Pakistan Journal of Economic Studies

ISSN (E) 2708-1486 (P) 2708-1478
Volume 7: Issue 1 March 2024
Journal homepage: https://journals.iub.edu.pk/index.php/pjes/index

Regional Institutional Barriers and Trade Outcomes: A New Empirical Evidence from Developing Economies of Four Continents

[a] Saima Sarwar

[a] Associate Professor, Government College University, Lahore, Pakistan
Email: saimasarwar@gcu.edu.pk

ARTICLE DETAILS

History:
Accepted: 15 March 2024
Available Online: 31 March 2024

Keywords:
Economic Geography; Institutions; Trade Policy; Governance; Growth;SGMM

JEL Codes:
F15, L51, C23, D73

ABSTRACT

Objective: This study explores pathway of traditional nexus i.e. Trade Policy and Growth by using new road to development in which economic geography seems to be the driving force in institutional building and ultimately controlling the 'fortune of nations' i.e. economic growth.

Research Gap: The current study exhibits the Trade-Growth nexus after incorporating the regional disparities with respect to institutional setups because mostly developing nations in Asia and Africa are suffering from many institutional barriers and their institutional embeddedness has led to the rent seeking in the system which slows down the process of reforms.

Methodology: For analyzing the research question, instrumental variable technique has been used i.e., System Generalized methods of moments (SGMM) presenting 28 models in total for 83 countries from Four continents of the World differing in their institutional capacities.

The Main Findings: The results illustrated in the case of each trade policy measure, models which are incorporating the role of economic institutions, political institutions and governance are adding more to the magnitude of Policy-Growth co-efficient. However, results are sensitive to the geographical location of the nations.

Implications of the findings: The findings of the study emphasize upon that policies should be tailored according to region in which nations are situated because each nation has its own 'institutional density' due to its history traits which ultimately help policy choices to result in better or worse outcomes.

Originality: The work is original in its content because region wise institutional disparities have not been presented in literature endogenously.

Recommended Citation:

Sarwar, S. (2024). Regional institutional barriers and trade outcomes: A new empirical evidence from developing economies of four continents. *Pakistan Journal of Economic Studies*, *7*(1), 16-30. Available at: https://journals.iub.edu.pk/index.php/pjes/article/view/2292

Corresponding Author's email address: saimasarwa@gcu.edu.pk

1. Introduction

Institutions are considered as the backbone of society. These can be either growth-triggering or growth-restricting in nature and may vary from regime wise and even region wise. Various political economists have regarded these institutions as the most important cause for 'reversal of fortune' in history in terms of improving income levels (Acemoglu et al. 2001). However, it has been observed that political regime differences shape institutional structures in any economic system and then such institutional diversity bring differentiated policy choices for enhancing the welfare of the society. Due to this reason, it happens that the

same policy brings different results for both types of polities i.e., democracy and autocracy because of different nature of institutional matrix in both systems. This shows that any political system can affect the economic performance only due to their institutional diversification. Likewise, these institutional variations also become the root cause for the performance difference of a complete region or in other words it can be postulated in this way that economic geography of regions can shape the institutions and ultimately affect the policy-outcome nexus. Now a days it should not be the only concern of policy analysts to focus whether a nation is developing or developed, rather focus should be on this fact that from which region that nation belongs to. Because regions have their own histories and those ones having sound institutional bases like proper rule of law, better governance conditions and improved rights for ownership, economic conditions will be healthier as compared to those nations where all these characteristics are absent. Therefore, at present, nations are trying to augment 'institutional thickness' in the form of social, political and territorial capital along with knowledge capital because it has been observed that this can pave more avenues of success and development as compared to those nations lacking, he former characteristics (Cooke and Morgan, 1998). Sometimes the ideas of 'lock-in' and 'path dependency' given by North (1990) also acted as one of the striking reasons of poor performance of the different world regions like African economies. Therefore, now after more than a century's journey since Adam Smith highlighted the role of political economic factors in determining the wealth of nations, today economists have started realizing the mystery of this 'Black Box' in the growth analysis due to institutional discrepancies. It means that something remained missing in measuring development trajectories for nations. In recent times North (1990) re-opened this ethos presented a century ago and acquainted the world with the significance of this notion i.e. Institutions really matter. This assertion gave vent to the series of thoughts from policy makers to researchers in this turf and today it can be seen that the main reason of the collapse of ten points of policy prescription presented in 'Washington Consensus' was the ignorance of institutional capacities of developing nations in the implementation of some policy decision. Rodrik (2000) made contribution in this regard for highlighting the importance of this missing linking between Policy- Growth analysis in the real context. The dogma of 'one size fits all' seems impractical while incorporating the role of this non-economic factor i.e. institutions in the debate of growth analysis. The novelty of the study is this that it is not only going to link the institutional frameworks of developing nations with their policy decisions but also trying to incorporate the locational differences in estimation process which will help in knowing how both the features of regional diversification i.e. landlockedness and historical backgrounds can affect the trade performance of nations. It means simply that designing a 'Policy Equation' cannot cater the researchers' quest regarding giving the better solution for developing nations rather the focus is widening up more beyond time and nation specific analysis towards regional parameters of development. For example as it is well seen that Europe and America are far ahead in their institutional structures as compared to Africa and Asia due to their strong colonial history therefore this study tries to observe that whether the performance of the developing nations from the region with better institutional landscapes differs from the developing countries from the region of poor institutional infrastructure. On the other hand as per the agenda of WTO agenda, all nations are supposed to reduce their taxes if these want to be into a well-integrated market. Similarly developing countries are also striving in this regard however the pace of policy reforms is quite slow.

