

Comparative analysis of e-commerce infrastructure: a study of Morocco and the USA

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Abstract

Purpose – This study aims to compare the e-commerce infrastructure between Morocco and the USA, focusing on internet connectivity, mobile technology, payment systems and logistics.

Design/methodology/approach – The research utilizes secondary data and conducts a SWOT analysis to identify the strengths, weaknesses, opportunities and threats related to e-commerce in both countries.

Findings – The findings reveal that the USA has a highly advanced e-commerce infrastructure, characterized by high internet penetration, fast broadband speeds, extensive use of digital payments and efficient logistics networks. In contrast, Morocco, while showing notable progress in mobile internet adoption and growing consumer interest in e-commerce, continues to face challenges in payment system development, last-mile delivery logistics and consistent rural internet connectivity. The study concludes that improving digital payment systems, strengthening logistics infrastructure, and capitalizing on high mobile penetration are essential for advancing Morocco's e-commerce sector. In the USA, further growth opportunities exist in reducing regional disparities in connectivity and logistics coverage and in integrating advanced technologies to optimize operations and security.

Research limitations/implications – This study has several limitations that should be considered. Firstly, the data used in the analysis are secondary, which means they were collected by other researchers and organizations. This can sometimes lead to inconsistencies or biases in the data. Additionally, the availability of data for Morocco was more limited compared to the USA, which might affect the depth of the analysis for Morocco. Furthermore, the study primarily focuses on technological infrastructure and does not deeply explore other factors like cultural differences or government policies that might also impact e-commerce development. Lastly, the rapidly changing nature of technology means that some of the data could quickly become outdated.

Practical implications – In the USA, improving Internet access and logistics in rural areas, along with using technologies like artificial intelligence and big data, can make e-commerce more efficient and customer-focused. In Morocco, encouraging digital payments, strengthening delivery networks, especially outside major cities and tapping into the country's strong mobile usage can help drive growth. These steps offer practical guidance for both policymakers and businesses. By building on their strengths and addressing key challenges, each country can create a more reliable, inclusive and competitive e-commerce environment.

Social implications – This research underscores the potential for better e-commerce infrastructure to increase accessibility, bridging the digital divide in emerging markets like Morocco. By empowering small businesses and entrepreneurs to participate more fully in the digital economy, it promotes inclusive growth. Improved e-commerce capabilities can drive job creation, provide better services and offer consumers more choices.

Originality/value – While existing comparative studies have examined e-commerce infrastructure across groups of developed and emerging markets, they rarely provide bilateral analyses. No study to date has directly compared Morocco and the USA, despite their contrasting infrastructural, regulatory and technological landscapes. This study fills that gap by analyzing mobile adoption, payment systems, logistics networks and regulatory environments in both countries, offering novel, context-specific insights that broader regional comparisons tend to obscure.

Keywords E-commerce infrastructure, Internet connectivity, Mobile technology, Payment systems, Logistics networks, Comparative analysis, SWOT analysis, Digital payments, Technological adoption, Rural connectivity

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1. Introduction

The global e-commerce landscape has witnessed unprecedented growth over the past decade, driven by rapid technological innovation, widespread internet accessibility, and evolving consumer preferences. E-commerce is no longer a niche market segment, it has become an essential part of everyday economic activity, influencing sectors as diverse as retail, healthcare, education, and financial services (Goyal, Goyal, & Chauhan, 2019).

A central factor in this development is the quality of a country's technological infrastructure, which directly affects internet access, mobile technology usage, digital payment systems, and delivery logistics. The USA, with its advanced digital ecosystem, serves as a model of what a fully developed e-commerce infrastructure can achieve. In contrast, Morocco represents a growing but challenged market, where businesses and consumers alike face practical issues such as inconsistent internet connectivity, limited adoption of secure digital payment solutions, and inefficiencies in last-mile delivery services (Youssef & Dahmani, 2023). These infrastructure limitations restrict both small enterprises and large firms from fully capitalizing on the benefits of e-commerce, especially outside major urban areas.

While most global studies focus on high-income markets, few compare the infrastructure realities of emerging economies like Morocco with developed leaders like the USA, leaving a gap in practical insights for businesses, investors, and development agencies. This study is motivated by the need to bridge that gap, examining not only what infrastructural components drive e-commerce success but also how these infrastructures differ in practical, operational terms across contrasting economic and technological environments. The study is driven by two primary research questions:

- (1) What are the key components of technological infrastructure that most significantly affect e-commerce success in Morocco versus the USA?
- (2) How does the technological infrastructure in Morocco compare to that in the USA in supporting e-commerce development?

1.1 Objectives

This study aims to:

- (1) Identify Key Components: Examine crucial parts of the infrastructure, such as internet access, mobile technology adoption, payment options, and logistics networks, and their impact on e-commerce in both countries.
- (2) Find Gaps and Opportunities: Identify infrastructure gaps in both countries and explore opportunities for improvement to bolster e-commerce growth.
- (3) Provide Recommendations: Suggest specific ways to enhance the infrastructure in both countries, tailored to their unique strengths and weaknesses, to support e-commerce development.

The study aims to provide a comprehensive understanding of the technological infrastructure in Morocco and the USA and its impact on e-commerce development. This analysis will help policymakers, businesses, and entrepreneurs in both countries understand what works, what needs improvement, and how to build stronger and more inclusive e-commerce environments.

1.2 Importance of the Study

The comparison between Morocco and the USA is particularly compelling due to the stark contrast in their economic and technological landscapes. The USA, with its mature and highly advanced e-commerce infrastructure, provides a benchmark for what a fully developed market can achieve. In contrast, Morocco represents a dynamic and rapidly developing market where

significant strides have been made in internet and mobile technology adoption, yet challenges remain in areas such as digital payments and logistics.

Understanding these differences is crucial for several reasons:

- (1) **Policy Development:** Policymakers in both countries can benefit from understanding the specific infrastructural elements that drive e-commerce success. For Morocco, this might mean prioritizing investments in rural internet connectivity and digital payment systems. For the USA, the focus could be on reducing regional disparities and enhancing logistics efficiency.
- (2) **Business Strategy:** Businesses looking to expand into or optimize their operations in either market can use these insights to tailor their strategies. For instance, e-commerce companies in Morocco can leverage mobile technology to reach a wider audience, while those in the USA can focus on integrating advanced technologies like AI and big data analytics.

2. Literature review

2.1 Introduction to e-commerce and technological infrastructure

(1) Defining E-commerce and Its Significance in the Global Market

E-commerce, or electronic commerce, refers to the buying and selling of goods and services over the internet. It encompasses a wide range of online business activities for products and services, including retail shopping, banking, investing, and rentals, among others. E-commerce has revolutionized traditional business models by enabling businesses to reach a global audience, reduce operational costs, and enhance customer convenience (Laudon & Traver, 2018).

