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The Political Macroeconomics of Trade Protection: A Study for Selected Developing Countries

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Despite the well-documented benefits of free trade, there has been a notable resurgence of protectionist policies, particularly in developing countries with low per capita incomes. Understanding how these protective measures are formulated offers critical insights into the underlying motivations behind trade restrictions. The primary aim of this study is to test the hypothesis that components of the political economy—particularly macroeconomic indicators—play a significant role in shaping and driving trade protection policies. To evaluate this hypothesis, the study employs panel data from 18 lower-middle-income developing countries from 2002 to 2022. A system of simultaneous equations, estimated via Two-Stage Least Squares (2SLS), is used to identify the key determinants of trade protection. The empirical findings highlight inflation as a principal driver of protectionism in low-income contexts, primarily driven by currency depreciation and monetary expansion. In contrast, higher economic growth, greater import penetration, and improved government effectiveness are associated with lower levels of trade protection and increased support for liberalization.

Interestingly, income inequality does not appear to exert a statistically significant influence on protectionist outcomes, suggesting a limited role for consumer advocacy and institutional representation in many developing countries. Overall, the results affirm that trade protection is not an exogenous policy instrument. Rather, it emerges as an endogenous response to the complex interaction of macroeconomic dynamics (including growth, inflation, and unemployment), structural features of the economy, and institutional shortcomings—particularly in the realms of governance and financial development.

Keywords: Trade Protection, Political Macroeconomics, Monetary Variables, Low-income Countries, System of Simultaneous Equations
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1 Introduction

Scholars of international political economy view political economy as the missing element in trade strategy formulation. They emphasize the role of political-economic dynamics and the self-interested motivations of individuals or groups in shaping trade policies—an issue commonly discussed under the concept of *endogenous protection*. Accordingly, the political economy roots of tariff protection have gained considerable attention in empirical research. The endogenous protection hypothesis seeks to identify the influential factors—particularly the role of economic agents—in shaping trade policy, thereby providing insights into how these agents operate and interact.

The importance of such studies becomes evident when considering that, despite the broad consensus among economists on the superior efficiency of free trade over import-restrictive policies (Frey et al., 1984), policymakers continue to face persistent demands from interest groups to raise trade protection. Rodrik (1994) refers to this phenomenon as the political economy of anti-trade bias puzzle, noting that governments tend to adopt more protectionist measures during economic downturns, while rarely dismantle trade barriers or reforming protectionist policies in times of economic recovery.

Furthermore, tariffs and quotas not only serve as protective tools but also function as revenue-generating instruments, influencing budgetary decisions. Economic policies and pressure from interest groups—particularly in economies where the state plays a dominant role—can significantly affect the formation of trade strategies. As the provider of economic policy, the government must find an optimal path between addressing public demands and responding to the interests of specific groups. In this context, protectionism should no longer be viewed merely as an exogenous policy instrument but rather as an endogenous outcome of multiple interacting forces. Thus, attention should be directed to the factors that contribute to the emergence of such strategies.

Given the critical role of the government in developing economies, protectionist strategies have maintained a prominent position in scholarly investigations. A key component of such protection is trade policy, which is often implemented through import barriers and customs tariffs. Existing opinions, evidence, and global trends in protectionism—evoking a form of new mercantilism—highlight the relevance of examining these issues, particularly for developing countries.

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The primary purpose of this study is to empirically assess the endogeneity of trade protection in a group of developing countries with below-average per capita income levels. It specifically evaluates the hypothesis that political economy determinants—most notably macroeconomic indicators—exert a statistically significant influence on the formulation and orientation of trade protection policies. The selected countries apply higher levels of trade protection compared to their higher-income counterparts. The availability of recent and comprehensive data, along with the systemic nature of the current study, has influenced the selection of these countries. The novelty of this study lies in its focus on low-income countries, where trade liberalization remains limited and protectionist policies are particularly relevant, while also drawing on the endogenous trade protection literature to examine a broad set of macroeconomic and political economy determinants. At the same time, it contributes methodologically by modeling trade protection as an endogenous outcome within a system of simultaneous equations, rather than treating it as an isolated policy choice.

This paper is structured in five sections. Following the introduction in Section 1, the theoretical foundations are presented in Section 2. Section 3 reviews the relevant empirical literature. Section 4 discusses model specification, estimation, and data analysis. The conclusion is offered in Section 5. References are provided at the end of the paper.