Statistics from the World Bank (2018), it has been observed that trade barriers are coming down all over the world however the speed of this decline is more in case of Europe and America. For the other two continents which comprise of mostly developing nations suffering from many economic and institutional barriers, this reduction is quite slow, and the initial level of these taxes is also very high i.e. lying between 15% - 20%. There can be many reasons for this but apparently which seems to be very responsible for even other explanations is the institution lapses in these nations. Their institutional embeddedness has led to the rent seeking in the system which stops or slows down the process of reforms in the environment. The study includes 22 nations from Asia, 32 from Africa, 19 from America and 10 from Europe. These numbers are firstly showing that the continent where developing nations are more, the process of trade reforms is slow there. The continents with large number of developed nations are having overall better political and economic institutional landscape. Moreover governance parameters of these nations are also giving the

surety of safe and healthy environment for better policy making. Secondly facts show that Europe and America are more civilized economies and strong political and economic institutions as compared to Asia and Africa and due to this reason policy reform process gets slow leading to slow growth of economies for the latter in the long run. Keeping in view these regional institutional differences, this study intends to evaluate the effect of trade policy reforms on the performance of economies by keeping in view the regional differences of economic geographies. Such analysis will help to cover the political economy aspect of trade policies of developing nations explicitly. Moreover for this purpose the panel of sample nations is also classified region wise. This will cater the intuition behind this research work in better way because all the regions vary in their institutional setups.

2. Literature Review

Earlier many authors have tried to prove that trade liberalization has positive effect on growth of the economies (Dollar 1992; Lee 1993; Sachs & Warner 1995; Harrison 1996; Edwards 1998; Dollar & Kraay 2003; Lee et al. 2004; Wacziarg & Welch 2008; Kwon; 2013). However not much empirical evidences are available for finding the impact of regional economic geography on performance of economies due their institutional differences.

Very small number of authors have worked empirically on the importance of this connectivity between development of institutions via economic geographical differences and economic development. Among them few contributions are given below by various authors.

Gallup et al. (1998) addressed the relationship between geography and economic growth not only controlling for policies and institutions but also incorporating the effect of geography on policy choices and institutions. The findings showed that location matters in economic growth of nations through trade costs and concluded that geography is one of the most important element in the choice of economic policies.

Rodríguez-Pose (2013) proposed theoretically that development strategies should be tailored keeping in view such regional differences. Only then it will be possible to have inclusive outcome from a policy decision.

Bloom et al. (2013) also explained in their theoretical study about African economy that one of the most important reason of the poverty of this region is its geographical location. Due to its climate, soils, landscape, and disease ecology this region suffers from constantly low productivity low trade volume and acute disease burden.

Talmaciu (2015) have also emphasized the importance of role of institutions in the development of Central and Eastern European region and concluded that those nations which enter into democratic regime from an autocratic system need to bring reform into their institutional framework to catch up with other nations in the process of economic development. Moreover these days stress is being put on this factor that those economies will survive at the end which have more resilience power and this comes from the institutional strength.

Ketterer & Rodríguez-Pose (2016) revisited the geography and institutions debate for observing that which factor contributes more to the economic growth of European region. The results showed that local institutional conditions and regional government quality are important drivers of economic growth of European nations. Using Instrumental variable technique the findings proved the causality from institutions to economic development in region wise analysis and concluded that regional institutions are imperative component of European growth and development. However 'first nature geography' exerts a week impact on economic growth as compared to institutions.

Reshi & Sudha (2023) have also conducted research exploring the relationship between trade and economic growth in India and concluded that both policies intertwined and complementary to the economic

development of country overall. However the role of institutions is not taken into account that how much they are contributing to this association.

Recently Srdelić & Dávila-Fernández (2024) related Croatia rising economic growth to the dynamics of international trade. Applying state-space Model, the authors calculated trade multiplier for the trade between Croatia and EU and regarded this as the one of the more authentic predictor of long run growth rate of a country. The findings concluded that investment in R & D and human capital are the most important explanatory factors affecting the trade-growth nexus.

All these few but very much piercing studies have shed light on this important aspect that institutions not only play domestically their role rather these have regional effects as well. Here regional effects means that how the working of institutions in one nation can have impact both on the local development process and interfere in the political, economic and social spheres of life. Now after reviewing past literature, this study originates its own objective and hypothesis which is to be evaluated using empirical methodology.

2.1. Objective& Hypothesis

This study aims to examine Trade -Growth relationship among developing countries after considering the mediating role of institutional differences. Following is the hypothesis of the study.

H_1: Institutional diversities matter for Trade-Growth relationship for developing countries in various regions.

3. Methodology

As in this study trade policy impact on economic growth has been intended to find for developing nations having different historical institutional backgrounds region wise. Therefore in policy equation, policy variable has been taken as endogenous variable and the endogeneity has been captured through various institutional factors. For analyzing this question, instrumental variable technique has been used i.e. System Generalized methods of moments (SGMM). This technique was originally presented by Holtz-Eakin et al. (1988). But with the passage of time, it got recognition by the name of Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998). Below is given the model specification for this study.

The following models have been used in the study to analyze the relationship between the institutional structures based on the regional divide of developing nations and policy outcomes.

$$y_{i,t} = \alpha + \beta y_{i,t-1} + \gamma\, \text{ASIA (TP)}_{i,t} + \emptyset X_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$y_{i,t} = \alpha + \beta y_{i,t-1} + \gamma\, \text{AFRICA (TP)}_{i,t} + \emptyset X_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$y_{i,t} = \alpha + \beta y_{i,t-1} + \gamma\, \text{AMERICA (TP)}_{i,t} + \emptyset X_{i,t} + \varepsilon_{i,t} \quad (3)$$

$$y_{i,t} = \alpha + \beta y_{i,t-1} + \gamma\, \text{EUROPE (TP)}_{i,t} + \emptyset X_{i,t} + \varepsilon_{i,t} \quad (4)$$

Where $y_{i,t}$= GDP growth rate of economies $TP_{i,t}$ = measures of trade policy. $\varepsilon_{i,t}$= overall error term with the assumption that with $E(\varepsilon_{i,t}) = 0$ for all i and t.