The significance of e-commerce in the global market cannot be overstated. According to the United Nations Conference on Trade and Development (UNCTAD), global e-commerce sales reached \$26.7 trillion in 2020, reflecting a significant increase in online retail sales driven by the COVID-19 pandemic (UNCTAD, 2021). This surge highlights the growing importance of e-commerce in driving economic growth, creating jobs, and fostering innovation across various sectors. Furthermore, e-commerce provides opportunities for small and medium-sized enterprises (SMEs) to enter the global market, thereby promoting inclusive economic development (OECD, 2019).

2.2 The role of technological infrastructure in supporting e-commerce

Technological infrastructure is essential for e-commerce, enabling secure online transactions and efficient platform operations. Key elements include internet connectivity, mobile technology, payment gateways, logistics, and cybersecurity. Advances like 5G, AI-powered fraud detection, blockchain payments, and automated logistics have improved speed, security, and delivery efficiency. Widespread use of multi-factor authentication and tokenization further protects consumer data, supporting the growing demands of online retail (clearlypayments, 2025).

(1) Internet Connectivity

Reliable and high-speed internet access is fundamental for the success of e-commerce. It allows businesses to operate online stores, process transactions, and communicate with customers. High internet penetration rates are associated with higher e-commerce adoption and growth. For instance, countries with advanced internet infrastructure, such as the USA, have seen substantial e-commerce development due to widespread internet access (ITU, 2020).

(2) Mobile Technology

The proliferation of smartphones and mobile internet has significantly impacted e-commerce. Mobile technology enables consumers to shop online anytime and anywhere, increasing the convenience and accessibility of e-commerce. Mobile commerce (m-commerce) has become a critical component of the e-commerce ecosystem, with many businesses developing mobile-friendly websites and apps to cater to this growing market segment (Statista, 2021a, b, c).

(3) Payment Gateways

Secure and efficient payment processing systems remain essential for global e-commerce. According to GlobalData, payment cards accounted for over 50% of global e-commerce transactions in 2024, while digital wallets such as Apple Pay, PayPal, and Google Pay continued to grow rapidly, comprising nearly 30% of online payments worldwide. This shift is driven by consumer demand for faster, more secure transactions. Payment gateways play a critical role by encrypting sensitive data and ensuring secure transmission, boosting consumer confidence. As mobile commerce expands, the integration of flexible, secure payment options is expected to further accelerate e-commerce adoption into 2025 (GlobalData, The Paypers).

(4) Logistics Networks

Effective logistics and delivery networks are essential for fulfilling online orders and ensuring timely delivery. Advanced logistics infrastructure, including warehouses, distribution centers, and transportation networks, enables businesses to manage inventory efficiently and meet customer expectations for fast and reliable delivery. Countries with well-developed logistics networks, like the USA, can support higher volumes of e-commerce transactions (Harrington, 2020).

(5) Cybersecurity Measures

Protecting online transactions and customer data is paramount in e-commerce. Robust cybersecurity measures, such as encryption, authentication, and fraud detection systems, help safeguard against cyber threats and build consumer trust. As cyberattacks become increasingly sophisticated, continuous investment in cybersecurity is necessary to ensure the integrity and security of e-commerce platforms (Symantec, 2020).

In summary, technological infrastructure plays a pivotal role in supporting e-commerce by enabling online transactions, enhancing customer convenience, and ensuring the security and efficiency of e-commerce operations. The comparative analysis of e-commerce infrastructure between Morocco and the USA will shed light on the specific components that drive e-commerce success in different economic contexts, highlighting both challenges and opportunities for growth and development.

2.3 Overview of e-commerce infrastructure in developed markets

- (1) Summarizing Key Findings from Studies on E-commerce Infrastructure in the USA and Other Developed Countries
- (2) USA: The USA is a global leader in e-commerce, supported by its high internet penetration, extensive mobile usage, and advanced technological infrastructure. According to the U.S. Census Bureau, e-commerce sales in the USA reached \$791.7 billion in 2020, representing a 32.4% increase from 2019 (U.S. Census Bureau, 2021). This growth is attributed to the widespread availability of high-speed internet, a mature logistics network, and diverse payment options.

Studies highlight that the USA benefits from significant investments in cloud computing and data centers, enhancing the scalability and reliability of e-commerce platforms (Laudon & Traver, 2018).

- (3) *UK*: The UK has a well-developed e-commerce infrastructure, characterized by a high level of internet usage and a strong logistics sector. As of 2024, UK online retail sales reached a record £127.4 billion, marking a 3.4% increase from £123.3 billion in 2023. This growth follows a 9.8% decline in 2022, indicating a robust recovery post-pandemic. Online shopping now comprises approximately 30% of total UK retail sales, up from 21.6% in 2019 (Retail Gazette, 2025)

Key strengths include efficient last-mile delivery services, extensive use of data analytics for personalized marketing, and a secure payment ecosystem (Deloitte, 2020).

- (4) *Germany*: Germany's e-commerce market is bolstered by its robust logistics infrastructure, high consumer trust in online shopping, and widespread use of secure payment methods. German e-commerce sales reached €80.6 billion in 2024, marking a 1.1% increase from the previous year. This growth is attributed to higher consumer savings and improved confidence, despite ongoing economic uncertainties (BEVH, 2021). Germany also excels in cross-border e-commerce, facilitated by the European Union's integrated market (Statista, 2021a, b, c).
- (5) *Japan*: Japan's e-commerce sector is driven by high internet penetration, widespread mobile commerce, and a strong culture of technological innovation.

Japan's e-commerce market grew to \$191.9 billion (JPY 26.9 trillion) in 2024, an 8.4% increase from the previous year. In 2025, it is projected to grow by 7.7%, reaching \$206.8 billion (JPY 29 trillion) (Retail Asia, 2025).

Japan's strengths include advanced logistics systems, high consumer trust in e-commerce, and innovative payment solutions like mobile wallets and contactless payments (Nikkei Asian Review, 2020).

2.4 Highlighting common strengths and best practices

- (1) High Internet Penetration

Developed markets benefit from high internet penetration rates, which are critical for e-commerce adoption. Reliable, high-speed internet access allows consumers to shop online seamlessly and enables businesses to operate efficient online platforms (ITU, 2020).

- (2) Advanced Logistics Networks

Efficient logistics and supply chain management are hallmarks of e-commerce success in developed markets. These countries have well-established infrastructure for warehousing, transportation, and last-mile delivery, ensuring timely and reliable order fulfillment (Harrington, 2020).

- (3) Secure and Diverse Payment Systems

A secure and diverse range of payment options enhances consumer trust and convenience. Developed markets offer multiple payment methods, including credit/debit cards, digital wallets, and mobile payments, supported by robust cybersecurity measures to protect transactions (Mulpuru, 2019).

- (4) Technological Innovation

Continuous technological innovation is a key strength. Developed markets invest heavily in emerging technologies such as artificial intelligence, machine learning, and big data analytics

to enhance customer experience, optimize operations, and drive personalized marketing (Turban, King, Lee, Liang, & Turban, 2020).

(5) Regulatory Support

Supportive regulatory environments facilitate e-commerce growth. Developed markets often have clear regulations regarding consumer protection, data privacy, and online transactions, which help build consumer confidence and encourage e-commerce participation (OECD, 2019).