2 Theoretical Foundations

Theoretical studies indicate that the political macroeconomic environment can play a significant role in **s**haping trade barriers and protectionist policies**.** Notable contributions in this field include works by Rodrik (1995), Hillman (1982), Mayer (1984), Baldwin (1989), Bhagwati (1980, 1988), Magee et al. (1989), and Grossman and Helpman (1994). Rodrik (1995), in particular, introduces a political economy model of trade policy (see Figure 1). His framework captures how individual preferences shape the political choices of policymakers (Box A). Furthermore, it details the mechanisms through which individual preferences are aggregated and expressed—such as through pressure groups, political parties, and other channels of collective action (Box B). The next two components concern the supply side of trade policy. Box C represents policymakers' preferences regarding reelection and partisan interests. Considering the institutional setting and the interaction between individual preferences and trade policy outcomes, Rodrik's model (1995) also incorporates the role of institutional configurations in mediating these dynamics (Box D).

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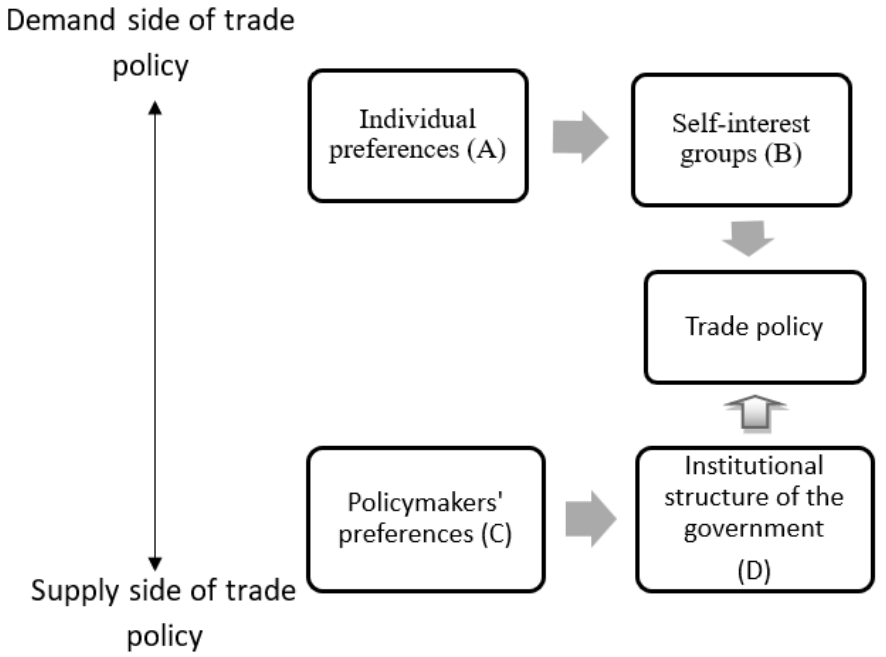

Figure 1. Elements of a trade political economy model
Reference: Based on Rodrik (1995)

Within the framework of Rodrik's (1995) political economy model, multiple approaches explain why governments adopt trade protection. The Compensating Heterogeneity Model argues that inequality increases demand for protection, as governments use tariffs to offset the unequal outcomes of liberalization. Here, the Gini coefficient becomes central, and institutional reforms in redistribution are essential for reducing protectionist pressures. The Trade Protection as Substitute for Social Insurance highlights that in the absence of effective welfare systems, governments protect vulnerable groups through tariffs and subsidies, making protection more common in weak states. The Interest Group Pressure Model, based on Grossman and Helpman (1994), emphasizes the lobbying power of industrial groups—especially import-competing sectors such as automotive—whose influence shapes tariff outcomes. In contrast, the Institutional Constraint Model stresses that the quality of governance—accountability, transparency, and corruption—determines whether trade protection serves legitimate policy goals or

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devolves into rent-seeking. Finally, the Political Legitimacy Trade-off Model suggests that governments may adopt tariffs for electoral or social legitimacy, for example, by raising protection before elections or during crises.

Beyond Rodrik's framework (1995), the broader political economy literature offers additional perspectives. In the Lobby-Based Tariff Formation and Protection for Sale models, tariffs are the outcome of lobbying resources and market characteristics, reflecting the government's attempt to balance social welfare with the interests of organized groups. The Political Support Function Approach formalizes this idea: governments maximize an objective function that combines social welfare with lobby profits, weighted by political importance, showing how policymaking is driven by both voter welfare and organized interests.

Other models focus on voter behavior and political competition. The Median Voter Model (Mayer, 1984) treats tariffs as a policy designed to reflect the preferences of the median voter, as political parties converge toward policies that maximize electoral support. The Campaign Contribution Approach (Magee et al., 1989; Grossman & Helpman, 1994) emphasizes the role of financial transfers in shaping trade outcomes, with lobbies supporting pro-trade or pro-protection parties in line with Stolper–Samuelson predictions. Similarly, the Political Participation Approach stresses that better-organized groups, such as unions or industry associations, gain disproportionate protection due to their ability to mobilize voters, resources, and visibility. Olson's (1965) theory of collective action reinforces why small, concentrated groups often prevail over diffuse public interests.

