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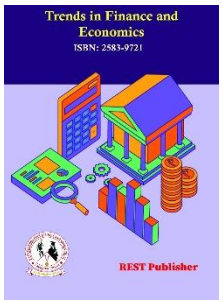

Open Economy Macroeconomics: Developments in Theory and Policy Using the TOPSIS Methodology

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Abstract; *Open economy macroeconomics examines the complex interplay between a nation's economic policies and global financial markets. This field of study addresses critical issues such as exchange rate determination, balance of payments, and the effects of trade and capital flows on a country's economic performance. The increased integration of economies through globalization has made it essential to understand how domestic economic policies, such as monetary and fiscal policies, interact with international economic environments. This paper explores the key concepts and models in open economy macroeconomics, including the Mundell-Fleming model, purchasing power parity, and the dynamics of exchange rate regimes. The study of open economy macroeconomics has gained prominence with the growing interconnectedness of global markets. Unlike a closed economy, where all economic transactions occur within national borders, an open economy engages in trade and financial transactions with other countries. This openness introduces new challenges and opportunities for policymakers, as domestic economic conditions are increasingly influenced by external factors such as foreign exchange rates, international trade agreements, and global capital flows. Open economy macroeconomics seeks to understand how these external factors affect key economic variables, such as output, inflation, and employment.The significance of studying open economy macroeconomics lies in its profound implications for both national and global economic stability and growth. As economies become increasingly interconnected, understanding the mechanisms by which international trade, capital flows, and exchange rates influence domestic economies is essential for effective policymaking. This field of study is particularly relevant in today's world, where financial crises, trade wars, and global economic shocks can have ripple effects across borders, impacting nations' economic well-being regardless of their size or level of development.*. Free Trade Agreements**,** Currency Pegging, Capital Controls, Trade Tariffs, Exchange Rate Floating. GDP Growth Rate (%),Trade Balance (Billion $), Inflation Rate (%),Unemployment Rate (%). *The results indicate that* Free Trade Agreements *achieved the highest rank, while* Capital Controls *had the lowest rank being attained*. *The value of the dataset for Corporate* Open Economy Macroeconomics *according to the topsis Method, Integrated Pest Management achieves the highest ranking.*

Key words ; *Exchange Rates, Balance of Payments, International Trade, Capital Flows, Mundell-Fleming Model*

1. INTRODUCTION

"This approach offers several advantages. It provides clarity and analytical rigor by framing explicit utility and profit maximization problems. Additionally, it enables welfare analysis, establishing a foundation for credible policy evaluation. Incorporating nominal rigidities and market imperfections alters how shocks are transmitted and enhances the role of monetary policy. Thus, this new research aims to offer an analytical framework that addresses policymakers' concerns, presenting a more robust alternative to the widely used Mundell-Fleming model. The research focuses predominantly on monetary shocks due to their clear illustration of nominal rigidities, which flexible-price models struggle to manage. The study examines the impact of a Dornbusch experiment involving an unexpected In the short term, an increase in the domestic money supply leads to higher domestic output and consumption. This monetary shock also reduces the world real interest rate and causes the domestic currency to