2.5 Overview of e-commerce infrastructure in emerging markets

Summarizing key findings from studies on E-commerce infrastructure in Morocco and other emerging markets given below:

(1) Morocco

Morocco's e-commerce market has been experiencing steady growth, propelled by increasing internet penetration and mobile usage. The Moroccan Ministry of Industry, Trade, and Green and Digital Economy reported a 46% growth in e-commerce transactions in 2020 (Ministry of Industry, Trade, and Green and Digital Economy, 2021). The National Telecommunications Regulatory Agency (ANRT) indicates that internet penetration in Morocco reached 74% in 2020, with substantial growth in mobile internet subscriptions (ANRT, 2021). However, challenges such as limited digital payment options and logistical constraints remain significant barriers to maximizing e-commerce potential.

(2) India

India stands out as one of the fastest-growing e-commerce markets globally. The market is projected to reach \$200 billion by 2026, driven by widespread smartphone adoption and affordable data plans (IBEF, 2021). Government initiatives like Digital India have significantly boosted e-commerce by enhancing digital infrastructure and payment systems. Despite this growth, challenges such as inadequate logistics infrastructure, regulatory hurdles, and a pronounced digital divide between urban and rural areas persist (KPMG, 2020).

(3) Brazil

Brazil's e-commerce sector continued its strong growth in 2024, with online retail sales reaching approximately \$45 billion, reflecting a steady increase fueled by widespread internet access and a growing middle class. Despite this progress, challenges such as high taxation, a complex regulatory framework, and logistical difficulties—especially in rural regions—remain significant barriers. However, advancements in digital payment technologies and improvements in last-mile delivery services are playing a crucial role in addressing these obstacles and supporting further expansion (Ebit/Nielsen, 2024; PwC, 2024).

(4) Nigeria

Nigeria is emerging as a leading e-commerce market in Africa, driven by a young, tech-savvy population and increasing internet penetration. E-commerce revenue in Nigeria is projected to reach \$6 billion by 2024 (Statista, 2021a, b, c). However, challenges such as inadequate infrastructure, unreliable internet connectivity, and limited access to digital payment options hinder e-commerce growth. Innovations like mobile money services and investments in logistics infrastructure are addressing these barriers (GSMA, 2020).

2.6 Highlighting common challenges and innovative solutions

(1) Challenges

- *Internet Connectivity:* Although internet penetration is rising, many emerging markets struggle with reliable and high-speed internet access, particularly in rural

areas. This limitation restricts the reach and efficiency of e-commerce platforms (World Bank, 2020).

- *Payment Systems:* A significant portion of the population in emerging markets remains unbanked, limiting access to secure and diverse payment options. This presents a substantial barrier to e-commerce adoption (Demirgüç-Kunt, Klapper, Singer, Ansar, & Hess, 2018).
- *Logistics and Infrastructure:* Poor logistics infrastructure, including inadequate road networks, shortage of skilled labor, bureaucratic hurdles and inefficient delivery systems, hampers timely delivery of goods and potentially impacts logistics costs, particularly in rural and remote areas where the infrastructure gap is pronounced (McKinsey & Company, 2020).
- *Regulatory and Legal Frameworks:* Complex and inconsistent regulatory environments can create barriers to e-commerce growth. High import tariffs, unclear regulations, and lack of consumer protection laws further complicate the landscape (UNCTAD, 2019).

(2) Innovative Solutions

- *Mobile Technology:* Mobile technology continues to transform e-commerce in emerging markets by expanding access to online shopping, digital payments, and communication. In 2024, mobile internet penetration in Sub-Saharan Africa reached 48%, boosting the use of mobile money services like M-Pesa, which now serves over 60 million users, significantly advancing financial inclusion and e-commerce participation (GSMA, 2024).
- *Digital Payment Solutions:* Innovative digital payment solutions, including mobile wallets, QR code payments, and fintech services, are addressing payment system challenges. These solutions enhance financial inclusion and facilitate secure transactions (Finextra, 2020).
- *Logistics Innovations:* To address logistical challenges, emerging markets are investing in last-mile delivery solutions, drone delivery services, and smart logistics platforms. These innovations aim to improve delivery efficiency and expand reach to underserved areas (DHL, 2021).
- *Public-Private Partnerships:* Partnerships: Strategic collaborations between governments and private companies remain vital for building e-commerce infrastructure. For example, India's Digital India 2.0 initiative launched in 2024 focuses on enhancing digital literacy and expanding broadband access, while Morocco continues to invest in its National Digital Strategy to improve regulatory frameworks and digital infrastructure, driving e-commerce growth (Government of India, 2024; Ministry of Industry, Trade, and Green and Digital Economy, & Morocco, 2024).

2.7 Reviewing existing comparative studies on e-commerce infrastructure between developed and emerging markets

Comparative studies on e-commerce infrastructure between developed and emerging markets provide valuable insights into the disparities and commonalities that shape the digital economy in different regions. These studies often focus on various components such as internet penetration, payment systems, logistics infrastructure, and regulatory environments to understand the factors driving e-commerce success or hindrance.

(1) Internet Penetration and Accessibility

A comprehensive study by the International Telecommunication Union (ITU, 2020) compared internet penetration rates across several developed and emerging markets. The findings highlight that developed countries like the USA have near-universal internet access, high-speed broadband, and widespread mobile connectivity. In contrast, many emerging markets struggle with lower penetration rates and slower internet speeds, primarily due to infrastructural and economic constraints.

(2) Payment Systems and Financial Inclusion

Research by Demirgüç-Kunt *et al.* (2018) in the Global Findex Database emphasizes the disparity in financial inclusion between developed and emerging markets. Developed countries exhibit a higher adoption of diverse and secure payment methods, which facilitate seamless online transactions. In emerging markets, the lack of access to traditional banking services has spurred innovative solutions like mobile money. However, these solutions often lack the robustness and security of systems in developed countries.

(3) Logistics and Supply Chain Management

McKinsey & Company (2020) conducted a comparative analysis of e-commerce logistics in developed and emerging markets. The study found that developed markets benefit from sophisticated logistics networks, efficient supply chain management, and advanced last-mile delivery solutions. In contrast, emerging markets face significant challenges, including poor road infrastructure, unreliable delivery services, and higher logistical costs.

(4) Regulatory Environments:

UNCTAD (2019) examined the regulatory frameworks governing e-commerce in various countries. The study revealed that developed markets typically have well-established regulations that protect consumers and facilitate business operations. Emerging markets, however, often lack comprehensive e-commerce regulations, which can lead to uncertainties and hinder market growth.

These comparative studies underscore the multifaceted nature of e-commerce infrastructure and the varying levels of development across regions. They also highlight the importance of tailored strategies to address specific infrastructural gaps in different markets.

