing competence and culture, and developing new generations that will adapt to developing technology and make a difference is only possible with strategic leaders.

Strategic leaders need to develop and implement appropriate strategies for the continuity of the institution. Naturally, leaders are also affected by all the changes brought about by globalization, competition, and the changing economy.

The change in industries that occurred linearly in the past centuries, the changing and developing competitive environment, and the globalizing economy prevented the direction of the institution from being determined from the perspective of a single individual. For this reason, the structure of 21st-century institutions has changed and caused strategic leadership practices to differ.

Strategic leaders follow the changes that occur with the global economy, create flexible conditions to adapt to the changes, ensure continuity and determine the goals and objectives determined within the framework of the corporate vision, and plan activities to achieve these goals and objectives. The survival and success of the organization in the changing and developing competitive environment depends on the activities of the leader.

Institutions encounter problems at certain periods depending on the changing conditions in the internal and external environment from the moment they are established. During this problematic process, some institutions fail to overcome the problems and collapse, while some institutions can overcome this difficult process with less damage than others, and in some cases, they can even turn the existing crisis into an opportunity and show a better performance than the previous one. Even if institutions go through similar problematic processes under similar environmental conditions, the difference in how institutions overcome this process is due to the resilience levels of the institutions. The increase in the resilience level of institutions is possible with the effects of the strategic leaders in the institution on the institution.

This research examines the impact of strategic leadership on increasing institutional resilience. The aim of the research is to investigate the strategic role of leaders in the institution, the effects of leadership on shaping institutional culture, the evaluation of employee competencies by leadership, the role of leaders in strategic planning and risk management processes, the determination of institutional resilience strategies by leadership, and the impact of leaders on increasing institutional resilience, and to develop various recommendations as a result of the research.

The research consists of 3 parts. The first part deals with strategic leadership, the second part deals with institutional resilience. In the third part, a study was conducted on the effect of strategic leadership on increasing institutional resilience.

The research was conducted in an institution in the software industry with team leaders in the institution. The research was conducted to address the impact of strategic leaders in an institution on increasing the resilience of the institution and to contribute with suggestions.

2. Strategic Leadership

2.1. The Concept of Strategy

The concept of strategy is a subject in today's business world where institutional structures and competitive forces are used, and their importance is emphasized. Due to the rapid changes experienced in the internal and external environments of institutions, increasing competition, rapid technological changes, changes in the legal field, changes in market and customer characteristics and many interrelated factors, it has become difficult for institutions to ensure the continuity of their organizational structures. Due to these factors and the rapidly changing conditions that arise from them, success in institutions cannot be achieved only with successful managers who have a classical mindset and with the management of these managers. Therefore, institutions need managers who can develop the necessary strategies to accept the existence of changing conditions and to adapt to the changes on time (Kırım, 2006).

In the 1970s, with the structural change of economies and the increase in the competitive environment in the market, institutions began to address the concept of strategy to ensure their continuity and make profits. In this process, institutions addressed strategy not only as a planning element but also as a management element (Hax, 1994).

Strategy is an analysis based on the institution's objectives and determines the institution's main areas of activity.

It encourages employees within the institution and ensures the continuity of the process, uses all physical and human resources, including machinery and equipment belonging to the institution, with a certain harmony and efficiency target, and plays a role in carrying out the institutions' future goals and objectives and plans related to these goals and objectives (Aktan, 2003).

The strategies that institutions will implement in the field of management have led to the formation of interconnected disciplines, first called "Strategic Planning" and then "Strategic Management", and "Strategic Leadership" in the sense of the manager who can implement them (Akgemci, 2019).

2.2 The Concept of Leadership

The concept of leadership can be found in many areas where there is a management function since the earliest ages of history. Although word leadership was first used in the 14th century, it has been used in more areas since the 19th century. Although leadership, which has been addressed by many thinkers and scientists from Aristotle, Socrates, Plato to Kurt Lewin, has been defined according to the person's perspective and the characteristics that are important to him, the definition of leadership has also developed with the increase in studies conducted since the 1950s (Doğan, 2021).

Leadership can be defined as the totality of knowledge and skills to bring a group of people together with specific goals and objectives and to mobilize them to achieve these goals (Duacioğlu, 2009). Leadership is the ability of a person to motivate and influence others to contribute to the success and continuity of the organization. A leader is a person who motivates individuals and employees within an organization and directs them to the goal so that a community or organization can achieve its goals and objectives. Leaders are also at the forefront of shaping the future of the organization and are the people who influence the individuals and employees in the organization for whom they assume leadership responsibility and ensure that they act in line with the determined goals and objectives (Güney, 2020).

2.3 Leadership Characteristics

For an individual to be a leader, he/she must have a different personality and characteristics than the individuals in the community that follow him/her. The leader must be able to provide communication and interaction between the individuals that make up the community. The leader must be able to harmonize the goals and efforts of the individuals that make up the community. The leader must be able to mobilize individuals for common goals and objectives. The leader must be the person who is followed, the one who is consulted and guided in the obstacles encountered on the way to the goal (Bayram, 2013).

2.4 Leadership Models

The leadership behavior adopted by the individual leader affects the effectiveness of the individual as a leader. There are many leadership models in the literature, the most common of which are autocratic (commanding) leadership, democratic leadership, and leadership models that allow full freedom.

Autocratic leadership is a leadership model where there is a single decision maker, the authority that comes with the authority is used, oppressive and aggressive qualities can be found, and a fearful punishment and threat system is dominant. Autocratic leaders make all decisions themselves without delegating their authority and responsibilities and do not include other team members or subordinates in this process. Decision-making by consultation and exchange of ideas are out of the question in this leadership model. In communities or businesses managed by an individual with this leadership model, the decision-making process is fast, but there is no team spirit, cooperation and, accordingly, trust and commitment between individuals. This leadership model, where obedience is expected, is generally seen and adopted in organizations where bureaucracy is dominant and traditional management culture is maintained (Bayram, 2013).

In the democratic leadership model, the leader tends to share his/her authority. The democratic leader determines the goals and objectives with subordinates and other team members. The determination of goals and objectives, divisions of labor and the people to be assigned to these divisions of labor are determined by the leader because of the democratic leader exchanging ideas. The democratic leader shares his/her decisions. Informing the community leader about the process, including his/her subordinates in the decision-making process, and being a sharer are the characteristics (Bayram, 2013).

In the fully free leadership model, there is little need for management authority, individuals are left to their own devices, and each individual is allowed to find their own goals, plans, and programs. In the fully free leadership model, the leader does not protect his authority, all authority is in the hands of subordinates. Authority is not used in this leadership model. In the fully free leadership model, the participation rate and action of individuals are high, but since there is no authority, individuals are likely to turn to different goals. In this leadership model, team spirit will decrease, and team success will also decrease (Duacıoğlu, 2009).

2.5 Strategic Leadership

Strategic leadership is defined as making decisions by voluntarily influencing individuals and thus providing short-term and long-term benefits for the institution. A strategic leader is a person who creates, plans, implements and controls the strategy of an institution. In cases where strategic change is required, a leader with a strategic leadership approach suggests and designs change to other individuals, provides flexibility in this process and strengthens the belief that individuals can adapt to change. A strategic leader can create a strategic management approach for what needs to be done by predicting the near and distant future. A strategic leader authorizes other managers and employees to achieve future goals and directs individuals to targets in line with the institution's vision. A strategic leader tries to see the big picture instead of dealing with daily problems (Duacıoğlu, 2009).

The aim of strategic leadership is to determine the end points and to apply the best and most effective methods on the way to the goal. If strategy is considered as a plan implemented on the way to the goal, strategic leadership can be expressed as thinking and deciding to develop and implement a plan (Uğuroğlu and Çelik, 2009).

The strategic leader should be able to motivate, influence and include employees in decision-making processes for the organization to achieve its goals and objectives. In this context, the strategic leader should be able to make effective decisions, think strategically and analytically, use communication effectively, make plans in line with goals and objectives, take manageable risks, be flexible in the face of possible situations, manage chaos that may arise within the organization, act holistically and independently, delegate authority to employees to support their development and evaluate their employees (Nyong'a and Maina, 2019).

2.6 Development of Strategic Leadership

The beginning of studies on strategic leadership can be chosen as the 1980s because the number of systematic studies conducted before this date is very few. Another reason for choosing the 1980s as the beginning is that, according to Finkelstein and Hambrick, two important developments contributed to the acceleration of strategic leadership research in general in this period. The first of these was the rechristening of organizational policy under the name of strategic management with the work written by Schendel and Hofer in 1979, which summarized the views of many important people in the field of management. Another important development was the start of publication of the "Strategic Management Journal" around this time (Doğan, 2021).

Strategic leaders need to develop and implement appropriate strategies for the continuity of the institution. Naturally, leaders are also affected by all the changes brought about by globalization, competition and the changing economy (Doğan, 2021).

The main task of strategic leaders in institutions is to provide a vision for the institution and to create the necessary conditions, goals and objectives to achieve this vision. Especially if this vision achieved results in financial success, the position of the strategic leader within the institution and the trust of individuals in the institution in the leader also increase. However, with the economic globalization that came with the 21st century, the stagnant and predictable environmental conditions in which institutions operate have changed. The change in industries that occurred linearly in the past centuries, the changing and developing competitive environment, and the globalizing economy have prevented the direction of the institution from being determined from the perspective of a single individual. For this reason, the structure of 21st-century institutions has changed and caused strategic leadership practices to differ (Uğuroğlu and Çelik, 2009).

2.7 Strategic Leadership Characteristics

Depending on the many different but similar definitions of strategic leadership in the literature, the characteristics of strategic leaders should have also been specified (Özyer, 2018).

Strategic leaders are the most influential people in the organization they are in regarding the future of the organization. They are the people who have the final say in decisions taken within the organization. The most important task of the strategic leader within the organization is to determine the climate of the organization and to ensure that it is managed effectively and efficiently. Since individuals within the organization follow their leaders, leaders must have a vision and ensure that their employees focus on the long-term goals of the organization. They pay attention to the interaction of all employees within the organization with each other. They ensure that the goals determined for the organization and the activities determined to achieve these goals are understood correctly and clearly by the employees of the unit and that the activities are followed during the implementation process. Leaders also attach importance to the organizational culture and ensure that employees pay attention to it (Çelik and Uğurluoğlu, 2009).

Strategic leaders follow the changes that occur with the global economy, create flexible conditions to adapt to the changes, ensure continuity and determine the goals and targets determined within the framework of the institutional vision, and plan the activities to achieve these goals and targets. The survival and success of the institution in the changing and developing competitive environment depends on the activities of the leader.

Strategic leaders must be able to make decisions quickly and effectively in a crisis environment, consider the effects of the decision results on the institution when making decisions, and act in accordance with the institution's vision, goals and objectives.

A leader who has strategic leadership qualities and can reflect these qualities to the institution he is affiliated with can survive in a changing and developing competitive environment, continue his activities successfully, and make a profit by achieving his goals and objectives.

2.8 Strategic Leadership Functions

Strategic Leadership Functions can be explained with the "Three Ring Model" created by Adair. Adair bases strategic leadership on the principles of the Three Ring Model. The basic skills that a successful strategic leader should have been explained in three items. According to the Three Ring Model, the duty of the strategic leader is to

is to aim to achieve success in situations that leaders have to overcome. The Three Ring Model addresses three tasks of the strategic leader (Adair, 2005).

- To achieve common goals and objectives,
- Establishing the team and ensuring its continuity,
- Ensuring and improving the motivation of team members

According to the Three Ring Model, strategic leadership functions are examined in seven dimensions. These are:

- Determining a direction for the institution,
- Pursuing an efficient strategy and active policy,
- Implementing targeted corporate strategies,
- Organizing and reorganizing,
- Revealing the spirit of the institution,
- Connecting the institution to other institutions and society,
- Determining the leaders of the age and raising the leaders of the future (Ünal, 2012).

Strategic leadership functions ensure the structure of the institution, the correct determination of the resources needed for the management of the institution, motivation, harmony and cooperation in the planned activities and strategies to achieve the goals and objectives determined within the framework of the institution's vision and mission (Ünal, 2012).

2.9 Strategic Leadership Forms and Dimensions

According to Pisapia (2009), strategic leadership styles are discussed in five dimensions. These dimensions are transformational, ethical, political, managerial and relational leadership.

The concept of transformational leadership was first mentioned in Daunston's (1973) study "Rebellion Leadership". Transformational leadership prioritizes emotions and cultural values and influences the masses with the impression it leaves on its followers and the respect, trust and behavior it creates in its employees (Barutçugil, (2006).

Ethical leadership is a leadership approach based on having certain ethical values and principles at the forefront. Pisapia defines ethical leadership as leadership that creates changes by blending them with belief values (Pisapia, 2009).

In the globalizing and changing economy, institutions need leaders with high political skills to motivate their employees, increase team performance, ensure unity and solidarity, and evaluate employees' talents. These needs can be met by political leaders who have an

impact on the behavior of the individuals who follow them, are flexible according to the situation and conditions, have developed social relationships, can establish strong interactions, and can inspire by providing confidence and motivation. Pisapia argues that in political leadership, leaders aim to strengthen their assets and use the resources that they have for the institution they are affiliated with to achieve success.

Managerial leadership includes stability and order and is defined as the preservation of the existing internal order. This aspect of managerial leadership is effective in managing the short-term goals of institutions, achieving targets and managing planned daily activities.

Relational leaders are leaders who know and care about the personal needs and values of the individuals who follow them in their environment and in the organization, establish strong communication with individuals, and focus on taking the existing relationship to a higher level (Groves, 2006).

2.10 Benefits of Strategic Leadership to Institutions

Strategic leaders contribute to the adoption of corporate vision and the effective and efficient execution and successful completion of processes and activities related to strategic management (Learning, 2012).

The strategic leadership approach contributes to an institution at three important points in the strategic management process: effectiveness, strategic flexibility, and competitive advantage (Doğan and Özdemir, 2021).

Strategic flexibility is the anticipation of changing competitive conditions along with globalization, the developing economy and the rapid adaptation to changing conditions. For institutions to adapt quickly to chaos, dynamism, and sudden fluctuations in changing environmental conditions and these changes, flexibility must be at the forefront in all their activities and processes. With the strategic leadership approach, institutions can ensure their continuity in the competitive environment, achieve success by implementing the strategic processes and activities determined to achieve their goals and objectives, and can quickly adapt to changing conditions and technological developments (Doğan and Özdemir, 2021).

Competitive advantage is the situation where an institution is superior to its competitors due to a certain feature, resource or strategy. With competitive advantage, institutions achieve more success than their other competitors. There are two ways for institutions to achieve competitive advantage. One is to plan and implement the best strategic activities and processes to achieve success in the end, but this alone is not enough for competitive advantage. Another is the strategic positions of institutions. Institutions with competitive advantage are seen to have a clear and distinct strategic position. Competition includes not only current competitors but also potential competitors who may enter the sector in the future. Therefore, to ensure the competitive advantage of the institution, the strategic leader must know how to overcome adverse and complex competitive conditions. Institutions with strategic leadership achieve competitive advantage by applying strategies that are not applied simultaneously, cannot be imitated and cannot be imitated, and have the potential to show rapid change to their current and potential competitors (Doğan and Özdemir, 2021).

For institutions to be able to continue and achieve success in competitive conditions, the strategic decisions they make, and the plans and processes determined must be successfully implemented. For these, there is a need for strategic and visionary leaders, who can foresee change and quickly adapt and respond to this change, can ensure that individuals who follow them take similar action, can take precautions against risks and crises, can observe the goals and objectives of the institution and make strategic decisions in line with these goals and objectives, are motivators, and have strong communication and interaction (Doğan and Özdemir, 2021).

3. Institutional Durability

3.1 The Concept of Durability

Resilience is the capacity of a system, institution or society to resist or change to achieve an acceptable level of functioning and structure. This is determined by the degree of the social system's ability to self-organize and to increase its capacity to learn and adapt, including the capacity to recover from a disaster.

3.2 The Concept of Institutional Resilience

Institutional resilience can be defined as ensuring the continuity of the current situation by resisting the challenging conditions that institutions face, gaining skills by getting stronger in the face of difficulties and becoming better than the current situation by turning difficulties into advantages. In a more concise expression, institutional resilience is the ability to cope with unpredictable and unfavorable situations (Okun, 2022). Institutional resilience not only maintains the current situation of institutions but also uses opportunities to maintain their performance (Okun, 2022).

It is accepted that a resilient institution has the ability to cope with environmental threats and changes, to adapt quickly to changing situations with the principle of flexibility, to continue its activities to ensure the continuity of the institution even in difficult conditions and times of crisis and to return to the economic break-even point in a short time after facing a devastating impact (Lengnick-Hall and Beck, 2009).

Resilient institutions can cope with threats, challenges, and changes in their environment, manage these changes effectively and adapt quickly to changing conditions, maintain their current activities in order to ensure continuity even under difficult conditions, respond effectively to disruptive events that occur and return to their current state or even become better than before after disruptive events and changing situations.

3.3 Conceptual Approaches to Institutional Resilience

The concept of institutional resilience is addressed in literature from five different perspectives and analyzed in line with these approaches. These are the behavioral approach, intuitive approach, renewal process approach, risk management approach, and system approach.

According to the behavioral approach, a resilient organization can anticipate, perceive and quickly adapt to environmental changes (Chan, 2011).

According to the intuitive approach, a resilient institution can anticipate disruptions and threats. In this approach, it is stated that the awareness and predictive features of institutions are important to ensure resilience (Kurşuncu, 2022).

According to the renewal process approach, a resilient institution can renew itself. In the renewal process, the importance of being aware of difficult conditions in advance is emphasized.

According to the risk management approach, a resilient institution can maintain its continuity in the face of uncertain and disruptive events that occur under crisis or stress. With this approach, institutions focus on abandoning their current systems and positions in times of crisis and returning to their status by overcoming the crisis as quickly as possible with alternative systems and processes. Maintaining their status or being able to return quickly is linked to effective risk management. Studies show that institutions can increase their resilience in different ways. These can be expressed as learning by trial and error, learning between institutions, learning from the institution's environment, and the capacity to create innovation (Chan, 2011).

According to the system approach, a resilient institution has a broad perspective on overcoming crises and changes and providing rapid adaptation and solutions to maintain and increase its resilience.

3.4 Dimensions of Institutional Resilience

When literature studies are examined, it is seen that the cognitive, behavioral, and contextual dimensions of the concept of resilience are addressed. These dimensions increase the ability of institutions to make sense of their current situation and to adjust on an institution-by-institution basis. Studies have shown that these three dimensions play a different but complementary role in the institution's response to rapid and unexpected changes (Lengnick-Hall and Beck, 2005).

Cognitive resilience, known as mental processes and conceptual orientation, is defined as "the organization's awareness of unexpected situations, interpretation, analysis of these situations and formulating the response to these situations" (Lengnick-Hall and Beck, 2009). Cognitive resilience can also be expressed as the ability of the organization to correctly evaluate and respond to unprecedented conditions and events in line with a strong purpose, value and vision (Lengnick-Hall and Beck, 2005).

Behavioral resilience is the ability to analyze information and data obtained through cognitive resilience and to act with this analysis. In other words, it is a driving force, a tool that acts as an engine that carries the institution from its current state to a better state. Behavioral resilience can be expressed as the combination of behavioral patterns that support the institution in learning unexpected and negative situations under difficult conditions, implementing new habits, and benefiting from all available resources to ensure continuity in difficult and unexpected situations.

Contextual resilience refers to the interpersonal connections, resources and supply lines that are effective in creating the appropriate conditions required for institutions to take rapid action in challenging conditions that are disruptive, surprising and negatively affect the long-term activities of the institution. The contextual resilience dimension enables the cognitive and behavioral aspects of institutional resilience to come together and be used and consists of connections and resources (Lengnick-Hall and Beck, 2009).

3.5 Developing and Managing Institutional Resilience Capacity

The resilience capacity of an institution includes the ability of the institution to react to challenging and unexpected events it faces and to take the necessary actions to turn the crisis into an opportunity. The resilience capacity is a multidimensional quality that enables the institution to effectively absorb challenging and unexpected events, to respond and to turn the encountered negative situation into an opportunity. Resilient institutions consider the activities, behaviors, and interactions of their employees. Apart from individual activities and resilience being an important factor in the strength of the institution, the capacity of the institution depends on both the interaction between individuals and the effectiveness of institutional processes (Megele, 2014).

Institutional resilience management is a management framework for deciding on the necessary activity planning to be able to predict changes in the environment and current conditions, to prevent them if possible or to be ready for change, and to respond to change in a timely and accurate manner. The resilience management process consists of the elements of creating awareness, selecting the basic components of the institution, assessing, identifying and prioritizing security vulnerabilities, and increasing integrable capacity.

In addition, human resources have a role in developing institutional resilience capacity and resilience management. Studies have shown that increasing the individual competence of institutional employees will have an impact on increasing institutional resilience. In addition to the important role of human resources in resilience management, management also has important responsibilities.

4. Effect Of Strategic Leadership on Increasing Institutional Durability

4.1 Purpose of Research

This research examines the effect of strategic leadership on increasing organizational resilience in an organization operating in the software sector and having a matrix

(heterarchical) organizational structure. The software sector has a dynamic environment that requires rapid adaptation to constantly changing and developing technological innovations. In this context, the original value of the research lies in revealing the role of strategic leaders in organic and heterarchical organizations specific to this sector and how these leaders shape organizational resilience. The research makes an important contribution to the literature by addressing the applicability of the concept of strategic leadership to the software sector and the critical role of strategic leaders in increasing organizational resilience within the specific dynamics of this sector for the first time. This study provides unique and innovative insights into the determination of sector-specific leadership and resilience strategies.

The aim of the research is to examine the effects of leaders who have adopted the strategic leadership model on the resilience of their institutions and on increasing resilience. In this context, the determination of institutional resilience strategies by strategic leaders, the shaping of institutional culture, the leadership role in strategic planning and risk management processes and the development of employee competencies were discussed.

4.2 Assumptions of The Study

The assumptions of the research consist of the following items.

1. It is accepted that the leaders participating in the research will answer the research questions sincerely and objectively in their opinions and evaluations about strategic leadership and institutional resilience.
2. It is accepted that sufficient questions were used to obtain the opinions of the strategic leaders participating in the research.
3. It is accepted that the structured interview, which is one of the qualitative research methods used by the researcher, is sufficient to obtain data.

4.3 Limitations of The Study

The limitations of the study consist of the following items.

1. The opinions and evaluations of the leaders participating in the research about strategic leadership and institutional resilience, and the data obtained from the interviews are limited to structured interview questions.
2. The research is limited to strategic leaders who will work in an institution in the software sector in the years 2023-2024. Other employees in the institution and other institutions in the sector are outside the scope of the study.
3. The research is limited to the information provided by strategic leaders in the institution.
4. The research is limited by the small number of strategic leaders participating.
5. The research is limited to asking all same questions to all participants, in the same order, and answering them within the same period.

4.4 Research Model

In the research, an inductive analysis model based on the structured interview method, one of the qualitative research methods, was used to examine the opinions and evaluations of the strategic leaders in the institution and the effect of the leaders on the institutions they are in, the resilience of the institutions and increasing the resilience of the institution.

Qualitative research is a process of inquiry that attempts to understand the problem or phenomenon under study in a questioning, interpretive and in-depth manner within its natural environment. Qualitative research is a subjective process aimed at perceiving previously known or unnoticed problems and addressing the facts related to the problem. Qualitative research helps to compile non-numerical data and is based on communication-based data collection methods. The areas of focus are the individual, society and culture (Bhat, 2024).

In qualitative research, data is collected in its natural environment, where participants experience the questions. Qualitative data collection techniques such as observation,

interview, documentation, and discourse analysis are mostly used. After the data is collected, it is analyzed, interpreted, and analyzed. Qualitative research involves complex reasoning. In the qualitative research process, the focus is on understanding the problems or issues faced by the participants, the problems are documented, and precautions are taken accordingly (Bhat, 2024).

Structured interview is a qualitative research method in which the questions to be directed to the participant are prepared in advance and the data is collected by asking the same questions to all participants in the same order. In structured interviews, the questions do not have a flexible structure due to being determined in advance, creating answer categories or being open-ended. Structured interviews are generally preferred when the study is conducted on a large sample. This qualitative research method allows the same type of data to be obtained at different times (Dömbekci and Erişen, 2022).

Participants were determined after an interview with the CTO HMA at the institution where the study would be conducted.

4.5 Questions of Research

In the research, interview questions were prepared for the participants on the following topics.

1. Shaping of corporate culture by strategic leadership
2. Development of employee competencies by strategic leadership
3. Strategic leadership role in strategic planning and risk management processes
4. Determination of institutional resilience strategies by strategic leadership

4.6 Data Collection Method

4.6.1 Determination of the institution and participants where the research will be conducted

The research was conducted in a software company that provides end-to-end cloud systems to travel companies, as it is expected to be conducted in an institution where strategic planning is carried out, where sudden and unexpected events are encountered, and which requires high levels of resilience. The institution in question acts as a service provider, strategy partner and produces solutions in data science for travel companies.

The matrix organizational structure was adopted because there were many changes in the external environment of the institution where the research was conducted, there were many departments within the institution and many inter-departmental relationships, there was a high need for communication and correspondence between departments and individuals, there was a lot of technological work and development in the software sector in which the institution operates, and employees had more than one manager and more than one reporting line answering to the manager.

The sample frame of the research is convenience sampling. There are 59 employees in the institution and 6 of them assume the role of team leader. According to Pisapia (2009), a study was conducted on 6 strategic leaders who adopted the relational leadership dimension, which is one of the five dimensions of strategic leadership. Relational leaders are leaders who know and care about the personal needs and values of the individuals who follow them in their environment and in the institution, establish strong communication with individuals and focus on taking the existing relationship to a higher level (Groves, 2006).

The participant questions used as a data collection tool in the research were conveyed to these 6 team leaders and the interview was conducted. All participants answered the questions openly and clearly, without being exposed to external factors. No negative situation was experienced in the interview, the length and depth of the answers they gave to the questions may vary.

Table 4.1 includes demographic information about the participants in the study.

Table 4.1. Demographic Information of the Participants in the Study

No	Name Surname	Age	Gender	Education Level	Current Department	Years of Service in	Current Position	Years in a Leadership Position
1	ZB	36	Woman	Associate degree	Customer Success	6.5 years	Customer Success Team Leader	3.5 years
2	VY	42	Male	Degree	Engineering	1 year	Engineering Director	1 year
3	UP	35	Male	University (continued)	Design	4.5 years	Design Department Leader	4.5 years
4	HMA	38	Male	Degree	Technology Management	3.5 years	Chief Technology Officer	3.5 years
5	ASB	40	Male	University (continued)	DevOps Team	5 years	DevOps Team Leader	4 years
6	ALSO	46	Woman	University	Software Development	3 years	Engineering Manager	3 years

4.6.2 Determining the Research Environment

After obtaining the necessary permissions, participants were informed about the study, and interview questions were sent. A 3-day response period was given for the questions. Participants answered the questions within a valid period. Continuous communication was established during the response period.