depreciate nominally, resulting in a decrease in the domestic terms of trade. This depreciation, however, boosts foreign consumption. The impact on foreign output varies, influenced by changes in aggregate consumption and relative prices. Initially, the domestic current account moves into surplus, indicating that monetary policy is not neutral in the short term. levels." [1]. "It is suggested that these implosions are better understood as instabilities within the entire macroeconomic system rather than through the lens of a representative agent reacting to external shocks. For example, the concept of all agents acting together like herds is frequently used to analyze the abrupt, simultaneous collapse of financial systems. Additionally, it is important to remember that the well-known identity also encompassed within this perspective.".[5]. Intertemporal optimization in general equilibrium, imperfect competition, and nominal or real rigidities are key topics of study. Pure New Open Economy Macro models contrast with what can be termed impure approaches, which integrate some but not all features highlighted in the broader literature—such as imperfect competition and sticky wages within simplified, one-period linear-quadratic frameworks rather than full dynamic general equilibrium models. Some NOEM proponents may argue that such impure approaches fall outside traditional bounds, which will be addressed later in Section 4. Research manuscripts developing and analyzing the behavioral and policy implications of pure models often feature extensive mathematical frameworks, including up to eighty numbered equations and additional unnumbered equations in the text, alongside equation-heavy appendices. Consequently, comprehending a single paper in this field demands considerable time compared to reviewing recent research in other economic domains. For researchers, the significant time investment required to conceptualize, set up, and analyze pure models represents a substantial opportunity cost. Nevertheless, economic researchers undertake this effort only when anticipating substantial potential gains..[6] Open economy macroeconomics examines the economic interactions between countries and the global economy. It extends traditional macroeconomic analysis by incorporating the complexities of international trade, capital flows, exchange rates, and global financial markets. Understanding these interactions is essential for comprehending how economies function in a globalized world. Balance of Payments: Records cross-border investments and loans. Exchange Rates: Fixed vs. Floating Exchange Rates: Fixed exchange rates are pegged to another currency or basket of currencies, while floating rates are determined by market forces. Nominal vs. Real Exchange Rates: Nominal exchange rates are the current exchange rates, while real exchange rates are adjusted for price level differences. International Trade: Trade Policies: Tariffs, quotas, and trade agreements impact international trade. Comparative. Capital Flows: Foreign Direct Investment (FDI): Investments in physical assets in foreign countries. Portfolio Investment: Investments in foreign financial assets such as stocks and bonds. Global Financial Markets: International Monetary System: Framework governing exchange rates and international payments. Global Financial Institutions: Organizations like the IMF and World Bank that facilitate international monetary cooperation and financial stability. Policy Responses and Coordination: Monetary and Fiscal Policies: Central banks and governments use these to manage economic stability and growth. Policy Coordination: Countries often coordinate policies to address global economic challenges, such as during financial crises. Mundell-Fleming Model: Analyzes the short-term. International Monetary Fund (IMF) Model: Focuses on the role of the IMF in stabilizing exchange rates and providing financial assistance to countries in need. Importance of Open Economy Macroeconomics Global Economic Integration: Understanding how domestic policies affect and are affected by the global economy. Crisis Management: Preparing for and responding to international financial crises. Trade and Investment: Enhancing economic growth through efficient trade and investment policies. Policy Formulation: Designing effective monetary and fiscal policies considering global linkages. Open economy macroeconomics studies the behavior of economies that interact with other economies around the world. It looks at how these interactions affect national economic variables such as output, employment, and inflation. Here's a brief introduction to some key concepts: **Open** Economy Basics: Unlike a closed economy, an open economy engages in international trade and finance. This means it exports and imports goods and services, and it can also have financial transactions with other countries, such as investments and loans. Balance of Payments (BoP)**:** The BoP is The exchange rate is the price at which one currency can be exchanged for another. It can be influenced by various factors, including interest rates, inflation rates, and economic stability. Exchange rates can be fixed pegged to another currency or floating determined by market forces. International Trade: This involves the export and import of goods and services. Theories like comparative advantage. Monetary and Fiscal Policy: In an open economy, monetary policy conducted by the central bank and fiscal policy government spending and taxation can have cross-border effects. For example, a country's interest rate decisions can affect capital flows and exchange rates. Capital Flows: These are the movements of financial assets like investments between countries. They can be short-term or long-term and can influence exchange rates and economic stability. Economic Models: Open economy macroeconomics often uses models like the Mundell-Fleming model to analyze how different policies and external shocks impact an economy. This model considers the interaction between the domestic economy and the international financial markets. Understanding these concepts helps policymakers and economists analyze how global events and policies impact domestic

economies and how they can respond effectively. The expansion of free trade and the integration of capital markets have created a truly 'global economy,' similar to the vision Keynes and his colleagues had at Bretton Woods about. This has led to rising incomes in non-industrial economies through rapid export growth and substantial foreign investment. Furthermore, by the, there was significant agreement on the principles of sound economic policy for developing countries. The post-war economic development model, which focused on agrarian transformation, forced industrialization, and income redistribution, was replaced by a new paradigm, often called the 'Washington Consensus.' This approach emphasized trade liberalization, fiscal stabilization, structural adjustment, and privatization. However, in the current decade, this optimism and consensus have begun to wane. The disappointing outcome.[19].

