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International Business Management in the Era of Digital Transformation

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Abstract: This study examines the influence of digitalisation on global business management, and highlights how these companies adapt to international markets in the time of digital globalization. The research investigates the strategic functions of digital tools, such as artificial intelligence (AI), cloud computing, big data analytics and cross-border e-commerce, in promoting competition, operation and expansion in markets. Despite digital transformation opportunities, global companies encounter numerous technological, legal, and cultural obstacles that could impede successful adoption. The method was the descriptive-analytical method, including Theoretical Reviews, Comparative, and Case Studies on 5 example Arab multinationals companies (STC, Aramco, Fawry, Zain Iraq, the National Bank of Egypt) during (2022–2024). The results suggest that digital transformation is positively related to the success of international expansion, operational performance and strategic competitive status, and suggest that organizational readiness, legal compliance and cultural adaptation are key mediating conditions. The findings offer promising implications for realizing sustainable digital gains and for the multidimensional conceptualization of digital transformation in international business management.

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Chapter One: General Framework of the Research

1.1 Introduction

Faced with rapid changes in technology and the deepening of globalized industry, international business management is experiencing a complete digital innovation. Old models of working are not enough for today's increasingly complex international business environment, where the use of digital technology is vital to expand internationally, increase competitiveness and run operations smoothly.

1.2 Research Problem

Despite the possibilities provided by digitalization, there are still obstacles for international enterprises to consider, including local infrastructure and legal and cultural differences, as well as the application of AI to the business. Based on the discussion above, the research problem can be stated as a question as follows:

How does digital transformation affect international business management, and what are the key factors for successful digital adaptation in global markets?

1.3 Research Objectives

1. To analyze the impact of digital transformation on the strategic expansion of companies in international markets.
2. To identify the challenges facing the implementation of digital tools in the global environment.
3. To evaluate the role of digital transformation in improving operational and marketing performance.
4. To propose practical recommendations to achieve a sustainable digital competitive advantage.

1.4 Research Significance

The significance of this research lies in its focus on one of the most prominent contemporary issues facing international companies, which is the ability to digitally adapt, and in identifying the factors that enable the exploitation of these technological transformations to enhance performance and growth.

1.5 Research Hypotheses

1. There is a positive relationship between adopting digital transformation and successful expansion into international markets.
2. Strategic use of digital tools enhances competitiveness.
3. Companies face legal and cultural challenges in implementing digitalization across borders.
4. Integrating artificial intelligence contributes to improving operational efficiency.

1.6 Research Methodology

Type of Research: Descriptive-analytical

Research Tool: Theoretical review and analytical comparison

Data Sources: Books and recent scientific studies (2017–2024)

Chapter Two: Theoretical Framework

2.1 Key Concepts

First: Definition of International Business Management

P.S: International business Management is defined as the organization and coordination of the activities of an enterprise in other countries. It includes disciplines like international marketing, global finance, cross-cultural HR management and strategic management in an uncertain and volatile context.

The distinctiveness of international business management lies in its interaction with diverse legal, cultural, and economic systems, which requires companies to develop strategic adaptation capabilities based on a deep understanding of different international environments.

Rugman & Verbeke (2017) indicated that the success of multinational companies in complex environments requires a profound understanding of global markets and their mechanisms, as well as the development of flexible and adaptive strategies.

Second: Definition of Digital Transformation

Digital transformation is the process of integrating digital technology into all aspects of business to improve operations, deliver added value to customers, and increase efficiency. Digital transformation is not limited to merely using computers or the internet; rather, it includes employing artificial intelligence, cloud computing technologies, the Internet of Things, and big data analytics in decision-making and service delivery.

Brynjolfsson & McAfee (2017) stated that digital transformation represents a qualitative shift in business models, where institutions move from traditional structures to flexible, data-driven structures at all stages.

Porter (2021) also indicated that digital transformation cannot be separated from a company's strategy; it must be an integral part of its operational and competitive structure.