4.6.3 Preparation and determination of research questions

In the study, interview guide questions that were used in the literature and created because of the literature review were used to examine strategic leadership, institutional resilience, and the effect of strategic leadership on increasing institutional resilience. In the preparation of the interview questions, interview guide questions in the book "Strategic Leadership in Businesses" by Senem Besler (2004), interview questions in the doctoral thesis "Strategic Leadership - Çağ and Nema Education Enterprises General Directorate Strategic Leadership Applications" by Şükrü Sert (2015) and questions created by the researcher because of the literature review were used.

While determining the research questions, the topics specified in 4.5 were taken as reference. In the structured interview questions consisting of a total of 14 questions, questions 1, 2, 3, 4 and 5 were prepared under the topic of shaping corporate culture by strategic leadership; questions 1, 2, 3, 4, 5 and 14 were prepared under the topic of developing employee competencies by strategic leadership; questions 6, 7, 8, 11, 12 and 14 were prepared under the topic of strategic leadership in strategic planning and risk management processes; questions 9, 10, 11, 12 and 13 were prepared under the topic of determining corporate resilience strategies by strategic leadership.

The research questions are listed below. The same questions were sent to all participants in the same order and were asked to answer within the same period.

1. Can you evaluate your current position as a strategic team leader based on the work done?
2. Are the corporate structure and the strategic leadership role you undertake compatible with the structure of the institution and the work carried out?
3. Are you aware of the institution's vision, mission, goals and objectives?
4. As a strategic leader, were your opinions taken into consideration when determining the organization's vision, mission, goals and objectives?
5. As a strategic leader, what is your impact on the organization? What kind of role do you play in which areas, situations and events?
6. How do you react in sudden and unexpected situations? What is your role in such situations, what are your effects?
7. Are there processes determined for the planned goals within the organization? How and on what basis are the tasks determined? What are your contributions and influences on these processes?
8. Does the institution have strengths and weaknesses in environmental changes? Is a forward-looking study being conducted to determine these aspects? How do you evaluate crises and opportunities arising from changes?
9. Is there a general view or understanding of resilience within the organization?
10. What is being done to increase resilience in the institution?
11. Are there strategies to increase organizational resilience? If so, how do you determine and implement them? What are your influences as a leader?
12. How do you evaluate the flexibility of the institution against changing situations and its resilience against sudden and unexpected crisis situations?
13. What do you think are the factors that affect the resilience of the institution?
14. What is your duty to increase corporate resilience? What do you do to instill and sustain the understanding of resilience in the team?

4.6.4 Application of research questions to participants

There are 14 questions in total in the research. The same questions were sent to all participants in the same order and were asked to answer them in the same period. Participants were asked to answer the questions according to their feelings and thoughts, perspectives, opinions, evaluations and suggestions, and no intervention was made. Questions were asked to each of the 6 participants in different environments, and it was not possible for them to be affected by each other's answers. In addition to the 14 questions, participants were first asked their name, surname, age, gender, level of education, the department they work in the institution, the years they have worked in the institution, their current position and the number of years they have been in the leadership position to obtain data on their demographic characteristics. The demographic characteristics of the participants are detailed in Table 4.1. Since permission was obtained in advance for the interview and the interview period was determined, the interview was carried out without any adverse situation.

4.7 Findings

This part of the research includes the analysis of the answers given to the participant questions, the analysis and interpretation of the collected data. The data was first interpreted on a participant basis in line with the answers given by each participant based on the questions, and then the answers given by the participants were compared and interpreted within the framework of the institution. In the participant-based interpretation, the answer given by each participant to the question was added. In the interpretation within the

framework of the institution, if there was a difference in the answers between the participants, it was stated and interpreted.

All participants state that they provide support within and outside the team, as well as ensuring that the team they lead fulfills its duties. They aim to take the relationship within the team and between their own team and other teams, the connection between activities, decision processes, and strategic steps for the benefit of the entire institution, and they strive for this. They have a say and responsibility in the management of teams, projects, and the institution.

Corporate identity: in addition to the visual elements of an institution such as symbols, logos, colors and tangible products, can provide some clues about how the institution is institutionalized, whether it is centralized and whether it has areas, branches or brands. The elements of corporate identity include the corporate philosophy that includes the vision and mission of the institution, the corporate design that includes product, communication and environmental designs, the corporate behavior and corporate communication that consists of the sum of the institution's economic, social and political behavior and information and quality behaviors. In Sibel Selvi's study titled "Impact of Identity and Culture in Brand Formation: Research on the Goldaş Brand", it was concluded that the vision and mission of the institution are effective in the formation of the identity of the institution. In line with the answers given by the participants to the interview questions, it is observed that the knowledge of the institution's vision, mission, goals and objectives is effective in the formation of the corporate identity and, accordingly, indirectly, in the formation of the institution's durability.

All participants support their own teams and other teams within the limits of their competencies, responsibilities and the boundaries given to them by the institution and are involved in strategic decisions. They fulfill their duties within their competencies to ensure internal balance, continuity of the institution and customer satisfaction, and assume a full leadership role with the strategic decisions they make or support.

According to the answers given by the research participants to the interview questions, it is seen that the increase in strategic leadership behaviors of strategic leaders, the development of crisis management skills, and the increase in the rate of involvement in strategic decision-making processes have a positive effect on the institution. This finding is consistent with other studies conducted in various fields related to strategic leadership. For example, in Uğurluoğlu's study titled "Evaluation of Strategic Leadership Characteristics of Hospital Managers", it was determined that approximately 50% of hospital managers use strategic leadership characteristics because of the analyses. In addition, it was also concluded in the same study that using strategic leadership characteristics was effective in increasing individual success levels. As another example, Chen's study titled "Strategic Leadership and School Reform in Taiwan" investigated the principal's efforts to transform the school into a school in Taiwan. It was concluded that the school principal's strategic-focused efforts increased development and motivation.

All participants first try to understand what the situation is when faced with sudden and unexpected situations, and then act in a calm, conscious, and goal-oriented manner. They take it as their responsibility not only to cope with and overcome sudden and unexpected situations but also to turn this process into an opportunity, to ensure the health of communication and information flow within the team, to reduce the stress level of team members, to be customer-focused and to adopt strategies that will benefit everyone. The institution's CTO HMA also emphasizes that he undertakes the necessary strategic decisions and follow-up to carry out the necessary work for the root cause after all actions.

strategic leaders are successful in analyzing and creating strategies, learning from the experienced situation, and working to prevent it from happening again, they need to determine their weaknesses and strengths and develop strategic leadership practices to maintain the existence of the institution against the pressures and threats of sudden and unexpected changes.

Serkan Doğan's "The Effect of Strategic Leadership Behaviors on Crisis Management: A Research in Malatya Organized Industrial Zones" confirmed the hypothesis that "There is a significant relationship and positive effect between the strategic leadership behaviors of business managers and crisis management". This finding is also consistent with the results of previous studies on this subject. For example, it is seen to be consistent with Arslan's study titled "A Research on the Effect of Leadership on Crisis Management". As a result of the field research conducted within this scope, it was concluded that strategic leadership behaviors have a positive effect on the actions taken and strategic decisions made in sudden and unexpected situations within the framework of the opinions and evaluations given to interview questions by the strategic leaders in the institution participating in the research.

All participants state that there are processes for the planned goals in the institution and that these processes and the tasks in the processes are determined according to the competence and responsibility level of the individual. The processes are planned in a healthy and conscious manner, and the distribution of tasks is fair and competence-oriented and is implemented.

According to Ahmet Al's 2022 study titled "A Qualitative Research on Personnel Selection and Organizational Management of Strategic Leaders", it is important for the success and continuity of the institution to select employees who implement the decisions taken by the leaders, manage them correctly, and have a good interaction between the employee and the leader, as well as the selection of the leader personnel, according to the needs of the institution. It is seen that selecting employees correctly according to the current job and assigning them to jobs related to the employee's abilities will increase the employees' sense of belonging to the institution, the activities carried out will progress healthily, the level of trust that employees have towards the institution will increase, the level of stress and anxiety will decrease, and justice, information flow and communication will be high. The findings obtained because of the opinions and evaluations given by the participants to the interview questions reveal that the fair and competence-oriented determination and distribution of tasks between employees and leaders has a positive effect on the processes carried out for the goals determined within the institution by strategic leaders.

Participants stated that they try to evaluate the problems and crises encountered well to strengthen the weaknesses of the institution and to ensure the continuity of its strengths and that they define the crisis in advance and produce solutions to turn it into an opportunity. They believe that they can become more resilient by being able to react quickly when faced with a problem, adapt quickly and learn from crises.

The answers given by the participants show the year they were in the institution, the crises they overcame, and the dimensions of the strategic decisions made during these processes. It is seen that strategic leaders who have been in the institution for a long time and who have been in the institution during the time when major crisis processes such as pandemics were successfully overcome have a wider perspective on the strengths and weaknesses of the institution and a wider range of reactions to sudden and unexpected situations. The processes carried out, the variety of sudden and unexpected situations and the reactions that can be given reveal the importance of strategic decision-making. Hall and Williams state that the managerial skills, age and experience of the leader increase the possibility of coping with future crises. In line with the answers given by strategic leaders to the research questions, it is observed that the more unexpected situations they encounter and the more negative their impact, the more their skills in decision-making processes increase. This finding shows that there is parallelism with the view conveyed by Hall and Williams.

The concept of institutional resilience is addressed in literature from 5 different perspectives and analyzed in line with these approaches. These are behavioral approaches, intuitive approaches, renewal process approaches, risk management approaches, and system approaches. According to the answers given by the participants, it is seen that the concept of resilience in the institution is based on the system approach. According to the system

approach, a resilient institution has a broad perspective on overcoming crises and changes, adapting quickly, and providing solutions to maintain and increase its resilience.

The responses given by the participants show that the process of determining resilience strategies in the institution is new, but all leaders are developing strategies within the framework of their own authorities and responsibilities, and they have a say and influence in determining and implementing general strategies within the institution and intra-team strategies.

Successful strategic leaders are individuals who motivate their employees with their behaviors, who can use their communication skills well in their interactions with their environment, who can solve the problems they encounter within a logical framework, who unite and guide their employees around the determined common goals and who correctly direct them towards achieving the organization's goals (Aydın, 2012). The employee's correct perception and understanding of the strategic leader's guidance and following their leader will ensure that the corporate culture is internalized, that all activities and decisions carried out in line with the flow of information, communication and determined processes are taken in a way that will benefit the organization, that they can react quickly and correctly in sudden and unexpected situations, and that a strategic path is followed in decision-making processes. A good strategic leader should develop himself against sudden and unexpected situations and adapt quickly to changing conditions.

When the participants' perspectives are examined, HMA and VY mostly listed factors outside the institution, while the other participants stated factors inside the institution. Considering that HMA is the chief technology officer and VY is the engineering director, it is observed that they listed factors outside the institution because they are more in touch with the external environment, have more authority and responsibility in the institution, and can read competitors and their strategies more holistically.

According to Pearson and Mitroff (1993), an institution can only be resilient through a crisis management process that includes signal detection before sudden and unexpected situations occur, rapid intervention and recovery in the next stage, and learning activities after the crisis is over. The opinions and evaluations given by the participants to the interview questions do not parallel Pearson and Mitroff's understanding of resilience, as there is no predetermined detection against sudden and unexpected situations that the institution faces, but the rapid intervention and recovery process and the phase of carrying out post-crisis learning activities are processes carried out in the institution, and thus parallel Pearson and Mitroff's understanding of resilience.

5. Conclusion and Recommendations

In this section of the research, the findings of the study on the effect of strategic leadership on increasing institutional resilience were evaluated and conclusions and suggestions were developed. The aim of the research was to evaluate the impact of leaders on institutional resilience through questions directed to institutional leaders in the software sector.

The research was conducted using the inductive analysis model based on interviews, one of the qualitative research methods. Face-to-face interviews were used as a data collection tool. The sampling frame of the research was convenience sampling.

The impact of strategic leaders in the organization on organizational resilience was examined according to the research questions stated in Section 4.5.

The conclusions drawn from the answers given by strategic leaders to questions about the shaping of corporate culture by strategic leadership are as follows:

- Strategic leaders support other teams as well as managing their own teams. This support shows that work is not only carried out by their own teams, but also that the relationships, flow of activities and decisions between teams are shaped in a way that benefits everyone.

- Strategic leaders also have a say and responsibility in team, project and institution management.
- Although the institution's structure is not found correct and sufficient by all strategic leaders, they are aware that there are things to be done to improve the process. They have a strategic leadership structure that the institution needs to develop, knows that it needs to develop and strives for this.
- Strategic leaders were knowledgeable about the organization's vision, mission, goals and objectives. This shows that each team is in communication with other teams and the organization's top management.
- Strategic leaders believe that even if they are not involved in the decision-making process of determining the organization's vision, mission, goals and objectives, they can contribute in some way and their opinions can be sought. This belief increases both their sense of ownership of the organization and their ability to take responsibility.

The conclusions drawn by strategic leadership regarding the development of employee competencies are as follows:

- Strategic leaders believe that employees of the organization should always develop. Distributing tasks according to competence and responsibility levels and taking all processes and teams into consideration in decisions taken are seen as steps for competence development.
- Strategic leaders support their own teams and other teams and are involved in strategic decisions within the scope of their competencies, responsibilities and the boundaries given to them by the institution.
- Strategic leaders fulfill their duties within their competencies to ensure internal balance, continuity of the institution and customer satisfaction, and assume a leadership role with the strategic decisions they make or support.
- The more unexpected situations strategic leaders encounter and the more negative their impact, the skills in strategic decision-making processes and the accuracy and speed of response increase to a similar extent.

The conclusions drawn regarding the strategic leadership role in strategic planning and risk management processes are as follows:

- When faced with sudden and unexpected situations, all strategic leaders first try to understand what the situation is, and then act in a calm, conscious and goal-oriented manner.
- They take it as their responsibility not only to cope with and overcome sudden and unexpected situations, but also to turn this process into an opportunity, to ensure the health of communication and information flow within the team, to reduce the stress level of team members, to be customer-focused and to adopt strategies that will benefit everyone.
- Strategic leadership behaviors have a positive impact on actions taken and decisions made in sudden and unexpected situations.
- After all actions, the necessary work is done for the root cause. Making the decision, planning and implementing the work, and monitoring this process are carried out by various leaders and teams.
- All strategic leaders have the understanding that there are processes for the planned goals in the organization and that these processes and the tasks in the processes are determined according to the competence and level of responsibility of the individual.
- It has been found that the fair and competency-oriented assignment and distribution of tasks between employees and strategic leaders has a positive impact on the processes carried out by strategic leaders for the internal goals determined by the organization.
- Strategic leaders have both similar and different views on the weaknesses and strengths of the institution. While the common decisions made for the institution, the unexpected situations affecting all teams and the views on the reactions given to these

situations are common to all leaders, the weaknesses and strengths based on the observations they make within their own responsibilities differ.

- The understanding of strategic leaders regarding institutional resilience is to increase resilience in the system, but creating a perception of resilience in all employees is not prioritized. It seems that each strategic leader understands resilience differently. Each leader has a perception of resilience, but when all leaders come together, a meaningful concept of resilience can be formed.

The conclusions drawn regarding the determination of corporate resilience strategies by strategic leadership are as follows:

- Strategic leaders do not prioritize institutional resilience in its current state. Resilience is not seen as a priority for leaders. They believe that various studies should be carried out to create, increase and develop resilience awareness.

- The understanding of strategic leaders regarding increasing resilience is seen as experience. When they encounter a sudden and unexpected situation, if a similar situation has not been experienced before, they confront the crisis in its full dimension and then learn lessons so that it does not happen again. They proceed with the same strategy in similar or different events or situations. Rather than taking precautions to prevent events or situations from happening, they understand getting through them with the least damage with the experience gained from the events and situations experienced.

- Strategic leaders have a business management approach rather than a person management approach. When faced with a sudden and unexpected situation, they are more interested in how to do it rather than who will do it. With this approach, they say that their current position in terms of durability is good.

- Some strategic leaders look at the factors affecting the resilience of the institution from an internal perspective, while others look from an external perspective. Rather than a holistic approach, an approach is taken within the limits of the experience gained from the situations encountered.

Ensuring the continuity of institutions that are naturally affected by globalization, competition and all the changes brought about by the changing economy, their ability to respond quickly to sudden and unexpected situations, gain flexibility and operate in line with the determined goals and objectives is ensured by the strategic role of leaders and their impact on the durability of the institution.

The work and activities that strategic leaders will carry out to increase the resilience of the institution and the resilience awareness they will gain, maintain and transfer are important.

Below are the recommendations that can be derived from the information obtained from the strategic leaders in the institution under research, the data collected and evaluated, and the findings:

- Strategic leaders' knowledge of corporate resilience should be increased. Awareness of resilience should be created in the organization. Awareness of resilience should be created not only among leaders but also among all subordinates and superiors.

- In order to create resilience awareness, various internal and external seminars, activities, training, and programs should be created, and participation should be ensured to determine what resilience is, how to increase it, and the activities and behaviors that should and should not be done. Employees' opinions should be taken before and after every study carried out to increase resilience awareness.

- The adoption of the mission, vision, purpose and goals known by strategic leaders by all employees will contribute to the unity of the institution.

- Scenarios should be developed to meet sudden and unexpected situations with the least damage and to prevent the situation before it occurs. All employees should be aware that the purpose of these scenarios is to increase the resilience of the institution.

- It should be evaluated whether there is a corporate structure in the institution. If there is a corporate structure or not, determining the advantages and disadvantages of having or not having one will contribute to the organization and development of the current structure.
- When making strategic decisions, not only strategic leaders but also all employees who may be affected by the decision should be encouraged to express their opinions. When the importance given to the opinions of all employees becomes a part of the corporate culture rather than just strategic leaders, the level of contribution and trust given by employees to the organization will increase.
- Collecting the views on the strengths and weaknesses of the organization not only from the perspective of strategic leaders but also from all employees and evaluating the data collectively will enable decisions to be made from a broader perspective.
- If the strategic leaders in the institution come together with all strategic leaders at certain intervals to discuss the areas and issues they think need development, it will be beneficial for the institution to be seen from a holistic perspective, for decisions to be made in a way that will benefit the institution's strategy, and for the determination of the level of different teams, their strengths and weaknesses, deficiencies, and areas that need to be corrected.

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K3- CORPORATE MANAGEMENT

Outsourcing In Foreign Trade Policies and International Market Entry Strategies

Asst. Prof. Metin KAYA

metinkaya@esenyurt.edu.tr

Abstract

This article examines outsourcing in foreign trade policies and international market entry strategies. The importance of this strategy is revealed by the fact that organizations optimize various business processes through outsourcing to gain competitive advantage. While outsourcing offers many benefits such as reduced costs, increased efficiency and access to expert resources, it also carries risks.

The role of outsourcing in global trade and various strategies that organizations can use to enter international markets are discussed. It is also discussed how technological developments such as artificial intelligence can be used in this context. It is stated that entering international markets offers companies opportunities to reach new customer groups and diversify their income. It is also explained that foreign trade policies include various strategies and decisions used by governments and international organizations to promote trade and support domestic industry.

Therefore, outsourcing strategies and entering international markets are important elements that can help companies increase their competitiveness and achieve sustainable growth. However, these strategies should be implemented carefully, considering the disadvantages and risks of outsourcing.

Keywords: outsourcing, outsourcing strategy, global trade, foreign trade policies.

1. Introduction

Today, every organization is looking for a competitive advantage in the market. In order to stay at the top of the competition, it is very important to have expertise, knowledge and an expert power in the organization. However, it should be noted that no business can be an expert in everything. Strategic outsourcing is a great solution that will help organizations optimize their business processes and outperform their competitors.

Considering the strengths and weaknesses of outsourcing, organizations have come to the conclusion that outsourcing and transferring some tasks to a third party is a good choice to stay in the world of international business competition.

Therefore, having an outsourcing strategy seems necessary for some of the business operations.

Organizations usually do not outsource their main activities, the buy or build strategy is a simple issue that can be seen in every corner of the organizations if you pay attention. All members of the organization participate in making or buying decisions, but the final decision is made by the managers. The strategy of choosing between making or buying is one of the main reasons for the creation of the concept of outsourcing.

In this article, we examine the importance of outsourcing to enter or remain in international markets and global trade and the reasons why organizations prefer it.

2. Literature Review

Outsourcing strategies are used as a very important and effective tool in foreign trade policies and entering international markets, to expand business activities and penetrate foreign markets. The use of outsourcing strategies in this field has wide applications that help businesses act more effectively in expanding their activities in global markets.

In today's business world, the use of outsourcing strategies in foreign trade policies and entering international markets is considered an extremely vital and necessary tool. These strategies allow businesses to increase their performance and outperform their competitors in the face of the challenges and opportunities offered by global markets.

In order to better understand this topic, we will examine the basic issues and understand their concepts and backgrounds.

2.1. Outsourcing

Outsourcing is the transfer of some or all of an organization's activities, services or processes, usually on a contractual basis, to another organization or organization in order to reduce costs, increase efficiency, improve quality or gain access to specific expertise or new

markets. In business terms, outsourcing is used as a business strategy to optimize the performance and growth of organizations.

Outsourcing is defined as the act of providing semi-finished products or services, finished products or services to a foreign organization, while these activities are traditionally performed in-house. The company using the outsourcing is called the "buyer" and the company providing the service is called the "seller". Outsourcing leads to a significant closeness between the seller and the buyer. In fact, there is inevitably a significant flow of technical and organizational knowledge between them, which can later lead to problems.

Managers sometimes confuse the concepts of "outsourcing" with "subcontracting". The second concept means transferring a part of the work to another organization that has certain skills or resources that allow it to perform the specified tasks under better conditions. In other words, the subcontractor works for the buyer within certain limits, while the seller works with the buyer. Subcontracting only involves the transfer of product or service specifications.

The history of outsourcing is described in the book (Dolgui and Proth, 2010) as follows.

- In the seventies, outsourcing activities were related to low value-added products such as textiles, consumer electronics (e.g. televisions), toys, etc.
- In the eighties, outsourcing of car parts and even complete assembly of cars were also included.
- In the nineties, outsourcing requirements were increasingly related to high value-added products such as software, semiconductors (for IBM, Intel, Texas Instruments), medical equipment.
- Since the mid-nineties, outsourcing to China has been the main focus of major automobile parts (For Ford, Daimler-Chrysler and Volkswagen), original aircraft parts (for Boeing) etc.

As Chinese vendors have become more involved in value-added products and services, the relevant technologies are being transferred from Europe and the US to China. This is because outsourcing often takes place through joint ventures, joint ventures and joint production agreements, which leads to knowledge sharing and, moreover, makes buyers more dependent on sellers.

Most major American and European organizations are currently outsourcing to China. To the above-mentioned organizations, we can add Philips Electronics, Thomson, Siemens, Airbus, General Motors, Renault etc.

This development has led to China's financial dominance over Europe and the US. This situation is sometimes summarized with the following sentence: "China supports developed countries like a rope supports a hanging person."

The manufacturer focuses on its core competencies such as product design and product distribution management and does not actually manufacture the product. Outsourced products range from clothing, toys, food, beverages, and electronics to automobiles and even pharmaceuticals (Wang et al., 2014; Lee et al., 2020). For example, 97% of the clothing sold in the United States is manufactured abroad (Uranga, 2017).

Apple CEO Tim Cook said that the number one reason Apple chose to manufacture iPhones in China was the abundance of skilled workers (Leibowitz, 2017). Contractors can efficiently produce products at the required quality level.

Outsourcing to contractors has been widely adopted and is quickly becoming standard practice. The e-manufacturing services market was valued at over \$450 billion in 2017 and is projected to grow at a 5% annual growth rate to over \$650 billion by 2024 (Wadhwani and Yadav, 2018). However, intense market competition has created pressure on contractors to develop a broad range of capabilities, provide other services such as product design, or produce their own branded products in addition to producing for others (Wang et al., 2014).

2.1.1. Outsourcing opportunities

There are several advantages of external collaboration that can be considered as an opportunity for the organization. It includes the possibility of creating a wide network of competencies related to outsourcing contracts. External providers can develop strong ties with the organization and the organization can collaborate regularly on specific projects or tasks. This provides an exchange of knowledge and experience between the organizations, as well as the development of close professional relationships, management and communication skills in both teams. Other benefits of outsourcing include the following (Dolgui and Proth, 2010).

Organizations use outsourcing for a variety of reasons, including:

- Cost savings, which requires choosing a vendor that performs the outsourcing function more efficiently than the buyer.
- Relieve employees from tedious tasks and give them more opportunities to focus on core activities
- Increase the organization's profit by using foreign expertise or outsourcing non-core activities
- Access to foreign skills and innovative technologies

- Reduce operating costs, labor, and overhead
- Save time by outsourcing time-consuming processes to foreign organizations and increase your competitive advantage by focusing more on your core competencies.
- Reduce business risk
- Increase the flexibility and efficiency of the organization by outsourcing difficult management and control responsibilities to foreign organizations
- Outsourcing can improve and speed up processes because organizations can outsource some of their activities instead of doing everything themselves.

Because of these benefits, organizations widely use outsourcing to increase their performance and competitiveness and achieve greater success in global markets.

2.1.2. Threats of outsourcing

While outsourcing has become an important part of an organization's core business and its benefits are widely recognized, the threats associated with outsourcing need to be clearly understood and minimized as much as possible (Wu et al, 2005).

The range of arguments in favor of outsourcing has increased significantly and includes strategic considerations that are of utmost importance. Long-term performance requires greater emphasis on the strategic aspects of competition. Although the scope of arguments at the strategic level is broad, analysts are often forced to abandon the quantitative approach and adopt a qualitative approach that is far less convincing.

A long-term outsourcing policy may require more defensive measures at the outset, but once confidence in the integrity and honesty of suppliers is well established, a more friendly approach can be adopted.

In addition, outsourcing activities or processes to third parties increases the risk of sensitive data being lost and confidentiality being compromised, and outsourcing organizations may draft lengthy contract agreements that include many unexpected cost clauses or impose confidentiality.

One of the most important disadvantages of outsourcing is the lack of quality control due to the profit-oriented structure of organizations that use outsourcing (Douglas and Brown, 2005). When considering the advantages and disadvantages mentioned for outsourcing, an organization should not forget that in order to benefit more from the advantages, it is necessary to reduce the disadvantages by adopting the right strategies and decisions for the organization.

2.2. Outsourcing strategy

Outsourcing is a strategic decision made by an organization to reduce costs and increase efficiency by hiring another person or organization to perform tasks, provide services, or manage operations. In simpler terms, it is performing some work tasks outside of an organization. Organizations use outsourcing strategy to reduce costs and increase efficiency. Outsourcing strategy is a plan that describes how a business contracts with other businesses or individuals to complete activities. This strategy can reduce costs, increase production, and improve the overall quality of the final product. Outsourcing strategies include the norms, practices, and rules that determine who an organization hires and how much it pays them. A business can outsource to a single person, a small business, or a large organization depending on its needs.

Outsourcing strategy has been introduced as one of the effective strategies to reduce disruption risks by sourcing components from different geographical locations (Chen and Xiao, 2015b; Hosseini et al., 2019).