2.8 Identifying gaps in the literature where Morocco and the USA have not been directly compared

While there is a wealth of comparative studies on e-commerce infrastructure between developed and emerging markets, there is a noticeable gap in direct comparisons between Morocco and the USA. Most existing research tends to focus on broader regional comparisons or contrasts between multiple emerging and developed markets without delving into specific bilateral analyses. This gap presents an opportunity for targeted research that can offer deeper insights into the unique challenges and opportunities within these two countries.

(1) Specific Bilateral Comparisons:

Existing studies often generalize findings across multiple countries within the developed or emerging market categories, without addressing the unique contexts of Morocco and the USA. A direct comparison could uncover specific infrastructural, cultural, and regulatory factors influencing e-commerce differently in these two countries.

(2) Focus on Mobile Technology Adoption

While many studies highlight the role of mobile technology in emerging markets broadly, there is limited research on how mobile adoption in Morocco specifically compares with that in the

USA. Given Morocco's rapid mobile technology uptake as a compensatory mechanism for other infrastructural deficiencies, this area warrants detailed examination.

(3) Payment Systems and Digital Financial Inclusion

There is a lack of comparative studies focusing on the differences in payment systems between Morocco and the USA. Such a comparison could reveal how innovative solutions like mobile money in Morocco contrast with the established financial systems in the USA, and what lessons can be learned to improve financial inclusion.

(4) Logistics and Delivery Networks

Comparative research often overlooks the specific logistical challenges and innovations in Morocco. Directly comparing Morocco's logistics infrastructure with that of the USA could provide insights into effective strategies for improving delivery efficiency and overcoming infrastructural barriers in emerging markets.

(5) Regulatory Frameworks

While regulatory comparisons exist, they frequently generalize the challenges in emerging markets. A focused study on Morocco and the USA would provide a clearer understanding of how differing regulatory environments impact e-commerce development and what best practices could be adopted.

In conclusion, while comparative studies on e-commerce infrastructure between developed and emerging markets provide a broad understanding, there is a significant gap in research specifically comparing Morocco and the USA. Addressing this gap could yield valuable insights and practical recommendations for enhancing e-commerce infrastructure tailored to the unique contexts of these two countries.

3. Methodology

The methodology for this study involves a detailed comparative analysis of the technological infrastructure in Morocco and the USA, with a specific focus on its impact on e-commerce development. The research exclusively uses secondary data and employs a SWOT analysis framework to identify and evaluate the strengths, weaknesses, opportunities, and threats associated with e-commerce infrastructure in both countries.

3.1 Data collection

(1) Secondary Data

The data for this study is gathered from a variety of reputable sources, including peer-reviewed articles, industry reports, and government publications. Specifically, the sources include:

- (1) *Industry Reports*: Data from Statista, eMarketer, and PwC, which provide insights into technological trends, e-commerce growth metrics, and infrastructure details.
- (2) *Government Reports*: Information from the World Bank, World Trade Organization (WTO), United Nations Conference on Trade and Development (UNCTAD), Moroccan Haut Commissariat au Plan, and the US Census Bureau, offering comprehensive statistics and analyses of technological infrastructure and e-commerce metrics.
- (3) *National and Regulatory Agencies*: Reports from the National Telecommunications Regulatory Agency (ANRT) in Morocco, and various regulatory bodies in the USA, such as the Federal Communications Commission (FCC) and the Federal Reserve.

- (4) *Financial Institutions*: Publications from Bank Al-Maghrib and other relevant financial institutions providing data on payment infrastructures and financial inclusion.
- (5) *Academic Literature*: Peer-reviewed journal articles and academic papers that offer theoretical insights and empirical data on e-commerce infrastructure and its impact on economic development.

These sources ensure a broad and reliable dataset that captures the current state and trends of e-commerce infrastructure in both Morocco and the USA.

3.2 Data analysis

(1) Comparative Framework

The SWOT analysis framework is used to systematically evaluate the e-commerce infrastructure in both countries. This involves:

- (1) *Strengths*: Identifying key components where each country excels, such as internet connectivity, mobile technology penetration, payment systems, and logistics networks.
- (2) *Weaknesses*: Highlighting areas that hinder e-commerce growth, such as limited payment options or logistical challenges.
- (3) *Opportunities*: Exploring potential areas for growth and improvement in e-commerce infrastructure.
- (4) *Threats*: Assessing external factors that could negatively impact e-commerce development.

(2) Visualization

To present the findings clearly and effectively, visualization tools like Tableau, Excel, and Canvas are used. These tools help create detailed charts and graphs that illustrate the comparative analysis, making it easier to understand and interpret the data.

3.3 Addressing limitations

(1) Data Normalization

Given the differences in data collection methodologies, economic scales, and technological development stages between Morocco and the USA, data normalization is crucial. This involves:

- (1) Adjusting data points to ensure they are directly comparable.
- (2) Accounting for variations in data collection practices between different sources.
- (3) Considering the economic and technological contexts of each country to provide a balanced and accurate comparison.

By normalizing the data, the study ensures that the comparative analysis is fair and meaningful, allowing for valid conclusions about the e-commerce infrastructure in both countries.

3.4 Theoretical assumptions

This study is based on several key assumptions. It assumes that the SWOT analysis framework offers a clear and strategic way to assess e-commerce infrastructure by organizing internal and

external factors, as supported by previous studies (Gürel & Tat, 2017; Helms & Nixon, 2010). It also relies on the use of secondary data from credible sources, assuming that such data is reliable and can be made comparable through normalization techniques to account for differences in how it was collected (Johnston, 2017). Finally, it assumes that meaningful comparisons can still be made across countries with different economic and technological backgrounds, as long as the data is contextualized and standardized according to established comparative research methods (Ragin, 2014).

4. Theoretical frameworks: SWOT analysis

The SWOT analysis framework, which stands for Strengths, Weaknesses, Opportunities, and Threats, offers a strategic approach to understanding the multifaceted aspects of e-commerce infrastructure. This framework is widely used in strategic management and organizational analysis due to its simplicity and comprehensive scope (Gürel & Tat, 2017). Applying SWOT to the comparative analysis of e-commerce infrastructure in Morocco and the USA allows for a detailed examination of both internal and external factors influencing e-commerce development in these countries.

4.1 Strengths

Strengths refer to the internal attributes that enhance the capabilities and competitive advantages of e-commerce infrastructure in a particular context. In the USA, strengths include advanced internet connectivity, robust logistics networks, and a well-established digital payment ecosystem (Laudon & Traver, 2018). Morocco's strengths lie in its rapidly increasing mobile internet usage and a youthful, tech-savvy population that is quick to adopt new technologies (Youssef & Dahmani, 2023).

4.2 Weaknesses

Weaknesses are internal factors that hinder the effectiveness and growth of e-commerce infrastructure. In Morocco, significant weaknesses include limited digital payment options and inadequate logistics infrastructure, particularly in rural areas (ANRT, 2021). Conversely, while the USA has a highly developed e-commerce infrastructure, issues such as regional disparities in internet access and high operational costs in urban centers can pose challenges (ITU, 2020).

