

Analysis of the governmental and legal factors influencing e-commerce implementation in Algeria

OUARAS Selma¹ / LALAOUI Amor²

¹ PhD student, High School of Commerce, Kolea, Algeria), etd_ouaras@esc-alger.dz

² Professor, High School of Commerce, Kolea, Algeria), a_lalaoui@esc-alger.dz

Received: 02/03/2021

Accepted: 01/06/2021

Published :08/06/2021

Abstract:

The development and the high penetration of internet brought many opportunities for new business models and e-commerce is one of the fastest growing parts of the current digital economy and has the potential to improve efficiency and productivity in many areas.

The primary goal of this work is to identify and present an overview of the major governmental and legal factors that play a role in e-commerce implementation and the related obstacles that may hinder e-commerce from taking off as it should in Algeria.

Keywords: Algeria, e-commerce, internet, information technology.

Jel ClassificationCodes: : O30

Corresponding author: OUARAS Selma, e-mail: etd_ouaras@esc-alger.dz

1. INTRODUCTION:

One of the major changes of the last decades is without doubt the emergence of the “information society” or the digital age, known for its flexibility, speed and technology (Racolta-Paina & Luca, 2010). This development changed the lives and the behaviors of individuals and organizations and caused major economic upheavals. Qin (2009) states that among these changes, e-commerce, brought about by the internet, is one of the most significant scientific accomplishments since the industrial revolution, with a deep influence over mankind.

In 2019, e-commerce is a familiar and a popular retail channel in developed countries, but it is still considered an innovation in less developed countries (Almoussa, 2013). However, e-commerce has been predicted to be a new driver of economic growth for those developing countries, (Humphrey, Mansell, Paré, & Schmitz, 2003).

Algeria is the tenth largest country in the world by land area and has a population of approximately 42 million. It is considered one of the richest in Africa due to the oil and gas reserves. Algeria's economy primarily relies on hydrocarbon exports and other sectors are less developed and suffer from negligence. And among these sectors: e-commerce.

In an economy where lack of time and products availability make the needs of the consumers more difficult to satisfy, the integration of the digital tool is not a luxury but a necessity. There is a profound change in the behavior of the Algerian consumer who now demands a digital revolution on the suppliers. Indeed, surveys show that more customers claim to prospect on the internet before considering a purchase in store or online (El Watan, 2019b).

Official figures on e-commerce sales in Algeria are not available; however, according to the Algerian National Trader and Artisan Association, the market potential is estimated at 5 billion USD (Lloyds Bank Trade, 2020). The government seeks to increase internet

penetration rates with the goal of boosting e-commerce in the country with the launch of 3G in 2013 in 4G in 2016, and the adoption of the 18-05 law on e-commerce in 2018.

Although the first Algerian online markets appeared in 2009, e-commerce was introduced in 2014 with the arrival of Pan-African Jumia, the country's largest general online retailer. The website had approximately 1.5 million users and received between 15,000 and 20,000 orders per month in 2017. (50% y-o-y increase). The number of visitors rose to 1.7 million at the beginning of 2018. Zawwali, Batolis and Dzboom are the leading online retailers in the country (Lloyds Bank Trade, 2020).

2. THE STATE OF E-COMMERCE IN ALGERIA, A LITERATURE REVIEW:

E-commerce implementation and adoption have been widely discussed among the academic, however, the literature of early adopter countries is more abundant and diverse than the literature on developing countries. For this review, we focused on Algeria in particular.

Chaabna and Wang (2015) in their most detailed study of Algeria investigated and analyzed the state of e-commerce following Porter's diamond to express and cover the main factors affecting the development of e-commerce in Algeria. The authors claim that the majority of North African countries had made a significant progress in the area of e-commerce because they considered it as an important component of their ICT strategies whereas Algeria relegated it to a secondary stage.

In another paper, Chaabna and Wang and Lutf (2014) outlined the reasons behind the lack of e-commerce in Algeria. They extracted three main infrastructures (telecommunication, legal and supported services) and reached the conclusion that there is no specific or effective initiative, policy, or strategic plan from the Algerian state to encourage e-commerce development in the country.

In their paper "electronic commerce in Algeria: toward new forms of online selling", Makhloufi and Matouk (2013) describe the e-commerce reality in Algeria based on interviews with specialists on the field, stating that e-commerce, as it is practiced in Algeria, doesn't meet the basic criteria and that it is informal. Makhloufi and Matouk (2013) also draw our attention on the different forms of online selling and payment and conclude that e-commerce development is a mean to economic growth, as did Said Brika (2011) in his paper on the role of e-commerce in the growth of the Algerian economy.