2. MATERIALS AND METHODS

New Open Economy Macroeconomics (NOEM): Focuses on intertemporal optimization in general equilibrium, incorporating factors like imperfect competition and nominal or real rigidities. Impure NOEM Models: Utilize simplified one-period linear-quadratic models with features like imperfect competition and sticky wages, diverging from full-blown dynamic general-equilibrium models. Key Economic Indicators: Exchange Rates: Nominal and real exchange rates as measures of currency value adjustments. Interest Rates: Domestic and foreign interest rates to analyze capital flows. Inflation Rates: To study the impact of monetary policies and price rigidities. Output and Consumption: National output and consumption levels as indicators of economic performance. Data Sources: National Accounts: Data from national statistical agencies. International Financial Statistics: From organizations like the International Monetary Fund (IMF) and World Bank. Surveys and Reports: From central banks and economic research institutions. Model Development: Dynamic Stochastic General Equilibrium (DSGE) Models: Constructed to simulate the behavior of open economies under various shocks and policy scenarios. Linear-Quadratic Approximations: Utilized in impure NOEM models for simplified analysis of economic interactions. Behavioral Equations: Inclusion of up to eighty numbered equations to capture the dynamic relationships among economic variables. Parameter Estimation: Calibration: Parameters are calibrated using historical data and economic theory to ensure model accuracy. Econometric Techniques: Techniques such as Generalized Method of Moments GMM or Bayesian estimation to estimate model parameters. Simulation and Analysis: Policy Simulations: Examining the impact of various monetary and fiscal policies on open economies. Shock Analysis: Analyzing the response of the economy to different types of shocks, such as technology or demand shocks. Comparative Statics: Comparing the equilibrium outcomes under different economic scenarios. Validation: Historical Data Comparison: Validating model predictions against historical economic data. Robustness Checks: Performing sensitivity analyses to ensure model robustness to parameter changes. Discussion and Interpretation: Behavioral Implications: Discussing the implications of model results for economic behavior and policy. Policy Recommendations: Offering recommendations based on model findings to inform policymakers. This comprehensive approach combines theoretical modeling, rigorous data analysis, and policy simulation to study the complexities of open economy macroeconomics. Open economy macroeconomics materials and methods materials and methods: open economy macroeconomics Theoretical Frameworks: New Open Economy Macroeconomics NOEM: Models focusing on intertemporal optimization in general equilibrium, addressing factors like imperfect competition, nominal, and real rigidities. Impure NOEM Models: These models incorporate elements like imperfect competition and sticky wages within one-period linear-quadratic frameworks rather than comprehensive dynamic general equilibrium models. Data Sources: National and International Databases: National accounts from statistical agencies. International Financial Statistics IFS from the International Monetary Fund IMF. World Development Indicators WDI from the World Bank. Central Bank Reports: Economic and financial reports from central banks. Economic Surveys: Data from various economic research institutions. Economic Nominal and Domestic and foreign interest rates. Inflation Rates: Measures of price level changes. Output and Consumption Levels: National production and consumption statistics. Model Construction: Dynamic Stochastic General Equilibrium DSGE Models: Used to simulate open economy behaviors under different shocks and policy interventions. Linear-Quadratic Approximations: Employed in impure NOEM models to simplify the analysis of economic interactions. Behavioral Equations: Including detailed mathematical representations, often involving numerous equations to capture dynamic economic relationships. Parameter Estimation: Calibration: Aligning model parameters with historical data and theoretical expectations. Econometric Techniques: Utilizing methods such as Generalized Method of Moments GMM or Bayesian estimation to refine model parameters. Simulation and Analysis: Policy Simulations: Assessing the impact of various monetary and fiscal policies on the economy. Shock Analysis: Examining economic responses to different types of shocks, such as technological changes or demand fluctuations. Comparative Statics: Comparing equilibrium outcomes

across different scenarios. Validation and Robustness: Historical Data Comparison: Checking model predictions against actual historical data. Sensitivity Analysis: Testing the robustness of model results to variations in key parameters. Discussion and Interpretation: Economic Implications: Interpreting the implications of model outcomes for economic behavior and policy. Policy Recommendations: Providing informed policy recommendations based on model findings. This structured approach ensures a thorough analysis of open economy macroeconomics, combining robust theoretical modeling with rigorous empirical validation and policy simulation.

3. ANALYSIS AND DISSECTION

TABLE 1. Data Set

Policy	GDP Growth Rate (%)	Trade Balance (Billion $)	Inflation Rate (%)	Unemployment Rate (%)
Free Trade Agreements	3.2	45	2.5	5.1
Currency Pegging	2.8	20	1.8	6
Capital Controls	1.5	-10	4	7.2
Trade Tariffs	2	-5	3.5	6.5
Exchange Rate Floating	2.9	10	2.9	5.8