With the development of contract manufacturing, OEMs have increasingly shifted their manufacturing operations from in-house production to outsourcing to contractors known as manufacturing providers (Arunada and Vazquez 2006; Amaral et al., 2006; Cheng et al., 2012).

Strategic outsourcing is a planning and management approach that organizations use to improve their performance, increase their competitiveness, and achieve their long-term goals. This strategy refers to the transfer of some of the activities, services, or business processes to other organizations in order to benefit from expertise, talent, and resources that are not available within the organization.

Strategic outsourcing is usually done with long-term targeting and coordination with the organization's macro strategies and goals. This approach relies on the experience and expert resources of foreign organizations rather than regular outsourcing and is effective in important management decisions.

The advantages and disadvantages of strategic outsourcing may be similar to the advantages and disadvantages of traditional outsourcing, but in addition, this strategy offers new opportunities that can contribute to the sustainable growth and development of organizations. For example, strategic outsourcing can help organizations access new markets and technological innovations while maintaining control and quality of their operations.

2.2.1. Reasons for choosing strategic outsourcing in organizations

According to the advantages and disadvantages mentioned, the main reasons for organizations to use outsourcing are, among other advantages of outsourcing, entrusting the

work to experts, increasing the flexibility and agility of the organization, risk management, reducing the workload of employees and not needing insurance. And in general, its advantages outweigh its disadvantages. On the other hand, all outsourcing steps can be controlled with the help of technology and tracking software.

In general, the reasons for outsourcing can be examined in three areas: Organizational, Cost and Human Resources.

Organizational reasons:

- Focus on the organization's core competence
- Access to first-class talent and facilities
- Flexibility in the long term
- Transform and improve the organization's services
- Improve operational performance
- Access to the best experiences and acquisition of new skills
- Increase and accelerate development
- Improved management and control

Financing and spending reasons:

- Save money
- Restructure costs
- Create liquidity

Human resources reasons:

- Utilize the expertise of contractors' human resources
- Focus people's strength and commitment on core activities
- Reduce employee problems (recruitment, benefits, termination, etc.)

It should be noted that outsourcing should not be done with complete confidence, but that an organizational manager is needed who will follow the organization's performance step by step and be aware of the details of the project work. The organization should not learn that the performance of that company is not correct after working for a few months, carrying out the work and depositing a certain amount into the account of the contractor company, or should be satisfied with only the output.

Determining organization-specific standards, direct and instantaneous monitoring of the product received from outside, periodic and partial delivery, enable the purchase of a quality product from the manufacturer, and this cannot be achieved unless the organization manager ensures this. Being an expert in production, product, and supervising the details regarding the implementation of production stages and production quality (Cantone et al., 2023).

In addition to all these reasons for choosing an outsourcing strategy, it should not be forgotten that outsourcing may cause organizations to lose control over the processes and

services they outsource, transfer sensitive information and activities to other organizations, and cause problems in the organization.

On the other hand, outsourcing may lead to communication problems and lack of coordination between different organizations, thus reducing the quality of services or products. Outsourcing may also encounter legal and contractual problems, especially if the contract terms are not properly defined.

So, in general, outsourcing can provide many benefits and opportunities to organizations, but it can also bring disadvantages and risks that should be carefully considered before doing so.

2.3. Global trade and entering global markets

We live in an era where international trade is an undeniable reality. You can order anything you want from anywhere in the world and enter global markets with a single click. However, the situation was very different in the ancient world than it is today. International trade is a very large and growing industry. Although the history of international trade dates back thousands of years, its modern era emerged after the industrial revolution. As in other areas of people's daily lives, there are significant changes in the way they do international trade. The history of global trade is long and exciting, and has had its share of ups and downs.

International trade began in ancient times. The history of this type of trade began with the Silk Road and the Amber Road, and the Silk Road was the first major trade route connecting the East and the West. And for over 2000 years, it was an important trade route connecting Asia to Europe via the Middle East.

English: Amber Road: (Amber Road) was a road that extended from the North and Baltic Seas to Southern Europe and the Mediterranean, and was transferred to Asia via the Silk Road, dating back to the 16th century BC.

The Silk Road or Silk Road was a series of trade routes in Asia connecting East and West and South Asia to North Africa and Eastern Europe; the road that was the largest trade network in the world for 1700 years until the 15th century. One of the most important parts of this road was entering the trade route of different cities of Iran via Central Asia, Fararoud, Khorazm and Khorasan (Abdoli and Garkani, 2011).

The Silk Road was established in Central Asia after the spread of the Han Dynasty (206 BC to 220 AD). The existence of this road allowed the Chinese to travel to Central Asia and establish business there. The Silk Road was also known as the "Silk Road" because of the transportation of silk from China to Rome. After years of trade with the Western world via the Silk Road between China and Eastern countries, the world developed and newer concepts were presented to the world by political economy theorists such as Adam Smith and Marx,

who revolutionized world trade (Smith, 2024; Marx, 2024). International trade is an exchange that takes place between at least two countries, involving various goods or services. In fact, international trade is a method of economic interaction between international institutions and is an example of economic connection. International trade occurs when a country has a comparative advantage in the production of a certain good or service, especially when the cost of producing this good or service is lower for that country than for any other country. Meanwhile, if a country chooses not to do business with other countries, it will be considered autocratic and growth and development will stop.

Specialization and trade allow each country to produce a product with a comparative advantage and then trade. Therefore, profit in foreign trade is considered a mutual thing that both parties to the transaction benefit from.

International trade allows countries to expand their markets and access goods and services that would never be available in that country in the absence of international trade. As a result of international trade, markets become more competitive, which ultimately leads to more competitive pricing and brings cheaper goods to the consumer.

International trade and foreign transactions have been the main factors in the rise of the world economy. In international trade, supply and demand and finally prices are affected by global events, as a result of which economic variables are defined and analyzed on a global level.

Different countries have different capabilities and specialize in different areas. Therefore, they have to trade with other countries to compensate for what they do not produce. For example, not every country has oil resources. In such cases, countries buy oil from oil producers and import it to their own countries. Since no country is self-sufficient in the modern world, international trade is of vital importance to all countries in the world (Bastani Rad, 2017).

Global trade and entry into international markets offer companies unique opportunities. Entering international markets allows companies to reach larger customer potential and increase their sales. It also allows companies to diversify their revenues by selling to different markets and different patterns and reduce financial risks. Access to international resources and expertise is another advantage of entering international markets; this allows companies to benefit from and benefit from existing resources and expertise in other countries.

On the other hand, companies in this position have to compete with competitors on a global level, which leads to growth and innovation, and facilitates industrial growth and development by facilitating the transfer of technology and knowledge from other countries to the country.

In general, entering international markets provides companies with extensive opportunities that can help them grow and develop further with the right management and use of appropriate strategies (Feenstra and Taylor, 2020).

Changes towards a global and knowledge-based economy have created new opportunities and threats for businesses. Although strategic management and manufacturing sectors have been developed separately and separately, both emphasize the company's ability to adapt to changes and take advantage of opportunities that will create prosperity. In the process of internationalization of companies, one of the most important decisions of organizations is to pay attention to the choice of entry mode (Brege and Kindström, 2020). The choice of entry mode to foreign markets can have significant and comprehensive consequences on the performance and survival of the company. The important entry mode is one of the most vital strategic options because it affects the decision-making process of the company regarding its future operations in the market of the selected countries (Tajuddin et al., 2013).

2.3.1. Benefits of global trade

International trade not only leads to increased production, but also allows countries to participate in the global economy and promotes opportunities for foreign direct investment (FDI). Theoretically, economies can grow more efficiently and become more competitive economic participants.

Many developing countries seek maximum efficiency from the conditions of countries such as the USA in their policy of reducing production costs. Outsourcing has recently been suggested in developing countries and some studies have been conducted in this area, but this outsourcing has been internal and has not experienced the real appeal of supply from abroad (Fischer, 2015).

Global trade, with its advantages and disadvantages, has far-reaching effects on the global economy and countries. Global trade can help increase the economic well-being of countries and individuals by increasing trade and export-import exchanges, improve living standards, provide consumers with a wider choice of products and services, and increase diversity in the market.

Increased production and employment is another advantage of global trade, which helps increase production and create job opportunities in countries, because it allows companies to capture new markets and offer their products to global markets.

Global trade can provide opportunities for the transfer of technology, knowledge and experience between countries, help develop technology and innovation, and also increase competition in markets, leading to improved product quality, lower prices, and increased innovation and productivity.

Of course, it goes without saying that there are disadvantages as well as all these advantages: Global trade can harm some domestic sectors of the country's economy, especially if small and conservative industries lose their markets. On the other hand, dependence on foreign markets can make countries sensitive to changes in world markets and other countries' economic conditions, leading to trade inequality between countries, which can lead to a decrease in productivity and resource ratio in some countries.

If business is based on the indiscriminate use of natural resources, this can have devastating effects on the environment.

In addition, global trade can weaken cultural identity and local industries in some countries, and lead to cultural and economic uniformity.

In general, global trade, with its advantages and disadvantages, is one of the important factors in the development and growth of the global economy, which requires smart management and balance between different interests.

Today, the movement of countries towards a knowledge-based economy is very important, and this transformation requires interaction with the world and the exchange of information, technology and products. Having information about the mechanisms and methods of entering international markets is an undeniable necessity for companies and organizations advancing on the path of globalization. The internationalization process is a long process that requires resources and management models.

Successful. Many companies have started the internationalization process and then stopped (Fazli and Taheri Kia, 2015). These companies either did not allocate sufficient resources to their activities or lacked management models that could manage their companies internationally. Choosing the most appropriate method of entering international markets is thought to shape a company's strategies for entering these markets. The variety of methods, the advantages and disadvantages of each, have led large companies to consider special measures in this regard. The devastating failures experienced by some large international companies in entering global markets have also made management and economics researchers sensitive to this issue, thus an interdisciplinary field called methods of entering global markets has emerged (Hemti et al., 2017).

Internationalization refers to the process of increasing participation in international operations and enables companies to increase the capabilities they need to compete and succeed in the global arena (Onkelinx et al., 2016). Therefore, while achieving some degree of internationalization is important for all businesses, it is especially important for small and medium-sized companies with fewer resources and experience to be able to compete in international markets.

Research findings show that the knowledge that companies acquire from other companies, especially during the internationalization process, can increase their competitiveness in the global market (Sanobar, Sarvari, & Jabarzadeh, 2017). Choosing outsourcing can be one of these solutions to give organizations the power to compete in the global arena.

Outsourcing strategies in foreign trade policy and entering international markets include outsourcing in production, outsourcing in marketing and sales, outsourcing in research and development, and outsourcing in support services.

- In outsourcing in production, companies can outsource some of their product manufacturing processes to foreign companies, especially if they specialize in a certain area. This strategy allows companies to reduce production costs and enter international markets.
- In marketing and sales outsourcing, companies outsource marketing and sales services to foreign companies to help them access global markets and increase their sales.
- In research and development outsourcing, a portion of a company's research and development activities are outsourced to foreign companies in order to benefit from expertise and experience in other countries and to accelerate innovation in their products.
- In support service outsourcing, support services such as customer service, transportation, raw materials, etc. are outsourced to foreign companies, allowing companies to increase the quality and efficiency of their services and reduce costs.

These strategies allow companies to improve and develop in global markets and compete with their competitors according to their needs and goals.

2.4. Foreign trade policies

Foreign trade policies include a set of decisions, laws, and strategies adopted by governments or international organizations to regulate and manage trade with other countries. These policies may aim to promote trade, support domestic producers, reduce trade barriers, or resolve trade disputes. Some of the basic foreign trade policies are as follows:

- Definition of Tariffs: Definition of import and export tariffs that may be imposed in the form of taxes or other restrictions to regulate the flow of trade with other countries.
- Bilateral and multilateral trade negotiations: Governments may conduct trade negotiations with other countries or within the framework of international organizations such as the World Trade Organization (WTO), the European Union, or the Asian Trade Entente (ASEAN).

- Promotion of exports and the acquisition of new markets: Governments may use various policies and programs to encourage domestic businesses to export and enter new markets.
- Support for domestic industry: Some governments may use support measures such as fiscal incentives, tax reductions, or domestic investment incentives to strengthen and support domestic industry.
- Appropriate exchange rate management: Governments may intervene in the foreign exchange market and set appropriate exchange rates to promote exports or control imports.

Resolution of trade disputes: Strategies such as negotiation, trade facilitation or determination of international obligations can be used to resolve trade disputes between countries.

These policies and measures are generally adopted with the aim of balancing domestic and foreign interests, promoting economic growth and increasing social welfare (Faraji and Alidadi,2011).

3. Methodology

Outsourcing strategies are considered as a vital and necessary tool for the survival and progress of the organization in foreign trade policies and entering international markets. These strategies help organizations perform better against global competitive challenges and achieve sustainable growth and development.

Global competition, expanding markets, product innovation and development, increasing efficiency and reducing costs are among the most important reasons why organizations use outsourcing strategies in their foreign trade policies and entering international markets. These strategies allow organizations to accelerate performance development against their competitors and experience sustainable growth in global business environments.

Although the need for outsourcing is quite obvious in order to keep up with the rapid pace of developments in global trade, we see that the most beneficiaries of this category are developed countries in this field.

For example, medical diagnostic laboratories in the United States outsource the analysis of their tests to India and claim to work 24 hours a day, thus attracting more customers and definitely earning more. Due to the time difference between America and India, samples are taken during the day and sent to India at night to prepare the results, where the day begins and the results are ready within 12 hours. This is the power of modern outsourcing and keeping up with technology.

In general, making the best use of outsourcing strategies requires careful planning, effective risk management, and building strong relationships with partners and suppliers. These approaches can help organizations become stronger against their competitors and experience sustainable growth in global markets.

Today, outsourcing strategies are considered a vital and necessary tool for the survival and progress of the organization in foreign trade policies and entering international markets. These strategies help organizations perform better in the face of global competitive challenges and achieve sustainable growth and development.

Global competition, expanding markets, product innovation and development, increasing efficiency and reducing costs are among the most important reasons why organizations need to use outsourcing strategies in their foreign trade policies and entry into international markets. These strategies allow organizations to accelerate performance development against their competitors and experience sustainable growth in global business environments.

In this context, in parallel with the progress of today's modern world, outsourcing strategies in foreign trade policies and entry into international markets, the use of artificial intelligence as an advanced and effective approach in managing and using resources is gaining great importance. Artificial intelligence allows organizations to increase their performance by analyzing big data, predicting trends, optimizing processes and making smart decisions.

With the help of artificial intelligence, outsourcing strategies can help design foreign trade policies to suggest strategies that will provide the highest return on international markets by analyzing market data and predicting demand. In addition, artificial intelligence can play a very effective role in the process of selecting and managing outsourcing partners, so that the most appropriate resources and capabilities are selected to carry out outsourcing activities.

In short, outsourcing strategies combined with artificial intelligence can help organizations improve their performance in foreign trade policies and enter international markets, compete with competitors in a dynamic and complex environment, and achieve sustainable growth.

4. Conclusion

Outsourcing in foreign trade policies and strategies for entering international markets are very important tools that help organizations perform better in the face of global challenges and international competition and achieve sustainable growth. Outsourcing strategies allow organizations to accelerate their performance improvements compared to their competitors and achieve the desired level of growth and sustainability by increasing flexibility, reducing costs, accessing global resources and facilitating entry into global markets.

In fact, it can be said that outsourcing in foreign trade policies and strategies for entering international markets are very effective tools that help organizations accelerate their performance increases against their competitors and experience sustainable growth in global business environments.

Considering these advantages, we can conclude that outsourcing strategies in foreign trade policies and entering international markets are not only necessary but also essential for organizations to survive and grow in a globally competitive environment. These strategies allow organizations to compete with their competitors and operate effectively in international markets.

Considering the dynamics of today's business world, the use of outsourcing strategies in foreign trade policies and entering international markets are seen as one of the most important factors for the survival and growth of organizations in the global competitive environment. These strategies, which use artificial intelligence tools and technology, have enabled organizations to accelerate their performance gains against their competitors and experience sustainable growth in global markets. As a result, the use of artificial intelligence as a powerful tool can strengthen the ability of organizations to face global challenges and provide sustainable growth and development in global business environments.

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The Sustainable Regional Development and Investment Strategy Document for Türkiye

Ahmet Baybars GÖĞEZ⁶, Researcher, abgrisk@gmail.com

Abstract

In Türkiye, everyone is talking about growth, which is state/government-focused, while development is citizen/people-focused. When the focus is on growth and improvements in indicators through financial policies that do not translate into development, the people's poverty remains unchanged. Even though politicians promise improvement in 2-3 years, these promises are not kept.

During Atatürk's era, development was the topic of discussion in the early years of the Republic. The five-year industrial plan implemented between 1933 and 1937, which resulted in the greatest development initiative in history and the highest growth rate, serves as an example. Despite having such success stories, it is incomprehensible what purpose is served- if not a conscious choice- by experimenting with different models today and being forced to live with crises.

Even if not at the national level, it is considered necessary, due to our area of interest, to conduct an ORIGINAL study on a Regional basis regarding the Sustainable Regional Development and Investment Strategy Document.

The INVESTMENT STRATEGY DOCUMENT, which is planned to be prepared, is intended to serve as a bedside/reference book, printed and distributed as a road-map for investment and development for Governors, District Governors, Rectors, directors of Agriculture, Industry, Health, Education, etc., Mayors, members of the Provincial General Assembly and municipal councils, and village headmen assigned to Provinces, Districts, and Towns. It is envisaged that the document will be revised every two years, incorporating any new developments and plans specific to the region following the National Strategy Document and Five-Year Development Plans/Programmes, if applicable. Most importantly, it is intended to serve as a guarantee document, approved by all councils, for investors interested in the region.

Keywords: Sustainable Regional Development, Growth, Investment, Strategy

⁶ Economist & Investigator Writer

1. Introduction

In the Turkish laws, it is stipulated that Local and Administrative Authorities are obliged to prepare a Sustainable Regional Development and Investment Strategy Document.

Strategic Plans are prepared by public institutions and municipalities. The declaration, which should be prepared in coordination with Local + Administrative Authorities + Chambers + Associations + Universities, + NGOs, should not be confused with our subject, the Investment Strategy Document.

Although references are made to the laws and regulations of some institutions, the most comprehensive definition is provided by the Municipal Law No. 5393. (The word 'development' appears in 3 places.)

Article 41 - "The mayor, within six months following the general local administration elections, shall prepare a Development Plan And Program, and, if applicable, a Strategic Plan consistent with the Regional Plan, and submit it to the municipal council before the start of the relevant year along with the annual performance program.

For municipalities with a population below 50,000, preparing a Strategic Plan is not mandatory. However, the law mandates that they must prepare a Development Plan and Program. It is not possible to find any municipality that has prepared these and published them on their website."

Article 15 - "The powers and privileges of the municipality are as follows: Within provincial boundaries, Metropolitan Municipalities, and within municipal and adjacent area boundaries, provincial municipalities and municipalities with a population exceeding 10,000, by council decision;

They may undertake or commission infrastructure works such as water, thermal water, sewage, natural gas, roads, and lighting for tourism, health, industry, and trade investments, as well as educational institutions, either with interest-free repayment terms of up to ten years or free of charge. In return, they may become partners in the facilities constructed; and, with the approval of the Ministry of Environment and Urbanization, they may allocate immovable property free of charge or at a low cost for projects aimed at improving health, education, social services, and tourism, provided the property is not used for purposes other than its intended one."

Accordingly, it is clear that municipalities have powers and responsibilities related to development. Law No. 5216 On Metropolitan Municipalities (The word 'development' appears in 2 places.) Duties, powers, and responsibilities of Metropolitan Municipalities (MM) and district municipalities:

Article 7 – “The duties, powers, and responsibilities of the MM are as follows:

(i) Prepare the strategic plan, annual targets, investment programs, and budget of the Metropolitan Municipality in accordance with these, by obtaining the opinions of the district municipalities.

(ii) Ensure the protection of the environment, agricultural areas, and water basins in line with the principle of sustainable development, and carry out afforestation.”

Article 8 - “To ensure the coordinated execution of infrastructure services in the MM, an Infrastructure Coordination Center (AKOME) is established, chaired by the MM mayor or a person designated by them, with the participation of representatives from public institutions and organizations as well as private entities, as determined by regulation. Draft programs prepared by public institutions and organizations and private entities for infrastructure investments to be made in the MM, following the development plan and annual programs, are consolidated into a definitive program.”

This is the most concrete indication that MMs are tasked with coordination, planning, and execution at the provincial level through AKOME in regional development.

Article 18 - “The duties and powers of the MM mayor are as follows: b) Managing the municipality under the strategic plan, establishing the institutional strategies of the municipal administration, preparing and implementing the budget in line with these strategies, determining the performance criteria for municipal activities and personnel, monitoring and evaluating them, and presenting related reports to the council.”

The most comprehensive definition to be taken as a basis is Article 41 of the Municipal Law No. 5393. The Metropolitan Municipality Law No. 5216 has provided additional duty definitions for MM mayors beyond the provisions of Law No. 5393. In other words, if something is not specified in Law No. 5216, Law No. 5393 serves as the basis.

The most important reason for this is that while the responsibility boundary of provincial and district municipalities is limited to their adjacent areas, the responsibility boundary of a Metropolitan Municipality extends to the administrative boundary.

Organizations such as the UN and the World Bank (WB) also provide support focused on regional development. With the Paris Climate Agreement, ratified by the Turkish Grand National Assembly, a road-map for sustainable development has been established.

The concept of sustainable development encompasses not only financial/economic/fiscal goals but also the realization of projects with a strong emphasis on social and environmental aspects. The most appropriate definition of sustainable development is as follows:

1. It is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

2. In other words, development should be achieved without harming nature or depleting resources.

Comprehensive, sustainable regional development should aim to meet all 17 criteria (SDGs) set by the UN.

2. Reports Regarding the Evaluation of Preparatory Processes for Achieving Sustainable Development

The Republic of Turkey Presidency of Strategy and Budget (CSBB) prepared the *Sustainable Development Goals Assessment Report* in 2019 (<http://www.surdurulebilirlikalkinma.gov.tr/dokumine/>).

Additionally, the Turkish Court of Accounts prepared the *Report On The Evaluation Of Preparation Processes For The Realization Of Sustainable Development Goals* (<https://www.sayistay.gov.tr/reports/nqZoxKY5Pa-surdurulebilir-kalkinma-amaclarinin-gerceklestirilmesine-yonelik-hazirlik-surecl>). The common findings from these reports related to our topic are as follows:

2.1. Common Connections Between These Reports and The Topic

Sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. For the first time in 1986, the Brundtland Report highlighted the importance of the concept of 'sustainability of development,' which has progressively gained significance over time and has become a constantly addressed topic on the United Nations (UN) agenda.

Following the United Nations (UN) Conference on Environment and Development held in Rio in 1992, Türkiye incorporated the concept of sustainable development into its agenda in 1996, and in subsequent years, the concept was reflected in Development Plans and numerous policy documents.

It was first introduced with the Millennium Development Goals in 2000:

The Sustainable Development Approach in Türkiye was first included as a concept in the Seventh Development Plan (1996-2000)... In 2002, the first company to publish a Sustainability Report was Aygaz, followed by Aksa Acrylic in 2005 and Erdemir Steel in 2006 (Elmacı ve Emre (2021), 30)

At the UN General Assembly in 2015, Resolution 70/1 titled 'Transforming Our World: “The 2030 Agenda for Sustainable Development”', which includes 17 goals and 169 targets to be achieved by 2030 under the Sustainable Development Goals (SDGs), was adopted and signed into action by 196 member states (noted as 193 countries in the CSBB report).



The 2030 Agenda encompasses all dimensions of development, and for this agenda to succeed, the interconnected elements of economic growth, social inclusion, and environmental protection must be implemented in harmony.

With the adoption of the agenda related to the SDGs, the International Organization of Supreme Audit Institutions (INTOSAI) emphasized that Supreme Audit Institutions (SAIs) play a significant supportive and reinforcing role in national, regional, and global efforts to implement the SDGs, as well as to monitor and review the progress achieved.

In line with the decision taken by the Presidency of the Court of Accounts of the Republic of Türkiye, a member of INTOSAI, such an audit has been conducted in our country, and the report includes evaluations regarding the preparatory processes for the 2030 Agenda.

The United Nations (UN) member states, by adopting the Transforming Our World: The 2030 Agenda for Sustainable Development in 2015, committed to working toward 'a better future for all' and 'leaving no one behind.' This global agenda includes 17 SDGs, along with 169 related targets and 232 global indicators, aimed at revitalizing state activities in all UN countries by the end of 2030. The SDGs generally cover topics such as ending poverty, combating inequality and injustice, economic growth, energy, sustainable production/consumption, industrialization, and climate change.

At the first meeting of the UN High-Level Political Forum (HLPF) held in 2016, 22 countries, including Türkiye, presented their Voluntary National Review (VNR) reports on the implementation of the 2030 Agenda and the SDGs. VNRs are evaluation reports that detail countries' efforts to implement the 2030 Agenda, their achievements, and the experiences they have gained. These reports serve as tools for countries to measure and report their

progress toward the SDGs while also enabling monitoring by the UN. These reports are shared with the public through the UN Sustainable Development Knowledge Platform.

In our country (Türkiye), the coordination of the 2030 Agenda process is carried out by the Presidency of the Republic of Türkiye Strategy and Budget Office (CSBB). Within the CSBB, this task is fulfilled under the coordination of the 'Directorate General of Sectors and Public Investments, Department of Environment and Sustainable Development.'

The international process related to indicators and monitoring is followed by the Turkish Statistical Institute (TÜİK). The relevant activities are conducted by TÜİK's 'Sustainable Indicators Group under the Department of Economic and Social Indicators.' Although these two institutions serve as the focal points for the coordination and monitoring of the implementation of the SDGs, numerous ministries, implementing agencies, local governments, civil society organizations, and UN entities are also involved in the process

2.2. Findings From the Turkish Court of Accounts Report

1. Türkiye has adopted the method of integrating and implementing the SDGs into national development strategies to ensure their realization, and the 11th Development Plan for the 2019-2023 period was prepared with the SDGs in mind.
2. It is understood that necessary measures were taken to integrate the SDGs into the Development Plan, ensuring the widest possible participation in the plan preparation processes while also considering national priorities.
3. It is observed that a separate section on the SDGs was included in the 11th Development Plan, that the actions required for the realization of the SDGs and the coordination of the process during the Development Plan period were identified, and that the relevant SDGs were taken into account in the formulation of policies and measures related to thematic areas.
4. There is a need to determine which SDGs will be prioritized in the 11th Development Plan or in plans to be prepared thereafter, as well as to establish a timeline for achieving the SDGs by 2030.
5. It is observed that efforts have been made to distribute the areas of responsibility among the institutions that will implement the 2030 Agenda and to raise awareness about these areas; however, the success of these efforts has been limited compared to expectations.
6. It is stated that following the publication of the 11th Development Plan, studies on the distribution of institutional responsibilities were conducted by the Presidency of the Republic of Türkiye Strategy and Budget Office (CSBB) and shared with relevant institutions and organizations, with an official publication to follow once agreement is reached.