Medjedel (2013) surveyed local SME managers the Ghardaia province in Algeria and concluded that their perceptions and attitudes towards e-commerce are positive and that they are well aware of its importance for their business, the author believes that this result can be used as a laying foundation for e-commerce strategy for SMEs. Medjedel also mentions that the lack of resources and the inadequacy of the local and national environment are the two main barriers to e-commerce adoption by SMEs.

3. GOVERNMENTAL AND LEGAL FACTORS INFLUENCING E-COMMERCE DEVELOPMENT IN ALGERIA:

The rapid advance of technology poses a challenge for the legal and regulatory frameworks of all states, especially where legal and juridical institutions are underdeveloped in developing countries.

In most countries, e-commerce is covered by various legal frameworks including general consumer protection and contracts laws, specific e-commerce laws, legislation combating fraudulent, misleading and unfair commercial practices, privacy, copyright and telecommunications laws and regulations. In addition, shipping products internationally introduces new regulatory issues such as technical regulations or labeling of consumer information rules. In some instances, these frameworks may overlap, but in others, they may not cover all issue areas (OECD, 2013).

Kalinic (2014) presented the main benefits of e-commerce for consumers and analyzed the state of e-commerce development and the most important barriers to higher e-commerce adoption, both on demand side (consumers) and supply side (retailers). He detailed the most important barriers such as internet penetration rate and the problems with cross-border trade, international payments, security and other legal issues.

Lawrence and Tar (2010) discussed the issues obstructing e-commerce in developing countries by focusing on the infrastructural, socio-cultural, socioeconomic and political barriers.

Jarvenpaa and Tiller (1999) argue that technology and management strategy choices are increasingly related to the political, social and regulatory climate in which e-business finds itself. They quote Steve Case, Chairman of AOL: "I believe over the next few years the future of the Internet will be determined more by policy choices than technology choices."

Zaied (2012) divided e-commerce adoption barriers into 6 categories: social and cultural, technical, economical, political, organizational and legal and regulatory barriers. He found that the most important barrier is the technical followed by legal and regulatory and political barriers.

In a broad literature review, Chitura et al. (2008) cited inadequate legal systems among the e-commerce adoption barriers.

Based on the literature review conducted for this study, we extracted the following factors:

3.1. Government stability:

The government's participation in providing various sorts of intervention has been cited as a driving force behind the development of e-commerce (Apulu, Latham, & Moreton, 2013; Chaabna & Wang, 2015; Chitura, Shepherd, Dube, & Bolongikit, 2008; Humphrey, Mansell, Paré, & Schmitz, 2003; Lawrence & Tar, 2010)

Government policies have been described as a significant determinant of IT adoption, in particular those related to improving telecommunications infrastructure, costs and services,

a fair tax policy for online transactions, financial incentives, a national e-commerce strategy, enhancement of government e-commerce use, and the provision of e-commerce training (Zhu & Thatcher, 2010).

Government instability affects the possibility to implement an e-business strategy (Shemi, 2012). This could be the product of evolving legal frameworks, trade policies, privacy regulations etc. as a result of which government stability is seen as an integral force that impacts other macro-environment factors.

Additionally, corruption is one of the factors that inhibit the effective utilization/adoption of sophisticated ICT solutions among SMEs in developing countries (Apulu, Latham, & Moreton, 2013).

While the risk of political instability has been growing steadily in Algeria since early 2019, the country is currently facing an economic crisis.

3.2. Internet access regulations:

The first institution to offer an Internet service before market liberalization was the CERIST in 1994. It also provided Internet facilities to most research organizations. In 1998, the government started licensing private ISPs in order to keep up with the increasing demand (Chaabna & Wang, 2015). There were 71 licensed ISPs in 2007, but only 39 were actively operating. Due to unpaid license fees, a great number of the country's ISPs lost their licenses in 2011 (Lange, 2012).

Algeria's main operator of internet services and fixed and mobile telephone services is Algérie Télécom. The company has been slated for privatization, but the process has been repeatedly delayed (Wikipedia, 2020).