4.3 Opportunities

Opportunities are external factors that can be leveraged to enhance e-commerce infrastructure and foster growth. Morocco has the potential to expand its digital payment systems and invest in logistics to better serve its growing e-commerce market. Additionally, the increasing availability of affordable smartphones and mobile internet plans presents a significant opportunity for further mobile commerce growth (Statista, 2021c). In the USA, opportunities include the integration of advanced technologies like artificial intelligence and big data analytics to optimize e-commerce operations and enhance customer experiences (McKinsey & Company, 2020).

4.4 Threats

Threats are external challenges that can adversely affect e-commerce infrastructure. For Morocco, regulatory hurdles, cybersecurity threats, and economic instability are significant threats that need to be addressed to ensure sustainable e-commerce growth (UNCTAD, 2019). In the USA, evolving cybersecurity threats and stringent data privacy regulations pose ongoing challenges that require continuous adaptation and investment (Symantec, 2020).

In summary, the SWOT analysis framework provides a strategic tool to assess and compare the e-commerce infrastructure of Morocco and the USA, identifying key areas of strength, potential weaknesses, opportunities for growth, and external threats. This analysis aims to inform targeted strategies for enhancing e-commerce capabilities in both developed and emerging market contexts.

5. Conceptual framework

To systematically examine the impact of technological infrastructure on e-commerce development in Morocco and the USA, we propose a conceptual framework that identifies key components of technological infrastructure as independent variables and e-commerce development as the dependent variable. This framework also considers the role of regulatory environments and consumer trust as moderating factors that could influence the relationships between the independent and dependent variables.

5.1 Independent variables (technological infrastructure components)

Internet Connectivity: Includes factors such as broadband speed, internet penetration rates, and access disparities between rural and urban areas.

- (1) **Mobile Technology Penetration:** Measures the penetration rates of mobile devices and access to mobile internet.
- (2) **Payment Infrastructure:** Encompasses the availability and adoption of various e-payment methods and the security of online transactions.
- (3) **Logistics and Delivery Networks:** Assesses the efficiency of shipping services and delivery times, crucial for meeting consumer expectations.

5.2 Dependent variable

- (1) **E-commerce Development**

Evaluated through metrics such as e-commerce adoption rates, market growth, and consumer participation shown in [Figure 1](#).

The conceptual framework posits the following hypotheses:

- (1) **Internet Connectivity:** Higher internet connectivity rates increase e-commerce development by providing broader access to online markets.
- (2) **Mobile Technology Penetration:** Increased mobile technology penetration enhances e-commerce development by facilitating mobile commerce.
- (3) **Payment Infrastructure:** Secure and widely available payment infrastructure boosts consumer trust and participation in e-commerce.
- (4) **Logistics and Delivery Networks:** Efficient logistics and delivery networks are crucial for satisfying consumer expectations and sustaining e-commerce growth.

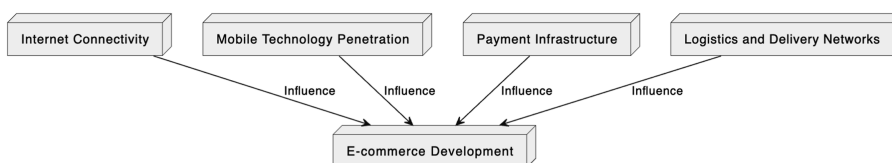


Figure 1. Factors influencing e-commerce development

5.3 Moderating factors

- (1) **Regulatory Environment:** The presence of supportive e-commerce regulations can strengthen the positive effects of technological infrastructure on e-commerce development.
- (2) **Consumer Trust:** High levels of consumer trust in online transactions can amplify the impact of technological infrastructure on e-commerce adoption and market growth.

In this study, we explore the impact of technological infrastructure on e-commerce development in Morocco versus the USA. Our conceptual framework identifies four key components of technological infrastructure as independent variables: Internet Connectivity, Mobile Technology Penetration, Payment Infrastructure, and Logistics and Delivery Networks. We hypothesize that improvements in these areas are positively associated with enhanced e-commerce development, characterized by increased adoption rates, market growth, and consumer participation. The framework suggests that higher internet and mobile access, secure and accessible payment options, and efficient logistics are crucial for e-commerce success. Additionally, we consider the role of regulatory environments and consumer trust as moderating factors that could influence the strength and direction of these relationships.

6. Results

6.1 Introduction to findings and discussion

The purpose of this study is to conduct a comparative analysis of the e-commerce infrastructure between Morocco and the USA, focusing on key components such as internet connectivity, mobile technology penetration, payment infrastructure, and logistics networks. This research aims to identify the strengths, weaknesses, opportunities, and threats (SWOT) associated with e-commerce development in both countries, and to offer strategic insights for enhancing e-commerce capabilities.

The research questions guiding this study are:

- (1) What are the key components of technological infrastructure that most significantly affect e-commerce success in Morocco versus the USA?
- (2) How does the technological infrastructure in Morocco compare to that in the USA in supporting e-commerce development?

This section of the paper presents the findings derived from the collected secondary data and interprets these results through the lens of the SWOT analysis framework. The discussion is structured as follows:

- (1) **Presentation of Findings:** This subsection provides a detailed overview of the descriptive statistics for the key variables, including internet connectivity, mobile technology penetration, payment infrastructure, and logistics networks. Comparative analysis between Morocco and the USA is also presented to highlight significant differences and similarities.
- (2) **SWOT Analysis Interpretation:** This part interprets the findings using the SWOT framework. It identifies the strengths and weaknesses within the e-commerce infrastructure of each country, explores the opportunities for growth and improvement, and assesses the external threats that could impact e-commerce development.
- (3) **In-depth Discussion:** This subsection evaluates the research findings in relation to the initial research questions and hypotheses. It discusses the practical implications of the SWOT analysis for policymakers and businesses, offering recommendations for

enhancing e-commerce infrastructure. Additionally, it considers the broader implications of these findings for the e-commerce landscape in both developed and emerging markets.

- (4) **Limitations and Future Research:** Here, the limitations of the study are acknowledged, and suggestions for future research directions are provided to address the identified gaps and build upon the current findings.
- (5) **Conclusion:** The final subsection summarizes the key findings, reiterates the significance of enhancing e-commerce infrastructure in both developed and emerging markets, and highlights the study's contributions to the field of e-commerce research

6.2 Descriptive statistics

(1) Internet Connectivity

Internet connectivity is crucial for e-commerce as it affects how easily consumers and businesses can engage in online activities. According to [DataReportal's 2024; 2025](#) report which is shown in [Table 1](#).

