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ASSESSING THE IMPACT OF IMPORT ON EXPORT IN MALAWI

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ABSTRACT :

Malawi, a landlocked economy in Southern Africa, faces persistent trade deficits despite policies aimed at boosting exports. This study investigates the impact of imports on exports in Malawi using time-series data (1964–2019) and an ARDL framework. Results indicate a long-run cointegrating relationship, with imports positively influencing exports, while exchange rates exhibit a negative effect. The findings suggest that strategic import policies could mitigate trade deficits and enhance export performance.

Keywords: Malawi, Trade Deficit, Imports, Exports, ARDL, Exchange Rates

Introduction

Malawi, a relatively small and landlocked nation in the southern region of Africa, occupies a unique geographic and economic position on the continent. Nestled among larger neighbors, it shares borders with Tanzania to the north, Zambia to the west, and Mozambique to both the east and south. While its location offers cultural and political connections with different parts of southern and eastern Africa, the lack of direct access to the sea has had a profound impact on its economic structure, limiting opportunities for low-cost international trade and raising transportation costs for goods moving in and out of the country.

For decades, Malawi has been classified as one of the world's least developed countries (LDCs), and in recent years, global poverty assessments have gone so far as to label it the world's poorest country. This is not to say that Malawi lacks resilience or the potential for growth rather, it highlights the scale of the challenges the nation faces. The country's development journey is shaped by historical, geographic, and structural factors, as well as the global economic environment.

One of the defining characteristics of Malawi's economy is its dependence on agriculture. According to World Bank (2016) estimates, agriculture employs close to 80% of the population. This is a striking figure, illustrating how livelihoods are deeply tied to farming and agricultural trade. However, the heavy reliance on agriculture also makes Malawi's economy highly vulnerable to climate variability, fluctuations in global commodity prices, and other shocks. Although the nation has not been blessed with an abundance of natural resources such as oil, gold, or vast mineral reserves, it does possess fertile agricultural land in certain regions and favorable conditions for the cultivation of crops like maize, tobacco, tea, and sugar. These agricultural products form the backbone of Malawi's export earnings, but they also expose the country to risks associated with over-dependence on a narrow range of commodities.

LITERATURE REVIEW

Empirical Literature Review

Empirical research on the relationship between imports and exports reveals diverse findings, often shaped by differences in country contexts, data availability, and methodological approaches.

Shabbaz (2012) investigated the effect of trade openness on economic growth in the long run using the ARDL approach to co-integration in the case of Pakistan. The results indicated that trade openness conceptualised to include both imports and exports –significantly promoted economic growth. This finding was supported by VECM Granger causality tests, which revealed bidirectional causality between trade openness and growth, and by innovation accounting techniques that confirmed the robustness of the results. Shabbaz et al. (2011), in a related study, tested the export-led growth hypothesis for Pakistan using quarterly data from 1990 to 2008, employing Phillip–Perron Unit Root tests, ARDL bounds testing, and Error Correction Models (ECM). Their findings supported the ELG hypothesis, with exports positively correlated with GDP growth in both the short and long run.

Kumar and Narayan (2005) examined whether exports and imports were co-integrated for 22 LDCs, applying bounds testing approaches to co-integration. They found that for only six countries in the sample, including some Sub-Saharan African economies, there was evidence of long-run co-integration between exports and imports. The estimated long-run elasticities were generally positive but statistically significant in only four cases, suggesting that

the relationship between imports and exports may be context-specific. Importantly, they noted that co-integration, while necessary, is not a sufficient condition for satisfying the intertemporal budget constraint, underscoring the need for structural reforms to ensure trade sustainability.

In the Indian context, Konya and Singh (2008) assessed the equilibrium relationship between exports and imports from 1949/50 to 2004/2005 using unit root and co-integration techniques. Their results indicated no evidence of co-integration, implying that India's trade policies had been ineffective in bringing exports and imports into long-run equilibrium, leading to persistent trade deficits.

