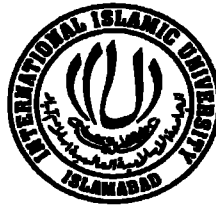


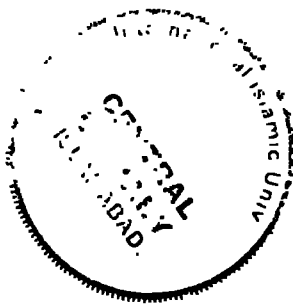
**Globalization and Economic Growth: Exploring the
Channels of Exchange Rate Volatility, Trade Openness, and
Financial Development for Developing Countries**



Researcher

Umbreen Zahra

Reg No. 163/FE/PhD/F16



Supervisor

Dr. Babar Hussain

Assistant Professor, IIE

FACULTY OF ECONOMICS

INTERNATIONAL INSTITUTE OF ISLAMIC ECONOMICS

INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD

July 2024

Ph?
338.9
11116

Accession No. TH-26304

Economic growth
Exchange Rate
Volatility Trade

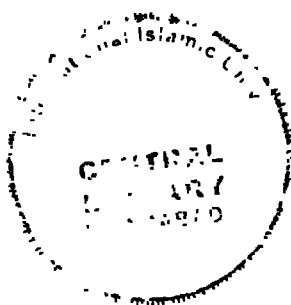
**Globalization and Economic Growth: Exploring the
Channels of Exchange Rate Volatility, Trade Openness, and
Financial Development for Developing Countries**



Researcher

Umbreen Zahra

Reg No. 163/FE/PhD/F16



Supervisor

Dr. Babar Hussain

Assistant Professor, IIIE

A Dissertation submitted to the School of Economics, International Institute of Islamic Economics in Partial Fulfillment for the Award of Doctor of Philosophy Degree in Economics in the International Islamic University, Islamabad.

July 2024

APPROVAL SHEET

Globalization and Economic Growth: Exploring the Channels of Exchange Rate Volatility, Trade Openness and Financial Development for Developing Countries
By

Umbreen Zahra

Reg. No: 163-FE/PhD Economics/F15

Accepted by the International Institute of Islamic Economics (IIIE), International Islamic University Islamabad (IIUI), as partial fulfillment of the requirements for the award of PhD degree in Economics

Supervisor:



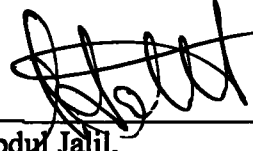
(Dr. Babar Hussain)
Assistant Professor, IIIE, IIUI

Internal Examiner:



(Dr. Miraj-ul-Haq)
Associate Professor, IIIE, IIUI

External Examiner-I:

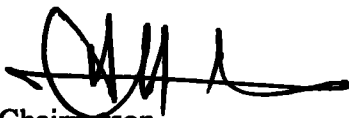


Dr. Abdul Jalil,
Professor,
National Defense University (NDU), Islamabad

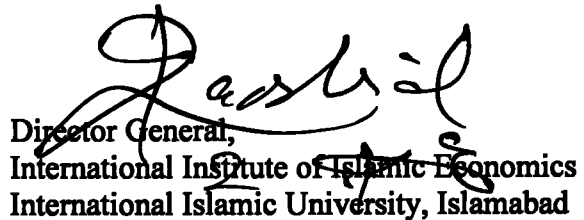
External Examiner-II:



Dr. Anwar Shah,
Professor,
School of Economics, Quaid-e-Azam University, Islamabad



Chairperson,
School of Economics
International Institute of Islamic Economics
International Islamic University, Islamabad



Director General,
International Institute of Islamic Economics
International Islamic University, Islamabad

Date of Viva Voce Examination: June 05, 2024

**Globalization and Economic Growth: Exploring the
Channels of Exchange Rate Volatility, Trade Openness, and
Financial Development for Developing Countries**

Researcher

Umbreen Zahra

Reg No. 163/FE/PhD/F16

Submitted in partial fulfilment of the requirements for the Master of Philosophy/Ph.D
degree in discipline) _____ with specialization in
_____ (where applicable) at the faculty of
_____, International Islamic University,
Islamabad.

DECLARATION

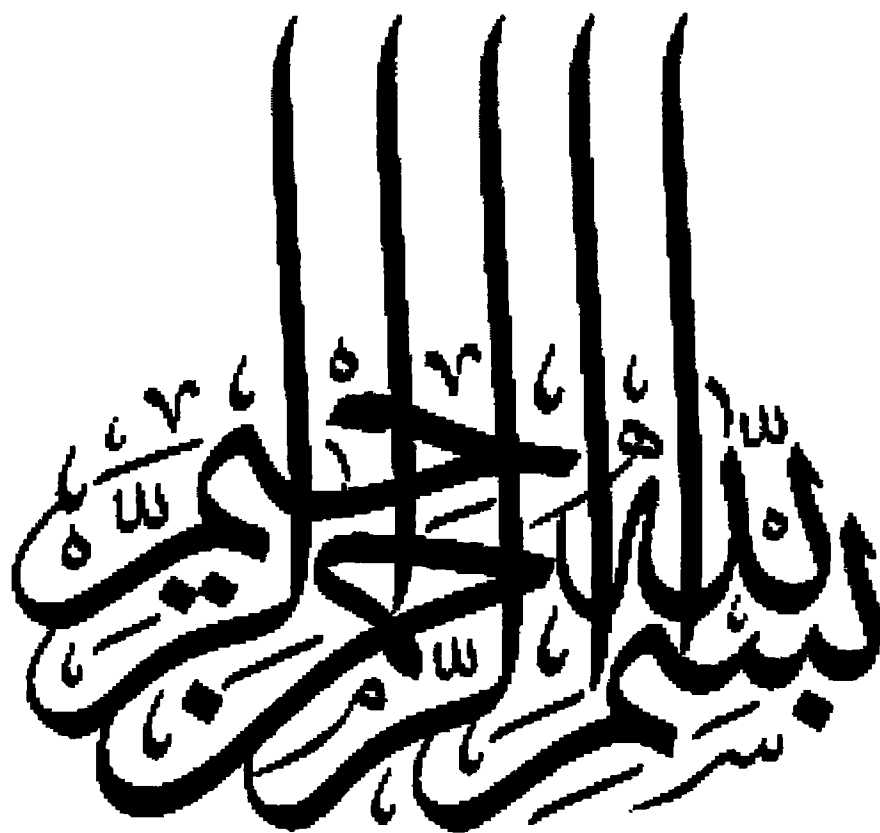
I, Umbreen Zahra D/O Sabir Hussain Registration No. 163-FE/PhD Eco /F16 student of Ph.D. Economics at the School of Economics, International Islamic Institute of Islamic Economics, International Islamic University, Islamabad, do hereby solemnly declare that the thesis entitled “ Globalization and Economic Growth: Exploring the Channels of Exchange Rate Volatility, Trade Openness, and Financial Development for Developing Countries”, submitted by me in the partial fulfillment for the award of Ph.D. degree in Economics. It is my original work, except where otherwise acknowledged in the text, and has not been submitted, printed or published earlier and shall not, in future, be submitted by me for obtaining any degree from this or any other university or institution.

Signature:_____

Umbreen Zahra

Copy Right © Umbreen Zahra

All rights reserved. No part of this publication may be cited, reproduced or stored in any form without the permission of the author.



In the name of Allah Most Gracious and Most Merciful

Dedication

*I dedicate this thesis to my beloved
late father to whom i promised to complete this thesis before he left
this world*

Acknowledgment

ALHAMDULILLAH, all praise to ALLAH Who gave me the power to seek knowledge, strength, and wisdom. Without His blessings, it was impossible to stay patient and complete this study. I would like to extend my gratitude to the following peoples, without their kind support I would not have been able to complete my doctoral research. After Almighty Allah, praises are to Prophet Muhammad (Peace be Upon Him), the most perfect and exalted who is forever a source of guidance and knowledge for the entire human race.

I am grateful to the most competent, knowledgeable, and cooperative supervisor **Dr. Babar Hussain** for his generous moral support, intellectual and insightful feedback, and patience to listen to me at every stage.

I would like to further extend my special gratitude to Dr. Abdul Rashid (DG IIIE), Dr. Hamid Hassan (HOD IIIE) and HOD (FC), Dr. Hajra Ihsan who all the time supported and motivated me to complete my research work. I would also offer special thanks to Sir Niaz Ali Shah and Dr. Tauqeer for their guidance and support. I am also offering special thanks to all IIE faculty (FC) and lab attendant Miss Badar, Miss Rubina and Miss Wafa. I am also very thankful to my other teachers Dr. Arshad Ali Bhatti, and Dr. Abdul Jabbar, for providing a valuable suggestions during my research work.

I am also thankful to my best friends Sania Shaheen, Isma Sadaf, Farah Waheed, Zakiya Batool, Mahnaz Aslam, , Madiha Asma, Mahnoor Jadoon, and Saiqa Lal Hussain, for their cooperation, moral support, motivation, love, care, prayers, and well wishes.

I am especially grateful to my mother and brothers, their encouragement, heartfelt blessings, prayers, moral and financial support, made me successful throughout my life.