(1) USA

- Internet Penetration: 93.1% (322 million users)
- Median Speed of Fixed Internet Connections: 262.59 Mbps (Download), 24.33 Mbps (Upload)
- Median Speed of Mobile Internet Connections: 123.63 Mbps (Download), 9.50 Mbps (Upload)
- Urbanization: 83.4%

(2) Morocco

- Internet Penetration: 92.2% (35.3 million users)
- Median Speed of Fixed Internet Connections: 33.99 Mbps (Download), 23.29 Mbps (Upload)
- Median Speed of Mobile Internet Connections: 45.18 Mbps (Download), 11.78 Mbps (Upload)
- Urbanization: 65.4%

It is important to note that urban areas typically exhibit higher levels of internet connectivity than rural regions in both countries. As illustrated in [Table 2](#), significant urban–rural disparities

Table 1. Internet connectivity data

| Metrics | USA | Morocco |
|------------------------------|-------------------------------------|------------------------------------|
| Internet Penetration (%) | 93.1% | 92.2% |
| Fixed Broadband Speed (Mbps) | 262.59 (Download) 24.33 (Upload) | 33.99 (Download) 23.29 (Upload) |
| Mobile Internet Speed (Mbps) | 123.63 (Download) 9.50 (Upload) | 45.18(Download) 11.78 (Upload) |
| Urbanization (%) | 83.4 % | 65.4 % |

Source(s): [DataReportal \(2025\)](#)

Table 2. Internet connectivity unevenly distributed

| Indicator (2024) | Urban USA | Rural USA | Urban Morocco | Rural Morocco |
|---|-----------|-----------|---------------|----------------------------------|
| Percentage of population without fixed broadband $\geq 25/3$ Mbps | 1.5% | 22.3% | $\approx 8\%$ | $\approx 23\%$ (77% penetration) |

Source(s): USDA (2024); Freedom House (2024)

persist in access to fixed broadband ($\geq 25/3$ Mbps) in 2024. In the United States, only 1.5% of the urban population lacks fixed broadband access, compared to 22.3% in rural areas (USDA, 2024).

A similar pattern is observed in Morocco, where approximately 8% of the urban population remains without fixed broadband, while this proportion rises to around 23% in rural areas (Freedom House, 2024). These figures highlight the structural digital divide that continues to shape e-commerce development in both contexts.

(2) Mobile Technology Penetration

Mobile technology is a major driver of e-commerce growth, especially in emerging markets. The metrics used for mobile technology are cellular mobile connections per capita and their year-on-year (YoY) change. Connections per capita offer a consistent proxy across Morocco and the USA, despite different market structures, while the YoY change captures diffusion dynamics, contrasting U.S. saturation with Morocco’s expansion and links directly to digital-commerce readiness. Since connections may exceed population due to multi-SIM use, we interpret this as access intensity rather than unique users. Data from DataReportal, as shown in [Table 3](#), highlights:

(1) USA

- Cellular Mobile Connections: 411 million (119% of the population)
- Year-on-Year Change: +9.5 million (+2.5%)

(2) Morocco

- Cellular Mobile Connections: 54.9 million (143% of the population)
- Year-on-Year Change: +1.2 million (+2.5%)

(3) Payment Infrastructure

A secure and diverse payment infrastructure is essential for building consumer trust and enabling smooth transactions. Here’s in [Table 4](#) additional data to provide a deeper understanding:

(1) USA

- Credit Card Penetration: 70% of the population regularly uses credit cards ([Federal Reserve, 2023](#)).

Table 3. Mobile technology penetration data

| Metrics | USA | Morocco |
|--------------------------------|------|---------|
| Internet Penetration (%) | 411 | 54.9 |
| Percentage of Population (%) | 119% | 143% |
| Year-on-Year Change (Millions) | +9.5 | +1.2 |

Source(s): [DataReportal \(2025\)](#)

Table 4. Payment infrastructure data

| Metrics | USA | Morocco |
|-----------------------------|----------|-----------|
| Credit Card Penetration (%) | 70% | 30% |
| Digit Wallet Usage (%) | 50% | 15% |
| Security Measures | Advanced | Improving |

Source(s): Federal Reserve (2023), Statista (2023), Bank Al-Maghrib (2023), World Bank (2022), ANRT (2021)

- Digital Wallets and Mobile Payments: 50% of online transactions are done through digital wallets like PayPal, Apple Pay, and Google Pay (Statista, 2023).
- Security: Advanced encryption technologies and strict regulations ensure secure online transactions (Mulpuru, 2019).

(2) Morocco

- Credit Card Penetration: 30% of the population uses credit cards (Bank Al-Maghrib, 2023).
- Digital Wallets and Mobile Payments: 15% of online transactions are done through digital wallets like PayPal and local options like Wafacash (World Bank, 2022).
- Security: Security is improving with the adoption of 3D secure technology (ANRT, 2021).

(4) Logistics and Delivery Networks

Efficient logistics and delivery networks are vital for e-commerce success, ensuring timely and reliable delivery of goods. Here's additional data shown in Table 5.

(1) USA

- Warehouse Facilities: There are over 18,000 warehouses nationwide, supporting efficient inventory management (U.S. Census Bureau, 2023).
- Shipping Services: Major carriers like FedEx, UPS, and USPS provide same-day and next-day delivery options (McKinsey & Company, 2020).
- Delivery Times: Typically 1–3 days across the country, with advanced tracking systems ensuring reliability (Harrington, 2020).
- Last-mile delivery is well-optimized even though costly, the key is efficiency and optimization using AI and automation (McKinsey & Company, 2024)
- The overall logistics cost at 10–12% of product value is relatively low compared to global averages (BTS, 2024)

Table 5. Logistics and delivery networks data

| Metrics | USA | Morocco |
|-------------------------------------|------------|------------------------|
| Logistics cost (% of product value) | 10–12 | 15–18 |
| Number of warehouses | 18,000+ | Limited, Urban Centers |
| Delivery times | 1–3 days | 3–7 days |
| Coverage | Nationwide | Urban-focused |

Source(s): BTS (2024), U.S. Census Bureau (2023), Harrington (2020), Oxford Business Group (2022), HCP (2024), DHL (2022)

- Coverage: Comprehensive nationwide coverage, including both urban and rural areas.
- (2) Morocco
- Warehouse Facilities: Major facilities are concentrated in urban centers like Casablanca and Rabat (Oxford Business Group, 2022).
 - Logistics costs at 15–18% of product value (HCP, 2024), much higher than both the USA and global benchmarks.
 - Less efficient customs, limited multimodal options, and slower adoption of digital logistics solutions (UNCTAD, 2021)
 - Shipping Services: Local providers like Amana and international companies like DHL operate, but with longer delivery times (3–7 days) (DHL, 2022).
 - Delivery Times: Longer and less predictable, especially in rural areas. The courier network radiates from Casablanca or Rabat; delivery to provinces such as Draâ-Tafilalet or Souss-Massa often requires third-party relay points, adding 24–48 h and extra COD fees. (World Bank, 2022)
 - Coverage: Better in urban areas, but limited in rural regions. Fragmented rural road infrastructure raises the cost-to-deliver ratio, so many sellers either refuse rural orders or demand minimum-basket thresholds.

6.3 Comparative analysis: Morocco vs. USA

Comparing the e-commerce infrastructure of Morocco and the USA shows significant differences and some similarities, reflecting the different levels of economic development and technological advancement.