7. The preference for integrating the SDGs into the national development plan to achieve the 2030 Agenda implies that the monitoring and evaluation of the SDGs will be included within the monitoring of the Development Plan. However, it is considered that the current monitoring framework for Development Plans is insufficient for effectively tracking and evaluating the SDGs.
8. It is believed that the Performance-Based Budgeting (PBB) system implemented in Türkiye, along with the planning system to which public institutions and organizations are subject, provides a suitable infrastructure for achieving and monitoring the SDGs.
9. Significant differences are observed in the capacities, awareness levels, and readiness of institutions to implement the SDGs. When evaluating the efforts of local governments and municipalities to achieve the SDGs, it is evident that institutional differences are even more pronounced at the local government level.
10. Although some efforts have been made at the central level to raise awareness about the 2030 Agenda and the SDGs among the public and all stakeholders involved in the process, it is evident that steps need to be taken to prepare and implement a centralized plan to manage communication processes.
11. It is assessed that preparatory/planning efforts for achieving the SDGs at the regional level are not at a sufficient level.
12. The UN 2030 Agenda encompasses a very broad framework, and it is considered that realistically determining the resources required to achieve the 2030 Agenda is not feasible. However, since the 2030 Agenda has been integrated into the national development strategy, it is evaluated that there is no need for separate budgeting from Türkiye's perspective.
13. It is believed that many of the routine activities carried out by local governments are already related to the SDGs and do not require additional resources, thus eliminating the need for a specific study to identify financing. However, it is assessed that studies to identify and plan financing needs for non-routine projects and activities are important for the implementation process.
14. While some efforts have been made at the central level to raise awareness about the 2030 Agenda and the SDGs among the public and stakeholders involved in the process, it is evaluated that steps need to be taken to systematize these efforts centrally to manage communication processes effectively.
15. Although efforts have been made by umbrella organizations to ensure the involvement of private sector entities in the 2030 Agenda, it is assessed that conducting these efforts within a plan and in a systematic manner is important for continuity.

16. It is observed that all globally determined indicators deemed relevant for our country have been fully integrated into our national monitoring and statistical system.
17. Out of the 215 indicators included in the Official Statistics Program (RİP), 132 are not yet being produced, and it is noted that classification and scheduling studies for these are planned.
18. A study has been conducted by TÜİK to identify indicators that could substitute for global indicators. In this study, substitute indicators meeting quality criteria were identified and used in the indicator bulletin. It has been stated that the scope of the complementary national indicator set will be expanded in line with priorities.
19. It is observed that baseline data for indicators are limited to those published in the sustainable development indicators bulletin, and efforts to establish a starting point for other indicators required to be monitored under the RİP are ongoing.
20. It is assessed that the responsibility structure for the production of sustainable development indicators has been established.
21. The RİP includes a working group mechanism to ensure stakeholder participation in the indicator production process. While the participation of Thematic Working Groups in reporting processes has been achieved to some extent, it is noted that the working group envisaged for sustainable development indicators has not yet been established. Additionally, a systematic mechanism to ensure the participation of all stakeholders has not been established by TÜİK.
22. It is observed that the efforts undertaken by TÜİK to enhance the technical capacities of institutions regarding the production of sustainable development indicators are not at a sufficient level to achieve the desired results.
23. It is noted that a control mechanism exists to ensure the accuracy and reliability of sustainable development indicator data.
24. It is observed that neither TÜİK nor other institutions are at the desired level in terms of producing disaggregated data.
25. The publication of sustainable development indicators is carried out through TÜİK's existing data dissemination platform. TÜİK's current data dissemination platform meets criteria such as the publication of data calculated according to an established and reliable methodology, transparent disclosure of metadata, and accessibility to everyone. However, it is assessed that improvements in terms of visual appeal, user-focused design, and ease of access to data would be beneficial.
26. There is a need for a high-level coordination mechanism to ensure the achievement of the SDGs and the effective management of the process, and as of 2019, it is observed that there are plans to establish such a mechanism.

27. There is no designated process or mechanism for the regular evaluation of progress regarding the 2030 Agenda. The CSBB has conducted three evaluation studies related to the SDGs. However, these studies are not subject to a specific systematic approach or regularity, though it is understood that plans exist to systematize them.
28. There is a need to establish a national structure to enhance inter-institutional communication and interaction regarding the SDGs and to ensure the systematic monitoring, evaluation, and guidance of implementation.

As can be seen, deficiencies have been identified in 10 out of the 28 findings (items 5, 7, 10, 11, 14, 21, 24, 25, 27, and 28). In terms of relevance to our topic, item 11 is significant: "It is assessed that preparatory/planning efforts for achieving the SDGs at the regional level are not at a sufficient level." This is a finding that underscores the importance of this article and should be taken seriously

2.3. Recommendations In the Court of Accounts Report

1. It is assessed that explicitly documenting the connections between plans, policies, and strategy documents and the SDGs would be beneficial for the effective management of the process, raising institutional awareness, and demonstrating the highest level of ownership.
2. It is considered unrealistic to achieve all SDGs within the five-year plan period; therefore, prioritizing the SDGs during the plan preparation processes and creating a road-map until 2030 would be beneficial to ensure that all relevant SDGs are addressed.
3. Establishing a clearer connection between the Development Plan and the SDGs is important to enable institutions to reflect the targets they are responsible for in their institutional plans and documents.
4. It is believed that establishing communication with the senior managers of institutions when assigning institutional responsibilities for the SDGs would be advantageous.
5. It is evaluated that publishing the institutional responsibility table by linking the responsibilities for policies and measures in the Development Plan with the SDGs would be significant for clarifying institutional responsibility areas, ensuring more effective institutional participation in the process, and facilitating inter-institutional cooperation.
6. Incorporating measures into the CSBB's monitoring system updates to track the realization of the SDGs will contribute to the process.
7. It would be beneficial to have an entity that evaluates the alignment of local governments' strategic plans and activities with the Development Plan and SDGs, while also providing guidance.

8. The participation of regional development agencies and regional development administrations in the process of implementing the SDGs is deemed important for localizing the SDGs and ensuring a holistic approach to their application.
9. It is assessed that establishing a budget infrastructure to track expenditures based on the SDGs, at both central and local government levels, is a critical element for the effective management of the process.
10. It is believed that conducting efforts systematically based on a plan to raise and enhance awareness among the public and all stakeholders would yield more successful results in achieving the intended goals.
11. It would be beneficial to define a road-map for producing indicators with an established methodology by starting work based on the priorities outlined in the 11th Development Plan.
12. It is necessary to initiate efforts to identify additional national indicators aligned with the objectives of the Development Plan.
13. Establishing a working group or groups specifically focused on sustainable development indicators would be beneficial for more effectively implementing SDG processes.
14. TÜİK needs to prioritize its efforts to enhance the data production capacities of institutions.
15. Although there are various capacity-building initiatives between regulatory institutions and other entities, increasing their number in the coming period would be advantageous.
16. Both TÜİK and other institutions responsible for indicator production need to emphasize capacity-building efforts for producing dis-aggregated data.
17. It is assessed that the work on the web platform planned for publishing sustainable development indicators should be completed and activated as soon as possible.
18. It is evaluated that establishing a Coordination Board within the CSBB, with the participation of senior representatives from all relevant public institutions and organizations, to monitor the 2030 Agenda, ensure policy alignment with the SDGs, and guide implementation toward achieving SDG targets would contribute to the process.

The Court of Accounts has clearly expressed the necessity of preparing a regional plan and enhancing its impact in recommendations 7, 8, 9, 10, and 11.

3. Regional Plan

A plan prepared under national development plans; it determines the temporal and spatial dimensions of investments through decisions regarding regional hierarchy, regional land use, and infrastructure, ensuring their reflection in the sectoral implementation plans and

programs of relevant institutions, coordinating and guiding investments, and directing environmental and zoning plans.

A planning region is an analytical region. These regions are defined primarily to facilitate the implementation of economic development plans and to ensure unity, integrity, harmony, and coordination among related economic decisions (Keleş, (2023), 356).

Planning regions express the concept of space from a macroeconomic or microeconomic perspective. It is commonly noted that planning regions encompass three areas of examination (Yıldız ve Doğan, (2024), 77).

1. Planning and organization of cities
2. Examination of key sectors
3. Identification of water basins

For the successful and effective implementation of regional planning, the area of application must be very well defined. In this context, regional planning is a type of planning that encompasses a wide range of topics and carries a broad meaning.

The regional plan aims to define the fundamental social and economic characteristics of the region, identify and highlight the factors hindering its development, ensure more efficient use of all available resources in the region, and facilitate their optimal utilization. To promote the development of the region through the regional plan, regional planning must be consistent with the country's national development plan. Regional planning is a form of local planning based on the principle of subsidiarity (Yıldız ve Doğan, (2024), 79).

The redistribution of resources for development and economic purposes, underdevelopment and regional changes, rural development, industry, and metropolitan growth are among the topics of regional planning (Glasson, 1974)

According to the author of this article, when conducting regional planning, rural development, along with development in cities and their peripheries aligned with economies of scale, should be addressed together, focusing on the goal of regional development in coordination with the regional plan (Göğez, (2024), 211).

In addition to these, there are also broader definitions that encompass all administrative, economic, and technical studies. These definitions, beyond a narrow focus solely on production and investment purposes, take into account human and economic values, utilize data from other disciplines to enable the development of methods, and provide the opportunity to find comprehensive solutions related to the region (Sakman ve Soral, (1966), 7).

4. Regional Planning According To The Economics Dictionary

The geographical scope covered by regional planning can vary from a broad to a narrow

scale. The boundaries of regional planning can range from measures taken to develop an earthquake-affected region to an entire continent, encompassing a part of the country, a province, a district, or a town.

In this dimension, regional planning is an upper-scale plan that guides public institutions and organizations, particularly local governments (Eastern Black Sea Regional Plan, (2014), 3). In our article, RURAL + URBAN (REGIONAL) DEVELOPMENT will be addressed at the province and district levels, and it is proposed to examine it in four phases:

1. Distribution of resources according to the region. Evaluation of the quantity, quality, and characteristics of the factors.
2. Once the inventory is prepared and the second phase is reached, the relationships between natural resources and needs. Measuring the capacity of the local human factor, financial resources, and technical capabilities to meet these needs.
3. Identifying measures that will maximize the efficiency of resource distribution to the highest degree. Preparing alternative projects that outline possible strategies and finalizing the Plan's objectives.
4. After the Plan takes its final form and is approved, determining the responsibilities and authorities of the implementing bodies through the Strategy Plan/Document/Book.

5. Fundamental Characteristics Of Regional Planning

Two fundamental criteria should be examined:

1. Existing trends and developments at the global level. (The EU Green Deal is an example of global trends.)
2. The country's unique conditions and the nature of problems requiring solutions at the regional level. (The utilization of geothermal resources is an example of the country's unique conditions. Unfortunately, it is only being utilized for baths and spas.)

Regional planning should be prepared under the supervision of a local organization established by the central government at the regional level, but through collaboration between central and local institutions. Considering the current state of the country's conditions, it is assessed that it should be seen as a solution that can be implemented in the short term.

The "Regional Planning Guidance" implemented in the United Kingdom and Singapore's succinctly termed "30 by 30" goal, which is "achieving 30% self-sufficiency in agricultural production by 2030" are notable examples. Algeria's Desert and Sub-Desert Agriculture Project can also be cited among remarkable examples.

Author's Note: Projects that encompass the entirety of the goal, such as the "Carbon Neutral/Negative City Yalova" project, should be considered for development.

6.Conclusion

1. Türkiye is among the league of developing countries. After the closure of the State Planning Organization (DPT), instead of planned development, investment and development initiatives appear to be random or based on political preferences.
2. Frequent economic crises are experienced due to the inability to achieve planned and sustainable development.
3. In our country, which is an earthquake-prone region, infrastructure problems lead to flood disasters in rural and urban areas. It is believed that unplanned urbanization and investments result in the inefficient use of public resources.
4. Even the most developed countries like Singapore prepare development plans based on targets, while it is observed that most Strategic Plans, prepared in a copy-paste manner, do not reflect reality.
5. Even the state budget has to be revised before the mid-year point.
6. It is observed that municipalities that lack investment and spending discipline based on their budgets but have the ability to borrow face excessive budget deficits, and due to over staffing, insufficient budget allocations are made for investments as a result of salary and wage payments.
7. Although preparing a National Strategy Document may be challenging, it is evident that there is a need to prepare a Local/Regional Strategy Document, revised every 2-5 years, by Local and Administrative Authorities, Chambers, Universities, Associations, NGOs at the regional/provincial level, taking into account the Five-Year Development Plans.
8. The planning and strategies to be implemented should be aligned with the EU Green Deal, the Paris Climate Agreement, and the 2053 Carbon Neutral targets.
9. Although the report prepared by the Court of Accounts examined plans on a national basis, the necessity of preparing plans on a regional basis has been very clearly expressed.
10. Despite the signing of the Paris Climate Agreement in 2015 and the prior emphasis on Sustainable Development-focused goals and approaches, was it the right decision to close the DPT in 2011, establish the Ministry of Development in its place, and then, following the 2018 elections, merge the Ministry of Development with the Budget and Financial Control Directorate General of the Ministry of Finance to establish the Strategy and Budget Office (CSBB) under the Presidency? This should be questioned.

Summary of the Paper

This paper outlines the concept and legal framework for preparing an Investment Strategy Document in Türkiye, intended as a comprehensive guide for sustainable regional development and investment. It targets local authorities such as Governors, Mayors, and other regional leaders, aiming to serve as a reference updated biennially and aligned with national strategies like the Five-Year Development Plans. It also seeks to provide assurance to investors by securing approval from relevant councils.

The Investment Strategy Document is envisioned as a practical, legally grounded tool to foster sustainable regional development in Türkiye, bridging national goals with local action while addressing deficiencies in planning, coordination, and implementation identified by the Turkish Court of Accounts.

1. Summary of the “Introduction” Section:

- Turkish laws, notably Municipal Law No. 5393 (Article 41) and Metropolitan Municipality Law No. 5216, mandate local authorities to prepare development and strategic plans. These laws assign municipalities responsibilities for infrastructure, health, education, and tourism investments, emphasizing sustainable development.
- The document distinguishes the Investment Strategy Document from Strategic Plans, highlighting its role as a coordinated effort involving local authorities, chambers, universities, and NGOs.
- Sustainable development is defined as meeting present needs without compromising future generations, aligning with global frameworks like the UN’s Sustainable Development Goals (SDGs) and the Paris Climate Agreement.

2. Summary of the “Findings from the Turkish Court of Accounts Report” Section

- Türkiye integrated SDGs into its 11th Development Plan (2019-2023), coordinated by the Strategy and Budget Office (CSBB) and monitored by TÜİK. However, challenges include:
 - Insufficient prioritization and timelines for SDGs.
 - Limited awareness and capacity at local levels.
 - Inadequate regional planning and monitoring frameworks.
 - Gaps in data production (e.g., 132 of 215 indicators are not yet produced).
- Key finding: Regional-level preparatory efforts for SDGs are insufficient, underscoring the need for this Investment Strategy Document.

3. Summary of the “Recommendations from the Court of Accounts Report” Section

- Prioritize SDGs in plans, clarify institutional roles, and enhance regional participation (e.g., via development agencies).
- Improve budgeting, awareness campaigns, and data production for SDGs.
- Establish a high-level coordination board to oversee the process.

4. Summary of the “Regional Plan” Section

- A regional plan aligns with national development goals, focusing on resource distribution, sectoral analysis, and infrastructure. It addresses rural and urban development holistically, emphasizing efficient resource use and economic growth at provincial and district levels.
- Four phases are proposed: resource inventory, capacity assessment, strategy development, and implementation.

5. Summary of the “Fundamental Characteristics of Regional Planning” Section

- Plans should reflect global trends (e.g., EU Green Deal) and local conditions (e.g., geothermal potential).
- Collaboration between central and local entities is essential, with examples like the UK’s Regional Planning Guidance and Singapore’s “30 by 30” goal cited as models.

6. Summary of the “Conclusion” Section

- Türkiye faces challenges like unplanned development, economic crises, and inefficient resource use, exacerbated by the closure of the State Planning Organization (DPT) in 2011 and subsequent institutional shifts.
- A localized Investment Strategy Document, revised every 2-5 years, is proposed as a solution, aligned with global sustainability targets (e.g., Paris Agreement, EU Green Deal).
- The Court of Accounts highlights the urgent need for regional planning to address these gaps effectively.

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The European Union's Irregular Migration Management Policy and Türkiye: An Evaluation In Terms of Leadership In Crisis Management

Gürol ÖZCÜRE

Ordu University
gozcure@odu.edu.tr

Nimet ERYİĞİT

Ordu University
neryigit@odu.edu.tr

Abstract

In this study, the European Union (EU) policies in the context of combating the Surian irregular migrant crisis in EU-Türkiye relations, and the cooperation between the EU and Türkiye on the 2016 EU-Türkiye Statement, 2013 Visa Liberalization Dialogue, and Readmission Agreement have been examined with the help of crisis management theories. The research was conducted through a literature review and the application of the Institutional Image Restoration Theory in crisis management. The denial, avoidance of responsibility, reduction of the negatives of the action, corrective action, and acceptance messages and strategies conveyed to the public were analyzed through a content analysis of news reports in foreign and local mainstream media. The heads of EU institutions, as well as the President of Türkiye and ministers implemented their strategies by informing the public accurately and completely during crisis communication and management. The scope of the research includes 60 news selected and examined among over 30 news which published by Dünya and Milliyet Newspapers and the EuroNews Turkish website which are the highest-circulated national and foreign newspapers and website in Türkiye, between March 2016 and December 2024 period. During the refugee crisis in this period, it was observed that while leaders were implementing effective proactive crisis management practices, they were also following strategies to adapt to changing conditions. How was crisis management and communication ensured during this period? Were the crisis management practices successful? The study sought to answer whether leaders were able to manage the crisis within the scope of Benoit's image restoration theory through content analysis of news related to the irregular migrant crisis and crisis management selected from Milliyet, Dünya and Sabah newspapers, which are important Daily and economic newspapers in Türkiye, and from the EuroNews Turkish website. The results of the research indicated that while EU

leaders managed the crisis management better and more successfully, Türkiye was not successful as expected in crisis management and became the country hosting the most irregular migrants in the world, which has turned into a crisis leading to significant debates.

Key Words: The European Union-Türkiye Relations, Irregular Migration Crisis, Crisis Management and Communication Theories.

1. Introduction

Among the recent policies implemented by the European Union (EU) as a supranational organization concerning irregular migrants—primarily refugees and asylum seekers who have entered EU countries illegally, with numbers increasing daily—are of significant importance. This issue not only affects the relationships among EU member states but also shapes relations with neighboring countries like Türkiye as a candidate country for full membership. Irregular migration has become a key point of debate and has created a major crisis at the EU level, much like it has globally. In managing this crisis, the success of leaders has gained greater importance in terms of sustainability, and different strategies are being followed. In the context of the irregular migration crisis caused by primarily Syrian migrants and later, EU institutions and member state leaders have shown more compassion towards Ukrainian irregular migrants and have implemented emergency mechanisms for the first time under conditions of mass migration.

According to the United Nations High Commissioner for Refugees (UNHCR), Germany has granted temporary protection to 1,125,850 Ukrainian refugees, Poland to 956,635, and the Czech Republic to 375,590, with these countries providing various rights such as residence permits, access to the labor market, housing, education for children, and social and medical services. These rights are based on the 2001/55/EC EU Temporary Protection Directive, which was adopted in response to the conflicts in the former Yugoslavia. Under the 343/2003 Dublin II Regulation, asylum applications within the EU must be submitted in the first EU country of entry. Through the Dublin I, II, and III Regulations, member states have sought to keep migration within their jurisdiction, but since tackling irregular migration requires cooperation at the EU level, the EU's authority in this area has been strengthened (Riso, 2024: 1-3; Sefer, 2023: 46-47).

As of May 17, 2023, according to the Republic of Türkiye, Ministry of Interior, Presidency of Migration Management, the number of foreigners in Türkiye holding legal residence permits is 1,308,514. Among them, there are nearly 3 million Syrians under temporary protection, along with significant numbers of irregular migrants also from Afghanistan, Pakistan, Iraq,

Iran, and other countries. The total number of irregular migrants in Türkiye is estimated to be between 4 to 5 million, including both known and unknown migrants. This situation has made Türkiye the country hosting the largest number of irregular migrants in the world. Given the economic, social, and political issues arising from this large population, there are considerations about returning them to their home countries. However, it is understood that a significant portion (around 60%) of these migrants will likely stay permanently. The financial cost of hosting this large group has already exceeded \$40 billion to Türkiye, and the problems faced in managing this large irregular migration groups are reaching unsustainable levels (Presidency of Migration Management, 2024).

This study reviews the literature on EU migration policies and draws attention on content analysis of agreement texts between the EU and Turkey, as well as media reports. The study will evaluate how the EU's irregular migration policy and intergovernmental methods influence the formation of EU policies, particularly within the framework of the March 18, 2016 EU-Türkiye Refugee Deal (the "Agreement"). It will examine how Türkiye used its EU accession process in this cooperation, especially in addressing irregular migration crises. Media coverage of the 2013 Visa Liberalization Dialogue (VLD) and the Readmission Agreement (RA), which foresaw the return of migrants who crossed the Aegean Sea to Greece via the islands, will also be analyzed. This agreement has been criticized by the United Nations and refugee and human rights organizations, who argue that it is immoral and violates international human rights law.

The research will explore how EU-Türkiyenegotiations have stalled, turning cooperation into a limited and shallow exchange regarding stopping migrant flows or providing visa facilitation. The significance of the Readmission Agreement (RA) will be examined in relation to the asylum crisis and the management of irregular migration. The study will use content analysis to evaluate media reports, statements from leaders regarding crisis management and communication, and academic literature on the subject. Content analysis involves converting specific characteristics of written texts into quantitative data, enabling a deeper understanding of the issue (Yengin, 2017: 164).

1.1. The EU's Irregular Migration Management Policy and Cooperation with Türkiye

Today, the social policies of EU member countries prioritize irregular migration, and it is clear that they must allocate significant resources, both in terms of policy and budget, to address essential social services—such as healthcare, security, nutrition, housing, education, and employment—not only for their own citizens but also for irregular migrants. In the EU context, migration refers to the "movement of a person from one country to another and settling in a different country for long-term or permanent residence." International labor migration, on the

other hand, involves individuals crossing borders in search of better living conditions and employment opportunities.

Three main factors shape this phenomenon: the first is the development of regular migration policies by developed countries to address labor shortages and attract skilled migrant workers. The second is the significant role of migrants' access to social welfare services, and the third concerns the competition between foreign workers and locals in the labor market. Lastly, migration movements can lead to demographic changes and potential political instability within countries (Özcüre, 2023).

The COVID-19 pandemic led to a severe economic downturn, a healthcare crisis, and exposed vulnerabilities in the EU's labor market, particularly regarding gender inequality. The pandemic's aftermath revealed increased fragility in the EU, especially concerning supply chains. These effects have necessitated reforms, including the strengthening of the healthcare system, promoting green and digital transformations, and addressing demographic shifts to ensure economic and social resilience. Additionally, Russia's invasion of Ukraine exacerbated the global cost-of-living crisis, raising energy, food, and fertilizer prices, which fueled inflation and led to food and energy shortages. This, in turn, is expected to increase migration flows to Europe, especially as the climate crisis emerges as another pressing issue, further contributing to homelessness (Atanasova and Rasnaca, 2023: 116).

The EU Commission's response to these challenges, particularly the irregular migrant crisis, aims to avoid a repeat of the 2015 migrant surge. On March 18, 2016, the EU reached a Refugee Agreement with Turkey, which includes providing EU funding for Syrian refugees under temporary protection. These funds are distributed through six categories, as defined by Turkey's Ministry of Development: 1) Humanitarian aid, 2) Education aid, 3) Health aid, 4) Urban infrastructure and services, 5) Social support and integration, labor, and economy, and 6) Migration management. The total required budget for these efforts over three years is €19.1 billion. However, since the EU's contribution of €6 billion is insufficient, much of the assistance comes from Turkey's own resources (Öztürk, 2019).

In 2012, Türkiye signed a Cooperation Agreement with the European Border and Coast Guard Agency (FRONTEX) to address the irregular migration flow. As a result, Türkiye enacted the Law on Foreigners and International Protection (YUKK) in 2014 and established the Directorate General of Migration Management. In response to the EU refugee crisis, Türkiye and the EU adopted a "conditionality" approach, aiming for cooperation with third countries in exchange for financial aid. Similar agreements have been made with countries along migration routes, such as Tunisia and other EU-bordering countries. An example of such an agreement is the 2018 deal between the EU and Egypt. According to FRONTEX data, the number of migrants entering the EU via the Eastern Mediterranean route using

Cyprus, the Aegean Sea, and the Meriç River has decreased significantly as a result of the cooperation between Türkiye and the EU, from a peak of 885,386 in 2015 to 182,277 in 2016. The numbers have continued to decline, with 42,319 in 2017, 56,561 in 2018, 83,333 in 2019, 20,280 in 2020 and 20,567 in 2021 (FRONTEX, 2024).

On May 14, 2024, the EU adopted a New Migration and Asylum Pact, which includes provisions to streamline and accelerate asylum application procedures, ensure solidarity among EU countries, establish a common financial pool, and strengthen migration management. Negotiations for this pact lasted over four years, facing opposition from far-right and far-left parties. Poland and Hungary voted against the pact, while the Czech Republic and Slovakia remained skeptical, and Austria voted against the Crisis Regulation. The pact consists of four main pillars: secure external borders, rapid and effective procedures, effective solidarity, and responsibility sharing. It also includes updates to the Screening Regulation and Eurodac Regulation (Şen, 2024: 34-35).

According to the Directorate General of Migration Management, migration governance refers to the regulation of cross-border migration and the management of refugees and those in need of protection within the national system. Turkey, as both a sending country of migrants to the EU and a transit country along EU migration routes, has faced increasing irregular migration and asylum-seeker issues since the 1980s.

1.1.1 Türkiye-European Union Refugee Agreement (Deal)- March 18, 2016

In Türkiye-EU relations, after the civil war that started in Syria in 2011, the refugee crisis led to a large irregular migrant population seeking asylum in Türkiye. In 2013, the Readmission Agreement (RA) was signed, offering visa liberalization for Turkish citizens in exchange. According to the agreement, Türkiye must complete 72 criteria to be granted visa liberalization by the EU. To date, 66 of the criteria have been met, and the remaining six criteria are: "Changes in anti-terrorism legislation," "Europol agreement," "Anti-corruption GRECO recommendations," "Judicial cooperation with member states," "Protection of personal data," and "Implementation of the Readmission Agreement." These six criteria are likely to be completed quickly, but Türkiye is seeking flexibility from the EU, especially regarding anti-terrorism legislation. However, no positive steps have been taken yet.

