

CONFRONTING UNCERTAINTY AND AMBIGUITY: THE POWER OF ORGANIZATIONAL IMMUNE SYSTEMS (AN EMPIRICAL STUDY ON MIDDLE EAST TOURISM COMPANIES)

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Abstract: The contemporary tourism work environment faces several persistent challenges that limit its growth and competitiveness. This study examines the influence of organizational immune systems by focusing on three dimensions (organizational learning, organizational memory, and organizational DNA) on the ability of tourism companies in the Middle East to confront uncertainty and ambiguity in the tourism work environment. This study used a questionnaire and structural equation modeling (PLS-SEM) to analyze data from 438 employees in 68 tourism companies across nine countries. A comprehensive analysis of several important reports from international tourism organizations and related organizations was conducted for the sector from 2019 to the first quarter of 2024 to identify opportunities and threats. The discussions clarified the importance and impact of the dimensions of organizational immunity and their impact on enhancing the ability of tourism companies to face uncertainty, the challenges and rapid changes they face. The study also provides insights into potential opportunities and threats for companies to capitalize on. By submitting a proposal, a practical strategic development model is developed as a major contribution to this study.

Keywords: Organizational Immune System – OIS, Organizational Learning – OL, Organizational Memory – OM, Organizational DNA – ODNA, Uncertainty, Ambiguity, Middle East – ME, Tourism Companies’ Ability to Confront Uncertainty and Ambiguity - TCACUA

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INTRODUCTION

The COVID-19 pandemic, originating in Wuhan, China in December 2019, prompted governments worldwide to implement extensive lockdown measures by February 2020 (Wu and McGoogan, 2020; Wut et al., 2022) to curb the spread of the virus (Rahman et al., 2021) and significantly impact various aspects of human life and business operations, including tourism management (Alcal´a-Ord´on˜ez and C´ardenas-Garc´ia, 2023). These measures have resulted in unprecedented movement restrictions that have had detrimental effects on the global tourism sector (Liutikas et al., 2024; Wen et al., Yang 2021), particularly in the Middle East (ME). According to a recent survey conducted by an expert team of the UNWTO, the primary obstacle to the revival of the tourism sector is challenging economic conditions, which include elevated inflation and interest rates, rising food and oil prices, and the apprehension of a potential worldwide economic downturn (UNWTO, 2023b). Consequently, tourists adopt a more cautious approach by reducing their expenses and opting for shorter trips to destinations closer to their residences (Korinth, 2022). Furthermore, geopolitical tensions and economic fluctuations will occur (UNWTO, 2024a). Consequently, the magnitude of the difficulties tourism companies encounter in resuming growth and development has become evident (Hassan et al., 2022).

Achieving this goal is neither effortless nor complex. This will necessitate shared decision-making and the execution of novel strategies throughout the business environment to ensure that both employees and employers can adapt effectively and strategically to capitalize on global shifts. This can only occur when there is an organizational immune system (OIS) that enables companies to effectively address challenges (Liutikas et al., 2024). OIS are of great significance in the current business environment. However, despite its origin in the mid-1990s, there is a lack of research specifically focusing on the administrative aspects of this topic. This calls for further investigation to uncover all pertinent aspects. Upon comparing the present study with several prior studies, a study conducted by (Nematpour et al., 2024) examined the correlation between competitive organizational identity and developmental factors in the post-pandemic changing environment in Iran. However, this study was confined to investigating only one aspect, namely organizational identity or footprint.

The study conducted by Walsh (2023) focused exclusively on establishing a connection between organizational identity and its significance in navigating through periods of tourism crises. Similarly (Ishie and Eke, 2023) specifically investigated the correlation between corporate identity management and organizational performance. Flanagan and Phi (2023) focused on organizational learning (OL) and its function in mitigating disruptions in the tourism industry. On the

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other hand, Li et al. (2023) study, on the other hand, focused solely on utilizing deep learning models to enhance the prediction accuracy of tourism demand. Jaaron et al. (2023) also provides a summary of the research on adaptive learning systems that respond effectively to threats. Similarly (Schweizer and Lagerström, 2020) study focused on connecting organizational memory (OM) and OL theories with sustainability. Finally, Farmaki (2021) specifically analyzed how OM may enhance tourist crisis management tactics.

In conclusion, it is evident that there is a need for further research on the administrative aspects of OIS. The studies conducted thus far have focused on various aspects, including organizational identity, corporate identity management, OL, and crisis management. As Mentioned earlier, the objective of this research endeavor is to strengthen the existing research gap by investigating how OL, OM, and organizational DNA (ODNA) as dimensions of OIS might improve tourism companies' ability to confront uncertainty and ambiguity (TCACUA). The research questions that are immediately relevant to the present investigation pertain to the study's problem and can be articulated as follows:

RQ1: How do OIS dimensions influence TCACUA?

RQ2: How can tourist companies capitalize on the future prospects that arise from the efforts of ME countries to reinvigorate their tourism industry, potentially surpassing pre-2019 levels, while effectively managing and mitigating threats?

RQ3: How can tourist enterprises in the ME bolster their organizational resilience to confront the significant challenges posed by economic, geopolitical, and health crises? The authors aimed to develop a practical strategic development model for incorporating OIS components into tourism companies to enhance the TCACUA.