(1) Internet Connectivity

The USA has higher internet penetration and faster broadband speeds than Morocco. While Morocco has improved internet access, there are still notable disparities, especially in rural areas.

(2) Mobile Technology Penetration

Both countries have high mobile technology penetration. The USA leads in absolute numbers, but Morocco has a higher percentage relative to its population. This rapid adoption of mobile technology in Morocco is crucial for potential e-commerce growth.

(3) Payment Infrastructure:

The USA's diverse and secure payment infrastructure underpins robust e-commerce activities. U.S. platforms optimize for card-on-file models, allowing for seamless and recurring digital transactions. In contrast, Morocco is making progress but must address challenges related to financial inclusion and consumer trust in digital payment systems. As a result, Moroccan merchants often rely on hybrid cash and digital payment flows to accommodate varying consumer preferences and trust levels.

(4) Logistics and Delivery Networks:

The USA's advanced logistics network ensures efficient and reliable delivery services, a crucial factor for e-commerce success. Morocco's logistics infrastructure is developing, with improvements needed to match the efficiency seen in developed markets.

In summary, the USA's e-commerce infrastructure is characterized by advanced technological capabilities and strong support systems, fostering high levels of e-commerce

activity. Morocco, while showing promising growth, needs to address specific infrastructural weaknesses to fully realize its e-commerce potential. The findings highlight critical areas where strategic improvements can drive significant enhancements in e-commerce development in both countries.

6.4 SWOT analysis interpretation

(1) Strengths

- USA
 - Advanced Internet Connectivity: The USA has a high internet penetration rate of 93.1% with significantly fast broadband speeds, making online activities and transactions smooth and reliable.
 - Mobile Technology Penetration: The USA boasts 411 million cellular mobile connections, which is 119% of the population, ensuring widespread access to mobile e-commerce.
 - Logistics costs are estimated at around 8–10% of product value, reflecting a relatively low expense due to advanced infrastructure.
 - Robust Payment Infrastructure: High credit card penetration (70%) and the widespread use of digital wallets (50% of online transactions) provide a secure and diverse payment ecosystem.
 - Efficient Logistics Networks: With over 18,000 warehouses and advanced shipping services like FedEx, UPS, and USPS, the USA ensures fast and reliable delivery, typically within 1–3 days nationwide.
 - The U.S. logistics industry continues to lead in technological innovations, with widespread adoption of automation, AI, and data analytics to optimize supply chains.
- Morocco
 - Growing Internet Connectivity: Morocco has made significant strides in increasing internet penetration, now at 92.2%, with efforts to improve both fixed and mobile broadband speeds.
 - High Mobile Technology Penetration: With 54.9 million cellular mobile connections (143% of the population), mobile technology adoption in Morocco is strong, supporting mobile e-commerce growth.
 - Improving Digital Payment Systems: While still developing, Morocco is seeing growing adoption of digital wallets and mobile payment systems, enhancing financial inclusion.
 - Urban Logistics Development: Major urban centers like Casablanca and Rabat have seen improvements in logistics infrastructure, facilitating better e-commerce delivery services.

(2) Weaknesses

- USA
 - Regional Disparities in Internet Access: Despite overall high internet penetration, there are disparities in access and speed between urban and rural areas.

- Card ownership is near-universal, but rural households have lower credit limits and higher debit-card usage, affecting ticket size and return behavior.
- High Operational Costs: The cost of logistics and warehousing in urban centers can be high, impacting the overall cost structure for e-commerce businesses.
- Last-mile delivery remains the most expensive part of logistics (28% of total logistics spending).

- Morocco:

- Limited Digital Payment Adoption: Only 30% of the population uses credit cards, and digital wallet adoption is still relatively low at 15%, limiting e-commerce transaction efficiency. For rural orders, Cash-on-delivery accounts for >60% (vs. <30% in Casablanca) because card ownership and wallet penetration are lower outside urban centers.
- High logistics costs at 15–18% of product value (HCP, 2024)
- High delivery costs, especially for last-mile services in rural and remote areas where infrastructure gaps are significant.
- Underdeveloped warehousing and distribution networks, reducing delivery speed and reliability.
- Inadequate Rural Logistics Infrastructure: Logistics and delivery networks are less developed in rural areas, leading to longer delivery times and unreliable services.
- Moderate Internet Speeds: The average internet speeds, both fixed and mobile, are significantly lower compared to developed countries, affecting the quality of online experiences.
- Low adoption of advanced logistics technologies, such as warehouse automation and automated sorting systems

(3) Opportunities

- USA

- Integration of Advanced Technologies: There is potential for further integration of AI, big data analytics, and automation to optimize e-commerce operations and enhance customer experiences.
- Expansion into Rural Markets: Improving internet access and logistics in rural areas can open up new markets and increase overall e-commerce penetration.
- Sustainable Practices: Investing in green logistics and sustainable supply chain practices can not only reduce costs but also appeal to environmentally conscious consumers.

- Morocco

- Expansion of Digital Payment Systems: There is significant potential to increase the adoption of digital wallets and mobile payment solutions, improving financial inclusion and e-commerce participation.
- Development of Rural Logistics: Enhancing logistics infrastructure in rural areas can improve delivery times and expand e-commerce reach.
- Mobile Commerce Growth: Leveraging the high penetration of mobile technology to promote mobile commerce can drive further e-commerce growth.

(4) Threats

- USA
 - Cybersecurity Threats: Increasing cybersecurity threats and data breaches can undermine consumer trust and impact the growth of e-commerce.
 - Regulatory Challenges: Stringent data privacy regulations and changing trade policies can pose operational challenges for e-commerce businesses.
 - Economic Instability: Economic fluctuations and inflation can impact consumer spending and e-commerce growth.
- Morocco:
 - Regulatory Hurdles: Complex and evolving regulatory frameworks can create uncertainties and barriers for e-commerce businesses.
 - Cybersecurity Risks: As digital transactions increase, so do the risks associated with cyberattacks, which can affect consumer trust and adoption rates.
 - Economic Challenges: Economic instability and high unemployment rates can limit consumer spending and hinder e-commerce growth.

By analyzing these strengths, weaknesses, opportunities, and threats, we can gain a comprehensive understanding of the current state and potential future of e-commerce infrastructure in both the USA shown in Figure 2 and Morocco shown in Figure 3. This analysis provides valuable insights for policymakers, businesses, and other stakeholders looking to enhance e-commerce development in their respective contexts.