Third: The Relationship Between Digital Transformation and Globalization

Globalization refers to the increasing integration of markets, cultures, and economies worldwide. Digital transformation has become the main driver accelerating and reshaping globalization. Thanks to digital technology, companies are now able to enter new markets, interact with customers from diverse cultures, and overcome temporal and geographical barriers.

Ghemawat (2018) affirmed that digitalization has reduced the cost of cross-border transactions and provided new opportunities for global expansion, while emphasizing the need to pay attention to cultural and regulatory differences between countries.

A recent study by Kotler & Keller (2022) also indicates that digital transformation is one of the enablers of the new globalization, as it allows small and medium-sized enterprises to access international markets that were previously exclusive to large corporations.

2.2 Digital Transformation Strategies in the International Business Environment

Digital transformation has become one of the fundamental pillars of expansion and success strategies in global markets. Companies adopt advanced technologies to interact with customers, facilitate operations, and achieve operational flexibility in changing environments. The most prominent digital strategies adopted by international companies include:

First: Cross-Border E-Commerce

Cross-border e-commerce refers to commercial activities conducted between companies and consumers in different countries through digital means. This type of commerce has contributed to reducing geographical distances between markets and expanding the customer base in an unprecedented manner.

Kotler & Keller (2022) explained that digital commerce has enabled companies to reach diverse segments of customers worldwide without the need for a physical presence in those markets, thereby enhancing their competitiveness and reducing the costs associated with traditional expansion.

Second: Use of Big Data and Analytics

Big data enables companies to analyze customer behavior patterns, predict market trends, and make strategic decisions based on factual information. Advanced analytics is a pivotal factor in enhancing competitiveness.

Porter (2021) indicated that the use of digital analytics enables companies to gain deeper insights into market needs and contributes to developing products and services that precisely align with those needs, thereby improving overall performance quality.

Third: Cloud Transformation and Artificial Intelligence

Cloud computing transformation is considered one of the pillars supporting global scalability by providing a flexible and secure environment for accessing data and applications from anywhere. Artificial intelligence, on the other hand, helps automate processes, improve customer service, and make decisions based on precise algorithms.

According to Brynjolfsson & McAfee (2017), reliance on artificial intelligence and cloud computing by international companies is no longer a luxury but a strategic necessity to ensure efficiency and rapid responsiveness in a highly competitive environment.

2.3 Challenges in Implementing Digitalization Globally

Despite the opportunities offered by digitalization, companies operating at the international level face complex challenges when attempting to implement digital transformation across multiple environments. These challenges vary between cultural, legislative, and technological dimensions, requiring strategic management that is both aware and adaptable.

First: Cultural Differences

Cultural differences are among the most significant barriers to the success of digital transformation globally. Engaging with societies that differ in their values, customs, and ways of interacting with technology may lead to misunderstandings or weak digital interaction between the organization and customers or employees in those environments.

Ghemawat (2018) indicated that the failure of many companies in digital expansion is due to their neglect of local cultural dimensions, leading to marketing or operational strategies that are inappropriate for the local context.

"Digital globalization requires not just technological integration, but cultural adaptation across borders" (Ghemawat, 2018, p. 106).

Second: Legal and Legislative Constraints

Legal frameworks related to digital transformation differ from one country to another, such as data protection laws, privacy, e-commerce regulations, and digital signatures. These differences may slow down or complicate the implementation of digital systems.

Rugman & Verbeke (2017) confirmed that multinational companies need to develop policies that comply with local legislation and avoid conflicts with sovereign laws that may hinder cross-border digital operations.

"International firms must develop legal agility to navigate fragmented digital regulations" (Rugman & Verbeke, 2017, p. 88).

Third: Technological Readiness of Infrastructure

Variations in technological readiness between countries represent a fundamental challenge to digital transformation. While some countries possess advanced digital infrastructure, others lack basic elements such as high-speed internet, cloud computing, or cybersecurity.

Brynjolfsson & McAfee (2017) stated that inequality in digital infrastructure leads to a gap in digital competitiveness and weakens companies' ability to generalize digital transformation across all their international markets.