THEORETICAL FRAMEWORK

Initially, several academics attributed the genesis of the OIS concept to two factors. The first theory pertains to organizational adaptation in response to internal and external risks that impact the organizational structure. Companies rely on adapting to and efficiently managing various dangers (Mahmood and Adel-Al-Jader, 2021). Second, the failure and insolvency of certain companies, along with the rise of significant competitors, has sparked a heightened focus on internal processes and corporate governance. This has resulted in the development of new systems that require organizations to adapt and place greater emphasis on the duties and skills of top management. Their role is to oversee various viral threats, diseases, and risks and select suitable strategies to address them (Simmons, 2013). Some argue that an OIS is a product of the theory of social self-production, suggesting that the system has internal mechanisms and processes that aid self-production and reproduction (Al-Badayneh, 2021). Nevertheless, the study conducted by De Geus in 1997 is widely regarded as the true starting point for discussions on the concept of OIS (Zhou et al., 2021), which refers to an organization's efforts to adapt to its internal and external environments and protect its internal culture from external influences (Hameed et al., 2021). Although this concept is relatively new, only a small number of scholars have provided definitions for it, and even fewer have made efforts to recognize its use inside companies.

Similar to the human immune system, which comprises cells and organs that defend against external threats, such as diseases, infections, and viruses, the immune system (Xue et al., 2020) identifies and eliminates threats, making it easier to respond to them more effectively and efficiently (Huang, 2013). OIS are intricate networks of tasks and employees that protect the organization from changes. Employees, policies, procedures, processes, and culture all contribute to the formation of this barrier, which serves as a defense against external threats and changes (Al-Badayneh, 2021; Gilles, 2022).

Dimensions of Organizational Immune Systems

Various researchers have proposed different dimensions of OIS. In a study by Simmons (2013), competitive position, ODNA, natural organizational immunity, acquired organizational immunity, bench-marking, and OM were identified as the key dimensions of OIS. A study conducted by Huang (2013) identified OL, OM, and organizational knowledge as dimensions of organizational immunity. Al-Saidi (2020) noted that the dimensions of OIS can be limited to the central, specialized, and peripheral immune systems. However, several researchers have converged on a common perspective when defining the dimensions of OIS, as evidenced by various studies (Al-Tahan and Al-Hindawy, 2021; Assayah, 2020; Huang, 2013; Mahmood and Adel-Al-Jader, 2021; Xue et al., 2020; Yang et al., 2021; Zhou et al., 2021). This perspective encompasses OL, OM, and organizational ODNA. As a result, this study focuses on the dimensions most commonly accepted by researchers and most relevant to current research, namely OL, OM, and ODNA. These dimensions are examined in the following sections.

Organizational learning (OL): OL refers to an increased awareness of challenges and the discovery of solutions (Kordab et al., 2020). Van den Brink (2020) defined it as a method of managing changes and enhancing the quality of structures, cultures, and processes. Assayah (2020) defines it as encompassing individual learning, group learning, learning from others, and self-learning. OL is crucial for establishing an internal environment that supports successful forecasting and achieving organizational goals (Schönherr et al., 2023), organizational effectiveness (Meher et al., 2024), and competitive advantage through a balance between exploitation and exploration (Zhang et al., 2023), as well as responding to market challenges. Kordab et al. (2020) established that OL plays an essential role in facilitating the exchange of knowledge and influencing the enhancement of individuals' competencies, ultimately resulting in the creation of added value for organizations and the enhancement of sustainable organizational performance (Binh, 2023). Despite the benefits of OL's, it is crucial for organizations to consider a specific set of considerations (Rass et al., 2023). The first pertains to the indispensability of a supportive administrative team, the second pertains to the utilization and exploration of knowledge in conjunction with the organization's endeavors, and the third pertains to managing risks and conducting experiments. The

fourth aspect is associated with effective engagement with the surrounding environment, while the final aspect is concerned with the dynamics of work teams in making organizational decisions (Escandon-Barbosa and Salas-P'aramo, 2023).

Organizational Memory (OM): OM refers to the collection of past experiences and events within an organization that are utilized to achieve future benefits (Simmons, 2013). It is important to note that OM can act as both an input and an output of intellectual capital, as it serves as the foundation for cognitive development (Mahmood and Adel-Al-Jader, 2021). It is worth noting that individual memories within organizations comprise declarative and procedural memories (Miller et al., 2012). Declarative memory refers to the retention of knowledge, including factual information, organizational facts, and past experiences. Procedural memory pertains to the retention of knowledge in the form of skills and routines that can be automatically retrieved. Procedural memory is advantageous for improvising certain tasks owing to its rapid nature, whereas declarative memory is more beneficial for enabling more complex and sophisticated answers because it slows down decision-making (Miller et al., 2012).

