

# Information Technology's Contribution to Non-Oil Algerian Export Growth.

*Contribution des TIC à la croissance des exportations non pétrolières.*

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## **Abstract:**

*This study employs a descriptive approach to establish a theoretical basis for economic recovery and growth in Algeria. It investigates the Contribution of ICT in export augmentation.*

*The findings reveal the pivotal role of electronic interactions among various stakeholders in enhancing export outcomes, the creation of a unique website is shown to play a critical role in increasing electronic exports as a proportion of total national exports.*

**Keywords:** CIT, exports, e-commerce, e-marketing, website.

**Jel Classification Codes:** L81, M16, M31.

## **Résumé:**

*Le but de cette étude était de décrire les fondements théoriques de la façon de stimuler l'économie et de favoriser la croissance économique dans le pays, en utilisant l'approche descriptive de la contribution des TIC à l'augmentation des exportations algériennes.*

*Enfin, nous découvrons le rôle des interactions à distance grâce à la mobilisation d'un site Web distinct qui contribue à accroître les exportations électroniques à l'échelle des exportations globales.*

**Mots clés:** TIC, export, e-commerce, e-marketing, site web.

**Jel Classification Codes:** L81, M16, M31.

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## 1. INTRODUCTION

The rapid technological advancements and resultant changes in the external environment of organizations have led to the collapse of physical barriers and trade restrictions. This has given rise to new avenues for conducting international trade through e-markets, which enable cross-border transactions without geographic limitations. In response, the Algerian government has implemented a range of measures to support exports and embrace digital economy. This has entailed the adoption of a digital economic strategy aimed at increasing the efficiency and effectiveness of e-exports through innovative methods such as e-commerce and e-marketing. The establishment of a prominent website to facilitate economic interactions has contributed to the development of non-oil exports, which have increased from approximately 4.8 billion USD in 2021 to around 7 billion USD in 2022, despite the challenges posed by the covid-19.

which has been made possible through the implementation of effective supervisory mechanisms by the ALGEX. The overarching objective of this policy is to achieve a significant boost in the overall volume of international trade, encompassing both traditional and digital channels, with a specific target of reaching \$15 billion. A noteworthy development that enhances the prospects of expanding non-petroleum exports is the initiation of barter operations in the southern regions. This strategic move paves the way for a transition from the current achievement of \$7 billion in the ongoing year to an ambitious projected goal of \$10 billion by the end of the calendar year 2023. The attainment of this trajectory assumes even greater significance if the Ouenza Mine and the Gar Djebilet project successfully advance into the production phase, as it will effectively narrow the performance gap between projected objectives and realized outcomes. The focal point of this study is to investigate the following research problem: **What is the contribution of ICT to increase non-oil exports in Algeria?** This research problem engenders a constellation of related sub-questions, such as: What is the definition of ICT and e-commerce, and what are the underlying factors that facilitate their proliferation? What is the degree of contribution that ICT can make towards the expansion of non-oil exports in Algeria?.

- **Research Objectives:** The study aims to accomplish multiple objectives:

- To comprehend the concept of ICT and e-commerce. and to examine the modern techniques that can be employed in digital communication.
- To investigate the effective approach towards the transition from conventional export methods to electronic exports. and To evaluate the contribution of ICT to the amplification of non-oil exports in Algeria.
- **Research methodology:** we have employed a descriptive methodology as the most suitable approach to address it. which aims to describe the phenomenon under investigation. thus, we will gather data and information from a range of sources, including references and online resources, to describe the research topic.

## **2. Defining ICT And E-Commerce And Factors Influencing Their Proliferation**

### **2.1 Information Technology (ICT)**

The advent of ICT has greatly contributed to the emergence of novel and effective communication methods, providing consumers with extensive access to information on desired goods and services (Fayad & Paper, 2015, pp. 1001-1002). as a result, a vast majority of companies have established online platforms, such as e-Bay and amazon.com, to showcase their products and engage in e-commerce. this shift has ushered in new modes of interaction between various entities engaged in two-way communication, namely companies and customers. consequently, consumers now enjoy enhanced accessibility to the websites of the companies they currently transact with or aspire to engage with (Al-Bakri, 2019, p. 368). To harness the potential of the digital economy, ICT stands as a fundamental pillar in the contemporary economic landscape. the world is deeply influenced by the ongoing ICT revolution, which serves as the bedrock for shaping the modern era, expanding the boundaries of knowledge, and transforming human relationships with entities and the surrounding environment (VIPIN, BINDOO, & SATYENDRA, 2021, pp. 665-666) . this integration has enabled internet to consolidate various features of traditional communication tools, giving rise to a distinctive model known as digital communication. notably, digital communication plays an indispensable role in facilitating integrated marketing communications between businesses and consumers (B2C), as well as inter-business communications (B2B). as a result, this paradigm

