IMPACT OF GROSS DOMESTIC PRODUCT AND INFLATION ON IMPORT IN NEPAL

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By

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CERTIFICATE OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled "**Impact of Gross Domestic Product and Inflation on Import in Nepal**". This dissertation's work has never before been submitted for a degree to be awarded, nor has it been suggested and presented as a prerequisite for any other academic reason.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of this dissertation.

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REPORT OF RESEARCH COMMITTEE

Mr. Santosh Singh Thagunna has defended dissertation entitled **"Impact of Gross Domestic Product and Inflation on Import in Nepal"** successfully. The dissertation has been registered for further development by the research committee. It is advised to complete the work in accordance with supervisor Asso. Prof Dr. Kapil Khanal recommendations and instructions before submitting the dissertation for review and a viva-voice examination.

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APPROVAL SHEET

We, the undersigned, have examined the thesis entitled "**Impact of Gross Domestic Product and Inflation on Import in Nepal**" presented by Mr. Santosh Singh Thagunna, a candidate for the degree of Master of Business Studies (MBS Semester) and conducted the Viva-voice examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

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Santosh Singh Thagunna

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ABBREVIATIONS

ADF : Augmented Dickey–Fuller test

ARDL : Autoregressive Distributed lag

ARDL : Autoregressive Distributed Lag Stationarity model,

CPI : Cunsumer Prices Index

CPI : Per Capita Income

EXR : Exchange Rate

EXR : Exchange rate

GDP : Gross domestic product

GDPgr : Gross domestic product

M : Money Supply

OECD : Organization for Economic Co-operation and Development

P : Price level

Q : Quantity of money

VAR : Vector Autoregression model

VDA : Variance decomposition analysis

VDA : Variable Dearness Allowance

ABSTRACT

Researcher has completed his research on the Impact of GDP, GDP gr, Per capita Income, Inflation on Import in Nepal. The general objective of study analyze the trend and growth of gross domestic product GDP, Gross domestic product growth rate, per capita income (PCI), Inflation and import of impact volume of Nepal and effects of GDP and Inflation on import and specific objective to analyze the trend and growth of GDP, GDP (gr), per capita income (PCI), Inflation and Import in Nepal, examine the association between GDP, GDP (gr), per capita income (PCI), inflation and Import of Nepal and assess the impact of GDP, GDP (gr), per capital income (PCI) and Inflation on Import in Nepal. The study was completed under the descriptive and causal research resign taking data from the year 1991 to 2023. The statistical model correlation and regression line used to analyze the data. Data collected from the secondary sources from the Nepal Rastra Banks. The correlation between Import and GDP (Gr) is weakly negative, suggesting a minor inverse relationship. Import also demonstrates a robust positive correlation with PCI, reflecting a connection between higher imports and increased per capita income. GDP exhibits an exceptionally strong positive correlation with PCI, highlighting a near-perfect relationship between overall economic output and per capita income. On the other hand, there is a weak negative correlation between GDP and Inflation, implying a slight inverse association. GDP (Gr) and PCI show a weak negative correlation, indicating a modest tendency for higher per capita income to be associated with lower growth in nominal GDP. The correlation between GDP (Gr) and Inflation is moderately positive, signaling a potential link between higher growth in nominal GDP and increased inflation. Lastly, PCI and Inflation display a weak negative correlation, suggesting a mild inverse relationship between per capita income and inflation. The inclusion of statistical significance indicators underscores the reliability of these correlations. The model exhibited substantial statistical significance, as evidenced by the F-statistic of 311.04 with a corresponding p-value less than 0.05. Which explain the Nepal's import volume 98.90 percent.

***Keywords*:** Gross domestic product (GDP), Gross domestic growth rate (GDPgr), per capital income (PCI), inflation (Inf) and Import (M).

Chapter I Introduction

1.1 Background of the Study

Imports play a pivotal role in shaping Nepal's economic trajectory. As GDP grows, domestic demand for goods and services typically increases, resulting in higher import volumes to meet rising consumption and investment needs. This growing reliance on imports reflects Nepal's limited domestic production capacity, particularly in key sectors such as energy, machinery, and consumer goods. Imports help fill the gap between what the country demands and what it can produce internally. They also support infrastructure development by providing essential materials and equipment not available locally. However, this dependence makes the economy vulnerable to external shocks, such as global price fluctuations and exchange rate volatility. Effective import management is therefore crucial for sustaining economic stability and long-term growth (Blanchard, 2016; Mishkin, 2013). However, when inflation accelerates, purchasing power declines, making domestic goods relatively more expensive. As a result, consumers and firms often turn to cheaper foreign alternatives to meet their needs. This shift in preference can lead to a surge in import demand. Imported goods become more attractive due to their lower prices, especially when domestic inflation is high. In such scenarios, inflation indirectly fuels import growth by altering consumption and production choices. This trend can deepen a country's reliance on foreign products and widen the trade deficit (Mishkin, 2013).

In Nepal's context, the impact of inflation on import behavior is particularly pronounced due to the country's heavy dependence on imported petroleum, machinery, and manufactured goods. More than 60 percent of these imports come from India, making Nepal highly susceptible to exchange rate fluctuations and external supply shocks. This dependence means that any disruption in trade or currency movements can quickly influence domestic prices. The 2015 border blockade vividly illustrated these vulnerabilities, causing severe shortages of fuel, medicines, and other essential goods. Prices of daily necessities surged, and economic activities slowed down drastically. The blockade exposed the risks of relying heavily on a single trade partner. It also underscored the importance of supply chain diversification and improved domestic production capacity. These lessons remain critical for strengthening Nepal's economic resilience against future shocks (Paudyal, 2018). The blockade led to severe shortages,

highlighting the risks of over-dependence on a single trading partner. Exchange rate volatility can rapidly transmit into domestic inflation through imported goods. Moreover, rising global prices of oil or machinery can directly impact Nepal's production costs and inflation. Nepal's limited domestic manufacturing capacity further deepens its dependency on imports. As a result, managing import-related vulnerabilities is essential for macroeconomic stability. Policymakers must therefore balance trade openness with strategies to enhance domestic production and diversify import.

Inflationary pressures often arise from rising costs within the economy, particularly when domestic prices increase faster than the supply of goods and services. One significant channel through which inflation affects the economy is its impact on imports. When the general price level rises, especially due to cost-push factors like increased production expenses, it can reduce the real purchasing power of consumers and businesses. This situation often leads to a shift in demand toward relatively cheaper foreign goods, resulting in increased import volumes (Paudyal,2018).

However, persistent inflation also weakens the national currency, making it more expensive to purchase foreign goods. As a result, the cost of imports rises, which can further fuel inflation, creating a cyclical relationship between inflation and import costs. This dynamic pressures monetary authorities to intervene, often by increasing interest rates to control inflation. While such measures may stabilize prices, they can also slow down economic growth by reducing investment and consumption. Where industrial development and infrastructure rely heavily on the import of capital goods, maintaining price stability is essential. High inflation disrupts planning and resource allocation, reduces the affordability of key imports, and can strain foreign reserves. Therefore, managing inflation effectively is crucial not only for domestic economic stability but also for sustaining healthy import levels that support long-term development (Rangkuti et al,2024).

Nepal's economic structure, characterized by remittances making up approximately 30 percent of GDP, adds another layer of complexity. These remittance inflows play a crucial role in supporting household consumption, allowing families to afford better living standards. A significant portion of this income is spent on imported goods, thereby fueling import demand. While this boosts domestic consumption, it also contributes to a widening trade deficit. The reliance on remittances makes Nepal's economy vulnerable to

fluctuations in global labor markets, particularly in countries where large numbers of Nepali workers are employed. Any economic or political disruption abroad can directly impact remittance flows. A decline in remittances could reduce household spending and overall import capacity. Additionally, over-dependence on remittance income may discourage domestic production and job creation. Balancing remittance benefits with sustainable economic policies is essential for long-term stability (Koirala & Acharya, 2021).

Moreover, Nepal's fixed exchange-rate peg to the Indian rupee significantly restricts the country's monetary policy flexibility. This arrangement often compels monetary authorities to depend on fiscal measures, such as subsidies or public spending adjustments, to manage inflation and stimulate economic growth. While the peg helps maintain exchange rate stability and facilitates trade with India, it limits Nepal's ability to independently respond to domestic inflationary pressures or external economic shocks. As a result, policymakers face constraints in using interest rate adjustments or other conventional monetary tools to maintain macroeconomic stability. Critics argue that persistent import-driven inflation, combined with Nepal's underdeveloped industrial sector, hampers the country's efforts to move toward economic self-reliance. Despite various government initiatives aimed at enhancing domestic production capacity, such as subsidies for local industries and promotion of import substitution, the structural reliance on foreign goods remains deeply entrenched. This dependency undermines long-term economic sustainability and leaves the country vulnerable to supply chain disruptions and external price volatility. Without a robust industrial base and a diversified economy, Nepal's reliance on imports continues to challenge its broader development goals (Brown, 2021; Krugman & Wells, 2018).

This study examines the impact of gross domestic product and inflation on import in Nepal, exploring how these macroeconomic variables interact to influence trade balances, price stability, and sustainable growth. Imports remain a critical component of Nepal's economic framework, intricately linked to trends in gross domestic product (GDP) growth and inflation dynamics. As GDP rises, household incomes and industrial activities increase, triggering higher domestic demand for goods and services. This, in turn, leads to a proportional surge in imports to fulfill both consumption and investment needs (Blanchard, 2016; Mishkin, 2013). Empirical observations in Nepal show a positive

correlation between GDP growth and import volume, especially in years marked by strong agricultural performance and remittance inflows that elevate purchasing power.

However, inflation introduces complexity into this relationship. A sustained rise in the general price level weakens consumers' real incomes, pushing both households and firms to substitute costlier domestic goods with relatively cheaper imported alternatives. This shift often intensifies import demand during inflationary periods, particularly for essential commodities like petroleum and manufactured goods. As more than 60% of Nepal's imports originate from India, domestic price levels are acutely vulnerable to exchange rate fluctuations and regional supply shocks (Paudyal, 2018).

Currency depreciation, often a consequence of rising inflation, further increases the local cost of imports, especially for essential goods such as fuel, food, and industrial inputs. As import prices rise, overall inflation intensifies, creating a cyclical pattern where inflation and currency depreciation reinforce one another. This positive feedback loop places significant pressure on the economy and complicates macroeconomic management. In response, the central bank is frequently compelled to adopt contractionary monetary policies, such as raising interest rates or tightening credit conditions, to stabilize the currency and curb inflation. While these measures can help restore confidence in the domestic currency and limit inflationary expectations, they also have adverse side effects. Higher interest rates tend to reduce access to credit, making borrowing more expensive for households and businesses. This, in turn, discourages investment and consumption, slowing down overall economic activity. As a result, GDP growth may weaken, particularly in a developing economy like Nepal that relies heavily on domestic demand and remittance-driven consumption. Policymakers must carefully balance inflation control with the need to sustain growth, ensuring that monetary tightening does not derail long-term development objectives (Mishkin, 2013).

Nepal's economic dependence on remittances, which account for roughly 30% of GDP, adds a distinctive dimension to its economic structure. These inflows play a vital role in sustaining household consumption, improving living standards, and reducing poverty. However, a large portion of remittance income is spent on imported goods, which fuels demand for foreign products and increases the trade deficit. This growing trade imbalance heightens Nepal's vulnerability to external shocks, such as fluctuations in global labor markets or changes in host country policies. Moreover, heavy reliance on

remittances may discourage domestic job creation and reduce incentives for industrial development. To ensure long-term economic resilience, Nepal must complement remittance-driven growth with strategies that strengthen domestic production and diversify its economic base (Koirala & Acharya, 2021).

Despite various policy initiatives aimed at boosting domestic production and reducing import dependency, Nepal continues to struggle with a weak industrial base and limited manufacturing capacity. This structural weakness hampers the country's ability to produce substitutes for imported goods, leading to continued reliance on foreign products. Additionally, the rigid exchange rate regime pegged to the Indian rupee, further constrains Nepal's macroeconomic flexibility. While the peg provides exchange rate stability and facilitates bilateral trade, it restricts the central bank's ability to independently manage monetary policy. As a result, Nepal has limited tools to respond to inflationary pressures or external economic shocks. These constraints make it challenging to achieve a balanced and self-sustaining economic growth path (Krugman & Wells, 2018; Brown, 2021).

The relationship between GDP, inflation, and imports in Nepal is marked by both direct and indirect effects that shape the country's economic landscape. As GDP grows, there is a corresponding rise in the demand for goods and services, leading to increased imports, particularly in sectors that Nepal cannot fully supply domestically. This surge in imports is further exacerbated by inflation, which drives up the cost of goods, both locally and internationally, creating a cost-push effect that amplifies the demand for foreign goods. As inflation increases, the purchasing power of consumers decreases, leading to a higher reliance on imports to meet demand at affordable prices. Rising imports, in turn, put pressure on the country's trade balance, potentially leading to an increase in the current account deficit. This external imbalance can feed back into inflation, as the cost of imports rises with exchange rate fluctuations and global price shifts. Additionally, the economy may face supply-side constraints as domestic industries struggle to compete with cheaper imported goods, further increasing inflationary pressures. The interconnected nature of these factors calls for careful policy formulation to manage inflation and import dependency while fostering sustainable economic growth. Policymakers must consider tools such as currency stabilization, import substitution, and efficient trade policies to maintain a balanced economic growth trajectory. Effective

coordination between monetary, fiscal, and trade policies is critical to addressing these challenges and ensuring long-term economic stability(Koirala & Acharya, 2021). The understanding these dynamics is essential for promoting trade stability, controlling inflation, and ensuring the country's economic resilience in the face of global economic shifts.

1.2 Problem Statement

In Nepal, the intricate relationship between GDP growth, inflation, and import dependency exposes critical economic vulnerabilities that demand careful policy attention. The country's GDP growth is primarily driven by remittances and agricultural output, both of which increase household incomes and fuel consumption demand. This rising demand, in turn, leads to a surge in imports of essential commodities such as petroleum products, agricultural machinery, vehicles, electronics, and various consumer goods. As a landlocked nation with limited domestic production capacity and restricted access to international markets, Nepal heavily relies on imports to meet its consumption and development needs. This high import dependency makes the economy highly sensitive to fluctuations in global prices, exchange rate volatility, and external supply chain shocks (Turan, 2014).