Additional perspectives highlight structural and international dimensions. The Status Quo Bias Model (Knetsch, 1989) suggests that uncertainty leads governments to maintain existing protectionist regimes rather than risk liberalization. The Foreign Policy Approach views tariffs as bargaining tools in international negotiations and instruments to enhance domestic competitiveness (Krugman, 1986; Bagwell & Staiger, 1999; Blanchard et al., 2025). Similarly, as domestic industries grow stronger, the demand for protection diminishes (Feinberg, 2005), though governments often continue to protect high value-added sectors for fiscal and industrial reasons (Chen & Feng, 2001; Afontsev, 2002).

Macroeconomic conditions also play a decisive role. Labor market factors link high unemployment to stronger protectionist demands, as job insecurity fuels lobbying and political pressure (Cheh, 1974). Exchange rate policies function as implicit protection: depreciation stimulates exports and

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shields industries when tariffs are constrained (Rodrik, 2008; Freund & Pierola, 2012), while misaligned currencies can intensify calls for tariffs (Krugman, 1991). Monetary factors, including inflation and interest rates, also shape protection. Inflation generates pressures for protection to stabilize domestic markets (Corden, 1984; Rodrik, 1995), while high interest rates raise production costs and reduce competitiveness, prompting demands for tariffs (Helpman & Razin, 1987; Calvo & Reinhart, 2002). Moreover, imperfect capital markets (Stiglitz & Greenwald, 2014) and distributional conflicts (Alesina & Rodrik, 1994) show how monetary shocks, inequality, and fiscal needs interact with trade policy, reinforcing the idea that protection often serves redistributive and stabilizing purposes.

Taken together, these approaches demonstrate that trade protection is rarely the outcome of a single factor. Instead, it reflects the interplay between inequality, institutional capacity, lobbying power, voter preferences, macroeconomic shocks, and international bargaining. This multidimensional framework highlights the endogenous nature of trade policy, shaped by both domestic political economy dynamics and external constraints.

3 Literature Review

Empirical investigations into the determinants of trade protection have consistently underscored the critical role of political economy variables in shaping tariff and non-tariff barriers. Early contributions such as Bohara and Kaempfer (1991) and Alesina and Rodrik (1994) demonstrated that protectionist measures often emerge as policy responses to macroeconomic shocks and distributive conflicts, where inflation, unemployment, and inequality intensify demands for protection. Similarly, subsequent works by Krol (1996), Edwards and Lederman (1998), and Bruno and Easterly (1998) confirmed that episodes of economic instability—particularly in high-inflation contexts—are strongly associated with the rise of protectionist measures in both developed and developing economies.

Beyond macroeconomic explanations, several scholars have emphasized the political and institutional dimensions of protectionism. Dollery and Whitten (1998) revealed how domestic interest groups and electoral structures embedded protectionist preferences within Australia's political economy, while Sherman (2002) highlighted the mediating role of international institutions and trade negotiations in transforming tariff-setting into a bargaining process between exporters and import-competing industries. Country-specific evidence further reinforced these insights: Terribile and Thornton (2000) for Italy, Afontsev (2002) for Russia, and

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Rasekhi and Davari (2013) for Iran each confirmed that macroeconomic fluctuations and structural factors shape tariff trajectories through political channels.

Recent contributions have opened new perspectives by linking trade protection to global shocks, firm-level lobbying, and optimal monetary rules in trade wars (Auray et al., 2024; Liu and Mukherjee, 2024; Coen and Vannoni, 2025). These studies enrich the debate by highlighting the interplay between firms' political strategies, lobbying dynamics, and international bargaining environments.

Despite this well-established literature, significant gaps remain. First, research on the political economy of trade protection has been disproportionately concentrated on developed and middle-income economies, while low-income countries—where the developmental implications of trade policy are arguably more pronounced—have received comparatively little attention. Second, although a growing number of studies address the endogenous nature of trade protection, the majority rely on single-equation or partial-equilibrium frameworks. Such approaches neglect the macroeconomic political economy dimension, where trade protection interacts simultaneously with inflation, growth, exchange rates, and government effectiveness. This limitation has left a relatively narrow understanding of the reciprocal links between trade policy and broader macroeconomic dynamics.

Filling this gap requires both a substantive shift in focus toward low-income countries and a methodological approach that captures the multidimensional, endogenous relationship between trade protection and macroeconomic and political economy variables—an area still underexplored in the existing literature.

4 Model Specification and Estimation, and Data Analysis

In order to test the research hypothesis, this section follows a structured strategy whereby the model is specified, subjected to validation, estimated, and the corresponding results are subsequently analyzed.