6.5 In-depth discussion: hypotheses testing

(1) H1: Internet Connectivity

The hypothesis that higher internet connectivity rates increase e-commerce development is supported by the data. The USA, with an internet penetration rate of 93.1% and fast broadband speeds, has a robust e-commerce market. Morocco, while improving with a 92.2% penetration

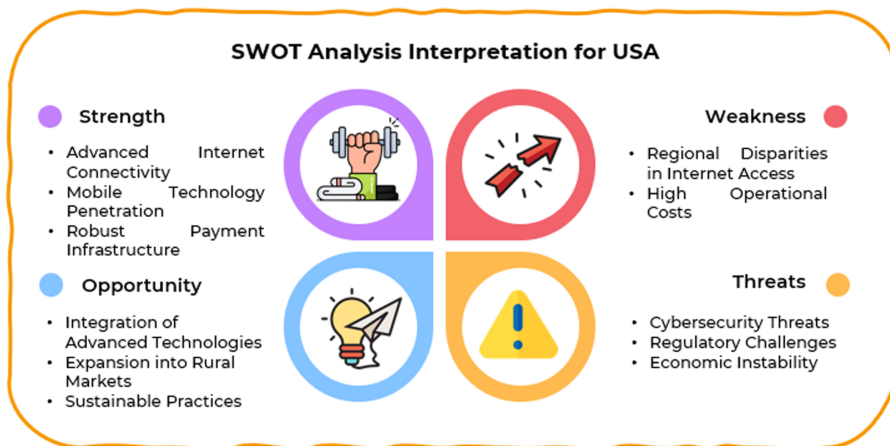


Figure 2. SWOT analysis interpretation for the United States

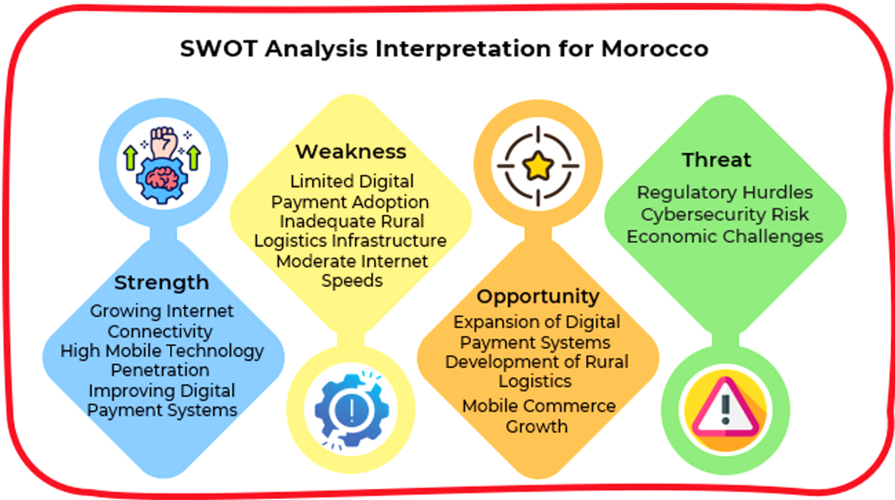


Figure 3. SWOT analysis interpretation for MOROCCO

rate, still faces challenges, especially in rural areas. This suggests that improving internet connectivity, particularly in underserved areas, can significantly boost e-commerce activity.

(2) H2: Mobile Technology Penetration

The hypothesis that increased mobile technology penetration enhances e-commerce development is also supported. The high mobile device penetration in both the USA (119%) and Morocco (143%) underscores the critical role mobile technology plays in e-commerce. The rapid adoption of mobile technology in Morocco indicates that mobile access can drive e-commerce growth even in emerging markets.

(3) H3: Payment Infrastructure

The hypothesis that a secure and widely available payment infrastructure boosts e-commerce is confirmed. The USA's diverse and secure payment options, with high credit card and digital wallet usage, clearly facilitate e-commerce. Morocco's lower but growing adoption of digital payment methods highlights an area for improvement. Enhancing payment infrastructure in Morocco can significantly impact e-commerce growth.

(4) H4: Logistics and Delivery Networks

The hypothesis that efficient logistics and delivery networks are crucial for e-commerce success is validated by the data. The USA's advanced logistics system supports quick and reliable delivery, which is crucial for e-commerce. Morocco's developing logistics infrastructure, especially in rural areas, still poses challenges. Improving logistics and delivery networks in Morocco can enhance e-commerce reliability and consumer satisfaction.

6.6 Practical implications

(1) USA

- Improve Rural Connectivity: Enhancing internet and logistics services in rural areas can further boost e-commerce.

- **Adopt Advanced Technologies:** Integrating AI and big data analytics can optimize e-commerce operations and enhance customer experiences.
- (2) Morocco
- **Expand Digital Payment Options:** Increasing the adoption of digital wallets and secure payment methods can improve e-commerce transactions.
 - **Enhance Logistics Infrastructure:** Improving logistics, especially in rural areas, can reduce delivery times and improve reliability.
 - **Leverage Mobile Commerce:** Given the high mobile penetration, promoting mobile commerce can significantly drive e-commerce growth.

These practical steps can help policymakers and businesses in both countries leverage their strengths and address their weaknesses, fostering a more robust e-commerce environment.

6.7 Limitations and future research

(1) Limitations

This study has several limitations that should be considered. Firstly, the data used in the analysis is secondary, which means it was collected by other researchers and organizations. This can sometimes lead to inconsistencies or biases in the data. Additionally, the availability of data for Morocco was more limited compared to the USA, which might affect the depth of the analysis for Morocco. Furthermore, the study primarily focuses on technological infrastructure and does not deeply explore other factors like cultural differences or government policies that might also impact e-commerce development. Lastly, the rapidly changing nature of technology means that some of the data could quickly become outdated.

(2) Future Research

Future research could address some of these limitations by collecting primary data, such as surveys or interviews, to gain more specific insights into the e-commerce infrastructure of both countries. More detailed studies on the impact of government policies and cultural factors on e-commerce would also be valuable. Additionally, longitudinal studies that track changes over time could provide a better understanding of how technological advancements and policy changes affect e-commerce development. Lastly, expanding the research to include other emerging and developed markets could offer a broader perspective and more generalizable conclusions.

7. Conclusion

7.1 Summary of key findings

In this study, we compared the e-commerce infrastructure of Morocco and the USA by looking at internet connectivity, mobile technology penetration, payment infrastructure, and logistics and delivery networks. We found that the USA has very high internet penetration and fast broadband speeds, which support a strong e-commerce market. Morocco has made significant progress, with good internet penetration and high mobile technology adoption, but still faces challenges in rural connectivity and logistics. The USA's payment infrastructure is very advanced, with widespread use of credit cards and digital wallets, while Morocco is still developing in this area. Logistics in the USA are efficient and reliable, whereas Morocco needs improvements, especially in rural areas.

7.2 Significance of findings

These findings are significant because they highlight the different stages of e-commerce development in a developed country like the USA and an emerging market like Morocco.

Understanding these differences helps to identify specific areas where improvements are needed to boost e-commerce in Morocco. For the USA, the findings suggest that further growth can be achieved by addressing regional disparities in connectivity and logistics.

7.3 Contributions to e-commerce research

This study contributes to e-commerce research by providing a detailed comparison of the technological infrastructure in a developed and an emerging market. It shows the importance of internet connectivity, mobile technology, payment systems, and logistics in supporting e-commerce. The study also highlights the potential for mobile commerce in emerging markets like Morocco and the need for improved digital payment and logistics systems. These insights can help policymakers and businesses develop strategies to enhance e-commerce infrastructure and drive growth.

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