Tuncer (2002), using a Vector Autoregressive (VAR) model with quarterly data from 1980 to 2000 for Turkey, identified a strong two-way relationship between imports and GDP and a unidirectional causal link running from imports to exports. This finding provided empirical support for the ILG hypothesis, suggesting that imports of capital and intermediate goods facilitated the production of exports.

In Malaysia, Choong, Soo, and Yusop (2004) employed Johansen's multivariate co-integration test using annual data from 1959 to 2000 and found a long-run relationship between imports and exports. Their results underscored the role of imported intermediate goods in sustaining export growth, a finding consistent with the experiences of many Southeast Asian economies during their industrialisation phase.

Iranyakul (2012) extended this line of inquiry by focusing specifically on manufacturing exports and imports of capital goods in Thailand, using monthly data from 2000 to 2011. The ARDL bounds testing approach revealed co-integration, with causality tests indicating that imports of capital goods had a unidirectional impact on manufacturing output growth, thereby indirectly enhancing exports.

More recent studies have explored the role of imports in global value chains (GVCs). For instance, OECD (2020) data show that in many developing economies, a significant proportion of exports is comprised of re-exported imported intermediate goods, highlighting the importance of efficient import systems for export competitiveness. In the African context, UNECA (2021) found that under the African Continental Free Trade Area (AfCFTA), trade liberalisation in capital goods and intermediate inputs could yield substantial export gains, particularly for landlocked countries like Malawi.

These empirical studies collectively demonstrate that the imports–exports nexus is complex and context-dependent. In some cases, imports act as a catalyst for export growth by providing essential production inputs, while in others, they exacerbate trade imbalances. For Malawi, understanding the precise nature of this relationship is crucial for designing trade policies that leverage imports for export promotion without worsening the trade deficit.

Theoretical Literature Review

The theoretical debate surrounding the relationship between imports and exports is rooted in a rich body of economic thought, drawing from multiple strands of trade and growth theory. Each theoretical school offers its own interpretation of how international trade transactions influence a nation's economic trajectory. Historically, imports were frequently perceived through a skeptical lens. Policymakers and early economic theorists often treated them as a form of "leakage" from the circular flow of national income an outflow of purchasing power that could otherwise be directed toward domestic industries. From this traditional standpoint, high import volumes were sometimes associated with reduced local production capacity, suppressed employment levels, and potential balance of payments difficulties.

However, over time, as economies became increasingly interconnected and globalization deepened, the perception of imports evolved. Modern trade theory and empirical evidence now highlight those imports can play a strategic and complementary role in driving economic growth. In many cases, domestic industries do not operate in isolation but rather depend on inputs sourced from abroad such as advanced machinery, specialized components, raw materials, and cutting-edge technologies. These imports often enhance domestic productivity, stimulate innovation, and expand a country's export capacity.

Thus, the imports exports nexus is far more dynamic than earlier models suggested. Imports can be both a drain and a catalyst: a drain if they displace viable domestic production without adding value, but a catalyst if they enable industries to move up the value chain and compete effectively in global markets. To understand this nuanced relationship, several theoretical frameworks have emerged. One prominent perspective is the Import-Led Growth (ILG) School, which explicitly emphasizes the positive role of imports in stimulating economic development. This viewpoint, alongside complementary theories, provides a foundation for understanding the mechanisms through which imports and exports interact.

The Import-Led Growth hypothesis represents a departure from the older, protectionist-oriented views of trade. Instead of focusing solely on export expansion as the engine of growth, ILG theory posits that imports particularly of capital goods and intermediate inputs can serve as a primary driver of long-term economic performance. This school of thought suggests that the nature and composition of imports matter far more than their sheer volume.

From this perspective, imports of advanced machinery, precision tools, specialized chemicals, and innovative technologies can enable domestic firms to improve production processes, reduce costs, and enhance product quality. These efficiency gains, in turn, strengthen a country's export potential by making its goods and services more competitive in global markets. Moreover, imported technologies can spill over into other sectors, generating broad-based productivity growth and fostering structural transformation.