shift has brought forth numerous advantages for internet users and stakeholders, including information exchange, freedom of choice, speed, accessibility, and cost-effectiveness (Al-Bakri, 2019, pp. 359-360). To gain insight into the essence of ICT, it is essential to examine various definitions put forth by scholars. among the definitions provided by (Rimas, Hamidi, & Zaouad, 2022, pp. 196-197) are the following:

- ICT denotes an assemblage of resources and apparatus indispensable for the processing of information. this encompasses computers, software applications, and indispensable networks that facilitate the generation, dissemination, retrieval, and presentation of information.
- Moreover, CT encompasses a broad spectrum of technological advancements employed in the operation, transmission, and storage of electronic information. this includes computer technology, communication tools, networking systems, facsimile machines, and an array of extensively utilized communication devices.

The aforementioned definitions shed light on the comprehensive nature of ICT, which encompasses a diverse array of tools for processing information in various forms. to discern the distinction between the terms "technology" and "technique" and to prevent any potential confusion, it is imperative to elucidate their fundamental disparities concisely (Fayad & Paper, 2015, p. 1003): **technology**, as a comprehensive concept, encompasses a social and ethical system characterized by its underlying philosophy and organizational structures. consequently, technology transcends the realm of technical equipment alone, as these techniques embody the values, culture, and civilization of the society that cultivates them. on the contrary, **technique** refers solely to a tool or apparatus devoid of the values, culture, and civilization of the society that gave rise to it.

## **2.2 E-Commerce**

The advent of e-commerce in 1995 brought forth a paradigm shift in business (catherine, 2008, p. 15), fueling organizations with optimism as they embraced the innovative approach to marketing and international trade facilitated by communication. this transformation often involved leveraging institutions rooted in traditional economies, distinguishing them from the digital economy that relies on internet-based transactions (Magdy, 2014, p.

121). Furthermore, the novel technological attributes of e-commerce through communication have shattered geographical barriers and engendered the emergence of new markets (Vlachos & Gutnik, 2016, pp. 17-18). traditional distributors heavily reliant on catalogs have capitalized on internet as an additional advantage, employing multi-channel distribution strategies such as brick-and-mortar establishments and online platforms "mortars, clicks". Moreover, e-commerce has empowered "pure players" to forge new business models (catherine, 2008, p. 8). Irrespective of the online merchant's origin, the longevity of any e-commerce model hinges on obtaining a competitive edge that resonates with consumers in terms of consumption or business clientele (Ziliang & Zeyu, 2016, pp. 6005-6006). consequently, the affordability of accessing information through internet has spurred consumer adoption, whether for online purchases or other purposes, particularly when comparing prices across various providers. The seamless nature of electronic communication (in contrast to traditional retail) has played a pivotal role, granting unrestricted access to e-commerce websites worldwide, around the clock, without the constraints of physical mobility and at reduced costs (Fayad & Paper, 2015, p. 1004). before delving into the concept of e-commerce, it is imperative to consider two distinct approaches, the first approach entails defining the scope of e-commerce, as elucidated by the organization for economic co-operation and development (OECD): "the sale or purchase of goods or services by a business, individual, government, or public or private organization through an electronic network". the second approach pertains to the disparities in internet-related statistics and its penetration, arising from their inherent heterogeneity. for instance, if we consider individuals who have accessed a website at least once annually or during a specific month, the internet user community varies based on age groups. some studies focus on individuals, while others emphasize the family unit. hence, caution must be exercised when employing such statistics (catherine, 2008, pp. 08-16).

As per the definition provided by (Rimas, Hamidi, & Zaouad, 2022, p. 219), e-commerce encompasses the conduct of business transactions utilizing internet or the exchange of goods and services facilitated through web pages. the world Trade organization (WTO) characterizes e-commerce

## Information Technology's Contribution to Non-Oil Algerian Export Growth

as a comprehensive framework encompassing production, distribution, promotion, and sales activities within a networked communication system. noteworthy instances of digitally disseminated merchandise include books and music recordings. the algerian legislative body, as documented in the algerian republic official gazette (Law18-05, 2018, p. 5) defines e-commerce as "the process whereby an electronic supplier proposes or guarantees the remote provision of goods and services to consumers through electronic communications".