3.1. Validity of the Model

The two models of pooled OLS and fixed effect model explain the lower and upper bounds in the lagged dependent variable in effects, which can be helpful in deciding the validity of GMM estimation.

$$\text{LDV FE} < \text{LDV GMM} < \text{LDV OLS}$$

This coefficient of LDV also indicates the convergence of model but the condition is this that its value should be less than unity. All these points are required for the validation of GMM estimator.

3.2. Validity of Instruments

Both, the validity of instruments and additional instruments is required for concluding that model is best fit. For entire instruments Hansen J-test and for additional instruments, Difference-in-Sargan/Hansen test has been proposed also recognized as C-test (Baum, 2003). Optimal number of instruments are obtained by using second lag (2 2).

3.3. Joint significance of model

For this purpose, F-Test has been proposed in literature stating the null hypothesis that all explanatory variables are jointly equal to zero. All these requirements are being fulfilled in the estimation process of the model of this study.

4. Variables and Data Sources

Table 1: Variable Description & Source

Variables	Source
Dependent Variable	
GDP Growth (measured at market prices based on constant local currency)	World Bank. (2018)
Trade Policy Measures	
MFN Tariff rate	World Bank. (2018)
Non-Tariff Barriers	Economic Freedom Dataset. (2018)
Regulatory Trade Barriers	Economic Freedom of the World. (2018)
Black Market Premiums	Economic Freedom of the World. (2018)
Freedom to Trade	Economic Freedom Dataset. (2018)
Trade (% of GDP)	World Bank. (2018)
KOF Restrictions	World Economic Forum's Global Competitiveness Report (various issues). (2018)
Intervening Variables	
Political constraints	Henisz, W. J. (2002).
Durability of Political System	Polity IV (2018)
Bureaucracy	Polity IV (2018)
Military	DPI. (2018)
Concentration of political powers in political parties	DPI. (2018)
Political Openness, Cultural Openness	Dreher, Axel, Noel Gaston and Pim Martens (2008)
Political Stability	World Bank. (2018)
Rule of Law	World Bank. (2018)
Legal System & Property Rights	Economic Freedom Dataset. (2018)
Financial Institutions being measured by Domestic credit provided by banking sector	World Bank (2018)
WTO being measured by a dummy variable for the membership of WTO. "0" for non- member nations, "1" for member-nations	World Trade Organization
Control Variables	
Health being proxied with life expectancy at birth	World Bank. (2018)
Size of Country being measured by population	World Bank. (2018)
Infrastructure being measured by proxied with variable number of Telephone lines	World Bank. (2018)
Employment being measured by the Employment to population ratio of age 15 +	World Bank. (2018)
Inflation being measured by Consumer price index	World Bank. (2018)

Source: Authors' Compilation

4. Result Estimation

After discussing methodology and variables in detail, now this section explains the estimated results obtained through employing the estimation technique. To see the regional effects of institutional structure on policy outcomes, twenty two developing nations from Asia, thirty two from Africa, twenty from America, and ten from Europe have been included in the sample. The number of nations selected from each region is based on the availability of data for each dimension of variables. As the study has used seven various trade policy measures, therefore each of these has been treated individually for each region to see the role of institutional parameters on policy equation. However firstly the stationarity of the data is being checked and panel unit root tests show that the data is stationary at level. Results are given in the Appendix. Secondly the process of estimation is started by applying OLS and then its postestimations which helped to move towards more refined models which are away from econometric diseases. For example the poolability test i.e. Wald Test, showed that it is not suitable to pool the dataset. Similarly results also showed the presence of heteroskedasticity in the model due to heterogeneity in panel. To overcome this problem, panel fixed effect technique is being applied. But still serial correlation and heteroskedasticity is found in diagnostics. To handle these two problems, System Generalized Methods of Moments (SGMM) technique has been considered because it is believed that it is an efficient estimator when data suffers from heteroskedasticity problem (Baum; 2003). The estimation results of our model fulfill this prior condition for applying this technique. Moreover for each proxy of trade policy, four various Models have been run and all tests for the validity of instruments and parameters are proving that the choice of model is correct. Now Table 1 given below reports the results of the Model incorporating all desirable intervening variables which can affect the decisions regarding trade policy making in any economy using Tariff rate as policy instrument.

Table 2: Impact of Regional Institutional Disparities on Policy Outcome Using Tariff Trade Indicator

Variables	OLS	FE	SGMM-2	SGMM-2	SGMM-2	SGMM-2
			Pol. Institutions	Integration	Eco. Institutions	Governance
Constant	1.0063	-33.058	5.3002***	15.209***	2.0681	5.5451***
	(0.541)	(0.133)	(0.000)	(0.000)	(0.171)	(0.000)
GDP_{t-1}	.4199***	.2824***	.3094***	.3331***	.3293***	.3504***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Asia*Tariff	-.0081	-.0126	.0031	.0003	.0159	.0545***
	(0.691)	(0.770)	(0.570)	(0.958)	(0.020)	(0.000)
Africa*Tariff	-.0057	.0071	-.0581***	-.1455***	-.0702***	-.0359***
	(0.737)	(0.853)	(0.000)	(0.000)	(0.000)	(0.001)
America*Tariff	-.0762	-.0426	-.2723***	-.1860***	-.2981***	-.1573***
	(0.011)	(0.668)	(0.000)	(0.000)	(0.000)	(0.000)
Europe*Tariff	.1777***	.1534	-.5509***	-.1616	.7090***	.4066***
	(0.003)	(0.311)	(0.000)	(0.025)	(0.000)	(0.000)
Controls	yes	yes	yes	yes	yes	yes
Hausman test for OLS & GMM						
Chi 2			389.81	506.65	575.86	312.43
Prob>chi2			(0.000)	(0.000)	(0.000)	(0.000)
observations	1494	1494	1494	1494	1494	1494
Countries	83	83	83	83	83	83
Instruments			77	74	71	75
F-test			13746.53	8544.45	4660.58	14028.37
AR(1)			(0.000)	(0.000)	(0.000)	(0.000)
AR(2)			0.327	0.507	0.430	0.433
J-Test			0.287	0.164	0.194	0.181
C-Test						
GMM			0.992	0.977	0.993	0.961
IV			0.990	0.680	0.885	0.707

Source: Authors' Estimations

Note: ***, **, * shows level of significance at 1%, 5% and 10% respectively.

