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INTERNATIONAL TRADE IN SERVICES AS A CATALYST FOR GROWTH: A COMPREHENSIVE ANALYS OF MOROCCO

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A B S T R A C T

This research examines the influence of international trade in services on economic value generation. The global landscape has transitioned to a service-oriented economy, propelled by technological breakthroughs and liberalization policies. This research used a multiple linear regression model to examine data from 2001 and 2022 in Morocco, investigating the correlations between GDP and several service-related variables. The findings indicate that service exports substantially enhance GDP growth, but imports generally detract from economic value. FDI is emphasized as a driver for growth, affirming its impact on technology transfer and capacity enhancement. These findings highlight the necessity of strategic strategies to foster service sector exports and attract foreign direct investment, enabling Morocco and other emerging countries to augment their involvement in global value chains. The paper closes by advocating for policies that promote service innovation and enhance infrastructure, recognizing the constraints associated with educational and technical factors, and proposing directions for further research.

1. INTRODUCTION

The global industrial and competitive scene has been significantly transformed by enhanced regional integration and the diminishment of tariff and logistical obstacles. The internationalization of enterprises has become a strategic need in a more linked globe, driven by technological advancements and trade liberalization. Globalization, propelled by substantial technical advancements, has expedited the global dissemination of goods and services. Nonetheless, political will is essential for fostering economic openness, as demonstrated by the implementation of neoliberal policies from the mid-20th century. Currently, international commerce in services is a pivotal catalyst of the global economy. The World Trade Organization (WTO) states that services, encompassing finance, distribution, and technology, constitute a substantial portion of global GDP, with almost three-quarters of foreign direct investment in developed nations

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originating from this sector. This surge highlights the significance of services in generating economic value and their function in connecting global value chains. Nonetheless, theoretical deficiencies persist in the internationalization of services, differing from traditional methodologies of commodities commerce. This study investigates the role of international commerce in services in generating economic value, utilizing Morocco as a pertinent instance due to its strategic location between Europe, Africa, and the Middle East.

2. LITERATURE REVIEW

2.1. The Development and Expansion of Global Trade in Services

Since the late 1970s, international trade in services has transitioned from a mere extension of goods commerce to a vital catalyst for global economic growth (Hill, 1977). The distinctive attributes of services, including intangibility, perishability, and variability, have rendered their analysis more intricate than that of products (Zeithaml et al., 1985). The unique characteristics have resulted in the creation of specific economic models for analyzing services trade (Lovelock & Gummesson, 2004).

In the past twenty years, technical progress and digitization have markedly expedited the globalization of services. Digital platforms have converted services formerly deemed “non-tradable” into significant elements of international trade (Baldwin, 2016). This transition has been facilitated by the expansion of the digital economy, which allows for the effortless provision of financial, professional, and technological services internationally (UNCTAD, 2021).

2.2. The Impact of Regulation and Liberalization on Trade in Services

The creation of the General Agreement on Trade in Services (GATS) by the World Trade Organization (WTO) in 1995 represented a significant advancement in the regulation and liberalization of global trade in services. The GATS delineated several forms of service provision, establishing a systematic framework for the international exchange of services (Mattoo et al., 2007). In emerging nations like Morocco, these agreements have been crucial for incorporating industries such as tourism, financial services, and ICT into their economic strategy (Bank Al-Maghrib, 2023).

Notwithstanding these achievements, regulatory inconsistencies and protectionist measures persist as obstacles to the trade in services. Recent research indicates that whereas liberalization has often enhanced market access, discrepancies in national policies frequently result in disparate effects on economic performance (Hoekman & Shepherd, 2017). Baumol's "cost disease" theory continues to be pertinent in contemporary analysis, indicating that productivity development in the services sector frequently behind that of manufacturing, hence affecting total economic growth (Baumol, 2012).

3.3. Emerging Trends and Theoretical Deficiencies

The research suggests that although the globalization of services is a crucial element of contemporary economies, theoretical deficiencies persist about the ideal ways for emerging nations to utilize services trade for sustainable development (Eichengreen & Gupta, 2020). Recent studies indicate that the incorporation of services into global value chains (GVCs) is intricate, influenced by technology and policy-related elements (Baldwin & Lopez-Gonzalez, 2015).