OM refers to the collective information stored within a group of individuals. This knowledge is transient, meaning that it is temporary and subject to change. Transient memory enhances the speed of information retrieval, improves decision-making and task coordination, and fosters confidence and effective communication (Argote et al., 2021). In terms of OM at the organizational level, over time, effective activities are consistently replicated and amplified, resulting in the accumulation of a repository of exceptional experiences. Knowledge is intentionally preserved, leading to enhanced OM and reduced reliance on research (Miller et al., 2012). To maintain up-to-date memory, it is essential to regularly update knowledge, incorporate new and valuable information, and consistently maintain up-to-date memory (Ayduğ and Esmahan, 2023). On the other hand, memory and forgetting are interconnected concepts, although they have opposing meanings (De Jesus Ginja Antunes and Pinheiro, 2020). Organizations may experience forgetting if they fail to effectively acquire and store new knowledge in their memory or if they selectively retain certain knowledge (Van den Brink, 2020). OM plays a vital role in establishing a sustainable competitive advantage, going beyond simply storing experience, data, and information. This necessitates the seamless integration of structures, decisions, and processes within an organization's environment (Cegarra-Navarro and Martelo-Landroguez, 2020).

OIS functions similarly to immune cells in the human body when an organ or body part experiences a specific viral impact, enabling it to recover and develop immunity against this threat. In this context, OM, which refers to the knowledge gained from prior treatments and stored solutions, functions as an organizational vaccine (Liu et al., 2020). Information gathering is used to acquire knowledge and data that aids in addressing and managing dangers and risks, as well as identifying effective alternatives that have been successful in dealing with such situations (Assayah, 2020).

Organizational Genes or Organizations DNA (ODNA): ODNA simulates human genes, embodying the distinct characteristics of each organization, setting it apart from others, and empowering it to effectively adjust to competition (Govers et al., 2024). ODNA refers to a collection of values, beliefs, cultures, and fundamental personality traits that define an organization's identity. It is difficult for other organizations to imitate or replicate this unique combination (Abraheem, 2023). According to Lee et al. (2017), ODNA is reflected in organization's performance and activities, resulting in a more positive outcome. Building on this definition (Elsanhawy and Badway, 2023) argue that strategic flexibility is not solely dependent on an analytical strategy focused solely on creative individuals or a particular organizational structure. Instead, it encompasses a range of administrative practices, skills, processes, and cultures that empower management to enhance and optimize organizational performance.

Furthermore, ODNA significantly influences the definition of organizations and their leadership and management responsibilities, including decision-making, organizational structure, teamwork, communication, and organizational definition (Abunaser et al., 2023). When organizations encounter difficulties in implementing strategies, they can find solutions by examining their organizational structure and decision-making authority (Guloglu et al., 2021), as well as their motives and communication channels for information flow (Lee et al., 2017).

Various factors determine an organism's identity and personality traits. These factors, referred to as chromosomes, comprise decision-making rights, information, motives, and structures. These elements play a crucial role in determining an organization's genes (Aamina et al., 2021; Govers et al., 2024; Hadjer and Amina, 2023).

However, the significance of ODNA is evident in assessing the present state of the organization, uncovering its strengths and weaknesses, and constructing unique organizational elements that contribute to the development of an innovative organizational culture transmitted to subsequent generations (Lee et al., 2017).

AN ANALYTICAL STUDY (ANALYSIS OF TOURISM REPORTS)

During this phase, key global reports from companies such as the World Tourism Organization (UNWTO), International Monetary Fund (IMF), World Travel & Tourism Council (WTTC), Tourism Economics (TE), World Bank (WB), and WTM were examined, spanning from 2019 to the first quarter of 2024. The objective was to address the second question: How can tourism companies leverage future opportunities arising from ME countries' endeavors to revive their tourism sector and potentially surpass pre-2019 levels by mitigating threats and managing them efficiently?

In 2020, foreign travel decreased by 72%, making this the worst year for tourism. This led to a decline of 1.1 billion international tourists (overnight visitors), returning the number of travelers to levels seen 30 years ago (UNWTO, 2020). International tourism is expected to increase by 5% by 2021, with 22 million international tourists. However, the number of international arrivals was 71% less than that in 2019. Pre-pandemic (UNWTO, 2023b).

International tourism has started to recover physically in the latter part of 2021 owing to growing passenger trust, accelerated immunization efforts, and the relaxation of entry requirements in many locations (UNWTO, 2023b) (Figure 1).

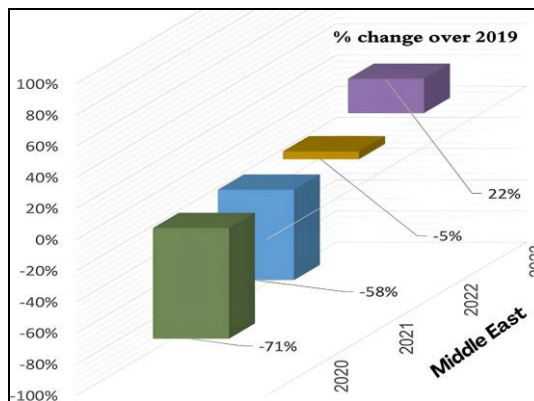


Figure 1. Global international visitors in 2021–2023 compared to 2023 (Source: this figure based on UNWTO, 2019-2024, reports)

Opportunities and strengths

Through a comprehensive analysis of various reports, it is feasible to identify several prospects that can contribute to the success of the tourism industry, provided that they are effectively utilized by tourism enterprises. These prospects encompass the following:

- The ME emerged as the leader in the rebound of the tourism industry, surpassing other regions as the only ones to reach pre-pandemic levels. According to UN tourism data from 2024, the number of arrivals in ME surpassed that in 2019 by 22%. This significant accomplishment is indicative of the region’s appeal and successful tactics for revitalizing the tourism sector (TE, 2023). In 2024, the outlook for the Middle East’s tourism industry is optimistic, with anticipated sustainable expansion. According to projections, the region’s foreign visitor population will grow significantly in the future, solidifying its status as a prominent destination for travelers (TE, 2023). Figure 2 depicts the number of tourists by geographical region for 2021, 2022, and 2023 compared with 2019. These statistics illustrate the ME region’s level of progress and dominance in attracting tourists, leaving competitors behind.