On November 29, 2015, with the initiative of German Chancellor Merkel, an action plan was established to jointly find a solution to the refugee crisis. This was followed by the Türkiye-EU Refugee Agreement (Deal) on March 18, 2016, under which irregular migrants arriving through Turkey, especially to Greece, would be returned to Türkiye, and in exchange, one Syrian irregular migrant would be resettled in EU member states. The 2016 agreement also marked Türkiye as a "Safe Third Country." However, as an EU candidate country, Türkiye is

making legislative changes to align with EU migration and asylum policies. According to the agreement, after initially accepting 18,000 Syrian irregular migrants, another 54,000 would be accepted, bringing the total to 72,000. Additionally, negotiations have led to the opening of new chapters, updating the Customs Union Agreement, and agreeing to grant visa liberalization to Turkish citizens starting from June 2016 (Özer, 2017: 37-38).

With the Refugee Agreement, Türkiye is expected to prevent irregular migration to the EU by taking measures both at sea and on land. The agreement has been successful in significantly reducing irregular migration to the EU. Türkiye has also received EU funding to support its efforts in keeping these migrants in the country. Moreover, the EU Asylum and Migration Pact (2024) has been enacted, creating a mandatory solidarity mechanism for "entry countries" like Greece, Italy, and Spain. A system for distributing irregular migrant quotas among EU member states has been established, with countries refusing to take in migrants required to pay an annual fee of 20,000 Euros.

According to EUROSTAT data, in 2023, the EU granted protection status to 409,485 asylum seekers. Of these, 43% were granted refugee status, 35% secondary protection, and 22% humanitarian protection. The largest groups were Syrians (130,000), Afghans (73,000), Venezuelans (42,000), Somalis (11,000), and Ukrainians (10,000). Germany (151,000 or 37%) and France (55,000 or 13%) were the main recipients. Social policy debates have emerged, with criticism regarding the use of local citizens' taxes to provide social assistance to irregular migrants. However, these policies are defended on economic, political, and humanitarian grounds (EUROSTAT, 2024).

Despite the Refugee Agreement being signed and the EU supporting it with a 6 billion Euro budget (which was later increased), the inflow of Syrian migrants heading to EU countries has been halted. However, after eight years, many provisions of the agreement, such as visa liberalization for Türkiye, remain unimplemented. This has led to a situation where irregular migrants from Syria and other countries have turned Türkiye into a transit country, as well as a target for migration, creating a crisis of irregular migration.

The March 18, 2016, Türkiye-EU Migration Agreement has been considered a successful cooperation model for the EU. But is it also considered a success for Türkiye? The crisis caused by the 3.7 million refugees from Syria, as well as increasing numbers from Afghanistan, Iraq, Libya, and Palestine, continues to put pressure on Türkiye's public opinion, causing significant debate and criticism. The EU has developed three main measures to manage the migrant crisis: first, rescue operations to reduce the public outcry over migrant drownings and dead bodies washed ashore; second, setting migrant quotas and ensuring solidarity by distributing asylum seekers across member states; and third, using agreements with countries like Türkiye to prevent the migrant flow. This crisis has been described as a

unique refugee issue in public discourse. However, the EU faces three major problems in this regard. The crisis has led to populism and political debates in EU member states, driven by concerns over elections (Tavacı, 2023: 110).

The agreement stipulates that the EU will keep records of Syrian and other refugees, allowing EU member states to accept those who meet their needs as asylum seekers, while others are to remain in Turkey. This arrangement has positioned Türkiye as a key partner in halting the refugee flow into the EU (Ekşi, 2016: 38; EU Commission, 2014: 41). According to the agreement, the obligation to accept their own nationals back began immediately, but a three-year transition period for third-country nationals and stateless persons in irregular migration was established until 2017. The EU has signed Readmission Agreements (RA) with countries that are countries of origin, transit, or both (such as Turkey) (Ekşi, 2016: 5).

Türkiye's strategy of becoming a "migration depot" for the EU has not been successful until 2008, when the law enforcement agencies took firm action. After 2013, the migration and asylum issue moved from the General Directorate of Security's provincial directorates to the Ministry of the Interior, with the establishment of the Directorate General of Migration Management in 81 provinces. In 2018, District Migration Management Offices were also established in 36 districts. However, these changes sidelined the law enforcement agencies, leading to a decision in the Migration Board meeting on September 15, 2021, to create departments within the Directorate General of Security and the Gendarmerie Command for combating migrant smuggling and human trafficking. Additionally, a "Irregular Migration Database" was created to ensure collaboration and data sharing among all relevant institutions, including security forces and the Coast Guard (Ekşi, 2021: 13-14).

Regarding Turkish citizens' visa-free travel to European countries, this issue dates back to Türkiye's membership in the Council of Europe in 1949, even before the start of EU relations. Additionally, the 12 September 1963 Ankara Agreement (AA), specifically Articles 9, 12, and 14, made provisions for this issue. Article 9 of the AA prohibits any discrimination based on nationality, and the Additional Protocol signed later (Article 41) stipulated that member states would not impose new restrictions on the free movement of services. Despite this, after the military intervention of 1980 and the increasing flow of Turkish asylum seekers, member countries of the Council of Europe began requiring Turkish citizens to obtain visas, starting with Germany and France (5 October 1980), and later Belgium, the Netherlands, and Luxembourg (1 November 1980) (Tekçi, 2022: 6-7).

In terms of labor market developments, it is often observed that well-educated individuals migrate from Türkiye to foreign countries. The Decision 1/80 of the EU-Türkiye Association Council (19 September 1980) determines the social security rights of Turkish workers. However, the Decision 1/80 of the EU-Türkiye Association Council did not regulate the free

movement rights of Turkish workers within the EU. According to Article 6 of the Decision, Turkish workers integrated into the labor market in EU member states are held responsible for national laws after their initial entry (Savaş-Case 37/98, ECR 2000, 1-2927, para 65) and Atabay (C-317/01 ECR 2003, 1-12301, para 65). Furthermore, the Decision 3/80 of the EU-Türkiye Association Council adopted on 19 September 1980, established the social security rights of Turkish workers. The Regulation 987/2009 deals with the status of third-country nationals entering EU member states, including researchers (2005/71/EC), students (2004/114/EC), and high-skilled workers (2009/50/EC) (Özcüre, 2017).

Economic, environmental, political, and social factors have contributed to this migration flow, which is driven by push factors (from the source countries) and pull factors (from the destination countries), especially due to the aging population and labor shortages in the EU. A significant portion of irregular migrants has been able to obtain work permits under certain conditions while staying under temporary protection, and they work in the informal sector under low wages and poor conditions. Despite Türkiye entering the EU Customs Union in the European Economic Area (EEA), Turkish labor remains excluded from the free movement and social security systems, facing different and discriminatory treatment compared to countries like Norway, Switzerland, and Liechtenstein that are part of the EEA but not EU members.

Since the Syrian Civil War in 2011, the migration of Syrian refugees to Türkiye and neighboring countries like Lebanon, the increase in terrorist incidents, global warming threats, the Russia-Ukraine War, and its resultant refugee flows are considered the greatest crises the international system has faced in recent years. The refugee crisis caused by these mass migrations requires international cooperation. This cooperation has become a necessity for Türkiye which hosts a large number of migrants, and has turned into a successful policy tool in Türkiye-EU relations. The Refugee Agreement signed between Türkiye and the EU plays an important role in creating this cooperation mechanism.

1.1.2.Migrant Crisis in the EU

According to 2023 statistics from the European Statistical Office (EUROSTAT), there are 27.3 million immigrants in the EU who have moved from non-EU countries and obtained permanent legal residence, accounting for 6.1% of the total EU population. Of these, 13.9 million are EU citizens residing in another EU country. Additionally, more than 5.1 million immigrants arrived in the EU in 2022, with 1.5 million of them already having settled within the EU, while the countries of origin for 400,000 immigrants remain undetermined. As a result, a total of 7 million immigrants entered the EU in 2022. The number of irregular migrants, which peaked in 2015 with 1.82 million illegal border crossings, decreased to

142,000 in 2019. In that year, 698,000 asylum seekers, who had illegally departed from third countries, could not obtain permanent rights in the receiving countries, with 370,000 of their asylum applications being rejected. Furthermore, it was noted that the EU hosted 2.6 million asylum seekers in 2019, which corresponds to 6% of the EU population (EUROSTAT, 2024). In Germany, policies have been implemented to expedite the processing of asylum applications, impose social assistance restrictions on asylum seekers, and increase financial aid to manage the migrant influx. However, Germany's "open door" policy toward immigrants remains in place, with economic demand for migrant labor playing a significant role alongside the European values of "human rights." Under international law, the principle of fairly treating those seeking protection, in addition to ensuring compliance with humanitarian and social standards for care and shelter, must be upheld. Germany announced that it spent 23 billion euros on asylum seekers and integration programs in 2023 alone. Although the Migration Pact has proven successful in reducing the number of asylum seekers by 94%, Türkiye has shouldered a financial burden exceeding 40 billion dollars, far beyond its social capacity. Moreover, while hosting more asylum seekers than the entire EU combined, Türkiye is seeking additional financial support from the EU for the permanent irregular migrants it hosts. There is also a call for the removal of the unfair visa restrictions imposed on Turkish citizens. Regarding EU powers, immigration policies from outside the EU were initially left to the jurisdiction of member states. However, due to the failure of this approach, the EU has recently begun to develop policies at the EU level. By signing new pacts, the EU is working to create common policies regarding the free movement and social security of EU citizens. In 2024, the EU countries that signed the new Migration and Asylum Pact established a unified asylum policy, as well as secondary and temporary protection policies, in accordance with Article 78 of the EU Treaty.

1.1.3. The EU and Türkiye Relations and the Irregular Migration Dimension

In recent times, as a result of the High-Level Dialogue and cooperation on migration with the EU, migration on the Eastern Mediterranean route has been halted, but there has been no concrete progress on the visa liberalization for Turkish citizens in the EU. Looking back, Turkish labor migration, which began with bilateral labor dispatch and social security agreements with mostly EU countries in the early 1960s, was halted and prevented by the unilateral regulations of these countries in the post-oil crisis period of 1973. Nevertheless, in terms of numbers, the presence of Turks in Europe has steadily increased year by year through family reunifications, new marriages, and the addition of spouses and children to the migrant workers, reaching the current level. Today, according to the Türkiye Research Center (TAM), based in Essen, Germany, the number of Turks in Europe has reached 3,052,133.

According to the latest official statistics from the Ministry of Labor and Social Security of Türkiye (ÇSGB), the number of our citizens in the following EU countries is 3,024,987. When evaluating this data, it is clear that alongside most of our working citizens in Germany, a significant proportion of our citizens are unemployed. For example, in Germany, 461,753 of our citizens are employed, while 176,192 are unemployed, which shows how difficult it has become to migrate to these countries for work. While these citizens, who mostly know the German language and have somewhat integrated into the society, cannot find jobs, unskilled labor migrants from Türkiye will have a very slim chance of finding employment in these EU countries (Özcüre, 2017).

According to the Temporary Protection Regulation (GKY), asylum seekers benefiting from temporary protection are not allowed to leave their registered province without permission, nor can they settle elsewhere in Türkiye. The EU's Temporary Protection Directive grants the opportunity to apply for main protection after a temporary protection period of up to 3 years. Türkiye, however, has not set such a time limitation for asylum seekers under the GKY. This means that there is no solution other than the repatriation of the asylum seeker when transitioning from temporariness to permanence. In this area, efforts to achieve integration should lead to steps for a legal process that will initiate measures towards granting citizenship to asylum seekers. There are gaps in our country's protection legislation in this area. In this situation, there is no other option for asylum seekers to acquire citizenship except for exceptional measures. This is an application based on the condition of being extraordinarily beneficial to the country (Öztürk, 2019: 6).

The phenomenon of "external migration" in Türkiye's economic and social history, and in this context, the beginning of relations with the EU, which has lasted for over 70 years, coincided with the start of Turkish labor migration to the EU, which began in 1959. As of 2024, this migration has lasted for more than 67 years, and the initial character of temporary guest workers and their return has long since disappeared, becoming permanent. This community now identifies itself as "European Turks." However, members of this large community, by leaving their countries' labor markets, have yet to be granted the right to search for and find employment in the labor markets of other EU member states, like EU citizens. Therefore, both the EU and Turkish authorities view the area of free movement as something that will be integrated over the long term. According to the 2004 Negotiation Framework Document, the right to free movement for Turks may be subject to "derogation." That is, the Commission may present this area as a bargaining point, suggesting the indefinite postponement of this issue in progress reports during the negotiation process. However, an economic integration without the free movement of labor has never been seen in EU history. In the Eastern Mediterranean Migration Route, the migration flow from Türkiye to Greece has decreased

significantly due to EU-Türkiye statement signed on March 18, 2016. Similarly, the migration flow to the EU via the Western Mediterranean route, especially from Morocco to Spain in 2018, was reduced significantly, reaching 64,300. A similar decrease has also been achieved in the migration flow from Libya to the EU countries.

In the ongoing full membership negotiations with the EU, there is a need for new legal regulations regarding the policies and measures to be taken against irregular migration and the development of a well-functioning migration governance system in alignment with the EU. Moreover, an urgent cooperation network must be established with neighboring countries in this regard. The high unemployment issue faced by Türkiye in the employment sector is further deepened by the dimension of irregular migrant workers in the labor market. On the other hand, some EU countries, particularly Greece, follow a policy of using Türkiye as a “migrant depot.” Since 2008, the Directorate General of Migration, along with the Provincial Directorate of Migration, under the General Directorate of Security and Provincial Police Departments, has been responsible for residence, deportation, and asylum procedures for foreigners. In 2013, this was reorganized into the “Migration Management Directorate General” and provincial directorates were established in provincial governments. With the establishment of 97 mobile migration points in 30 metropolitan municipalities, Türkiye had to take a new step in the challenge against irregular migration.

The EU has followed a policy of making the agreement on the Readmission of Persons Residing Without Authorization between the Republic of Türkiye and the European Union (RA) attractive by committing to provide visa liberalization to Türkiye, offering financial (3 billion Euros immediately and later an additional 3 billion Euros, totaling 6 billion Euros) and technical assistance, and accelerating membership negotiations by opening new chapters. The RA is an agreement concerning the acceptance of irregular migrants passing through Türkiye into EU member states, and includes provisions protecting the rights of individuals who need international protection and their return to Türkiye under the agreement. Under the agreement, parties will cooperate on expulsion, removal, and deportation procedures under international and national law (Ekşi, 2021: 14).

Within this framework, 47,000 irregular migrants were caught and deported from Türkiye in 2023. After 2019, temporary protection registrations for Syrians in metropolitan areas were halted, and controls were tightened. Only 168,103 irregular migrants had work permits, among whom 91,500 were Syrians, and only 5,335 were women. According to our regulations, work permits are granted only upon employer application. Those unable to apply for work permits are allowed to work informally. In our country, where there are 3.7 million Syrian migrants, primarily engaged in subcontracted production for global markets and EU countries that require cheap labor, and 1.7 million migrants from other nationalities, a “spatial

concentration strategy” to combat this phenomenon was piloted in 16 provinces before being implemented nationwide. With this strategy, foreign populations are not allowed to exceed 25% of the total population in any given province. This helps prevent the formation of migrant ghettos. The 16 provinces involved are Ankara, Antalya, Aydın, Bursa, Çanakkale, Düzce, Edirne, Hatay, Istanbul, Izmir, Kırklareli, Kocaeli, Muğla, Sakarya, Tekirdağ, and Yalova. Following the 2016 Türkiye-EU Refugee Agreement, 1.5 million Syrian refugees benefited from the Social Integration Aid that was launched in 2017. It has been observed that the 250 TL monthly EU aid per person is insufficient, and there is no solution other than informal and low-wage employment for refugees. In this regard, the EU should share the responsibility with Türkiye and increase financial assistance (Özcüre, 2024: 113-114).

1.1.3.1. Readmission Agreement

In our country, migration management is primarily a matter that should be carried out within the framework of combating the informal economy. Standard & Poor's has stated that Türkiye has become a country where between 500,000 and 1 million irregular migrants work informally, which causes significant problems for a country with an unemployment rate of around 10%. In the field of migration management in Türkiye, the Law on Foreigners and International Protection, published in the Official Gazette of Türkiye on April 11, 2013, and entered into force, establishes a balanced system that preserves human rights, freedoms, and security, and aligns with EU acquis and international conventions. An efficient, manageable migration system was created, and the Directorate General of Migration Management, under the Ministry of the Interior, was established. The steps taken in the negotiations with the EU regarding Chapter 24: "Justice, Freedom, and Security" are important for opening negotiations on this chapter.

Article 91 of the Law on Foreigners and International Protection provides that "for foreigners who are forced to leave their country, cannot return to their country of origin, or come to our borders for emergency and temporary protection purposes or cross our borders, the Temporary Protection Regulation was prepared, which was published in the Official Gazette on October 22, 2014, and came into force." According to this regulation, temporary protection status was granted to those who came to our country due to civil war from Syria after November 28, 2011. The European Commission's Visa Exemption Roadmap emphasizes the continuation of cooperation with EU institutions, including the European Agency for the Management of Operational Cooperation at the External Borders (FRONTEX), in ensuring border security.

The Readmission Agreement (RA) does not cover all EU countries. The situations of the United Kingdom, Ireland, and Denmark are different. Since Ireland is subject to different rules

within the EU's Area of Freedom, Security, and Justice, the EU's visa policies and readmission agreements do not directly bind these two countries. Denmark, however, being a Schengen member, is bound by any arrangements made regarding visa liberalization. (Directorate for EU Affairs of Türkiye, 2024). It is explicitly stated in the RA that Türkiye will not lose any rights arising from its association law. Article 18/2 of the RA stipulates that the rights of individuals who have legally resided or worked in the territory of one of the parties, including those specified in the Ankara Agreement, the relevant Association Council Decisions, and the case law of the European Court of Justice (ECJ), will be fully respected. Türkiye is a party to the 1951 Geneva Convention on the Status of Refugees, the fundamental international treaty on refugee law, and the 1967 Protocol to the Geneva Convention (the New York Protocol). Türkiye accepted the geographical limitation contained in the 1951 Geneva Convention, which means that Türkiye does not grant refugee status to those who come from countries outside of Europe (the East) and apply for international protection. Türkiye has stated that it would consider lifting this geographical limitation only in conjunction with EU membership, as noted in the "Roadmap with Reservations" (Directorate for EU Affairs of Türkiye, 2024).

1.1.3.2. Türkiye-EU Visa Liberalization Dialogue

Türkiye-EU visa liberalization process has been based on an agreed Roadmap regarding how the Visa Liberalization Dialogue will be conducted, and a Memorandum of Understanding has been signed. Once the obligations outlined in the Visa Liberalization Roadmap are fulfilled and the process is successfully completed, the EU will amend Council Regulation 539/2001, and Türkiye will be added to the positive list of countries with visa-free access to Schengen countries. This will allow Turkish citizens to travel to Schengen countries for up to 90 days without a visa (Directorate for EU Affairs of Türkiye, 2024).

The Visa Liberalization Roadmap includes obligations related to the security of travel documents (such as passports), migration management, public order and safety, fundamental rights, and the proper implementation of the Readmission Agreement (RA). In this context, the proper implementation of the RA, the preparation of passports according to EU standards (biometric passports), ensuring the security of passports, identity cards, and other similar documents, providing adequate control and monitoring at borders in terms of migration management, compliance with EU acquis and effective application in international protection and foreigner-related procedures, combating organized crime, terrorism, and corruption, and preventing these crimes, aligning with EU acquis on terrorism financing, human trafficking, and cybercrimes, judicial cooperation in criminal matters, personal data protection, and ensuring that there is no discrimination among citizens regarding

fundamental rights, and ensuring access to identity documents for refugees and stateless individuals, are included in the obligations (Directorate for EU Affairs of Türkiye, 2024).

If the remaining six criteria are met, the Commission, as shared with the public on May 4, 2016, will recommend adding Türkiye to the list of countries eligible for short-term visa-free travel to the EU. However, the European Parliament (EP) has not discussed this yet, citing that the six criteria have not been fully met, and the Commission's visa liberalization proposal has been halted. With the recommendation, the EP and the Council will decide, within the framework of a joint decision-making procedure, whether the visa regime for Turkish citizens will be lifted. The recommendation will first be evaluated by the relevant European Parliament Committee (LIBE), where the recommendation and the outputs of the third Visa Liberalization Report will be discussed. If any changes are proposed, they will be sent to the Commission and the Council if necessary. The issue will move to the Council's vote once the European Parliament vote results in the conclusion that Türkiye has met all the criteria and that visas should be lifted. The fact that the Council will require a qualified majority rather than unanimity is certainly a favorable situation for Türkiye. As reflected in the Commission's 2015 Progress Report, although Türkiye is partially prepared for Chapter 24, especially in the areas of integrated border management and data security, it will need to undertake technical legislation that will enable effective cooperation with EU institutions and countries. Given that the EU is facing the largest migrant crisis since World War II, it is expected that the Commission will closely follow reforms in Türkiye regarding irregular migration and the social and economic integration of migrants, particularly in the coming period (IKV, 2016: 111-115).

In order to secure the external borders of the EU and dismantle criminal networks involved in human trafficking, enhanced cooperation is being carried out in areas related to migration, including Türkiye and the broader region. Since 1980, steps have been taken in a problematic issue, and the visa requirement imposed by Germany in 1980 as a "temporary measure" continued with Türkiye's inclusion in the EU's blacklist under the Schengen System (which currently includes 26 countries). Decisions by national courts of EU member states against our citizens, as well as European Court of Justice (ECJ) rulings, have complicated this issue. For our citizens, visas have started to be described as "torture," "hardship," and "ordeal." Furthermore, the fees paid for visas have reached astronomical amounts (Özsöz, 2014: 131). The visa requirement imposed by Germany in 1980 as a "temporary measure" continued with Turkey's inclusion in the EU's blacklist under the Schengen System (currently covering 26 countries). Decisions by national courts in EU member states against our citizens and rulings from the European Court of Justice (ECJ) have further complicated the issue. This process highlights the importance of good leadership and crisis management practices in migration governance.

2. Crisis Communication Theories And Effective Crisis Management

It is important for leaders to ensure crisis communication is effective and proactive crisis management is in place, allowing them to adapt to changing conditions.

Table 2.1. Crisis Communication Theories

Theories	Features
Corporate Defense Theory	It highlights the importance of managing the threat created by an attack on the organization. It focuses on defending the alleged immoral or illegal behavior (offense) committed by the organization. It implements communication strategies aimed at defense.
Image Repair (Restoration) Theory	It attempts to eliminate the threat to the image of the accused. It focuses on making an explanation to account for the organizational behavior that caused the crisis. It implements communication strategies to manage these explanations.
Situational Crisis Communication Strategies	It tries to reduce the attribution of responsibility for the crisis. It focuses on determining communication based on the institution's reputational assets and the type of crisis. There is a decision-making flowchart for crisis response strategies aimed at influencing responsibility attributions or stakeholders' perceptions.
Corporate Renewal Theory	It emphasizes the growth and learning opportunities in the crisis. It places great importance on leadership and institutional communication principles. To overcome crises, it focuses on strong positive values, an optimistic forward-looking perspective, and learning.

Source: Çakır, 2014: 72; Çınarlı, 2016 :54-56; Özcüre, 2021: 24..

As can be understood from the below Table 2.2, crisis communication theories are utilized in the process of exiting from crises. Among these theories, situational crisis communication strategies, corporate renewal theory, corporate defense, and image restoration (reparation) theory are the most prominent. The strategies applied in crisis management are categorized under two main headings. First, the accommodation strategies are those that accept responsibilities and propose corrective actions. Defense strategies, on the other hand, are those that deny responsibilities by claiming that there is no issue, attempting to reject responsibility due to the crisis (Çakır, 2014: 113).

Table 2.2: Crisis Response Strategies

Strategy	Example
1. Non-existence strategies	
a. Denial	We didn't do it.
b. Clarification	We didn't do it, and here's why.
c. Attack	Those who accuse us are making a mistake.
d. Intimidation	We will sue those who accuse us.
2. Distance strategies	
a. Excuse	We are not responsible.
b. Denial of intent	We didn't want this to happen.
c. Denial of volition	Someone else did it.
d. Justification	The crisis is not as bad as others.
i. Minimizing the damage	No one was harmed by the crisis.
ii. Claiming the victim deserved it.	The victim deserved these effects.
iii. Misinterpretation of the event causing the crisis	Our crisis did not cause an effect.
3. Forcing oneself to be accepted	
a. Supporting	Let's examine our positive sides.
b. Establishing superiority	The real problem is much bigger.
c. Praising others	Thank you very much for your advice.
4. Apologizing (Asking for forgiveness)	
a. Attention and improvement	We are closely monitoring the situation of the victims, and we will compensate for their losses.
b. Regret	Please accept our apology.
c. Correction	Here's how we will solve the problem.
5. Suffering	We are also victims of the crisis.

Source: Çınarlı, 2016: 52; Özcüre, 2021: 34.

Table 2.3: Image Repair (Restoration) Strategies and Key Characteristics

MESSAGE STRATEGY	KEY CHARACTERISTICS
DENIAL	
Simple Denial	Claiming that no mistake was made
Blaming Others	Claiming that the mistake was made by someone else
EVADING RESPONSIBILITY	
Provocation	Attempting to make the mistake understandable by claiming that the action had to be carried out as a result of another action.
Deficiency	Claiming that the mistake was caused by a lack of knowledge or ability.
Accident	Claiming that the mistake occurred as a result of an unfortunate event.
Goodwill	Claiming that there was goodwill despite the mistake.
Minimizing the negatives of the action	
Support	Emphasizing the positive qualities of the activity or its past positive aspects despite the mistake.
Minimizing	Claiming that the damage caused by the mistake is very small.
Distinction	Claiming that the mistake caused less damage compared to similar mistakes made by other companies in the past.
Superiority	Claiming that the benefit gained from the activity is more significant than the damage caused by the mistake.
Attacking The Accuser	Attempting to undermine the credibility of the accuser
Compensation	Paying compensation to the victims, covering their damages
CORRECTIVE ACTION/ACCEPTION	Problem-solving or prevention plan. Apologizing for mistake

Source: Çetin and Toprak, 2016: 59.

As shown in Table 2.3 above, five message strategies are followed in crisis communication regarding reputation management, which include: evading responsibility, denial, minimizing the negatives of the action, acceptance, and corrective action (Çetin and Toprak, 2016: 54-68; Muslu, et al., 2022: 176).

2.1. Analysis of Media News in Türkiye Using Content Analysis Method

The content analysis method is a research technique that transforms the content of news articles published in print or electronic media into data, facilitating accurate and objective interpretation (Muslu et al., 2022: 177). Between March 2016 and December 2024, 60 news articles were selected for analysis, selected from Dünya and Milliyet newspapers— two national newspapers in Turkey, as well as, from the EuroNews Turkish website. Throughout this period, leaders have been applying effective and proactive crisis management strategies, consistently working to adapt to changing circumstances. Among more than 100 news articles published by Dünya and Milliyet newspapers, as well as, the EuroNews Turkish website in Turkey, 30 news articles were selected that specifically addressed the irregular migration crisis and the statements made by leaders in response to this crisis. Through content analysis, the study seeks to answer the questions of how leaders managed the crisis and whether they were successful.

