Cahiers de Traduction

Volume32 Issue 2/ Juin 2026 pp 282- 295

دفاتر الترجمة
Cahiers de Traduction

ISSN 1111- 4606
EISSN 2602-6023

Challenges of Economic Translation from English into Arabic in the Digital Age: Between Digital Transformation and Terminological Issues

تحديات الترجمة الإقتصادية من الإنجليزية إلى العربية في عصر الرقمنة : بين التحول الرقمي وإشكالية المصطلح

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Received:03/04/2026 ***Accepted:07/06/2026*** ***Published 09/04/2026***

Abstract:

This study examines the challenges of economic translation in the digital age, with the particular emphasis on the impact of digital transformation on terminology. It highlights how the rapid development of information and communication technologies has led to the emergence of new economic concepts. These developments have significantly increased the complexity of the translation process in the economic field, especially with regard to achieving terminological accuracy and conceptual equivalence. The study adopts a descriptive-analytical approach to explore the main difficulties faced by translators when transferring digital economy terminology from English into Arabic. It also investigates the underlying causes of these challenges, including the lack terminological standardization and the multidisciplinary nature of digital economy terms. Furthermore, the paper addressed the main role of digital tools in facilitating the translation process, while pointing out their limitations in handling complex meanings and concepts. It also emphasizes the importance of human expertise in ensuring accuracy and clarity. In addition, it stresses the need for continuous training and the development of specialized terminological resources to keep pace with rapid transformations. The study ultimately concludes that economic translation in the digital age requires a competence with economic and technological knowledge.

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Keywords: Economic translation, Digitalization, Digital transformation, Digital economy, Economic Terminology

الملخص:

تتناول هذه الدراسة تحديات الترجمة الاقتصادية في عصر الرقمنة، مع التركيز بشكل خاص على تأثير التحول الرقمي على المصطلحية. وتبرز كيف أن التطور السريع لتقنيات المعلومات والاتصال أدى إلى ظهور مفاهيم اقتصادية جديدة. وقد أسهمت هذه التطورات في زيادة تعقيد عملية الترجمة في المجال الاقتصادي خاصة فيما يتعلق بتحقيق الدقة الاصطلاحية والتكافؤ المفاهيمي. وتعتمد الدراسة على المنهج الوصفي التحليلي لاستكشاف أهم الصعوبات التي يواجهها المترجمون عند نقل مصطلحات الاقتصاد الرقمي من الانجليزية الى العربية. كما تبحث هذه الورقة البحثية في الأسباب الكامنة وراء هذه التحديات، من بينها غياب التوحيد الاصطلاحي والطبيعة متعددة التخصصات لمصطلحات الاقتصاد الرقمي. بالإضافة إلى ذلك، تتناول الدراسة دور الأدوات الرقمية في تسهيل عملية الترجمة، مع الإشارة إلى محدوديتها في التعامل مع المعاني والمفاهيم المعقدة. كما تؤكد على أهمية الخبرة البشرية في ضمان الدقة والوضوح. وتشدد كذلك التكوين المستمر وتطوير موارد مصطلحية متخصصة لمواكبة التحولات المتسارعة. وتلخص الدراسة في النهاية إلى أن الترجمة الاقتصادية في عصر الرقمنة تتطلب مقاربة متعددة الأبعاد تجمع بين الكفاءة اللغوية والمعرفة الاقتصادية والتكنولوجية.

الكلمات المفتاحية: الترجمة الاقتصادية، الرقمنة، التحول الرقمي، الاقتصاد الرقمي، المصطلح الاقتصادي

Introduction:

The accelerated development and pervasive diffusion of information and communication technologies have fundamentally reconfigured economic practices and modes of living, thereby engendering an emergent economy model identified as the **Digital Economy.** It broadly denotes a spectrum of economic activities carried out via the internet through engagement with digital platforms that constitute the operational infrastructure of institutions and enterprise, including crypto currencies and e-commerce, and other emerging modalities of economic exchange. The evolution of this form of economy has led to the emergence of new digital terminology and concepts that had no prior existence, reflecting profound transformations in core economic paradigms. As a consequence of structural shift, translation has become an indispensable instrument for the transfer of these contemporary digital concepts across languages and cultures. Within this context, economic translators have encountered considerable challenges in ensuring terminological precision, semantic accuracy, and conceptual clarity throughout the translation process. Against this backdrop, the following research question may be formulated: In what ways do the difficulties faced by translators manifest when rendering digital economy terminology from English into Arabic?