I feel very lucky as the list of my well-wishers is very long. My heartiest thanks are due to all of them my class fellows, junior and senior research fellows and colleagues who support my task morally and who prayed for my success all the time.

Umbreen Zahra

Table of Contents

DECLARATION	iv
Copy Right © Umbreen Zahra	v
Dedication	vii
Acknowledgment	viii
List of Tables.....	xi
List of Figures	xiv
List of Abbreviations.....	xv
Abstract	xvii
CHAPTER 1	1
INTRODUCTION.....	1
1.1 Background	1
1.2 Rationale of the Study	9
1.3 Objectives of the Study	14
1.4 Research Questions	14
1.5 Research Hypotheses	15
1.6 Significance of the Study	15
1.7 Structure of the Study	16
CHAPTER 2	17
LITERATURE REVIEW.....	17
2.1 Globalization and Economic Growth	17
2.2 Exchange Rate Volatility and Economic Growth	26
2.3 Trade Openness and Economic Growth.....	38
2.4 Financial Development and Economic Growth	47
2.5 Summary	54
CHAPTER 3	58
METHODOLOGY AND DATA.....	58
3.1 Theoretical Framework	58
3.2 The Empirical Model.....	72
3.3 Estimation Methods.....	83
3.3.1 Generalized Method of Moments.....	84
3.4 Data Description	87
3.4.1 Selection of Sample countries and Data Period	87
3.4.2 Selection of Variables, Definition and Construction	88
3.4.2.1 Dependent Variable	88
3.4.2.2 Explanatory Variables	88

3.5	Summary	93
CHAPTER 4		95
RESULTS AND DISCUSSION.....		95
4.1	Summary Statistics and Correlation Analysis.....	95
4.2	Overall Globalization and Economic Growth	98
4.2.1	De-Facto Aspect of Overall Globalization and Economic Growth	101
4.2.2	De-Jure Aspect of Overall Globalization and Economic Growth.....	103
4.3	Globalization, its Dimensions, Exchange Rate Volatility and Economic Growth	105
4.3.1	Conditional Analysis of Overall Globalization on Economic Growth at Varying Level of Exchange Rate Volatility	110
4.3.2	De-Facto Aspect of Globalization, it Dimensions, Exchange Rate Volatility and Economic Growth.....	111
4.3.3	De-Jure Aspect of Globalization, its Dimensions and Economic Growth: Role of Exchange Rate Volatility.....	115
4.4	Overall Globalization, its dimensions and Economic Growth: Role of Trade Openness	121
4.4.1	Conditional Analysis of Overall Globalization on Economic Growth at Varying Level of Trade Openness.....	122
4.4.2	De-Facto Aspect Globalization, Trade Openness and Economic Growth.....	123
4.4.3	De-Jure Aspect of Overall Globalization, Trade Openness and Economic Growth	127
4.5	Overall Globalization, its dimensions, Financial Development and Economic Growth	131
4.5.1	Conditional Analysis of Overall Globalization on Economic Growth at Varying Level of Financial Development	135
4.5.2	De-Facto Aspect of Globalization on Economic Growth at Varying Level of Financial Development.....	136
4.5.3	De-Facto Aspect of Globalization, and Financial Development	142
	on Economic Growth.....	142
4.6	Summary of the Chapter	143
CHAPTER 5		145
CONCLUSION AND POLICY RECOMMENDATIONS.....		145
5.1	Main Findings	145
5.2	Policy Implications.....	147
	References	150
	Appendix	167

List of Tables

Table 4.1: Summary Statistics and Correlation Matrix.....	96
Table 4.2: Impact of Globalization and its Dimensions on Economic Growth by using Two step Sys.GMM	99
Table 4.3: Impact of De-facto Aspect of Globalization on Economic Growth by using Two step Sys.GMM	102
Table 4.4: Impact of De-Jure Aspect of Globalization on Economic Growth by using Two step Sys.GMM	104
Table 4.5: Impact of Globalization on Economic Growth: Role of Exchange Rate Volatility by using Two step Sys.GMM	107
Table 4.6: Conditional Effects of Globalization on Economic Growth at Varying Level of Exchange Rate volatility	110
Table 4.7: Impact of De-Facto Globalization, its dimensions on Economic Growth through ERV by using Two step Sys.GMM	112
Table 4.8: Conditional Effects of De-Facto Aspect of Globalization on Economic Growth at Varying Level of Exchange Rate volatility.....	114
Table 4.9: Impact of De-Jure Globalization on Economic Growth through ERV by using Two step Sys.GMM	116
Table 4.10: Conditional Analysis for De-Jure Aspect of Globalization at Varying Level of Exchange Rate Volatility	118
Table 4.11: Impact of Globalization on Economic Growth through the Channel of Trade Openness by using Two step Sys.GMM.....	119
Table 4.12: Conditional Effects of Overall Globalization on Economic Growth at Varying Level of Trade Openness	122
Table4.13: Impact of De-Facto Globalization on Economic Growth through Trade Openness by using Two step Sys.GMM	124
Table 4.14: Conditional Effects of De-Facto Aspect of Globalization on Economic Growth at Varying Level of Trade Openness	126
Table 4.15: Impact of De-Jure Globalization on Economic Growth through Trade Openness by using Two step Sys.GMM	128
Table 4.16: Conditional Effects of De-Jure Aspect of Globalization on Economic Growth at Varying Level of Trade Openness	130
Table 4.17: Impact of Globalization and its Dimensions on Economic Growth through Financial Development by using Two step Sys.GMM	132

Table 4.18: Conditional Effects of Globalization on Economic Growth at Varying Level of Financial Development	135
Table 4.19: Impact of De-Facto Globalization on Economic Growth and its Dimensions through Financial Development by using Two step Sys.GMM.....	137
Table 4.20: Conditional Effects of De-Facto Aspect of Globalization on Economic Growth at Varying Level of Financial Development.....	139
Table 4.21: Impact of De-Jure aspect of Globalization on Economic Growth through Financial Development by using Two step Sys.GMM	140
Table 4.22: Conditional Effects of De-Jure Aspect of Globalization on Economic Growth at Varying Level of Financial Development.....	143
Table A1: Impact of Globalization and its dimensions on Economic Growth through Fixed Effect Model	167
Table A2: Impact of De-Facto aspect of Globalization on Economic Growth by using Fixed Effect Model	168
Table A3: Impact of De-Jure aspect of Globalization on Economic Growth by using Fixed Effect Model	169
Table A4: Impact of Overall Globalization and its dimensions on Economic Growth through ERV by using Fixed Effect Model.....	170
Table A5: Conditional Effects of Globalization on Economic Growth at Varying Level of Exchange Rate Volatility	172
Table A6: Impact of Overall De-Facto Aspects of Globalization and its dimensions on Economic Growth through ERV by using Fixed Effect Model	173
Table A7: Conditional Effects of De -Facto Aspect of Globalization on Economic Growth at Varying Level of Exchange Rate Volatility.....	175
Table A8: Impact of Overall De-Jure Aspects of Globalization and its dimensions on Economic Growth through ERV by using Fixed Effect Model	176
Table A9: Conditional Effects of De-Jure Aspect of Globalization on Economic Growth at Varying Level of Exchange Rate Volatility.....	178
Table A10: Impact of Overall Globalization and its dimensions on Economic Growth through Trade openness by using Fixed Effect Model.....	179
Table A11: Conditional Effects of Globalization on Economic Growth at Varying Level of Trade Openness.....	181
Table A12: Impact of De-Facto aspect of Globalization on Economic Growth through Trade Openness through Fixed Effect Model	182
Table A13: Conditional Effects of Globalization on Economic Growth at Varying Level of Trade Openness.....	184

Table A14: Impact of De-Jure aspect of Globalization on Economic Growth through Trade Openness by using Fixed Effect Model	185
Table A15: Conditional Effects of De-Jure Globalization on Economic Growth at Varying Level of Trade Openness	187
Table A16: Impact of Globalization and its dimensions on Economic Growth through Financial Development by using Fixed Effect Model	188
Table A17: Conditional Effects of Globalization on Economic Growth at Varying Level of Financial Development	190
Table A18: Impact of De-Facto Aspect of Globalization and its dimensions on Economic Growth through Financial Development by using Fixed Effect Model.....	191
Table A19: Conditional Effects of De-Facto Aspect of Globalization on Economic Growth at Varying Level of Financial Development.....	193
Table A20: Impact of De-Jure aspect of Globalization and its dimensions on Economic Growth through Financial Development by using Fixed Effect Model.....	194
Table A21: Conditional Effects of De-Jure Aspect of Globalization on Economic Growth at Varying Level of Financial Development.....	196
Table A22: List of Countries	197
Table A23: Variables Definition and Data Sources	198
Table A24:Components of Globalization	199

List of Figures

Figure 3.1: Conceptual Framework of Globalization and Economic Growth.	63
Figure 3.2: Functional approach for Finance and Economic Growth.....	70

List of Abbreviations

GLOB	Globalization
EGLOB	Economic Globalization
SGLOB	Social Globalization
PGLOB	Political Globalization
ER	Exchange rate
ERV	Exchange rate volatility
TO	Trade openness
FD	Financial Development
IFI	International Financial Integration
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GGFCE	General Govt. Fixed Capital Expenditure
GATT	General agreement on tariff and trade
R&D	Research and Development
NTT	New Trade Theory
NICs	Newly Industrialized Countries
Ivs	Instrumental Variable
Sys.GMM	System Generalized Method of Moment
FEM	Fixed Effect Model
REM	Random Effect Model
OLS	Ordinary Least Square
SSA	Sub-Saharan Africa
MNC	Multinational corporation