Table 2.4: Number of Migration Crisis News in Mainstream and Social Media in Türkiye and Worldwide: Case Analysis (March 23, 2016 – December 2024)

Newspaper or News Website Name and Link	Number of News Articles
Dünya Newspaper, www.dunya.com.tr	10
Milliyet Newspaper, www.milliyet.com.tr	10
EuroNews/Turkish: www.tr.euronews.com	10
In Total	30

During the period between March 2016 and December 2024, news articles selected from Dünya, Milliyet, Sabah and Hürriyet newspapers, as well as EuroNews Turkish websites were analyzed. The statements of high-level leaders and officials, such as the President of the Republic of Türkiye, Prime Minister, Minister of Foreign Affairs, Minister for EU Affairs, Government Spokesperson, and Speaker of the Grand National Assembly, were examined in the news coverage.

As shown in Table 2.5 below, the news reports highlighted statements emphasizing the critical need to end the visa regime imposed on Turks in the 1980s, explaining that the Readmission Agreement was signed with this goal in mind. It was also noted that the EU

failed to uphold its promises and that the Readmission Agreement would not be implemented. On the EU side, representatives from the EU Commission and the heads of state of the member countries stated that there was no alternative to the RA with Turkey.

They also mentioned that one-third of the financial aid would be sourced from member states' budgets, that efforts to reach a compromise on migration and asylum were ongoing, and that resolving the crisis would require additional time. Both EU and member state leaders, along with Turkish officials, reiterated the importance of cooperation with Türkiye in managing the migrant crisis—primarily involving Syrian asylum seekers—and declared that there was no viable alternative to this collaboration. In exchange, they announced a Readmission Agreement alongside visa liberalization for Turkish citizens and a €3 billion support package.

As can be seen in Table 2.5 below, the news included statements that it was of vital importance to end the visa regime imposed on Turks in the 1980s, that the Readmission Agreement was signed for this reason, that the EU did not keep its promises and that the Readmission Agreement would not be put into effect. On the EU side, the representatives of the EU Commission and the heads of state of the member states made statements that there was no alternative to the Readmission Agreement with Türkiye that one third of the aid would be paid from the budgets of the member states, that they were looking for a compromise on migration and asylum, and that time was needed to resolve the crisis.

Table 2.5: News Articles Related to the Irregular Migration Crisis 2016–2024 (Dünya Newspaper)

Date	News Headlines and Details	Message Strategy
23.04.2016	"Prime Minister Davutoğlu said, 'Visa exemption is a vital issue for Turkey. The Readmission Agreement can only be implemented alongside visa exemption.'"	Reducing Negativity of Action
28.04.2016	"EU Commission Vice President Timmermans stated, 'There is no alternative to the migration agreement made with Turkey.'"	Acceptance
02.07.2016	"President Recep Tayyip Erdoğan stated that Syrian migrants will be granted citizenship if they wish."	Acceptance
27.08.2016	"EU Minister Çelik, stating that Europe has not kept its promises regarding refugees, said, 'We will not implement the Readmission Agreement.' Minister Çelik reminded that EU countries have taken in only 1% of the Syrians they promised, while Türkiye is hosting between 2 to 3 million refugees, and that European countries are discussing voting on accepting only 300-500 individuals."	Corrective Action
31.08.2016	"Until October 2016, we expect visa liberalization. Foreign Minister Mevlüt Çavuşoğlu stated regarding the migration agreement with the EU, 'Despite the fact that irregular migration in the Aegean is under control, we do not see that the EU is willing to fulfill its promises.'"	Corrective Action
06.10.2017	"Accusation from the Prime Minister of Hungary to the EU. Viktor Orbán claimed that the European Union is implementing a plan prepared by Hungarian-Jewish businessman George Soros regarding refugees."	Denial

07.06.2018	"The readmission agreement with Greece has been suspended. Foreign Minister Çavuşoğlu said, 'We have a bilateral readmission agreement with Greece. Right now, we have suspended that readmission agreement.'"	Corrective Action
29.06.2018	"The EU will provide most of the 3 billion euros from its budget. The EU will contribute 2 billion euros of the financial support pledged for Syrian refugees in Türkiye from its budget, and 1 billion euros will be provided by member states."	Reducing Negativity of Action
02.02.2021	"EU member responsible for migration: Europe no longer has a migrant crisis. 'I want everyone to open their eyes now. Contrary to what some people are projecting, there is no more migrant or refugee crisis,' Avramopoulos, EU Commissioner for Migration, Home Affairs and Citizenship, said. He said".	Denial
04.10.2023	"EU Interior Ministers meeting in Brussels once again failed to reach a consensus on migration and asylum seekers. The Spanish Interior Minister, EU Presidency, stated that there were discussions on the "Crisis Regulation", the crisis clause of the "Migration and Asylum Agreement" proposed by the EU Commission, and said, "We need a little more time".	Corrective Action

Source: www.dunya.com.tr

Table 2.6: News on Irregular Migrant Crisis 2016- 2024 (Milliyet Newspaper)

Date	News Headline and Details	Message Strategy
07.06.2018	"Minister Çavuşoğlu: We stopped the Readmission agreement with Greece. Regarding the statements of the presidential candidates of the opposition parties that they would send Syrians in Türkiye back to their countries if they are elected, Çavuşoğlu said that the candidates are making populism far from humanitarian feelings."	Reducing Negativity of Action
18.09.2019	"Circular from Erdoğan on the visa liberalization dialogue process with the EU. On 16 December 2013, it was reminded that the negotiations with the EU side within the framework of the Visa Liberalization Dialogue process, which was initiated simultaneously with the Readmission Agreement signed on 16 December 2013, were carried out by the relevant public institutions and organizations under the coordination of the Ministry of Foreign Affairs Directorate for EU Affairs".	Support
20.09.2019	"The visa liberalization process with the EU will gain momentum. Having fulfilled 66 of the 72 criteria, Türkiye has focused on the remaining six chapters. Revision of anti-terrorism legislation, Europol agreement, GRECO recommendations, judicial cooperation with member states, protection of personal data and full implementation of the Readmission Agreement are the last obstacles to visa liberalization."	Corrective Action
04.10.2019	"Türkiyeshowed an exemplary behavior. Interior Minister Soylu met with EU Commissioner for Migration, Home Affairs and Citizenship Dimitris Avramopoulos and German Interior Minister Horst Seehofer".	Support
14.01.2021	"Greece has requested that 1450 rejected irregular migrants be sent to Turkey. Greece's Migration Policy Ministry has asked the European Commission and Frontex, the EU border protection agency, to send 1450 irregular migrants whose asylum applications were rejected to Turkey."	Avoiding Responsibility
12.03.2021	"EU wants to increase cooperation with third countries on migration. The European Union (EU) administration stated that they want to increase cooperation with third countries on migration, especially on readmissions, and if they fail to make progress, they may resort to means such as visa restrictions."	Reducing Negativity of Action
08.04.2021	"The EU is preparing its financial aid proposal after EU Commission	Support

	President Ursula von der Leyen and European Council President Charles Michel met with President Recep Tayyip Erdoğan in Ankara the day before. The European Union (EU) will present a proposal for financial assistance to support Syrians hosted by Turkey.”	
22.06.2021	“German Foreign Minister Heiko Maas has called for an update of the migration agreement between the European Union (EU) and Türkiye. Pointing out that around 4 million Syrians and refugees from other countries in the region live in Türkiye. Maas said, “I don't want to put any numbers on it, but it is absolutely clear that this will not happen for free.””	Acceptance
16.06.2022	“Mustafa Şentop, the Speaker of the Grand National Assembly of Türkiye, said: “Migration is not only Türkiye's issue but the whole world's issue. The most fundamental reason for migration is that people are deprived of the land where they were born. Why is this so? The most current reason for this is that the countries they live in have been made unlivable by Western countries.””	Denial
18.08.2022	“Minister Soylu's statement on Syrian asylum seekers: 70% want to go back. Refugees will of course return to their countries. When it started in 2011, we did not anticipate that this process would take so long. We cannot be separate from our humanity, we cannot be separate from our neighborliness, we cannot be separate from the persecution and processes those people face. Won't these people return to their own countries? Of course they will. Of course they will, but where can they return to now?”	Denial

Source: www.milliyet.com.tr

EU and member state leaders, as well as Turkish leaders, have declared that they attach great importance to cooperation with Türkiye to manage the migrant crisis, mostly Syrian asylum seekers, and that there is no alternative, announcing a Readmission Agreement in exchange for visa liberalization for Turks and a €3 billion support package.

Table 2.7: News on Irregular Migrant Crisis 2016- 2024 (EuroNews/Turkish)

Date	News Headline and Details	Message Strategy
07.09.2019	“President Erdoğan: If not, we will open the doors, let the EU think. Stating that they have spent 40 billion dollars for the Syrians so far, President Erdoğan said, “If it happened, we will open the doors, let them (EU) think.” He said”.	Acceptance
02.10.2020	“Merkel: EU and Türkiye to discuss visa liberalization in December. Merkel said, “We want a positive agenda with Türkiye. They want the migration agreement between Türkiye and the EU to move to a new phase”.	Acceptance
25.11.2023	“Migrant crisis: Which European countries are reintroducing border controls in the Schengen area? As the European Union struggles to cope with a surge in the number of migrants arriving legally and illegally, some member states have taken additional measures in free movement zones. Several countries in Europe have temporarily reintroduced border controls in the Schengen area, where free movement is normally allowed”.	Corrective Action

08.01.2024	“While the rate of asylum seekers in Germany increased by 51 percent in 2023 compared to the previous year, the first three places were occupied by those from Syria, Türkiye and Afghanistan. Among those who applied for asylum in Germany, Syrian citizens ranked first with 104 thousand 561, Turkish citizens ranked second with 62 thousand 624 applications, and Afghans ranked third with 53 thousand 582 applications. Last year, 351 thousand 915 people applied for asylum in the country”.	Support
08.04.2024	“EU to vote on landmark asylum reform to 'make migration harder'. Asylum applications in the European Union reached 1.14 million last year, the highest level since 2016. The European Parliament will vote on a series of laws creating the migration and asylum pact that will make entry procedures for asylum seekers more difficult. The agreement establishes a “solidarity mechanism” requiring frontline countries such as Italy and Greece to help by either accepting some of the asylum seekers or making an equivalent financial contribution.”	Acceptance
06.06.2024	“Short-term Schengen visa fees have been increasing since June. The European Commission cited inflation in the member states as the reason for the price increase. The basic fee for a Schengen visa will rise from €80 to €90 for adults and from €40 to €45 for children.”	Corrective Action
03.07.2024	“The Netherlands may be heading towards a confrontation with Brussels over migration, one of the hottest topics on the political agenda: “The EU's withdrawal from asylum and migration policy will be presented to the European Commission as soon as possible.” This quickly caught Brussels' attention, as it came in the same week that member states gave final approval to the New Migration and Asylum Pact. This comprehensive reform completed a political initiative that set collective, predictable rules to manage the arrival of asylum seekers and dates back to the 2015-2016 migration crisis.”	Reducing Negativity of Action
17.07.2024	“Asylum seekers in Austria are obliged to work in nursing homes and libraries. New working conditions and social obligations for asylum seekers in Austria have been announced. The new obligations announced by Interior Minister Gerhard Karner aim to strengthen the integration of asylum seekers into the country.”	Reducing Negativity of Action
31.07.2024	“Albania is preparing to host thousands of asylum seekers on behalf of Italy. Migrants rescued by Italy in the Mediterranean will be held in two migration centers to be opened in Albania from next month while their asylum claims are assessed under the controversial migration deal known as the “third country formula”.	Avoiding Responsibility

31.07.2024	"Greek coastguard knowingly threw migrants overboard and caused their deaths': 43 migrants reportedly died in 15 cases between May 2020 and May 2023".	Avoiding Responsibility
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Source: www.tr.euronews.com

2.2.Result of The Content Analysis

In this study, 30 news articles published by Turkish mainstream medya between March 2016 and December 2024 were analyzed. These articles were selected from three different sources: 10 from *Dünya* Newspaper, 10 from *Milliyet* Newspaper and 10 from the EuroNews Turkish website. Each article was then subjected to content analysis.

Table 2.8: Image Restoration Theory and Content Analysis Results of Milliyet and Dünya Newspapers and EuroNews Turkish Websites in Turkish Mainstream Media

Strategy	Number of Applications	Percentage (%)
Corrective Action	6	%20,00
Support	3	%10,00
Acceptance	6	%20,00
Reducing Negativity of Action	8	%26,67
Denial	4	%13,33
Avoiding Responsibility	3	%10,00
IN TOTAL	30	%100,00

As can be seen in Table 2.8 above, as a result of the content analysis of 30 news in the mainstream media in Türkiye, it was determined that the most common explanation and crisis communication strategies were reducing negativity of action with 26.67%, followed by corrective action and acceptance with 20%, denial with 13,33%, and avoiding responsibility and support with 10% each.

3. Conclusion and Recommendations

The March 18, 2016, EU-Türkiye statement, which established Türkiye as a third safe country for irregular migrants and asylum seekers under the Readmission Agreement, aimed to end the irregular migration flow to the EU by providing effective protection. This agreement is regarded as a successful example of cooperation in migration management for the EU. However, the same cannot be said for Türkiye (Ceran, 2017: 70-72).

By the end of 2024, following the overthrow of Bashar al-Assad's government in Syria and the rise of Hayat Tahrir al-Sham (HTS), some irregular migrants in Türkiye began to voluntarily return to Syria. Yet, the overall number of returnees remains limited. While

voluntary returns may increase as stability in Syria improves, academic studies suggest that the return rate for migrants to their home countries remains at only 40%, with the majority opting not to return. Consequently, Turkey's decision to lift the temporary protection status granted to Syrians should be carefully considered. It would be prudent to ensure that migrants who do not return are properly registered and granted work permits, particularly in labor markets.

As Türkiye collaborates with the EU to address the issue of irregular migration, there is an urgent need to accelerate negotiations. Effective leadership and crisis management are crucial to managing migration flows in this context. It is observed that EU countries, particularly Greece, tend to treat Türkiye as a de facto holding point for migrants. In Turkey, since 2008, the Immigration, Asylum, and Foreigners Branches under the General Directorate of Security have been responsible for residence, deportation, and asylum procedures for foreign nationals. This structure evolved in 2013 with the establishment of the Directorate General of Migration Management and Provincial Directorates under the Governorships. Türkiye has since advanced in its approach to irregular migration, implementing the 'fight against spatial concentration' in 16 provinces as a pilot program, before expanding it nationwide. This practice ensures that foreign populations do not exceed 25% of the total population in any given province, preventing the creation of migrant-dominated ghettos. The 16 provinces involved in this initiative include Ankara, Antalya, Aydın, Bursa, Çanakkale, Düzce, Edirne, Hatay, İstanbul, İzmir, Kırklareli, Kocaeli, Muğla, Sakarya, Tekirdağ, and Yalova. In cases where a migrant population exceeds 25%, the migrants are redistributed to provinces with smaller populations.

According to FRONTEX data, the flow of migrants heading to the EU via the Eastern Mediterranean route, including Cyprus, the Aegean Sea, and the Evros River, peaked at 885,000 in 2015. This number significantly decreased following the EU-Türkiye Statement, with 182,277 migrants arriving in 2016, 42,319 in 2017, 56,561 in 2018, 83,333 in 2019, and 20,280 in 2020. In 2021, the number rose slightly to 20,567 (Frontex, 2024).

From the EU's perspective, the management of this migration crisis has been successful, offering valuable lessons for Türkiye. Research indicates that 60% of migrants remain permanent residents in their host countries. To effectively address the irregular migration crisis, which is projected to affect almost 5 million people in Türkiye and is considered one of the country's most pressing social issues, more comprehensive migration management policies are necessary. This includes cooperation with the EU on visa issues, where the economic cost is high and citizens face challenges in obtaining visas, despite the €80 application fee. It is crucial to negotiate the free movement of labor within the EU framework,

as well as to regulate regular migration flows. This aligns with the principle of “reciprocity” that underpins all agreements between Türkiye and the EU (Özcüre et al., 2023).

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The Civil Aviation Sector Transformed By Artificial Intelligence: A Bibliometric Study

Burcu YILDIZ

Istanbul Arel Üniversitesi

burcuyildiz@arel.edu.tr

Abstract

In recent years, artificial intelligence applications have emerged as a revolutionary tool in the civil aviation sector. These technologies have enhanced flight monitoring and management systems, significantly improved safety standards, and provided critical contributions such as increasing operational efficiency and minimizing costs, thereby elevating the overall performance of air transportation. AI-supported systems' ability to process complex data analyses swiftly and offer real-time decision-support mechanisms presents innovative solutions to challenges in the aviation industry. This study utilizes data from the Web of Science database as of July 10, 2024, analyzed via Vosviewer software, providing a comprehensive bibliometric analysis of AI applications in civil aviation. It has been observed that research in this area shows an upward trend over the years, yet only 199 studies have been identified, indicating that the literature remains limited.

In the conceptual structure analysis of civil aviation and artificial intelligence literature, the three most frequently used keywords were identified as “Artificial Intelligence,” “Civil Aviation,” and “Machine Learning.” The analysis reviewed academic networks, collaborations, and interactions within the literature, identifying the most productive authors as Xusheng Gan, Felix Mora-Camino, Walid Moudani, Xinming Wang, Zhibing Xue, and Jinfeng Yang. However, the social structure analysis shows limited collaboration among these authors, with low citation and co-authorship link strengths, suggesting limited interactions. The most influential countries have been determined to be China, the United Kingdom, and the United States. Although these nations play a significant role in the literature, their collaborations remain limited. These findings highlight the importance of enhancing collaborations in the field and suggest that new research and strategies are needed for more effective information flow. This study can guide future research in civil aviation and artificial intelligence, potentially offering strategic contributions to sectoral applications. The research conclusively shows that civil aviation and artificial intelligence, still a niche area, will contribute to developing solutions to the current and future challenges faced by the industry.

Keywords: Artificial Intelligence, Civil Aviation, Machine Learning, Bibliometrics

1. Introduction

In recent years, artificial intelligence has emerged as a transformative technology driving revolutionary changes in the civil aviation sector. The contributions of AI-supported systems to the development of flight monitoring and management systems, improvement of operational efficiency, and reduction of costs have enhanced security standards in the sector, thereby improving the performance of the aviation industry. The ability to rapidly process complex data analyses and provide real-time decision support mechanisms has made AI applications critical in offering innovative solutions to the challenges faced by civil aviation. In this context, examining the current state of the literature on civil aviation and artificial intelligence, research trends, and academic collaborations in this field has gained importance.

2. Literature Summary

The integration of Artificial Intelligence (AI) into the aviation industry has enabled profound transformations across many areas of the sector and paved the way for significant advancements. AI, which can imitate cognitive functions of the human mind such as learning and problem-solving, is used for various purposes, including improving operational processes and enhancing passenger experiences (Aithal & Aithal, 2019; Tuo, Ning, & Zhu, 2021; Sheth, Yip, Iyengar, & Tepper, 2019).

One of the most widely used AI applications in aviation is speech recognition and natural language processing technologies. AI-based systems developed in this field can perceive and interpret voice commands, enabling appropriate responses and thereby transforming the interaction methods experienced by passengers during their travel process (Brady, 1985). Moreover, real-time information flow is provided through virtual assistants and chatbots at airports and airlines, enabling passengers' questions to be answered quickly and facilitating processes such as reservations and check-ins (Torres & Sipe, 2020).

In addition, AI has made significant contributions to the operations of airlines and airports. With the help of big data analytics, elements such as past flight records, weather forecasts, and passenger preferences are processed to optimize flight schedules, make resource management more efficient, and improve decision-making processes aimed at customer satisfaction (Kazak, Chetyrbok, & Oleinikov, 2020).

The impact of AI in aviation is not limited to improving operational processes. Thanks to AI-based systems, it has become possible to provide personalized services by analyzing passengers' past travel data and individual preferences. In this context, various applications

have been developed to improve passenger experiences, such as creating travel plans, making hotel reservations, and offering additional services (Torres & Sipe, 2020).

Considering the ongoing developments in the aviation industry, it is predicted that AI will continue to play an important role as a factor promoting innovation, improving operations, and providing passengers with a more personalized and seamless travel experience. Studies in this field are increasing day by day, particularly since the second half of 2024, some of which conducted in Turkey on aviation and artificial intelligence are discussed below.

Coşgun and Kurubacak (2022) examined the role of artificial intelligence technology in the aviation ecosystem and the benefits it provides to the sector. The authors emphasized how AI increases efficiency in operational processes and enhances decision-making processes in the aviation industry. The book specifically discusses applications in civil aviation worldwide and in Turkey, examining the potential of artificial intelligence in this field (Coşkun & Kurubacak, 2022).

Şahin (2024) conducted a bibliometric analysis examining the development of academic studies in the aviation sector and artificial intelligence. The study found that research combining AI and aviation concepts increased significantly from 2020 onwards. It was determined that most publications were published in IEEE Access, Aerospace, and Applied Sciences-Basel journals, with Aerospace having the highest h-index. The most productive authors were identified as Annemarie Landman, Xiang Li, Jiaying Shang, Van Paassen M.M.R., and Huawei Wang. The study also revealed that most research in aviation and artificial intelligence originated from China and that Italy was the country with the most citations. According to the keyword analysis, AI-based studies have been shaped around the concepts of "performance," "modeling," "forecasting," and "automation." The study highlights the role of artificial intelligence in prediction and optimization processes in aviation operations and provides guiding findings for future research (Şahin, 2024).

Çakır and Nacar (2024) conducted a comprehensive study examining the effects of artificial intelligence on digital marketing and service quality. The study analyzed the impact of AI-supported digital marketing strategies on customer satisfaction and service quality in the aviation sector. An online survey was conducted with 209 AI users working in the marketing department of an airline company, and the data obtained were evaluated using statistical methods. The findings show that the general attitude towards the use of AI positively affects service quality and customer satisfaction but does not directly affect perceived value. Additionally, AI usage in service quality was found to have positive effects on both perceived value and customer satisfaction. The study provides important findings on the effective use of AI-supported marketing strategies in the aviation sector and offers recommendations for expanding research in this area (Çakır & Nacar, 2024).

Karabulut and Shah (2024) examined the role of artificial intelligence and blockchain technologies in the development of 6G networks in aviation networks. The study emphasized that aviation networks provide uninterrupted communication, AI creates transformation in network management and personalized services, and blockchain contributes to security and data integrity. It was stated that the integration of these three technologies increases the flexibility of 6G, preparing the ground for new applications. Furthermore, the study pointed out that the development of AI algorithms, the scalability of blockchain, and energy efficiency should be prioritized in future research. The study demonstrates that technological integration is a critical factor in the success of aviation communication and 6G (Karabulut & Shah, 2024).

Mızrak (2024) examined the strategic role of human resources in the integration of artificial intelligence and cybersecurity in the aviation sector. The study emphasized the importance of human resource management and the integration of advanced technologies in the face of increasing cyber threats. Interviews conducted with industry experts in Turkey and NVivo analyses revealed the challenges in AI applications and the importance of interdepartmental cooperation. Sentiment analysis conducted using TextBlob showed a positive perception of AI-supported human resources strategies. The findings highlight the transformative impact of continuous training, strategic recruitment, and predictive threat analysis on aviation cybersecurity (Mızrak, 2024).

Kaya (2023) examined the job insecurity concerns of aviation management students due to artificial intelligence. The study emphasized that the increasing use of AI in the aviation industry has created uncertainties about the future of certain professions. The survey results revealed that students have concerns about job security and the necessity of acquiring new skills to adapt to technological developments. Accordingly, the study recommended updating education programs (Kaya, 2023).

Efendigil and Eminler (2017) examined the strategic importance of passenger demand forecasting in the aviation industry and comparatively analyzed the methods used in this field. The study evaluated 114 academic articles on air travel demand between 1950 and 2015 and determined that AI techniques have gradually replaced traditional econometric models over time. In particular, artificial neural networks and adaptive neural fuzzy inference systems (ANFIS) were found to be superior in terms of prediction accuracy. The study compared econometric methods with AI-based models using regression analysis and found that artificial neural networks had the lowest margin of error. Additionally, the factors affecting passenger demand were evaluated using correlation analysis, revealing that variables such as tourism activity, population size, and airline type have significant effects. The study

emphasizes that the correct selection of forecasting models directly impacts critical operational decisions such as fleet and network planning (Efendigil & Eminler, 2017).

Seçkiner, Atay, and Eroğlu (2021) examined the use of robotic process automation (RPA) in the aviation industry and the benefits it provided during the COVID-19 pandemic. The study highlighted that low-cost airlines can increase operational efficiency, reduce costs, and minimize human errors through RPA technologies. The need for increased digitalization during the pandemic led airlines to adopt more automation systems, accelerating processes. It was noted that RPA is effectively used in airport operations, customer service, baggage handling, and ticketing. Moreover, the study predicted that this technology would become more widespread in the future, reducing the need for human labor and increasing the competitiveness of airlines (Seçkiner, Atay, & Eroğlu, 2021).

Increasing research in Turkey and around the world comprehensively addresses the contributions of artificial intelligence to the aviation ecosystem and offers evaluations from both a technical and managerial perspective. It is observed that AI has gained importance as a factor that promotes innovation and supports decision-making processes in the aviation industry, especially after 2020. However, the impact of AI on employment and the need to adapt to technological transformation remain key areas for future research.

3. Materials and Methods

3.1. Bibliometric Analysis

The increasing number of scientific studies has made it increasingly difficult for researchers to closely follow developments in their fields. Therefore, both quantitative analysis methods and in-depth literature reviews approached from a qualitative perspective, which help researchers conduct their literature reviews more systematically, have gained increasing importance (Schmidt, 2008). Bibliometric analysis is one of the methods that enables examining the existing body of knowledge in a particular academic field from a broad perspective (Van Nunen, Li, Reniers, & Ponnet, 2018). Through numerical data, the productivity and development of a particular scientific field can be examined. In this context, the most influential academics and studies can be identified, leading journals on a specific topic can be determined, and the contributions of countries and academic institutions can be analyzed. Additionally, when the number of articles published on a particular topic and the fields in which these articles are classified are evaluated, comprehensive information about the interdisciplinary structure and thematic diversity of the relevant research area can be obtained (Li & Hale, 2016).

In the literature, five basic methods of bibliometric analysis are mentioned. Zupic and Čater (2014) classify these methods as citation analysis, co-citation analysis, bibliographic

coupling, co-authorship analysis, and keyword analysis. Citation analyses are considered a reliable indicator for measuring scientific interactions between researchers and academic institutions (Gundolf & Filser, 2013). This widely used technique evaluates the scientific impact of a publication based on the number of citations it receives. If an article or book receives many citations, it is interpreted as being considered an important reference in the academic community (Üsdiken & Pasadeos, 1995). Co-citation analysis is defined as a science mapping method based on the assumption that publications that frequently reference the same works focus on similar topics in terms of content. This analysis is used to reveal the intellectual structure of a particular academic field.

In co-authorship analysis, collaborations and interactions among academics within a specific subject framework are evaluated (Donthu, Kumar, Mukherjee, & Pandey, 2021). In bibliographic coupling analysis, the number of shared references in two academic studies is taken as the basis. The higher the overlap rate in the bibliographies of the relevant articles, the stronger the scientific connection between them is considered to be (Zupic & Čater, 2014; Baysal & Yangil, 2023).