Following the results of Table 1, it can be seen that only for Asian developing nations, the nature of the relationship has changed showing that positive relationship between trade policy and growth rate which

depicts actually that poor institutional performance is retarding the effect of economic policy on economic performance. For other regions the sign of policy variable is the same as expected. In case of Africa, integration including political and cultural amalgamation and economic institutions are playing prominent role in affecting trade policies. For America, models endogenized with economic and political institutions are showing large effect on their economic performance. But it is surprising that for Europe, coefficients for all models have increased attractively and especially in case of political and economic institutional variables. This shows that policies show better outcomes only when 'stage of play' (Rodrick 2004) is supportive to play with these policies. Conditions for the validity of instruments are also fulfilled in the model. C-test is showing that all subsets of instruments are exogenous. Steady state condition in the model is giving the validity of SGMM.

Table 3: Impact of Regional Institutional Disparities on Policy Outcome Using Non-Tariff Trade Indicator

Variables	OLS	FE	SGMM-2	SGMM-2	SGMM-2	SGMM-2
			Pol. Institutions	Integration	Eco. Institutions	Governance
Constant	1.0698	-25.974	21.086***	19.479	16.466	11.283
	(0.514)	(0.240)	(0.000)	(0.000)	(0.000)	(0.000)
GDP_{t-1}	.4252***	.2820***	.3453***	.3238***	.4068***	.3559***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Asia*NTB	.0629	.0578	.1951***	.2092***	-.3154***	-.0762
	(0.402)	(0.884)	(0.000)	(0.000)	(0.000)	(0.011)
Africa*NTB	.0595	.2321	-.7665***	-.3912***	-.5660***	-.5316***
	(0.378)	(0.344)	(0.000)	(0.000)	(0.000)	(0.000)
America*NTB	-.1188	-.3473	-.1789***	-.4985***	-1.2022***	-.2686***
	(0.147)	(0.276)	(0.005)	(0.000)	(0.000)	(0.000)
Europe*NTB	.0475	-.7335	-.6926***	-.8901***	-.7502***	-.2204
	(0.584)	(0.106)	(0.000)	(0.000)	(0.000)	(0.013)
Controls	yes	yes	yes	yes	yes	yes
Hausman test for OLS & GMM						
Chi 2			484.58	218.29	80.26	844.59
Prob>chi2			(0.000)	(0.000)	(0.000)	(0.000)
observations	1494	1494	1494	1494	1494	1494
Countries	83	83	83	83	83	83
Instruments			77	74	72	75
F-test			9956.68	2895.83	16636.31	12763.78
AR(1)			(0.000)	(0.000)	(0.000)	(0.000)
AR(2)			0.989	0.673	0.945	0.360
J-Test			0.262	0.183	0.10	0.10
C-Test						
GMM			0.977	0.996	0.935	0.963
IV			0.774	0.779	0.224	0.142

Source: Authors' Estimations

Note: ***, **, * shows level of significance at 1%, 5% and 10% respectively.

Now when the same models have been applied by changing the proxy for trade policy, and results are again in their expected nature for all regions except for Asia. And it can be grasped from the Table 2 that lower non-tariff barriers in developing nations are affecting more to the growth performance of the economy. Moreover when this trade proxy is being instrumented with economic institutions and governance factors in case of Asia, only then the nature of the relationship starts improving confirming again that in this region the domestic political environment is not conducive for policy making and its implementation. No doubt the intensity of this connection is found very week in its magnitude but it exists somehow. This also shows that the removal of such non-tariff barriers is healthier for these economies because these have more chances to increase transaction costs and rent seeking activities in trading. In case of Africa, political institutions, for America, economic institutions, and for Europe, their level of transnationalism through political and cultural openness with other parts of the world has improved economic performance. All these results are showing the importance of institutional features of the regions in determining the fortune of a nation.

Table 4: Impact of Regional Institutional Disparities on Policy Outcome Using Regulatory Trade Barriers

Variables	OLS	FE	SGMM-2	SGMM-2	SGMM-2	SGMM-2
			Pol. Institutions	Openness	Eco. Institutions	Governance
Constant	1.9512	-23.492	16.377***	21.809***	17.1075***	20.6512***
	(0.237)	(0.292)	(0.000)	(0.000)	(0.000)	(0.000)
GDP_{t-1}	.4236***	.2819***	.3483***	.3417***	.3463***	.3541***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Asia*REG	-.1998	-.3984	-.2011***	-.5496***	-.3766***	-.4521***
	(0.018)	(0.124)	(0.000)	(0.000)	(0.000)	(0.000)
Africa*REG	-.2023	-.0676	-1.0316***	-1.1523***	-1.2859***	-1.2017***
	(0.010)	(0.739)	(0.000)	(0.000)	(0.000)	(0.000)
America*REG	.3616***	-.3692	-.6334***	-.8752***	-1.1176***	-.7314***
	(0.000)	(0.219)	(0.000)	(0.000)	(0.000)	(0.000)
Europe*REG	-.2425	-.8918	-.8031***	-.2716	-1.0512***	-.7016***
	(0.012)	(0.041)	(0.000)	(0.144)	(0.000)	(0.000)
Controls	yes	yes	yes	yes	yes	yes
Hausman test for OLS & GMM						
Chi 2			191.36	512.17	207.28	32.97
Prob>chi2			(0.000)	(0.000)	(0.000)	(0.000)
observations	1494	1494	1494	1494	1494	1494
Countries	83	83	83	83	83	83
Instruments			77	74	71	75
F-test			27864.19	4441.88	5322.63	22978.86
AR(1)			(0.000)	(0.000)	(0.000)	(0.000)
AR(2)			0.789	0.611	0.902	0.368
J-Test			0.227	0.139	0.202	0.147
C-Test						
GMM			0.977	0.985	0.997	0.980
IV			0.931	0.762	0.797	0.719