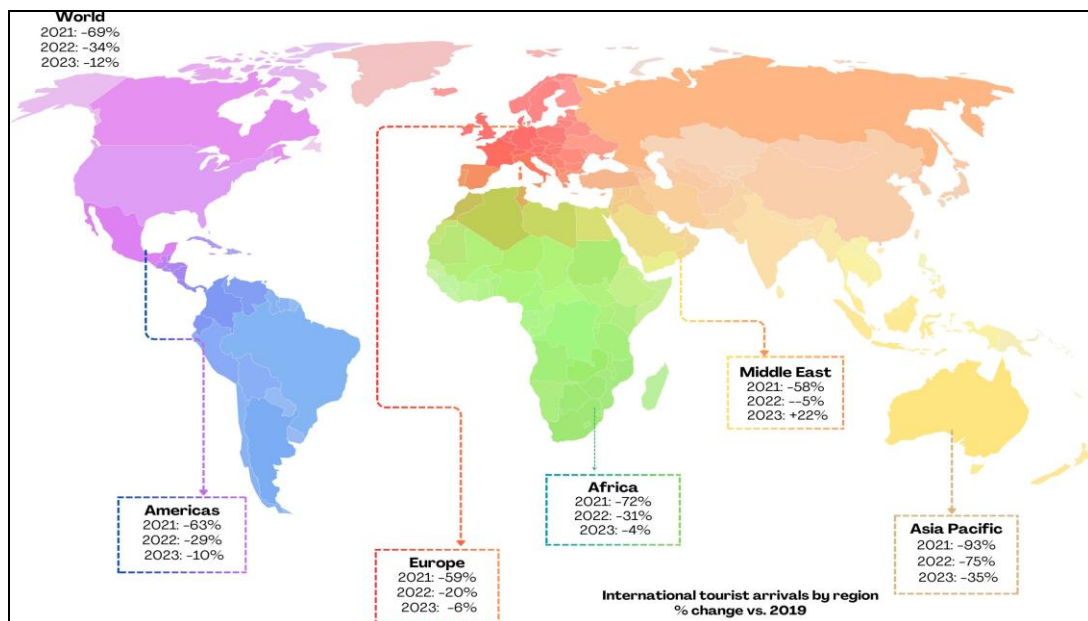


Figure 2. Regional international tourist arrivals percentage change vs. 2019 (Source: UNWTO Panel of Experts Survey, 2024)

- According to the latest UNWTO confidence indicator, there will be a higher level of optimism in 2023 than in the previous year. Specialists in Middle Eastern tourism predict that this positive outlook will continue until 2024, given the anticipated advancements and growth in the industry. This indicates the region’s ability to attract and accommodate the needs of global travelers (UNWTO, 2024b) (Figure 3).

- According to the Economist Intelligence Unit (EIU, 2023b), tourism in the ME accounts for approximately 9% of the region’s GDP. By 2032, the tourism sector is expected to increase at an annual average rate of 7.7%, which is significantly higher than the overall economic growth rate of 2.5%. Therefore, tourism growth is expected to provide positive economic benefits. The 2023 World Economic Forum report (WEF, 2023a) highlights the potential of the tourism industry to support regional development and job creation.

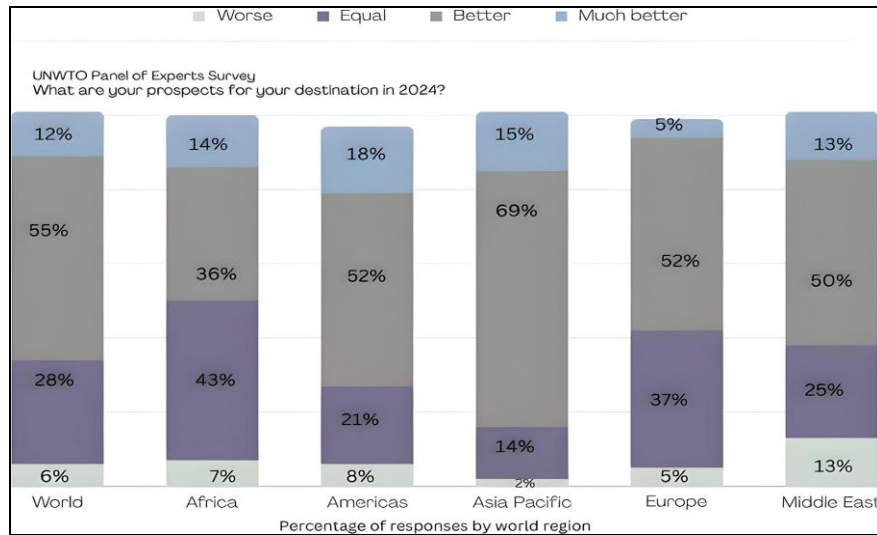


Figure 3. Regional international tourist arrivals percentage change vs. 2019 (Source: UNWTO Panel of Experts Survey, 2024)