IMF	International Monetary Funds
WDI	World Development Indicator
IFS	International Financial Statistics
PWT	Penn World Table

Abstract

This study examines the impact of the composite index of globalization and its economic, social, and political dimensions by distinguishing the de-facto and de-jure aspects on economic growth. This study empirically analyzes the moderating role of exchange rate volatility, trade openness, and financial development on the relationship between globalization and economic growth. Panel data from 46 selected developing countries over the period from 1980 to 2018 has been used in the study. This study uses fixed effect model (FEM) and a two-step generalized method of moment (Sys.GMM) to evaluate the robustness and cater for the model's endogeneity. This study produces four main results. First, the results show that globalization significantly impacts the economic growth of developing countries. The results demonstrate that de-facto, de-jure political globalization, and de-jure economic globalization boosts economic growth. While de-facto, de-jure social globalization, and de-facto economic globalization hinders growth. Second, the findings imply that the role of exchange rate volatility weakens the relationship between overall globalization, its dimensions, and economic growth. However, both de-facto and de-jure aspects of globalization show that exchange rate volatility strengthens the globalization and growth relationship. Moreover, this impact is stronger in the de-facto aspect of globalization than de jure aspect. Third, the results show that trade openness weakens the relationship between globalization and economic growth in all dimensions and both aspects. The reasons behind the adverse effect of trade openness on economic growth in developing countries which depend on the export of raw materials and agricultural products, unfavorable term of trade, and face challenges in competing with advanced economies. Finally, the impact of FD has been examined in the globalization and growth relationship. The results suggest that the role of financial development weakens the relationship between overall globalization and economic growth. Moreover, similar results have been found for all its dimensions and in both aspects. Additionally, the findings also indicate that there are significant undiscovered outcomes of globalization in less developed nations. Therefore, future studies should examine the appropriate dimensions of globalization that can enhance economic growth.

JEL Classification : C23, F15, F21, F40, F41, F43, E44, O10, O55

Keywords: De-Facto Globalization, De-Jure Globalization, Economic Globalization, Economic Growth, Exchange Rate, Financial Development, Panel Data

CHAPTER 1

INTRODUCTION

1.1 Background

Remarkable growth has been witnessed in globalization (hereafter GLOB) in the last two decades, which is illustrated by global interdependencies and interconnections between people; especially in developing countries, the impact of GLOB is exceptional. It is a multifaceted idea conceptualized as establishing links between actors at a multicomponent level of the capital flows, ideas, images, and information, by facilitating the movement of people and commodities (Clark, 2000; Norris, 2000). It has lifted the traditional limitations of investigation and policy relating to resource flows and international trade (Cook & Kirkpatrick, 1997). Furthermore, by diminishing the boundaries of national economies, international integration, diffusion of technology, strong institutions, and governance lead to the creation one continent and complex interdependencies (Dreher et al., 2008).

There is an ongoing debate regarding the effects of GLOB as it has affected both developing and developed countries and the daily lives of rich and poor residents. It's a boon for some while an anathema for others. For some economies, it is a factor in opening up new opportunities and has a favorable impact on their economic growth (Ahmad, 2019; Khoshnevis & Shakouri, 2017; Menhas et al., 2019). However, in some economies, it contributes to poverty, unfair income distribution and hinders economic growth (Fainstein, 2001; Gourdon et al., 2008).

The internationalization of economic activity is not a new phenomenon. Although the economies were connected to some extent before World War-II (1945), international trade increased exceptionally after 1945 mainly because of the international monetary

and trade regime created in the Bretton Wood Conference and GATT (General Agreement of Tariff and Trade). Earlier international trade expansion was categorized just by strengthening the economic connections that exceed domestic boundaries at the functional level. Now, with the inclusion of economic agents and structure at the micro level, resource flows, and trade have become more complex through the behavior and strategies of firms.

An increasing trend of GLOB has been observed in recent years. GLOB can be defined in many aspects like economic, political, social, technological, and cultural collaboration, which considers many factors like trading, transportation, communication, and migration, bringing the economies closer and more integrated. The impact of GLOB can be viewed in different sectors, such as economic growth, poverty, regional differences, and economic integration (Almas & Sangchoon, 2010).

GLOB shapes EG through many factors which include international financial integration (hereafter IFI), international trade, international flow of labor, and technology changes. Improvement in these factors leads to economic growth in the country (Kilic, 2015). Several factors impact economic growth as Solow (1956) suggested advancement in technology, and Smith (1986) suggested the accumulation of capital and labor productivity. Moreover, Romer (1986) and Lucas (1988) suggested human capital and many other factors that enhance economic growth, including IFI (Ibrahim et al., 2016).

IFI accelerates economic growth in three ways. First, efficient allocation of capital improves the use of financial resources in the most productive way that increases economic growth. Second, IFI encourages risk sharing and diversification through ownership of assets across countries and diversified portfolios (Baele et al., 2004).

Third, IFI enhances growth through the development of financial systems (Ibrahim et al., 2016).

Empirically, the literature provides evidence that GLOB has a positive impact on economic growth. This is achieved through various means such as opening up trade, enhancing competition, facilitating economies of scale, attracting FDI, transferring technology, and promoting macroeconomic stability (Armstrong, 1998; Das, 2010; Friedrich et al., 2013; Hammudeh et al., 2020).

Another factor that enhances the effect of GLOB on growth in developing economies is the liberalization of international capital markets (Obstfeld & Rogoff, 1998). In this context, several examples mentioned in the prior studies explain the positive effect of GLOB on economic growth through financial integration and trade liberalization for transitional and middle-income countries. Moreover, through financial integration, trade, and trade liberalization, the European transition countries got more economic growth in the late 1990s compared to developing countries.

The influence of GLOB on the economic growth of any country depends on the tendency of an economy to get the benefit of GLOB by speeding up growth. In this respect, some studies support the argument that GLOB boosts economic growth in the presence of a threshold level of capital inflows to the desired level, institutional quality, and financial markets development (Hall, 2000; Hammudeh et al., 2020; Stiglitz, 2004; Wei, 2006).

The empirical literature on the impact of the three dimensions of GLOB on economic growth is inconsistent (Dreher et al., 2008; Kilic, 2015; Rao & Vadlamannati, 2011). Moreover, the economic GLOB (hereafter EGLOB) has a boosting impact on growth. The effects of social GLOB (hereafter SGLOB) and political GLOB (hereafter

PGLOB) are inconclusive (Kilic, 2015; Ying et al., 2014). While, some studies suggest that SGLOB has a positive impact on growth (Gurgul & Lach, 2014; Marques et al., 2017). However, other studies report the opposite results (Kilic, 2015; Rao & Vadlamannati, 2011; Ying et al., 2014). Further, the boosting impact of PGLOB on growth is suggested by (Kilic, 2015). While the detrimental impact of PGLOB is reported by (Ying et al., 2014), and no impact at all of PGLOB is concluded by (Gurgul & Lach, 2014). Few studies support that GLOB and its dimensions benefit growth (Villaverde & Maza, 2011).

Limited literature is available on the effect of de-facto and de-jure aspects of GLOB on growth. Only one study exception by Bataka (2019) analyzes both aspects of GLOB on growth for African economies. The results support the view that de-jure GLOB, de-jure EGLOB, and de-jure SGLOB leads to growth. However, de-facto GLOB, de-facto PGLOB tends to hinder economic growth. However, de-facto SGLOB, and de-jure PGLOB do not have a significant impact on growth. So, we consider the impact of GLOB, its dimensions mentioned above, and both aspects on economic growth for developing economies. In this study, we go deeper and provide a comprehensive analysis of the impact of GLOB, its dimensions, and both aspects.

Literature supports that ERV can significantly affect economic growth. When ER fluctuates rapidly and unpredictably, it creates uncertainty and risk for businesses, investors, and policymakers. This uncertainty affects various aspects of the economy, including trade, investment, inflation, and overall economic stability. High levels of ERV can hinder economic growth by discouraging foreign investment, disrupting trade flows, increasing import costs, and undermining business confidence. As a result, countries often strive to minimize ERV to promote stable economic conditions conducive to sustained growth and development (Samuelson & Nordhaus, 2009).

Several macro variables directly influence ERV, including supply and demand of goods and services, investment, inflation, and growth in different countries. Moreover, the expectation about current and future events also affects the ERV. The higher ERV leads to a decrease in the foreign exchange reserve which may constrain the growth in developing nations (Rapetti, 2013).

Previous literature on the linkages between ERV on growth has frequently produced conflicting results. There are at least two explanations for this. First, there are contradictory implications of ERV on the dynamics of growth. On the one hand, ERV can be viewed as a shock absorber and seems more appropriate for nations that frequently experience real shocks. On the other hand, volatility increases higher macroeconomic fluctuations in terms of trade, investment, and economic growth. Second, there are other factors, such as FD, that have an impact on how ER and economic growth are related (Aghion et al., 2009; Alagidede & Ibrahim, 2017; Bianco & Loan, 2017; Ioan et al., 2020; Ndambendia & Hayky, 2011; Vo et al., 2019).