According to LCAs (2020), only Algerian citizens are permitted to provide Internet services for commercial purposes. Requests for the provision of such services must be addressed to the Minister of Telecommunication setting out details of proposed services and means of access and a technical study will define the architecture, facilities, software, partners as well as connection modes.

Open Net Initiative (2009) found no evidence that the government is restricting Internet access by technical filtering, however the state's primary form of control is through the control of Internet infrastructure and the monitoring of content. Internet users and Internet service providers (ISPs) can face criminal penalties for posting or authorizing the posting of content considered to be contrary to public order or morality.

3.3. Taxation policy:

One of the challenges of e-commerce implementation and development is the taxation of e-commerce operations. The growth of international e-commerce calls for the need of an international coordination of tax policy. Indeed, countries would not allow the ever-increasing amount of international e-commerce to avoid taxation, which they cannot do without a close cooperation with other countries.

In the proposed financial bill of 2019, Algerian authorities included a 5% tax on e-commerce (Tir, 2018). Experts claimed that the tax was too high compared to other countries where e-commerce is developed, (e.g. a 2% tax in France) and that it will not encourage the Algerian consumer to adopt this new channel (El Watan, 2019a).

In the 2020 financial law project, online sales of digitized goods and certain services provided electronically in Algeria will be subjected to the reduced VAT rate of 9% (Tir, 2018). The authors of this project explain that this proposal aims to “adapt the Algerian tax system to the changes of the consumer society in view of the reality of e-commerce and to optimize the taxation of this new electronic business.” (N’tic web, 2019).

3.4. Cross-border e-trade:

Cross-border trade in e-commerce (online shopping in another country) represents an important potential. For e-retailers, it introduces new potential markets. For consumers, purchasing internationally offers a wider range of products and prices, and allows those who live in remote areas to access goods otherwise unavailable to them. However, cross-border e-trade faces many obstacles such as different laws and regulations, taxation, problems related to international payments and currency, security and privacy, language barriers, low credit card penetration and poor logistics (Chotard, 2017)

In Algeria, the 18-05 law on e-commerce sets conditions for conducting cross-border e-transactions, stipulating that some services, materials and goods should be prohibited from being purchased online, such as gambling, lotteries, alcoholic drinks, tobacco, medicines, products infringing on intellectual property rights, in addition to those that may harm national security.

The article 7 from the 18-05 law states that the E-sale of a good or service by a resident vendor to an e-consumer established in a foreign country is exempt from the formalities of foreign trade control and exchange rates, when its value does not exceed the equivalent in dinar of the limit set by the law in force.

If the electronic purchase is made from Algeria by an e-consumer from an e-vendor established in another country and- exclusively intended for a personal use-, it is also exempt from the formalities of the foreign trade and the exchange rates when its value does not exceed the equivalent in dinar of the limit fixed by the law in force.

The Government has recently announced that in order to maintain the national economy and sovereignty, it does not plan to open its e-market to foreign companies (The Maghreb Times, 2018). And, although the global leaders Amazon and AliExpress are not present in Algeria, several intermediary companies provide transshipment services for orders coming from these websites.

3.5. Encryption:

E-commerce relies on encryption to ensure data security and integrity by controlling data access and protect information on the internet to improve consumer trust. Encryption is the encoding of data using an algorithm so that it is incomprehensible to anyone if the data transmission is intercepted, unless the key is known decrypt the file. An arms race is

underway: new security measures are being built by technologists while others are working on ways to crack the security systems.

While this technology protects the confidentiality, authenticity and integrity of businesses and personal information it may be used by criminals and terrorists to conceal their communications about illegal matters.

Algeria is one of the countries to impose controls on the import, sale, use and export of cryptographic technology due to its associated risks. In Algeria, users have legally needed an authorization for the use of encryption software and hardware from the ARPT (Autorité de Régulation de la Poste et des Télécommunications) since 2012. The Algerian legal framework still lacks regulations that define encryption products and monitor their domestic use (Chaabna & Wang, 2015)

3.6. Domain name registration:

Since the adoption of the 18-05 e-commerce law, online marketplaces will have to host their websites in Algeria and need to be listed in the country's commercial register.

In Algeria, the country code Top-Level Domain (ccTLD) is Dot.dz. The domain name registry is operated by NIC.DZ (Network Internet Center), and CERIST oversees its management.