Accordingly, the study seeks to address the following sub-questions: What categories of challenges confront translators when translating the digital economic terminology? What are the underlying causes of

these challenges? And what are the main appropriate translation techniques do translator employ in order to overcome such challenges?

To address the above research questions, the study advances the following hypotheses: First, translators might encounter the absence of precise lexical and conceptual equivalents in Arabic when rendering digital economy terminology. This difficulty can be attributed to the relative novelty of such terms, as well as to their structural and conceptual complexity. Second, in order to overcome these challenges; translators are likely to resort to both direct and indirect translation techniques.

The primary objective of this study is to develop a deeper understanding of contemporary economic texts, particularly those related to the digital economy, through a systematic analysis of terminology across English and Arabic. By examining the semantic, conceptual, and contextual dimensions of digital economic terms, the study seeks for to elucidate the challenges inherente in cross-linguistic transfer and to contribute to greater terminological precision in economic translation. To fulfill these objectives, the research is grounded in a descriptive-analytical approach.

1- Definition of the Digitalization:

Digitalization is commonly understood as the process of converting information resources and documented materials regardless of their forms from physical, paper-based formats into machine readable formats processed and encoded according to specific digital systems, readers, or researchers who require them. More broadly, digitalization refers to the transformation of diverse data into digital form within the field of computing, enabling their processing, storage, and manipulation through computers systems. In the context of information systems, digitalization denotes the conversion of printed texts such as books, images of various types, and maps into formats that can be read and processed by computers, typically through specialized technologies such as optical scanning devices. In the field of telecommunications, it refers to the transformation of informational and communicative signals into specific digital signals that can be transmitted, stored, and decode efficiently. Furthermore, according to the Encyclopaedic Dictionary of Information and Documentation, digitalization is defined as an electronic process through which digital or electronic codes are generated from a document or any physical entity by means of specialized electronic signals (Ali & Hidjazi, 2005, p. 25).

Digitalization constitutes a significant scientific undertaking which, like any rigorous scholarly project aimed at fulfilling educational, economic, social, and cultural functions, requires a set of essential conditions for its successful implementation. Foremost among these is the need for sound planning and effective management, whereby digitalization is conceived as a strategic project. This entails entrusting its execution to a specialized supervisory committee endowed with both scientific expertise and technical competence, capable of ensuring its realization with a high degree of efficiency and professionalism

Equally critical is the availability of a robust technological infrastructure, encompassing the necessary hardware and equipment such as computers, scanners, and printers taking into account the nature and volume of the documents and records to be digitized. This infrastructure also includes information networks, as well as specialized software dedicated to digital processing operations and the handling of linguistic and textual data.

2- Definition of the Digital Economy:

The origin the digital economic can be traced back to the 1960s, with the growing recognition of information as a strategic economic resource and the progressive development of knowledge-based infrastructure driven by advances in information and communication technologies. These transformations gradually paved the way for the emergence of the digital economy as a fundamental pillar of growth and development within contemporary economic policy frameworks. Despite its increasing significance, scholarly literature has not reached a consensus on a unified definition of the digital economy, owing to the diversity of theoretical perspectives and analytical approaches adopted in examining this concept. Nevertheless, some of the most prominent definitions articulated in this regard may be outlined as follow: the digital economy constitutes as integrated economic system based on the continuous and structural convergence of information and communication technologies, on the one hand, and national, sector, and global economic systems, on the other hand.

This integration aims to achieve advanced levels of transparency and to accelerate access to accurate economic indicators, thereby enhancing the efficiency and timeliness of economic, commercial, and financial decision-making. Information and communication technologies play a strategic and pivotal role in fostering economic growth and in modernizing operational mechanisms within the economic system, through improvements in operational efficiency, organizational restructuring, and enhanced coordination among economic agents. Moreover, digital tools-most notably the Internet-contribute to the reconfiguration of performance patterns across finance, business, trade, and investment, shifting from traditional models to real-time, dynamic frameworks driven by speed of execution and responsiveness. This transformation strengthens the competitive capacity of economies and enterprises alike within what is commonly referred to as time-based competitiveness (Kroush & Doudan, 2018, pp. 145-171).