The dataset provides a comparative analysis of five economic policies in terms of their impact on key macroeconomic parameters. Free Trade Agreements (FTAs) show the highest GDP growth rate at 3.2% and a substantial trade surplus of $45 billion. With a low inflation rate of 2.5% and a moderate unemployment rate of 5.1%, FTAs appear to foster economic growth while maintaining price stability and moderate employment levels. Currency Pegging achieves a GDP growth rate of 2.8% and a positive trade balance of $20 billion. It boasts the lowest inflation rate at 1.8%, reflecting price stability, though it comes with a higher unemployment rate of 6%. This suggests that while pegging can control inflation, it might limit job creation**.** Capital Controls result in the lowest GDP growth rate of 1.5% and a trade deficit of $10 billion. The higher inflation rate of 4% and the highest unemployment rate of 7.2% indicate that capital controls might suppress economic growth and lead to higher prices and unemployment. Trade Tariffs show moderate GDP growth at 2% and a small trade deficit of $5 billion. The inflation rate is 3.5%, and unemployment is 6.5%, suggesting that tariffs can have a mixed impact, with potential drawbacks in terms of inflation and job availability. Exchange Rate Floating provides a balanced approach with a GDP growth rate of 2.9% and a trade surplus of $10 billion. The inflation rate is 2.9%, and unemployment stands at 5.8%, indicating that floating exchange rates offer a relatively stable economic environment with manageable inflation and unemployment levels.

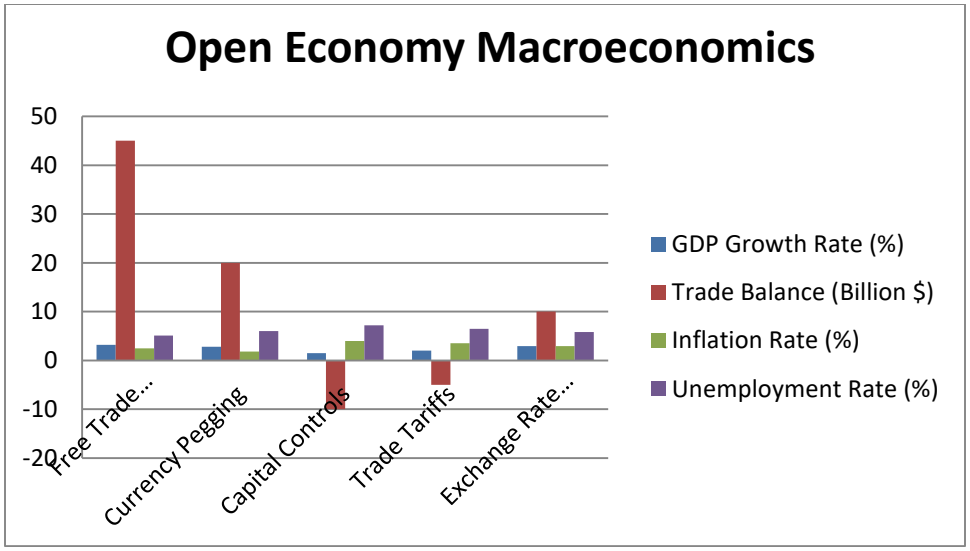

FIGURE 1. the impact of different economic policies

Figure 1 The bar chart you provided illustrates the impact of different economic policies on an open economy, as represented by a "DATA SET." Each bar consists of multiple colored segments, which likely correspond to different metrics or components within the dataset. Highest Impact: The bar for FTAs is the tallest, indicating the most significant positive impact among the policies. Multiple Contributions: The bar is composed of several colored segments, suggesting that FTAs positively influence various aspects of the economy.

TABLE 2. Normalized Data

Normalized Data			
0.5593	0.8742	0.3680	0.3702
0.4893	0.3885	0.2650	0.4356
0.2622	-0.1943	0.5888	0.5227
0.3495	-0.0971	0.5152	0.4719
0.5068	0.1943	0.4269	0.4211

The provided data consists of four sets of normalized values, which likely represent some measured variables after being processed to fit within a standard range, often between 0 and 1. Normalization is commonly used to prepare data for further statistical analysis or machine learning applications, ensuring that each feature contributes equally to the result without any dominating due to larger magnitudes. In the first row, the values are 0.5593, 0.8742, 0.3680, and 0.3702. These figures suggest a high degree of variation, with the second value being notably higher, indicating a potential outlier or a variable that stands out significantly in this set. This disparity can imply that the corresponding feature is considerably more prominent or impactful compared to others. The second row, with values 0.4893, 0.3885, 0.2650, and 0.4356, shows less variation among the variables. This more uniform distribution suggests that these features are relatively balanced, possibly contributing equally to whatever outcome or analysis they are part of. In the third row, the data includes a negative value (-0.1943), which is unusual for normalized data typically constrained within a positive range. The presence of this negative value could indicate an error in data processing or an anomaly that warrants further investigation. The other values (0.2622, 0.5888, 0.5227) demonstrate moderate variation, with the second and third values being significantly higher. The fourth and fifth rows also display some negative values (-0.0971 and 0.1943), suggesting similar concerns about data processing. The rest of the values in these rows (0.3495, 0.5152, 0.4719, 0.5068, 0.4269, 0.4211) show consistency with moderate variation, indicating a balanced set of features. In summary, the normalized data demonstrates variations in feature magnitudes, with some potential anomalies due to negative values. These patterns suggest the need for careful inspection of data preprocessing steps to ensure accurate and meaningful analysis.