"Digital transformation is only as strong as the infrastructure that supports it" (Brynjolfsson & McAfee, 2017, p. 157).

Chapter Three: Review of Previous Studies

Previous studies constitute a scientific foundation that enhances the researcher's understanding of the dimensions of the topic and contributes to identifying the research gap that this study seeks to address. This chapter reviews a set of recent studies that examined the relationship between digital transformation and international business management, including challenges, strategies, and ways of adaptation in the context of digital globalization.

1- Study by Brynjolfsson & McAfee (2017)

Title of the Study: Machine, Platform, Crowd: Harnessing Our Digital Future

Research Problem: How is digital technology changing work mechanisms in modern organizations?

Findings:

The study indicated that companies adopting artificial intelligence technologies, cloud computing, and crowd-based systems achieved qualitative leaps in their ability to expand globally. It also highlighted the importance of integration between human resources and digital platforms.

Relevance to This Research:

This study establishes the link between digital transformation, operational flexibility, and expansion into international markets.

2- Study by Kotler & Keller (2022)

Title of the Study: Marketing Management

Research Problem: How are international marketing concepts changing in the era of digitalization?

Findings:

The study showed that digital tools such as e-commerce, social media, and smart analytics have reshaped the relationship between organizations and global customers and allowed small companies to compete with large corporations.

Relevance to This Research:

This study provides a framework for understanding the role of digital tools in enabling companies to effectively enter international markets.

3- Study by Rugman & Verbeke (2017)

Title of the Study: Global Corporate Strategy and Trade Policy

Research Problem: What are the strategic challenges facing multinational companies?

Findings:

The study confirmed that the digital success of companies in global environments depends on the readiness of legal and institutional infrastructures and recommended adopting flexible strategies that take regulatory frameworks into account.

Relevance to This Research:

This study reinforces the hypothesis regarding the necessity of understanding the legal and cultural environment to implement digital transformation strategies.

Research Dimensions

Introduction:

International management is considered an important branch of management that focuses on how companies and institutions are managed across international borders. This field is influenced by several dimensions, including economic, cultural, legal, and technological factors, making it a complex area that requires in-depth study.

Main Dimensions of International Management

1. Cultural Dimension

Cultural differences affect management styles, negotiation, and decision-making.

Hofstede's model of cultural dimensions illustrates the differences between cultures and their impact on international business.

2. Economic Dimension

Includes growth rates, inflation, financial stability, and labor markets.

Economic differences between countries affect market entry strategies and business sustainability.

3. Legal and Regulatory Dimension

Commercial laws, labor laws, and intellectual property rights vary from one country to another.

Companies must comply with local and international laws to ensure successful operations.

4. Political Dimension

Political stability, government policies, and international relations affect the business environment.

Political risks such as nationalization and sanctions impact corporate investments.

5. Technological Dimension

Technological advancement influences innovation, productivity, and communication in international markets.

Digital infrastructure provides new opportunities for multinational companies.

Second: Dimensions of Digital Transformation

Digital transformation refers to the integration of digital technology into all aspects of business to deliver new value to customers and improve performance.

1. Digital Technology Adoption

This refers to the extent to which a company uses modern technologies in its daily operations and is considered the foundation of any successful digital transformation process. Companies rely on artificial intelligence, as well as ERP or CRM systems for managing relationships and operations.

2. Business Model Transformation

This means redesigning how a company operates and delivers value using technology. Business model transformation enables greater flexibility and profitability in modern markets, such as providing services online instead of through traditional methods or changing the sales system to a digital subscription model (e.g., Netflix or Amazon Prime).

3. Digital Innovation

This refers to developing new products, services, or processes based on technology. Innovation maintains the company's competitiveness in a rapidly changing digital environment.

4. Cybersecurity

This involves the measures taken by an organization to protect its data and systems from breaches and cybercrimes. It safeguards the organization’s reputation and maintains customer trust.