### **Perspectives on the definition of e-commerce**

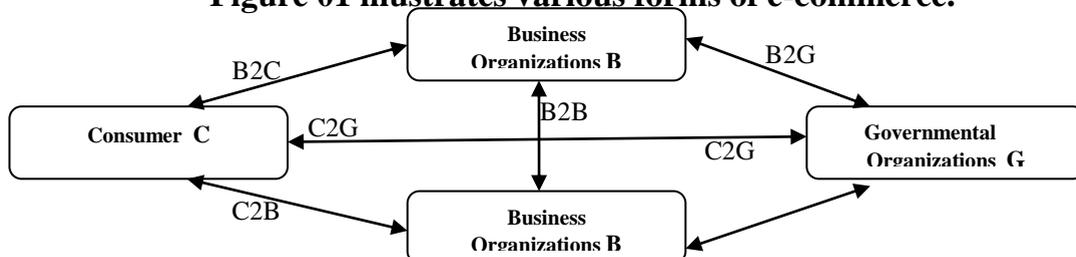
Perspective	Definition
<b>Communications</b>	Refer to the electronic transmission of goods, services, and information utilizing internet networks, accompanied by e-payment mechanisms.
<b>Business</b>	Within the realm of e-commerce, business represents a prominent application of digital technology in the domain of commercial exchanges.
<b>Service</b>	It plays a crucial role as a directed tool aimed at meeting the needs and desires of both organizations and individuals. It is designed to fulfill objectives such as cost reduction, expedited service delivery, and product quality enhancement.
<b>Performance</b>	signifies a tool that facilitates the seamless provision, purchase, and instantaneous exchange of products and information over the internet network.
<b>Collaboration</b>	It is a fundamental framework for mutual cooperation between selling and buying organizations.
<b>Community</b>	serves as a virtual gathering place that brings together diverse elements of the society. It provides a platform for knowledge sharing, exchange of ideas, and collaborative interactions among individuals, businesses, and other stakeholders.

**Source :** (Rimas, Hamidi, & Zaouad, 2022, p. 220)

### **2.3 International E-Commerce**

The concept entails active participation in a range of conventional international trade activities. these activities include exporting and importing, negotiating terms, accessing foreign markets, finalizing contractual agreements, facilitating shipping processes, and achieving e-delivery. this is accomplished through the utilization of internet and diverse modalities of e-commerce, as delineated by(Wang, 2014, pp. 142-143).

**Figure 01 illustrates various forms of e-commerce.**



**Source :** (VIPIN, BINDOO, & SATYENDRA, 2021, p. 667)

## **2.4 E-Marketing**

The proliferation of internet has bestowed upon consumers a considerable level of autonomy in accessing the requisite product information for their desired purchases. consequently, e-marketing has emerged as a rapid and cost-efficient conduit for communication. Termed as electronic home marketing (Skudiene, Auruskeviciene, & Sukeviciute, 2015, pp. 921-922), this approach manifests in diverse formats, encompassing internet and cable television, all unified by their shared advertising functionality. while this method has gained extensive traction in the United states (Ziliang & Zeyu, 2016, pp. 6003-6005), its adoption has experienced heightened traction in Europe and other continents, albeit to a relatively lesser degree. this discrepancy can be attributed to the necessitated presence of a comparatively sophisticated communication and responsiveness infrastructure within the realm of digital marketing communications, with t internet assuming a pivotal role as the crux of the communication process(Al-Bakri, 2019, p. 356). the concept of e-marketing is closely intertwined with e-commerce, as both are primarily focused on conducting trade e-transactions and targeting customer segments consisting of internet users. e-marketing represents a contemporary marketing paradigm that has gained widespread adoption among modern enterprises. it can be defined as the strategic utilization of ICT and communication to achieve marketing objective through direct communication networks, computer-mediated communications, and interactive digital media channels (Skudiene, Auruskeviciene, & Sukeviciute, 2015, pp. 920-921). furthermore, as highlighted by (Rimas, Hamidi, & Zaouad, 2022, pp. 208-209), it pertains to the promotion and sale of products via internet showcasing an organization's offerings and facilitating online transactions, capitalizing on the pervasive presence of internet users. additionally, it encompasses the dissemination of an organization's website to a broader spectrum of potential customers and users.