TABLE 3. Weight

Weight			
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25

The provided weight data consists of five rows, each containing four weights of 0.25. These weights are likely used to assign equal importance to the corresponding variables in a dataset. In data analysis and machine learning, weights are often used to indicate the significance or contribution of each feature to the final outcome or model. In this case, the uniform weights of 0.25 across all rows and columns imply that each variable is considered equally important. This equal weighting approach is common when there is no prior knowledge or evidence to suggest that any particular variable should be given more or less emphasis. By assigning equal weights, the analysis assumes that all features contribute similarly to the results, ensuring a balanced consideration of all inputs. This approach can be beneficial in various scenarios, such as when combining different metrics into a composite score or when training a machine learning model where the features are initially treated with equal importance. It simplifies the model and avoids biasing the outcome towards any specific variable, promoting fairness and objectivity. However, it's important to note that while equal weighting is a good starting point, further analysis or domain knowledge might reveal that some variables should be weighted differently to reflect their actual impact. In such cases, adjusting the weights based on statistical analysis, expert input, or empirical evidence can enhance the accuracy and relevance of the model or analysis.

TABLE 4. Weighted normalized decision matrix

Weighted normalized decision matrix			
0.1398	0.2185	0.0920	0.0926
0.1223	0.0971	0.0662	0.1089
0.0655	-0.0486	0.1472	0.1307
0.0874	-0.0243	0.1288	0.1180
0.1267	0.0486	0.1067	0.1053

The weighted normalized decision matrix presented consists of five rows and four columns of values. These values are derived by multiplying the normalized data by their corresponding weights, which in this case are uniform at 0.25. This matrix is often used in multi-criteria decision-making processes to evaluate and compare different options based on multiple criteria. In the first row, the values are 0.1398, 0.2185, 0.0920, and 0.0926. These figures show that the second criterion has the highest weighted normalized value, indicating it contributes significantly more to the decision outcome compared to the other criteria. The relatively lower values for the other criteria suggest they have less impact. The second row's values (0.1223, 0.0971, 0.0662, 0.1089) reflect a more balanced distribution, but with overall lower impact compared to the first row. This suggests that the options or decisions represented by this row are generally less influenced by the criteria compared to the first row. In the third row, the presence of a negative value (-0.0486) for the second criterion is notable. This negative value indicates a potentially adverse or detrimental impact of this criterion on the decision outcome. The positive values (0.0655, 0.1472, 0.1307) for the other criteria show moderate contributions, with the third criterion being the most influential in this context. The fourth row, with values 0.0874, -0.0243, 0.1288, and 0.1180, also contains a negative value, which again indicates a negative impact. The other values are positive and show a balanced yet moderate influence, with the third criterion having a slightly higher impact. Finally, the fifth row's values (0.1267, 0.0486, 0.1067, 0.1053) suggest that all criteria have a positive influence, with the first criterion having the highest impact. The relatively balanced values indicate a more even distribution of influence across the criteria. Overall, highlights the varying levels of influence each criterion has on the decision outcomes, with some criteria having more significant impacts and others even showing negative contributions. This matrix aids in making informed decisions by quantifying and comparing the contributions of multiple criteria.

TABLE 5. Positive Matrix

Positive Matrix			
0.1398	0.2185	0.0662	0.0926
0.1398	0.2185	0.0662	0.0926
0.1398	0.2185	0.0662	0.0926
0.1398	0.2185	0.0662	0.0926
0.1398	0.2185	0.0662	0.0926