Some studies support the positive impact of ERV on economic growth because it stimulates domestic industries through import substitution, enhances export competitiveness, and encourages economic diversification (Friedman, 1953; Katusiime et al., 2016; Kočenda et al., 2013). Some studies suggest the negative effect of ERV on economic growth due to macroeconomic instability, uncertainty and risk, consumption volatility, inflation, and depreciation of currency, which raise the debt burden (Kandil, 2004; Schnabl, 2009; Vieira 2013). The insignificant impact of ERV on economic growth is supported by (Aristotelous, 2001; Bleaney & Greenaway, 1998; Campa & Goldberg, 1995).

This study empirically investigates the joint role of ERV, GLOB, and economic growth in selected developing countries. Although many prior studies investigated the impact of ERV, and GLOB on economic growth separately, we considered the combined impact of ERV, GLOB, and economic growth in a single framework.

As far as the concept of TO is concerned, the literature supports the view that TO can help to improve economic growth. According to neoclassical growth theory, TO encourages capital accumulation and enhances resource allocation, leading to better economic growth (Helpman, 1984; Rodrik, 1998). Moreover, the new growth theory suggests that TO primarily enhances the quality of economic growth by stimulating technological advancements and increasing productivity (Romer, 1986).

TO leads to increased economic growth by enhancing productivity, leading to economies of scale and specialization in production. TO brings innovation and competition among local firms to use resources efficiently, and due to innovation country achieve the efficiency in production (Hadhek & Mrad, 2015; Nguyen et al., 2018). TO is a critical aspect of economic development for developing countries. It describes the extent to which a nation engages in international trade by exporting and importing goods and services.

Many developing countries have implemented policies to promote TO to boost economic growth, reduce poverty, and improve living standards. The benefits of TO include increased access to foreign markets, increased competition, technology transfer, and economies of scale. However, the effect of TO on growth is not straightforward. It may vary depending on various conditions, such as the structure of the economy, the degree of development, and the policies and institutions in place.

TO accelerates economic growth in different ways. The traditional trade theory explains that comparative advantage arises due to increased efficiency in production. However, consumption rises due to increased competition and increased availability of goods and services at lower prices. Trade may enhance growth through saving channel. Higher saving rates and technology transfer increase the accumulation of physical and human capital (Baldwin, 1992).

The contrasting results observed in previous literature on the linkages between TO and economic growth. The first strand of literature provides evidence that TO positively affects economic growth. It enhances efficient resource allocation, technology transfer, product diversity, and economies of scale (Edwards, 1992; Sinha & Sinha, 2000; Wacziarg, 2001). The second strand of literature supports the hindering impact of TO and economic growth due to many reasons like macroeconomic instability by boosting inflation, depreciation of exchange rate (hereafter ER), and low tariffs make imports more desirable (Batra & Slottje, 1993; Levine & Renelt, 1992; Rodrik, 1992).

Hence, it can be said that no definitive consensus has been reached on the impact of TO on economic growth based on previous studies. The empirical literature frequently fails to produce consistent results despite the strong support of the theoretical idea, which enhances growth. This study examines how three factors, GLOB, TO, and economic growth work together in selected developing countries. While previous research has examined the effects of GLOB and TO on economic growth individually, we are exploring their combined impact within a single framework.

Similarly, to ERV and TO, the concept of FD is also extensive. The earlier studies have also contended that the effect of GLOB on growth is conditional on FD. GLOB

generates opportunities for new markets for many economies. Domestic economies must require a lump-filled capital investment to take advantage of those opportunities. Thus, FD plays a significant moderating role in the nexus of GLOB to economic growth. FD indicates the performance of the market and financial institutions of the economy. FD boosts investment, helps in the efficient allocation of financial resources, and brings long-term growth (Law et al., 2013; Ranjan & Agrawal, 2011).

This argument supports the view that FD is considered an engine of economic growth based on the studies of (McKinnon, 1973; Shaw, 1973). FD promotes economic growth for developed and developing countries. FD discourages long-run growth, because developing countries deal with many challenges like financial resources constraints, poverty, and income inequality problem. So this shows that FD is important for developing countries because that creates growth differences between developed and developing economies across the globe (Levine et al., 2000).

The FD can increase savings and investment decisions as well as the effective use of capital, which can raise the benefits of GLOB through the role of foreign direct investment (hereafter FDI) (Batten & Vo, 2009; Beck & Levine, 2005; Hammudeh et al., 2020; Hermes & Lensink, 2003). This study covers this gap by exploring all channels important for the nexus of GLOB growth. Limited studies examine the impact of GLOB in boosting economic growth through raising social and human capital, an inflow of FDI, FD, and technology improvement (Agenor, 2003; Rourke & Williamson, 2001). One expectation by Hammudeh et al. (2020) findings conjecture that the effect of GLOB on growth is stronger in the presence of developed FD and higher the institution's quality but found an insignificant effect for developing countries. In this study, we examine how three factors, namely GLOB, FD, and economic growth, work together in certain developing countries. While previous

research has looked at the effects of GLOB and FD on economic growth individually, we take a different approach by studying their combined impact within one framework.

Our study empirically establishes a relationship between the concepts we have discussed ERV, TO, and FD and how they are connected to GLOB and the economic growth for selected developing countries. Although numerous previous studies have highlighted the significance of these factors in the growth process of developing countries, we have brought together these insights and integrated them into a unified and cohesive framework for analysis. Thus, we do a comprehensive study on the impact of GLOB, its dimensions and its aspects on economic growth through the above-said channels. No study analyzed the joint impact of GLOB, its three dimensions, and its aspects on economic growth through ERV, TO, and FD channels.

1.2 Rationale of the Study

The association between GLOB and economic growth are a matter of debate because existing theoretical and empirical literature has not produced conclusive results. The prospects of GLOB on growth are well known. While the immediate effects may be negative due to resources utilized inefficiently and because of comparative disadvantage, when resources are utilized in productive way, this leads to increased economic growth (Falvey et al., 2012). Long-term effects on growth come through improving factor productivity, technology, and innovations (Kim & Lin, 2009).

Our first objective is to analyze the impact of overall GLOB, its three dimensions such as economic, social, political, and both aspect like as de facto and de jure on economic growth for developing countries. De facto measures the actual flow this aspect measures the tangible and practical elements of GLOB that occur in reality. but

de jure measures the conditions and policies which facilitates the actual flow. It encompasses the formal rules and commitments that countries adopt to manage and engage in GLOB. Differentiating between de jure and de facto variables aids in comprehending the pragmatism of GLOB-related economic policies and institutions. De facto GLOB can be seen as the outcomes of de jure policies. Effective policies (de jure) ideally enhance de facto GLOB. The existing literature on the linkages between GLOB and economic growth like Ying et al. (2014), Barry (2010), Kilic (2015), Gurgul and Lach (2014), Zahonogo (2018), and Suci et al. (2015) give limited insight for the dimensions of GLOB but did not analyze the different aspects of GLOB. Our study aims to build up and extend the prior research by adding the analysis for the both aspects de facto and de jure of GLOB on economic growth.

To investigate the channels of ERV, TO and FD is essential to understand the complex dynamics of GLOB and its impact on economic growth. Each of these factors play a significant role in shaping the economic landscape of countries and their integration into the global economy. We are interested in analyzing the channels of ERV, TO, and FD on economic growth in the context of GLOB for several reasons. First, fluctuations in ER can significantly affect trade, investment, and overall economic stability, making it crucial to understand their relationship with economic growth. A more volatile ER reduces the imports, conversely increasing the production of tradable domestically, reducing foreign savings. This knowledge will help us to develop effective policies to manage risks and seize opportunities.

Our second objective is to analyze the impact of overall GLOB, its three dimensions and its both aspects on economic growth by considering the role of ERV. A limited work has been done on it. The earlier study by Gaies et al. (2020) analyzed the impact of financial GLOB on economic growth through the spillover effect of ERV for 72

developing countries from 1971-2011. Our study is different in the three ways. Firstly, we take overall index of GLOB instead of taking just one component of GLOB like the impact of financial GLOB on economic growth. Secondly, our study also analyzed the three dimensions of GLOB and their interaction with ERV while analyzing the GLOB and economic growth relationship. Thirdly, we go into more depth by analysing both defacto and dejure aspects of GLOB on economic growth by considering the role of ERV.

Second, trade is crucial in boosting economic growth by helping countries to allocate resources effectively, encouraging them to focus on what they do best, promoting innovation, and creating more market opportunities globally. Moreover, TO has allowed countries to exchange goods and services across borders, facilitating innovation and technological improvement (Berg & Krueger, 2003; Lucas, 1988). The ability of a country to absorb new ideas and technologies depends on its absorption capacity, which depends on its level of human capital and technological advancement (Fagerberg, 1994; Verspagen, 1991). Studying the linkages between TO and growth is vital to identify the benefits and challenges of global integration. This understanding will guide us in formulating policies and strategies that maximize the enhancing effects of TO on economic growth.