The Digital economy is also defined as an economy associated with the concept of the information society, which reflects a future oriented vision of a world in which information constitutes the fundamental pillar for the economy human relations to be fully realized within an advanced digital infrastructure capable of achieving this across various fields (Salah & Al-Sayed, 2020, p. 06). In the context of Uk economic thought, the digital economy is understood as a broad and multifaceted phenomenon. Official Uk government sources defined it as all economic activity generated through digital content, goods and services, with particular emphasis on firms that rely heavily on digital technologies in their operations (Department for Science, 2024, p. 05).This perspective is further expanded in national digital strategies, which conceptualize the digital economy as encompassing not only the digital sector itself but also digital occupations across non-digital industries, reflecting the pervasive nature of digitalization in the labour market (Uk Government, 2021, p. 10).

Furthermore, research briefs note that digital economy comprises multiple sectors such as computing equipment, software publishing, telecommunications, and data processing, illustrating its broad impact on the UK's economic structure (Rhodes & Rathbone, 2016, p. 03). Based on the foregoing definitions, it is evident that the digital economy is no longer confined to the mere use of technology in economic processes; rather, it represents a profound structural transformation in the architecture of the contemporary economy. In this context, information and knowledge have emerged as the primary strategic resources and the main driving forces behind economic activities. This economic paradigm is founded upon an integrated digital infrastructure that contributes to enhancing efficiency, fostering innovation, and strengthening competitiveness, thereby positioning the digital economy as a fundamental pillar for achieving sustainable development in the era of rapid digitalization.

3-The Main Features of the Digital Economy:

The digital economy is characterized as an advanced economic framework that promotes the diffusion of the information and knowledge society, thereby contributing to the transformation of economic and institutional interaction. This shift supports the development of modern models of management and service delivery, most notably e-government, e-business, e-banking, e-commerce, and e-administration. These components represent key manifestations of the comprehensive digital transformation shaping the contemporary economy. Accordingly, the main features of the digital economy can be summarized as follow: Easy of access to get information: facilitating access to different sorts of information constitutes a fundamental pillar of the digital economy, as its success and growth are closely linked to the ability of individuals and institutions to actively engage into information networks and diverse online platforms. Effective participation in the digital economy requires the availability of a robust and reliable digital infrastructure capable of ensuring efficient data flows and enhancing economic inclusion within the digital environment. Therefore, the development of advanced digital infrastructure represents a critical prerequisite for enabling economic agents to achieve full integration into the digital economy framework (Kroush & Doudan, 2018, pp. 145-171).The digital economy is closely associated with profound transformations in the industrial environment, particularly those related to information technology, the Internet, telecommunication, networking infrastructures, and mobile technologies. This implies that technological capability constitutes the fundamental driving force behind the emergence and development of the digital economy.

Moreover, competitive advantage in a knowledge-based economy no longer relies on the traditional paradigms of mass production, mass marketing, mass distribution, or standardized policies. Instead, the key to business success increasingly lies in identifying the specific characteristics of each consumer and in developing innovative products and services tailored to their individual needs and preferences (Nghmoushi, 2024, p. 66).

4-Economic Translation:

The discourse on economic translation is by no means a recent development; rather, it has been intrinsically intertwined with the broader translation movement since its earliest inception. Indeed, the challenges encountered by the economic translator are not fundamentally different from those faced by translators in other specialized domains. Likewise, the complexities and constraints that characterize the field of translation as a whole are equally manifest in economic translation, insofar as it constitutes a distinct yet integral branch of the translation discipline. Economic as a form of specialized translation, is concerned with rendering terminology and texts of an economic information and knowledge through formats such as annual reports, statements, analyses, and statistical data, intended for both specialists and the general public alike.

According Al-Akhdari Azzi, translation of an economic and financial nature should support the objectives of knowledge-based communication and the retrieval of meaning within intellectual domains, particularly those pertaining to economics (Azzi, 2004, pp. 10-11). The issue of economic translation is currently regarded as one of the most challenging areas within the field of Arabic translation. This difficultly stems from the complexity of engaging with such texts without prop expertise in economics and accounting, as well as a thorough understanding of the mechanisms involved in the preparation and maintenance of budgets, and the compilation of consolidated financial statements, among other financial and economic

domains. Many graduates of translation and language studies choose to pursue careers as economic translators, relying on whatever knowledge they may have acquired during their university education or, in some cases, through one or two courses in economics at the secondary or tertiary level.