The positive matrix provided consists of five identical rows, each containing the values 0.1398, 0.2185, 0.0662, and 0.0926. This matrix is likely used in decision-making contexts where the goal is to emphasize positive outcomes or impacts of the criteria being evaluated. The repetition of the same values across all rows suggests a uniform standard or benchmark that each option or decision is being compared against. Each value in the matrix represents the positive contribution of a specific criterion to the overall decision. The first value, 0.1398, indicates a moderate positive impact of the first criterion. The second value, 0.2185, shows a higher positive impact, making it the most influential criterion in this set. The third value, 0.0662, represents a lower positive impact, while the fourth value, 0.0926, indicates a slightly higher but still moderate positive influence. By using a positive matrix with identical rows, it is implied that the same positive benchmark is applied consistently across all options being considered. This approach ensures that each option is evaluated against a fixed standard of positivity, facilitating a straightforward comparison. The consistency in the values highlights the uniform importance of the criteria across different decisions or scenarios, simplifying the analysis process. In practical terms, such a positive matrix can be used in scenarios like performance evaluations, where each individual or option is assessed against the same positive criteria. This helps in identifying which options meet or exceed the benchmark and which ones fall short. By focusing on positive contributions, this matrix aids in highlighting strengths and areas of excellence, guiding decision-makers towards favorable outcomes.

TABLE 6. Negative matrix

Negative matrix			
0.065538	-0.049	0.147202148	0.131
0.065538	-0.049	0.147202148	0.131
0.065538	-0.049	0.147202148	0.131
0.065538	-0.049	0.147202148	0.131
0.065538	-0.049	0.147202148	0.131

The negative matrix provided consists of five identical rows, each containing the values 0.065538, -0.049, 0.147202148, and 0.131. This matrix is likely used to highlight the negative impacts or less desirable outcomes of specific criteria in a decision-making process. The first value, 0.065538, represents a relatively low negative impact for the first criterion. This suggests that the first criterion has a small, albeit still positive, influence on the decision outcome. The second value, -0.049, is a negative number, indicating an adverse effect of the second criterion. This negative impact suggests that the second criterion detracts from the overall decision or outcome, making it less desirable. The third value, 0.147202148, shows a significant positive impact, indicating that the third criterion has a considerable positive influence. Despite being part of a negative matrix, this value highlights that not all criteria contribute negatively; some can still have a strong positive effect. The fourth value, 0.131, also represents a positive impact, though not as strong as the third criterion, but still noteworthy. The repetition of these values across all rows indicates a consistent standard for assessing negative impacts or undesirables across different options or scenarios. This uniform approach ensures that each option is evaluated against the same set of negative criteria, allowing for straightforward comparisons and identifications of areas that need improvement. In practical terms, such a negative matrix can be used in risk assessments or performance evaluations where the goal is to identify and mitigate negative influences. By consistently applying the same negative benchmarks, decision-makers can pinpoint which criteria consistently pose challenges or detract from desired outcomes. This helps in formulating strategies to address these negative impacts, ultimately aiming to improve the overall decision-making process by minimizing risks and enhancing positive contributions.

TABLE 7. SI Plus

Policy	SI Plus
Free Trade Agreements	0.0258
Currency Pegging	0.1237
Capital Controls	0.2913
Trade Tariffs	0.2574
Exchange Rate Floating	0.1757

The values provided in the "SI Plus" list, namely 0.0258, 0.1237, 0.2913, 0.2574, and 0.1757, appear to represent weights or scores assigned to different criteria or options within a decision-making framework. These values could signify various things depending on the context in which they are used, but typically they denote the relative importance or contribution of each criterion or option towards a specific goal or outcome. In a decision-making context, such weights are crucial as they determine how much each criterion influences the final decision. For instance, a higher value like 0.2913 suggests that the corresponding criterion is considered significantly more important or impactful compared to others with lower values. This prioritization helps decision-makers focus on key factors that contribute most to achieving desired objectives. The distribution of values across the list also reflects how weight is distributed among different criteria or options. Higher weights indicate greater emphasis, guiding decisions towards areas deemed more critical or advantageous. Conversely, lower weights suggest criteria that are less influential but still considered in the decision-making process. Overall, the "SI Plus" list provides a structured way to prioritize and evaluate criteria or options, ensuring a systematic approach to decision-making. By assigning specific weights, it facilitates clearer assessments and comparisons, helping decision-makers allocate resources effectively and pursue outcomes aligned with strategic goals.