4.1 Model Specification

In the present study, the Simultaneous Equations Models (SEM) approach is employed to test the research hypothesis. When trade protection is determined endogenously, estimating a single equation results in simultaneity bias (Gujarati & Porter, 2009). To overcome this issue, the SEM framework is applied, enabling the estimation of a system of

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interdependent structural equations (Greene, 2018). Moreover, when endogenous variables are jointly determined, conventional Ordinary Least Squares (OLS) estimators yield inconsistent results (Wooldridge, 2010). Under such conditions, SEM addresses the problem by employing instrumental variables (IV) techniques (Kmenta, 1997). Unlike simple regression models, which capture only unidirectional effects, SEM explicitly models the mutual interdependencies among variables (Greene, 2018). This feature makes the method particularly well-suited for policy analysis, as in real economies policies influence multiple variables simultaneously, and SEM provides a more accurate representation of such policy interventions (Wooldridge, 2010). In addition, SEM offers a high degree of flexibility, allowing for the simultaneous estimation of multiple equations. Consequently, the simultaneous equations method constitutes a powerful tool for studying the political macroeconomy, where variables such as exchange rate, inflation, economic growth, unemployment, and government effectiveness interact dynamically (Gujarati & Porter, 2009; Greene, 2018). To examine the hypothesis concerning the influence of the political macroeconomic environment on the formation of trade protection in selected countries, the first step is to specify a system of equations grounded in theoretical foundations and supported by prior empirical studies. This step yields a structural system of equations that includes both endogenous and exogenous variables, capturing the direct and indirect effects of political macro-economy factors on the formation of trade protection policies. In the following model (relation 1), the endogenous variables include trade protection (TF_{it}), Gross Domestic Product ($LGDP_{it}$), Inflation Rate ($INFR_{it}$), and Unemployment Rate (UR_{it}). Also, the exogenous variables include Gini Coefficient ($GINI_{it}$), Import Penetration ($IMPEN_{it}$), Government Effectiveness (GE_{it}), Economic Freedom (UR_{it}), Industrial Share of GDP ($INDSH_{it}$), Trade Openness (TO_{it}), Broad Money (LBM_{it}), Nominal Exchange Rate (ER_{it}), Agricultural Share of GDP ($AGSH_{it}$), and Financial Freedom (FO_{it}), all of them measured for country i at time t. This structure allows for analyzing how both macroeconomic conditions and political-institutional variables contribute to shaping trade protection policies, either through direct causal channels or via interactions among economic indicators.

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$$\mathrm{TF}_{it} = \alpha_{0\mathrm{i}} + \alpha_{1\mathrm{i}} L\mathrm{GDP}_{\mathrm{it}} + \alpha_{2i} GINI_{it} + \alpha_{3i}\mathrm{IMPEN}_{it} + \alpha_{4i}\mathrm{INFR}_{it} + \alpha_{5i}\mathrm{GE}_{it} + \varepsilon_{it}$$

$$\begin{aligned} \mathrm{LGDP}_{it} &= \beta_{0\mathrm{i}} + \beta_{1\mathrm{i}}\mathrm{EF}_{\mathrm{it}} + \beta_{2i}\mathrm{INDSH}_{it} + \beta_{3i} TO_{it} + \beta_{4i}\mathrm{INFR}_{it} + \zeta_{it} \\ \mathrm{INFR}_{it} &= \delta_{0\mathrm{i}} + \delta_{1\mathrm{i}}\mathrm{LBM}_{\mathrm{it}} + \delta_{2i} ER_{it} + \delta_{3i}\mathrm{TO}_{it} + \delta_{4i}\mathrm{TF}_{it} + \varphi_{it} \\ \mathrm{UR}_{it} &= \gamma_{0\mathrm{i}} + \gamma_{1\mathrm{i}}\mathrm{TF}_{\mathrm{it}} + \gamma_{2i}\mathrm{AGSH}_{it} + \gamma_{3i}\mathrm{ER}_{it} + \gamma_{4i}\mathrm{FO}_{it} + \upsilon_{it} \end{aligned} \quad (1)$$

4.2 Variable Description

In this study, the dependent variable is the trade freedom index, which is one of the subcomponents of the Heritage Foundation's Index of Economic Freedom. It measures trade restrictions, including tariffs, import quotas, and other non-tariff barriers. The index is scored on a scale from 0 to 100, where 100 indicates the highest level of trade freedom (i.e., the lowest degree of protectionism).[1] The import penetration index is calculated as the ratio of imports to domestic demand (defined as gross domestic product minus exports plus imports). The trade openness index is measured by the ratio of total trade to GDP. The financial freedom index is proxied by the ratio of foreign direct investment (FDI) to GDP. Broad money includes all highly liquid financial instruments held by money-holding sectors in the economy and widely accepted as a medium of exchange. The government effectiveness index is taken from the Worldwide Governance Indicators (WGI) and reflects the quality of public services, policy formulation, and implementation. The data for all variables in this study are obtained from reliable statistical sources, primarily the World Bank and the Heritage Foundation. Table (1) provides a summary of the variables used in the analysis.