Our third objective is to analyze the impact of overall GLOB, its three dimensions and its both aspects on economic through the role of TO. In this context the previous study by Aka (2006) analyzed the direct impact of GLOB and TO on economic growth. Our study is different in three ways. Firstly, he analyzed the direct impact of GLOB and TO on economic growth but we analyzed the impact of GLOB, its dimensions and both aspects on economic growth through the channel of TO. Secondly, he analyzed one country and we have used the panel data set of 46 developing countries. Thirdly,

he has used VAR model for analysis but we are using Sys.GMM method for panel analysis.

Third, in a globalized world, FD facilitates economic growth. As countries become more interconnected, financial markets become crucial for capital flows and investment. The linkages between FD and economic growth show how financial systems promote innovation, resource allocation, and overall economic efficiency. This knowledge will help us design policies that foster sustainable and inclusive growth.

Our last objective is to analyze the impact of overall GLOB, its three dimensions, and its both aspects on economic growth through the role of FD. In this respect, there is limited work has been done in literature. Kandil et al. (2017) analyzed the direct impact of GLOB and FD on economic growth. In this context, our study is different in three ways. Firstly, they analyzed the direct impact of GLOB and FD on economic growth but we analyzed the impact of overall GLOB, its three dimensions and both aspects on economic growth through the channel of FD. Secondly, their analysis is based on India and China but we take the panel data set of 46 developing countries. Thirdly, they employed cointegration approach for their analysis.

Therefore, we are interested in more than just understanding the individual importance of ERV, TO, and FD in promoting economic growth. We also want to explore how these factors interact and affect the GLOB-growth nexus. Specifically, we separately probe the moderating effect of ERV, TO, and FD on the nexus of GLOB-economic growth. Our contribution to the literature is by combining the three strands of literature. For this purpose, these linkages investigate from 1980 to 2018 for 46 selected developing countries from the World Bank criteria.

The reason behind investigating ERV, TO, and FD in the domain of GLOB and EG is that they are of great importance in shaping the economic dynamics. ERV significantly impacts trade and investment by affecting the stability and predictability of returns, which in turn influences business decisions. High volatility can deter effect on foreign investment and trade, while stable ER foster economic growth by providing a predictable environment. Additionally, fluctuations in ER can lead to inflationary pressures and affect the competitiveness of a country's goods and services in the global market. Understanding this channel is crucial for policymakers to manage inflation and enhance competitiveness.

Furthermore, stability in ER is closely linked to overall macroeconomic stability, which is essential for sustained economic growth. Investigating this channel can reveal strategies for countries to mitigate the adverse effects of ERV. TO allows countries to access larger markets, achieving economies of scale and production efficiency, which spur economic growth. It facilitates the transfer of technology and knowledge, fostering innovation and productivity. Exposure to international competition drives domestic firms to become more efficient and innovative, while promoting the efficient allocation of resources based on comparative advantage, enhancing overall economic productivity and growth.

A well-developed financial system mobilizes savings and allocates capital to productive investments, supporting economic growth and facilitating access to finance for businesses and entrepreneurs. It provides instruments for managing globalization-related risks, such as currency fluctuations and international trade risks. FD also promotes financial inclusion, enabling broader participation in economic activities, and supports higher levels of investment in research and development, driving innovation and long-term economic growth. Taken together these channels provide a

holistic understanding of how GLOB as a process can either promote or slow down EG through chain reactions.

The current study's findings will provide valuable guidance to policymakers in developing effective strategies that harness the benefits of GLOB while managing its risks. Additionally, this research will advance academic discussions and enhance our understanding of the complex linkages between GLOB and economic growth.

1.3 Objectives of the Study

This study aims to empirically explore the impact of GLOB on economic growth through three channels, i.e., ERV, TO, and FD. The main objectives are

1. To investigate the linkage between GLOB, its dimensions, its aspects, and economic growth of selected developing countries.
2. To analyze the effect of GLOB on economic growth through the channel of ERV of selected developing countries.
3. To explore the impact of GLOB on economic growth through the role of TO of selected developing countries.
4. To analyze the effect of GLOB on economic growth through the channel of FD of selected developing countries.

1.4 Research Questions

The main questions to be answered by the study are under

1. Does GLOB, its dimensions, and its aspects significantly impact economic growth?
2. Does the ERV strengthen the impact of GLOB on economic growth?
3. Does the TO have any significant impact on GLOB on economic growth?

4. Does the FD strengthen the impact of GLOB on economic growth?

1.5 Research Hypotheses

Below are the main hypotheses that we need to test through empirical analysis

1. Globalization positively impacts the economic growth of developing countries.
2. The role of ERV weakens the nexus between GLOB and economic growth.
3. The impact of TO complements the association between GLOB and economic growth.
4. The channel of FD weakens the linkages between GLOB and economic growth.

1.6 Significance of the Study

The empirical studies do not indicate GLOB- growth nexus through the role of ERV, TO, and FD. That leaves little guidance on the growth-enhancing effects of GLOB for developing countries. Moreover, the literature lacks an empirical attempt to assess the linkages of three channels with GLOB impacting economic growth.

GLOB is a complex-historical idea having economic, social, and political dimensions. Variables in the de-facto aspect represent actual flows and activities, whereas variables in the de-jure aspect represent theoretical economic policies (Gygli et al., 2019). Numerous studies explain the relationship between GLOB and economic growth. Although the existing empirical literature is ambiguous on the linkages between GLOB and growth, several empirical studies conjecture that GLOB and its dimensions have a stimulating effect on economic growth (Egbetunde & Akinlo, 2015; Gurgul & Lach, 2014; Olimpia & Stela, 2017; Samimi & Jenatabadi, 2014).

However, other studies exhibit the hindering effect of GLOB on economic growth (Barry, 2010; Musila & Yiheyis, 2015).

The motivation of this study is to analyze the empirical linkages of GLOB, its three dimensions (economic, social, and political), and its aspects (de-facto and de-jure) on economic growth in the panel of selected developing countries is that although GLOB does enhance the competition, yet it is not clear if the economy will get significant benefit from it or not. The general opinion about GLOB is that it not only gives development opportunities but also brings new risks and challenges.

1.7 Structure of the Study

The rest of the chapters is organized as follows. Section 2 briefly describes the existing empirical literature on the effect of GLOB on economic growth, ERV, TO, and FD on economic growth. Section 3 highlights the theoretical framework, empirical modeling, estimation techniques, data sources, and variables construction. Section 4 explains the empirical results, and 5 discusses the conclusion and policy implications.

CHAPTER 2

LITERATURE REVIEW

Numerous theoretical and empirical studies exist in the literature; the most important efforts need to be reviewed in more depth. This section intends to review the literature. We have organized the literature into six sections. The first section focuses on exploring the connections between GLOB and economic growth. The relationship between ERV and growth is discussed in the second section, The third section provides an overview of empirical studies exploring the TO and growth relationship. Last, the fourth sections address the linkages between FD and growth.

2.1 Globalization and Economic Growth

We divide the literature into three broad ways; first, the literature linked the impact of overall GLOB on growth. Second, the literature related to the effects of the dimensions of GLOB on growth. Third, the section related to both aspects of GLOB on growth.

The relationship among GLOB and economic growth has been considered an important area in research. Although, existing literature reports mixed results regarding the linkages between GLOB and economic growth. Some studies show a positive relationship of GLOB on growth, and some show a negative impact of GLOB and economic growth. The positive impact of GLOB on growth is supported by (Incekara & Savrul, 2012; Kose et al., 2009; Potrafke, 2015; Quinn et al., 2011; Rao & Vadlamannati, 2011; Sa'idu et al., 2014; Samimi & Jenatabadi, 2014; Villaverde & Maza, 2011; Yahya et al., 2019). The negative impact of GLOB and growth nexus are

supported by (Ahmed, 2013; Baddeley, 2006; Bagwati, 1998; Gourinchas & Jeanne, 2013; Stiglitz, 2002; Türedi & Altiner, 2016).

In this perspective, Kose et al. (2003) explain that a country is attaining a higher GDP growth rate which has more open to the financial market compared to the closed one. Moreover, Villaverde and Maza (2011) find the same positive results for 101 developed and developing countries over the period 1970-2005 by using the KOF index of GLOB, by using the methods of generalized method of moment (hereafter GMM) and ordinary least square (hereafter OLS). They emphasize that GLOB brings convergences of income among the countries. Further, GLOB leads to rapid improvement in technology, global integration of financial markets, and low cost of information helps to confirm growth in investment and productivity, efficient resource allocation, and full level of employment, these boost the rate of economic growth of the country (Incekara & Savrul, 2012).

Potrafke (2015) highlights that after World War II high-income countries and Asian developing countries show high growth which is considered as the benefit of GLOB. In addition, the benefits getting from GLOB affect a country's development level. The reason behind inconclusive results may be due to different handling of GLOB, difference in emergence due to the complicated components of GLOB and its different aspect like economic, political, and social. Moreover, countries that have different characteristics such as political, cultural, and social are considered important determinants of obtaining different results. Moreover, Chang et al. (2011) took a structured break in their analysis regarding the influence of the KOF GLOB index on economic growth for G-7 countries for the period 1970-2006. The results indicate that there is a long-run linkages between GLOB and economic growth.