Recent empirical assessments indicate the importance of foreign direct investment (FDI) as a driver of growth in the services sector. Foreign Direct Investment facilitates knowledge transfer, capacity development, and the improvement of service sector competitiveness, especially in emerging areas (Doytch & Uctum, 2016). There is a necessity for more targeted research on the effects of FDI on certain service sectors in nations such as Morocco, where services constitute a substantial segment of economic activity (World Bank, 2022).

2.4. Technological Progressions and Their Effects

The digital revolution of the global economy has redefined the extent and magnitude of tradable services. The emergence of technologies like artificial intelligence, blockchain, and cloud computing has enabled the international delivery of services, leading to what several scholars term the “new wave of globalization” (McKinsey Global Institute, 2019). In this setting, digital services, such as finance and software development, have emerged as vital growth industries (OECD, 2021).

In Morocco, the deployment of technology has been essential in augmenting service exports, especially in sectors such as IT outsourcing and customer support services. Nonetheless, the digital gap persists as an obstacle, constraining the complete potential of service sector expansion in places with inadequate technology resources (UNDP, 2023).

3. RESEARCH PROBLEMATIC

The growth of international commerce in services signifies a pivotal moment in the global economy, indicating a strategic transition from the dominance of tangible goods trade to a model focused on intangibles. This transition prompts inquiries regarding the optimization of service commerce to foster sustainable value creation, especially inside emerging economies.

This research investigates the capacity of international trade in services to serve as a catalyst for economic growth and competitiveness in nations like Morocco. The analysis centers on the incorporation of services into global value chains and investigates the processes via which this incorporation affects value generation. The objective is to elucidate the fundamental dynamics and pinpoint the particular levers and limitations encountered by rising economies in their pursuit of global competitiveness. Contemporary research identifies theoretical deficiencies regarding the regulation and liberalization of services, along with inconsistencies in their impact on national economic performance. This research seeks to address existing gaps by employing a methodology that integrates theoretical review with empirical analysis, focusing on how enterprises and public policies may effectively operate within a globalized, service-oriented landscape to optimize economic returns. This article aims to analyze the role of services in value creation and their influence on Moroccan economic growth, proposing a comprehensive analytical methodology applicable to Morocco and other rising economies. This method elucidates the strategic ramifications of liberalization policies and the prerequisites for international trade in services to serve as a viable catalyst for growth and development.

4. MODEL AND DETERMINANTS OF INTERNATIONAL TRADE IN SERVICES

4.1. Theoretical model: Multiple linear regression (MLR)

In order to analyze the impact of international trade in services on the creation of economic value, particularly in Morocco, we have opted for a multiple linear regression (MLR) model. This methodological choice enables us to explore the relationships between the dependent variable, represented by gross domestic product (GDP) in US dollars, and a set of explanatory variables characterizing various aspects of international trade in services and macroeconomic factors. The theoretical model is formulated as follows:

$$Y_i = \beta_0 + \sum_{j=1}^{p} \beta_j X_{ij} + \varepsilon_i \qquad (1)$$

with:

- Y_i is GDP, the variable to be explained;
- β_0 is the intercept;
- β_j (for j=1,...,p) represents the coefficients of the explanatory variables X_{ij} ;
- ε_i is the residual error term, assumed to follow a centered, homoscedastic normal distribution.

The parameters β are estimated using the ordinary least squares (OLS) method, guaranteeing unbiased estimators with minimum variance, in accordance with the Gauss-Markov property.

4.2. Explanatory variables in the model

We have selected direct and indirect explanatory variables to capture the various factors influencing international trade in services and their contribution to economic growth:

Direct variables:

- X1: Transportation services (% of commercial services imports)
- X2: Travel services (% of commercial services imports)
- X3: Other services (% of imports of commercial services)
- X4: Transportation services (% of exports of commercial services)
- X5: Travel services (% of exports of commercial services)
- X6: Other services (% of exports of commercial services)

Indirect variables:

- X7: Adult literacy (% of adults over 15)
- X8: Tertiary enrolment (gross % of population)
- X9: Foreign direct investment - net inflows (in current USD)

These variables are chosen for their theoretical relevance and their ability to capture the multiple dimensions of service internationalization, influenced by both domestic economic factors and global market forces.