Inflation plays a central role in shaping the impact of GDP growth on import dynamics. Rising inflation, often triggered by depreciating currency and increased import costs, erodes the real purchasing power of consumers and businesses. This not only increases the cost of living but also affects production costs, further discouraging domestic production and pushing the economy to depend more on imports. Consequently, trade deficits widen, foreign exchange reserves are strained, and macroeconomic stability is threatened. Although GDP growth reflects economic expansion, its sustainability is compromised when accompanied by high and persistent inflation. The inflationary environment creates uncertainty, reduces investor confidence, and compresses profit margins, which ultimately undermines the long-term benefits of economic growth (Liaqat et al, 2022).

GDP growth in Nepal, particularly its reliance on remittance income, contributes to a consumption-driven economic pattern rather than a production-oriented one. Remittance inflows, while supporting household expenditure, significantly increase the demand for imported goods rather than stimulating domestic manufacturing. This dynamic fuels a

cycle where increased GDP leads to higher imports, which in turn contribute to inflation through higher prices and supply-side constraints. Without effective policy interventions, this cycle can become self-perpetuating, reinforcing economic fragility. Studies have shown that such patterns of remittance-led consumption exacerbate inflation and suppress the growth of local industries (Koirala & Acharya, 2021).

Therefore, understanding the interdependence between GDP growth, inflation, and imports is crucial for formulating economic policies that promote resilience. Strategic measures are required to control inflationary pressures while fostering domestic production capabilities to reduce excessive reliance on imports. This includes strengthening import substitution industries, stabilizing the exchange rate, improving infrastructure, and enhancing agricultural productivity. Only by addressing the underlying structural issues linking GDP growth and inflation to import dependency can Nepal ensure a more balanced and sustainable economic trajectory (Paudyal, 2018). This statement shows:

i. What is the trend of GDP, GDP (gr), Perc pita income (PCI), Inflation and import in Nepal?
ii. Is there significant correlation between GDP, GDP (gr), per capita income (PCI), Inflation and Import of Nepal?
iii. Does the significant impact of GDP, GDP (gr), Per capita income (PCI) and Inflation on Import of Nepal?

1.1 Objectives of the Study

The general objectives of study is measure the analysis of the economic variables on import from the abroad of Nepalese economy. Where the specific objectives of the study are as follows:

i. To analyze the trend and growth of GDP, GDP (gr), per ca-pita income (PCI), Inflation and Import in Nepal.
ii. To examine the association between GDP, GDP (gr), per ca-pita income (PCI), inflation and Import of Nepal.
iii. To assess the impact of GDP, GDP (gr), per ca-pita (PCI) and Inflation on Import in Nepal.

1.4 Hypotheses

H1: There is significant association of GDP, GDPgr, per ca-pita income and inflation with import of Nepal.

H2: There is significant impact of GDP, GDPgr, per ca-pita income (PCI) and Inflation on import of Nepal.

1.5 Rational of Study

This study provides a critical rationale for policy-making, economic growth, investment strategies, and further research. By examining the relationship between GDP, inflation, and imports in Nepal, the research on economic variables that influence the country's trade and financial dynamics. The findings offer valuable insights for policymakers to design and revise strategies aimed at fostering economic progress, managing inflation, and boosting foreign direct investment (FDI). Understanding the impact of GDP and inflation on imports enables the government to formulate targeted policies that enhance trade efficiency and balance economic growth. For investors, the study serves as a guide to assess the economic environment, identify opportunities, and mitigate risks, thereby supporting informed decision-making.

Research rating the importance of creating motivational tools to attract FDI, which can stimulate job creation, infrastructure development, and technological advancement. It provides a foundation for economists to evaluate the effectiveness of existing economic policies and propose improvements. By linking macroeconomic variables to trade performance, the study opens avenues for further exploration of their long-term implications on economic stability. For researchers, it serves as a basis to investigate the dynamics of GDP, inflation, and trade in other developing economies, facilitating comparative analysis. This study not only addresses current economic challenges but also supports the development of sustainable strategies for future economic resilience.

i. This study useful for modify the motivational tool for investor in country.
ii. The importance of the study is on revised policy to encourage investor.
iii. This study also helpful in planning and allocation of resources to achieve the economic growth.

1.6 Limitation of the Study

The study focused on gross domestic product impact on import of country. There are only limited variable consider to complete the study.

i. There are only three variables the study; GDP, GDPgr, per capita income (PCI), Inflation and Import
ii. The study is based on descriptive and causal comparative research design where there are other research design design exist but researcher completed study only follow these research design.
iii. There are only taken the data of study from 1991 to 2023
iv. The study completed on the basis of secondary data, researcher has not use primary and qualitative data in the study.
v. The study in the context of Nepalese economy as the relation of Gross domestic product and inflation of economy with import of goods and services from the rest of worlds.

Chapter II Literature Review

2.1 Introduction

Any investigation, regardless of its scale, involves reviewing existing literature to understand what has already been written about the area of interest, collecting relevant information to support or challenge arguments, and documenting the findings. The literature review serves to acquaint the researcher with key information related to the topic under study and is essential for establishing a solid foundation for the research. Ideally, most of the reading should occur early in the research process, though it often continues alongside data collection and analysis (Bryman, 2017). This chapter includes a review of past studies, theories, and scholarly works that are directly related to the research problem, providing a concise summary of significant findings from books, journal articles, and research papers. It explains the rationale for selecting each piece of literature and how it contributes to building the theoretical framework and refining the problem statement (Creswell & Creswell, 2021). Thus, the literature review is a critical step in shaping a well-informed and theoretically grounded investigation.

2.2 Theoretical Review

A theoretical review entails an in-depth examination and synthesis of existing theories, concepts, and models that are pertinent to a specific research topic or question. It functions as a critical evaluation of the foundational theoretical frameworks that support a particular field of study, aiming to uncover gaps, inconsistencies, or areas requiring further exploration (Walker, 2015). The primary objective is to establish a solid conceptual basis for comprehending the research subject and to guide the formulation of hypotheses or research inquiries. Theoretical reviews play a vital role in advancing scholarly knowledge by refining theoretical constructs, enhancing understanding of the topic, and encouraging the development of new perspectives within academic discussions (Nguyen, 2020). Such reviews are instrumental in shaping the theoretical structure of research and fostering intellectual growth in the respective discipline.

2.2.1 Economic Growth

Economic growth refers to the sustained increase in the production of goods and services within an economy over a specific period, commonly measured by the rise in real Gross Domestic Product (GDP). It reflects improvements in a country's standard of living and is driven by factors such as capital accumulation, technological innovation, and labor

productivity. A growing economy tends to provide more employment opportunities and higher income levels, contributing to poverty reduction and overall societal welfare (Smith, 2018). Long-term economic growth is crucial for addressing developmental challenges and achieving structural transformation, especially in developing countries. Governments often promote growth through investment in infrastructure, education, and favorable policy environments that encourage private sector activity (Brown, 2021). Thus, economic growth serves as a key indicator of a nation's economic health and development trajectory.There are various economic growth model propounded by the various economist. The main economic growth model can be explained as follows:

2.2.1.1 Classical Growth Theory

The Classical Growth Theory, associated with economists such as Adam Smith, David Ricardo, and Thomas Malthus, does not explicitly assert that economic growth would invariably decline with rising population and limited resources. Thomas Malthus, in particular, expressed concerns that population growth could outstrip resource availability, leading to diminished living standards. He posited that population grows geometrically, whereas food production increases arithmetically, suggesting that unchecked population growth might eventually exceed resource sustainability. However, other classical economists like Adam Smith and David Ricardo emphasized factors such as capital accumulation, technological advancement, and specialization as primary drivers of economic growth, rather than predicting systemic decline due to population increases.

It is essential to recognize that classical growth theory laid the foundation for subsequent economic frameworks. Modern neoclassical and new growth theories, for instance, expand on these ideas, arguing that productivity gains and innovation can mitigate resource constraints posed by population growth. While Malthus highlighted the risks of population-resource imbalances, attributing an inevitable economic decline to all classical economists oversimplifies their diverse perspectives. Smith and Ricardo, for example, acknowledged the potential for growth through institutional and technological progress. Thus, classical economists held varied views on the interplay between population dynamics and economic development, with Malthus’s pessimism contrasting sharply with the optimism of his contemporaries regarding human ingenuity and adaptive capacity (Shapiro, 2001).

2.2.1.2 Neoclassical Growth Model

The Neoclassical Growth Theory is an economic model of growth that outlines how a steady economic growth rate results when three economic forces come into play: labor, capital, and technology. The simplest and most popular version of the Neoclassical Growth Model is the Solow-Swan Growth Model. Neoclassical growth theory typically emphasizes the role of capital accumulation, technological progress, and labor in driving economic growth over the long term. The neoclassical growth model, often associated with economists like Robert Solow, generally argues that economic growth is a result of increases in capital (physical and human), technological advancements, and improvements in efficiency. In the long run, sustained economic growth requires investments in capital, improvements in technology, and an increase in the quality and quantity of labor.

Short-term and long-term equilibriums are concepts more associated with macroeconomics and general economic equilibrium theory rather than specifically with neoclassical growth theory. In traditional economic models, short-term equilibrium might focus on the fluctuations in output and employment around a potential level, while long-term equilibrium is concerned with the factors influencing sustained growth over extended periods. The neoclassical framework assumes diminishing returns to capital, which implies that without technological progress, long-term growth would eventually stagnate. It also highlights the importance of exogenous technological change, meaning that technological progress is assumed to occur independently of economic decisions within the model. As a result, policies promoting education, innovation, and infrastructure development are viewed as essential for long-run productivity gains and sustainable economic growth (Shapiro, 2001)

2.2.1.3 Endogenous Growth Theory

The Endogenous Growth Theory states that economic growth is generated internally in the economy, i.e., through endogenous forces, and not through exogenous ones. The theory contrasts with the neoclassical growth model, which claims that external factors such as technological progress, etc. are the main sources of economic growth.

The Endogenous Growth Theory is a school of thought in economics that posits that economic growth is primarily driven by internal factors and endogenous variables within an economy, as opposed to being solely influenced by external factors such as capital

accumulation or technological progress. This theory contrasts with the traditional Solow-Swan neoclassical growth model, which emphasizes exogenous factors as the main drivers of economic growth. The key insight of the Endogenous Growth Theory is that certain variables within an economy can be influenced by policy measures and institutional changes, leading to sustained and long-term economic growth. Unlike the neoclassical model, which suggests diminishing returns to capital accumulation and technological progress, the Endogenous Growth Theory argues that increasing returns to scale can be achieved through investments in human capital, research and development, and innovation. One of the central concepts in Endogenous Growth Theory is the role of knowledge and technological progress in driving economic growth. According to this perspective, investments in education, training, and research and development can result in a continuous expansion of knowledge, leading to productivity gains and economic growth. In other words, the accumulation of human capital and the creation of new ideas and technologies are seen as self-reinforcing processes that can fuel sustainable economic development. Furthermore, Endogenous Growth Theory highlights the importance of institutions and policies in fostering innovation and entrepreneurship. A supportive regulatory environment, protection of intellectual property rights, and efficient financial markets are considered crucial for creating incentives for individuals and firms to invest in research and development activities. The theory also underscores the role of spillover effects, where the benefits of technological advancements and knowledge accumulation extend beyond the initial innovators to the broader economy. This implies that a dynamic and interconnected system, where ideas and innovations are shared and diffused, can lead to positive feedback loops, promoting continuous economic growth. In final Endogenous Growth Theory challenges the idea that economic growth is solely determined by exogenous factors. Instead, it emphasizes the role of internal variables, such as human capital, innovation, and institutional frameworks, in driving sustained economic development. This perspective has important implications for policymakers, suggesting that interventions aimed at fostering education, research and development, and a supportive business environment can play a crucial role in promoting long-term economic growth (Shapiro, 2001).

2.2.2 Inflation

Inflation fundamentally represents a persistent and widespread increase in the general price level of goods and services within an economy over a sustained period. It occurs when the demand for goods and services exceeds supply, or when production costs, such as wages and raw materials, rise, leading to higher prices. Inflation can erode purchasing power, making money less valuable, and can affect consumers, businesses, and governments. Central banks typically monitor inflation closely and use monetary policy tools, such as interest rates, to control its rate and maintain economic stability. While moderate inflation can signal a growing economy, excessive inflation or deflation can lead to economic instability and reduced confidence in the currency (Mishkin, 2023). This phenomenon can be equivalently understood as the progressive erosion of purchasing power over time, signifying that each unit of currency commands fewer real goods and services than it previously could (Bernanke et al., 2019). The rate at which this purchasing power diminishes is quantitatively captured by measuring the average price increase of a representative basket of selected goods and services such as food, housing, energy, and transportation, over a specified time frame, typically a month or a year (European Central Bank, 2022). This rise in the overall price level, conventionally expressed as an annual percentage rate, concretely demonstrates that a single unit of currency effectively purchases less than it did during preceding periods, thereby reducing real incomes and consumption possibilities for households and businesses alike (Blanchard, 2021). Inflation stands in direct contrast to deflation, which describes a sustained period of declining prices across the economy; deflation consequently leads to an increase in the purchasing power of money, although it can also signal weak demand and pose significant challenges for economic stability and monetary policy effectiveness (Krugman & Wells, 2018). While moderate inflation is often considered a normal feature of growing economies, persistently high or volatile inflation distorts economic decisions and creates a number of challenges. When inflation is high, businesses may find it difficult to plan for the future, as the costs of raw materials and wages fluctuate unpredictably. This uncertainty can lead to reduced investment and lower economic growth. Additionally, inflation erodes the value of savings, particularly for individuals with fixed incomes, as their purchasing power diminishes over time. For example, retirees living on pensions or fixed salary workers may struggle to maintain their standard

of living as their income does not keep pace with rising prices. Furthermore, inflation can exacerbate income inequality, as those with assets that appreciate in value, such as real estate or stocks, may benefit, while those without such assets suffer. Ultimately, high inflation can lead to social costs, such as increased poverty, decreased quality of life, and social unrest, especially if it is not effectively managed by policymakers (Cecchetti & Schoenholtz, 2020).