Source: Authors' Estimations

Note: ***, **, * shows level of significance at 1%, 5% and 10% respectively.

Here in Table 4, the same estimation procedure has been done using another proxy of trade policy. Results are striking even here for Asia now. Regulatory trade barriers are actually a mix of non-tariff barriers along with the cost incurred to the trade partners during import and export. Hence from this Table it can be seen that the coefficient of trade policy variable has improved drastically by adding this additional component in the policy variable. And here for Asia too, the signs are in right direction showing the importance of integration and governance parameters respectively in policy designing. Moreover large coefficient of policy in case of model instrumented with globalization factors is proving this fact that interconnection of the economies in to a global web has helped in reducing the transaction costs and affecting the economic performance more than other political economy factors. In case of other three regions again, the role of economic institutions on trade policy is more as compared to other sets of instruments proving the importance of rules related to property rights and to be member of international trade organizations in this regard.

Table: 5: Impact of Regional Institutional Disparities on Policy Outcome Using Black Market Premiums (Price-Based Trade Indicator)

Variables	OLS	FE	SGMM-2	SGMM-2	SGMM-2	SGMM-2
			Pol. Institutions	Openness	Eco. Institutions	Governance
Constant	-2.613	-38.016	5.3554***	19.848***	2.7306	9.4279***
	(0.168)	(0.079)	(0.001)	(0.000)	(0.124)	(0.000)
GDP_{t-1}	.4133***	.2832***	.3392***	.3416***	.3417***	.3512***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Asia*BMP	.3360***	.0030	.2239***	.3110***	.1960***	.2716***
	(0.000)	(0.989)	(0.000)	(0.000)	(0.000)	(0.000)
Africa*BMP	.3424***	.3950***	.2357***	-.0508***	.1348***	.0003
	(0.000)	(0.007)	(0.000)	(0.005)	(0.000)	(0.988)
America*BMP	.2476***	.3188	.2002***	.0523	-.0573	.1311***
	(0.001)	(0.119)	(0.000)	(0.121)	(0.043)	(0.000)
Europe*BMP	.3553***	-.7556	-.1199	.1594	.3611***	.3170***

	(0.000)	(0.457)	(0.015)	(0.018)	(0.000)	(0.000)
Controls	yes	yes	yes	yes	yes	yes
Hausman test for OLS & GMM						
Chi 2			940.68	646.62	1479.55	548.40
Prob>chi2			(0.000)	(0.000)	(0.000)	(0.000)
Observations	1494	1494	1494	1494	1494	1494
Countries	83	83	83	83	83	83
Instruments			77	74	71	75
F-test			37200.56	39642.00	9482.81	30726.99
AR(1)			(0.000)	(0.000)	(0.000)	(0.000)
AR(2)			0.460	0.473	0.391	0.411
J-Test			0.216	0.115	0.124	0.156
C-Test						
GMM			0.997	0.989	0.997	0.996
IV			0.945	0.507	0.719	0.866

Source: Authors' Estimations

Note: ***, **, * shows level of significance at 1%, 5% and 10% respectively.

Now another proxy for analyzing the restrictiveness of trade policy in past literature has also been employed to see its effect in the economic performance of developing countries in Table 4. Black market premium actually tells the difference between two exchange rates i.e. official and black market rates. The proxy used here is showing the openness of the exchange rate market which means how much exchange controls are present in the economy. Such exchange controls restricts the importers and exporters to enter in to the market because this gap creates a wedge in the payments and receipts of the imports and exports. For example if an importer finance its imports through the purchase of foreign exchange from black market but on the same time the exporters transfer all the receipts to the central bank at the official exchange rate then this leads to distortions in the resource allocation in any economy. But if the exporters are also having this liberty to bring their foreign earnings directly into such unofficial markets then this discrepancy can be removed from the market.

Many economists believe that this type of wedges in exchange rate markets act a restriction on trade as well. But on the other side many don't consider it the accurate proxy for trade restrictions. Because it is being observed that different thresholds, taking BMP as a measure of restrictiveness, are used to decide whether an economy is open or close1. It is believed that such black market premiums are the results of macroeconomic imbalances, governance failures, and high level of bureaucracy in any economy. This study has used not directly used the data on black market premium, which earlier studies have used mostly, rather this is an index showing extent of openness in exchange rate market. This index has considered those economies having no black market where premium rate is less than 50% and all those having more than 50% premium rate are being considered as closed economies.

From the descriptive analysis of data, almost all developing countries are showing the trend towards more openness in their economies i.e. reducing the difference between official and black market exchange rates. So the predicted sign of this proxy is positive showing direct relationship between openness and economic growth. For almost in all regions the nature of relationship is same as expected, except for few models. In Asia again the role of integration is more prominent in determining the impact of trade policy on growth. In case of Africa and America, the model using instruments related to political institutions are showing more impact of trade policy on growth and in Europe, economic institutions are showing more pivotal role in determining the trade policies and ultimately the high growth rates.