3.2. Data Collection for Bibliometric Analysis

In this study, data obtained from the **Web of Science** database on **July 10, 2024** were analyzed using **VOSviewer** software to provide a comprehensive bibliometric analysis of artificial intelligence applications in civil aviation. It was observed that research has shown a growing trend over the years; however, only **199 studies** related to the topic were identified, indicating that studies in the literature remain limited. While filtering, the keywords “**Artificial Intelligence**” and “**Civil Aviation**” were used. In this context, it was decided to conduct a content analysis of the **199 academic studies** using VOSviewer software.

Although various programs have been developed for bibliometric mapping, VOSviewer stands out for its focus on visual representation and its ability to clearly visualize bibliometric maps generated from large-scale data sets (Baysal & Yangil, 2023).

Within the scope of this study, a comprehensive bibliometric analysis of artificial intelligence applications in civil aviation will be conducted to define the conceptual framework in this field and reveal how it may develop in the future. In line with the primary goal of the study, the following research questions will be addressed:

Research Question 1: What is the performance status of the "civil aviation and artificial intelligence" literature?

Research Question 2: What is the conceptual structure of the "civil aviation and artificial intelligence" literature?

Research Question 3: What is the intellectual structure of the "civil aviation and artificial intelligence" literature?

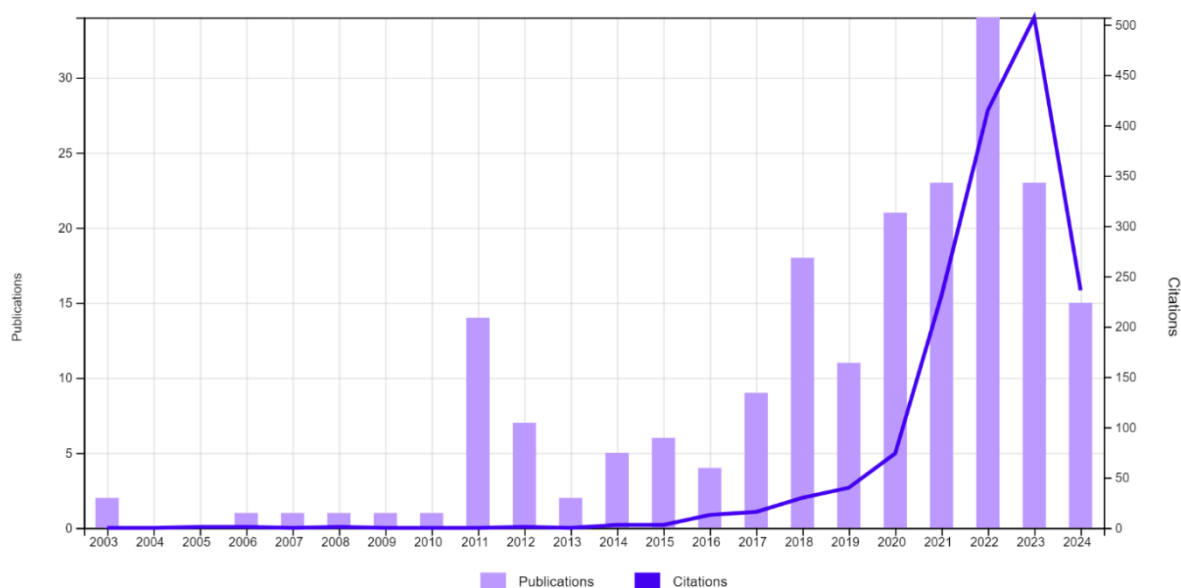
Research Question 4: What is the social structure of the "civil aviation and artificial intelligence" literature?

4. Findings

4.1. Performance Analysis

In the performance analysis, the “publication” and “citation” performances of researchers/authors, institutions, universities, countries, and journals conducting studies on the subject are evaluated.

Table 1 Graphical representation of the number of studies jointly addressing Artificial Intelligence and Civil Aviation by year.



It is possible to state that there is an upward trend in the number of academic studies over the years in the general course of the graph. However, considering that the data were collected up to **July 10, 2024**, it should be noted that the graphical representation may change with the increase in academic studies by the end of 2024.

Research Question for Performance Analysis;

Research Question 1: What is the performance status of the "civil aviation and artificial intelligence" literature?

To reveal the performance status of the civil aviation and artificial intelligence literature, analyses of the most productive author, the most productive country, and the most productive institution/university were conducted.

4.1.1 Productive Author Analysis

This analysis is a citation analysis conducted to evaluate the performance status of the most productive authors contributing to the "Civil Aviation and Artificial Intelligence" literature. The analysis includes authors who have published at least two documents and have no limitations in terms of the number of citations. Among the total of **190 authors**, **6 authors** meeting these criteria were identified, and the total strength of their co-authorship links with other authors was calculated.

Table 2 Most Productive Authors

Author	Documents	Citations	Total Link Strength
Gan, Xusheng	2	0	0
Mora-Camino, Felix	2	1	0
Moudani, Walid	2	1	0
Wang Xinming	2	2	0
Xue Zhibing	2	2	0
Yang, Jinfeng	2	1	0

According to the analysis results, authors **Xusheng Gan**, **Felix Mora-Camino**, **Walid Moudani**, **Xinming Wang**, **Zhibing Xue**, and **Jinfeng Yang** have contributed to the literature with at least two articles. However, the number of citations for each of these authors remains at zero or very low levels. Furthermore, the total strength of the co-authorship links among these authors was also measured as zero. This indicates that although these authors have made significant contributions to the literature on civil aviation and artificial intelligence, they have not interacted with other studies or such interactions have been extremely limited.

This analysis is significant in terms of evaluating the productivity status of certain authors in the literature and their interactions within the academic network. The low citation and co-authorship link strengths of the authors suggest that more collaboration and interaction may be needed in this field. This situation highlights the importance of taking steps to increase interactions and collaborations in the field.

4.1.2 Most Productive Institution (University) Analysis

This analysis is a citation analysis conducted to evaluate the performance status of the most productive universities contributing to the "Civil Aviation and Artificial Intelligence" literature. The analysis includes institutions with at least **five documents** and evaluates them without any limitations in terms of the number of citations. Among a total of **79 institutions**, **three institutions** meeting these criteria were identified, and the total strength of their co-authorship links with other institutions was calculated.

Table 3 Most Productive Institutions

Organization	Documents	Citations	Total Link Strength
Civil Aviat Univ China	8	11	0
Civil Aviat Flight Univ China	6	25	0
Travelsky Technol Ltd	6	2	0
Air Force Engn Univ	2	0	0
Caac	2	1	0
China Acad Civil Aviat Sci & Technol	2	5	0
Enac	2	4	0
Lebanese Univ	2	1	0
Natl Aviat Univ	2	3	0
Tianjin Univ	2	6	0

According to the analysis results, **Civil Aviation Flight University of China** and **Civil Aviation University of China** are among the institutions that have made the most significant contributions to this field, with **six** and **eight documents**, respectively. Civil Aviation Flight University of China holds the highest citation count in this field with **25 citations**, while Civil Aviation University of China has received **11 citations**. These results demonstrate that both institutions play a significant role in the civil aviation and artificial intelligence literature and provide influential academic contributions.

However, the total strength of the co-authorship links for both institutions was measured as zero, which indicates that these institutions have limited collaboration with other institutions or that such collaborations are at extremely low levels.

This analysis is important in identifying the most productive universities in the field of civil aviation and artificial intelligence and in evaluating their contributions to the literature as well as their academic collaborations. The analysis results emphasize that these institutions should be evaluated not only based on the number of citations but also in terms of their inter-institutional collaboration links.

4.1.3 Most Productive Country Analysis

This analysis is a citation analysis conducted to evaluate the performance status of the most productive countries contributing to the "Civil Aviation and Artificial Intelligence" literature. The analysis includes countries with at least **three documents** and evaluates them without any limitations in terms of the number of citations. Among a total of **16 countries**, **four countries** meeting these criteria were identified, and the total strength of their co-authorship links with other countries was calculated.

Table 4 Most Productive Countries

Country	Documents	Citations	Total Link Strength
Peoples R China	41	72	0
Usa	4	24	0
England	3	47	0
France	3	4	0

According to the analysis results, **the United Kingdom, France, the People's Republic of China**, and **the United States of America** are among the countries producing the most documents in this field. The People's Republic of China stands out as both the country producing the most documents and the most cited country, with **41 documents** and **72 citations**. The United Kingdom, with **3 documents** and **47 citations**, demonstrates a remarkably high citation rate per document. The United States and France are among the other leading countries, with **24** and **4 citations**, respectively.

However, the total strength of the co-authorship links of the four identified countries was measured as zero, indicating that these countries are not active in terms of collaboration with other countries, or that such collaborations are at extremely low levels.

This analysis is important in evaluating the academic performance and international collaboration capacities of countries in the field of civil aviation and artificial intelligence. The analysis results emphasize the importance of identifying the influential countries in this field and evaluating their contributions to the literature from a broader perspective, including international collaborations.

4.2 Conceptual Structure Analyses

Conceptual structure analyses aim to understand the topics covered by studies conducted in a specific field and to reveal the visual map of the most frequently studied topics.

Research Question for Conceptual Structure Analysis;

Research Question 2: What is the conceptual structure of the "civil aviation and artificial intelligence" literature?

This analysis is a co-keyword analysis conducted to reveal the conceptual structure of the "Civil Aviation and Artificial Intelligence" literature. The analysis was conducted based on the keywords used by the authors, and among **202 keywords** used at least **twice**, **nine keywords** exceeding the threshold of **two** were identified. The total strength of the co-occurrence links between each keyword and other keywords was calculated.

Table 5 Co-Occurrence Map of Keywords in Articles on Artificial Intelligence and Civil Aviation

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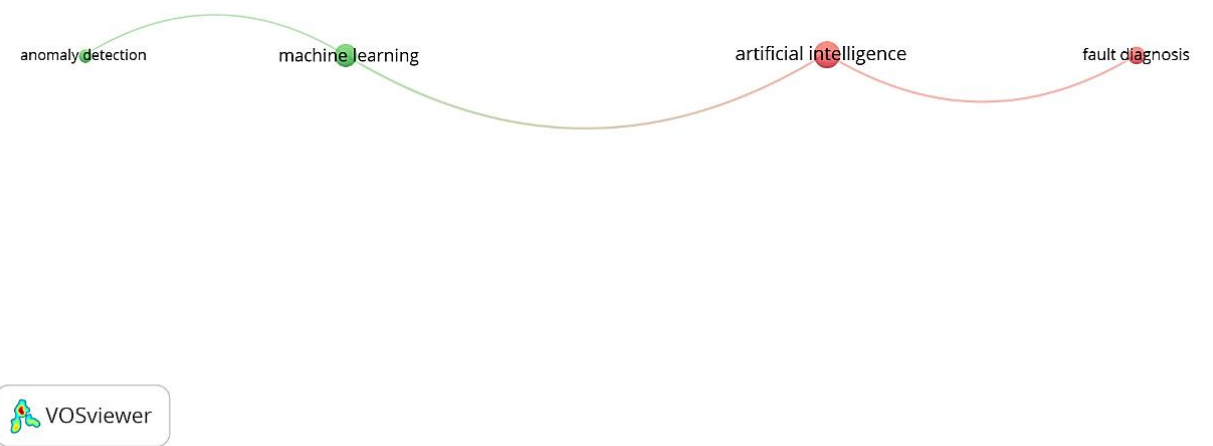


Table 6 Changes in Keywords in Studies on Artificial Intelligence and Civil Aviation Over the Years

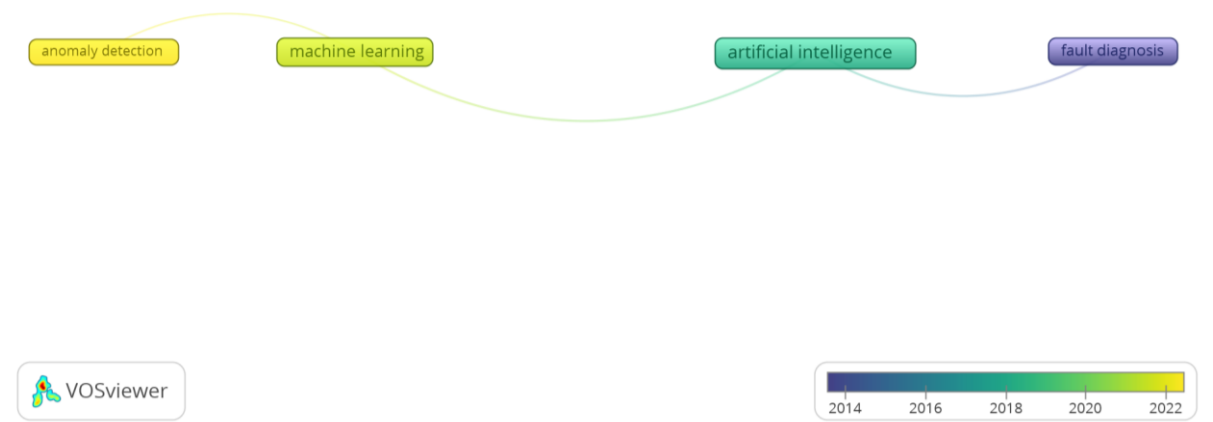


Table 7 Frequency of Keywords in Articles on Artificial Intelligence and Civil Aviation

Keyword	Occurrences	Total Link Strength
Artificial Intelligence	7	4
Civil Aviation	6	0
Machine Learning	5	3
Fault Diagnosis	3	2
Anomaly Detection	2	1
Civil Aviation Airport	2	0
Deep Learning	2	1
Lstm	2	0
Security	2	1

According to the analysis results, the keyword **"Artificial Intelligence"** was used **seven times** and its total connection strength was measured as **4**. This indicates that artificial intelligence holds a central role in understanding and solving issues related to civil aviation in the literature. Although the term **"Civil Aviation"** appeared **six times**, its connection strength was determined as **0**, indicating that this term is generally used alone and does not have a strong association with other concepts. The term **"Machine Learning"** was used **five times** and its total connection strength was measured as **3**, showing that this technology has found applications in the aviation sector.

Among other keywords, terms such as **"Anomaly Detection"** and **"Deep Learning"** were also present, each used **twice** with limited connection strengths (both measured as **1**), indicating specific application areas. The term **"Fault Diagnosis"** was used **three times** and had a total connection strength of **2**, showing that AI applications have increasing importance in solving such technical issues in the aviation industry.

This analysis is valuable for understanding which topics stand out in the literature on civil aviation and artificial intelligence and the relationships between these topics. The analysis results demonstrate which concepts researchers focus on and how these concepts create an interaction network in the literature. This information can be useful for guiding research in these areas and planning new studies.

4.3. Intellectual Analysis

Intellectual analysis reveals the intellectual structure of a research field and the network of relationships among bibliometric elements. Co-citation analysis determines the intensity and strength of the relationships between co-cited authors, studies, and journals.

Research Question for Intellectual Analysis

Research Question 3: What is the intellectual structure of the "civil aviation and artificial intelligence" literature?

4.3.1 Reference-Level Co-Citation Analysis

This analysis is important for understanding the fundamental studies influencing the aviation and artificial intelligence literature and how these studies are positioned within the literature. It is also valuable in terms of demonstrating the flow of knowledge within the literature and how the cited sources create a network of interactions.

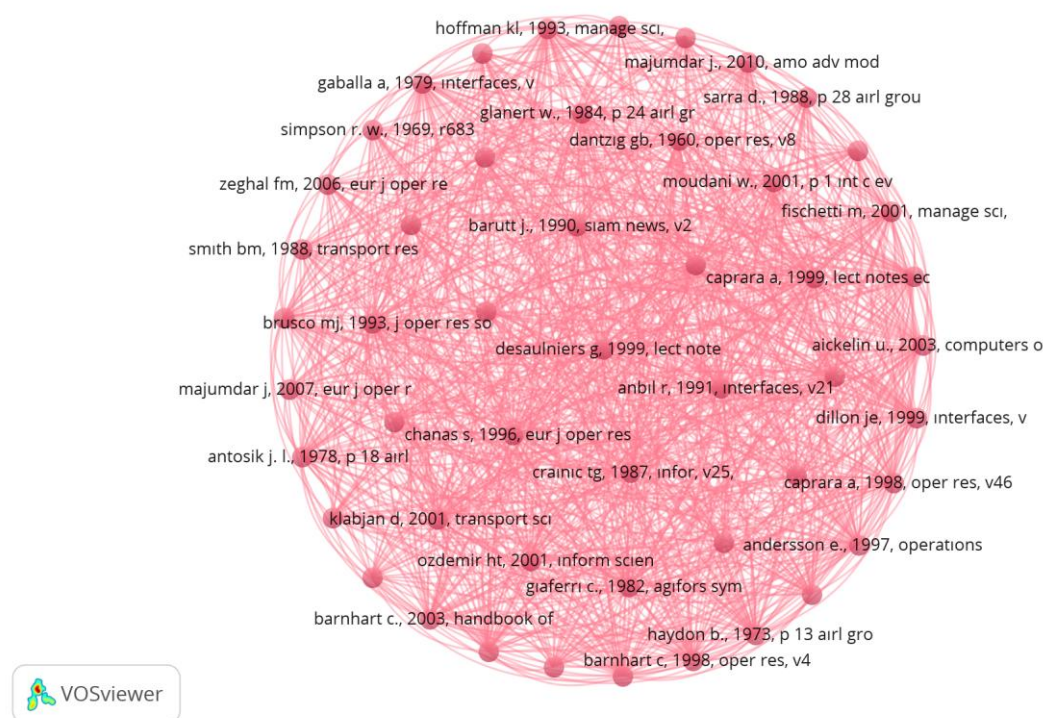
Table 8 Reference-Level Co-Citation Analysis

Cited Reference	Citations	Total Link Strength
"aickelin u., 2003, computers operations, v31"	2	98
"anbil r, 1991, interfaces, v21, p62, doi 10.1287/inte.21.1.62"	2	98
"andersson e., 1997, operations res airli"	2	98
"antosik j. l., 1978, p 18 airt group int"	2	98
"barnhart c, 1998, oper res, v46, p316, doi 10.1287/opre.46.3.316"	2	98
"barnhart c., 2003, handbook of transportation science, p493"	2	98
"barutt j., 1990, siam news, v23"	2	98
"brusco mj, 1993, j oper res soc, v44, p1191, doi 10.1057/jors.1993.198"	2	98
"byrne j., 1988, p 28 airt group int"	2	98
"caprara a, 1998, oper res, v46, p820, doi 10.1287/opre.46.6.820"	2	98
"caprara a, 1999, lect notes econ math, v471, p1"	2	98
"carraresi p., 1995, computer aided trans, v430, p188"	2	98
"chanas s, 1996, eur j oper res, v94, p594, doi 10.1016/0377-2217(95)00055-0"	2	98
"cranic tg, 1987, infor, v25, p136"	2	98
"curtis s. d., 1999, pacp99. proceedings of the first international conference on the practical application of constraint technologies and logic programming, p239"	2	98
"curtis s., 2000, p 2 int c pract appl"	2	98
"dantzig gb, 1960, oper res, v8, p101, doi 10.1287/opre.8.1.101"	2	98
"desaulniers g, 1999, lect notes econ math, v471, p19"	2	98
"dillon je, 1999, interfaces, v29, p123, doi 10.1287/inte.29.5.123"	2	98
"fischetti m, 2001, manage sci, v47, p833, doi 10.1287/mnsc.47.6.833.9810"	2	98
"freling r., 2001, lect notes ec math s, v505, p153, doi 10.1007/978-3-642-56423-9_9"	2	98
"gaballa a, 1979, interfaces, v9, p78, doi 10.1287/inte.9.2pt2.78"	2	98
"glanert w., 1984, p 24 airt group int"	2	98
"giaferri c., 1982, agifors symposium proceedings, v22,	2	98

p69"		
"haydon b., 1973, p 13 airl group int"	2	98
"hoffman kl, 1993, manage sci, v39, p657, doi 10.1287/mnsc.39.6.657"	2	98
"holloway s., 1997, straight and level: practical airline economics"	2	98
"klabjan d, 2001, transport sci, v35, p359, doi 10.1287/trsc.35.4.359.10437"	2	98
"kroon l., 2001, computer-aided scheduling of public transport, p181"	2	98
"levine d, 1996, comput oper res, v23, p547, doi 10.1016/0305-0548(95)00060-7"	2	98
"majumdar j, 2007, eur j oper res, v177, p684, doi 10.1016/j.ejor.2005.11.034"	2	98
"majumdar j., 2010, amo adv modeling opt, v12"	2	98
"marsten re, 1981, networks, v11, p165, doi 10.1002/net.3230110208"	2	98
"mingozzi a, 1999, oper res, v47, p873, doi 10.1287/opre.47.6.873"	2	98
"moudani w., 2000, p 9 ieee int c fuzz"	2	98
"moudani w., 2001, p 1 int c ev mult cr"	2	98
"nemhauser gl, 1966, intro dynamic progra"	2	98
"ozdemir ht, 2001, inform sciences, v133, p165, doi 10.1016/s0020-0255(01)00083-4"	2	98
"qi xt, 2004, oper res, v52, p148, doi 10.1287/opre.1030.0076"	2	98
"rakshit a, 1996, interfaces, v26, p50, doi 10.1287/inte.26.2.50"	2	98
"rubin j., 1973, transportation science, v7, p34, doi 10.1287/trsc.7.1.34"	2	98
"ryan d. m., 1981, computer scheduling of public transport. urban passenger vehicle and crew scheduling. proceedings of an international workshop, p269"	2	98
"ryan dm, 1992, j oper res soc, v43, p459"	2	98
"sarra d., 1988, p 28 airl group int"	2	98
"schaefer aj, 2005, transport sci, v39, p340, doi 10.1287/trsc.1040.0091"	2	98
"simpson r. w., 1969, r683"	2	98
"smith bm, 1988, transport res a-pol, v22, p97, doi 10.1016/0191-2607(88)90022-2"	2	98
"sohoni mg, 2003, interfaces, v33, p57, doi 10.1287/inte.33.5.57.19253"	2	98
"sohoni mg, 2004, manage sci, v50, p724, doi 10.1287/mnsc.1030.0141"	2	98
"das s., 2010, p 16 acm sigkdd int, p47, doi 10.1145/1835804.1835813"	2	4
"oehling j, 2019, safety sci, v114, p89, doi 10.1016/j.ssci.2018.12.018"	2	4
"ribeiro mt, 2016, kdd'16: proceedings of the 22nd acm sigkdd international conference on knowledge discovery and data mining, p1135, doi 10.1145/2939672.2939778"	2	4
"wang l, 2014, reliab eng syst safe, v127, p86, doi 10.1016/j.ress.2014.03.013"	2	4
"al-haddad la, 2023, drones-basel, v7, doi 10.3390/drones7020082"	2	1
"schölkopf b, 2001, neural comput, v13, p1443, doi 10.1162/089976601750264965"	2	1
"silver d, 2016, nature, v529, p484, doi	2	0

10.1038/nature16961"		
"zadeh la, 1965, inform control, v8, p338, doi 10.1016/s0019-9958(65)90241-x"	2	0

Table 9 Co-Occurrence Map of Reference-Level Co-Citation Analysis



This analysis was conducted to reveal the intellectual structure of the "Civil Aviation and Artificial Intelligence" literature. The analysis includes **58 references** that were cited at least **twice** among a total of **1,019 cited references** in the **Web of Science** database and was carried out using the **co-citation analysis** method.

The analysis results identify the references that are frequently cited in the literature and have high connection strength. For example, studies such as "**Aickelin U., 2003, Computers Operations, v31**" and "**Anbil R., 1991, Interfaces, v21**" received only **two citations** each; however, their total connection strengths were measured as **98**. This indicates that these sources are highly influential in the scientific literature and have a broad network of interactions, regardless of the number of citations they received.

The study conducted by **Özdemir H.T.** and published in "**Information Sciences**" in **2001** has made a significant contribution to the civil aviation and artificial intelligence literature. Although this study was cited only **twice** in the analysis, its total connection strength was measured as **98**. This high connection strength demonstrates that the study has a broad network of interactions within the scientific community and is regarded as an important reference source in aviation and artificial intelligence topics.

Özdemir's study has guided research in this field by providing methodological and applied information on how artificial intelligence technologies can be implemented in the aviation sector. As a result of this analysis, the study's influential role in the academic literature and its contributions to sectoral applications have also been demonstrated. Özdemir's study stands out as a reference point for exploring the potential of artificial intelligence applications in the aviation sector and conducting in-depth analyses in this area.

On the other hand, some sources have low total connection strength. For instance, the study **"Al-Haddad LA, 2023, Drones-Basel, v7"** received **two citations** but had a total connection strength of only **1**. This suggests that such studies address a narrower field or have limited interaction with other studies in the literature.

This analysis is important for understanding the key influential studies in the aviation and artificial intelligence literature and how these studies are positioned within the literature. It is also valuable in terms of demonstrating the flow of knowledge within the literature and how the cited sources create a network of interactions.

4.3.2 Author-Level Co-Citation Analysis

This analysis reveals not only the citation tendencies of the authors in question but also the position and interactions of their cited works within the scientific network. This analysis makes an important contribution to understanding how certain authors are positioned in the aviation and artificial intelligence literature and identifying the key actors shaping the flow of knowledge in this field.

Table 10 Author-Level Co-Citation Analysis

Author	Citations	Total Link Strength
"Moudani, W"	6	15
"Ajakwe, So"	5	0
"Chen, Zs"	5	0
"Majumdar, J"	5	15

A **co-citation analysis** was conducted using **199 articles** collected from the **Web of Science** database. "Cited Authors" was selected as the unit of analysis, and the minimum citation threshold was set at **five**. Among a total of **882 authors**, **four authors** exceeded this threshold.

According to the analysis results, the authors **Ajakwe, S.O.**, **Chen, Z.S.**, and **Majumdar, J.** were each cited **five times**. The total connection strength for both **Majumdar, J.** and

Moudani, W. was measured as **15**. This indicates that, in addition to the number of citations, the cited articles by these two authors have strong connections with other studies.

However, despite being cited, the total connection strength for **Ajakwe, S.O.** and **Chen, Z.S.** was measured as **zero**, indicating that their works have weak or no interaction with other scientific studies.

4.3.3 Journal-Level Co-Citation Analysis

This analysis provides valuable insights into understanding the core sources of the field and the interactions of these sources within the scientific network.

Table 11 Journal-Level Co-Citation Analysis

Source	Citations	Total Link Strength
Remote Sens-Basel	20	590
Ieee T Geosci Remote	20	561

The analysis was conducted based on the co-citation characteristics of articles published on aviation and artificial intelligence. "Cited Sources" was used as the unit of analysis. Among a total of **882 sources**, the analysis examined sources that were cited at least **twenty times**, and **three sources** exceeding this threshold were identified.

According to the analysis results, the journals **"Remote Sensing-Basel"** and **"IEEE Transactions on Geoscience and Remote Sensing"** were each cited **20 times** and had total connection strengths of **590** and **561**, respectively. These results indicate that these sources have a significant impact on research in the field of aviation and artificial intelligence and are in strong interaction with other scientific studies.