2.2.2.1 Common View

Inflation is commonly understood as a significant and persistent increase in the general price level of goods and services within an economy over a sustained period. It typically occurs when there is an imbalance between supply and demand, with demand for goods and services outstripping supply, or when production costs rise. Inflation can erode the purchasing power of money, making it more expensive for consumers to buy the same goods and services. Central banks monitor inflation closely and use various monetary tools, such as adjusting interest rates, to maintain price stability and foster economic growth (Mishkin, 2023), fundamentally, inflation erodes the purchasing power of money, meaning each unit of currency buys fewer goods and services than before. As prices rise, consumers are unable to purchase the same quantity of goods for the same amount of money, which can lead to a decrease in their overall standard of living. This reduction in purchasing power affects individuals' savings, especially if their income does not keep pace with rising prices. Additionally, inflation can create uncertainty, as consumers and businesses may struggle to predict future costs, making it harder to plan for the future. Over time, unchecked inflation can lead to significant economic instability and diminish confidence in the currency (Samuelson & Nordhaus, 2010). This pervasive rise signifies a state where the real value of money is continuously falling (Friedman, 1963), distinct from temporary fluctuations and representing an ongoing trend of increasing living costs (Blanchard, 2021). Its magnitude is typically quantified by the percentage change in a price index, such as the Consumer Price Index (CPI), which tracks the average cost of a representative basket of consumer goods and services (Bureau of Labor Statistics, 2023). Inflation stands in direct contrast to deflation, characterized by a persistent decline in the general price level and a corresponding increase in money's purchasing power (Krugman & Wells, 2018). While moderate inflation often accompanies economic growth, high or hyperinflation severely disrupts economic activity, erodes savings, distorts investment

decisions, and creates significant uncertainty (Cecchetti & Schoenholtz, 2020). Consequently, understanding inflation's causes and consequences, particularly its erosion of purchasing power and impact on stability, remains central to effective monetary policy and macroeconomic management (Bernanke et al., 2019).

2.2.2.2 Keynesian View

Keynes defined inflation as a phenomenon of full employment. Regarding the full employment, Keynes distinguished inflation into two name, semi-inflation and real inflation. According to Keynes general rise in price below the full employment equilibrium is known as semi-inflation and general rise in price beyond the full employment equilibrium is known as real inflation.

John Maynard Keynes fundamentally redefined inflation within his macroeconomic framework by linking it intrinsically to the level of employment, asserting that true inflation is essentially "a phenomenon of full employment" (Keynes, 1936). He argued that a general rise in prices occurring before an economy reaches full employment equilibrium should be distinguished from price rises occurring beyond that point. Keynes termed this initial phase semi-inflation, characterizing it as a situation where aggregate demand increases lead to rising prices even while significant unemployment persists and unused productive capacity remains available (Keynes, 1936; Mankiw, 2019). Semi-inflation arises primarily due to demand-pull factors encountering bottlenecks and supply inelasticities in specific sectors as output expands, rather than an economy-wide overheating (Tily, 2010). Crucially, semi-inflation represents an increase in the price level accompanied by an increase in real output and employment, driven by rising demand against constraints in particular industries or resources (Skidelsky, 1992). In stark contrast, Keynes defined real inflation (or sometimes "true inflation") as a general rise in prices occurring after the economy has achieved full employment equilibrium, where all resources, including labor, are fully utilized (Keynes, 1936, Wray, 2015). At this point, further increases in aggregate demand cannot generate more real output because the economy has hit its physical capacity limits; consequently, any additional demand translates entirely into higher prices across the board (Davidson, 2007). Real inflation, therefore, signifies a state of pure inflationary pressure with no accompanying gains in output or employment, fundamentally driven by an excess of aggregate demand over the economy's maximum possible supply (Dimand, 2019). Distinction valuation

why Keynesian policy prescriptions for managing semi-inflation tha means often involving targeted supply-side measures or investment differ significantly from those required to combat real inflation (primarily necessitating demand restraint) (Tcherneva, 2018).

2.2.2.3 Modern View

Modern monetarist economists provide a comprehensive and unified analysis of inflation, integrating both demand-pull and cost-push elements into their explanation of the inflationary process. Central to their theory is the proposition that sustained inflation is fundamentally a monetary phenomenon, primarily determined by the growth rate of the money supply within an economy (Friedman, 1963). Monetarists argue that while an expansion in the money supply may temporarily stimulate higher output and employment in the short run, its long-run consequence is solely an increase in the general price level, leaving real economic variables unchanged at their natural rates (Laidler, 1991). This core monetarist tenet is famously encapsulated in Milton Friedman's dictum: "Inflation is always and everywhere a monetary phenomenon" (Friedman, 1963). Furthermore, monetarists emphasize the critical role of expectation**s** in shaping the inflation process; specifically, the expectations held by workers and firms about future price levels significantly influence wage bargaining and output decisions. When the actual price level exceeds the expected price level, meaning inflation is underestimated workers perceive their real wages as higher than anticipated, leading to increased labor supply and potentially higher output in the short term, temporarily dampening measured inflation. Conversely, if the actual price level is lower than expected meaning inflation is overestimated, workers perceive their real wages as lower than anticipated, reducing labor supply and output, thereby exacerbating inflationary pressures as firms raise prices to cover higher expected wage costs. Consequently, deviations between actual and expected inflation cause short-run fluctuations in output and employment around the natural rate, but sustained inflation ultimately requires persistent monetary expansion to validate rising expectations (Laidler, 1991). The monetarist framework thus underscores the paramount importance of controlling money supply growth and anchoring inflation expectations for achieving long-term price stability (Paudyal, 2018).

2.2.2.4 Structuralists Model

Inflation emphasizes supply side factors as determinants of inflation. In their model, inflation is driven by development efforts made by the government. When government increases its expenditure, people have more money. On the other hand, supply of output was not increase in desired growth rate due to structural bottlenecks in the economy and hence forces the price level up. So, structural bottlenecks are the main cause of inflation for them (Paudyal, 2018).Structuralist economists emphasize supply-side constraints as fundamental determinants of inflation, particularly within developing economies. Their model posits that inflation is often driven by the development efforts initiated and financed by the government. When the government significantly increases its expenditure on infrastructure, social programs, or industrialization, it injects more money into the hands of consumers and businesses, thereby boosting aggregate demand. However, the supply of essential goods and services frequently fails to increase at the desired growth rate due to pervasive structural bottlenecks inherent in the economic system. These bottlenecks include factors such as inefficient agricultural production, inadequate transportation networks, limited industrial capacity, rigid labor markets, and technological backwardness. Consequently, the rising money supply chases a relatively inelastic supply of output, creating a persistent imbalance between demand and supply. This imbalance inevitably exerts sustained upward pressure on the general price level. For structuralists, therefore, these deep-seated supply-side rigid and inefficiencies rather than purely monetary expansion or demand surges,constitute the primary underlying cause of inflation (Taylor, 1991). Their analysis underscores the critical need for addressing these structural constraints to achieve both stable prices and sustainable development.

Measurement of Inflation

$$\text{Rate of Inflation} = \frac{\text{Current price index-Previous price INdex}}{\text{Previous Price Index}} \times 100$$

$$\textit{Rate of Inflation} = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100$$

2.2.2.5 Phillips Curve

IN the late 1950s, while much intellectual efforts was being spent on demand pull and cost-push inflation, a study was published by A. W. Phillips. The study was about

Phillips Curve. The mechanism of Phillips Curve is simple but can be widely used as an important tool for economists and politicians. Phillips Curve which is propounded by A. W Phillips based upon the empirical data of UK from 1861 to 1957. Phillips analyzed the data in three phases of time i.e. 1861 to 1913, 1913 to 1948 and 1948 to 1957. Phillips used inductive method for the study and found that there is inverse and non-linear relationship between the rate of change in money wage and unemployment in the economy. Phillips' empirical analysis of data shows a stable and permanent association between the rate of change in money wage and unemployment (Paudyal, 2018).

2.2.2.6 Lipsey's Theory of Phillips Curve

Based on Lipsey's (1960) seminal work, a theoretical foundation was established for the empirical correlation between wage inflation and unemployment observed by A.W. Phillips. Lipsey argued that two principal mechanisms explained this Phillips curve relationship. First, he proposed that disequilibrium in the labor market, specifically the degree of excess demand for labor, directly drives the rate of wage change. When unemployment is low, signifying high excess demand, employers competitively bid up wages rapidly to attract scarce workers. Conversely, high unemployment indicates low excess demand, resulting in much slower wage growth. Second, Lipsey introduced the concept of labor market heterogeneity and adjustment speeds. He reasoned that labor markets are not uniform but consist of many distinct sectors experiencing different levels of excess demand at any given time. Wages adjust more rapidly in sectors with higher excess demand pressures than in those with lower pressures. Therefore, the aggregate wage inflation rate observed across the economy reflects a weighted average of these differing sectoral adjustment speeds in response to varying levels of local excess demand (Paudyal, 2018).

2.2.2.7 Positive Relationship

Positive relationship between the rate of change of money wage and the magnitude for excess demand for labor. A clear positive relationship exists between the rate of change in money wages and the magnitude of excess demand for labor. When the demand for workers significantly exceeds the available supply (high excess demand), employers must compete more aggressively to attract and retain employees. This heightened competition directly manifests as faster increases in money wage rates. Conversely, situations where labor supply outstrips demand (low or negative excess demand) result in much slower

growth, or even stagnation, in wages. Therefore, the level of excess demand in the labor market is a fundamental driver determining the pace of wage inflation.

2.2.2.8 Inverse Non-linear Relationship

Inverse non-linear relationship between excess demand for labor and unemployment.

By combining these two relations, Lipsey obtained the Phillips Curve relationship. When demand for commodity services is greater than its supply, we expect the price of the commodity or services increases in the economy. Larger the excess demand, treater was the rate of increase in price. On the other hand, when the demand is smaller than its supply, we expect the price of the commodity declines in the economy. Greater the deficiency of demand, the larger was the rate of fall in price. Obviously this principle operates in the prices of labor services (Paudyal, 2018)Lipsey identified an inverse non-linear relationship between excess demand for labor and unemployment, which became a crucial component in deriving the Phillips Curve. By integrating this relationship with wage dynamics, Lipsey demonstrated how the Phillips Curve could explain the link between unemployment and wage inflation. When the demand for goods and services exceeds their supply, prices tend to rise due to the pressure of excess demand. The greater the excess demand, the higher the rate of price increase across the economy. Conversely, when demand falls below supply, prices are expected to decline. The greater the demand deficiency, the faster the rate of price reduction. This same principle applies to the labor market, where excess demand for labor results in rising wages, while excess supply (i.e., unemployment) leads to wage stagnation or decline (Harrison, 2020). Lipsey's model effectively tied these price movements to unemployment levels, offering a theoretical explanation for the empirical findings of A.W. Phillips. It emphasized the behavioral mechanisms in both product and labor markets that drive inflation and wage changes (Patel, 2023). This framework remains influential in modern macroeconomic analysis and labor market studies.

2.2.2.9 Samuelson – Solow Modification of Phillips Curve

Samuelson and Solow's seminal 1960 American Economic Review paper adapted A.W. Phillips' empirical observation of a UK wage-unemployment relationship into a framework for US price inflation policy. Their analysis suggested an inverse correlation between inflation and unemployment rates, presenting policymakers with a hypothetical "menu of choice" between different combinations of these variables. This

implied that governments could trade higher inflation for lower unemployment through demand management policies. Crucially, however, they expressed significant skepticism about the long-run stability of this relationship, noting that the curve "might shift with adaptation of expectations or other structural changes". Despite these caveats, their work was widely interpreted in the 1960s as endorsing an exploitable short-run trade-off, influencing US economic policy to tolerate moderate inflation for employment gains. This interpretation was later challenged by Friedman (1968) and Phelps (1967), who introduced the natural rate hypothesis asserting that any trade-off would vanish once inflation expectations adjusted, making the long-run Phillips curve vertical. Subsequent stagflation in the 1970s simultaneously high inflation and unemployment appeared to validate Friedman's critique and undermined the original policy trade-off premise. Modern scholarship, such as Forder (2014), contends that Samuelson and Solow's cautious policy messaging was oversimplified by later narratives, though their role in popularizing the Phillips curve as a policy tool remains historically significant. Contemporary economists largely accept that while short-run inflation-unemployment dynamics may exist, the long-run absence of a stable trade-off limits its usefulness for policy fine-tuning.

2.2.3 Import

Imports represent goods or services purchased domestically but produced in another country, forming one fundamental component of international trade alongside exports. When a nation's total import value surpasses its export value, it results in a negative balance of trade, commonly termed a trade deficit. Countries frequently import items that foreign industries can produce more efficiently or at a lower cost than their own domestic sectors. Additionally, nations import essential raw materials or commodities unavailable within their own borders, such as oil imported by countries lacking sufficient domestic reserves or production capacity to meet demand (World Trade Organization, 2020). The relative expense of importing specific goods and materials is significantly influenced by existing free trade agreements and established tariff schedules. These policy frameworks can make certain imports more economically viable than domestic alternatives. Consequently, the decision to import hinges on both comparative economic advantage and the necessity for resources not found locally. This dynamic shapes a country's trade

relationships and overall economic position. Ultimately, sustained imports exceeding exports lead to the persistent trade deficit scenario described.

2.3 Empirical Review

Empirical review is a systematic and structured analysis of existing research studies and empirical evidence related to a specific topic or research question. It involves the examination of primary sources, such as research articles and experimental data, to draw conclusions based on observable facts rather than theoretical reasoning. The purpose of an empirical review is to provide a comprehensive and unbiased summary of the current state of knowledge on a particular subject, identifying trends, patterns, and gaps in existing research. Researchers conduct empirical reviews to inform their own studies, validate hypotheses, and contribute to the overall understanding of a field. The quality of an empirical review relies on the selection of relevant studies, rigorous analysis, and the synthesis of findings to generate meaningful comprehensions.

