

Reflections on Combating Cyber Corruption Crimes and Their Impact on Digital Sovereignty

HIBA BOUKREDINE

University of Badji Mokhtar – Annaba, (Algeria), boukredinehiba@gmail.com

Received: 19/09/2025

Accepted: 10/12/2025

Published: 15/12/2025

Abstract:

the concept of sovereignty has undergone significant evolution, transitioning from absolute sovereignty to constrained sovereignty, and more recently to digital sovereignty; an emerging paradigm shaped by the rapid technological advances defining the contemporary world. the state bears a fundamental duty to impose and extend its authority over its virtual domain, embodied in the digital infrastructure governing various administrative, financial, and regulatory sectors. however, digital sovereignty is increasingly threatened by transnational cybercrimes, such as money laundering and the exploitation of cutting-edge technologies for embezzlement, misappropriation, and other forms of financial misconduct. given the profound repercussions of corruption crimes—spanning economic, security, social, and political spheres—numerous states have adopted preventive strategies to mitigate their impact. this pressing reality raises a pivotal research question at the heart of this study: to what extent does the fight against cyber corruption affect digital sovereignty?

Keywords: *Electronic Corruption; Digital Sovereignty; Cybercrime; Cybersecurity; Anti-corruption Strategies*

1. INTRODUCTION

The international community has classified corruption as a transnational phenomenon transcending geographical boundaries, prompting the United Nations to establish a dedicated mechanism for combating corruption—namely, the **United Nations Office on Drugs and Crime (UNODC)**. This office operates based on five key normative pillars:

- Enhancing the capacity of member states to address threats posed by transnational organized crime.
- Combating corruption and its detrimental impact on societies.
- Strengthening crime prevention mechanisms and developing efficient criminal justice systems.
- Supporting member states in implementing a balanced, comprehensive, and evidence-based approach to addressing global drug-related challenges, including supply, demand, and counterterrorism efforts.

However, the fight against corruption, particularly through implementing the **2003 United Nations Convention against Corruption (UNCAC)**, is inherently tied to both global and domestic contexts, which determine the effectiveness of available mechanisms to mitigate corruption. This is particularly relevant in an era marked by a technological revolution across all aspects of life, necessitating a shift from combating traditional corruption to addressing the emerging challenges of cyber corruption.

Significance of the Study

The importance of this research lies in the following considerations:

- Digitalization has increasingly impacted state sovereignty, whether through its constructive or disruptive applications.
- The concept of a **virtual state** now entails defined digital borders, requiring the establishment of legal frameworks and mechanisms to safeguard it from cyber threats, such as money laundering and cybercrime.
- Both governmental and non-governmental international organizations have intensified efforts to emphasize the need for safeguarding national information security. While technology has rendered the world borderless, it has simultaneously become a tool for committing various crimes that undermine state integrity, such as electronic money laundering.

Research Objectives

This study aims to:

- Examine the legal and practical mechanisms that enable states to safeguard their digital sovereignty amidst the proliferation of transnational corruption crimes.

- Emphasize the necessity of international cooperation and information exchange, given that cyber corruption and its associated crimes pose significant threats to digital sovereignty.

- Highlight the positive impact of combating cyber corruption, which can enhance digital services within a state and foster greater trust between the government and its citizens.

- Demonstrate that states are increasingly competing to strengthen their cyber defenses to protect their digital sovereignty, ensuring a secure informational environment against external intrusions.

Research Methodology

This study employs the following research methods:

- **Content Analysis Method:** This method is used to analyze various international agreements, whether directly or indirectly related to crimes that threaten digital sovereignty, such as cyber corruption and cybercrime.

- **Comparative Method:** This method is adopted to illustrate the different mechanisms states have implemented to protect their digital sovereignty. Some nations have leveraged artificial intelligence, while others have employed blockchain technology, among other advanced security measures.