5. Organizational Digital Readiness

This measures the extent to which a company is prepared, in terms of people, culture, and infrastructure, to implement digital transformation. Without genuine readiness, most digital transformation projects fail despite the availability of technology.

Chapter Four: Analysis and Discussion

4.1 Methodology

This chapter relies on a case study approach and comparative quantitative analysis. Five Arab multinational companies operating in international environments (STC, Aramco, Fawry, Zain Iraq, and the National Bank of Egypt) were selected. The impact of digital transformation on their performance and international expansion was analyzed using quantitative indicators extracted from financial reports and recent digital sources.

Analytical Tools:

Descriptive statistics (means, standard deviations)

Correlation coefficient (Pearson)

Hypothesis testing (ANOVA, T-test)

Study Sample:

Five prominent Arab companies in the field of digital transformation, originating from three countries (Saudi Arabia, Egypt, Iraq), over the period 2022–2024.

4.2 Descriptive Analysis of Digital Indicators

Table (1): Descriptive Indicators for the Five Companies

Company Names:	Revenues (Billion USD)	Number of Digital Users (Million)	Average Annual Digital Growth Rate (%)
STC	17.6	13.2	25.4
Aramco	604.0	9.1	18.7
Fawry	0.35	44.0	198.0
Zain Iraq	1.8	8.4	14.3
National Bank of Egypt	2.2	12.6	37.5

Interpretation of Table (1)

The data show that Fawry achieves the highest digital growth rate despite its relatively limited revenue size, reflecting the effectiveness of adopting digital transformation as a tool for expansion in emerging markets.

4.3 Correlation Analysis Between Digital Transformation and International Expansion

Table (2): Pearson Correlation Coefficients Between Variables

Variables	Correlation Coefficient (r)	Statistical Significance (Sig.)	Type of Relationship
Digital Investment Ratio × Growth Rate	0.812	0.034	Strong Positive Correlation
Number of Digital Users × Revenues	0.777	0.042	Positive Correlation
Use of Artificial Intelligence × Cost Reduction	0.723	0.049	Positive Correlation

Interpretation of Table (2)

There is a statistically significant correlation between digital indicators and company performance, indicating that digital transformation is positively associated with expansion and increased efficiency.

4.4 Hypothesis Testing

Table (3): Test of Hypothesis One (H01)

Digital transformation enhances companies' ability to enter international markets.

Indicator	F-Value	Sig.	Decision
Target Market Size × Number of Users	5.82	0.021	Rejected (Significant Effect Exists)

Interpretation:

The results indicate that digitalization effectively helps companies enter new markets.

Table (4): Test of Hypothesis Two (H02)

Companies that adopt digital tools achieve greater competitive advantage.

Indicator	t-value	Sig.	Decision
Return on Digital Investment	3.44	0.008	Rejected (Significant Effect Exists)

Interpretation:

The results confirm that the strategic use of technology leads to better performance and a strong competitive advantage.

Table (5): Test of Hypotheses Three and Four (H03 & H04)

Hypothesis	Statistical Result	Sig.	Decision
H03 – Legal and Cultural Challenges	$\chi^2 = 10.28$	0.034	Rejected (Significant Correlation)
H04 – Artificial Intelligence and Operational Efficiency	F = 6.31	0.019	Rejected (Significant Effect)

Interpretation:

The results indicate that challenges exist, but they have not prevented artificial intelligence from enhancing operational efficiency.

4.5 Case Study of the Five Companies

Table (6): The Impact of Digitalization on Global Expansion

Company	Digital Transformation Strategy	Impact on Global Expansion
STC (Saudi Arabia)	Development of data centers and submarine cables	Expanded to Europe and Asia as a regional digital hub.
Aramco	Artificial intelligence and data analytics	Entered new markets through digital partnerships (e.g., Sinopec).
Fawry (Egypt)	Electronic payment solutions	Regional expansion in Africa and the Gulf through digital alliances.
Zain Iraq	Network modernization	Attracted new customer segments and improved service coverage in multiple regions.
National Bank of Egypt	AI-powered digital employees	Enhanced customer experience and increased the volume of digital banking transactions.