In reality, however, economics is such a vast discipline that even specialists within the field often lack sufficient expertise and in-depth knowledge in several of its branches, such as econometrics, and other related areas. The question that naturally arises, therefore, is: how many economic systems have translators actually been trained in, and what type of qualifications do they hold that would enable them to operate competently in this field? A brief look at the Arab context suggests that the majority of practitioners engaged in economic translation possess little more than short-term, non-specialist training certificates, which, even under the most favourable circumstances, may not exceed a few weeks in duration. Even if a translator is fortunate enough to hold a degree in one of the economic disciplines, there is no guarantee that they will not encounter difficulties when dealing with economic texts.

It should also be noted that anyone claiming the title of "economic translator" may be easily exposed if , for instance, a client requests the translation of specialized materials such as" the International Accounting Standards". This leads us to main fundamental points: first point, a translator must be fully aware of the limits of their knowledge and expertise, and be capable of clearly determining what they can and cannot translate, and second point, it is essential for translators to engage in continuous learning in the field of economics, trying to understand not only the terminology but also methodologies underlying the formulation and preparation of financial statements, rather than relying solely on lexical familiarity (AL-Hadidi, 2011, p. 73). It is not an exaggeration to state that many bilingual economic dictionaries fall short of the standards required for translating numerous domains within economics. This is a reality that must be acknowledged and addressed if we aspire to reach the level of advanced countries in this field. Sometimes, for instance, banks Western countries offer services that do not exist in our local context; consequently, the underlying principles, frameworks, and terminology associated with such services remain largely unfamiliar to us.

Moreover, it is important to bear in mind that economics and finance are among the most rapidly evolving disciplines; in fact that continuously fuels them with an ever-expanding set of new terminology almost on a daily basis. So, what should we do when we encounter an economic term? To save time, we should first ascertain its precise meaning by consulting monolingual dictionaries specifically designed for investors, as well as reviewing economic articles, newspapers, or any other reliable sources such as online platforms. This approach ensures a comprehensive understanding of the term within its proper financial and economic context. Subsequently, we need to identify its equivalent in our language by applying the techniques and principles that professional translators develop through experience and practice. Therefore, consulting monolingual economic dictionaries is both essential and highly valuable, particularly for comparing their entries with the terminology used in our own country. This is especially important because accountants tend to be strict and conservative in their use of certain terms, often accepting only a single preferred translation even when a term may have more than five possible equivalents.

Accordingly, it is advisable to seek out bilingual dictionaries prepared by specialized and accredited economic associations, each tailored to the standards of its respective country (AL-Hadidi, 2011, p. 74). In the light of the foregoing, the translator in the field of economic science must maintain a broad and continuous awareness of such developments, so that their translation remains closely aligned with prevailing logic and

commonly used terminology. It follows, therefore, that economic translation is by no means an easy craft to master or accomplish. This is largely due to the specificity of the economic text, which encompasses a wide array of knowledge, experiences, cultures, ideas, and diverse perspectives-factors that generate challenges capable of impending the economic translator and hindering the attainment of an accurate and adequate translation.

5-The Language of Economy:

Iben-Khaldun addressed economic thought extensively in his monumental introduction (Muqaddimah), placing it at the forefront of his intellectual project and granting it the significance it duly deserves. In doing so, he laid the foundations of what may be termed Khaldunian Economic Thought. He consistently emphasized the intrinsic and organic relationship between the economy and society, with language serving as a unifying and mediating factor the two. Although not always articulated explicitly, Iben-Khaldun did not overlook the interconnection between language and economic activity; rather, he approached it implicitly through his broader socio-economic analysis.