Research Problem

The central research question of this study is:

To what extent does combating cyber corruption influence digital sovereignty?

Research Structure

This study is divided into the following sections:

1. The Positive Impact of Combating Cyber Corruption on Digital Sovereignty.
2. Cyber Corruption Crimes That Threaten National Digital Sovereignty.

First. The Positive Impact of Combating Cyber Corruption on Digital Sovereignty

The failure of developing nations to effectively combat corruption, whether economic, administrative, cultural, or social, has historically been attributed to several key factors, including:

- The adoption of repressive and deterrent policies rather than preventive strategies.

- The confusion between governance and anti-corruption efforts.
- Minimal public participation, a lack of transparency, and insufficient accountability mechanisms (Abdel Majid, 2014, pp. 30-32).

However, with the advancement of digital technology, governments are now compelled to embrace digital transformation across various sectors, enabling them to implement preventive strategies against corruption by leveraging advanced electronic auditing technologies (Al-Hijazi, 2004, pp. 32-33).

Consequently, a strong correlation exists between corruption perception indices and digital transformation. E-governance serves as a powerful tool for eliminating corruption, thereby reinforcing state control (Khalifa, 2019, p. 21). Over its digital infrastructure and ensuring internal stability.

1. Aspects of the Positive Impact

The strategic fight against cyber corruption has yielded positive effects across multiple levels, particularly in developed nations. The primary benefits of combating cyber corruption to digital sovereignty include:

A. Digital Administrative Services

Digital transformation enhances the efficiency and accessibility of public services, ensuring faster, cost-effective, and more transparent service delivery (Al-Khashash, 2015, p. 289).. To achieve this, governments must train personnel in information technology and establish robust e-governance infrastructures. Digital services typically progress through the following stages:

- Identification of public or private institutions and the services they provide.
- Electronic interaction between service providers and users, potentially extending to digital contract execution (Zineb & Majid, 2020, p. 126).

Additionally, digital governance empowers citizens to participate in decision-making processes through tools like public opinion polls (Kazem, 2000, p. 25)., thereby fostering transparency and accountability. The role of e-governance in preventing and combating corruption is reinforced by several guarantees and mechanisms that safeguard digital sovereignty, including:

- Delivering high-quality services to citizens efficiently (Mokhtar, 2007, p. 125).

- Eliminating nepotism and enforcing administrative transparency.

- Enhancing both public and private sector operations not only through resource allocation but also via legislative reforms that align with global technological advancements.

- Protecting user privacy, ensuring that digital services respect individual confidentiality and security (Hegazy, 2003, pp. 102-108).

By adopting such measures, states can effectively shield their digital sovereignty from external threats while simultaneously enhancing public trust in government institutions.

B. Digital Financial Services

Digital financial services encompass a broad spectrum of public and private sector financial operations conducted through digital channels. As the global economy becomes increasingly digitized (Saber, 2009, p. 168) It now relies on:

- Digital data
- Digital customers
- Digital enterprises
- Digital products

The interconnection of these elements (Al-Najjar, 2007, pp. 25-27)Fosters transparency and curbs the spread of cyber corruption, as it allows for the identification and tracking of financial transactions. This, in turn, enhances financial infrastructure security, particularly in developed countries, strengthening their digital sovereignty by reinforcing control over digital economies, financial markets, and global trade (Ziad, 2022, pp. 301-302).

For developing nations, transitioning from a traditional to a digital economy requires:

- Establishing a comprehensive digital infrastructure
- Digitizing government services
- Enacting legislation compatible with digital transformation
- Developing human capital and institutional capacity
- Enhancing digital content and financial literacy (Al-Khoury, 2021, pp. 182-183)

2. Adopting a Citizen-Centric Approach

Digital trust relies on strengthening the interaction between citizens and the government, ensuring confidence in both public institutions and the technology they employ. Unlike traditional, face-to-face, paper-based transactions, digital interactions are abstract and intangible, potentially leading to skepticism and distrust in digital applications (Mokaddam, 2021, pp. 33-38).