- In the final quarter of 2023 and early 2024, two significant events are expected to boost tourism in the region. Qatar will host the FIFA World Cup in November and December 2022, whereas the Asian Football Cup will be scheduled for 2023. Additionally, the Kingdom of Saudi Arabia is focusing on increasing its tourism figures, including allowing international tourists to participate in annual Hajj pilgrimages (WTTC, 2023).
- To expand its presence in popular tourist destinations, the company is investing in the United Arab Emirates and the Sultanate of Oman. Furthermore, it uses effective marketing strategies to promote tourism offerings in European and Asian export markets. The company is also prioritizing stringent health and security procedures to ensure the safety of its customers and staff in line with industry best practices (EIU, 2023b).
- ME is seeing a growing emphasis on sustainable tourism, with governments and businesses in countries such as KSA, the UAE, Bahrain, Oman, and Jordan focusing on preserving and valuing their natural and cultural heritage (WEF, 2023b). This is reflected in the growing interest in ecotourism, health, agriculture, and adventure, which serve as sustainable tourism models in the region. These models prioritize providing unique experiences that draw inspiration from the local environment and foster mutual respect between visitors and host communities. Despite not being a new concept, sustainable tourism continues to gain attention and attract an increasing number of travelers seeking meaningful and environmentally friendly adventure activities (Colliers, 2023).
- Figure 4 shows the most notable recovery in leisure travel arrivals in 2023 compared to 2019 was observed in Saudi Arabia and the United Arab Emirates, which are two of the top destinations for entertainment spending. These countries are making significant investments in tourism infrastructure, with tourism development being a key strategic priority (TE, 2023).

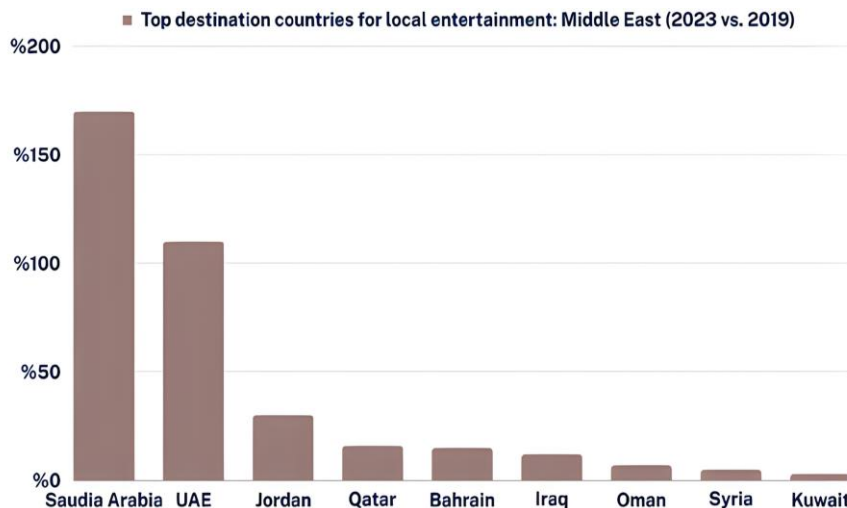


Figure 4. Countries with the best local entertainment ME (2023 vs. 2019) (Source: Tourism Economic, 2023)

Similar to its predecessor, the 2023 World Tourism Market report revealed the top entertainment destinations in ME by 2023 (TE, 2023). This information is represented in the form of bubbles, which indicate the primary countries in each region that receive the highest expenditure from leisure visitors. Bubble size corresponds to the overall market size of the leading destination in each region. Additionally, high-growth markets are represented by a constant bubble size. These rapidly expanding markets could potentially emerge as top choices for regional travel (Figure 5).



Figure 5. Top leisure destinations by region, 2033 (Source: WTM Global Travel, 2023)

Risks and obstacles

Although the tourism industry in ME is experiencing significant recovery and growth, indicating the potential of the region and its dedication to becoming a top global tourist destination (UNWTO, 2023c), it is important to acknowledge the challenges and threats that hinder the pace of tourism development. They can be identified based on the following criteria:

- In 2023 and the first quarter of 2024, there will be increased pressure on challenging economic conditions, as well as a significant decline in public finances and the balance of external payments (ILO, 2022a). This situation was even more severe than before the crisis, causing countries in the ME region to face the possibility of the prolonged impact of this crisis, potentially surpassing the effect of the global financial crisis (WEF, 2023a).
- Based on economic projections from the World Bank for 2023 (WB, 2023), it is estimated that the gross domestic product (GDP) of the countries in the area might decrease by 12% in the next five years compared to pre-crisis trends. This is higher than the 9% decrease expected in emerging markets and developing economies. Furthermore, it could take over ten years to revert to the tendencies that existed before the crisis. This affects consumers' trust and beliefs in the market, leading to increased uncertainty and hesitation to invest.
- According to OECD (2023) estimates (WEF, 2023a), worldwide growth in 2024 is expected to be less than that in 2023 due to increased monetary policy clarity. Given the increased monetary policy clarity, global growth in 2024 is likely to be lower than that in 2023. Nonetheless, fundamental inflation persisted.
- These risks persistently favor the negative side, and inflation may maintain a higher level of stability than initially anticipated while still acknowledging the ongoing potential for more disturbances in the energy and food markets. However, UNWTO reports (UNWTO, 2023a) indicate that the recent surge in oil prices and significant inflation has increased the costs of accommodation and transport services. This places additional strain on companies, reduces consumers' purchasing power, and hampers savings, as shown in Figure 6.