Contemporary scholars and researchers frequently revisit the sources of Khaldunian economic thought, often with the aim of validating the theoretical frameworks, methodological approaches, and epistemological insights he introduced. These contributions are widely regarded as among the most significant intellectual foundations upon which modern economic theory can be constructed. Language of economic is defined as a scientific and technical mode of expression characterized by clarity, precision, and accessibility, deliberately avoiding any elements that hinder the effective transmission of economic information to the recipient. It relies predominantly on quantitative indicators, including figures, ratios, and statistical data, as essential tools for analysis and communication. Furthermore, this specialized language engages closely with ongoing developments and emerging trends within the economic sphere, functioning as a vital channel of communication. It bridges the gap between specialists and practitioners in the field on the other, thereby facilitating the dissemination and interpretation of economic knowledge across different audiences. Despite its technical specificity and precision, language of economic occasionally incorporates stylistic devices that tend toward rhetoric and suggestiveness.

Among the most prominent of these are metaphor and metonymy, although their impact remains relatively limited and vary in degree depending on context. In recent years, this specialized language has gained considerable prominence, attracting the growing attention of scholars and researchers. It is increasingly regarded as a fertile field of inquiry that has yet to be fully explored or thoroughly examined, particularly when compared to other domains such as language of literary, legal, or political, which have benefited from more extensive band in-depth scholarly investigation. Discussing the distinctive features of the langauge of economic inevitably invites a comparison with general language. The stylistic conventions of everyday discourse differ markedly from those of business and economic communication, particularly in their reliance on quantitative expression. Economic writing is inherently data-driven, as analysts and practitioners routinely engage with cost structures, percentage ratios, rates of return, and loss margins, among other metrics (Verni, Schiffrin, & Volp, 2004, p. 08).

Accordingly, economic advisors and planners tend to employ a register characterized by a certain degree of technicality and, at times, opacity. Indeed, some analysts and economists deliberately resort to terminology that may prove inaccessible to the lay audience, thereby compounding the challenges associated with its translation. This linguistic complexity is not merely incidental ; rather, it often serves a

strategic purpose, as it can enhance the perceived sophistication of discourse and appeal to the behavioural predispositions of clients an integral component of their broader marketing approach (AL-Hadidi, 2011, p. 74). For instance, some financial analysts may prefer the statement: "This investor holds a beta-oriented portfolio"

يمتلك هذا المستثمر محفظة استثمارية ذات معامل بيتا مرتفع.

, as opposed to the more transparent formulation: "This investor holds a volatile portfolio"

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This preference reflects a tendency within economic discourse to favour specialized terminology (e.g., "beta") over more accessible descriptors (e.g., "volatile"), thereby reinforcing both precision and professional exclusivity (AL-Hadidi, 2011, p. 75). On the other hand, many economic analytic and experts tend to resort more opaque and obscure terminology when addressing the risks and potential financial downturns that may affect an investor or even an entire economy. This practice often serves to shift the burden of responsibility onto broader global economic dynamics, thereby diluting direct accountability. Consequently, they frequently incorporate unnecessarily complex formulations, resorting to statements such as: "Rising interest rates in Europe and a mild recession in Japan have adversely affected the valuation f the investor's portfolio"

أدى ارتفاع أسعار الفائدة في أوروبا إلى جانب حالة ركود طفيف اليابان إلى تراجع القيمة السوقية لمحفظة الأوراق المالية الخاصة بالمستثمر.

This example illustrates how economic discourse may deliberately employ sophisticated phrasing to frame losses as the outcome of macroeconomic forces rather than individual decision-making, reinforcing both abstraction and strategic ambiguity in financial communication.

The Language of economy encompasses a broad spectrum of textual forms, including commercial, financial, banking, and marketing texts, as well as stock market discourse and certain types of advertising materials. These texts are most commonly manifested in the form of corporate annual reports, lean documentations, economic studies, and official reports and correspondence issued by central banks, in addition to institutional banking documents, specialized economic journalism, advertising billboards, and various communications addressed by financial managers to their clients and business partners. Despite this diversity of textual genres, these forms tend to converge stylistically in adopting a relatively unified mode of expression, characterized by a technical and scientific register that prioritizes clarity, precision, and accessibility. Nonetheless, this register may, at times, incorporate subtle elements of suggestiveness and rhetorical nuance whether spontaneous or deliberate depending on the communicative purpose and contextual framework of the text.