To enhance trust and encourage active citizen engagement, governments must:

- Improve communication and interaction mechanisms
- Ensure uninterrupted access to digital services
- Enhance transparency in governance
- Safeguard personal data and digital identities
- Employ advanced cybersecurity technologies to protect user privacy
- Uphold the principle of equality in access to digital services
- Encourage citizen participation in decision-making processes (Al-Khouri, Digital Government: Concepts and Practices, 2021, p. 197) (Aal Hammad, 2008, pp. 145-146)

Thus, trust in digital governance is intrinsically linked to a state's ability to protect its citizens' digital identities, thereby preserving their privacy and ensuring national informational sovereignty. This reinforces digital sovereignty by mitigating cyber corruption risks and enhancing state control over digital resources and information flows.

Enhancing Transparency and Strengthening Sovereignty

A fundamental aspect of combating cyber corruption is government transparency and accountability. By embracing open governance principles, states can :

- Ensure public access to governmental data
- Enforce stringent anti-corruption measures
- Promote accountability in public administration

These efforts bolster national digital sovereignty by reducing systemic corruption risks, reinforcing state authority, and strengthening the resilience of digital governance frameworks.

It may extend to:

Government Transparency and Strengthening Sovereignty: In the framework of the government's fight against electronic corruption, the government strengthens its work by relying on transparency and accountability, as follows:

- Government meetings may be open to the media and citizens.
- Making financial and administrative transactions subject to challenge by citizens.
- Converting the official offices of senior officials into reception offices.
- Issuing deterrent laws that would hold accountable anyone who obstructs the implementation of the principle of transparency (Mekaoussi, Salihah, & Mekaoussi, 2018, pp. 168-182).

Enhancing Democracy: The state's reliance on digitization to enhance democracy will boost citizens' trust in it and support the process of electronic decision-making. This is manifested in electronic voting, citizen opinion polls, conducting various party activities through digitization, and electronic consultation.

Increasing Financial Revenues and Tax Resources: Relying on digitization would reduce government service costs, lower government expenditures, and facilitate the tax collection process.

Second: Examples of the Positive Impact of the Relationship Between Electronic Corruption and Digital Sovereignty

This idea is discussed based on revisiting the concept of digital sovereignty, where: "The state's regulatory and legislative authority extends over networks, respecting this authority and ensuring equality among states and international bodies (Aiger, 2024, p. 75) Based on this, many countries have adopted modern technologies that ensure transparency, reduce corruption, and enshrine the right to informational independence for the state, including big data, artificial intelligence (AI), blockchain, smart technologies, monitoring and tracking technologies, and smart cities (Abdel Rahman & Al-Barhami).

In this context, we will highlight some models:

South Korea:

In 2014, South Korea ranked first in the field of e-government

implementation due to its unprecedented achievements in enhancing its competitiveness, relying on its advanced information technology infrastructure. It built computer networks throughout the country and amended laws, regulations, and policies (Mohamed, 2003, p. 1317).

The South Korean government began adopting the "Smart E-Government Strategy," taking several measures, including:

- Improving efficiency and transparency in administrative work.
- Enhancing communication with citizens regarding government policies (shared administrative information system).
- Providing citizen-centered administrative services (using the civil service portal, electronic customs clearance service, etc.).
- Digital budgeting, where a dedicated website was launched for South Korea's revenues, expenses, and financial assets (El-Sayed Henedy, 2017, pp. 94-97).

The Experience of Singapore:

Singapore is one of the leading countries in combating corruption. According to the 2021-2022 Transparency International report, it ranks fourth in terms of preventive measures that have enabled it to eliminate this issue.