The ILG framework also draws on the concept of technology transfer. In many developing and emerging economies, domestic R&D capacity is limited, and innovation often relies on the adaptation of foreign technologies. Imports act as a conduit for this transfer, allowing local industries to leapfrog certain stages of technological development. Over time, this can narrow the productivity gap between developed and developing economies, provided that the recipient country has the institutional capacity, skills base, and infrastructure to absorb and utilize the imported technologies effectively.

Import-led growth theory further acknowledges that the benefits of imports are not automatic. They depend on complementary factors such as sound macroeconomic policies, an open and competitive market environment, and targeted investments in human capital. In the absence of these conditions, reliance on imports may lead to dependency rather than development. For instance, excessive importation of consumer goods without a corresponding

investment in productive capacity may create trade imbalances and hinder industrialization efforts. Thus, the ILG perspective emphasizes a strategic, rather than indiscriminate, approach to import policy.

While the ILG school focuses on imports as a driver of growth, the Export-Led Growth (ELG) framework has long been a dominant paradigm in development economics. ELG posits that sustained economic growth is best achieved through the expansion of export-oriented production. Increased exports generate foreign exchange earnings, which can then be used to finance imports of capital goods and technology, creating a virtuous cycle between trade and growth. In practice, ILG and ELG are not mutually exclusive. In fact, they often reinforce one another. Imports of advanced inputs can boost productivity and product quality, thereby enhancing a country's export competitiveness. Conversely, export success provides the financial resources necessary to sustain high-quality imports. The interaction between these two frameworks highlights the importance of maintaining a balanced trade policy that recognizes the interdependence of imports and exports in the growth process.

Another lens through which to view the imports–exports relationship comes from the Heckscher–Ohlin (H–O) model and the broader principle of comparative advantage. According to these theories, countries export goods that intensively use their abundant factors of production and import goods that require factors in which they are relatively scarce. From this standpoint, imports are not inherently harmful; rather, they are a reflection of a country's resource endowment and specialization pattern.

In this framework, imports complement exports by allowing countries to focus on producing goods and services where they hold a comparative advantage. By importing goods that are costly or inefficient to produce domestically, a country can allocate resources more efficiently, raise overall productivity, and generate higher national income. Furthermore, in the modern global economy characterized by complex value chains the distinction between imports and exports often blurs. Components and raw materials may cross borders multiple times before reaching the final consumer, illustrating the interconnected nature of trade flows.

Endogenous growth theory provides yet another perspective on how imports influence long-term economic performance. This school of thought emphasizes that technological progress and innovation are key drivers of sustained growth, and these can be significantly enhanced through international trade. Imports, particularly of capital goods and high-technology products, are channels for knowledge spillovers. Domestic firms learn from imported technologies, adapt them to local conditions, and develop new innovations in the process. These spillovers extend beyond the importing firms themselves. Competing domestic producers may observe and imitate new production techniques, suppliers may adopt higher standards to meet the requirements of technologically advanced buyers, and workers may acquire new skills through exposure to imported machinery and processes. Over time, these cumulative effects can raise the economy's overall productivity level, supporting both import- and export-led growth.

While imports can play a positive role, they must also be viewed through the lens of macroeconomic stability, particularly the balance of payments (BOP) constraint. This concept, rooted in the work of Thirlwall and others, suggests that a country's long-term growth rate is limited by the need to maintain a sustainable balance between foreign exchange earnings (from exports and capital inflows) and foreign exchange expenditures (on imports and debt servicing). If imports grow faster than exports, the resulting trade deficit can place pressure on a country's foreign reserves and exchange rate. In the absence of adequate capital inflows, this imbalance may necessitate restrictive trade or monetary policies that slow economic growth. From this perspective, the imports–exports nexus is not only about mutual reinforcement but also about maintaining a sustainable ratio between the two flows.