The language of economy is inherently grounded in real-world dynamics, as it responds to ongoing social transformations and closely follows the continuous evolution of economic and social structures. From this perspective, it is terminological productivity, consistently generating new terms that emerge through processes such as derivation, translation, borrowing, and other linguistic mechanisms. These terminological innovations primarily arise from the emergence of new concepts within the economic domain, driven by the rapid pace of development that characterizes this field of knowledge. With the steady proliferation of innovations and modern technologies, newly formed economic concepts continue to expand, thereby

necessitating precise and adequate designations. Consequently, it has become indispensable to employ terms such as Islamic Banking and Privitization, among other expressions that have become integral to contemporary economic discourse (Verni, Schiffrin, & Volp, 2004, p. 02) .

6-The Structure of Economic Text:

Each scientific discipline has developed its own specialized linguistic system, capable of encompassing its terminology, conceptual framework, and syntactic structures. This system enables precise articulation of its theories, principles, and epistemological particularities, thereby distinguishing it from other fields of knowledge. Accordingly, languages are often categorized based on their domains of specialization, giving rise to designations such as the language of medicine, the language of law, and the language of economics.

Within this framework, the language of economics has established itself as a fundamental medium of communication among economic agents, as well as a principal vehicle of instruction and knowledge transmission in higher education institutions and specialized institutes. Economic texts, as a form of specialized discourse, are primarily characterized by their informative function. They are chiefly concerned with conveying data and knowledge often in the form of figures and statistical information through a precise, direct, and objective linguistic register. Consequently, language aesthetic considerations are not predominant in such texts. This view is echoed by Christine Durieux, who argues that the aesthetic dimension does not dominate specialized discourse, given its reliance on a straightforward and natural style that is largely devoid of figurative connotations. However, this assertion cannot be universally applied to all specialized texts; indeed, certain domains, such as political and economic discourse, may exhibit a measured use of rhetorical devices serving interpretive and pragmatic purposes (Durieux, 2007, p. 37).

An economic text, by its very nature, is subject to the dual processes of rigorous analysis and precise reformulation, with the primary aim of achieving comprehension first and effective communication thereafter, even if this is accomplished through a level of simplification that does not attain the depth characteristic of literary texts. The fundamental distinction lies in the purpose behind the use of rhetorical devices: in specialized discourse, the writer's foremost objective is to persuade and influence the audience, whereas literary texts are primarily oriented toward aesthetic ends. From this perspective, one may aptly invoke Al-Suwaisi's assertion that the language of science is not devoid of (Didawi, 2000, p. 25). The very nature of economic discourse compels the writer to adopt a meticulous approach in selecting words and expressions, which are, in most cases, specialized terminological units. This selection is by no means arbitrary; rather, it is governed by a set of criteria, foremost among them the nature of the subject matter and the characteristics of the intended audience. Accordingly, the economic writer must strike a careful balance between scientific precision and communicative clarity, taking into account the level of the general reader when choosing terminology and structures (Rochard, 2007, p. 104).

Indeed, economic texts are not readily accessible to non-specialists, as they encompass technical knowledge and intricate concepts that require domain-specific expertise. Financial and commercial information is typically conveyed through analytical formats such as annual reports, press releases, and economic publications which may prove difficult to comprehend unless subjected to processes of analysis and simplification, thereby enabling effective communication and the attainment of the intended objective.

7-The impact of Digital Transforamtion on Economic Translation:

Digital transformation constitutes a fundamental pillar in the field of translation, as it has brought about profound changes in workflows and the tools employed within this domain. It refers to the integration of advanced technologies and their applications with the aim of enhancing and optimizing the translation process. Intelligent language technologies and machine translation systems represent some of the most prominent manifestations of this transformation, relying on artificial intelligence and machine learning techniques to analyze, process, and automatically translate texts.

With the rapid advancement of these technologies, automated systems have become increasingly capable of producing translations of reasonably high quality, particularly for structurally standardized texts. Furthermore, modern digital tools offer a wide range of advanced features that support translators in performing their tasks more efficiently. These include automated proofreading and editing tools that correct grammatical and spelling errors, improve stylistic quality, and ensure proper formatting. Consequently, such tools contribute significantly to improving translation accuracy and enhancing productivity, while maintaining a high level of consistency and quality.

Moreover, computational services have become instrumental in enhancing economic translation processes. These technologies enable access to files and linguistic databases anytime and anywhere, facilitating information exchange among translation teams and promoting collaborative workflows. Despite the significant advancements achieved by digital technologies in economic translation, machine translation still faces certain limitations. Deep linguistic and cultural understanding remains a major challenge for computational systems, which may lead to outputs that lack sufficient accuracy in complex contexts. Hence, human translation remains essential to ensure quality and to accurately convey the original meaning.