2.3.1 Article Review

Ahmad et al. (2024) study focused on examined the short-term and long-term relationships between Pakistan's total imports and selected explanatory variables using the ARDL model. The data covered the period from 1980 to 2021, and the ADF test confirmed that none of the variables were integrated of order two, validating the ARDL approach. The bounds test showed a long-run cointegrating relationship among the variables. The model was robust, with diagnostic tests confirming the reliability of the results. In the long run, import demand was significantly related to GDP and inflation, while the import price index and foreign direct investment had a slight positive effect. The study suggested that policymakers should focus on enhancing FDI, managing inflation, and promoting sustainable economic growth. These strategies could strengthen Pakistan's import demand dynamics. The findings underscore the importance of macroeconomic factors in shaping import demand.

Rezeta et al. (2024) investigated the impact of six macroeconomic variables on exchange rates in 11 ASEAN countries using panel data from 2003 to 2022. A multiple linear regression model was employed, with the Fixed Effects model being the most suitable for the data. The results showed that foreign exchange reserves had a negative but insignificant effect on exchange rates, while exports had a negative and statistically significant effect. Imports positively impacted exchange rates, and GDP had a negative

and statistically significant effect. The money supply was also found to have a statistically significant impact. These findings highlight the complex relationships between macroeconomic variables and exchange rate movements. Policymakers need to manage trade and monetary policies effectively to stabilize exchange rates. The results emphasize the importance of exports, imports, GDP, and money supply in determining exchange rates.

Hidayat et al. (2024) analyzed the effects of exchange rates, inflation, FDI, government expenditure, and economic openness on exports and imports in Indonesia from 1980 to 2021. Using multiple linear regression, the study found that FDI and government expenditure significantly contributed to the growth of exports and imports. However, a depreciating rupiah did not stimulate exports or imports. FDI, government spending, and economic openness had a positive effect on Indonesia's economic growth. Inflation and net exports were not found to have significant impacts on growth. These findings suggest that controlling inflation and effectively managing trade could ensure stable economic growth. The study stresses the need for policies that encourage investment and economic openness. The results offer useful insights for fostering economic growth in Indonesia.

Fatima et al. (2023) investigated the impact of international trade on Saudi Arabia's economic growth, focusing on exports, imports, and GDP from 2002 to 2021. It used statistical measures like mean, standard deviation, and coefficient of variation, along with ANOVA and post hoc tests to analyze the data. The results revealed a strong co-movement between exports, imports, and GDP. The growth rate of non-mineral exports differed significantly from imported goods like machinery and electrical equipment. The study suggested that enhancing non-mineral exports and reducing reliance on imported goods could spur economic growth. Policies should focus on diversifying exports while minimizing dependence on specific imports. The findings offer valuable insights for policymakers aiming to improve Saudi Arabia's economic performance. The results emphasize the importance of trade diversification for long-term growth.

Akbar (2022) evaluated the relationship of inflation, exports, imports, interest rates, and GDP affected sales in state-owned pharmaceutical companies from 2018 to 2022. Using both primary and secondary data, the analysis involved multiple linear regression and moderating regression analysis. It found that inflation, exports, imports, and interest rates had a positive and significant impact on sales. However, GDP did not moderate the

relationship between inflation and trade activities. GDP only served as a pure moderating variable in the relationship between interest rates and sales. The study suggested that GDP's role in moderating the effects of interest rates on sales was notable, but its impact on inflation and trade was minimal. Future research could explore microeconomic factors for a more detailed understanding of sales performance. The study contributes valuable insights into the impact of macroeconomic variables on sales in pharmaceutical companies.

Firdaus and Septiani (2022) diagnosed the influence of inflation, exports, and imports on Indonesia's economic growth from 1990 to 2020 using the Error Correction Model (ECM). The results indicated a long-term negative relationship between inflation and economic growth, suggesting that rising inflation harms the economy. Exports also had a negative effect on growth in the short term. The study recommended managing inflation and trade activities effectively to ensure long-term growth. Stabilizing exports and controlling inflation were crucial for a sustainable economic environment. The findings emphasized the need for policies that address inflation and optimize trade for economic stability. Indonesia's growth could be enhanced by managing trade performance and inflation. The study contributed to understanding the dynamics between trade and economic growth in Indonesia.

Panta et al. (2022) explored the relationship between economic growth, exports, and imports in Nepal from 1965 to 2020. The findings showed no support for the exports-led growth or growth-led exports hypotheses in the short and long run. However, the imports-led growth hypothesis was supported in the short term, while the growth-led imports hypothesis held in the long term. The research concluded that foreign trade, particularly imports, played a significant role in Nepal's economic growth. The study found no evidence that exports significantly contributed to Nepal's long-term economic growth. Policymakers should focus on managing imports to support economic development. The research provides insights into how Nepal's trade policies affect its economic performance. These findings are essential for policymakers seeking to strengthen Nepal's economic growth.

Salman (2022) investigated the causality between exports, imports, and GDP in Iraq from 1990 to 2020. Using co-integration and Granger causality tests, the research found no causal relationship between exports, imports, and GDP. The findings reflected the

structure of Iraq's rentier economy, which relies heavily on crude oil exports. The study suggested that the economic system in Iraq required structural reforms to boost productivity. It recommended reorganizing production relations to improve national economic activity. The lack of causality between trade and GDP highlighted the need for better economic diversification. The research concluded that increasing efficiency and productivity was crucial for economic growth. Policymakers should focus on enhancing non-oil sectors to foster sustainable growth in Iraq.

Ektiarnanti et al. (2021) examined the impact of inflation and the BI Rate on Indonesia's trade balance. The data covered a five-year period, and path analysis techniques were used to analyze the secondary data. The results showed that GDP influenced the trade balance indirectly through inflation. While exports did not have a significant direct impact on the trade balance, imports showed a significant direct influence via inflation. The BI Rate was found to have an indirect but significant effect on the trade balance. Inflation itself had a significant impact on the trade balance. The study emphasized the importance of managing inflation and interest rates for effective trade balance policies. The findings highlight the need for stable macroeconomic policies to support Indonesia's trade balance.

Parajuli (2021) studied on explored the relationship between economic growth and foreign trade in Nepal. The ARDL model was used to analyze data from 1994/95 to 2018/19. The results indicated a stable long-run relationship between economic growth and foreign trade. Both imports and exports were found to have significant roles in influencing the economy. The study underscored the importance of foreign trade in Nepal's economic growth. The evidence supports the idea that foreign trade is a key factor in driving economic performance. Policymakers should focus on improving trade policies to sustain economic growth. The research contributes to understanding the dynamics of trade and growth in Nepal.

Stievany and Jalunggono (2020) analyzed the effects of exports, capital formation, and government spending on Indonesia’s economic growth from 1989 to 2018. The data were analyzed using the Error Correction Model (ECM). The findings showed that both exports and capital formation significantly influenced economic growth in both the short and long term. In contrast, inflation did not significantly impact economic growth. The study emphasized the critical role of exports and capital formation in fostering growth. It

suggested that government policies should focus on these two factors to sustain growth. The findings contribute to the understanding of the key drivers of Indonesia's economic development. The study highlights the need for structural reforms to boost economic performance.

Ebrahimi (2017) analyzed the relationship between imports and economic growth in Iran using cointegration methods and neural networks. Data from 1961 to 2010 were analyzed using the autoregressive distributed lag model and the error correction model. The results showed no cointegration relationship between GDP and imports when GDP was the dependent variable. However, there was a cointegration relationship when imports were the dependent variable. The use of neural networks to model the relationship provided reliable results. The study concluded that imports had a significant impact on Iran's GDP. The findings suggest that imports play a critical role in driving economic growth in Iran. Policymakers should consider the impact of imports when formulating economic policies.

Gokmenoglu et al. (2015) examined the relationship between international trade, financial development, and economic growth in Pakistan. The ADF and PP tests were used to check the order of integration, and the Johansen co-integration methodology was applied to explore the long-run relationships. The study found that all variables were non-stationary, confirming a long-run relationship among international trade, financial development, and economic growth. The Granger causality test revealed that international trade and financial development spur economic growth in Pakistan. The findings emphasize the interconnectedness between trade, finance, and economic growth. Policymakers should focus on enhancing trade and financial systems to foster growth. The results underline the importance of financial development in supporting economic growth. This study contributes to the literature on trade and growth in Pakistan.

Mehta (2015) investigated the long-run relationship between GDP, exports, and imports in India from 1976 to 2014. The ADF unit root test, Johansen cointegration, and vector error correction methods were used for analysis. The findings revealed a long-run co-integrating relationship among GDP, exports, and imports. There was unidirectional causality running from GDP to exports, meaning GDP leads to exports in the long term. However, no causality was found between GDP and imports. The study also found unidirectional causality running from exports to imports, indicating that exports lead to imports. The results suggest that GDP growth drives exports, but imports are more

responsive to export growth than GDP. The findings have implications for trade and growth policies in India.

Vardari (2015) analyzed the causality between exports, imports, and economic growth in Kosovo using the Granger causality technique and vector error correction models. The results indicated that exports significantly contributed to economic growth. However, when imports were included in the model, the effect of exports on growth became statistically insignificant. The study found bidirectional causality between GDP and exports, and unidirectional causality from imports to exports. Exports, and consequently economic growth, were significantly influenced by imports of intermediate goods. The findings suggest that managing imports, especially of intermediate goods, is crucial for boosting economic growth. The study highlights the complex relationship between trade and growth in Kosovo. Policymakers should focus on improving the structure of trade to foster growth.

Turan (2014) explored the relationship between exports, imports, and GDP in Albania from 1984 to 2012. The analysis revealed a long-term equilibrium relationship between exports, imports, and GDP. The study aimed to determine whether exports and imports affect GDP growth in Albania. The findings indicated that both exports and imports played a significant role in driving GDP growth. The relationship between these variables was analyzed using econometric models and data from the World Bank. The results suggest that international trade positively influences Albania's economic growth. The study highlighted the importance of managing trade policies to sustain growth. Policymakers should focus on balancing exports and imports to support Albania's economic development.

Review about Inflation

Rangkuti et al. (2024) study explored the impact of trade liberalization, including imports, on inflation in Indonesia from 2000 to 2023. The ARDL model showed that a one-unit increase in trade openness led to significant inflation increases after one to two years. The study controlled for money supply and government spending, both of which were positively correlated with inflation. The authors concluded that trade liberalization could fuel inflation without complementary fiscal and monetary policies. The results highlighted the importance of balancing trade openness with sound fiscal discipline. Policymakers were advised to manage trade policies carefully to avoid inflationary

pressures. The study found that the long-term effects of trade openness on inflation were significant. The conclusion stressed the need for complementary policies to control inflation in an open economy.

Mazher et al. (2024) investigated the effects of foreign reserves, FDI, inflation, exports, and imports on the Pakistani exchange rate. Using monthly data from 2018 to 2023 within an ARDL framework, the study found that both inflation and import volumes significantly affected the exchange rate in the short and long run. Rising imports contributed to rupee depreciation, which in turn raised import costs. The authors highlighted the feedback loop between imports, inflation, and exchange rates, amplifying inflationary pressures. The study concluded that imports and inflation significantly influence exchange rate movements. This feedback loop creates a cycle of rising inflation and depreciating currency. The results suggested that policymakers should address these interconnected dynamics. The study underlined the importance of controlling imports and inflation to stabilize the exchange rate.

Hamdi et al. (2024) examined the impact of economic growth, imports, and exports on food inflation in ASEAN countries, including Timor-Leste, Laos, Cambodia, and Myanmar. The panel data fixed-effects model showed that imports and exports did not have a statistically significant effect on food inflation. Instead, domestic economic growth was found to reduce food inflation. The study emphasized that trade openness had a limited impact on food price increases in these high-inflation contexts. The results indicated that GDP growth acted as the main moderator of inflation. The authors concluded that domestic policies focused on production rather than trade openness were crucial for food price stability. They recommended strengthening domestic production to mitigate food inflation. The findings suggested that trade openness was not a major driver of food inflation in these countries.

Tahir et al. (2023) examined the effect of trade openness on inflation in China using quarterly time-series data from 2000 to 2022. The study found that greater import penetration significantly dampened inflation in both the short and long run. The VAR model results showed a strong negative elasticity of inflation to import openness, indicating that imports helped stabilize prices. The study suggested that controlled trade openness could serve as an anti-inflation mechanism. The findings highlighted the role of external competition in moderating inflationary pressures. Policymakers were advised to

manage import levels to ensure price stability. The study concluded that well-managed imports could act as a counterbalance to inflation in China. The results supported the idea that trade openness can be used as a tool to control inflation.

Silva (2024) analyzed the impact of production networks on the transmission of import price shocks to CPI inflation in small open economies. Using input-output models, the study found that direct and indirect import channels significantly amplified CPI responsiveness to global cost changes. The results indicated that countries with complex production networks were more sensitive to import price shocks. The study emphasized the importance of managing import cost shocks through diversified supply chains. Policymakers were advised to strengthen domestic production to reduce vulnerability to global price fluctuations. The study concluded that the structure of imports in production networks plays a critical role in determining inflation sensitivity. The findings suggested that economies with stronger domestic production resilience could better absorb global price shocks. The results stressed the importance of supply chain diversification for managing inflation.

Fariha Sami & Komal (2022) analyzed the relationship between imports and inflation in Pakistan from 1986 to 2020 using a VAR model. The results showed that import growth had a strong and significant positive effect on inflation. The impulse response analysis revealed persistent inflationary shocks from rising imports. However, inflation did not significantly affect exports within the model. The study recommended monitoring import-dependent inflation thresholds to prevent macroeconomic instability. The authors concluded that unchecked import growth could exacerbate inflation. The findings suggested that policies should regulate imports to maintain price stability. The study emphasized the need for careful trade policy management to avoid inflationary pressures.