4.3. Analysis of determinants

Transport and travel services are vital sectors of Morocco's foreign commerce, highlighting the significance of connectivity and tourism in the national economy. These industries directly impact GDP via their contributions to the balance of payments and employment generation. Indirect indicators, such literacy rates and university enrollment, indicate the degree of human capital, which is crucial for the competitiveness of exporting services. Foreign direct investment serves as a catalyst, enhancing infrastructure and capacity within the services industry.

4.4. Statistical methodology

The adequacy of the model is evaluated by the adjusted coefficient of determination (adjusted R2), which assesses the explanatory capacity of models with varying quantities of variables. Statistical tests on the regression coefficients are conducted to verify the significance of the found associations. The theoretical model outlined offers a solid foundation for examining the role of service trade in fostering economic growth in an emerging country such as Morocco, including the interplay of economic, educational, and investment factors.

5. RESULTS

5.1. Descriptive analysis and variable statistics

Descriptive analysis of the data revealed significant variations in the different categories of services imported and exported by Morocco between 2001 and 2022 (Table 1). Travel and transport services played a dominant role, both in terms of imports and exports. Foreign direct investment and adult literacy also showed significant influences on GDP.

Table 1. Descriptive Statistics for Key Variables (2001-2022)

Variables	Mean	Standard deviation	N
GDP (current US$) (Billion USD)	95,55	21,44	22
Transportation services (% exports of commercial services)	16,65	2,20	22
Travel services (% exports of commercial services)	46,29	7,28	22
Other services (% exports of commercial services)	37,06	6,10	22
Foreign direct investment - net inflows (current US$)	2,30	0,82	22
Literacy - adults (% of adults over 15 years of age)	62,85	12,73	22

5.2. Assessment of model fit

The multiple regression model used demonstrated strong explanatory power, with an adjusted coefficient of determination (adjusted R2) of 0.92, indicating that 92% of the variation in GDP was explained by the selected variables (Table 2). The Fisher statistic (F) is significant ($p < 0.001$), underlining the relevance of the overall model.

Table 2. Summary of Regression Model Fit and Significance

Model	R	R2	adjusted R2	Standard error of estimation	Sig. F
1	0,95	0,96	0,92	0,097	0,000

5.3. Regression coefficients and interpretation

The regression coefficients show the relationship between each explanatory variable and GDP (Table 3). Transport and travel services have a significant positive impact on GDP, while other services and certain indirect variables have a moderate effect.

Table 3. Regression Coefficients for Variables Influencing GDP

Variables	Unstandardized coefficients (B)	Standard error	Standardized coefficients (Beta)	T	Sig.
Transportation services (imports)	-5,511	0,710	-0,478	-0,277	0,001
Travel services (imports)	-4,491	0,200	0,328	-0,190	0,006
Transportation services (exports)	18,423	0,038	0,752	6,721	0,000
Foreign direct investment	21,159	0,001	0,940	12,313	0,000

Transport services and foreign direct investment appear to be major determinants of economic value creation, confirming the hypothesis that the integration of services into international trade promotes economic growth.

5.4. Analysis of residuals

Model residuals were examined to test the validity of the normality and homoscedasticity assumptions. The analysis confirmed that the residuals are centered around zero, validating the model's fit as shown in Table 4.

Table 4. Summary of Residual Statistics for Model Validation

Residual statistics	Minimum	Maximum	Mean	Standard deviation	N
Predicted Values	94,94	125,20	111,81	9,83	22
Residues	0,00	0,00	0,00	0,00	22

The results show that the linear model used is appropriate and well-fitted for analyzing the relationship between the explanatory variables and GDP.