The sample consists of 18 selected countries classified as lower-middle-income economies according to World Bank criteria.[2] These countries were

[1] Empirical studies, due to easier access to data, have generally used the simple average tariff rate to measure trade protection. This indicator, however, does not take into account non-tariff barriers and other forms of protection. The Trade Freedom sub-index in the Heritage Foundation's Index of Economic Freedom, in addition to incorporating tariff restrictions (measured by weighted average tariff rates) and import quotas, also considers other non-tariff barriers. Hence, it is regarded as a more comprehensive and preferable measure of trade protection compared to alternative indicators. This index ranges from 0 to 100, with higher values reflecting fewer restrictions and lower levels of trade protection. For further details, see: www.heritage.org).

[2] Bangladesh, Benin, Bolivia, Cameroon, Egypt, El Salvador, Honduras, India, Indonesia, Iran, Pakistan, Senegal, Philippines, Vietnam, Burkina Faso, Togo, Uganda, Niger

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chosen based on data availability and the observation that trade protection tends to be more prevalent in this income group compared to others. The panel data set includes annual observations from 2002 to 2023 and is employed for model estimation.

The analysis of Table (1) shows that the selected countries face relatively low GDP and significant income inequality, reflecting economic fragility and limited distributive capacity. With nearly 30 percent of domestic consumption dependent on imports, these economies are highly vulnerable to external shocks, reinforcing demands for trade protection. A high inflation rate, weak government effectiveness, and low economic freedom further characterize an unstable macroeconomic environment, while weak financial freedom and the modest shares of industry and agriculture highlight structural limitations in global competitiveness. Coupled with notable unemployment and only moderate trade openness, these conditions illustrate the tension between global integration and limited domestic capacity. The relatively low and dispersed trade freedom index indicates that trade policies in these countries primarily emerge as responses to structural macroeconomic pressures, rather than as stand-alone policy choices.

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Table 1
Variable Description of the model of trade protection formation

Variable	Description	Unit	Min	Max	Mean	Standard Deviation	Coefficient of Variation	Source
GDP	Gross Domestic Product	Dollar	3.66E+09	2.97E+12	2.44E+11	4.59E+11	1.881	WB
GINI	Gini Index	Scale-free	0.280	0.590	0.393	0.064	0.164	WB
IMPEN	Import penetration	Share	0.081	0.973	0.297	0.132	0.443	WB
INFR	Inflation rate	Percent	-3.233	43.488	5.699	6.157	1.080	WB
GE	Government effectiveness index	Scale-free	-1.525	0.436	-0.510	0.352	-0.690	WB
EF	Economic freedom index	Scale-free	36.400	73.000	55.377	5.784	0.104	Heritage Foundation
IINDSH	Industry share	Share	0.147	0.461	0.273	0.067	0.247	WB
TO	Trade Openness index	Scale-free	0.158	1.918	0.566	0.270	0.477	WB
BM	Broad money (M3 to GDP)	Percent	7.051	179.650	48.012	27.591	0.575	WB
TF	Trade freedom index	Scale-free	21.800	86.500	66.576	10.883	0.163	Heritage Foundation
AGSH	Agriculture share	Share	0.050	0.432	0.177	0.076	0.432	WB
FO	Financial freedom index	Scale-free	-0.031	0.134	0.024	0.023	0.955	WB
UR	Unemployment rate	Percent	0.316	13.679	4.462	2.955	0.662	WB
OER	Exchange rate	LCU against Dollar	1	42000	3249.641	7438.383	2.289	WB

Reference: Research findings

4.3 Estimation Strategy

The first step in estimating the selected model is to test the stationarity of the panel data variables. The panel unit root tests indicate that all variables are stationary at level, except for GDP, CPI (Consumer Price Index), and IMSH (Import Share), which are non-stationary at level. To address this, the study uses LGDP (log of GDP), INFR (Inflation Rate), and IMPEN (Import Penetration) instead, which are stationary at level.

Next, it is essential to examine the identification conditions of the simultaneous equations. Each equation must be properly identified to be estimable. Two conditions are required: the order condition (necessary) and the rank condition (necessary and sufficient). According to the order condition, the following inequality must hold for each equation:

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$$k - m \geq g - 1 \quad (2)$$

Where, k denotes the total number of exogenous variables in the system, m represents the number of exogenous variables included in a given equation, and g indicates the total number of endogenous variables in the system. If this condition is not met, the equation is underidentified. The results of the identification test show that all equations are overidentified. Therefore, this study applies the Two-Stage Least Squares (2SLS) method, which is more appropriate for over identified systems and is preferred to OLS in such cases.