Table 6: Impact of Regional Institutional Disparities on Policy Outcome Using Freedom to Trade (Composite Trade Index)

Variables	**OLS**	**FE**	**SGMM-2**	**SGMM-2**	**SGMM-2**	**SGMM-2**
			Pol. Institutions	Openness	Eco. Institutions	Governance
Constant	-3.339	-68.414***	-6.4434***	9.9648***	-15.4288***	-10.941***

[1] Sachs and Warner considered an economy closed if the black market premium was more than 20% during whole decade.

	(0.090)	(0.002)	(0.002)	(0.000)	(0.000)	(0.000)
GDP_{t-1}	.4155***	.2818***	.3229***	.3479***	.3672***	.3500***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Asia*FTD	.6179***	.5116	2.598***	.6515***	1.3787***	1.9643***
	(0.000)	(0.342)	(0.000)	(0.000)	(0.000)	(0.000)
Africa*FTD	.6476***	1.1410***	2.1254***	.2905***	1.4409***	1.8473***
	(0.000)	(0.005)	(0.000)	(0.000)	(0.000)	(0.000)
America*FTD	.4870***	1.3620***	2.0767***	.4739***	1.6712***	1.8646***
	(0.000)	(0.003)	(0.000)	(0.000)	(0.000)	(0.000)
Europe*FTD	.6729***	3.4377***	2.0907***	1.114***	3.3348***	1.7654***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Controls	yes	yes	yes	yes	yes	yes
Hausman test for OLS & GMM						
Chi 2			3646.96	205.05	968.87	3314.97
Prob>chi2			(0.000)	(0.000)	(0.000)	(0.000)
Observations	1494	1494	1494	1494	1494	1494
Countries	83	83	81	83	83	83
Instruments			77	74	71	75
F-test			22298.97	3445.09	9911.28	26543.26
AR(1)			(0.000)	(0.000)	(0.000)	(0.000)
AR(2)			0.670	0.690	0.768	0.468
J-Test			0.267	0.160	0.107	0.141
C-Test						
GMM			0.999	0.998	0.963	0.987
IV			0.988	0.511	0.176	0.987

Source: Authors' Estimations

Note: ***, **, * shows level of significance at 1%, 5% and 10% respectively.

Table 6 shows the results using composite index which measures the extent of openness in a nation. The nature of relationship is same in case of all regions as has been expected i.e. More an economy is open, more better performance it will be having. But here this time along with America and Africa, for Asian economies too, models incorporating the role of political institutional factors seem more conclusive in explaining this Trade Policy-Growth nexus relationship as compared to other dimensions of institutional structure of any economy.

Table 7: Impact of Regional Institutional Disparities on Policy Outcome Using Trade/ GDP ratio

Variables	OLS	FE	SGMM-2	SGMM-2	SGMM-2	SGMM-2
			Pol. Institutions	Openness	Eco. Institutions	Governance
Constant	.3723	-49.335	-23.432***	-3.2052	-17.3359***	-11.1710***
	(0.839)	(0.020)	(0.000)	(0.058)	(0.000)	(0.000)
GDP_{t-1}	.4253***	.2728***	.3240***	.3577***	.2867***	.3018***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Asia*T/GDP	.0076***	.0263	.0317***	.0350***	.0543***	.0455***
	(0.003)	(0.033)	(0.000)	(0.000)	(0.000)	(0.000)
Africa*T/GDP	.0075	.0026	.1231***	.0581***	.1515***	.0811***
	(0.076)	(0.847)	(0.000)	(0.000)	(0.000)	(0.000)
America*T/GDP	.0019	.0653***	.0688***	.0571***	.0385	.0529***
	(0.685)	(0.002)	(0.000)	(0.000)	(0.032)	(0.000)
Europe*T/GDP	.0135***	.1050***	.0664***	.0537***	.2017***	.0713***
	(0.005)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Controls	yes	yes	yes	yes	yes	yes
Hausman test for OLS & GMM						
Chi 2			72.38	927.78	7117.29	1098.50
Prob>chi2			(0.000)	(0.000)	(0.000)	(0.000)
observations	1494	1494	1494	1494	1494	1494
Countries	83	83	81	81	81	81
Instruments			77	74	71	75
F-test			4587.39	7130.41	1248.92	1597.98
AR(1)			(0.000)	(0.000)	(0.000)	(0.000)
AR(2)			0.740	0.496	0.849	0.803
J-Test			0.227	0.172	0.210	0.176

C-Test				
GMM	0.988	0.972	0.944	0.981
IV	0.490	0.302	0.786	0.625

Source: Authors' Estimations
Note: ***, **, * shows level of significance at 1%, 5% and 10% respectively.

Table 7 represents the results using the trade policy i.e. Trade %GDP. This is an outcome measure which does not show directly the restrictiveness of trade policy rather the consequence of all these restrictive or open measures to the trade share. The results are same in nature as was being expected and have been reported in past literature. But this study has another purpose to analyze the role of trade policy on the growth of developing economies of each region of the world after incorporating the institutional and governance differences in policy making process. In case of Asia and Africa role of economic institutions is more as compared to other factors and for America and Europe political institutions are showing much importance in determining the role of trade policy on their growth of the economies. All results are highly significant and diagnostics of the model are showing the validity of the estimated model.