Taken together, these theoretical perspectives reveal that the relationship between imports and exports is multifaceted. Imports are no longer viewed solely as a drain on national income but as potential catalysts for productivity, innovation, and export competitiveness. The key lies in the nature, composition, and strategic management of imports. In the context of globalization, many countries especially those integrated into global value chains import intermediate goods and capital equipment as part of their export production processes. For instance, a nation may import semiconductor components, assemble them into finished electronics, and export the final products to global markets. In such cases, imports and exports are part of the same production cycle, reinforcing rather than competing with one another. The challenge for policymakers is to design trade and industrial policies that maximize the developmental benefits of imports while maintaining external balance. This may involve promoting the importation of technology-intensive goods, investing in skills development to absorb and adapt foreign technologies, and fostering domestic industries that can compete in export markets. At the same time, careful monitoring of the balance of payments is essential to avoid the risks associated with excessive import dependence.

The imports exports relationship is not a simple matter of one being "good" and the other "bad." Instead, it is a complex, interactive dynamic shaped by technological capabilities, resource endowments, macroeconomic constraints, and the structure of global trade. The Import-Led Growth (ILG) School highlights the critical role that strategic imports can play in enhancing productivity and competitiveness. The Export-Led Growth (ELG) framework emphasizes the importance of generating foreign exchange to sustain these imports. Theories of comparative advantage, endogenous growth, and the balance of payments constraint further enrich our understanding of this nexus. In today's interconnected world, successful economies often strike a balance between the two importing the goods and knowledge they need to upgrade domestic production, while exporting the competitive products and services that sustain their ability to engage in global trade. Understanding this nuanced interplay is essential for crafting policies that harness the full potential of international trade for sustainable economic growth.

Research Methodology

Research Design

This study employed a quantitative research design to investigate the impact of imports on exports in Malawi over the period from 1962 to 2019. The choice of a quantitative approach was driven by the nature of the research question, which sought to measure and analyze the relationship between two key economic variables imports and exports over a long historical timeframe. Quantitative research was particularly suitable for studies that involved numerical data and aimed to identify patterns, trends, and statistical relationships, making it ideal for this investigation.

The study relied exclusively on secondary data, which was obtained from the World Bank database. This source was selected due to its credibility, comprehensiveness, and consistent coverage of economic indicators over several decades. By using World Bank data, the research ensured reliability,

accuracy, and comparability of figures across the entire study period. This was crucial for long-term trend analysis, as inconsistencies or gaps in data could have undermined the validity of the results. The decision to focus on the period from 1962 to 2019 was significant for two reasons. First, it captured Malawi's economic performance from the time of independence in 1964 through various phases of economic reform, trade policy changes, and integration into regional and global markets. Second, this long-term horizon enabled the study to examine both short-term fluctuations and long-term structural shifts in the import–export relationship, providing a richer and more comprehensive understanding of the dynamics at play.

A quantitative approach allowed for a systematic examination of patterns and relationships between imports and exports by applying statistical and econometric techniques. These techniques helped identify whether changes in imports were associated with corresponding changes in exports and, if so, the nature and strength of this relationship. For instance, the study tested whether increased imports stimulated exports through access to better inputs and technologies, or whether they suppressed exports due to trade imbalances and dependency on foreign goods. The methodology involved organizing the collected data into time series format and conducting statistical analyses to establish trends, correlations, and causality where possible. This included the use of regression models, correlation coefficients, and other econometric tools that provided empirical evidence for interpreting the relationship between the variables. The quantitative nature of the study also enhanced objectivity, as conclusions were based on measurable evidence rather than subjective judgment.

Furthermore, by using secondary data, the study avoided the logistical and financial constraints associated with primary data collection, especially given the historical scope of the research. This enabled the researcher to focus on rigorous data analysis while benefiting from the robustness and credibility of already-published figures. The combination of a quantitative research design, credible secondary data from the World Bank, and a long-term analytical horizon positioned the study to provide valuable insights into the import–export dynamics in Malawi. The approach ensured that findings were grounded in empirical evidence, allowing for informed discussions and policy recommendations regarding Malawi's trade strategy and economic development.