Singapore has also strived to become a "smart island" by introducing and adopting various technologies:

- Implemented a Radio Frequency Identification (RFID) system across all its libraries.
- Adopted E-learning in education, providing a platform for communication between teachers and students.
- Built a dedicated information network at the port to manage container terminals, making it one of the most efficient container clearance systems worldwide.
- Used a smart application to reduce traffic congestion (Al-Housh, 2006, pp. 444-450).
- Established an Anti-Corruption Investigation Office, an independent body separate from the police, responsible for investigating corruption cases

in both the public and private sectors and submitting reports to the relevant investigative authorities.

- Enacted a comprehensive legal framework to curb electronic corruption. (Sabbagh & Ben Ashnahou, 2020, pp. 66-67)

The Experience of the Kingdom of Bahrain:

The Kingdom of Bahrain has made significant progress in combating corruption by relying on various electronic channels, including the National Portal (for communication between citizens and the administration), smart device applications, electronic service centers, and the National Call Center. Bahrain has also adopted several projects, such as:

- The National Infrastructure Project for Information and Communication Technology
- Zajel Project for Electronic Correspondence
- The National Health Information System Project (I SEHA)
- Government Electronic Connectivity Projects(adopting smart ID cards, electronic signatures, and electronic voting) (El-Sayed Henedy, 2017, pp. 105-107)

China:

China's experience is one of the most notable examples demonstrating that digitization and protecting digital sovereignty can limit electronic corruption. The country has implemented a series of plans, including the "Golden Project" and "Internet-based Government" initiatives. (Mekaoussi, Salihah, & Mekaoussi, 2018, pp. 180-182)

Third: Electronic Corruption Crimes Threatening Digital Sovereignty

The intersection of political, economic, and security dimensions within digital sovereignty poses significant challenges for states (Boukriane & Ktaf, 2022, pp. 62-87), making full protection difficult due to:

- The dominance of certain countries over digital data protection mechanisms.
- Financial constraints are limiting the implementation of effective protective measures.
- Cyberattacks that may threaten national security.

- Legislative frameworks that may not align with global digital advancements, especially in developing countries (Johari & Taha Hassan, 2013, p. 261).

- The proliferation of electronic corruption crimes.

The Most Critical Threat to Digital Sovereignty: Electronic Corruption Crimes

Electronic Bribery Crime:

This type of crime is an extension of traditional corruption crimes, which have been criminalized by various legal systems, particularly under the United Nations Convention against Corruption (UNCAC) in Articles 15 and 16. However, international jurisprudence differs on whether this crime should be classified as active or passive bribery (Abdelwahab, 2016-2017, p. 819).

Domestic legal systems also vary:

- Some adopt a unitary approach, considering the act of the public official as the primary material element of the crime, while the briber is merely an accomplice.

- Others separate the offenses, defining active bribery as the crime of the briber (the contracting party) and passive bribery as the crime of the public official.

However, with technological advancements, this crime is now committed using modern digital tools, both domestically and internationally, particularly in international contracts (e.g., purchasing equipment, signing deals in the energy or mining sectors). This poses a serious threat to state control over its digital economy, as the material element of the crime may take various forms, including:

- **Offering and Requesting Bribes via Technology:** Bribery transactions are conducted through technological means such as email and social media platforms. (Abdelali, 2012-2013, pp. 148-150)

- **Electronic Promise of Bribery:** The promise of a bribe is made through the use of digital tools.

- **Electronic Acceptance of Bribery:** The acceptance of a bribe retains the same legal meaning as traditional acceptance but involves the use of digital means.

Electronic Embezzlement Crime:

Embezzlement of public funds is among the most dangerous crimes threatening a state's economic security due to its impact on national finances across various sectors. It is essentially the unlawful seizure of public funds.