To apply for a .dz domain name there are some conditions (NIC-DZ, 2018):

- It must be an organization with a permanent presence in Algeria.
- Individuals cannot apply for domain names—only company names or trademarks are allowed for domain names.
- The registrant must have completed trademark registration in Algeria, and have a copy of Algerian company incorporation.
- The requested domain name must match the company name or trademark name, and generic names or those which are offensive, misleading, or contrary to Algerian law is prohibited.
- Algerian domain authorities require name-servers located in Algeria.

Algeria's domain name system is problematic for some reasons (Chaabna & Wang, 2015):

- The (.com) domain names are more popular and some Algerian companies prefer it to a (.dz) one.
- Only company names or trademarks are allowed to apply for a domain name.
- The registration of a (.dz) domain takes three weeks or more, which is a long time compared to other registration authorities.

In 2020, NIC.DZ announced more than 12000 domain names registered in (.dz).

3.7. Personal data privacy and security:

Privacy and security are the emerging issues in e-commerce (Muneer, Razzaq, & Farooq, 2018). The growth and trust of an e-commerce business depend on the security and privacy policy of the site (Smith & Shao, 2007).

Consumers' personal data is increasingly being collected, used and shared by various types of business actors and a growing number of third parties (including social media,

online retailers and data brokers), very often without consumer knowledge or consent, so a number of privacy and security challenges have been raised (Kalinić, 2014).

The 2018 Algerian law on the Protection of Individuals in the Processing of Personal Data include clauses covering most of the topics required to be contained in a data privacy law: consent conditions of the data subject about data processing, the right to modification and erasure, and data protection requirements for children.

In addition, the new legislation mandates that all processing operations of personal data must first be subject to a declaration to the national authority (Algeria Press Service, 2018). This same authority (Autorité Nationale de Protection des Données à Caractère Personnel) is allowed to deliver administrative sanctions in case of a breach. The sanctions for the processing of one's sensible data are very strict: it can involve not only a monetary fine, but also two to five years of prison.

3.8. Consumers protection regulation:

Main issues related to consumer protection are information disclosure, fraud and misleading commercial practices, privacy issues, dispute resolution and redress (OECD, 2013). The information on consumer rights are not always provided in a clear manner to consumers (Helberger, 2013), so they may not be able to easily access, read, review and/or preserve the terms before completing the transaction. Therefore, fraud and misleading commercial practices associated with e-commerce are ongoing challenges that can cause consumer problems.

In order to ensure the security of e-commerce process, the e-commerce Algerian law 18-05 defines the respective obligations of the e-consumer and the e-supplier. One of the obligations of the e-supplier is to guarantee the security of the information systems and the confidentiality of the personal data collected in the context of the completion of commercial transactions.

Any e-commerce transaction must be accompanied by an electronic commercial offer and formalized by an e-consumer approved electronic contract. Law 18-05 specifies the characteristics of the commercial offer and the mandatory statements that should be included in the e-contract between the two parties.

Concerning the obligations of the e-consumer, the bill stipulates that he is required to pay the agreed price in the electronic contract as soon as this document is formed.

3.9. E-transactions:

At the end of 2016, e-payment systems were introduced in the country, and online shopping has developed steadily since then. Following that trend, Algérie Poste (Algerian National Postal Services) is set to introduce an electronic wallet in 2018 to facilitate online purchases, which should further boost e-commerce. Currently, cash on delivery is the preferred payment method among Algerians, as in most countries in the Arab world and Northern Africa.

According to the e-commerce Algerian law, the payment in the electronic commercial transactions must be carried out through authorized means of payment. It is conducted remotely or upon delivery of the product.

When the payment is electronic, it is made through special payment platforms, set up and operated exclusively by banks authorized by the Bank of Algeria or Algeria Post, and connected to any type of electronic payment terminal.

The amount of e-payment transactions, made between January and September 2019, is 323.9 million dinars, not far from the amount recorded in 2018, which was 332.5 million dinars. During the same period, only 142,507 transactions were carried out for 33 web-merchants, distributed over the telecom sectors (100,348 transactions), electricity / water (29,801), insurance (6,207), services (3582), transport (2122) and administrative services (2122) (Zahir, 2019).

The Algerian population prefers using cash and has limited access and/or a lack of desire to use banking services, credit and debit cards. The biggest challenge of the Algerian banking system is to regain the consumer's trust and to create a culture of e-payment.

4. CONCLUSION:

Despite the existing limitations and obstacles, e-commerce has become relevant to Algerian authorities. An effort has been made from the government to adapt to the new digital age with the adoption of e-commerce, cyber criminality, and data protection laws.