Kohlscheen & Moessner (2022) study explored the effect of trade openness on the pass-through of labor costs to CPI inflation in OECD economies. The panel regressions showed that pass-through coefficients dropped significantly as import penetration increased from the 1980s to the 2010s. The study found that rising imports helped mitigate the impact of domestic labor cost inflation on CPI. Despite continued labor cost pressures, the overall inflation response to domestic cost increases declined due to global integration. The study concluded that greater trade openness dampened the impact of domestic cost pressures on inflation. The results suggested that global integration has

been effective in reducing inflationary pressure from labor costs. Policymakers were advised to promote trade openness to stabilize inflation. The study highlighted the long-term benefits of globalization in controlling inflation.

Liaqat et al. (2022) examined the relationship between oil prices and economic growth in Pakistan from 1972 to 2020. The results showed that oil price inflation negatively affected economic growth in both the short and long run. The study used the Augmented Dickey-Fuller test and the ARDL model for co-integration analysis. The findings indicated that oil price increases were anti-growth, as they raised general price levels without benefiting economic growth. The study concluded that oil price inflation had a detrimental impact on economic growth in Pakistan. The empirical models revealed no significant positive effect of oil price inflation on growth. The results highlighted the negative relationship between oil prices and economic development. The study suggested that Pakistan should focus on mitigating oil price inflation to sustain economic growth.

Zhou et al. (2020) estimated Nigeria's import demand function, focusing on the responsiveness of imports to domestic product prices, exchange rates, GDP, and foreign reserves. Using the ARDL bounds testing and Johansen cointegration methods, the study confirmed long-run relationships among the variables. The results showed that imports in Nigeria were influenced by domestic inflation in the long run, but were inelastic to exchange rates and income. The study also found unidirectional causality from domestic inflation to import demand. The findings suggested that domestic inflation plays a significant role in shaping Nigeria's import demand. The study recommended diversifying domestic production and enhancing the price competitiveness of local products. Policymakers were advised to focus on managing inflation to control import demand. The results highlighted the importance of improving domestic production capacity for economic stability.

Ahmed et al. (2018) examined the relationship between inflation and exports/imports in Pakistan from 2001 to 2017. Using an error correction model, Johansen cointegration, and Granger causality tests, the study found that a 1% increase in exports and imports led to a 0.63% and 0.57% increase in CPI, respectively, in the long run. The variance decomposition analysis showed that exports had the highest impact on inflation. However, Granger causality tests did not find evidence that monthly changes in exports or imports caused changes in inflation. The study concluded that both exports and

imports contributed to inflation in Pakistan, but their short-term effects were not significant. The results highlighted the importance of monitoring trade-related inflationary pressures. The study emphasized the need for policy measures to control the inflationary impact of imports and exports. The findings suggest that trade policies should focus on managing inflationary risks.

Table 2

Meta Table

SS. N.	Date of Publication	Article	Writers	Objectives	Methodology	Findings
1	2024	Short-term and Long-term Relationships Between Imports and Economic Indicators in Pakistan	Ahmad, S., Maqbool, I., Raihan, A., Xin, L.	To examine the relationships between imports and selected economic variables in Pakistan.	RDL model, annual data (1980-2021), ADF test, bounds testing.	Long-term relationships between import demand, GDP, inflation, import
2	2024	The Impact of Macroeconomic Variables on Exchange Rates in ASEAN Countries	Rezeta, F., Soelistyo, A., Fuddin, M. K.	To study the effect of macroeconomic variables on exchange rates in ASEAN countries.	Panel data (2003-2022), multiple linear regression, Fixed Effects model.	significant positive effect. Inflation has no significant impact on exchange rates.
3	2024	The impact of trade liberalization on inflation in Indonesia	Rangkuti, S., Rahmi, M., Nuriyo, A., & Wahyuni, R.	to determine whether trade openness increases price levels over time	ARDL model	one-unit rise in trade openness leads to statistically significant inflation increases
4	2024	The consequence	Mazher, M. A.,	to test short- and long-term	ARDL bounds-testing	inflation and import volumes

		s of foreign reserves, FDI, inflation, exports, and imports on Pakistani exchange rate.	Nair, Y. N. T., & Osman, Z. A.	effects of imports and inflation on currency value, with inflation's role as a determinant of import-driven depreciation.		significantly influence
5	2024	The effect of economic growth, imports and exports on food inflation in ASEAN countries.	Hamdi, S., Hasyim, S., Syafii, M., & Tanjung, A. A.	to explore whether trade openness drives food-specific price increases in high-inflation contexts.	ARDL Model	price increases in high-inflation contexts. Interestingly, imports and exports had no statistically significant effect
6	2024	Inflation in disaggregated small open economies	Silva, Á.	to illustrate how production networks mediate imported cost impacts on CPI inflation.	using input-output models	Results showed that direct and indirect import channels significantly amplify CPI responsiveness to global cost changes.
7	2023	The Effects of Exchange Rates, Inflation, and FDI on Exports and Imports in Indonesia	Hidayat, A. M., Purwanda, E., Hadijah, H. S., Sodik, G.	To analyze the effects of macroeconomic variables on exports, imports, and economic growth in Indonesia.	Time series data (1980-2021), multiple linear regression, EViews software.	expenditure significantly contribute to exports and imports.
8	2023	Trade openness and	Tahir, M., Ali, N. O.,	to assess whether	VAR/ECM model	negative elasticity of

		inflation rate in China: Empirical evidence from time series data.	Naseem, I., & Burki	China's increasing openness influenced inflation dynamics		inflation to import openness
9		The Role of International Trade in Economic Growth: Saudi Arabia Case Study	Ali, A., Fatima, N., Rahman Ali, B. J. A., Husain, F.	To investigate the impact of international trade on Saudi Arabia's economic growth.	Statistical analysis using SAMA data (2002-2021), ANOVA, post hoc tests.	Strong co-movement between exports, imports, and GDP.
10	2022	An empirical analysis of exports, imports and inflation: A case of Pakistan	Sami, F., & Komal.	to quantify how imports influence domestic price levels amid fluctuating trade volumes.	VAR mode	significant positive effect on inflation
11	2022	The Impact of Inflation, Exports, and Imports on Indonesia’s Economic Growth	Ellina Nuril Firdaus, Yustirania Septiani	To investigate how inflation, exports, and imports affect Indonesia's economic growth.	Error Correction Model (ECM), secondary data (1990-2020).	Long-term negative relationship between inflation and economic growth and import
12	2022	The Impact of Inflation, Exports, Imports, and Interest Rates on Pharmaceutical Sales	Taufik Akbar	To study the effect of inflation, exports, imports, and interest rates on sales in pharmaceutical SOEs.	Panel data (2018-2022), multiple linear regression, moderating regression.	GDP does not moderate the effect of inflation and exports/imports on sales.

13	2022	Iraq Exports,Imports and GDP: The Co-intergration and Causality for the Period 1990-2020.	Saddam, A.	Aims to look into the relationship between imports, GDP, and population growth in Iraq.	Causal Research Design (Granger)	influenced the import
14	2022	Exports and Imports-Led Growth: Evidence from a Small Developing Economy	Panta, H., Devkota, M. L., & Banjade, D.	examines equilibrium relationships and dynamic causality between economic growth, exports, and imports in Nepal	Time series causal comparative research design (Cointegration)	Foreign trade supports the economic growth of Nepal in the long run.
15	2022	he Relationship between Imports, Gross Domestic Product and Population Growth	Salman A.H	identify the causality of exports and imports in the GDP in Iraq	Granger Causality	Significant relation GDP and Import
16	2022	Globalisation and the decoupling of inflation from domestic labour costs	Kohlschee n, E., & Moessner, R.	To analyze rising imports weaken domestic cost inflation.	ARDL Model	import penetration rose—a significant long-term mitigation of inflation by openness.

17	2021	A Study on Impact of Foreign Trade in GDP of Nepal	Parajuli, R.	To investigate linkage between economic growth with import & export	ARDl Model	There is stale relationship in long run with foreign trade
18	2021	The Role of Inflation in Indonesia's Trade Balance	Ektiarnanti et al.	To explore how inflation impacts trade balance, with a focus on GDP, exports, and imports in Indonesia.	Path analysis using secondary data, monthly dataset (5 years).	Imports show a significant direct influence via inflation.
19	2020	The Impact of Exports, Capital Formation, and Government Spending on Indonesia’s Economic Growth	Gabriella Millenia Stievany, Gentur Jalunggono	To analyze the impact of exports, capital formation, and government spending on Indonesia’s economic growth.	Quantitative approach, secondary time series data (1989-2018), Error Correction Model (ECM), EViews software.	capital formation significantly influence economic growth
20	2017	AN Analysis of the Relationship of Import and Economic Growth in Inran	Ebrahimi, N.	To analyze the relationship of import and economic growth	Cointegration method	The import is depends on GDP. Data support it.

21	2015	The Relationship among International Trade, Financial Development and Economic Growth	Gokmenoglu et al	To investigate the relationship among international trade and economic growth	Johansen co-integration methodology	International trade and financial development spur economic growth in Pakistan.
22	2015	The Dynamics of Relationship Between Export, Import and Economic Growth in India.	Mehta, S.N	Examine the relationship between GDP, export and Import	Johansen cointegration	there is no causality between GDP and Import
23	2015	Relationship between Import-Exports and Economic Growth: The Kosava Case Study.	Vardari, L.	Analyze the causality between export, import and economic growth	Granger causality	short run and long run relationships exist among these variables
24	2014	An Empirical Study on Import, Export and Economic Growth in Albania.	Turan, G.	Discuss relationship between export, import and GDP in Albania	Macro economactric model	Equilibrium in long run between import, export and GDP

25	Inflation 2022	The Impact of Oil Price Inflation on Economic Growth of Oil Importing Ecnomies	Liaqat, M., Ashraf, A., Khurshee d, A., & Nisar, S.	Analyzing the imapact of oil price on economic growth	A-D Fuller test	Insignificant impact
26	2020	Domescti Inflation, Exchange rate, adn aggregate import demand nexus in Nigeria.	Zhou, L., Lormom, B. I., Azhar, M. S., & Peng, M. Y.-P.	To find responsiveness of impots to domestic price	ARDL	Unidirectional Causality running domestic inflation to import
27	2018	An Empirical Analysis Of Export, Import, And Inflation.	Ahmed, R. R., Ghauri, S. P., Vveinhar dt, J., & Streimiki ene, D.	Examine the association between inflation export and import in Pakistan.	Johansen cointegration & Granger Causality	Monthly change in inflation cause the import

2.4 Research Gap

Most of the empirical studies focused on showing the impact of GDP on GDPGR, relationship of GDP, Inflation on GDPGR. Most of the study was focused on Impact on GDPGR on GDP, however this study try to find out the GDP and inflation on GDPGR and GDPGR and Inflation impact on GDP of Nepal. The result reveled that there is no causality between GDP and Import; it means GDP does not lead to Import and Import does not lead to GDP. We also found evidence of unidirectional causality running from Export to Import, it means in long term Export lead to Import but Import does not lead to Export (Mehta, 2015). Different empirical researches and macro econometric models

indicates that there is an equilibrium relationship between exports, imports and GDP in the long term (Turan, 2014). Total import and real GDP is supported when the total import is a dependent variable and the GDP is an independent variable (Ebrahimi, 2017).

The outcomes of Granger causality and Toda Yamamoto causality does not find evidence for the hypotheses that the monthly changes of export and import do not cause the monthly modification in inflation in case of Pakistani econom (Ahmed, Ghauri, Vveinhardt, & Streimikiene, 2018). Found import demand to be inelastic to EXR and income, same as to foreign exchange reserves (Zhou, Lormom, Azhar, & Peng, 2020).

The study focused on how GDP, GDP growth, Per capita income and Inflation influences the import in Nepal. There is general, economic theory states that there is positive relationship between national income and import within country, however the inverse relation with inflation rate in an economy. So, researcher focused the results of theory efficiently work in the context of Nepal.

Chapter III Research Methodology

3.1 Introduction

Research methodology is the whole process of the research work followed from beginning to the end principles techniques. Methodology has sub- system in the process of the research. It includes the techniques. Methodology is the analysis and systematic application of procedures used in scientific investigation or in particular research project. It includes research design, population and sampling, data collection strategy, data analysis methods, tools and techniques being used in research work.

3.2 Research design

The study based on descriptive and casual-comparative research design, where GDP, Inflation, GDPGR, Import are main variable in the study. Descriptive research design explain about the data of GDP, GDP growth, inflation, Per capital income, inflation, import volume. However the causal comparative research design explain about the finding relation and impact between the dependent and independent variable.

3.3 Population and Sample, and Sampling design

The study utilizes data on Nepal's Gross Domestic Product (GDP), GDP growth rate (GDPgr), per capita income, inflation rate, and import volume. The data covers a comprehensive period from the year 1991 to 2023. These variables were selected to analyze the macroeconomic trends and their relationship with imports in Nepal. The study aims to provide insights into how economic indicators influence import dynamics over the specified period.

3.4 Nature and Sources of data

The study is based on quantitative data obtained from both secondary and primary sources. Secondary data were mainly collected from credible institutions such as the Central Bureau of Statistics (CBS) and reports of the monetary authority. These sources provided reliable economic and business-related information. Primary data were collected through a structured questionnaire. The questionnaires were distributed and responses gathered directly from the field of study. This combination of data sources ensures a comprehensive and credible foundation for the research.

3.5 Instrument data collection

The study used the secondary data from the published sources like annual report, NRB survey report and economic survey by MOF.

3.6 Methods of analysis

The study was use the various statistical tools to analyze data. They are means, standard deviation, variance, correlation and ordinary regression line and technique. The software about data analysis was use Excel, SPSS.