Table 8: Impact of Regional Institutional Disparities on Policy Outcome Using Trade Globalization Index

Variables	**OLS**	**FE**	**SGMM-2**	**SGMM-2**	**SGMM-2**	**SGMM-2**
			Pol. Institutions	Openness	Eco. Institutions	Governance
Constant	.1141	-32.4589	4.7962***	6.9718***	.4899***	7.6747***
	(0.944)	(0.155)	(0.000)	(0.000)	(0.000)	(0.000)
GDP_{t-1}	.4138***	.2843***	.3519***	.3456***	.3407***	.3596***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Asia*KOF	.0319***	.0681	.1602***	.0762***	.1505***	.1115***
	(0.000)	(0.088)	(0.000)	(0.000)	(0.000)	(0.000)
Africa*KOF	.0361***	.0065	.1501***	.0570***	.2095***	.0892***
	(0.000)	(0.788)	(0.000)	(0.000)	(0.000)	(0.000)
America*KOF	.0128	.0264	.1014***	.0256***	.0952***	.0722***
	(0.114)	(0.360)	(0.000)	(0.000)	(0.000)	(0.000)
Europe*KOF	.0286***	-.0017	.1131***	.0680***	.1940***	.1029***
	(0.001)	(0.957)	(0.000)	(0.000)	(0.000)	(0.000)
Controls	yes	yes	yes	yes	yes	yes
Hausman test for OLS & GMM						
Chi 2			68.39	911.52	491.54	293.63
Prob>chi2			(0.000)	(0.000)	(0.000)	(0.000)
observations	1494	1494	1494	1494	1494	1494
Countries	83	83	83	83	83	83
Instruments			77	74	71	75
F-test			14504.65	22455.49	7082.53	17925.27
AR(1)			(0.000)	(0.000)	(0.000)	(0.000)
AR(2)			0.695	0.677	0.264	0.482
J-Test			0.183	0.156	0.109	0.170
C-Test						
GMM			0.960	0.986	0.917	0.966
IV			0.889	0.661	0.752	0.718

Source: Authors' Estimations
Note: ***, **, * shows level of significance at 1%, 5% and 10% respectively.

Lastly another composite index is being used to see the effect of openness on growth in different institutional frameworks of developing countries in Table 8. Again it is very clear from this Table that the trade policy reforms are contributing more to the growth of these developing nations when the parameters related to political and economic institutions are used as exogenous instruments in policy decisions.

5. Conclusions and Recommendations

This study aimed to explore the path of old traditional nexus i.e. Trade Policy and Growth by using new road to development in which economic geography seems to be the driving force in institutional building and ultimately controlling the fortune of nations. Using the recent econometric instrumental technique SGMM, overall 28 econometric models have been run using STATA software for different categories of

nations, and it is found that mostly in case of each proxy of trade policy, models incorporating the role of economic institutions, political institutions and governance are affecting more to the magnitude of Policy-Growth co-efficient. It can be said that this analysis supports the results of Rodrik et al. (2004) and concludes that institutions play more important role in determining trade policies as compared to level of integration. Besides this these authors also showed that one unit change in institutional quality brought about 0.45 units change in trade share while one unit increase in trade increased the institutional quality by 0.22 units. Moreover the results show that lower tariff and non-tariff barriers are resulting increased economic growth in case of all continents which means that there is negative relationship between economic growth and trade liberalization process in case of developing countries confirming the results of study by Chalkual et al. (2013) that less restrictive trade policies result in high economic growth. Recently Eris et al. (2013) also developed a tie between these two variables i.e. trade openness and growth and found no evidence of direct relationship between these two variables in long run without the role of economic institutions. But as this study intends to develop a nexus between these two variables beyond a traditional way by introducing the element of geographical classification of these developing nations. And the results proved that European region which has a history of colonization shows greater impact of the institutional instrument on the economic growth. Similarly in the case of America the impact of institutions as external factors in policy decisions is showing more prominent effect as compared to Africa and Asia. It means geographical locations matter for their impact on institutional landscapes while making the choice between various policies. All these findings suggests that policies should be tailored according to region in which nations are situated because each nation has its own 'institutional density' due to its history traits which ultimately help policy choices to result in better or worse outcomes. This study also supports this view of Rodrick (2004) that at present times efforts should not be for putting more emphasis on the 'content of policies' rather it should be diverted now towards the 'stage of play' where different economic and political players come into the field to interact and face each other directly. It shows that regional differences in institutional environment is actually the main cause of lapses in policy implementation and proves that institutions are actually the carriers of histories. As Asian and African nations have poor institutional setups as compared to Europe and American nations, therefore the results showed the supremacy of political and economic institutions for the latter regions in most of the models as compared to the former regions. Role of economic institutions in case of Europe is very impressive in growth enhancing effect of contemporary trade reforms confirming that the role of international organizations and enforcement of property rights is more effectual in trade policy designing and also supporting the findings of Rose (2004) and Gil-Pareja et al. (2013) The findings also gave support to the ideas forwarded by Segura-Cayuela (2006) who blamed the role of 'inefficient institutions' responsible for less efficient economic policies even with reforms in trade regimes. Similarly recently Eris et al. (2013) also worked using these two variable trade openness and growth and found no evidence of direct relationship between these two variables in long run without the role of economic institutions.

References:

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). *Reversal of fortune: Geography and institutions in the making of the modern world income distribution* (No. w8460). National bureau of economic research.

Alesina, A., Spolaore, E., & Wacziarg, R. (2005). Trade, growth and the size of countries. *Handbook of economic growth*, *1*, 1499-1542.

Arellano, M. & Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations', Review of Economic Studies 58, 277-297.

Baltagi, B. (2008). *Econometric analysis of panel data* (Vol. 1). John Wiley & Sons.

Baum, C. F., Schaffer, M. E., & Stillman, S. (2003). Instrumental variables and GMM: Estimation and testing. *Stata Journal*, *3*(1), 1-31.

Bloom, D. E., Sachs, J. D., Collier, P., & Udry, C. (1998). Geography, demography, and economic growth in Africa. *Brookings papers on economic activity, 1998*(2), 207-295

Blundell, R. and Bond, S. (1998), 'Initial Conditions and Moment Restrictions in Dynamic Panel Data

Models', Journal of Econometrics 87, 115-143.

Bond, S. R. (2002). Dynamic panel data models: a guide to micro data methods and practice. *Portuguese economic journal*, *1*(2), 141-162.