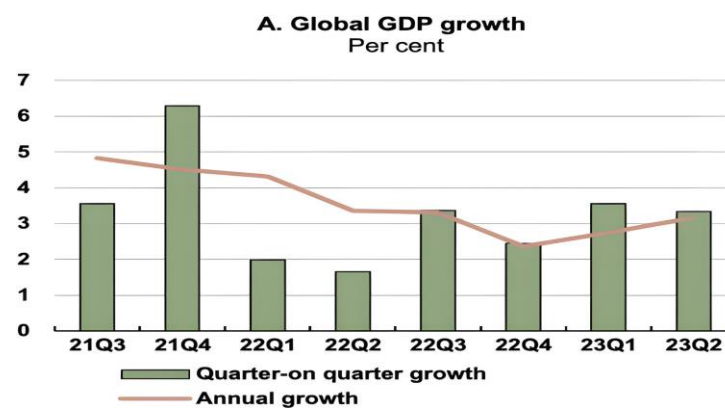


Figure 6. Global GDP growth: Source: OECD Economic Outlook, Interim Report February 2024

By 2023, GCC countries and Iraq enjoyed significant advantages over other nations, owing to changes in the global energy market. The GCC region experienced an increase in earnings from oil and gas exports, which led to growth in non-energy sectors and improved business activities (WB, 2023). The utilization of energy resources and the promotion of domestic and international tourism have contributed to economic prosperity and the development of various business ventures. However, in Lebanon, Syria, Yemen, Turkey, Iran, and Egypt, where hyperinflation or inflation rates exceeding 10% are prevalent, these nations are not only grappling with the economic challenges posed by high prices but also face significant obstacles to economic growth and stability. Consequently, these circumstances are expected to lead to economic hardships and have a noticeable impact on the tourism sector (EIU, 2023a) (Figure 7).

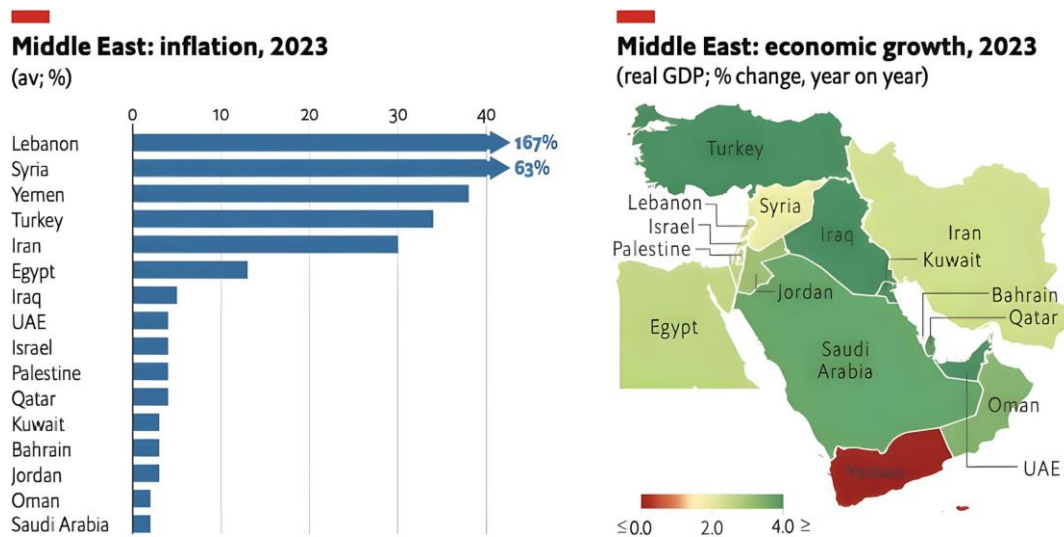


Figure 7. Middle Eastern economic growth and inflation indicators
(Source: EIU, Middle East outlook 2023, Weathering political and economic headwinds)

On the other hand, ongoing political unrest in various parts of the world, such as the conflict in Ukraine and escalating tensions in Gaza, Palestine, and Israel (UNWTO, 2023c), has had a widespread influence on the economies of member states. Other geopolitical tensions and ongoing travel restrictions due to the COVID-19 pandemic have exacerbated this situation (ILO, 2024). To a certain degree, the erosion of public trust could have a detrimental impact on public confidence and impede the revitalization of the tourism industry (Izvorski et al., 2023)

- According to (WTTC, 2023), the worldwide travel and tourism sector will experience a significant impact, with over 121 million jobs affected and a loss of \$3.4 trillion in global GDP. Confronted by substantial decreases in income and unchanged expenses, many businesses have been compelled to implement furloughs or layoffs for a considerable number of employees (ILO, 2022b).
- Therefore, it is imperative to acknowledge the significance of these environmental factors. Since the middle of the twentieth century, the ME has experienced higher temperatures throughout the day and night, more frequent and intense heat waves, and a growing scarcity of water due to drought. The primary consequences of these alterations include heightened water shortages, elevations in sea levels, coral bleaching, the proliferation of algae blooms, and the intensification of extreme weather phenomena (UNWTO, 2024a).