The human translator continues to play a pivotal role in the digital transformation of economic translation. While computational systems excel in rapid text generation, human translators possess the flexibility, profound linguistic and cultural insight, and evaluative capacity necessary to manage complex economic texts effectively and deliver precise, contextually appropriate translations (Cronin, 2013, p. 116).

The impact of digital transformation has become increasingly evident across various fields, particularly in economic translation, where it has led to the emergence of new trends and methodologies, including the use of artificial intelligence applications, machine translation systems, and advanced digital tools, as previously noted. This transformation has also given rise to novel concepts in the digital economy, such as e-commerce, crypto currencies, financial technology (FinTech), block chain, smart contracts, and big data analytics.

However, these emerging concepts pose significant challenges for economic translators. Among the main difficulties are the rapid emergence of new terminology, the lack of terminological standardization, and the multiplicity of translations for the same term, which may result in inconsistencies across translated texts. While digital tools facilitate translation workflows and enhance productivity in the economic sector, improper use may lead to inaccurate or ambiguous translations that fail to convey the full meaning of modern economic terms.

Effective digital economic translation, thus, requires combining precise terminological knowledge with careful utilization of digital tools, ensuring accurate and clear transmission of terms and meanings while keeping pace with ongoing developments in the digital economy.

8- Economic Terminology in the Context of Digital Transformation:

The economic terminology landscape has undergone profound transformations in the context of digital transformation, affecting both its semantic structure and communicative function as a result of the

rapid technological changes reshaping economic activities. The digital environment has generated a wide array of new concepts, including the digital economy, e-commerce, digital marketing, digital platforms, the platform economy, the sharing economy, collaborative consumption, block chain, crypto currencies, digital assets, non-fungible tokens (NFTs), decentralized finance (DeFi), financial technology (FinTech), digital banking, e-wallets, electronic payment systems, contactless payments, central bank digital currencies (CBDCs), digital identity, big data, data analytics, artificial intelligence, machine learning, algorithms, cloud computing, the Internet of Things (IoT), smart contracts, the algorithmic economy, the data-driven economy, the knowledge economy, remote work, digital freelancing, intermediary platforms, crowd sourcing, crowd funding, mobile commerce (m-commerce), digital advertising, search engine optimization (SEO), digital supply chains, smart logistics, digital governance, digital taxation, cyber security, digital privacy, tokens, the met averse, the virtual economy, stable coins, decentralized exchanges (DEXs), and the digital creative economy.

This terminological expansion has considerably broadened the economic field, giving rise to complex, hybrid concepts that are often coined in foreign linguistic environments predominantly English and subsequently transferred into Arabic in the absence of standardized terminological frameworks. This frequently results in multiple and sometimes competing translations, as observed with terms such as "cryptocurrency," "blockchain," and "token," which may be rendered through transliteration, literal translation, or explanatory adaptation. The challenge is further exacerbated by the rapid circulation of terminology across digital platforms, where terms are often adopted without rigorous scholarly validation or linguistic normalization, thereby undermining terminological precision and conceptual clarity.

Moreover, the intersection of economics with technology and law renders digital economic terminology inherently multidimensional, requiring translators to possess interdisciplinary expertise that extends beyond linguistic competence to encompass a deep understanding of technical and economic contexts, particularly in relation to concepts such as smart contracts, digital regulation, regulatory technology (RegTech), and insurance technology (InsurTech).

On the other hand, machine translation tools such as Google Translate and DeepL have facilitated the transfer of such terminology; however, they often produce literal renderings that lack terminological accuracy, thereby exacerbating rather than resolving the terminological dilemma especially in the case of nuanced concepts related to encryption, decentralization, and the token economy.

In this regard, Michael Cronin argues that digital transformation has not merely altered the tools of translation but has fundamentally reconfigured the nature of linguistic knowledge itself, as translators are now required to operate within a dynamic digital ecosystem that demands both adaptability and precision in terminological selection. Accordingly, addressing the challenges of economic terminology in the digital age necessitates coordinated scholarly efforts aimed at standardizing concepts, developing specialized digital lexicons, and enhancing translators' technical and cognitive competencies, thereby ensuring a balance between scientific rigor and the evolving demands of technological advancement (Cronin, 2013, p. 125).