According to the rank condition, the matrix of instrument coefficients must have full rank. This can be verified by estimating the system of equations and forming the determinant of the matrix of excluded exogenous variables for each equation. The condition is satisfied if this matrix has at least rank $g - 1$, or if the determinant is non-zero. For an asymmetric matrix, at least one square sub-matrix (minor) of size $r \times$ r, where $r = g - 1$, must have a non-zero determinant. The results confirm that the rank condition is satisfied for the selected system of equations.

Before estimating the model, the F-Leamer (Chow) test is conducted to determine whether the data structure is pooled or panel. The test results (reported in Table 1) confirm that the panel data structure is appropriate. Additionally, to choose between fixed effect and random effect models, the Hausman test is applied to the selected system of equations. The results, shown in Table 1, indicate that the fixed effects model is appropriate for estimation.

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Table 2
Estimation of the system of simultaneous equations for the formation of trade protections in selected countries during the period 2002-2022 using the 2SLS method

Variable	**Coefficient**	**P-Value**
	TF Equation	
c(1)	8.656699	0.6598
LGDP	2.715056*	0.0569
GINI	84.23747***	0.0000
IMPEN	11.12101**	0.016
INFR	-0.50028***	0.0014
GE	8.084123***	0.0002
Equation Identification	Over-identified but rank condition met	
Leamer test (P-value)	291.119161(0.000)	
Huasman test (P-Value)	42.148261(0.000)	
	LGDP Equation	
c(7)	8.051087***	0.0000
EF	-0.00479	0.5547
IINDSH	13.58589***	0.0000
TO	-0.93214***	0.0000
INFR	-0.02365*	0.10
Equation Identification	Over-identified but rank condition met	
Leamer test (P-value)	1215.448099 (0.000)	
Huasman test (P-Value)	20.582059 (0.0004)	
	INFR Equation	
C(12)	0.351185	0.9132
LBM	8.535318***	0.0000
OER	0.000429***	0.0000
TO	-8.53565***	0.0000
TF	-0.07304**	0.0309
Equation Identification	Over-identified but rank condition met	
Leamer test (P-value)	166.302245 (0.000)	
Huasman test (P-Value)	18.103990 (0.001)	
	UR	
C(17)	15.13065***	0.0000
TF	-9.91E-02***	0.0000
AGSH	-22.7846***	0.0000
OER	3.15E-05*	0.0689
FO	-6.03409	0.3009
Equation Identification	Over-identified but rank condition met	
Leamer test (P-value)	564.561755 (0.000)	
Huasman test (P-Value)	9.571269 (0.04)	

Reference: Research findings calculations with Eviews 10
The symbols *, **, and *** indicate a significance level of 10, 5, and 1 percent, respectively.

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4.4 Discussion

Based on Table (2) and with an emphasis on the research hypothesis—that trade protection is shaped within a political macroeconomic framework—the following key results emerge:

4.4.1 Trade Protection Equation

The findings of this study reveal that in lower-middle-income developing countries, trade protection is significantly shaped by political macroeconomic variables. Rising GDP and overall economic strength tend to reduce the demand for tariffs and other restrictions. This aligns with theoretical expectations and empirical evidence showing a negative relationship between income growth and protectionism. Larger economies benefit from more diversified production structures, better technology, and economies of scale, making them more competitive globally and less dependent on trade barriers. Economic growth is also associated with improved governance, transparency, and policy environments that discourage protectionist measures. Empirical studies such as Dutt & Mitra (2002), Gawande & Krishna (2003), and Milner & Kubota (2005) confirm that higher GDP levels are linked to lower tariffs.

The study also uncovers a negative association between income inequality and protectionism. While traditional theories suggest inequality fosters protectionist pressures, evidence in lower-middle-income countries points in the opposite direction. In highly unequal societies, poor and middle-income groups—who typically advocate for tariffs—lack the organizational strength to influence policy. Instead, powerful elites tied to international trade often resist protection to safeguard their own interests. In non-democratic contexts, trade policy is largely elite-driven, favoring openness over restriction. This interpretation is supported by Dutt & Mitra (2002) and Milner & Kubota (2005), who show that inequality may coincide with lower tariff levels in certain developing and transition economies.

Inflation, by contrast, exerts a positive effect on trade protection. Rising prices weaken domestic competitiveness, prompting firms to seek tariff protection against imports. Governments may also rely on tariffs as a less visible source of revenue compared to direct taxation. Inflation reduces profit margins, strengthening lobbying incentives for protectionist measures. This mechanism resonates with the models of Grossman and Helpman (1994) and Hillman (1982), as well as empirical studies such as Rodrik (1998), Baccini & Urpelainen (2015), and Gawande et al., (2015), who find that macroeconomic volatility and chronic inflation encourage governments to adopt protectionist policies.