**2.4.1 The factors driving the adoption of e-marketing:** as expounded by (Rajab, Kwama, & Nyakweba, 2015, pp. 79-80), can be delineated as follows:

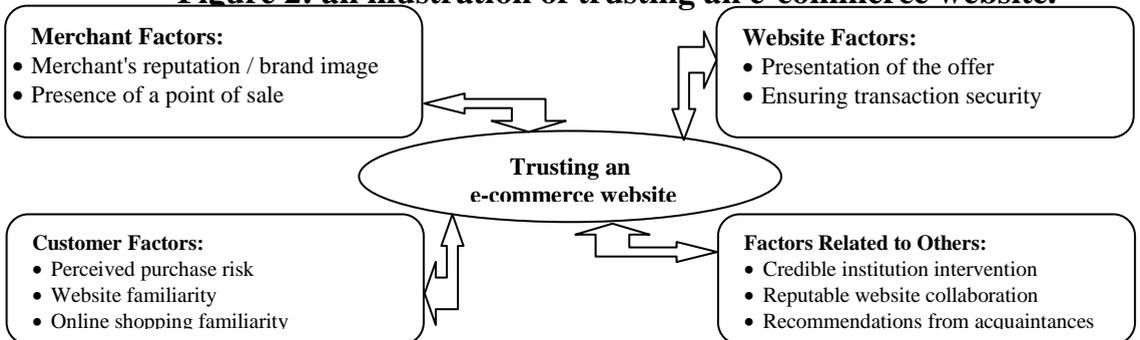
- **Market factor:** Amidst the dynamic and globalized markets of today, organizations operate within an environment characterized by market pressures and variables. these factors have contributed to the heightened influence and empowerment of consumers.
- **Society factor:** This factor encompasses the social responsibility of organizations in response to the prevailing circumstances and the evolving external environment. consequently, the effectiveness of e-marketing activities renders it a fitting conduit for organizations.
- **Technology factor:** The incessant growth and relentless innovations in e-commerce and e-marketing operations have engendered an inundation of information that permeates individuals and diverse organizations. this inundation is a result of the optimal utilization of internet. logically, these factors present a favorable impetus for organizations to embrace and amplify their e-marketing endeavors (Sebastiaan, Eveline, Joost, Katrien, Hennie, & Hubertus, 2014, pp. 237-241).

**2.4.2 The Website:** A website functions as a central hub comprising interconnected web pages, easily accessible through the official page. its design encompasses various elements such as artistic expression, color schemes, imagery, icons, dynamic elements, and video integration (catherine, 2008, p. 68). essentially, a website serves as the cornerstone of a company's online presence, effectively displaying its unique attributes, competitive advantages, and overall image. to harness its full potential as a marketing tool, a website should embody the key factors of success. as the website content reflects the company's commitment, it becomes imperative to regularly update and align it with the marketing plan. this not only conveys a sense of proactivity and attentiveness to potential customers but also improves its evaluation by prominent search engines, leading to increased visitor traffic. conversely, a poorly designed and inadequately curated website creates a negative impression among visitors. Hence, it is crucial to select an appropriate design and employ software that adheres to global standards for the contemporary internet landscape, aligning with the specific requirements of the website (Magdy, 2014, pp. 170-173).

**2.4.3 Trusting Websites:** The absence of trust in a website is widely recognized as a significant barrier to the expansion of e-commerce.

customers may encounter sellers who fail to fulfill their promised delivery conditions, resulting in a decline in trust. consequently, establishing a trustworthy interactive online environment is crucial for the success of e-commerce (Kalyanam & McIntyre, 2002, p. 495). Since virtual products can only be assessed visually, their quality hinges on the seller's credibility. trust encompasses various elements, including the seller's behavior, the product itself, the brand, the producing or distributing organization, and confidence in control mechanisms (such as technological trust, achieved through the use of security protocols that minimize technological intrusion). while most research on trust emphasizes the customer's perspective rather than the potential risks faced by sellers, buyers may engage in opportunistic behavior by concealing their true identity behind a pseudonym. thus, the legal aspect of trust holds utmost importance for both parties involved (catherine, 2008, pp. 78-81).

**Figure 2: an illustration of trusting an e-commerce website.**



Source: (catherine, 2008, p. 82)

### 3. Channels of Digital Communications

The realm of digital communications encompasses a diverse array of channels (Al-Bakri, 2019, pp. 364-366):

- **Website:** Serving as the virtual gateway, a company's website is accessed by internet users. the design of the website assumes paramount importance, with a high-quality and visually captivating interface instrumental in captivating visitors and fostering repeated engagement.
- **Mobile Marketing:** Among the most prevalent channels, mobile phones have emerged as a ubiquitous medium in digital communications. consumers readily embrace and positively respond to advertising messages and visually-driven promotional content.