DISCUSSION

The global pandemic has been unprecedented in recent history, resulting in substantial losses across various domains, including economic, human, social, health, and environmental. According to empirical evidence, companies that are equipped with information and have a wealth of knowledge and skills stored in their OM are better able to successfully address the challenges they face and make well-informed judgements. Furthermore, the impact of ODNA on the quality of organizational decisions was revealed through statistical analysis. This can be attributed to the fact that each organization's distinctive qualities and characteristics directly influenced its ability to handle uncertain and ambiguous situations during and beyond the pandemic. While some companies were able to effectively address the crisis, extract valuable lessons from it, and capitalize on opportunities despite the uncertain nature of the situation, others were unable to overcome these challenges. The identity of each organization played a significant role in addressing the subsequent challenges observed globally after 2019. Additionally, the researched companies demonstrated an understanding of the various organizational characteristics that form distinct ODNA. This understanding aids in identifying the crisis, market conditions, and business environment, as well as uncovering strengths and weaknesses and fostering a suitable organizational culture. To address and handle a crisis effectively, a company should enhance its internal elements, including organizational structure, skilled personnel, support from top management, and strategic flexibility.

According to the analysis reports from the International Tourism Organization and other international sources that research the state of the tourism industry in the ME before and after the pandemic. According to previous statistics, it can be concluded that the tourist sector in ME has new potential for growth. However, the success of tourism companies depends on their efforts, awareness of these opportunities, and ability to make the most of them. Upon analyzing the data from these studies, it is evident that countries in the ME are expediting their progress and exerting significant efforts to. It is essential for companies to recognize that the dimensions of OIS support the continuous flow of unique human resources within the company. In the event of swiftly restoring their economic activity.

This has created numerous prospects for growth in this sector. Hence, companies must strive to enhance their performance and bolster their capacity to accurately forecast the future, fortify their defensive capabilities against hazards or risks, augment their cognitive perception, adaptable mindset, strategic consciousness, sensitivity towards the internal and external milieu, and proactively anticipate changes. To answer the last study question about how to improve the OIS of tourism companies in the Middle East so they can better handle economic, geopolitical, and health-related problems, we suggest a useful strategic

development model that uses OIS features to help tourism companies deal with uncertain and unpredictable situations. This model in Figure (8) outlines the primary strategy, sub-strategies, and necessary methods and means to strengthen companies' resilience in response to the evolving environment and increasing threats to the tourism industry.