3.6.1 Statistical Method

Statistical tools are methods and techniques used to analyze and interpret data in order to make informed decisions. They provide a systematic way to organize, summarize, and draw conclusions from data, helping researchers and analysts to uncover patterns and trends. Common statistical tools include measures of central tendency i.e. mean, median, and mode, measures of dispersion i.e. variance, standard deviation, hypothesis testing, and regression analysis. These tools are essential in various fields such as science, business, and social sciences for drawing reliable inferences from data.

i. Arithmetic Mean

Arithmetic Mean of a given set of data is the sum of the data divided by the number of data. In such as case all the items are equally important. Simple Arithmetic Mean used in this study as per necessary for analysis.

We have,

$$Mean\ (\bar{X}) = \frac{\Sigma X}{n}$$

Where;

$\sum x$ = sum of all values

n = Number of year

x = Value of variables

ii. Standard Deviation (S.D)

The letters often represent the standard deviation (σ). Karl Pearson proposed it as a frequently used measure of dispersion and defined it as the distance between the supplied observations and their arithmetic mean of a collection of values. It sometimes referred to as the root mean square deviation. In this study, standard deviation utilized to quantify the degree of volatility of the interest rate and other variables as needed for the analysis.

We have,

$$Standard\ Deviation\ (\sigma) = \sqrt{\frac{\Sigma (X-\bar{X})}{n}}$$

iii. Coefficient of Variation (C.V.)

The relative measure of dispersion based on standard deviation called coefficient of standard deviation and 100-time coefficient of standard deviation called coefficient of variation. C.V. denotes it. Thus,

C.V. = $\frac{\sigma}{\bar{X}} \times 100$

Where;

σ = Standard Deviation

$\overline{X}$ = Mean Value of Variables

The distribution having less C.V. said to be less variable or more consistent. A distribution having greater C.V. said to be more variable or less consistent.

iv. Corrélation Coefficient (r)

Correlation analysis is a statistical method that is commonly used to describe how closely one variable is connected to another. This tool is used to determine the intensity or magnitude of a linear connection between five variables X and Y, which is commonly denoted by 'r' and may be calculated as follows:

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2}\sqrt{N\sum Y^2 - (\sum Y)^2}}$$

v. Regression analysis

Regression line refers to the relationship between dependent and independent variable. Where dependent variables value finding through the regression analysis of independent variable.

$M = \alpha + \beta 0GDP + \beta 1Gr + \beta 2PCI + \beta 3IF$ ……. i

Where,

M = Import Volume

GDP = Gross Domestic Product

PCI = Per Ca-pita Income

IF = Inflation Rate

vi. Coefficient of Determination (r^2)

It explains the variation percent derived in dependent variable due to the any one specified variable; it denotes the fact that the independent variable is good estimator of the behavior of the dependent variable. It is square of correlation coefficient.

The coefficient of determination (R^2) is a statistical measure that explains the proportion of the variance in the dependent variable that is predictable from the independent variable(s) in a regression model. Its formula is as follows:

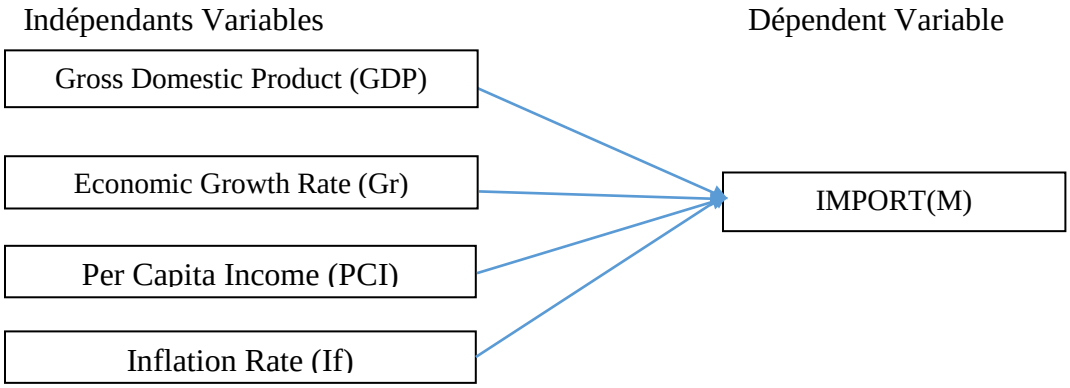
$$R^2 = 1 - \frac{SSR}{SST}$$

Where

SSR : Sum of Square of Residual

SST : Sum of Square of Total

6.6 Research Framework and definition of Variables



{(Source: Gokmenoglu et al (2015) and Liaqat et al (2022)}

***Figure 1*: Research Framework**

Gross Domestic Product (GDP): Gross domestic product at market price is the money value of the final goods and services produced within the domestic territory of a country during a year period of time. In other words, it is the product of market price and the final value of goods and services, i.e., MP = P*Q, where M is the money supply, P is the price, and Q is the quantity of the product. GDP refers to the money value of total goods and services in an economy, but it only includes final goods and services, calculated at current prices, and includes only those goods and services sold in the market (Smith, 2023). Gross domestic product (GDP) is the total monetary or market value of all finished goods and services produced within a country's borders in a specific time period (Jones, 2022).

Economic Growth (Gr): Economic growth is the increase in the production of goods and services in an economy. Factors such as increases in capital goods, labor force, technology, and human capital contribute to economic growth (Taylor, 2021). Economic

growth can be measured by changes in GDP over time, and it typically signals improvements in a nation's economic health (Davis, 2023).

Per Capita Income (PCI): Per capita income is a measure that represents the average income earned per person in a specific region, typically a country. It is calculated by dividing the total income of the region by its population, which provides insights into the standard of living and economic well-being of the population (Miller, 2022). This economic indicator helps policymakers assess and compare the overall prosperity of different regions (Harris, 2023).

Inflation (Ifn): Inflation generally refers to the increase in the prices of commodities and services in the market over a period of time. There is no universally accepted definition of inflation, and the degree to which price levels must rise to be considered inflation is debated. According to A.C. Pigou, "Inflation exists when money income is expanding more than in proportion to the increase in earning activity" (Pigou, 2021). This definition emphasizes the relationship between rising income and the growth in the economy relative to price increases (Brown, 2023).

Imports: Imports refer to the total amount of goods and services taken from abroad to satisfy the needs of a country. Countries require various types of products and services, and these are often imported from different nations. Generally, there is a positive relationship between the growth of GDP and the level of imports in a country. As the income of a country rises, imports from other countries also tend to increase (White, 2022).

Chapter IV Results And Discussion

4.1 Introduction

This chapter systematically guides the reader through the entire analytical process, beginning with a concise introduction that outlines its objectives and scope. It then presents the raw data in well-organized tables, ensuring clarity and transparency before any analysis takes place. Following this, detailed descriptive statistics summarize the central characteristics of the data set such as means, medians, ranges, and standard deviations providing an essential foundation for deeper exploration. Next, the chapter examines inter-variable relationships through correlation analysis, identifying the strength and direction of associations. Building on these insights, multiple regression techniques are employed to model the influence of selected predictors on the dependent variable. Each analytical step is accompanied by clear interpretation of the findings, with narrative explanations that bridge numbers and practical implications. The chapter concludes by discussing the overall results in context, highlighting their significance, limitations, and avenues for future research.

4.2 Results

Results refers to the findings or outcomes obtained after analyzing data collected during a research study. It presents the evidence that supports or refutes the research hypothesis or objectives. Results are usually expressed through statistical analysis, tables, graphs, or descriptive summaries. They provide clarity on patterns, trends, or relationships among variables. The results section is crucial for drawing valid conclusions and guiding further interpretation or discussion.

Data presentation involves organizing and displaying information in a visually accessible manner to facilitate understanding and decision-making. Through various graphical representations such as charts, graphs, and tables, complex data sets can be simplified, allowing users to discern patterns, trends, and insights at a glance. Effective data presentation enhances communication, aids in conveying messages, and supports more informed analysis and interpretation of information.

4.2.1 Data Analysis of Import, GDP, GDP Growth, PCI and Inflation

Data analysis encompassing imports, GDP, GDP growth, PCI, and inflation, the initial steps involve loading the dataset and examining its structure, ensuring the presence of relevant columns, and addressing any missing values or outliers. Once the data is

prepared, exploration through visualizations becomes pivotal. Time series plots illustrate the trends in imports, GDP, GDP growth, and PCI over the designated time period, offering a dynamic perspective on economic indicators. Additionally, correlation matrices and scatter plots provide insights into the relationships between these variables, aiding in the identification of potential patterns and associations that may inform economic policymaking and decision-making processes. Data analysis encompassing imports, GDP, NGDP growth, PCI, and inflation, the initial steps involve loading the dataset and examining its structure, ensuring the presence of relevant columns, and addressing any missing values or outliers. Once the data is prepared, exploration through visualizations becomes pivotal. Time series plots illustrate the trends in imports, GDP, NGDP growth, and PCI over the designated time period, offering a dynamic perspective on economic indicators. Additionally, correlation matrices and scatter plots provide insights into the relationships between these variables, aiding in the identification of potential patterns and associations that may inform economic policymaking and decision-making processes.data analysis encompassing imports, GDP, NGDP growth, PCI, and inflation, the initial steps involve loading the data set and examining its structure, ensuring the presence of relevant columns, and addressing any missing values or outliers. Once the data is prepared, exploration through visualizations becomes pivotal. Time series plots illustrate the trends in imports, GDP, NGDP growth, and PCI over the designated time period, offering a dynamic perspective on economic indicators. Additionally, correlation matrices and scatter plots provide insights into the relationships between these variables, aiding in the identification of potential patterns and associations that may inform economic policy-making and decision-making processes.

4.2.2 Trend Analysis of Import, GDP, GDP growth, PCI and Inflation

Analyzing economic trends involves a comprehensive examination of key indicators such as imports, GDP, GDP growth, PCI, and inflation. By tracking import levels, one can discern trade patterns and their impact on the overall economy. Concurrently, observing GDP growth, both nominal and real, provides insights into economic expansion or contraction. Evaluating per capita income trends and inflation rates adds depth to the analysis, revealing how economic growth translates into individual prosperity and the stability of price levels. A holistic understanding of these factors enables policymakers and economists to make informed decisions for sustainable economic development.

Table 2

Descriptive Statistics of Import, GDP, GDP (gr), PCI and Inflation

	N	Minimum	Maximum	Mean	Std. Deviation
Import ($ Billion)	33	0.88	14.18	5.39	4.47
GDP ($. Billion)	33	3.40	46.10	16.02	12.74
GDP (Gr)	33	0.77	24.19	12.22	4.75
PCI ($)	33	185.51	1410.17	597.93	415.32
Inflation (%)	33	2.27	17.15	7.36	3.50

(*Source*: Calculate by SPSS)

Table 2 provided dataset encompasses key descriptive statistics for five distinct economic variables, shedding light on the characteristics of a sample of 33 observations. In terms of Import ($ Billion), the data ranges from a minimum of $0.88 Billion to a maximum of $14.18 Billion, with an average of $5.39 Billion and a standard deviation of $4.47 Billion, showcasing considerable variability. The GDP ($ Billion) variable exhibits even greater diversity, spanning from $3.40 Billion to $46.10 Billion, with a mean of $16.02 Billion and a standard deviation of $12.74 Billion. GDP (Gr), representing nominal GDP growth, shows a range from 0.77 to 24.19, with a mean of 12.22 and a standard deviation of 4.75. Per Capita Income (PCI) in dollars presents a broad spectrum, with a minimum of $185.51 and a maximum of $1410.17, averaging at $597.93, and demonstrating a standard deviation of $415.32. Lastly, the Inflation (%) variable spans from 2.27% to 17.15%, with an average inflation rate of 7.36% and a standard deviation of 3.50%. These descriptive statistics encapsulate the central tendencies, variations, and ranges within each economic parameter, providing a comprehensive overview of the dataset's distribution and characteristics.

4.2.3 Correlation Analysis

Correlation is a statistical measure that describes the degree to which two variables change together. It provides insight into the direction and strength of the relationship between two sets of data. A correlation coefficient ranges from -1 to 1, where -1 indicates a perfect negative correlation, 1 indicates a perfect positive correlation, and 0 suggests no correlation. Understanding correlation helps researchers and analysts identify patterns,

make predictions, and gain insights into the interdependence of variables in various fields such as finance, economics, and scientific research.

Table 3

Correlation Analysis of Import, GDP, GDP (gr), PCI and Inflation

	Import ($ Billion)	GDP ($. Billion)	GDP (Gr)	PCI ($)	Inflation (%)
Import ($ Billion)	1	.968**	-0.156	.980**	-0.190
GDP ($. Billion)	.968**	1	-0.196	.997**	-0.140
GDP (Gr)	-0.156	-0.196	1	-0.183	.439*
PCI ($)	.980**	.997**	-0.183	1	-0.136
Inflation (%)	-0.190	-0.140	.439*	-0.136	1

(*Source*: Calculate by SPSS)

Table 3 provided correlation matrix offers a detailed and insightful overview of the interrelationships among critical economic indicators within the analyzed context. A particularly noteworthy finding is the exceptionally strong positive correlation (0.968) between Import ($ Billion) and GDP ($ Billion), implying that increases in import levels are closely aligned with corresponding rises in gross domestic product. This suggests that in the observed economy, external trade especially imports plays a vital role in economic expansion. In contrast, the correlation between Import and GDP growth rate (GDP Gr) is weakly negative (-0.156), indicating a subtle inverse relationship where higher imports may slightly coincide with slower GDP growth, though the effect is not substantial.

Furthermore, Import shows a very strong positive correlation (0.980) with Per Capita Income (PCI $), highlighting that as a country imports more, its average income per person also tends to rise, likely due to improved access to goods and services or productivity gains. Similarly, GDP ($ Billion) has an almost perfect positive correlation (0.997) with PCI ($), illustrating a strong alignment between overall economic output and the average income level of citizens. This underscores the notion that macroeconomic expansion tends to benefit individuals economically, at least in nominal terms.

On the other hand, GDP and Inflation (%) have a weak negative correlation (-0.140), which suggests that as GDP increases, inflation tends to decrease slightly, although the relationship is not particularly strong. Interestingly, GDP growth rate (GDP Gr) and PCI

($) also reveal a weak negative correlation (-0.183), indicating that higher per capita income might be marginally associated with slower nominal GDP growth, possibly due to mature economic conditions or income disparity effects.