- **Internet-Specific Advertising and Videos:** Engaging with recipients to augment viewership, by fostering interaction and fostering sharing behavior, businesses amplify the dissemination of their advertising content and videos across the digital landscape.
- **Micro sites:** These dedicated, standalone websites are financially supported by external advertisers, serving as extensions of the principal website. Each page caters to distinct facets of the company's offerings or promotional initiatives, thereby diversifying the channels through which information is conveyed.
- **Email:** As a widely employed marketing communication channel, email enables targeted dissemination of specific content or advertising messages. Its direct and personalized nature facilitates efficient communication with recipients and serves as a reliable means of engagement.
- **Online Community:** By fostering interactive communication and deploying strategically crafted advertising messages, businesses engage individuals within online communities, fostering increased brand exposure and enhancing communication efficacy.
- **Social Media:** businesses exploit their capacity to effectively target specific individuals based on their social interactions. this personalized approach enhances engagement and facilitates tailored communication strategies (VIPIN, BINDOO, & SATYENDRA, 2021, p. 666).

#### **4. Transitioning from traditional export to e-commerce export.**

The advent of ICT has played a pivotal role in facilitating the expansion of international trade transactions across diverse stakeholders. this catalyzed a transformation in consumer behavior from conventional patterns to novel characteristics observed in e-consumers. this paradigm shift has unlocked substantial export prospects through the global opportunities presented by the world wide web, traversing various trajectories. as a consequence, formidable enterprises have emerged, operating exclusively within the virtual realm and centering around services that have captivated millions of users. within this context, notable instances that demand attention include (Al-Zeboun, 2015, pp. 143-145):

- **The case of e-Bay:** Originally a modest venture, eBay has evolved into a colossal publicly traded corporation, with some regarding it as an

independent economic ecosystem. founded by a computer engineer, its primary objective was to empower individuals to engage in online trading. remarkably, the company has amassed sales figures of \$40 billion through its electronic platform, thereby generating nearly \$1 billion in profits. Its website attracted 150 million international visitors, with 60 million actively participating in purchasing activities.

- **The experience of David Filo:** Following the establishment of the renowned website Yahoo in 1990, backed by a capital investment of \$1 million, Filo took strategic steps to propel the company's growth. After just thirteen months, he orchestrated a successful public offering of 2.6 million company shares. each share was priced at \$13, attracting significant investor interest and contributing to Yahoo's remarkable trajectory. at present, he retains ownership of 6.4% of Yahoo's valuation, which amounts to a staggering \$2.7 billion.
- **The journey of Pierre Omidyar:** Eminent for its dominance in the realm of online auctions, the e-Bay platform has attained an impressive net profit of \$4.55 billion from its annual sales. Pierre Omidyar, the Italian-born founder and pivotal contributor to e-Bay's success, emphasizes that their profession extends beyond mere selling to fostering meaningful connections among individuals. e-bay's initial undertakings encompassed the acquisition of various e-commerce websites, subsequently expanding to incorporate the payment program PayPal and the online calling platform Skype (Catherine, 2008, p. 36).

In summation, the proliferation of the Internet has bestowed pivotal significance upon the tools and technologies employed in digital communications, emerging as a vital determinant in the prosperity and advancement of international trade transactions. consequently, numerous advanced nations have witnessed notable increases in their overall industrial output, accompanied by a paradigm shift in contemporary economic constructs on a global scale. notably, consumer behavior has transitioned from traditional norms to novel patterns exhibited by e-consumers. the boundaries once constraining end consumers within geographical limits have been obliterated, granting unrestricted access to desired products from any corner of the world. this phenomenon is largely attributed to the

profound impact exerted by the Internet on the global economy, which acts as a transformative force within the system itself and even influences governmental dynamics, given the fierce competition that numerous industries and services confront.

### **5. Contribution of ICTs to the growth of non-oil exports in Algeria.**

The positive contribution of ICT to export activity is evident based on the number of internet users accessing websites and revisiting them. recently, algerian institutions have recognized the role of ICT not only in the input side of production processes but also in the output side through the implementation of e-customer relationship management (E-CRM) strategies.