9-Strategies for Addressing Challenges in Digital Economic terminology:

Addressing the challenges of digital economic terminology necessitates a comprehensive set of strategies that balance scientific accuracy with adaptability to rapid technological change. One of the primary approaches is transliteration and linguistic borrowing, which involves importing a foreign term

while adapting it phonetically or orthographically to the target language. This strategy is particularly useful in the early adoption stages of neologisms such as block chain and token, where maintaining recognisability and conceptual linkage to the source language is essential (Katan, 2014, p. 45). In addition to borrowing, descriptive or explicative translation plays a central role in clarifying terminology that lacks a precise equivalent in the target language, such as decentralized finance (DeFi) or non-fungible tokens (NFTs). In such cases, translators provide concise definitions or explanatory formulations that convey the underlying concept without sacrificing terminological clarity (Hatim & Mason, 1997).

Equally important is the use of equivalent terminological translation when a well-established Arabic counterpart exists, such as rendering big data as(البيانات الضخمة) which enhances terminological consistency across texts and disciplines (Newmark, 1988)

Furthermore, contextual translation is indispensable for terms whose meanings vary significantly depending on subject matter; for example, the term mining may denote different processes in digital economics versus other technological domains. Therefore, translators must carefully analyze the contextual framework before selecting the most appropriate equivalent. In the digital age, digital resources and terminological databases have become integral to translation strategies. Specialized corpora, electronic dictionaries, and dynamic terminology repositories enable translators to keep abreast of emerging terms and their established uses. However, these tools should complement not replace human expertise, as automated suggestions can lack the semantic precision required for economic discourse.

In this context, the role of ongoing professional development cannot be overstated. Translators who engage in continuous training on topics such as artificial intelligence, big data analytics, and financial technologies are better positioned to interpret complex constructs such as smart contracts, RegTech (regulatory technology), and the met averse with scholarly fidelity (Cronin, 2013, p. 135).

Finally, institutional and research coordination serves as a foundational strategy for fostering standardized terminology. Collaboration among academic institutions, linguistic authorities, and research centers is essential for developing specialized digital lexicons and normative databases that reduce terminological fragmentation and promote uniformity in usage. Such concerted efforts not only strengthen translational practice but also advance the clarity and interoperability of economic knowledge across linguistic and cultural boundaries. Ultimately, effective management of digital economic terminology requires an integrative framework that combines linguistic, technological, educational, and institutional strategies to ensure precise and contextually appropriate translation in an era of accelerating digital innovation.

Conclusion:

It becomes evident that economic translation in the context of digital transformation is no longer a mere traditional linguistic transfer, but rather a complex practice in which linguistic, cognitive, and technological dimensions intersect. The real challenge does not lie solely in finding an appropriate lexical equivalent, but extends to understanding the conceptual depth of terms within their original context and reformulating them in a way that ensures accuracy and clarity in the target language. Moreover, despite the significant advancements brought about by digital technologies such as machine translation and terminological databases these tools cannot replace the human translator. Instead, they function as supportive instruments that enhance efficiency without eliminating the need for critical analysis and deep comprehension. The accurate rendering of economic concepts, particularly emerging ones, remains closely tied to sound interpretation and context-sensitive term selection.

Furthermore, the rapid expansion of terminology associated with the digital economy necessitates continuous engagement with new developments. This requires not only linguistic competence but also an ongoing enrichment of knowledge in economics and technology. The contemporary economic translator is therefore expected to adopt a multidisciplinary perspective in order to effectively handle increasingly complex and evolving texts. In addition, the multiplicity of translations for a single term represents a significant challenge, often leading to ambiguity and terminological inconsistency. This situation highlights the urgent need for coordinated academic and institutional efforts aimed at standardizing terminology and developing specialized dictionaries and reliable databases capable of keeping pace with digital transformations.

In light of the above, economic translation in the digital age can be seen as both a challenge and an opportunity: a challenge due to conceptual complexity and constant evolution, and an opportunity for advancing translation practices toward greater precision and professionalism. Ultimately, achieving effective economic translation depends on the ability to combine deep understanding, solid knowledge, and the informed use of digital tools, ensuring the accurate and clear transfer of economic knowledge across languages and culture.

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