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A further key result is the negative relationship between import penetration and trade protection. In import-dependent economies, producers often rely heavily on imported intermediate goods, making tariffs costly and counterproductive. For instance, assembly-based industries, including automotive manufacturing, may oppose tariffs that would raise input costs. High import penetration also increases the risk of retaliation from trade partners, discouraging governments from imposing barriers. This is consistent with findings by Trefler (1993) and Gawande & Krishna (2003), who show that greater import dependence reduces protectionist demand.

Finally, government effectiveness is found to reduce trade protection. Effective governments do not rely on trade barriers but instead strengthen competitiveness through infrastructure investment, education, research and development (R&D), and institutional reforms. By contrast, weak states are more vulnerable to rent-seeking pressures from special interest groups. Greater accountability, transparency, and policy coherence further limit protectionist tendencies. Empirical evidence from Gawande and Krishna (2003) and Kee et al ., (2009) confirms that effective governments impose lower tariffs and resist lobbying pressures for protection.

Overall, these results suggest that in lower-middle-income countries, trade protection is not an exogenous policy choice but rather an endogenous response to economic conditions, inequality structures, inflationary pressures, trade dependence, and institutional capacity.

4.4.2 GDP Equation (LGDP)

The study finds that logarithmic GDP (LGDP) is positively and significantly influenced by the industrial share of value added, confirming the well-established view that industrialization serves as the engine of growth in developing economies (Rodrik, 2008). Manufacturing industries benefit from increasing returns to scale, higher productivity, and greater export potential, and thus a high industrial share signals structural transformation. This result is consistent with prior empirical findings: Rodrik (2008) shows that industry-led growth fosters faster and more sustainable development, while Szirmai (2005) highlights that industrialization generates stronger growth effects than agriculture or services, particularly in the early stages of development.

By contrast, inflation exerts a significant negative effect on LGDP. Elevated inflation creates macroeconomic uncertainty, reduces real consumption, discourages investment, and erodes purchasing power, especially in economies with weak financial systems. These outcomes are consistent with Fischer (1993), who demonstrates a broad negative

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relationship between inflation and growth, and Barro (1995), who shows that high inflation suppresses growth most severely in developing economies.

Finally, the study finds that trade openness negatively and significantly affects LGDP, a result especially relevant for countries at early development stages. Premature liberalization can expose infant industries to excessive competition, foster import dependency, and weaken domestic production. Without adequate infrastructure, technological readiness, or institutional stability, openness may harm rather than support growth. Rodrik (2001) argues that liberalization without complementary institutional reforms deepens vulnerabilities, while Yilmazkuday (2011) provides evidence that in developing economies, trade openness often increases consumption-driven imports rather than productive investment, ultimately depressing GDP growth.

4.4.3 Inflation Equation

The inflation equation indicates that broad money (LBM) and the nominal exchange rate (OER) exert positive and statistically significant effects on inflation, while trade openness (TO) and trade freedom (TF) exert negative and significant effects. The positive effect of money supply growth is consistent with the Quantity Theory of Money: without commensurate output growth, liquidity expansion raises the general price level. This mechanism is particularly pronounced in economies with weak financial systems or limited central bank independence, where money growth translates more directly into inflationary pressures. Empirical evidence supports this relationship, with Fischer (1993) and Barro (1995) demonstrating a strong link between money growth and inflation in developing economies.

Similarly, the exchange rate's positive effect on inflation reflects both cost-push and expectations channels. Depreciation increases import costs, directly raising consumer prices, while anticipated future depreciation fuels inflation expectations and self-fulfilling price spirals. Empirical studies confirm this dynamic: Calvo and Reinhart (2002) emphasize the exchange rate pass-through to domestic prices, and Kandil and Morsy (2011) identify depreciation as a central driver of inflationary pressures in developing countries.

By contrast, trade openness and trade freedom help reduce inflation. Greater international competition and access to cheaper imports exert downward pressure on domestic prices. More open economies also tend to maintain stronger policy discipline, stable institutions, and competitive market structures, all of which restrain inflationary dynamics. This inverse

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relationship is well documented: Romer (1993) shows that open economies exhibit lower inflation, Bleaney (1999) finds a negative correlation between import shares and inflation, and Dabla-Norris et al. (2007) demonstrate that " openness, when combined with institutional quality, dampens inflationary tendencies. Likewise, Arora and Kumar (1994) argue that liberalization enhances the effectiveness of stabilization programs, particularly in economies more integrated into global trade.