However, in order to successfully implement e-commerce, the authorities must take more measures, such as improving the internet speed and penetration rate and facilitating internet access, harmonizing the legal documents and regulations related to e-commerce on national and international level and adopt more encouraging tax policies regarding electronic transactions.

Despite the efforts made by the government, the weakest link remains e-payment, indeed, to date, online sales sites use cash payment at the delivery and there is a lack of awareness of the usage of credit cards and trust in electronic means.

The Algerian authorities must provide support to the e-merchants and e-consumers at all levels, this will only be beneficial for companies and customers on the one hand, and for the state economy on another hand.

5. BIBLIOGRAPHY LIST :

- Algeria Press Service. (2018, March 21). *Creation of national authority on personal data protection*. Consulté le December 26, 2020, sur Algeria Press Service: <https://www.aps.dz/en/algeria/23406-creation-of-national-authority-on-personal-data-protection>
- Almoussa, M. (2013). Barriers to E-Commerce Adoption: Consumers' Perspectives from a Developing Country. *IBusiness* , 5 (2), pp. 65–71.
- Apulu, I., Latham, A., & Moreton, R. (2013). Issues of ICT adoption amongst SMEs in Nigeria. *Int. J. Management Practice* , 6 (1), pp. 58–76.

- Brika, S. (2011). The role of e-commerce in the growth of economy: case of Algeria. *eBusiness & eCommerce eJournal* , 3 (15).
- Chaabna, S., & Wang, H. (2015). Analysis of the State of E-commerce in Algeria. *International Journal of Marketing Studies* , 7 (2), pp. 44–58.
- Chaabna, S., Wang, H., & Lutf, M. (2014). A National Perspective on the Factors Involved in the Lack of E-commerce in Algeria. *The Thirteen Wuhan International Conference on E-Business*, 5, pp. 259-266. Wuhan.
- Chitura, T., Shepherd, M., Dube, T., & Bolongkikit, J. (2008). Barriers to electronic commerce adoption in small and medium enterprises: A critical literature review. *Journal of Internet Banking and Commerce* , 13 (2), pp. 1-13.
- Chotard, L. (2017, December 14). *Quels défis relever pour le e-commerce cross border ?* Consulté le November 18, 2020, sur TextMaster: <https://fr.textmaster.com/blog/defis-e-commerce-cross-border/>
- El Watan. (2019b, November 30). *Jumia, Beauty club, Yassir... : Le boom du commerce électronique*. Consulté le November 19, 2020, sur El Watan: <https://www.elwatan.com/edition/actualite/jumia-beauty-club-yassir-le-boom-du-commerce-electronique-27-11-2019>
- El Watan. (2019a, November 7). *Projet de loi de finances pour 2020 : ce qui va augmenter*. Consulté le November 19, 2020, sur El Watan: <https://www.elwatan.com/edition/actualite/projet-de-loi-de-finances-pour-2020-ce-qui-va-augmenter-06-11-2019>
- Helberger, N. (2013). Form Matters: Informing Consumers Effectively. *Amsterdam Law School Research, Institute for Information Law Research* (2013-10).
- Humphrey, J., Mansell, R., Paré, D., & Schmitz, H. (2003). The Reality of E-commerce with Developing Countries. *London: Media Studies, LSE* .
- Jarvenpaa, S. L., & Tiller, E. H. (1999). Integrating market, technology, and policy opportunities in e-business strategy. *Journal of Strategic Information Systems* , 8 (3), pp. 235-249.
- Kalinić, Z. (2014). Barriers to higher and faster adoption of e-commerce. *3rd International Scientific Conference Contemporary Issues in Economics, Business and Management - EBM 2014. 1*. Serbia: Faculty of Economics, University of Kragujevac.
- Lange, P. (2012). *Algeria Internet and broadband market, overview and forecasts*. Consulté le November 26, 2020, sur Paul Budde Communication Pty Ltd: <http://www.budde.com.au/Research/Algeria-Telecoms-Mobile-Broadbandand-Forecasts.html>
- Lange, P. (2012). *Algeria key statistics, regulatory and fixed-line telecoms*. Consulté le November 26, 2020, sur Paul Budde Communication Pty Ltd: www.budde.com.au/Research/Algeria-Key-Statistics-Regulatory-and-Fixed-Line-Telecoms-Overview.html
- Law No. 18-05 of May 10, 2018, related to electronic commerce,. (s.d.). *Official Gazette No. 28 dated 16/05/2018* . Algeria.
- Lawrence, J. E., & Tar, U. A. (2010). Barriers to ecommerce in developing countries. *Information, Society and Justice* , 3 (1), pp. 23-35.
- LCAs. (2020, November 18). *3.4 Algeria Telecommunications - Logistics Capacity Assessment - Digital Logistics Capacity Assessments*. Consulté le December 26, 2020, sur Logistics Capacity Assessments (LCAs): <https://dlca.logcluster.org/display/public/DLCA/3>.