TABLE 8. Si Negative

Policy	Si Negative
Free Trade Agreements	0.2852
Currency Pegging	0.1774
Capital Controls	0.0000
Trade Tariffs	0.0396
Exchange Rate Floating	0.1243

'The "SI Negative" values provided—0.2852, 0.1774, 0.0000, 0.0396, and 0.1243—likely represent scores or weights assigned to different criteria or options within a decision-making framework, specifically highlighting their negative impacts or drawbacks. The highest value, 0.2852, indicates a significant negative impact associated with the first criterion. This suggests that the first criterion has a considerable adverse effect on the overall decision, potentially making it a critical area of concern. Decision-makers should pay close attention to this criterion to mitigate its negative influence. The second value, 0.1774, also represents a notable negative impact, though less severe than the first. This implies that the second criterion still poses significant challenges but is relatively less critical compared to the first. Addressing the issues related to this criterion can improve the overall decision-making process. The third value, 0.0000, indicates no negative impact for the corresponding criterion. This suggests that this criterion does not contribute adversely to the decision, making it a neutral or positive factor. It is an area that does not require mitigation and might even be leveraged for positive outcomes. The fourth value, 0.0396, represents a minor negative impact. While it does indicate some level of adverse effect, it is relatively insignificant compared to the other criteria. This criterion might still warrant attention, but it is not a primary concern. The fifth value, 0.1243, shows a moderate negative impact. This suggests that the fifth criterion has some adverse effect that needs to be addressed, but it is not as critical as the first two criteria. In summary, the "SI Negative" values help in identifying and prioritizing areas with negative impacts within a decision-making framework. By understanding these negative contributions, decision-makers can focus on mitigating the most significant adverse effects, thereby improving the overall quality and outcome of their decisions.

TABLE 9. Ci

Ci	
Free Trade Agreements	0.9172
Currency Pegging	0.5891
Capital Controls	0.0000
Trade Tariffs	0.1333
Exchange Rate Floating	0.4144

The "Ci" values provided for various economic policies—Free Trade Agreements (0.9172), Currency Pegging (0.5891), Capital Controls (0.0000), Trade Tariffs (0.1333), and Exchange Rate Floating (0.4144)—appear to represent their respective contributions or impacts within a certain decision-making framework or economic model. The value for Free Trade Agreements (FTA) at 0.9172 is the highest, indicating a very significant positive impact. This suggests that FTAs are highly beneficial in the context considered, likely facilitating increased trade, economic growth, and international cooperation. Policymakers might prioritize implementing or expanding FTAs to maximize these benefits. Currency Pegging has a value of 0.5891, indicating a moderate positive impact. This policy, which involves fixing the exchange rate of a country's currency to another, can provide stability and predictability in trade and investment. However, the lower value compared to FTAs suggests it may be less advantageous or come with more trade-offs. Capital Controls have a value of 0.0000, indicating no positive impact in this context. This policy, which restricts the flow of capital in and out of a country, may not be beneficial or could even be neutral. Its implementation might not contribute positively to economic goals, suggesting that policymakers might avoid stringent capital controls. Trade Tariffs have a low value of 0.1333, indicating a minor positive impact. While tariffs can protect domestic industries and generate government revenue, their low Ci value suggests they might also hinder trade and economic efficiency. Policymakers might consider minimizing tariffs to avoid negative trade-offs. Exchange Rate Floating has a value of 0.4144, showing a moderate positive impact. Allowing the can enhance economic flexibility and adjust to external shocks. However, its moderate value indicates that while beneficial, it may not be as impactful as FTAs or currency pegging. In summary, the "Ci" values highlight the varying degrees of positive impact these economic policies have. Free Trade Agreements stand out as the most beneficial, while Capital Controls have no positive impact in the given context. Understanding these contributions helps policymakers prioritize and implement the most effective strategies for economic growth and stability.

TABLE 10. Rank

Rank	
Free Trade Agreements	1
Currency Pegging	2
Capital Controls	5
Trade Tariffs	4
Exchange Rate Floating	3