6. DISCUSSION

6.1. Results interpretation

This study used a multiple regression analysis to thoroughly examine the effect of international trade in services on the generation of economic value, quantified by Gross Domestic Product (GDP). The research indicated that the incorporation of services into international commerce is crucial to Morocco's economic dynamics. The findings indicate that imports of services, especially transport and travel services, exert a substantial negative influence on GDP, but exports of services have a considerable positive effect. These insights affirm the increasing significance of services within the global economic framework, highlighting their dual role as both difficulties and possibilities for the national economy. The negative regression coefficients for service imports (-5,511 for transportation services, -4,491 for travel services, and -4,371 for other services) indicate that reliance on imported services may diminish the internal value generated by the economy. These findings align with the current research, which underscores the risk of imbalance when countries overly rely on imports to the detriment of domestic output. Conversely, service exports emerge as significant catalysts for development. The affirmative regression coefficients (18,423 for transport services, 13,438 for travel services, and 11,915 for other services) validate that exported services substantially contribute to GDP growth. These findings underscore the necessity of cultivating internationally competitive services that enhance value and fortify the nation's standing in global value chains.

6.2. Impact of foreign direct investment

The research emphasized the significant influence of foreign direct investment (FDI) on economic growth. The substantial regression coefficient of 21.159 and a statistical significance of $p < 0.001$ indicate that foreign direct investment (FDI) is a primary driver of economic success. This confirms the concept that FDI not only addresses capital deficiencies but also serves as a conduit for the transfer of knowledge and expertise, enhancing local industries, including services. These findings support the economic hypothesis that foreign direct investment promotes innovation, enhances productivity, and raises employment, so facilitating a positive cycle of economic development. Policymakers should thus contemplate strategies that entice and sustain a consistent influx of FDI, including tax incentives, a solid regulatory framework, and resilient infrastructure.

6.3. Theoretical considerations and practical implications

The results of this study endorse the notion that international trade in services may drive sustained economic growth. The establishment of specialized services, whether in technology, finance, or tourism, is crucial for economic stimulation. Economies that effectively integrate into global value chains and use service exports can achieve a substantial competitive advantage. The practical consequences for Morocco and other rising countries need the promotion of innovation and competitiveness within the services sector. This may be accomplished by policies that promote research and development, enhance educational quality, and connect existing capabilities with market demands.

6.4. Limitations of the study and future research

This study offers significant insights but recognizes limits, including the insignificance of factors associated with literacy and tertiary enrollment rates. The results suggest that contextual or qualitative variables may affect the correlation between service trade and economic development. Future study may investigate aspects such as educational quality and the influence of technology advancements on service competitiveness. Investigating the impact of digitalization and advanced technology on the services industry constitutes an interesting area of study. A comparative analysis of many emerging economies should enhance our comprehension of viable techniques for optimizing the services sector's contribution to economic growth.

7. CONCLUSION

This research has illustrated the substantial impact of international trade in services on economic value generation, utilizing Morocco as a case study. Analysis of data from 2001 to 2022 using a multiple linear regression model revealed that service imports, especially in transportation and travel, adversely affect GDP, whereas service exports significantly enhance economic growth. The results highlight that foreign direct investment (FDI) is a crucial catalyst for economic value through the facilitation of knowledge transfer and the augmentation of local capacity, hence emphasizing the necessity of strategic policies to attract and utilize FDI effectively. The results correspond with current research, which emphasizes the dual role of services in generating economic value, offering both possibilities and problems for developing economies. The research also verifies that incorporating services into global value chains might enhance economic resilience and competitiveness. From a policy standpoint, the research indicates that Moroccan authorities have to focus the enhancement of service sector exports via innovation, infrastructural advancement, and skills development. Enhancing digital infrastructure and facilitating foreign investment are essential strategies to fully use the potential of service exports. Furthermore, diversifying the service sectors engaged in international commerce helps alleviate the adverse impacts of service imports. This study provides useful insights but acknowledges its limits, notably the exclusion of qualitative variables like educational quality and the alignment of skills with market demands. Future study may investigate the influence of these elements, alongside the effect of digitalization and sophisticated technology, on the competitiveness and expansion of the services industry. Comparative analyses with additional developing economies may yield a more profound comprehension and wider relevance of the results. This study underscores that international commerce in services, bolstered by effective FDI strategies and thorough economic policies, is a crucial mechanism for sustained economic development. Incorporating these factors into economic planning can enhance Morocco and comparable nations' positions in the global economic arena, fostering sustained growth and development.

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