The high citation and connection strength values of these sources demonstrate that they play a central role in research on aviation and artificial intelligence and significantly shape the flow of knowledge in these fields.

4.4. Social Structure Analysis

Social structure analysis demonstrates the collaboration network. In this section, the co-authorship network has been examined. Co-authorship analysis defines the collaboration between authors, countries, and institutions.

Research Question for Social Structure Analysis

Research Question 4: What is the social structure of the "civil aviation and artificial intelligence" literature?

4.4.1 Author-Level Co-Authorship (Collaboration) Analysis

This analysis provides an important perspective for understanding the structural dynamics of academic collaborations in aviation and artificial intelligence. The study particularly allowed for an evaluation of how certain authors interact and collaborate within the literature, as well as the strength and scope of these collaborations.

Such a social structure analysis is also valuable for identifying influential authors and those who could be important for potential collaborations in the field.

Table 12 Journal-Level Co-Citation Analysis



Table 13 Author-Level Co-Authorship (Collaboration) Analysis

Author	Documents	Citations	Total Link Strength
"Gan, Xusheng"	2	0	0
"Mora-Camino, Felix"	2	1	2
"Moudani, Walid"	2	1	2
Wang Xinming	2	2	2
Xue Zhibing	2	2	2
"Yang, Jinfeng"	2	1	0

This analysis is an **author-level co-authorship (collaboration) analysis** conducted to reveal the social structure of the "Civil Aviation and Artificial Intelligence" literature. The analysis includes authors with at least **two documents** based on the specified criteria, with no limitations in terms of the number of citations. Among a total of **190 authors**, **six authors** meeting these criteria were identified, and the total strength of their co-authorship links with other authors was calculated.

According to the analysis results, the authors **Xusheng Gan**, **Felix Mora-Camino**, **Walid Moudani**, **Xinming Wang**, **Zhibing Xue**, and **Jinfeng Yang** have contributed to the literature with at least **two articles** each. However, except for **Gan** and **Yang**, the other authors have been cited at least once. **Mora-Camino**, **Moudani**, **Wang**, and **Xue** each have two documents and one or two citations, but their total connection strength was measured as **2**. This indicates that the collaborations among these authors and their interactions with other authors are relatively low.

On the other hand, **Gan** and **Yang** had zero citation and connection strength, indicating that these authors are positioned in an isolated manner in the literature and do not interact with other studies.

4.4.2 Institution-Level Co-Authorship (Collaboration) Analysis

This analysis provides an important perspective for understanding the structural dynamics of academic collaborations and interactions among institutions operating in the field of aviation and artificial intelligence. Inter-institutional collaborations are crucial for understanding and promoting the transfer of knowledge and technology in this field. The social structure analysis of institutions is also valuable for identifying influential institutions and those that could be important for potential collaborations in the field.

Table 14 Institution-Level Co-Authorship (Collaboration) Analysis

Organization	Documents	Citations	Total Link Strength
Civil Aviat Flight Univ China	6	25	0
Civil Aviat Univ China	8	11	1
Travelsky Technol Ltd	6	2	1

Bu analiz, "Sivil Havacılık ve Yapay Zeka" literatürünün kurumlar arası sosyal yapısını değerlendirmek amacıyla yapılan bir kurum düzeyinde ortak yazarlık (iş birliği) analizidir. This analysis is an **institution-level co-authorship (collaboration) analysis** conducted to

evaluate the inter-institutional social structure of the "Civil Aviation and Artificial Intelligence" literature. The analysis includes institutions with at least **five documents** and was evaluated without any limitations in terms of the number of citations. Among a total of **79 institutions**, **three institutions** meeting these criteria were identified, and the total strength of their co-authorship links with other authors was calculated.

According to the analysis results, the institutions **Civil Aviation Flight University of China**, **Civil Aviation University of China**, and **Travelsky Technology Ltd** have contributed to the literature with at least **five articles** each. These institutions have been cited **25**, **11**, and **2** times, respectively, and their total connection strengths were measured as **0**, **1**, and **1**, respectively. This indicates that although **Civil Aviation Flight University of China** stands out in terms of citation count, it remains isolated in terms of collaboration with other institutions. The other two institutions, **Civil Aviation University of China** and **Travelsky Technology Ltd**, exhibit a slightly more interactive collaboration structure despite having lower citation counts.

4.4.3 Country-Level Co-Authorship (Collaboration) Analysis

This analysis is a **country-level co-authorship (collaboration) analysis** conducted to examine the social structure of the "Civil Aviation and Artificial Intelligence" literature at the country level. The analysis includes countries with at least **five documents** and was evaluated without any limitations in terms of the number of citations. Among a total of **16 countries**, **four countries** meeting these criteria were identified, and the total strength of their co-authorship links with other authors was calculated.

Table 15 Country-Level Co-Authorship (Collaboration) Analysis

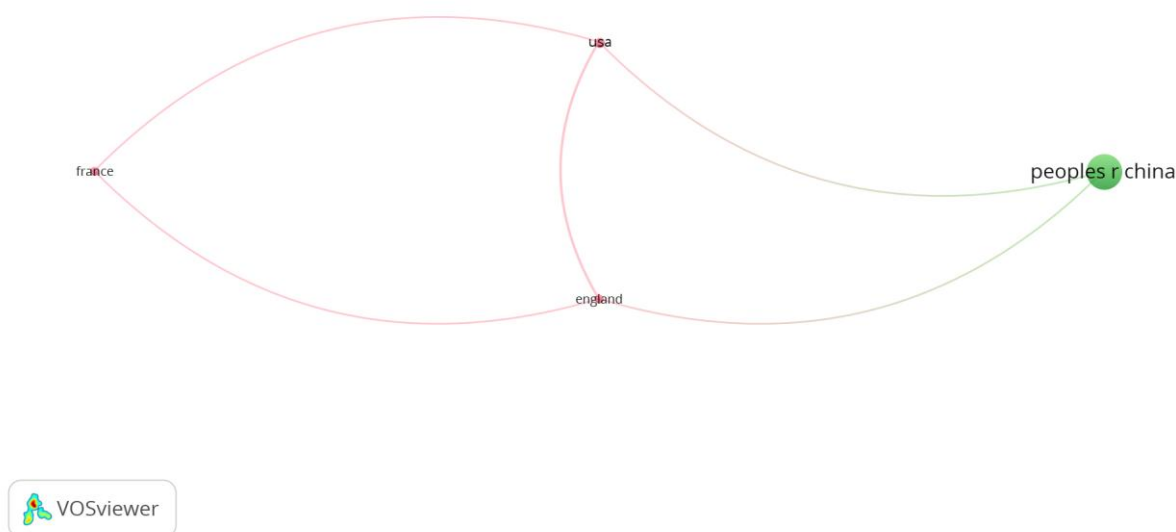
Country	Documents	Citations	Total Link Strength
Peoples R China	41	72	2
Usa	4	24	4
England	3	47	4
France	3	4	2

According to the analysis results, the **United Kingdom**, **France**, **the People's Republic of China**, and **the United States of America** have contributed to the literature with at least **five articles** each. These countries have been cited **47**, **4**, **72**, and **24** times, respectively, and their total connection strengths were measured as **4**, **2**, **2**, and **4**, respectively.

The **United Kingdom** and the **United States** stand out not only in terms of citation counts but also in terms of connection strength. This indicates that these countries are highly

influential in the literature on aviation and artificial intelligence and have an extensive international collaboration network.

Table 16 Co-Occurrence Map of Country-Level Co-Authorship (Collaboration) Analysis



This analysis demonstrates the structural dynamics of international collaborations in the field of civil aviation and artificial intelligence and highlights which countries have more intense collaborations. Inter-country collaborations play an important role in understanding and promoting the flow of knowledge and innovation in this field. The social structure analysis of countries provides a valuable perspective on global collaborations and potential partnership opportunities in this area.

5. Discussion

This study examined the current state of artificial intelligence (AI) applications in the civil aviation sector and trends in the academic literature through a **bibliometric analysis** method. The analysis results indicate that AI is increasingly being adopted in different areas of civil aviation. In particular, the effectiveness of AI solutions is increasing in critical areas such as **flight operations, maintenance and fault prediction, customer service, and safety management**.

The findings of the study reveal that academic research on AI and civil aviation is increasing in the literature; however, the total number of publications on this subject remains limited.

Among the most productive countries are **China, the United Kingdom, and the United States**, where universities and researchers are making significant contributions to the field. However, it was observed that academic collaboration networks are limited and that stronger connections between different research groups need to be established.

According to the bibliometric analysis results, the most frequently used keywords were identified as **"Artificial Intelligence," "Civil Aviation,"** and **"Machine Learning."** This indicates that artificial intelligence and machine learning continue to be the main research areas for the aviation sector. However, the findings from the social structure analysis reveal that the level of collaboration among authors and institutions is low, highlighting the need for broader academic interactions in the literature.

The adoption of artificial intelligence applications in the aviation sector offers significant opportunities to improve **operational efficiency, enhance safety, and reduce costs**. However, key barriers to technological adaptation include **data security, ethical issues, regulatory gaps,** and potential challenges in **human-machine interaction**. Future research should focus more on ethical and legal regulations to improve the reliability of artificial intelligence applications.

6. Conclusion and Recommendations

This study highlights the development of artificial intelligence (AI) applications in the civil aviation sector and draws attention to the academic and industrial gaps in this field. The analyses conducted emphasize that AI-based studies are increasing; however, the need to strengthen collaboration networks is also underscored. In this context, the following recommendations are presented:

Academic collaborations in the field of artificial intelligence and civil aviation should be encouraged, and joint projects should be established among different research groups and countries.

The **civil aviation sector** should focus on developing innovative AI solutions by working more closely with **universities and technology companies**.

International standards and regulations should be established to ensure the effective and reliable use of AI applications in civil aviation.

The development of AI-based **early warning and prediction systems** should be encouraged in critical areas such as **flight safety, maintenance processes, and crisis management**.

Data privacy, cybersecurity, and ethical codes should be established and enforced to ensure the security of AI algorithms.

This study provides an important roadmap for how AI applications in the civil aviation sector may evolve in the future. To enhance the effectiveness of academic studies and industrial applications, greater emphasis should be placed on **interdisciplinary research** and **international collaborations**.

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Leadership In Art and Design Education

Assoc. Prof. Dr. Ülkü Gezer

Istanbul Arel University, Turkey

ulkugezer@arel.edu.tr

1. Introduction

This study aims to investigate the significance of art and design, the importance of art and design education, and the critical role of leadership in art and design education. Research has been conducted within these topics to derive findings and provide recommendations.

In the course of this investigation, the importance of art and design education is explored across ten distinct subtopics. The significance of leadership in art and design education is addressed by focusing on seven key areas, while the qualities of qualified educators are examined through eight separate subheadings. Subsequently, considerations and recommendations are presented for leaders overseeing individuals with advanced education.

2. Literature Review

Art and design education offers students the opportunity to develop creativity and aesthetic values. Art education is essential for individuals to understand, interpret, recognize, and appreciate life. This enables individuals to imbue their work with values related to themselves and humanity, preserve these values, and lead a life of respect towards the world and others, guided by a strong work ethic and discipline.

Holding a leadership position in this field requires specific skills and strategies to effectively guide educational institutions and maximize the potential of students.

Art and design education leaders, by utilizing these key skills and strategies, can successfully lead educational institutions and enhance the creativity and abilities of students. This not only helps to elevate the individual success of all students, whether aspiring artists or not, but also contributes to increasing the societal impact of art and design.

At the same time, it fosters the improvement of students' achievements in other areas as well.

This study aims to explore key topics such as the importance of art and design education, the significance of leadership in art and design education, fundamental responsibilities and duties, fostering creative thinking, managing the teaching staff, strategies for enhancing student success, increasing student engagement and motivation, and managing physical and

virtual infrastructure. Through research on these areas, the study seeks to derive findings and provide recommendations.

Art and design education has long been recognized as a core component of a holistic education that not only develops technical and creative skills but also fosters critical thinking, emotional intelligence, and cultural awareness. Researchers such as Eisner (2002) and Winner et al. (2013) emphasize that art education plays a transformative role in developing individuals' ability to perceive the world from different perspectives and express complex ideas through visual means.

According to Efland (2002), art education nurtures aesthetic sensitivity, thereby enhancing individuals' ability to interpret and make sense of both their inner world and the social realities surrounding them. This perspective aligns with Dewey's (1934) approach, which places aesthetic experience at the core of personal meaning-making and democratic participation.

Design education, as noted by Findeli (2001), combines creativity with problem-solving and functionality, thereby preparing students to address real-world issues through innovative thinking. In recent years, there has been an increasing interest in interdisciplinary approaches within design pedagogy, which fosters collaboration across various fields and supports flexible, forward-looking leadership within creative disciplines (Oxman, 2006).

The role of leadership in art and design education also stands out as a significant area of research in the literature. Effective leadership encompasses not only administrative functions but also pedagogical ones, influencing the quality of the educational environment, curriculum development, institutional culture, and student success. Studies emphasize the need for leaders in creative education to have a profound understanding of artistic processes, possess pedagogical sensitivity, and demonstrate strong communication skills (Fullan, 2001; Sergiovanni, 2009).

Furthermore, the qualities that art and design educators should possess are frequently discussed in the literature. Research reveals that traits such as empathy, open-mindedness, critical engagement, and the ability to inspire contribute significantly to the intellectual and moral development of students, positioning art educators as both guides and role models (Bamford, 2006).

In conclusion, the literature highlights the multifaceted value of art and design education and the crucial role of educational leadership in maintaining quality and meaningful teaching in these fields. Based on the existing literature, this study examines the core dimensions of leadership in art and design education and proposes strategies for enhancing effectiveness in this domain.

3. The Importance of Art and Design

Mustafa Kemal Atatürk, the founder of the Republic of Turkey, viewed art, leadership, and universal values in a way that not only made him the leader of a nation but also one of the rare figures who shaped world history. He was not merely a political and military leader; he also established a significant place in history as a pioneer of modern education, art, and cultural development. His statement, "A nation without art has lost one of its lifebloods," clearly demonstrates his belief in the transformative power of art and art education on society. Atatürk viewed art and design not only as an aesthetic domain but also as a strategic tool in the process of modernization and identity construction for a nation during the establishment of the Republic of Turkey.

It would be appropriate to begin our work by citing some of the key statements made by Mustafa Kemal Atatürk, the universal symbol of art and leadership, regarding the importance of art:

"To sustain a nation, certain foundations are necessary, and one of the most important of these foundations is art.

A nation that is deprived of art and artists cannot possess a complete life. Such a nation is like a person with one leg lame, one arm crippled, broken and ill. In fact, this phrase does not even fully express the meaning I intend. A nation without art loses one of its lifebloods.

A nation that does not prioritize art is doomed to a great catastrophe.

Nations that fail in the fine arts will unfortunately be forever deprived of occupying a high position in the realm of civilization, under the dignity of humanity.

The artist is the person who, after much effort and labor in society, is the first to sense the light on their forehead.

One of the significant reasons we have remained so distant from the level we must reach today is that art and artistry have not been given the importance they deserve." (Atatürk, M. K., 1997)

Art reflects the history, values, and traditions of a society. Artworks allow us to understand the lifestyles, belief systems, and intellectual perspectives of past societies. In this context, through art, future generations have the opportunity to learn about their cultural roots and preserve this heritage.

"Another importance of art is as follows: knowledge is a whole consisting of scientific, technical, and artistic information. The effective and creative use of acquired knowledge is as important as the knowledge itself. In other words, art enables knowledge to be beneficial to human life." (Yolcu, 2004)

"Art is a process that develops creativity. People engaged in art develop different perspectives, strengthen their problem-solving abilities, and enhance their aesthetic sensitivity." (Yolcu, 2009)

Art provides individuals with a space where they can freely express themselves.

4. The Importance of Art and Design Education

Art and design education is a multifaceted educational approach that contributes to both the artistic and cognitive development of individuals while fostering awareness within social and cultural contexts. This education enhances skills such as personal expression, aesthetic understanding, creative thinking, and problem-solving, while also providing strong professional foundations. Therefore, art and design education plays a crucial role in the development of both the individual and society. In this context, types of intelligence, such as visual-spatial intelligence and intrapersonal intelligence, can be developed through art education, thus enhancing individuals' intellectual and emotional competencies (Özkan, H. H., 2008).

Art education contributes to the intellectual and emotional development of individuals. Skills such as creativity, critical thinking, and aesthetic awareness are strengthened through art education. Additionally, art also cultivates abilities such as discipline, patience, and attention to detail.

Art stimulates an individual's aesthetic sensibilities. Aesthetic experiences encourage reflection on beauty and meaning, making individuals more sensitive to the world around them.

Art not only creates individual aesthetic experiences but also plays a significant role in the construction of social identity.

In art education, the adoption of this perspective enables students to develop a deep understanding of both historical and cultural contexts. Students gain the ability to analyze the meaning of artworks not only as aesthetic values but also as social messages, cultural codes, and historical documents. This provides important insights into how the concept of leadership can be integrated into art and design education. Leadership in art education is not limited to the transfer of technical knowledge and skills; it also includes fostering a sense of responsibility towards the preservation of cultural heritage, strengthening historical consciousness in societies, and helping individuals better understand their cultural identities. In this context, art and design education serves as a crucial platform for the preservation of social memory and its transmission to future generations.

The importance of art and design education can be explained under the following headings:

1. Creativity and Innovation

Art and design education helps individuals develop their creative thinking skills. Creativity is an essential skill for personal development as well as in the business world. Processes such as solving design problems and developing different perspectives through art offer individuals ways to think innovatively. Creativity provides a competitive advantage, particularly in technology, engineering, and business sectors.

2. Critical Thinking and Problem Solving

Art and design education equips students with the ability to analyze and solve complex problems. The challenges encountered in a design project or artwork provide students with the opportunity to generate innovative solutions from different perspectives. This process enhances their overall problem-solving skills.

3. Aesthetic Perception and the Concept of Beauty

Art and design education enhances aesthetic perception and sensitivity to the environment. This education teaches individuals to understand aesthetic principles such as beauty, balance, and symmetry. Aesthetic awareness strengthens the ability to appreciate beauty both in art production and in daily life. This contributes to the creation of more livable and aesthetically pleasing environments through design.

4. Cultural and Social Awareness

Art and design education increases cultural awareness. Working with artworks from different cultures and periods helps individuals understand social and cultural diversity. Design projects, by addressing environmental and social issues, assist individuals in becoming more sensitive to societal concerns.

5. Personal Expression and Emotional Development

Art and design offer individuals the opportunity to express themselves. Visual arts, music, and design serve as ways for individuals to reveal and communicate their emotional worlds. This process contributes to emotional development and boosts self-confidence. Additionally, art and design can be used as a therapeutic tool for personal development and emotional healing.

6. Professional Development

Art and design education is a fundamental requirement in many professional fields, including advertising, architecture, fashion design, graphic design, and industrial design. Professionals in these fields are expected to possess creative thinking, aesthetic sensitivity, and technical knowledge. Art and design education provides the essential foundation for building a successful career in these areas.

7. The Intersection of Technology and Art

Today, art and design education is deeply intertwined with technology. Digital art, graphic design, 3D modeling, and animation demonstrate how technology is used in creative processes. This education teaches students to use digital tools effectively and cultivates sensitivity to technological innovations.

8. Collaboration and Teamwork

Art and design projects often require teamwork. The ability to collaborate with people from different disciplines, share ideas, and work toward a common goal is of great importance for both individual development and professional life. Design-focused work helps students develop communication and collaboration skills.

9. Emotional and Cognitive Balance

Art and design education contributes to both emotional and cognitive development. Creative processes allow for emotional expression while also enhancing analytical thinking, planning, and execution skills. This balance enables students to experience more comprehensive mental and emotional development.

10. Social Change and Sustainability

Art and design draw attention to social issues and have the potential to provide solutions. The understanding of sustainable design, particularly projects produced with environmental friendliness and social responsibility in mind, aims to create a better quality of life. This shows that art and design education can have a significant impact not only on individuals but also on society.

3. Leadership in Art and Design Education

Art and design education provides students with the opportunity to develop creativity and aesthetic values. Serving as a leader in this field requires specific skills and strategies to effectively guide educational institutions and maximize students' potential. When examining this field, we can address the key elements that contribute to successful outcomes. In other words, what should be done and how should these actions be managed?

Here, we will focus on essential points for managing art and design education effectively:

1. Management and Development of Teaching Staff

A high-quality teaching staff is fundamental to successful art and design education. Leaders must recruit qualified teachers, motivate them, support their professional development, and continuously assess their performance.

2. Development and Management of Educational Programs

It is important for educational programs in art and design to be current and effective. Leaders should regularly review programs, consider new trends and industry needs, and update programs accordingly.

4. Management of Physical and Technological Infrastructure

Providing appropriate physical and technological infrastructure for art and design education is essential. Workshops, laboratories, technological equipment, and software should be kept up to date and meet the needs of students.

5. Student Support Services and Career Development

In addition to academic success, it is important to support students' career development. Leaders should provide support services such as internship opportunities, portfolio preparation, and career counseling to help students integrate successfully into the job market after graduation.

6. Collaboration with the Art and Design Community

Leaders can offer valuable connections and opportunities to students and faculty by collaborating with professional communities in the art and design world. Organizing joint projects and events with art galleries, design studios, museums, and industry leaders helps students and teachers gain real-world experience.

7. Diversity and Inclusion

The world of art and design is composed of individuals from diverse cultural and social backgrounds. Leaders should encourage diversity in educational institutions, create an inclusive environment, and strive to provide equal access to opportunities for every student.

8. Institutional Development and Sustainability

For the long-term success of educational institutions, it is important to develop strategies for institutional development and sustainability. Leaders should ensure the financial stability of their institutions, manage relationships with donors, and work to maintain their institutional reputation.

Art and design education leaders, using the skills and strategies outlined above, can successfully guide educational institutions and maximize the creativity and talents of students. This can enhance both individual student success and the societal impact of art and design.

The following are the key qualities that should be present in art education instructors:

1. Expertise in the Field

Qualified instructors should have deep knowledge and experience in their specific art disciplines. They should be strong in both theoretical knowledge and practical applications, and closely follow current art trends and techniques.

2. Approach that Supports Creativity

Art educators should provide opportunities for students to explore and express their individual creativity. They should encourage creative risks, support experimental work, and offer students the freedom to think independently.

3. Ability to Provide Critical Thinking and Feedback

Feedback is crucial in art education. A qualified instructor should offer structured and constructive criticism to support students' artistic development. Critiques should highlight both areas of improvement and strengths.

4. Mentorship and Guidance

Art educators are not just information providers but also mentors who inspire and guide students in their artistic careers. They should offer support as students navigate challenges in their artistic journeys and help with the transition to professional life.

5. Patience and Empathy

Each student learns at their own pace and requires different approaches. A qualified instructor must be patient and empathetic, approaching each student according to their individual needs and learning styles. They should understand students' abilities and limitations and offer guidance that fits.

6. Openness to Innovation and Flexibility

The art world is rapidly changing; digital art, new media, and interdisciplinary work are gaining importance. A qualified art educator must be adaptable, able to incorporate new technologies and artistic practices into the curriculum. Embracing flexible and innovative approaches makes it easier for students to adapt to the contemporary art world.

7. Communication Skills

Educators should be able to communicate effectively, conveying complex artistic concepts in simple and understandable ways. Building trust-based relationships with students and motivating them is also critical to the success of art education.

8. Ability to Inspire

A qualified educator should inspire students, fostering both their artistic and personal growth. They should use methods that expand students' artistic vision, introduce new perspectives, and motivate them.

In art and design education, where the goal is to develop positive human qualities, the characteristics of the educator themselves and how they manage them are of paramount importance.

“The best way to manage people in science and art is to give them interesting and challenging tasks, then leave them to work on their own without interference.” (Davis, 1988).

Scientific and artistic individuals are more intellectually oriented and intelligent than most other workers. They have a strong motivation to solve problems in their fields of interest. Due to their strong drive for success, they need recognition, status, and opportunities for development. Because of their motivation and meticulous nature, they can be sensitive, quick-tempered, and easily hurt. They value taking responsibility and self-fulfillment, so they may respond to obstructive managerial behavior with vulnerability and resistance.

Studies have shown that scientific and artistic individuals consistently seek high levels of autonomy and freedom in their work. These studies also show that the higher a person's academic level, the stronger their desire for autonomy. (Abrahamson, 1964, as cited by Davis, 1988).

A study involving 2,500 scientists and artists from 16 countries found that all participants showed the top seven goals related to success and autonomy. Salary and earnings were ranked only eighth. These individuals clearly sought challenging tasks with responsibility and a degree of autonomy, which would contribute to their development. (Hofstede, 1972, as cited by Davis, 1988).

Scientific and artistic individuals have made significant investments in their education and professional preparation. In return, they expect to be appropriately rewarded, and if they do not find satisfaction, they are likely to seek it elsewhere. Here, what managers need to focus on is preventing these employees from easily changing institutions.

A study in the United States has estimated the annual cost of employees not finding what they expect from their managers to be \$300 billion. This study covers not only academics but all workers. (Robinson, 2004, as cited by Robbins-Decenzo-Coulter, 2013).

Another study involving scientists working in three major research laboratories revealed that workers in laboratories A and B operated within traditional hierarchical systems, while those in laboratory C worked under an open, participatory, and collegial approach, described by Burns and Stalker as an organic approach. The four success criteria perceived by participants were: respect and value in the eyes of colleagues, contribution to science, a sense of individual accomplishment, and contribution to management goals. These criteria, especially the first three, were much higher in laboratory C compared to the other laboratories. (Hofstede, 1972, as cited by Davis, 1988).

There is evidence that scientific and artistic individuals perform better when they are free from organizational uncertainty. They tend to feel uneasy in the face of organizational system complexities. Managers who are aware of this issue work to maintain organizational stability, ensuring that these individuals can work in a more peaceful environment.

4. Conclusion and Recommendations

Summarizing the key considerations for managers of highly educated individuals:

Narrowing the scope of command and authority, while expanding the dimensions of authority based on knowledge and experience. The manager should be a contributor rather than just an authoritative figure.

Preventing these individuals from engaging in excessive paperwork and tasks that fall below their skill and capability levels.

Creating an intellectually flexible and rational environment for research and work.

Ensuring protection from organizational uncertainty and injustice.

Highly educated individuals are a valuable resource for advancing management positions within institutions. They possess all desirable qualities, such as the desire to succeed, job commitment, education, intellectual skills, and analytical intelligence. However, the transition to managerial roles is not always easy, and it can be particularly difficult if individuals have not received training in management and behavioral areas.

For instance, in universities, all those in managerial positions are typically academics who are experts in their respective fields, but they may not have sufficient knowledge of management and human behavior as required in business settings. In such cases, the recommended practice-applied in many large institutions around the world-is that these individuals undergo in-service training on management and human behavior as soon as they are assigned managerial duties.

Becoming a university manager requires strong skills in academic leadership, strategic planning, resource management, and human relations. Additionally, the manager must adapt to the ever-changing global dynamics, ensuring that the university remains innovative and competitive. Managers who are proficient in both academic and administrative processes can secure the long-term success of the institution and create a supportive environment for both students and faculty.

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