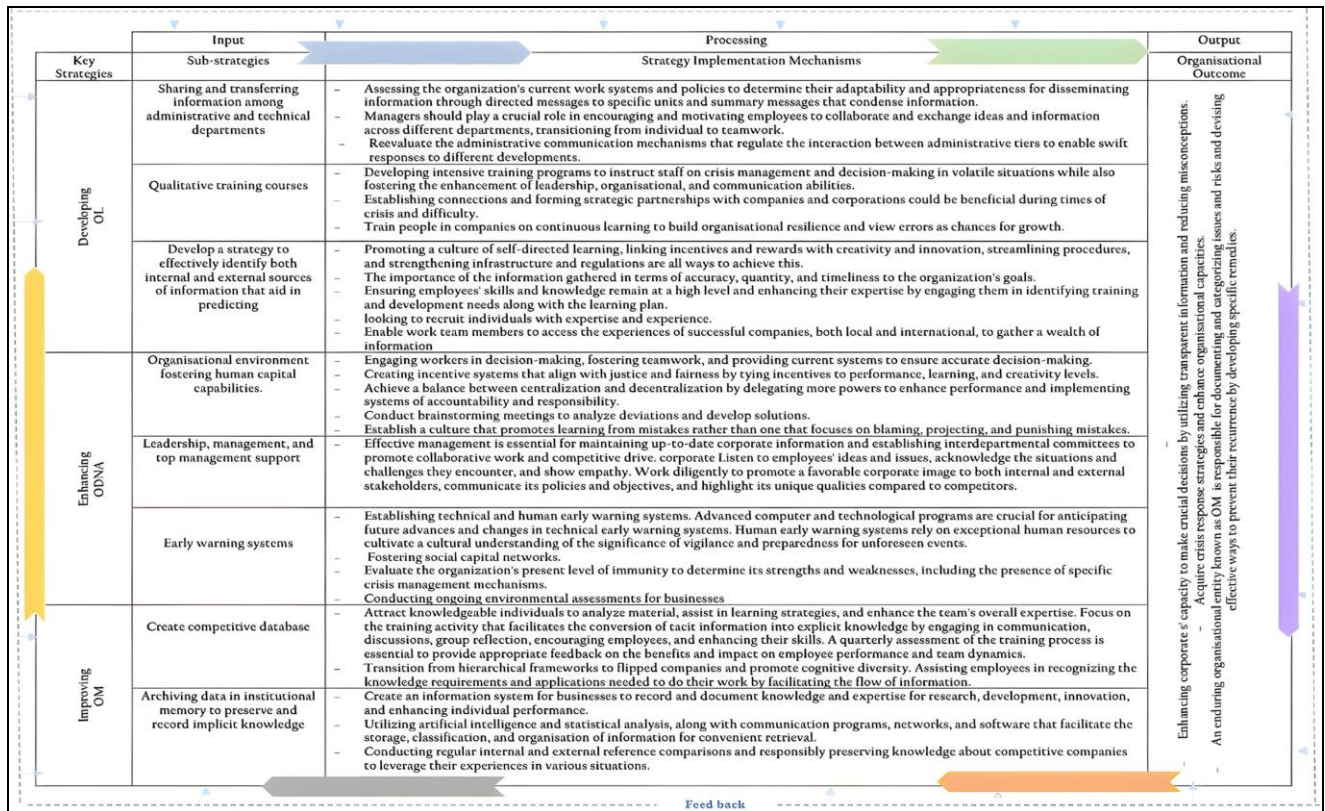


Figure 8. The Practical Strategic Development Model

Theoretical Implications

The current study has significant implications for researchers and academics, as it introduces an administrative concept and complements the findings of previous studies. This study utilized a conceptual model to investigate the impact of OIS on the ability of tourism companies to deal with uncertain and ambiguous situations. As a result, this study offers an updated and comprehensive definition that highlights the organizational effects of OIS. Our findings indicate that it is essential to address OIS as a comprehensive approach within the business environment. This approach not only demonstrates the organization's capacity to handle challenges and crises but also its ability to anticipate future events.

To achieve this, a comprehensive vision must be developed that encompasses all internal processes, including those related to organizational structure and culture, communication, information systems, and decision-making, based on the three main dimensions (OL, OM, and ODNA), which serve as guiding principles for developing suitable ways to address situations characterized by uncertainty, ambiguity, crises, and organizational risks.

It is worth noting that the previous definition was derived from various administrative theories, focusing on their role in facilitating organizational flexibility and adaptability. This is achieved by influencing the organization's decisions and outcomes through ongoing assessment, modification, and evaluation. Hence, the theory of adaptation can be relied upon. Alternatively, if we acknowledge that these systems depend on previous experience and knowledge to address obstacles and provide new information required for structural interaction, they are not independent of their surroundings; thus, they rely on social exchange theory. This theory suggests that social contact among employees, involving the sharing of knowledge and the development of mutual trust, can enhance the system throughout the organization.

Managerial Implications

An organizational disaster or environmental virus, the initial harm suffered is the deterioration of the cultural and social fabric. This gives rise to the emergence of organizational migration of human capital organizational migration and, at times, the need to engage in incorrect and disruptive practices to restore the status quo. Therefore, it is crucial for companies to establish efficient channels or strategies for employees to provide feedback and strengthen the connections between management and work teams. By actively seeking input from employees, companies can foster trust and beliefs that contribute to the development of robust ODNA. This enables companies to address and overcome issues effectively.

However, managers of tourist companies must understand that the key to survival and dealing with crises is to have a well-organized force that can consistently offer innovative solutions that adapt to changes and mitigate risks. This can be achieved by integrating and combining the various dimensions of an OIS in an interactive and mutually reinforcing manner. These systems enable companies to provide organizational, human, informational, and strategic assistance.

Therefore, the formation of a crisis team that encompasses a wide range of cognitive abilities is essential for ensuring a comprehensive perspective. Such personnel effectively enhance TCACUA.

Ultimately, this study presents a practical strategic development model for managers of tourist companies. It focuses on the influence of OIS on improving skills and boosting performance.

CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

This scientific work aimed to investigate the influence of OIS, specifically OL, OM, and ODNA, on TCACUA enhancement. We consider the significance of the tourism industry and its promising prospects in the Middle East, following the challenges it faced in 2019 and subsequent events. This prompted the authors to further investigate OIS, which is a comprehensive approach that improves an organization's capacity to address the challenges and crises it encounters. To substantiate this claim, we examined the feedback provided by the selection of tourism establishments in countries located in the ME using SmartPLS 4 software. Furthermore, it was subjected to further analysis. Global reports on the tourism industry in the ME concerning the circumstances preceding and following the COVID-19 pandemic.

Although the authors of this study made an effort to be comprehensive in their research, some limitations may be future contributions for researchers. Future studies should examine several limitations. The analysis of the reports only included Middle Eastern countries, which makes the study possible to be extrapolated to other countries around the world or expanded to include different sectors, such as manufacturing, universities, and banking services.

The OIS dimension hampers the ability of tourism companies to deal with uncertain and ambiguous situations in the period before and after the pandemic (2019 Q1 2024). This represents opportunities for future research to explore the relationship between OIS dimensions and various organizational factors, such as organizational sustainability, critical success factors, strategic leadership, and strategic business alignment.

Recently, the development of digital OIS technology has come to the fore in contemporary research, providing an opportunity to integrate it with artificial intelligence and communications technology.

Disclosure statement

The author declares that they have no affiliations with or involvement in any organization or entity with any financial interest in the subject matter or materials discussed in this manuscript.

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