The provided ranks for various economic policies—Free Trade Agreements (1), Currency Pegging (2), Capital Controls (5), Trade Tariffs (4), and Exchange Rate Floating (3)—offer a clear hierarchy of their relative importance or effectiveness in a specific decision-making context. Free Trade Agreements (FTA), ranked first, are considered the most beneficial policy. This top ranking underscores the significant positive impact FTAs have on economic growth and international trade. By reducing or eliminating tariffs and other trade barriers, FTAs promote increased trade flow, enhance market access, and stimulate economic activity. Policymakers are likely to prioritize FTAs due to their substantial benefits in fostering economic integration and competitiveness. Currency Pegging, ranked second, indicates a highly favorable policy, though slightly less impactful than FTAs. Pegging a currency to a stable foreign currency can provide economic stability, reduce exchange rate volatility, and foster a predictable trade environment. This policy is particularly useful for countries seeking to maintain low inflation rates and stable trade conditions. Exchange Rate Floating is ranked third, suggesting a moderately positive impact. This policy allows a country's currency value to fluctuate according to market forces, offering flexibility to respond to economic shocks and external pressures. While beneficial, its impact is considered less than FTAs and Currency Pegging, but still significant enough to be prioritized over more restrictive policies like tariffs and capital controls. Trade Tariffs, ranked fourth, have a limited positive impact. Although tariffs can protect domestic industries and generate revenue, they often lead to trade distortions, higher prices for consumers, and potential retaliation from trading partners. This rank suggests that while tariffs may have some benefits, their overall impact is less favorable compared to the more open and flexible policies ranked higher. Capital Controls, ranked fifth, are seen as the least favorable policy in this context. These controls restrict the flow of capital in and out of a country, potentially stabilizing financial systems but also limiting economic growth and investment. The low ranking reflects their minimal positive impact and potential drawbacks, indicating that such controls should be used cautiously and possibly avoided. In summary, the ranking clearly favors policies that promote openness and flexibility in the economy, with Free Trade Agreements and Currency Pegging being the top choices. Exchange Rate Floating offers moderate benefits, while Trade Tariffs and Capital Controls are less favored due to their restrictive nature and potential negative consequences. This hierarchy guides policymakers in prioritizing strategies that enhance economic stability and growth.

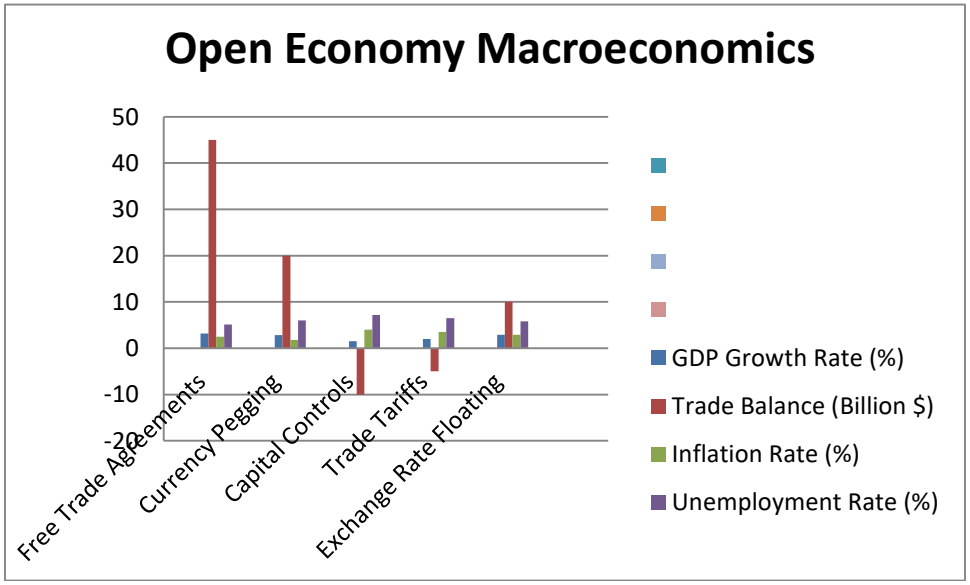

Figure 2. Ranking

Figure 2 Open economy macroeconomics deals with how an trade, investment, and financial flows. It extends traditional macroeconomic models by incorporating international factors. Here are some key concepts: Exchange Rates**:** The value of a country's currency relative to others, affecting trade balances and capital flows. Exchange rate movements can impact inflation, interest rates, and overall economic stability.

4. CONCLUSION

The recent models' intertemporal nature enables the tracking of dynamic effects and, importantly, their robust micro foundations support welfare analysis, which can yield surprising results. This welfare analysis, in turn, facilitates rigorous policy evaluation and lays new groundwork for analyzing international policy interdependence. Additionally, the stochastic versions of these models are well-suited for making meaningful comparisons across different policy regimes. As highlighted in this survey, many welfare outcomes are highly sensitive to the specific assumptions about price stickiness, preference specifications, and financial market structures. Therefore, policy recommendations derived from this literature should be made with caution. The structural model performed better compared to a standard vector auto regression, with the Schwarz criterion favoring it for all three countries. However, its performance in forecasting individual variables was less impressive Although the model has some predictive capability for price levels and output, it falls short compared to a random walk when forecasting exchange rate movements or the current account for any of the three countries. The removal of the regime has expanded the range of choices available to agents, complicating their decision-making processes. With additional factors, such as exchange rates and monetary policies, allowed to vary unpredictably, forecasting their future values becomes risky. Furthermore, a failure in the higher-order system can trigger a failure in the lower-order system, even in economies where trade variables are positively aligned.

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