Moreover, the correlation between GDP Gr and Inflation (%) is moderately positive (0.439*), suggesting a plausible relationship where higher GDP growth may accompany rising inflation, a typical feature in demand-driven economic environments. Finally, PCI ($) and Inflation (%) exhibit a weak negative correlation (-0.136), implying a slight inverse association between rising average income and inflation rates.

The presence of statistical significance markers such as the asterisk indicating significance at conventional thresholds adds further credibility to the analysis by highlighting which relationships are likely not due to random variation, thereby enhancing the interpretive value of the correlation.

4.2.4 Regression Analysis

Regression line is a fundamental aspect of statistical analysis and predictive modeling. In essence, a regression line represents the best-fitting straight line that minimizes the sum of squared differences between observed data points and their corresponding predicted values. It serves as a mathematical representation of the relationship between two variables, typically depicting the dependent variable's response to changes in the independent variable. The slope of the regression line quantifies the rate of change in the dependent variable for a unit change in the independent variable, while the intercept denotes the expected value of the dependent variable when the independent variable is zero. Researchers and analysts use regression lines to make predictions, identify trends, and understand the strength and direction of associations between variables in various fields, such as economics, biology, and social sciences.

Table 4

Regression of GDP, GDP (gr), PCI and Inflation on Import

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.989[a]	0.98	0.97	0.71

a. Predictors: (Constant), Inflation (%), PCI ($), GDP (Gr), GDP ($. Billion)

(*Source*: Calculate by SPSS)

Table 4 provided summary pertains to a multiple linear regression analysis aimed at predicting a dependent variable using a set of independent economic indicators. The model exhibits a remarkably high degree of explanatory power, as evidenced by an outstanding R-squared value of 0.989. This means that approximately 98.9% of the variation observed in the dependent variable is explained by the independent variables included in the regression model. Such a high R-squared value indicates that the model fits the data very well and leaves very little unexplained variance, enhancing its credibility and usefulness for predictive or analytical purposes.

The R-squared value, the Adjusted R-squared is reported at 0.970. This statistic adjusts for the number of predictors used in the model and provides a more accurate estimate of the model's explanatory strength, particularly when multiple independent variables are involved. The relatively small difference between the R-squared and Adjusted R-squared values further supports the strength and stability of the model, suggesting that the inclusion of additional predictors does not introduce significant fitting.

The standard error of the estimate is 0.71, indicating the average distance that the observed values fall from the regression line. A lower standard error signifies that the predicted values are generally close to the actual values, further supporting the model's precision.

The independent variables incorporated into the model include a constant term, along with Inflation (%), Per Capita Income (PCI in $), the growth rate of Nominal Gross Domestic Product (GDP Gr), and total GDP ($ Billion).

Table 5

ANOVA analysis of Regression line of GDP, GDP (gr), PCI and Inflation on Import

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	625.96	4	156.49	311.04	.000[b]
	Residual	14.09	28	0.50		
	Total	640.05	32			

a. Dependent Variable: Import ($ Billion)

b. Predictors: (Constant), Inflation (%), PCI ($), GDP (Gr), GDP ($. Billion)

(*Source*: Calculate by SPSS)

Table 5 shows an Analysis of Variance (ANOVA) was conducted to evaluate the overall statistical significance of the regression model developed to predict the dependent variable, Import ($ Billion). The findings indicate that the model is highly statistically significant, as reflected by a large F-statistic value of 311.04 and a corresponding p-value less than 0.05. This suggests that there is a very low probability that the observed relationship between the dependent and independent variables occurred by chance, thereby affirming the validity of the model.

The regression sum of squares (SSR) was calculated at 625.96, which quantifies the portion of the total variation in Import ($ Billion) that can be explained by the set of independent variables used in the model. These predictors include a constant term, Inflation (%), Per Capita Income (PCI in $), GDP growth rate (GDP Gr), and total GDP ($ Billion). The mean square for regression, derived by dividing the regression sum of squares by the degrees of freedom, was 156.49, further supporting the model's strength in capturing systematic variation in the dependent variable.

On the other hand, the residual sum of squares (SSE), which represents the unexplained variation or error in the model, was relatively low at 14.09. The mean square for residuals, calculated by dividing the residual sum of squares by its respective degrees of freedom, was 0.50. The total sum of squares (SST), which combines both the explained and unexplained variance, amounted to 640.05, offering a complete picture of the variation in the Import variable.

Together, these statistics demonstrate that the regression model, including the specified economic indicators as predictors, effectively accounts for the majority of the variance in Import ($ Billion). The small residual variance relative to the regression variance, combined with the high F-statistic and statistically significant p-value, underscores the robustness and reliability of the model. These findings reinforce the conclusion that the selected independent variables are meaningful and significantly contribute to explaining changes in import values within the studied context.

Table 6

Coefficient Analysis of Independent Variable GDP, GDP (gr), PCI and Inflation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.621	0.497		-3.264	0.003
	GDP ($. Billion)	-0.451	0.120	-1.286	-3.766	0.001
	GDP (Gr)	0.037	0.030	0.040	1.241	0.225
	PCI ($)	0.024	0.004	2.258	6.629	0.000
	Inflation (%)	-0.102	0.040	-0.080	-2.564	0.016

a. Dependent Variable: Import ($ Billion)

(*Source*: Calculate by SPSS)

Table 6 shows regression analysis results provide a comprehensive understanding of the factors influencing the dependent variable, "Import ($ Billion)," and reveal the significance and direction of the relationships between imports and macroeconomic indicators. The constant term, which represents the estimated value of imports when all independent variables are held at zero, is -1.621 billion dollars. This negative constant suggests that in the absence of GDP, GDP growth rate, PCI, and inflation, the model would predict a baseline negative import value. The t-value associated with this constant is -3.264, and the corresponding p-value is 0.003, indicating that this term is statistically significant at the 1% level and should not be disregarded in the model.

Turning to the independent variables, GDP ($ Billion) plays a crucial role in determining import values. It has an unstandardized coefficient of -0.451, meaning that for every one-billion-dollar decrease in GDP, imports are expected to decline by approximately 0.451 billion dollars. The t-value for GDP is -3.766 with a highly significant p-value of 0.001, confirming its statistical relevance in the model. This strong and negative relationship implies that a shrinking economy is likely to lead to lower import levels, possibly due to reduced domestic consumption or constrained industrial activity.

In contrast, GDP Growth Rate (GDP Gr) does not appear to be a statistically significant predictor of imports in this model. The p-value for GDP Gr is 0.225, which is well above

conventional thresholds for significance (such as 0.05 or 0.01). This suggests that changes in the rate at which GDP grows, whether accelerating or decelerating do not have a direct or consistent effect on the overall import volume in the given dataset. While GDP Gr may still hold theoretical importance in broader economic discussions, its statistical insignificance in this context implies limited explanatory power for import fluctuations.

Per Capita Income (PCI $), on the other hand, emerges as a highly influential and statistically robust predictor. It has an unstandardized coefficient of 0.024, indicating that each additional dollar increase in PCI is associated with a 0.024 billion dollar increase in imports. More impressively, the standardized coefficient (Beta) for PCI is 2.258, suggesting it has the most substantial standardized impact among the variables considered. The t-value of 6.629 and p-value of less than 0.001 reinforce the strength of this relationship. This finding aligns with economic theory, as rising incomes typically lead to greater consumer demand, often including imported goods and services.

Inflation (%) also shows a statistically significant impact on imports, but in a negative direction. The unstandardized coefficient is -0.102, suggesting that a one-percentage-point increase in the inflation rate leads to a 0.102 billion dollar decline in imports. The standardized Beta coefficient is -0.080, and the t-value is -2.564, with a corresponding p-value of 0.016. This result indicates that higher inflation, which erodes purchasing power and can increase the cost of foreign goods, is associated with a reduction in import volume. Inflation likely discourages both household consumption and business imports due to higher prices and uncertainty.

The regression analysis GDP, PCI, and Inflation as significant and meaningful predictors of import levels. GDP has a negative effect, while PCI positively influences imports, and Inflation also exerts a negative impact. Meanwhile, GDP Growth Rate does not show statistical significance and thus does not meaningfully contribute to explaining changes in imports in this particular model. These findings emphasize the importance of both macroeconomic stability and individual income levels in shaping a country's import behavior and offer critical insights for policymakers, economists, and trade analysts alike.

4.2.5 Hypothesis testing

Hypothesis testing is a statistical method used to make inferences or draw conclusions about a population based on sample data. It involves formulating two competing

hypotheses: the null hypothesis (H_0), which represents no effect or no relationship, and the alternative hypothesis (H_1), which indicates the presence of an effect or relationship. The process begins by selecting a significance level (commonly 5%) to determine the threshold for rejecting the null hypothesis. A test statistic is then calculated from the sample data and compared to a critical value or p-value. If the p-value is less than the chosen significance level, the null hypothesis is rejected in favor of the alternative hypothesis. Hypothesis testing helps researchers determine whether observed results are statistically significant or likely due to random chance.

H1: There is significant association of GDP, GDPgr, per ca-pita income and inflation with import of Nepal.

Table 7

There is significant association of GDP, GDPgr, per ca-pita income and inflation with import of Nepal.

Variables	Correlation Value	Sig. @5%	Remarks
GDP	0.968	Significant	Accept
GDP(gr)	0.156	insignificant	Reject
PCI	0.98	Significatt	Accept

Table 7 correlation analysis shows that GDP has a strong positive relationship with Import, with a correlation value of 0.968, which is statistically significant at the 5% level. This indicates that as GDP increases, imports also rise significantly. Per Capita Income (PCI) also exhibits a very strong and significant positive correlation of 0.980 with Import, suggesting higher income levels are closely associated with increased import activity. However, GDP growth rate (GDP r) shows a weak and statistically insignificant correlation of 0.156, indicating no meaningful relationship with Import.

H2: There is significant impact of GDP, GDPgr, per ca-pita income (PCI) and Inflation on import of Nepal.

Table 8

There is significant impact of GDP, GDPgr, per ca-pita income (PCI) and Inflation on import of Nepal.

Particular	F-Valu	Sig.@5%	Remarks
ANOVA	311.04	Significant	Accept

Table 8 ANOVA test result shows an F-value of 311.04, which is statistically significant at the 5% level. This indicates that the overall regression model is highly significant and effectively explains the variation in the dependent variable, Import ($ Billion). The significance of the F-value confirms that the combination of independent variables used in the model contributes meaningfully to the prediction. Therefore, the null hypothesis is rejected, and the regression model is accepted as statistically valid.

4.3 Results of Study

The data analysis reveals significant insights into the economic variables under consideration across 33 observations. In terms of Import ($ Billion), the data exhibits a substantial range from $0.88 Billion to $14.18 Billion, conveying notable variability. The average Import stands at $5.39 Billion, with a standard deviation of $4.47 Billion, signifying diverse observations within the sample. Moving to GDP ($ Billion), a wider diversity is observed with values spanning from $3.40 Billion to $46.10 Billion. The mean GDP is $16.02 Billion, accompanied by a standard deviation of $12.74 Billion, indicating a broad spectrum of economic output among the entities in the study. The variable GDP (Gr), representing nominal GDP growth, showcases variability from 0.77 to 24.19, with a mean of 12.22 and a standard deviation of 4.75. This illustrates the range of growth rates across the observed entities, providing a nuanced perspective on their economic dynamics. Per Ca-pita Income (PCI) in dollars presents a diverse landscape, ranging from $185.51 to $1410.17. The average PCI is $597.93, with a standard deviation of $415.32, reflecting substantial disparities in individual income levels within the sample. Lastly, the Inflation (%) variable spans from 2.27% to 17.15%, with an average inflation rate of 7.36% and a standard deviation of 3.50%. This highlights variations in inflationary pressures among the entities, contributing to a comprehensive understanding of the economic landscape. Descriptive statistics provide a nuanced portrayal of the central tendencies, variations, and ranges within each economic parameter, contributing

to a comprehensive overview of the dataset's distribution and characteristics. Researchers and analysts can leverage these results to derive meaningful insights and draw informed conclusions about the economic entities represented in the data set.

The analysis reveals several key findings regarding the relationships between various economic indicators. Firstly, a robust positive correlation of 0.968 exists between Import ($ Billion) and GDP ($ Billion), indicating that as the import value increases, there is a corresponding rise in the gross domestic product. Conversely, Import ($) demonstrates a weakly negative correlation of -0.156 with GDP (Gr), suggesting a minor inverse relationship between import value and nominal GDP growth. Moreover, Import ($) exhibits a strong positive correlation of 0.980 with PCI ($), underlining a substantial connection between higher imports and increased per ca-pita income. On the other hand, GDP ($ Billion) displays an exceptionally strong positive correlation of 0.997 with PCI ($), emphasizing a near-perfect relationship between overall economic output and per ca-pita income. Furthermore, a weak negative correlation of -0.140 is identified between GDP ($) and Inflation (%), implying a slight inverse association. GDP (Gr) and PCI ($) reveal a weak negative correlation of -0.183, indicating a modest tendency for higher per ca-pita income to be associated with lower growth in nominal GDP. The correlation between GDP (Gr) and Inflation (%) is moderately positive at 0.439, signaling a potential link between higher growth in nominal GDP and increased inflation. Lastly, PCI ($) and Inflation (%) display a weak negative correlation of -0.136, suggesting a mild inverse relationship between per ca-pita income and inflation. The inclusion of statistical significance indicators serves to underscore the reliability of these observed correlations, providing a comprehensive overview of the interplay between the specified economic variables.