This interactive approach aims to achieve an optimal balance between the institution and satisfying customer needs to maximize profits and minimize costs. by utilizing digital media and better understanding customers, the use of the web has become a fundamental pillar in pre-sales (providing product information) and post-sales (repair, complaints) customer relationship management, with emphasis on foreign e-customers (especially importers) as the focal point of trade deals (exports). this is achieved by attracting and retaining customers, fostering loyalty, and utilizing them as free promotional channels for export institutions through distinctive interactions and transactions between local and foreign parties. thus, these interactions, enabled by this modern technology, contribute significantly to improving the position of the algerian economy within the global economy, diversifying domestic production, restraining imports of domestically produced goods in particular, protecting domestic products from global competition, and focusing on enhancing exports.

As per minister of trade kamel rezig, positive indicators highlight the potential for significant growth in non-oil exports. he emphasized the practical evidence of agricultural investors and domestic industrial entities adhering to rigorous quality standards and sanitary requirements, especially with algerian products gaining traction in markets with stringent regulations. this substantiates the compelling opportunity for expanding export activities. the minister expressed satisfaction with the remarkable achievements in product excellence and diversity within biskra province, positioning algeria to strengthen its presence in global markets, particularly

in europe and america. he emphasized that biskra province, alongside ouargla and oued souf provinces, will play a pivotal role as a prime hub for exporting date and vegetable products (Minister of Trade, 2022).

These remarkable statistics are a direct outcome of export-oriented endeavors targeting 147 countries globally, with european nations at the forefront. notably, france secures the top position, surpassing \$700 million, trailed by italy with \$415 million and germany with \$264 million. within the american continent, the united states leads with exports valued at approximately \$415 million. concerning african nations, ivory coast emerges as the frontrunner with \$70 million, followed by niger with \$63 million, and subsequently, ghana, mauritania, and senegal, each contributing around \$30 million. in terms of non-oil exports to arab countries, tunisia claims the primary spot with \$124 million, succeeded by Jordan with \$55 million, and both iraq and syria with approximately \$20 million. noteworthy non-oil export commodities include fertilizers, commanding the highest position with a value of \$1.7 billion, marking a notable 28% increase compared to the corresponding period in 2021. iron and steel closely trail behind with a total exceeding \$500 million, signifying a growth rate exceeding 30%, while the cement sector follows suit, experiencing a significant surge of 93% with exports reaching around \$400 million. additionally, a nascent sector, cleaning products, exhibits remarkable progress, achieving over \$48million, surpassing its performance of \$1 million during the same period in 2021 (Alhawari A. , 2023). Anticipated by experts, a momentous milestone of \$15 billion is projected to be achieved by the culmination of 2024 (Abrous, 2023), propelled by the substantial impetus witnessed in 2022, which propelled non-oil exports to soar to \$7 billion, surpassing the pre-established target. in pursuit of the imperative objectives of ensuring the perpetuity and broadening the horizons of the national economy beyond the hydrocarbon sector, a novel aim of \$10 billion has been delineated (Alhawari A. , 2023) .

## **6. Swot analysis for the strategy of transforming algeria's economy towards e-commerce for export.**

Swot analysis, which stands for strengths, weaknesses, opportunities, and threats, is a comprehensive analytical framework that emphasizes a

realistic assessment of the present situation in order to forecast the future state (Xie, 2017, pp. 211-212). Its underlying purpose is to establish a conducive digital business environment that will shape the trajectory of Algeria's economy towards electronic exports. This endeavor encompasses three main aspects. Firstly, it involves the pursuit of product enhancement. Secondly, it focuses on cost reduction. Lastly, it emphasizes the integration of novel technological services within the operational practices of diverse economic and service sectors that form the bedrock of Algeria's economic landscape. The primary aim is to augment local productivity and efficiently channel the surplus towards foreign markets, while concurrently facilitating seamless electronic commercial and banking transactions. Notably, in light of the ongoing expansion in economic activities, this approach actively contributes to the creation of high-quality employment opportunities and fosters economic growth, ultimately resulting in a trade surplus through innovation, adaptations, and refinements of domestic products to meet international standards and fulfill the expectations of electronic foreign clientele.

The realization of these objectives necessitates a qualitative transformation in the services delivered by institutions, aligning with Algeria's visionary aspirations for 2030 and its journey towards a digitally-enabled society. Through a meticulous examination of strengths and weaknesses, SWOT analysis facilitates a comprehensive assessment of the internal dynamics and capabilities inherent in Algeria's economic landscape, as well as the local enterprises that engage in international export activities. Concurrently, the analysis also sheds light on the opportunities and threats emerging from the external environment, about market trends, competitive forces, and technological advancements. SWOT analysis is a critical tool for evaluating and understanding internal strengths and weaknesses of economy as well as external opportunities and threats it faces in the pursuit of e-commerce exports (Xie, 2017, p. 213). It provides valuable insights that inform decision-making processes and help maximize profits while minimizing costs in the international market, whether in terms of tangible goods or intangible services. As one of the most effective systems for developing digital business strategies, SWOT analysis guides the formulation