Sampling Technique

Because this study *used* secondary data from the World Bank database, the sampling technique *was based* on the availability of reliable data. The study utilized annual data covering the period from 1962 to 2019, providing a comprehensive 58-year time span for analysis. This extensive time frame allowed the researcher to examine long-term trends and explore the evolving relationship between imports and exports in Malawi over different economic and policy periods. The selection of this period was intentional, as it captured both historical and contemporary dynamics, from the early post-independence years through various phases of trade liberalization, economic reforms, and integration into global markets.

The reliance on data availability meant that the sample consisted of all years for which complete and consistent figures were recorded in the World Bank database for both imports and exports. This approach ensured that the analysis was grounded in the most accurate and comprehensive dataset possible, thereby increasing the credibility of the results.

Data Collection Methods

The research used a primary source of secondary data, which was obtained directly from the World Bank database. This database provided reliable, accessible, and internationally recognized data on key trade indicators, including annual values of imports and exports for Malawi. The World Bank was selected as the data source because of its reputation for accuracy, standardized reporting, and consistency in compiling economic indicators across countries and time periods.

The data was retrieved in a format compatible with statistical analysis and then imported into Stata for processing and examination. Before analysis, the dataset was cleaned to check for missing values, inconsistencies, or anomalies that might distort the results. This process included verifying that the figures were recorded in the same units and currency over the years to maintain comparability. By using the World Bank's annual trade data, the study ensured that the findings were based on robust and trustworthy information. This not only enhanced the reliability of the results but also allowed for replicability, enabling future researchers to access the same data and verify or extend the analysis.

DATA PRESENTATION AND ANALYSIS

Behind all these percentages and exchange rate figures are real people. When imports are high and the currency weakens, ordinary Malawians feel the impact in their daily lives—higher prices for fuel, cooking oil, bread, clothes, and even medicine. When export earnings drop, government revenue declines, making it harder to fund public services like education and health care. On the other hand, when exports rise and the currency stabilizes, farmers get better prices for their crops, businesses can plan with more confidence, and imported goods become relatively more affordable.

For example, a tea farmer in Thyolo might earn more in a year when the kwacha is weaker and global tea prices are high because their earnings in dollars convert into more kwacha. But if that same farmer has to buy imported fertilizer or a new pump for irrigation, the weaker kwacha makes those items more expensive. Similarly, a small shop owner in Lilongwe who imports cooking oil from South Africa will have to raise prices when the kwacha falls, which can reduce customer demand and profits. These everyday ripple effects show why trade balance and exchange rate trends matter far beyond the realm of economists and policymakers they affect the lives of every citizen.

The table's data may seem simple percentages of GDP for exports and imports, and numbers showing the exchange rate but it captures the essence of Malawi's economic position. The country exports, on average, a quarter of its GDP, but imports more, creating a trade gap that puts pressure on the exchange rate. Over time, the kwacha has seen dramatic depreciation, reflecting both domestic and external challenges. The challenge for Malawi is to harness its export potential while reducing its dependency on imports in a way that does not harm growth or living standards. Strengthening domestic production, diversifying exports, and maintaining macroeconomic stability are crucial steps toward a more balanced and resilient economy.

In essence, the story behind the table is one of an economy striving to find equilibrium in an interconnected global system an economy whose fortunes are deeply tied to the rains, the soil, the global market, and the delicate dance between what it sells and what it buys.

Variable	Observations	Mean	Std. Dev.	Minimum	Maximum
Exports	60	24.51756	4.495981	15.86064	35.65977
Imports	60	36.1517	6.087785	25.0488	61.74514
Exchange rate	60	100.6466	199.0193	0.714285	745.5407

ADF and PP Unit Root Tests (with trend constant)

	Levels	Levels		First Differences		Integration order
Variables	ADF	PP	Variables	ADF	PP	
Ln exp	-3.396***	-4.188***	Δ ln_exp	…	….	I(0)
Ln imp	-3.678***	-5.246***	Δ ln_imp	…	….	I(0)
Ln exch	0.978	1.513	Δln_exch	-2.661***	-4.330***	I(1)

Note: *** and ** represent significance at the 1% and 5% significance levels, respectively.