Rao and Vadlamannati (2011) use panel data analysis regarding the association among GLOB and economic growth in 21 African countries by using fixed-effect model (hereafter FEM), random effect model (hereafter REM), and GMM and find that GLOB positively affects economic growth. This study based on time-series data analysis during the period from 1974-2004 for Thailand, Malaysia, Philippines, and India. The results reveal that GLOB has a dissimilar effect on economic growth depending upon the level of GLOB. A higher level of GLOB attains higher economic growth.

Moreover, Quinn et al. (2011) investigate the sample of 189 countries through the GMM and conclude that higher per capita income is attain through the increase in GLOB. Samimi and Jenatabadi (2014) analyze the effect of GLOB on economic growth over the period from 1980-2008 for OIC countries. Their results suggest that the impact of GLOB on growth dependent on the income level. Higher-income countries get more benefits from GLOB. Moreover, if the country's financial system has well-developed and human capital is at higher level than the benefits gain from GLOB increase.

The direct impact of GLOB on economic growth through trade. GLOB enhances economic growth in developing economies by enhancing the domestic markets efficiency, increasing the volume of global trade, and enhancing competition in the international market, investment, and productivity. It also sources to reduce poverty and income inequality. This perspective is recognized as the Washington Consensus which is supported by two international organizations such as World Bank (WB) and International Monetary Funds (IMF) (Rao & Vadlamannati, 2011).

Sa'idu et al. (2014) investigate the short-term and long-term linkages between the GLOB factors and economic growth, including TO, external reserve, foreign exchange, and net foreign indebtedness. Moreover, Yahya et al. (2019) analyze the association among GLOB and growth for SAARC countries, including one additional corruption variable. Both studies concluded that GLOB positively affects economic growth. While corruption is harmful for the process of growth because it has adversely affected growth.

The effect of GLOB in economic growth was analyzed through the role of technology and innovation for 139 countries from 1970-2009 using the Sys.GMM. Through this channel the strong evidence regarding the benefit of financial GLOB on productivity and GDP growth. In particular, the developing nations achieved the desired goal of benefits of financial GLOB on growth through technology transmission. However, if foreign capital consists of external debt then it may be not compulsory for technology spillover and growth (Kose et al., 2009; Neto & Veiga, 2013).

Stiglitz (2002) highlights that a country faces many problems like institutional, moral hazards, monopolistic tendencies, and adverse selection that limited the scope of GLOB (Baddeley, 2006). However, the detrimental effect of GLOB on economic growth is due to higher income inequalities, raising the risk of crises especially when financial institutions are less developed, and excessive movement of capital raises the chances of external shocks (Türedi & Altiner, 2016).

Economic growth is affected by international integration through three main channels which are as follows: The world's allocative efficiency improvement, risk diversification, and financial markets development through risk-sharing between countries (Ibrahim et al., 2016). The positive financial impact on growth is supported

by (Bekaert et al., 2005; Bong & Premaratne, 2019; De Nicolò & Juvenal, 2014; Henry, 2000; Klein & Olivei, 2008; Vithessonthi & Tongurai, 2012). The negative impact of financial integration is supported by (Ahmed, 2013; Ahmed, 2016; Bagwati, 1998; Gourinchas & Jeanne, 2013). The insignificant impact is supported by these studies (Ahmed & Mmolainyane, 2014; Edison et al., 2002; Gourinchas & Jeanne, 2013).

Financial integration is mostly linked with developed financial markets (Ibrahim et al., 2016; Volz, 2016). During several decades, a major change has been noticed in financial markets because of financial GLOB which makes more integrated global financial market. The results of financial integration are amazing as discussed in many economies promptly a decrease in capital control (Chen & Quang, 2014). Financial integration enhances economic growth through the removal of capital control along with the efficient allocation of capital (Baele et al., 2004).

Financial integration has a positive and significant effect on economic growth through the absence of control which raise economic growth, whereas capital control and liberalization restrictions negatively affect economic growth. So, financial integration affects economic growth directly as well as indirectly because it is paired with the other components of economic growth. Consequently, policies that support financial integration can promote the economic growth. On the other side that policies are not favorable for financial integration discourage economic growth (Ehigiamusoe & Lean, 2019). However, De Nicolò and Juvenal (2014) analyze 48 countries for the period covering 1985-2008 and find that financial integration and financial GLOB are link with high growth, lower volatility in growth, and lower productivity activities of the country.

Many studies have emphasized catching the components that decide a nation's FDI desirability. FDI may be either market-oriented or export-oriented. The market-oriented FDI emphasizes on the market size but export-oriented FDI emphasizes on host country's cost competitiveness (Economou et al., 2017).

The studies analyzed the components of FDI for developing countries are TO, economic growth, inflation, exchange rate, and infrastructure, communication on FDI, economic and political instability, institutional variable market size, and human capital. Non-traditional components of FDI have shown a significant impact. Moreover, traditional components of FDI institutional variables and political risk have also shown significant effects on FDI inflows in developing economies (Benassy et al., 2007; Busse & Hefeker, 2007; Economou et al., 2017; Iwai & Thompson, 2012; Kok & Ersoy, 2009; Krifa & Matei, 2010; Mottaleb & Kalirajan, 2010; Noorbakhsh et al., 2001; Ranjan & Agrawal, 2011; Sekkat et al., 2007).

The effect of FDI fundamentally relies upon the kind of activities it funded. FDI in various structures, or a similar structure yet in various monetary environments, is likely to influence FD unexpectedly (Borensztein et al., 1998; Combes et al., 2019; Wooster & Diebel, 2010). For example, in lower-pay African states or natural assets-rich economies where FDI is related to natural assets extraction, it might obstruct the divergence of the manufacturing sector and eventually hurt development despite what might be expected, FDI moved in the manufacturing sector, similar to the case in most Asian countries, can improve development by the utilizing an ease talented work power (Combes et al., 2019).

The effect of FDI on prices of non-tradable assets fluctuates with the particular type of activities that financial flow is related to. The import of equipment and machinery

are linked through FDI and it is a slight chance to constantly appreciate the real ER. The technology spillover and management skills are related to FDI. Better management and improved technology lead to a raised productive capacity that puts less weight on cost (Agenor, 1998; Kinda, 2012; Kinda, 2014; Smarzynska Javorcik, 2004).

The second strand of literature which focuses on the impact of dimensions of GLOB on growth. Although, the literature generally shows a positive correlation between GLOB and economic growth, it is worthwhile to note that not all of the aspects show the direct relationship (Dreher et al., 2008; Kilic, 2015; Rao & Vadlamannati, 2011). The effects from its social and political dimensions are not at all obvious, even though its economic dimension typically has a beneficial impact on growth (Kilic, 2015; Ying et al., 2014). While, some empirical studies have concluded that SGLOB has a boosting effect on economic growth (Gurgul & Lach, 2014; Marques et al., 2017).

Others have come to the opposite conclusion (Kilic, 2015; Rao & Vadlamannati, 2011; Ying et al., 2014). Dreher (2006) introduces a new composite index of GLOB which is KOF to examine the influence of GLOB on economic growth for 123 developing economies during the period from 1970-2000 and find that GLOB's two dimensions (economic and social) increase economic growth. While, its political dimension has no such effect on economic growth.

Similarly, when it comes to the political aspect of GLOB, some scholars suggest that it has a beneficial influence on growth (Kilic, 2015). However, others claim that it has a detrimental impact (Ying et al., 2014), or perhaps no influence at all (Gurgul & Lach, 2014). There are not many examples where GLOB and all its dimensions show a beneficial impact on growth (Villaverde & Maza, 2011). Consequently, we can

conclude that their findings are inconsistent in this regard. The econometric methods employed, the sample and period selected, the country-specific effects, the dimensions of GLOB selected by researchers to be included in their estimations, and whether they have chosen to use levels or growth rates are some of the explanations given for such a diversity of results (Potrafke, 2015). The income levels of the various nations might also be cited as a contributing factor to the discrepancy in the findings (Majidi, 2017; Samimi & Jenatabadi, 2014).

Kilic (2015) analyze the overall influence of GLOB on economic growth for 74 developing nations from 1981-2011 and concludes that EGLOB and PGLOB has positively affected economic growth but SGLOB has an adverse effect on economic growth. Moreover, the results support the view that for developing countries EGLOB and PGLOB is more helpful in the process of growth compared to SGLOB. Developing countries need to improve their participation in international trade and FDI. PGLOB improves through participation in political decisions in the context of the international arena. These results support by Ying et al. (2014) analysis of ASEAN countries and conclude that EGLOB has a significant and direct effect on growth for ASEAN countries but PGLOB has an inverse effect on growth.

However, the effect of SGLOB on growth is insignificant. Tsai (2007) finds that overall GLOB has a positive and significant influence on human development. PGLOB has a positive effect but SGLOB and EGLOB do not produce a positive impact when regional differences and levels of development have functioned as control.

The third strand of literature on the aspects of GLOB, there is only one study Bataka (2019) which distinguished among both aspects (de-facto and de-jure) of GLOB for

40 African economies. The results support the view that de-jure GLOB leads to growth. However, de-facto tends to hinder economic growth. The evidence suggests that de-jure EGLOB, and SGLOB have positive on growth. However, de-facto SGLOB, de-jure PGLOB do not have a significant on growth. Further, the de-facto PGLOB actually slow down the process of growth. Overall GLOB has a boosting impact on growth but if certain aspects are not properly managed, it can have negative effects on economic growth.