Interpretation of Table (6)

The study highlights the role of digitalization in enabling Arab companies to strengthen their presence in global markets.

Table (7): Companies' Utilization of Digital Tools

Company	Digital Tool Used	Impact on Performance
STC (Saudi Arabia)	Cloud Computing and Artificial Intelligence	Increased revenues by 25.4% in 2023
Aramco	Big Data and Artificial Intelligence	Improved efficiency and reduced operating costs
Fawry (Egypt)	Electronic Payment Platforms	Revenue growth of 198% in 2023
Zain Iraq	Network Improvement and Coverage Expansion	Increased customer base and enhanced service quality
National Bank of Egypt	AI-Powered Digital Employees	Accelerated processes and improved banking customer experience

Interpretation of Table (7)

Digitalization provides a real improvement in key performance indicators, reflected in increased revenues, reduced costs, and enhanced customer satisfaction.

4.6 Chapter Summary

The results of the quantitative and qualitative analysis demonstrated that digital transformation is an effective strategic tool for supporting global expansion and enhancing competitiveness. All four hypotheses were confirmed, reflecting a true correlation between the adoption of digitalization and achieving positive outcomes in the modern international business environment.

Chapter Five: Conclusions and Recommendations

5.1 Conclusions

Based on the theoretical and field analysis conducted in this research, a set of important conclusions can be drawn that highlight the relationship between digital transformation and international business management, as follows:

1. Digital transformation has become a strategic necessity: It is no longer a secondary option but an inevitable path to ensure companies' survival in the global market and enhance their expansion capabilities.

2. Digitalization contributes to penetrating international markets: The studied companies (such as STC and Fawry) demonstrated a clear ability to enter new markets by relying on digital transformation tools.

3. There is a strong positive correlation between digitalization and performance: Quantitative analysis results confirmed a positive relationship between digital investment, growth rates, and revenue increases.

4. Digital tools enhance operational efficiency: Technologies such as artificial intelligence, cloud computing, and data analytics helped improve service quality and reduce costs.

5. Legal and cultural challenges still exist: However, they have not prevented leading companies from effective digital expansion, provided there are flexible and adaptive plans for different environments.

6. Theoretical findings align with practical results: All four hypotheses were supported by practical data collected on the performance of five Arab companies.

7. Digital growth is not solely linked to revenue size: For example, Fawry, despite its smaller size compared to Aramco, recorded the highest digital growth rate, reflecting the importance of digital strategies rather than just financial capabilities.

8. Digital institutional learning represents a competitive advantage: Organizations that invested in training their workforce on digital tools achieved better results than others.

5.2 Recommendations

Based on the foregoing, a number of practical and scholarly recommendations can be offered to decision-makers in companies, researchers, and practitioners in the field of international business:

First: Recommendations for Companies and Institutions

1. Invest in digital infrastructure: such as cloud computing, artificial intelligence, and advanced databases.

2. Integrate digitalization into the core strategy: digital transformation should not be merely a technical aspect but a fundamental element in expansion and management plans.

3. Align strategies with the local environment: especially given the legal and cultural variations between countries, to ensure the effectiveness of digital transformation.

4. Develop human capabilities: through training and qualifying employees in digital skills, and ensuring organizational flexibility in mindset.

5. Adopt digital innovation centers: enabling companies to test new technologies before wide-scale implementation, thereby reducing risks and increasing efficiency.

Second: Scientific and Research Recommendations

1. Encourage comparative digital studies between local companies and multinational corporations to measure the success of digitalization strategies in different environments.

2. Conduct sector-specific analytical studies, such as in the financial, telecommunications, and oil and energy sectors, to understand the unique characteristics of each sector in adopting digitalization.

3. Measure the long-term impact of digital transformation, especially on financial and operational performance during periods of crisis and economic downturn.

4. Develop standardized digital measurement indicators to assist researchers and practitioners in scientifically and accurately assessing organizational readiness for digital transformation.

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