of both long-term and short-term plans to achieve strategic or tactical objectives, reducing the performance gap between planned and actual outcomes. by analyzing internal and external factors shaping algeria's economy, swot analysis supports sustainable growth and success. the precision of the analysis holds significant implications for enhancing algeria's economy to effectively respond to the demands of the digital landscape. conversely, an inadequate analysis heightens the probability of encountering numerous difficulties and unfavorable consequences, thereby intensifying external threats and challenges. within the context of our preceding discussion, our objective is to illuminate the pivotal elements of the analysis and the factors surrounding the strategic trajectory of algeria's economy. this trajectory has been embraced by algeria as it strives to execute its strategy for transitioning towards e-commerce exports, driven by the overarching aim of attaining long-term sustainability.

<b>Analysis of internal environmental factors (controllable elements)</b>	
<b>Weaknesses</b>	<b>Strengths</b>
<ul style="list-style-type: none"> <li>• Weakness of legislative regulations, international, regional, local laws, and regulatory decrees governing E-International trade transactions.</li> <li>• Weakness of infrastructure capabilities.</li> <li>• Weakness of awareness and sufficient values among decision-makers regarding the importance of digitalization in most local producing institutions with export capabilities in international markets, negatively impacting the transition towards a digital economy (e-commerce export).</li> <li>• Weakness of the role of Algerian economic institutions with export capabilities in keeping up with digital business practices and delivery methods, hindering the acceleration of electronic business programs.</li> <li>• Existence of several disjointed and non-integrated computerized systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of computerized systems in most local producing institutions with export capabilities in international markets.</li> <li>• The orientation of many Algerian exporting institutions towards addressing post-COVID-19 requirements by focusing on digital transformation to facilitate the swift entry of their products into foreign markets at minimum costs.</li> <li>• Human resources possess the necessary skills for utilizing digital technologies.</li> <li>• Availability of facilities and incentives provided by the Algerian government to boost export activities without potential future obstacles, particularly by relying on ICT for conducting international trade transactions, aiming to facilitate the introduction of local institutions and promote their products through dedicated websites for information exchange.</li> <li>• A distinct strategic vision for foreign trade activities to drive the national economy and achieve real progress, moving towards economic takeoff and enabling local institutions to effectively compete in the international arena.</li> </ul>

<b>Analysis of external environmental factors (uncontrollable elements)</b>	
<b>Threats</b>	<b>Opportunities</b>

## *Information Technology's Contribution to Non-Oil Algerian Export Growth*

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| <ul style="list-style-type: none"><li>• limited capacity of local economic institutions with export capabilities in international markets to keep up with the updates and development of modern electronic versions of programs that align with the digital landscape.</li><li>• Emerging concerns at the policy level regarding privacy, data security, and slow adoption of digital payment systems.</li><li>• Many internet markets, especially in North Africa, are witnessing monopolies or barriers that restrict entry for competitors.</li><li>• Low interest in digital commercial and financial transactions due to usability challenges, lack of trust, or inadequate legal protection.</li><li>• The threat of electronic attacks compromising information security, such as hacking, viruses, theft of personal and financial data, phishing of websites, including official government platforms,</li></ul> | <ul style="list-style-type: none"><li>• The presence of local and international supporting entities and partners showing interest in the digital transformation of Algerian economic institutions.</li><li>• Global adoption of information society contributes to the integration of efforts regarding the development of ICT infrastructure .</li><li>• The rapid pace of technological advancements facilitates the provision of digital transformation requirements at a lower cost (financial, temporal, and effort-wise).</li><li>• existence of national strategies emphasizing the significance of digital transformation, along with successful national and global experiences in transitioning from traditional export to e-commerce export.</li><li>• establishment of a new team of international government experts focused on digital economy, e-commerce, and international collaboration (CNUSED 2020) responsible for formulating a digital transformation strategy and implementing the African Continental Free Trade Area.</li></ul> |
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• Upon completing the comprehensive analysis of the aforementioned four focal points, a holistic understanding of internal and external landscape of the algerian economy in relation to its strategic pursuit of transitioning towards e-exports can be attained. this analytical attempt serves as the bedrock for uncovering and delineating the subsequent marketing strategies:

1. Exploitation of strengths to capitalize on the discerned opportunities.
2. Harnessing strengths to surmount the identified threats.
3. Execution of appropriate measures to overcome the highlighted weaknesses, thereby seizing the opportunities at hand.
4. Alleviation of weaknesses to effectively counter the identified threats.