After reviewing numerous studies about the linkages between overall GLOB and economic growth. However, the results and conclusions of the previous studies have been inconsistent. The findings have been varied and inconclusive. The reason behind inconclusive results may be different proxies of GLOB. The difference in emergence due to complicated components of GLOB and its different aspects like economic, political and social.

Moreover, countries that have different characteristics, cultural, and social are considered important determinants of obtaining different results. There are still gaps in the literature according to our knowledge that the impact of the GLOB index KOF (2018) on economic growth for developing economies, the linkages between GLOB and state fragility determinants which consider GDP per capita, investment, government expenditure, human capital, TO, and inflation. The impact of GLOB on economic growth by making the change in attributes a regional integration comparison of the different regions like Asia, Africa, and Pacific America. Impact of GLOB on socio-economic development which is measured with indicators, such as GDP, life expectancy, literacy, and level of employment.

2.2 Exchange Rate Volatility and Economic Growth

The existing empirical studies on the impact of ERV on economic growth is inconclusive. There are many types of literature in the context of ERV on growth. First, explains through the regime of the ER. Second, the positive impact of ERV on growth. Third, show the negative affect of ERV on growth. Fourth, explain the insignificant impact of ERV on growth. Fifth, explain the relationship of ERV on economic growth through different channels, perspectives, and country-specific factors.

First strand of literature explains in the context of different ER regimes. The importance of different regimes of the ER on economic growth arises in the era of Friedman (1953), Mundell (1961), and Humphrey (1974). The supports of a flexible ER highlight the advantage of volatile exchange in the presence of asymmetric real shock (Arratibel et al., 2011; Levy-Yeyati & Sturzenegger, 2003; Mundell, 1961). When a country is hit by asymmetric real shocks the outcome of the shock on price and wages both are adjusted slowly but international prices are comparatively adjusted faster in the presence of a flexible ER regime that compensates for the output loss (Mundell, 1961).

The second argument is that an economy behaves differently to asymmetric shock and common shock so independent and strong monetary and ER policies can help to smooth the output adjustment in the shock (Bayoumi & Eichengreen, 1993). Mundell (1961) is the first researcher who focuses on the volatility of ER in the context of the free movement of capital. A flexible ER regime is preferable rather than a fixed one in the context of financial openness. Moreover, targeting growth and price stability are

considered as in trade, and financial openness which is external objectives of macroeconomics.

McKinnon (1973) furthermore explains that the nominal ERV is an increase in the presence of capital inflow in the short term but does not explain what is short term neither defines the extent of the nominal ER which is managed by the government. Tille (2008) highlights the importance of monetary shocks in the open economies that are produced by financial GLOB, also verifies that the ER destabilizes due to monetary shocks and when there an international flow of bonds rather than equity it may become more severe.

The first argument in support of a fixed ER regime is that its stability in the nominal ER stimulates growth through the channel of trade (Frankel & Rose, 2002; Rose, 2000). The important argument for a fixed ER regime is that it reduces uncertainty which enhances price transparency and at the international level price mechanism is efficient (Aghion et al., 2009; Schnabl, 2008).

Edwards and Yeyati (2005); Mundell (1961), and Mahmood et al. (2011) supporters of a free market economy argue that a domestic economy with adjustment to real shock with minimum output losses has boosting effect on growth. But the excessive volatility in the ER has an adverse effect on growth by slowing down the macroeconomic performance. Moreover, higher volatility in the ER boosts an uncertain investment environment. Bagella et al. (2006) supported that flexible ER regime countries have additional benefits compared to countries with fixed ER regimes because flexible ER have more capacity to absorb shocks. However, the fixed ER is suitable for macroeconomics because it diminishes uncertainty and promotes

investment and international trade as a result leads to growth (Frankel & Rose, 2002; Katusiime et al., 2016).

Barguelli et al. (2018) analyze the effect of ERV on economic growth through the role of different regimes of ER and financial openness for emerging and developing countries from 1985 to 2015. The results suggest that real and nominal ER has a negative and significant effect on economic growth. Those countries that have flexible ER regimes experienced an inverse impact on economic growth but those countries who have fixed ER regimes have insignificant impact on economic growth because economic agents had fear of uncertainty about ERV so they postpone their investment and trade operation that's why having an inverse impact on growth.

However, in the case of a fixed ER, the uncertainty is limited as a result of not having an effect on economic growth. Finally, by incorporating the effect of financial openness in explaining the relationship of ERV on economic growth the results support the negative effect but this negative effect is stronger in the presence of financial openness.

The empirical literature on ERV and economic growth has mixed results. Some studies support the positive impact of ERV on economic growth (Edwards & Yeyati, 2005; Friedman, 1953; Katusiime et al., 2016; Kočenda et al., 2013; Mahmood et al., 2011). Studies support the negative relationship between ERV and economic growth (Aghion et al., 2009; Arratibel et al., 2011; Barguelli et al., 2018; Janus & Riera, 2015; Morina et al., 2020; Mundell, 1961; Schnabl, 2008; Schnabl, 2009; Umaru et al., 2018; Vieira 2013). Studies find not any significant relationship among ERV and economic growth (Aristotelous, 2001; Bleaney & Greenaway, 1998; Campa & Goldberg, 1995; Darby et al., 1999; Ghosh et al., 1997).

Schnabl (2009) support the inverse association among ERV on economic growth in Asia and several European countries. In the same way, Vieira (2013) also confirms the existence of the adverse impact of ERV on economic growth for 82 countries which consist of developed and emerging economies. Moreover, the empirical results also suggest that the volatility is related to the instability of macroeconomics and for boosting economic growth ER stability is important. Thus, the ERV is hindering economic growth. Kandil (2004) investigate the ERV on growth and inflation in developing countries. The results support that volatility of ER and deprecation has a negative effect on growth. In the long term, the anticipation about the exchange rate may increase inflation and reduce growth.

Alagidede and Ibrahim (2016) examine the causes of volatility in the real ER and its impact on economic growth in Ghana. Domestic shocks bring ERV which affects the supply and demand. They also find that for the long-term economic growth volatility in the real ER is deleterious for growth. Schnabl (2008) finds an inverse association among ERV and economic growth for the less developing economies where there is an underdeveloped capital market and high macroeconomic instability.

Moreover, Morina et al. (2020) also find the inverse impact of ERV on the economic growth of CEE countries. The ERV is measured from two different measures z-score and standard deviation. Both measures support that the ERV has negatively affected the economic growth of CEE countries because of the adaption of the euro from 2002-2018. They analyze the ERV on economic growth through three factors like through investment, trade, and macroeconomic stability. The two channels are investment and macroeconomic stability show the inverse influence of ERV on economic growth but the third channel which is trade have not statistically significant. To check the influence of ERV on the economic growth of OECD countries over the period 1980-

2001. Further, Dollar and Kraay (2003) analyze the association between ERV on growth and found a negative relationship exists for developing countries.

According to Bosworth et al. (1995) who examine the factors that influenced economic growth in 88 industrialized and developed nations between 1960 and 1992, ERV has a negative impact on output growth by slowing of factor productivity. Aghion et al. (2009) suggest that in a country that has less developed financial markets if the FD of a country is less than a certain threshold level then the productivity growth is negatively associated with real ERV. The advantage of this study we are using panel data set instead of cross-sectional data set, their identification strategy assumes that the volatility of real effective ER and interaction of FD is not correlated with the error term of future realization.

Janus and Riera (2015) explain an inverse association among real ERV and economic growth by employing instrumental variables. Moreover, Thorsten and Daniel (2015) examine the real ERV on economic growth for OECD countries. Here, the instrument real effective ERV with the measure of trade volatility of a commodity for correcting the potential endogeneity. Although it is not clear that the volatility of REER is linked with the volatility of trade is the only mechanism for growth. They conclude that volatility in REER has an inverse influence on economic growth for OECD countries.

Studies supported that ERV has insignificant impact on growth (Aristotelous, 2001; Bleaney & Greenaway, 1998; Campa & Goldberg, 1995; Darby et al., 1999; Ghosh et al., 1997). Among the empirical studies reporting the association among real ERV and economic growth, Ghosh et al. (1997) find insignificant linkages exists among volatility and growth by considering a sample of 140 countries, under the pegged ER regime trade growth is lower and investment is higher. Aristotelous (2001) investigate

the ERV and regime for the export of British to the USA for ten years 1989-1999, he finds that both volatility and regime have not affected export.

Over time different approaches have developed to explain the indirect linkages between ERV and growth. The previous studies find that some important determinants of economic growth like trade and investment have been negatively affected by ERV. Too much volatility in the ER may cause a delay in investment in that case when there is an irreversible investment decision and a higher cost of adjustment to ERV (Goldberg & Kolstad, 1994; Katusiime et al., 2016). The mixed results of the effect ERV on growth attributed due to many factors, such as FD, institutional settings, physical, and human capital, and (Frankel & Romer, 1999; Husain et al., 2005; Katusiime et al., 2016; Schnabl, 2008).

Combes et al. (2019) examine the impact of financial flows on the real ER and the economic growth for middle and lower-income countries for the period 1980-2012 by using the GMM method for the dynamic panel. Their findings suggest that financial flows have both effects direct as well as indirect. The direct effect of these flows is seen through the appreciation of real ER which sparks economic growth irrespective of the development of the country.