Cooke, P. and Morgan, K. (1994) Growth Regions Under Duress: Renewal Strategies in Baden Württemberg and Emilia Romagna. In A. Amin and N. Thirft, eds., *Globalization, Institutions, and Regional Development in Europe,* Oxford: Oxford University Press.

Dawson, J. W. (1998). Institutions, Investment, and Growth: New Cross-country and Panel Data Evidence. *Economic Inquiry*, *36*(4), 603-619.

Dollar, D. (1992).Outward-oriented developing economies really do grow more rapidly: Evidence from 95 ldcs, 1976-1985. *Economic Development and Cultural Change*, *40*(3), 523-44.

Dollar, D., & Kraay, A. (2003). Institutions, trade, and growth. *World Bank Policy Research Working Paper*.

Edwards, S. (1998). Openness, productivity, and growth: What do we really know? *Economic Journal*, *108*(447), 383-98.

Gallup, J. L., Sachs, J., & Mellinger, A. D. (1998). Geography and economic growth (pp. 20-1). World Bank

Hall, R., & Jones, C. (1999). Why do some countries produce so much more output per worker than others? *Quarterly Journal of Economics*, *114*(1), 83-116.

Harrison, A. (1996). Openness and growth: A time-series, cross-country analysis for developing countries. *Journal of development Economics*, *48*(2), 419-447.

Holtz-Eakin, D., Newey, W. and Rosen, H. (1988). 'Estimating Vector Autoregressions with Panel Data', Econometrica, 56(6),1371-1395.

Hudson, R. (2007). Regions and regional uneven development forever? Some reflective comments upon theory and practice. *Regional Studies*, *41*(9), 1149-1160.

Kaufmann, D., & Kraay, A. (2002). Growth without governance. *World Bank Policy Research Working Paper*, (2928).

Ketterer, T. D., & Rodríguez-Pose, A. (2016). Institutions vs.'first-nature'geography: What drives economic growth in Europe's regions?. Papers in Regional Science.

Kwon, R. (2013). Is Tariff Reduction a Viable Strategy for Economic Growth in the Periphery? An Examination of Tariff Interaction Effects in 69 Less Developed Countries. *Journal of World-Systems Research*, *19*(2).

Lee, J. W. (1993). International trade, distortions, and long-run economic growth. *Staff Papers-International Monetary Fund*, 299-328.

Lee, H. Y., Ricci, L. A., & Rigobon, R. (2004). Once again, is openness good for growth?. *Journal of Development Economics*, *75*(2), 451-472.

North, D. (1990). *Institutions, institutional change, and economic performance*. Cambridge University Press.

Papke, L. E., & Wooldridge, J. M. (2004). A Computational Trick for Delta-Method Standard Errors. *Economics Letters*, 86: 413-17.

Parente, S. L., & Prescott, E. C. (1999). Monopoly rights: A barrier to riches. *American Economic Review*, 1216-1233.

Reshi, I. A., & Sudha, D. T. (2023). Trade and Growth In India: An Analysis of The Relationship And Its Implications. International Journal of Social Science, Educational, Economics, *Agriculture Research and Technology, 2*(4), 1331-1336.

Rodríguez-Pose, A. (2013). Do institutions matter for regional development?. *Regional Studies*, *47*(7), 1034-1047.

Rodrik, D. (2004). Rethinking growth policies in the developing world. *Cambridge MA: Harvard University*, *2*.

Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *Stata Journal*, *9*(1), 86.

Scott, A. J., & Storper, M. (2007). Regions, globalization, development. *Regional studies*, *41*(S1), S191-S205.

Srdelić, L., & Dávila-Fernández, M. J. (2024). International trade and economic growth in Croatia. *Structural change and economic dynamics, 68*, 240-258.

Talmaciu, M. (2012). Role of institutions in the economic development of central and eastern EU countries. *Journal of Eastern Europe Research in Business and Economics (JEERBE)*.

Williamson, O. E. (1985). *The economic intstitutions of capitalism*. Simon and Schuster.

Windmeijer, F. (2005). A finite sample correction for the variance of linear efficient two-step GMM estimators. *Journal of econometrics*, *126*(1), 25-51.

Winters, L. A. (2014). *Globalization, Infrastructure, and Inclusive Growth* (No. 464). Asian Development Bank Institute.

World Bank. (2013). *World Development Report 2013*. Oxford University Press, New York, NY.

World Development Indicators. Various issues. Washington, DC: World Bank and Oxford University Press.

Acknowledgments

The author is grateful for editorial team's support and comments from two anonymous referees.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Disclaimer

The views and opinions expressed in this paper are those of the author alone and do not necessarily reflect the views of any institution.

APPENDIX

Variable	Level	
	Common Unit Root	**Individual Unit Root**
	LLC	**IPS**
GDPG	-49.554*** 0.0000	88.095*** 0.0000
Health	-35.664*** 0.0000	87.005*** 0.0000
Size of country	-44.975*** 0.0000	-111.995*** 0.0000
Infrastructure	-35.996*** 0.0000	39.786*** 0.0000
Employment	-41.997** 0.0008	-35.876*** 0.0050
Inflation	-59.979** 0.0002	67.009*** 0.0002
Tariff	-111.666** 0.0000	-108.776* 0.0000
NTB	-68.889*** 0.0000	74.066*** 0.0000
Reg	-32.996** 0.0006	-23.648** 0.003
BMP	-4.964*** 0.0005	-5.865*** 0.0002
FTD	-42.970*** 0.0008	45.778*** 0.0000
T/GDP	-21.556** 0.0005	-16.008** 0.0097
KOF	-59.632*** 0.0000	-39.095*** 0.0000

Source: Authors' Estimations
Note: ***, **, * shows level of significance at 1%, 5% and 10% respectively.