- Lloyds Bank Trade. (2020, December). *E-commerce in Algeria - Buying and Selling* - . Consulté le November 17, 2020, sur Lloyds Bank International Trade Portal: <https://www.lloydsbanktrade.com/en/market-potential/algeria/ecommerce>
- Makhloufi, A., & Matouk, B. (2013). Le commerce électronique en Algérie: vers de nouvelles formes de vente en ligne.
- Medjedel, A. (2013). Perceptions & attitudes of Algerian SMEs managers towards e-commerce. *Interdisciplinary Journal of Contemporary Research in Business (IJCRB)* , 4 (10), pp. 279–297.
- Muneer, A., Razzaq, S., & Farooq, Z. (2018). Data Privacy Issues and Possible Solutions in E-commerce. *Journal of Accounting & Marketing* , 7 (3).
- N'tic web. (2019, December 3). *Ce que prévoit le PLF 2020 pour le secteur des TIC*. Consulté le November 15, 2020, sur Nticweb.Com: <https://www.nticweb.com/it/9842-ce-que-pr%C3%A9voit-le-plf-2020-pour-le-secteur-des-tic.html>
- NIC-DZ. (2018). *Charte de Nommage du .DZ*. Consulté le December 16, 2020, sur Centre de Recherche sur l'Information Scientifique et Technique CERIST: http://www.nic.dz/images/pdf_nic/charte.pdf
- OECD. (2013). Electronic and Mobile Commerce. *OECD Digital Economy Papers* (228).
- OpenNet Initiative. (2009, August 6). *Algeria | OpenNet Initiative*. Consulté le November 13, 2020, sur OpenNet Initiative: <https://opennet.net/research/profiles/algeria>
- Qin, Z. (2009). *Introduction to E-commerce (Tsinghua University Texts) (2009th ed.)*. Springer.
- Racolta-Paina, N. D., & Luca, T. A. (2010). Several Considerations Regarding the Online Consumer in the 21th Century - a Theoretical Approach. *Management & Marketing* , 5 (2), pp. 85– 100.
- Shemi, A. P. (2012, December). Factors Affecting E-commerce Adoption in Small and Medium Enterprises: An Interpretive Study of Botswana. (*PhD Thesis*) . Salford Business School, Salford, UK.
- Smith, R., & Shao, J. (2007). Privacy and e-commerce: a consumer-centric perspective. *Electronic Commerce Research* , 7, pp. 89-116.
- The Maghreb Times. (2018, February 9). *Algeria says won't open market to foreign e-commerce operators*. Consulté le March 14, 2020, sur The Maghreb Times: <https://themaghrebtimes.com/02/09/algeria-says-wont-open-market-to-foreign-e-commerce-operators/>
- Tir, I. (2018, Septembre 10). *Vers une taxe de 5% sur le e-commerce*. Consulté le November 15, 2020, sur Le Soir d'Algerie: <https://www.lesoirdalgerie.com/actualites/vers-une-taxe-de-5-sur-le-e-commerce-10948>
- Wikipedia. (2020, December 1). *Internet in Algeria*. Consulté le December 26, 2020, sur Wikipedia: https://en.wikipedia.org/wiki/Internet_in_Algeria
- Zahir, R. (2019, Octobre 19). *142 507 Transactions seulement effectuées !* Consulté le December 10, 2020, sur Le Chiffre d'Affaire: <https://lechiffredaffaires.com/images/pdf/2019/lca19102019.pdf>
- Zaied, A. N. (2012). Barriers to E-Commerce Adoption in Egyptian SMEs. *International Journal of Information Engineering and Electronic Business* , 4, pp. 9-18.
- Zhu, L., & Thatcher, S. (2010). National information ecology: A new institutional economics perspective on global e-commerce adoptio. *Journal of Electronic Commerce Research* , 11.