The model demonstrates a high level of explanatory power, as indicated by an impressive R-squared value of 0.989 that means 98.90 percent of import depends on independent variables. The analysis of variance (ANOVA) was conducted to evaluate the significance of a regression model predicting the dependent variable, Import ($ Billion). The obtained F-statistic of 311.04, coupled with a p-value below 0.05, underscores the substantial statistical significance of the model. The regression sum of squares (625.96) signifies the degree to which the predictors (including a constant, Inflation (%), PCI ($), GDP (Gr), and GDP ($ Billion)) collectively elucidate the variance in the Import variable. The mean

square for regression, at 156.49, indicates the average variance explained by these predictors. In contrast, the residual sum of squares (14.09) and the corresponding mean square for residuals (0.50) reflect the unexplained variability in the model. The combined total sum of squares (640.05) encapsulates the overall variability in the dependent variable. Overall, these results affirm that the model, incorporating the specified predictors, effectively captures and significantly explains the variation in Import ($ Billion).

4.5 Discussion

The analysis of 33 economic observations reveals patterns that both support and challenge existing literature. The strong variation in import values and their positive association with GDP aligns with Hidayat et al. (2024) and Panta et al. (2022), supporting the imports-led growth hypothesis. However, this contradicts Firdaus and Septiani (2022), who found trade, especially exports, to have a negative short-term impact on growth. The wide range in GDP and GDP growth rates is consistent with findings by Stievany and Jalunggono (2020) and Hidayat et al., highlighting the role of trade, capital formation, and openness in driving growth. Yet, the link between trade and short-term growth contradicts Ahmed et al. (2018), who found minimal short-run effects in Pakistan. The disparities in per capita income support the idea that trade improves economic performance but also expose inequality, suggesting that GDP gains do not always equitably benefit individuals. Lastly, high inflation rates align with trade-induced inflation noted by Mazher et al. (2024) and Rangkuti et al. (2024), but contradict Firdaus and Septiani (2022), who warned that inflation undermines long-term growth—highlighting the need for effective macroeconomic management.

The correlation analysis shows a strong positive link between Import ($) and both GDP ($) and PCI ($), supporting Hidayat et al. (2024) and Panta et al. (2022) on trade-driven economic and income growth. However, the weak negative correlation between Import and GDP growth slightly contradicts the imports-led growth theory, suggesting that rising imports may not always boost short-term growth. The strong association between GDP and PCI aligns with Stievany and Jalunggono (2020), affirming that higher output increases income levels. In contrast, the negative correlation between GDP and inflation partially contradicts findings from Ahmed et al. (2018) and Mazher et al. (2024), who link trade and growth with rising inflation. The moderately positive relationship between

GDP growth and inflation supports Firdaus and Septiani (2022), indicating growth-related inflation. Finally, the weak negative correlation between PCI and inflation and between GDP growth and PCI suggests that income gains may be unequally distributed, contrasting with assumptions that growth equally benefits all.

The regression analysis with an R-squared of 0.989 strongly supports Hidayat et al. (2024) and Panta et al. (2022), affirming that GDP and PCI significantly influence Import ($). The model's statistical significance, validated by the F-statistic and p-value, aligns with Ahmed et al. (2018) and Mazher et al. (2024), who linked trade with inflation and macroeconomic activity. The strong predictive roles of GDP ($) and PCI ($) match both correlation results and literature emphasizing output and income as key trade drivers. However, the inclusion of GDP growth (Gr) contradicts both its weak correlation in the dataset and Firdaus and Septiani (2022), who observed limited short-term growth-trade effects. The model's near-zero residual variance challenges Salman (2022) and Ebrahimi (2017), who questioned the direct and linear relationship between trade and economic growth. Finally, the model's strength somewhat contradicts Hamdi et al. (2024) and Tahir et al. (2023), who found more context-specific or weaker impacts of inflation and trade in different economic settings.

Chapter V Summary And Conclusion

5.1 Summary

Analyze the impact of GDP, inflation on import in Nepal Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. As a broad measure of overall domestic production, it functions as a comprehensive scorecard of a given country's economic health. Though GDP is typically calculated on an annual basis, it is sometimes calculated on a quarterly basis as well. In the U.S., for example, the government releases an annualized GDP estimate for each fiscal quarter and also for the calendar year. The individual data sets included in this report are given in real terms, so the data is adjusted for price changes and is, therefore, net of inflation. Inflation generally indicates the raise in price of commodity and services in market in a period of time, there is no universally accepted definition of inflation. It is debatable that at what degree of rise in price level is inflation. For this let use examine the definition given different economist. Inflation exist when money income is expanding more than in proportion to increase in earning activity Financial globalization has been one of the key factors contributing to the mitigation of rigid economic boundaries between countries by enhancing cross-country capital mobility for almost two centuries. However, the enhancement process of international capital mobility was not a smooth one due to interrupt political and economic episodes throughout the 19th and early 20th century. The collapse of the Bretton Woods System in 1971 and the Oil Shock of 1973-1974 greatly revitalized and increased the volume of international capital flows among countries, specifically from developed to developing countries, thanks to the innovations in communication technologies, promising domestic factors of the developing countries and macro-finance factors such as growth in Eurodollar market, bank lending and low-interest earnings at the financial centers. The general objectives of the study was measures the impact of GDP, Inflation on import volume of Nepalese economy, with specific objectives to analyze the trend and growth of GDP, Inflation and Import in Nepal, examine the association between GDP, inflation and Import of Nepal and assess the impact of GDP, Inflation on Import in Nepal. The study completed under the causal comparative research design taking the sample of data from the year 1994 to 2023 through published sources. The method of data analysis was descriptive statistics such as trend analysis, mean, standard deviation, and correlation and

regression model to analyze the impact. The finding of study was the correlation between GDP (Gr) and Inflation (%) is moderately positive at 0.439, signaling a potential link between higher growth in nominal GDP and increased inflation. Lastly, PCI ($) and Inflation (%) display a weak negative correlation of -0.136, suggesting a mild inverse relationship between per ca pita income and inflation, the regression sum of squares (625.96) signifies the degree to which the predictors (including a constant, Inflation (%), PCI ($), GDP (Gr), and GDP ($ Billion)) collectively elucidate the variance in the Import variable. The mean square for regression, at 156.49, indicates the average variance explained by these predictors.

5.2 Conclusion

The analysis of the dataset reveals significant variability and diversity in key economic variables across the 33 observations. Notably, the range of Import ($ Billion) spans from $0.88 Billion to $14.18 Billion, indicating a broad spectrum of economic activities. Similarly, GDP ($ Billion) exhibits wide diversity, ranging from $3.40 Billion to $46.10 Billion, signifying varied economic output among the entities studied. Nominal GDP growth (GDP (Gr)) and Per Ca-pita Income (PCI) both showcase considerable disparities, highlighting nuanced perspectives on economic dynamics and individual income levels. Additionally, the variation in Inflation (%) rates, ranging from 2.27% to 17.15%, underscores diverse inflationary pressures within the sample. These findings equip researchers and analysts with valuable insights, enabling them to identify strengths, weaknesses, and patterns within the economic parameters for informed and comprehensive conclusions about the entities represented in the data.

This analysis has revealed intricate relationships between key economic indicators. Notably, a positive correlation was identified between Import ($) and GDP ($ Billion), underlining that an escalation in import value corresponds to an increase in gross domestic product. Conversely, Import ($) exhibited a weakly negative correlation with GDP (Gr), suggesting a subtle inverse link between import value and nominal GDP growth. The strong positive correlation between Import ($) and PCI ($) emphasizes a substantial connection between heightened imports and increased per ca-pita income. The exceptionally strong positive correlation observed between GDP ($) and PCI ($) underscores a nearly perfect relationship between overall economic output and per ca-pita income. Finally, while these correlations offer valuable insights, it is crucial to interpret

them cautiously, recognizing the absence of causation and the potential influence of other factors on these observed relationships.

The regression analysis demonstrates a highly effective model for predicting Import ($ Billion), with a remarkable R-squared value of indicating that nearly 98.90% of the variance in Import is explained by the chosen predictors. The statistically robust ANOVA results, characterized by a significant F-statistic ($p < 0.05$), affirm the meaningful relationship between the independent variables and Import. The components of variance, including regression sum of squares and residuals, highlight the model's ability to capture and explain the majority of the variability in Import. Overall, these findings underscore the significance of the included predictors and validate the model's efficacy in elucidating the factors influencing Import ($ Billion).

5.3 Implication

Implication refers to the logical relationship between two statements, where the truth of one statement necessitates the truth of the other. The study have theoretical and empirical implication, which are as follows:

5.3.1 Theoretical Implication

i. Trade and Economic Development: The study provides theoretical insights into the relationship between economic development indicators (GDP, per capita income) and international trade (imports). Understanding how economic growth and income levels influence import patterns contributes to the broader discourse on trade-led development.

ii. Macroeconomic Stability: The analysis sheds light on the role of inflation in influencing import levels. Theoretical implications extend to the importance of maintaining macroeconomic stability to ensure sustainable trade practices. Inflation measures that support import activities without causing economic imbalances.

iii. Consumption Patterns and Import Demand: The study explores how consumer behavior, influenced by GDP growth and per capita income, impacts import demand. Theoretical implications to understanding changing consumption patterns and preferences, which are crucial for businesses.

iv. Globalization and External Vulnerabilities: The study contributes to the theoretical framework surrounding the globalization of economies, changes in domestic economic indicators can affect a country's external trade position.

5.3.2 Empirical Implication

i. Trade Balance Sensitivity: A positive correlation may be observed between Nepal's import levels and its GDP growth rate and per capita income. Higher economic activity and income levels are likely to lead to increased imports. However, careful consideration is needed regarding the impact of inflation on the affordability of imported goods.

ii. Economic Diversification: Examining the import composition can reveal insights into Nepal's economic diversification. A growing GDP and GDP growth rate may indicate increased demand for diverse goods and services, reflecting economic development. The per capita income factor could shed light on the nature of consumer preferences, influencing the types of imports.

iii. Inflationary Pressure on Imports: High inflation may act as a preventive to imports due to increased costs. Understanding the relationship between inflation and import levels can provide insights into the resilience of Nepal's trade balance in the face of domestic price pressures.

iv. Policy Implications: The empirical study can inform policy decisions. If the analysis suggests that economic growth positively influences imports, policymakers may prioritize measures that stimulate economic activity.

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APPENDIX I

Year	Import ($ Billion)	GDP ($. Billion)	GDP (Gr)	PCI ($)	Inflation (%)
1991	0.91	3.92	16.39	204.1	15.56
1992	0.88	3.40	24.19	185.5	17.15
1993	1.05	3.66	14.71	194.6	7.51
1994	1.28	4.07	16.21	204.9	8.35
1995	1.52	4.40	9.99	217.4	7.62
1996	1.61	4.52	13.57	218.2	9.22
1997	1.85	4.92	12.70	232.9	4.01
1998	1.65	4.86	7.25	224.8	11.24
1999	1.50	5.03	13.69	228.1	7.45
2000	1.78	5.49	10.95	243.6	2.48
2001	2.00	6.01	16.35	259.8	2.69
2002	1.72	6.05	4.06	254.2	3.03
2003	1.81	6.33	7.14	260.9	5.71
2004	2.14	7.27	9.04	292.3	2.84
2005	2.40	8.13	9.81	328.7	6.84
2006	2.83	9.04	10.97	352.2	6.92
2007	3.28	10.33	11.27	414.3	2.27
2008	4.17	12.55	12.07	496.1	9.91
2009	4.46	12.85	21.16	502.4	11.09
2010	5.83	16.00	20.69	614.2	9.33
2011	6.15	21.57	10.00	818.3	9.23
2012	6.33	21.70	12.52	813.9	9.46
2013	7.22	22.16	10.86	819.8	9.04
2014	8.15	22.73	14.53	836.2	8.36
2015	8.88	24.36	8.56	883.8	7.87
2016	8.32	24.52	7.61	899.2	8.79
2017	10.67	28.97	17.98	1,049.5	3.63
2018	13.45	33.11	12.31	1,184.4	4.06
2019	14.18	34.19	11.66	1,216.3	5.57
2020	11.41	33.43	0.77	1,180.4	5.05
2021	14.01	36.29	11.93	1,283.6	4.09
2022	13.35	40.83	13.35	1,407.0	8.70
2023	11.04	46.10	9.07	1,410.2	7.70

(Sources: NRB 2023)

APPENDIX II

Year	Trend of Import	Trend of GDP	Trend of GDP Gr	Trend of PCI	Trend of Inflation
1991	0	0	0	0	0
1992	-3.72	-13.27	47.55	-9.10	10.23
1993	20.24	7.61	-39.20	4.88	-56.24
1994	21.47	11.11	10.22	5.33	11.24
1995	18.82	8.22	-38.39	6.09	-8.70
1996	6.08	2.74	35.85	0.37	20.96
1997	15.09	8.78	-6.43	6.71	-56.51
1998	-11.27	-1.27	-42.91	-3.45	180.41
1999	-9.10	3.65	88.90	1.47	-33.74
2000	19.10	9.15	-20.03	6.77	-66.73
2001	12.07	9.33	49.28	6.65	8.45
2002	-13.65	0.73	-75.17	-2.14	12.69
2003	4.82	4.62	75.80	2.64	88.39
2004	18.59	14.90	26.73	12.02	-50.21
2005	11.83	11.77	8.48	12.47	140.56
2006	18.16	11.24	11.83	7.13	1.23
2007	15.66	14.17	2.75	17.62	-67.21
2008	27.38	21.50	7.04	19.76	336.62
2009	6.78	2.47	75.37	1.27	11.98
2010	30.74	24.49	-2.22	22.25	-15.94
2011	5.51	34.81	-51.67	33.23	-1.07
2012	3.00	0.60	25.23	-0.53	2.52
2013	14.01	2.12	-13.30	0.72	-4.44
2014	12.92	2.57	33.82	2.01	-7.48
2015	8.94	7.17	-41.08	5.68	-5.92
2016	-6.28	0.67	-11.05	1.75	11.71
2017	28.21	18.14	136.14	16.72	-58.74
2018	26.09	14.29	-31.53	12.85	11.97
2019	5.37	3.25	-5.28	2.69	37.12
2020	-19.55	-2.20	-93.40	-2.95	-9.27
2021	22.82	8.54	1449.10	8.74	-19.09
2022	-4.70	12.51	11.94	9.61	112.82
2023	-17.30	12.91	-32.05	0.22	-11.49

(Sources: NRB 2023)

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