• Once these inquiries find resolution, the final adjustments can be made to the four quadrants of the matrix. subsequently, swot analysis can be employed to formulate strategies that underpin algerian economy's shift from traditional exportation to e-exportation, acting as the core nucleus of the algerian digital economy. this transformative pursuit entails the delineation of regulatory frameworks and the seamless integration of digital international economic practices, payment modalities, and e-commerce among diverse stakeholders at both local and international levels. the overarching aim is to leverage the advantages conferred by this transition, propelling algerian economy from its conventional underpinnings towards a knowledge-based economy that realizes economic objectives while

minimizing performance discrepancies between intended strategic objectives and actual outcomes.

swot analysis matrix operates through three pivotal stages, as follows:

1. Commence by scrutinizing the external milieu to identify prevailing threats and viable opportunities.
2. Undertake an internal analysis to ascertain algerian economy's financial, material, knowledge-based, human, technological, and technical capabilities in the domain of exports, while concurrently identifying potential weaknesses that might impede this economic transformation.
3. Converge the insights gleaned from external and internal analyses, aligning the constituent elements of the matrix to engender informed decision-making.

Evidently, the global recognition of algerian economy hinges upon the alignment of its goals and plans with the sphere of ICT, which commands primacy in economic, political, and societal domains. hence, the trajectory from traditional exportation to digital exportation offers emerging nations a secure pathway to generate enduring value and align with contemporary digital economies. in these economies, technology and digitization serve as primary pillars and sustainable sources of financial returns, especially as traditional resources face declining prospects due to covid-19 pandemic. consequently, it becomes imperative to draw wisdom from past missteps and embark upon assured, cost-effective measures to confront forthcoming challenges.

## **7. CONCLUSION**

The achievements of the program aimed at enhancing algeria's non-oil exports cannot be attributed to mere chance. rather, they serve as a testament to the presence of a distinct strategic vision regarding foreign trade activities, which seeks to propel national economy, foster genuine progress, facilitate economic takeoff, and empower local enterprises to compete on the global stage. the government places significant emphasis on this initiative, striving to augment the value of non-oil exports on an annual basis, thus reducing reliance on hydrocarbon exports. to this end, the government provides facilitations and incentives to promote export activities, ensuring their unhindered progression in the future.

Sustaining the implementation of this strategic export plan necessitates a comprehensive examination of both the external and internal environments within which local producing institutions operate. this enables them to exert control over the prevailing circumstances and remain abreast of emerging ICT advancements, which hold paramount significance in the realm of international trade, given its increasing reliance on technology for conducting cross-border business transactions. the objective is to facilitate the introduction of local enterprises and the promotion of their products through dedicated websites, thereby satisfying e-customer needs and expectations, and catering to electronically requested products. on one hand, this approach involves exploring untapped markets and tailoring marketing strategies to meet the anticipated requirements and demands of prospective e-customers. the impact of ICT on increasing the exports of local enterprises operating in this sector is profound. ICT enables these enterprises to expand their international market share through electronic means, providing them with international opportunities to broaden their presence in foreign markets.

## **8. Recommendations:**

In order to operationalize e-commerce activities in algeria and align with the comprehensive global shift toward digital economy, which substantively contributes to the realization of the strategy aimed at bolstering algeria's non-oil exports, the following recommendations should be considered: establish a robust legislative framework that remains synchronized with the rapid pace of technological progress. specifically, amendments to existing laws and regulatory decrees, particularly (Law18-05, 2018), should be undertaken. of e-commerce practices and the intricate mechanisms of electronic contract formation. and Foster an environment conducive to investment by opening doors for potential investors to engage in sectors of paramount significance, including financial services, telecommunication, and other domains ICT. and actively support and incentivize institutions in forging network connectivity to seamlessly embrace the digital economy wave. it is incumbent upon higher authorities to recognize the profound importance of embarking on the digital economy journey. and formulate a comprehensive plan that actively addresses the

digital divide between algeria and other economies of comparable nature. this plan should effectively promote coordination and address fundamental prerequisites for technological advancement, and embrace an encompassing policy that advocates for the widespread adoption of ICT, effectively disseminating their utilization across various sectors of the algerian economy. and Institute robust mechanisms to ensure the security and confidentiality of private information, effectively counteracting cyber threats, hacking, and other forms of technological encroachment.

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