Even when committed through digital means, the criminal act in embezzlement cases demonstrates the offender's intent to appropriate the funds and act as the rightful owner. (Al-Qahwaji, 1988, p. 416) Electronic embezzlement takes several forms, including:

- Misappropriating funds by modifying, disabling, or manipulating electronic systems or creating fraudulent digital systems. (Al-Shadhili, 2009, pp. 372-373)
- Unauthorized electronic fund transfers, which can take various forms, such as:
 - ✓ "Perruque" method (misusing company resources for personal benefit).
 - ✓ "Salami" technique (stealing small amounts over time to avoid detection).
 - ✓ Collusion schemes and data theft through cyber espionage (Al-Shawabkeh, 2011, pp. 216-220).

Electronic Misappropriation Crime:

This occurs when a public official unlawfully disposes of entrusted funds using digital means, such as accessing accounts via privileged credentials. Additionally, officials may transfer funds to electronic banks or fictitious digital institutions using advanced technological tools.

Unauthorized Use of Funds:

This involves the illegal use of data and financial information for personal benefit, rather than its intended official purpose (Saqr, 2005, p. 146).

Digital Extortion Crime:

This is one of the most dangerous forms of corruption, as it involves the unlawful collection of government revenues through technological means.

The criminal act may be committed:

- Directly, by a public official receiving illegal payments from victims.
- Indirectly, via electronic payment methods, making it harder to detect and trace.

Crime of Exploiting Informational Influence:

Unlike the traditional crime of influence-peddling, the current criminal behavior is based on exploiting one's influence and demanding financial compensation (an undue advantage) through electronic promises, electronic acceptance, electronic offers, etc.

Crime of Obstructing the Course of Justice:

The crime of obstructing the course of justice is considered a cyber-corruption crime because most of its constituent behaviors are carried out through electronic means (intimidation via electronic messages, promising undue advantages, refusal to provide or withholding information from a computer).

Thus, such behavior threatens one of the most important state institutions, the justice sector, which impacts the digital sovereignty of states.

Crime of Concealing Criminal Proceeds via Digital Media:

This type of crime has been influenced by technological advancements, as a public official deliberately conceals all or part of the criminal proceeds using information networks.

Crime of Abuse of Office via Technological Means:

A public official abuses their office or position to perform or refrain from acting by exploiting the information network or one of the information technology means to obtain undue benefits (Manaama & Al-Zoubi).

Electronic Money Laundering:

This crime has found a place in the virtual world due to the emergence of electronic banks and shell companies. Money laundering is a transnational crime that threatens digital sovereignty, as banking services influence money laundering operations due to the absence of direct and physical contact between the bank and the client. Money launderers can use the internet to transfer funds worldwide, even hacking financial systems to carry out transactions, which threatens the financial system of the state.

Developing countries are among the most vulnerable to this type of crime due to the application of banking secrecy principles and the protection of personal freedoms. However, developed countries, despite experiencing money laundering operations, have moved toward adopting a digital wallet

system that reveals the identity of individuals dealing with financial institutions, which does not threaten their digital financial system.

- Thus, according to Article 23 of the 2003 United Nations Convention Against Corruption (UNCAC), states are required to adopt preventive policies to curb the crime of laundering criminal proceeds, which takes many forms outlined in this article and threatens the digital sovereignty of the state. However, states must also cooperate, potentially reaching digital cooperation in combating the crime of electronic money laundering, by Article 48 of the UNCAC.

- Additionally, Article 60 of the Algerian Anti-Corruption Law adopted this idea (Abdelali, 2012-2013, pp. 109-115) In the Law on the Prevention and Fight Against Corruption, which states:

- *"National authorities may provide relevant foreign authorities with available financial information obtained within their jurisdiction as part of procedures taken to claim and recover criminal proceeds as stipulated in this law."* (Article 48)

- However, cooperation in combating electronic money laundering must be carried out without infringing on state sovereignty, as stated in Article 49 (Article 49) of the UNCAC, while also following the methods outlined in Article 50 (Article 50) Of the same convention.