4.4.4 Unemployment Equation

The unemployment equation shows that trade freedom (TF) and the agricultural share in GDP (AGSH) reduce unemployment, while the exchange rate (ER) increases it; financial freedom (FO) has no significant effect, reflecting the structural weaknesses of financial systems in many developing countries. The negative impact of trade freedom underscores the labor market benefits of tariff reductions and import liberalization, which expand international market access and stimulate export-led employment. Empirical evidence supports this mechanism: Dutt et al., (2009) find that liberalization lowers long-term structural unemployment, while Felbermayr et al. (2011) show that greater openness is generally associated with lower joblessness. Similarly, the agricultural sector's share in GDP is negatively related to unemployment because agriculture acts as a labor-intensive safety net, absorbing low-skilled workers and cushioning economies during shocks. Todaro and Smith (2015) note that larger agricultural sectors reduce formal unemployment, even if much of this work is informal, and World Health Organization (WHO) (2020) emphasizes agriculture's vital role in job creation across low-income countries.

By contrast, the exchange rate exerts upward pressure on unemployment. Exchange rate depreciation raises the cost of imported inputs and capital goods, elevates inflation, and erodes real incomes, thereby weakening demand and employment in import-dependent economies with limited export capacity. Supporting evidence includes Bahmani-Oskooee and Kutan (2009), who find that exchange rate shocks increase unemployment in developing countries, and Kiliç and Bayar (2014), who report similar effects for Turkey, where lira depreciation reduced industrial output and jobs. Finally, the insignificant effect of financial freedom reflects underdeveloped financial intermediation: although liberalization indicators may suggest openness, credit access often remains limited. Levine (2005) argues that financial efficiency, rather than formal openness, drives employment outcomes, while Beck and Demirguc-Kunt (2006) show that many African

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countries score highly on financial freedom yet face weak sectoral performance.

In summary, these findings highlight a broader conclusion: trade protection is not merely an exogenous policy choice, but an endogenous response shaped by the complex interplay of macroeconomic variables (growth, inflation, and unemployment), sectoral structures, and institutional limitations, such as weak financial systems and low governance quality. This view aligns with endogenous political economy models advanced by scholars like Rodrik (1995), Grossman & Helpman (1994), and Corden (1984, 1993), which emphasize that protectionist policies arise not from top-down directives, but from strategic interactions among economic structures, institutional contexts, and the pressures exerted by interest groups.

5 Conclusion

This study examines the determinants of trade protection in lower-middle-income countries, which have historically exhibited the highest levels of protectionist policies relative to other income groups. To investigate the mechanisms behind this phenomenon, a Simultaneous Equations Model (SEM) estimated through Two-Stage Least Squares (2SLS) was employed, covering the period from 2002 to 2022, with a particular focus on how the political macroeconomic environment shapes the adoption of protectionist measures.

The findings indicate that trade protection in these economies is not an isolated policy tool but rather the outcome of interdependent economic, sectoral, and institutional dynamics. For example, growth in the industrial share of GDP promotes economic development while simultaneously strengthening the political influence of industrial actors. As these sectors expand, their ability to influence policymaking often translates into stronger demands for protective measures, consistent with the interest-group model of endogenous protection (Grossman & Helpman, 1994). Similarly, GDP growth in the early stages of development may unintentionally reinforce protectionist tendencies as governments seek to sustain momentum through tariffs and trade barriers.

Macroeconomic instability also plays a central role. Inflation—often driven by monetary expansion or exchange rate volatility—undermines competitiveness by destabilizing prices. In response, governments frequently resort to trade restrictions to mitigate import-driven inflation and stabilize domestic markets, in line with Rodrik's (1995) framework linking volatility to greater intervention. Unemployment exerts comparable pressure: high

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joblessness incentivizes governments to adopt protectionist measures, while trade liberalization can reduce unemployment and weaken the political case for protection. Conversely, under institutional weakness, currency depreciation may worsen unemployment, reinforcing demands for restrictions.

Sectoral structures further shape protectionism. Agriculture in many lower-middle-income countries absorbs a large share of low-skilled and informal labor, masking formal unemployment levels. Nevertheless, the sector remains politically sensitive, sustaining demands for tariffs on imported food due to its socioeconomic importance for rural and low-income populations. Financial institutions also matter: weak and underdeveloped financial systems reduce the effectiveness of indicators such as financial freedom, as limited institutional capacity constrains productive investment and credit allocation, weakening their influence on broader economic and trade policy.

Overall, the evidence suggests that trade protection in these countries should not be viewed as an exogenous or discretionary policy choice but as an endogenous response to macroeconomic conditions—particularly growth, inflation, and unemployment—combined with sectoral dynamics and institutional weaknesses. This perspective aligns with political economy models of endogenous protection (Rodrik, 1995; Grossman & Helpman, 1994; Corden, 1984, 1993), which highlight how policies emerge from strategic interactions among economic actors, institutions, and interest groups, especially in structurally fragile environments with limited policy space.

A key limitation of this study is the availability of comparable data across the selected countries. While the most relevant political and macroeconomic indicators were employed within the framework of the existing literature, the influence of variables such as lobbying, democratic institutions, and political systems warrants further investigation and offers promising avenues for future research.

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