4.2.2 Cointegration test using ARDL Bounds Test

In empirical economic research, particularly when working with time series data, one of the most important preliminary steps is to determine whether a long-run relationship exists among the variables under study. Establishing this relationship is crucial because it determines the type of econometric modeling approach that will be appropriate for the analysis. If such a relationship exists, it implies that the variables tend to move together over time, and any short-term deviations from their equilibrium path will be corrected in the long run.

In this paper, the *Autoregressive Distributed Lag* (ARDL) bounds testing procedure has been employed to investigate whether there is evidence of a long-run equilibrium relationship among the variables in the model. The ARDL approach, introduced by Pesaran, Shin, and Smith (2001), has become a preferred technique in many empirical studies because it can be applied regardless of whether the variables in question are purely integrated of order zero [I(0)], purely integrated of order one [I(1)], or a mixture of both. This flexibility overcomes a major limitation of older cointegration methods, such as the Engle-Granger and Johansen procedures, which require all variables to be integrated of the same order.

The regression model satisfies the homoscedasticity assumption. Therefore, the OLS estimates are efficient, and the inference based on standard errors, t-tests, and F-tests is valid.

Source	chi2	Df	P
Heteroscedasticity	19.48	20	0.4907
Skewness	3.99	5	0.5644
Kurtosis	3.44	1	0.0638
Total	26.82	26	0.4191

In this case, the variables are homoscedastic since Prob>Chi-square (0.4907) is greater than the level of significance 0.05, therefore homoscedasticity is confirmed.

Findings

Positive Import–Export Relationship the research found a strong and positive correlation between imports and exports, both in the short term and the long term. This aligns with the *import-led growth hypothesis*, which argues that imports of intermediate goods, technology, and capital equipment enhance domestic production capacity, which in turn boosts exports.

Short-run and Long-run Dynamics - *Short run:* A 1% increase in imports was associated with a 0.34% increase in exports. This shows that even within shorter economic cycles, imports can have a quick simulative effect on export performance, possibly through the immediate use of imported inputs in production. *Long run:* A 1% increase in imports correlated with a 0.85% increase in exports. This stronger relationship in the long term suggests that sustained access to imported capital goods, raw materials, and technology leads to more profound improvements in industrial capacity, productivity, and export competitiveness.

Recommendations

To enhance Malawi's economic growth and industrial development, the government should prioritize the importation of capital goods, production machinery, agricultural technology, and essential raw materials for manufacturing and agro-processing sectors. The Reserve Bank of Malawi should implement targeted foreign exchange allocation policies, ensuring that foreign currency is directed toward imports that directly drive production and export growth while limiting non-essential imports. These trade initiatives should be supported by strategic investments in infrastructure such as reliable power supply, efficient transport networks, and robust ICT systems to maximize the benefits of productive imports. Furthermore, strong collaboration between government agencies and private sector stakeholders is vital to identify high-priority imports that can significantly boost export capacity and to negotiate trade agreements that make such imports more affordable. At the same time, efforts to promote import substitution should be balanced with complementary imports, encouraging the development of local industries for intermediate goods while continuing to source specialized equipment and materials that cannot be efficiently produced domestically.

Conclusion

This study set out to examine a fundamental yet often misunderstood aspect of Malawi's economic development: the relationship between imports and exports. While the country's policymakers have traditionally been preoccupied with reducing trade deficits by restricting imports, this research takes a different angle. It investigates whether imports when used strategically can actually promote export growth and contribute to long-term economic progress.

Using data spanning 57 years, from 1963 to 2019, and applying the Autoregressive Distributed Lag (ARDL) model, the study provides compelling empirical evidence. The findings reveal that imports are not merely a drain on foreign exchange reserves; rather, they can be an engine for export expansion. The results support the *import-led growth hypothesis***,** which posits that certain types of imports particularly capital goods, machinery, raw materials, and intermediate inputs can enhance a country's productive capacity, technological base, and ultimately its ability to compete in international markets.

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