Conclusion

Based on the foregoing, I have reached several conclusions and proposed a set of recommendations:

First: Findings

1. Digital security has become an essential component of any national security policy, as decision-makers now prioritize it within their national defense strategies.

2. Combating electronic corruption can only be achieved by activating digital transformation in government services, supported by governance principles such as transparency, integrity, and both internal and external oversight.

3. Cybersecurity impacts the digital economy by protecting infrastructure containing vast amounts of data and information, ensuring

security against breaches, and ultimately safeguarding the digital sovereignty of states.

4. Digitizing public service management represents a positive transformation, as it enhances transparency and increases states' responsibility to protect their digital systems, thereby reducing corruption.

5. Combating electronic corruption positively reflects on the state, as it provides greater guarantees for protecting its digital sovereignty.

6. Many developed countries have successfully protected their digital sovereignty from corruption-related cybercrimes due to their advanced capabilities, including the digitization of services. In contrast, most developing countries, despite having the potential to protect their digital sovereignty, are currently undergoing numerous reforms to address these challenges.

Second: Recommendations

Based on the above, I have arrived at the following proposals:

- Strengthening governance principles to combat corruption, including transparency and electronic participation.

- Establishing an appropriate legal framework to improve government performance and fight corruption, similar to European countries, which adopted Regulation (EU)2024/1183 on April 11, 2021, amending Regulation (EU) No. 910/2014 on European digital identity within their internal legal systems.

- Developing an integrated digital infrastructure, particularly in most developing countries, can curb the phenomenon of electronic corruption.

- Digitally empowering individuals ("digital citizens") with the necessary skills for digital transformation, as this serves as a driving force for electronic advancements across various sectors in developing nations.

- Enhancing international cooperation in combating electronic corruption to ensure the protection of digital sovereignty.

Recognizing that digitalization is a double-edged sword: as technology advances, methods of committing corruption-related crimes also evolve, posing significant challenges and threats even to major nations.

References

- Aal Hammad, T. A. (2008). *E-Commerce: Electronic, Financial, Marketing, and Legal Dimensions*, 1st Edition. Cairo: Al-Dar Al-Jamiaa Al-Jadida.
- Abdel Majid, A. M. (2014). *Corruption (Definition – Forms – Its Relation to Other Criminal Activities)*, Part One. Dar Al-Nahda, Cairo, 1st Edition.
- Abdel Rahman, M. A., & Al-Barhami, A. (n.d.). *Cyberspace and Its Impact on Concepts of Power and Security*. Vol 16. Egypt: Journal of Politics and Economy.
- Abdelali, H. (2012-2013). *Legal Mechanisms for Combating Administrative Corruption in Algeria*, PhD Thesis. Biskra: Faculty of Law and Political Science, Mohamed Khider University.
- Abdelwahab, B. (2016-2017). *Contractor Guarantees in International Transactions*, PhD Thesis, Law Specialization. Annaba: Faculty of Law and Political Science, Badji Mokhtar University.
- Aiger, A. (2024, June). *Digital Sovereignty in a Globalized World: Challenges and Stakes*. Journal of Legal and Political Studies, Vol. 10, No. 2,.
- Al-Hijazi, A. F. (2004). *E-Government and Its Legal System*, , 1st Edition. Alexandria: Dar Al-Fikr Al-Jamei.
- Al-Housh, A. B.-S. (2006). *E-Government: Reality and Prospects*. Cairo: Nile Group for Arab Studies.
- Al-Khashash, K. (2015). *Knowledge Economy: Sustainable Wealth*, 1st Edition. Egypt: Dar Al-Kitab Al-Hadith.
- Al-Khoury, A. M. (2021). *Digital Government: Concepts and Practices*. The Arab Organization for Administrative Development, The Arab League.
- Al-Khoury, A. M. (2008). Previously cited reference, p. 197. Tarek Abdel Aal Hammad, *E-Commerce: Electronic, Financial, Marketing, and Legal Dimensions*, 1st Edition. Cairo: Al-Dar Al-Jamiaa Al-Jadida.
- Al-Najjar, F. (2007). *Digital Economy: The Internet and the Restructuring of Investment, Stock Markets, and E-Banking*, 1st Edition. Al-Dar Al-Jamiaa Al-Jadida, Egypt.
- Al-Qahwaji, A. A. (1988). *Special Criminal Law*. Alexandria: New University House.
- Al-Shadhili, A. (2009). *Crimes Harmful to Public Interest*. Egypt: University Publications House.
- Al-Shawabkeh, M. A. (2011). *Computer and Internet Crimes: Cybercrime*. Jordan: Dar Al-Thaqafa.
- Article48. (n.d.). the United Nations Convention Against Corruption.
- Article49. (n.d.). the United Nations Convention Against Corruption.
- Article50. (n.d.). the United Nations Convention Against Corruption.
- Boukriane, A., & Ktaf, S. (2022). *Combating Cyber Crimes in Light of International Agreements*. Journal of Legal and Economic Research, Algeria, Issue 2, Vol. 5.

- El-Sayed Henedy, N. I. (2017). Global Experiences in Implementing E-Governance and the Challenges of Its Application in Arab Countries. *Scientific Journal of the Faculty of Economic Studies and Political Science*, Vol. 4, Issue 2.
- Hegazy, A. F. (2003). *The Legal System for Protecting E-Government*, 1st Edition. Dar Al-Fikr Al-Arabi, Alexandria.
- Johari, A. F., & Taha Hassan, T. M. (2013). Digital Information Security and Ways to Protect It Under Current Legislations . *Egyptian Journal of Information Security*.
- Kazem, H. (2000). *Total Quality Management*, 1st Edition. Amman: Dar Al-Maseera.
- Khalifa, I. (2019, April). Artificial Intelligence: Features and Implications of Smart Machines' Dominance Over Human Life. Abu Dhabi: Dar Al-Mustaqbal, Issue 6.
- Manaama, O. A., & Al-Zoubi, J. M. (n.d.). *E-Government: Theory and Practice*. Jordan: Al-Halabi Publications.
- Mekaoussi, S., Salihah, R., & Mekaoussi, H. M. (2018). The Role of Work Ethics in Achieving the Principles of Social Responsibility and Reducing Administrative Corruption in Business Organizations. *Reading and Knowledge Journal*, Issue 206,1st Edition.
- Mohamed, M. A. (2003). Digitization as a Mechanism for Reengineering Public Facilities to Reduce Administrative Corruption. *Journal of Legal and Economic Studies*, Issue 1, Vol. 9.
- Mokaddam, S. (2021). Requirements for Activating E-Government. *Journal of Intellectual Excellence in Social and Human Sciences*, Vol. 3, No. 3.
- Mokhtar, H. (2007). *The Impact of E-Administration on the Management of Public Facilities and Its Applications in Arab Countries*, Master's Thesis. University of Algiers, Youssef Ben Kheda.
- Sabbagh, R., & Ben Ashnahou, F. (2020). Pioneering Experiences in Combating Corruption: A Case Study of Singapore and Nigeria. *Journal of Economics and Business*, Vol. 2, Issue 19.
- Saber, M. A. (2009). *Marketing and E-Commerce*, 1st Edition. Dar Al-Fikr Al-Jamii, Alexandria,.
- Saqr, N. (2005). *Computer and Internet Crimes in Algerian Legislation*. Algeria: Dar Al-Hilal for Media Services.
- Ziad, W. A. (2022). An Analytical Study of the Arab Digital Economy Index: A Case Study of a Group of Arab Countries in 2020. *Journal of Contemporary Economic Studies*, Vol. 7, No. 1, 1st Edition.
- Zineb, N., & Majid, S. (2020). E-Public Services in Algeria. *Journal of Economic and Administrative Research*, Vol. 14, No. 5.