Moreover, the indirect effect of financial flows through remittance is if real ER appreciated then the effect of remittance on growth is more relative to the effect of foreign aid and FDI. However, aid does not prompt appreciation for the ER, specifically in moderately all-around oversaw economies. Likewise, aid beneficiaries need to spend these money-related assets carefully on the quality of an institution for transparency and accountability (Elbadawi et al., 2012).

Growth is positively affected by capital market efficiency which is gained through efficient allocation of capital, lower cost of the transaction, and price transparency (McKinnon, 1973). The lower volatility in the ER leads to higher growth if there is an irreversible investment or credit constraint. Moreover, a fixed ER guarantees the stability of the ER and no chance of potential risk of the ER which leads to a rise in overinvestment and moral hazards in the domestic economy (Schnabl, 2009). But a fixed ER regime leads to inefficient allocation of resources by promoting protectionist behavior (Obstfeld & Rogoff, 1995).

Empirical literature does not show the direct linkages between ERV and economic growth. However, the discussion is in the context of the outcomes of economic growth and different regimes of the ER (Katusiime et al., 2016). Many empirical studies analyzed the ERV impact on economic growth through different factors and perspectives like as international trade, investment, macroeconomic stability, employment, human capital, FD, productivity, and institutional settings in addition to direct effect and causality (Morina et al., 2020; Schnabl, 2008).

Trade has a great role in explaining the relationship among ERV and growth. The studies on the association among ERV on trade (Alper, 2017; Bahmani-Oskooee & Gelan, 2018; Bostan & Firtescu, 2018; Clark, 1973; Cushman, 1986; Doyle, 2001; Franke, 1991; Perée & Steinherr, 1989; Pino et al., 2016; Senadza & Diaba, 2017; Sercu & Vanhulle, 1992; Vieira & MacDonald, 2016). In this regard, Vieira and MacDonald (2016) emphasis on the impact of REER volatility on export flows for 106 developed and developing economies between 2000 and 2011 and come to the conclusion that there is an inverse association among the two variables. According to Pino et al. (2016), exports in six Asian economies between 1974 and 2011 were affected by ERV. Their empirical study demonstrates that ERV negatively affects

exports over the long term, especially. Investments can affect economic growth through a second channel created by ERV. The literature does not give a unique result regarding the linkages between ERV and trade (McKenzie, 1999).

Theoretically, the ERV has a negative effect on trade supported by the studies (Cushman, 1986; Perée & Steinherr, 1989). An increase in ERV may decrease the trade by encouraging the market participant to invest in less risky projects due to ERV so resources are diverted to less risky activities which may reduce the trade (Clark, 1973). Perée and Steinherr (1989), emphasize that the ERV leads to a decrease the trade, especially in industrialized economies.

Vieira and MacDonald (2016) analyze the relationship between real effective ER and export for the 106 emerging and developed countries from 2000-2011 and find the negative linkages between these two variables. Bahmani-Oskooee and Gelan (2018) focus on the long-term and short-term impact of ERV on trade by using the ARDL approach for African economies from 1971-2015 using quarterly data. For forecasting ARDL is better than other approaches of cointegration results supports the ERV has more strong impact dominant in the short-run (Senadza & Diaba, 2017). As well Alper (2017) analysis the impact of ERV on the trade of Turkey to 15 European countries. The outcomes support that in the short-term reduction of export is observed due to ERV. However, in the long term, both positive and negative is observed for imports. In addition, the ERV has not affected the trade of Turkey with European countries.

Bostan and Firtescu (2018) examine the ER impact on the competitiveness of international commercial trade in Romania. They discover that although the impacts of volatility on import and export are different, the ER is thought to be a key factor in

determining trade competitiveness. The volatility for imports is weaker. However, Clark (1973), Franke (1991), Sercu and Vanhulle (1992), and Doyle (2001) empirically found that higher volatility positive impact on trade their findings are opposite from the theoretical view.

The relationship between ERV and growth is not straight forward investment has a role in explaining this above relationship. The empirical literature on ERV and investment like as Campa and Goldberg (1995), Bleaney and Greenaway (2001), Byrne and Philip Davis (2005), Aghion et al. (2009), Arratibel et al. (2011), Kandilov and Leblebicioğlu (2011), Chowdhury and Wheeler (2015) Cavallari and d'Addona (2013).

Furthermore, empirical studies on the effect of ERV and investment give mixed results. Bleaney and Greenaway (1998) find that higher ERV reduces trade because the economic agents invested in economic activities which are less risky. However, the higher ERV increases trade by providing new opportunities to economic agents. Moreover, Bleaney and Greenaway (2001) analyze the ERV for sub-Saharan African (hereafter SSA) countries over the sample of 14 developing countries and found that there is no impact on growth but have to impact on investment.

However, other studies find an inverse impact of ERV on investment (Aghion et al., 2009; Arratibel et al., 2011). Campa and Goldberg (1995) observe the adverse effect of ERV on investment in developed countries like the US because those industries which have high markup absorb the volatility of the ER by declining real investment. Moreover, Darby et al. (1999) also find an adverse impact of ERV on investment in 5 developed countries like the US, UK, Germany, France, and Italy.

Byrne and Philip Davis (2005) empirical analysis of the ERV on investment for G-7 countries finds a negative relationship between variables. Cavallari and d'Addona (2013) disclose the adverse linkages between ERV and FDI for OECD countries for the period 1985-2007.

Sharifi (2012) finds the same results for Iran. Kandilov and Leblebicioğlu (2011) conclude that ER fluctuation had a detrimental influence on industrial investment in Colombia. Moreover, Aghion et al. (2009) suggest that in a country that has less developed financial markets if the FD of a country is less than a certain threshold level then the productivity growth is negatively associated with real ERV. The advantage of this study is the use of panel rather than cross-sectional data, their identification strategy assumes that the volatility of real effective ER and interaction of FD is not correlated with the error term of future realization.

Some empirical studies conclude that the volatility in the ER causes uncertainty and reduces investment. Campa and Goldberg (1995) examine the impact of ERV investment in the US and Canada. They observe the negative impact of ERV on the investment of the US manufacturing sector because volatility brings uncertainty in investment and in the US, real investment is refused by the industries with high markups that absorb the ERV.

Arratibel et al. (2011) suggest that ERV has an inverse relationship with growth and other macroeconomic variables like the stock of FDI, and current account deficit. Higher volatility in the ER may lead to decrease investment specifically foreign investment as a result of higher risk premia and interest rates. Consumption and investment decisions are also affected by higher ERV. It may increase macroeconomic volatility. Dal Bianco and Loan (2017) conclude the negative impact

on FDI of ERV for 10 Latin American and Caribbean countries and volatility in prices are considered to be irrelevant for the sample countries. Moreover, Kandilov and Leblebicioğlu (2011) find the negative impact of ERV on the investment of the manufacturing sector in Colombia. However, Chowdhury and Wheeler (2015) find no significant relationship between ERV and investment in developed countries like the US, UK, Canada, and Germany. Several studies in empirical literature explain the negative relationship between ERV and employment.

Demir (2010) investigate the above relationship for Turkey, Feldmann (2011) examine the 17 industrial countries, and Belke and Kaas (2004) for Eastern European emerging economies. Investment decisions are affected by ERV (Arratibel et al., 2011). The empirical literature on ERV on country-specific factors, like human capital, FD, and institution setting (Husain et al., 2005; Schnabl, 2008). Likewise, aid beneficiaries need to spend these money-related assets carefully on the quality of an institution for transparency and accountability (Elbadawi et al., 2012).

The recent literature has more focused on ERV in international finance because it has a prominent impact on developing countries. Due to financial liberalization policies, most developing countries faced ERV. Moreover, developing countries have more impact on ERV because of deficiencies in financial and fiscal structure. Developing countries observed negative effects of ERV on growth due to the poor structure of financial markets.

Later, Mundell's triangle of incompatibility was revisited and empirically analyzed by Aizenman et al. (2012) for Asian economies for the period 1970-2007. The results suggest that East Asian countries hold foreign exchange reserves for the stability of their currencies on average 20 percent of their GDP. Compared to Asian countries

non-Asian countries face more volatility in ER. Al-Abri (2013) analyzed the interaction of financial GLOB, ERV, and term of trade for exporting primary products in 53 developing countries. The analysis confirms that the reducing shock on the ER in terms of trade stabilizes the ER affected by financial GLOB. This effect of stabilizing is stronger when FDI consider as financial GLOB which was earlier stated by Cufiado et al. (2006).

This effect is vulnerable because the transaction and contract use double currencies, which leads to dollarization. Hausmann et al. (2006) highlight that ERV is higher in developing economies relative to developed economies because the developing countries are primary goods exporters, and the primary goods constitute a significant share of exports. Primary goods prices are widely fluctuating in the international markets (Cashin et al., 2004; Gregorio & Wolf, 1994).

The volatility is linked with the unplanned volatility of prices in an economy. Hence, one of the main factor that affect stable economic growth is the stability of the ER, other factor includes stability of prices and FDI which are required for economic growth (Ajao & Igbekoyi, 2013; Umaru et al., 2018). Empirically few studies found the welfare effect of ERV on growth by Pallage and Robe (2003) analyzed the welfare gain in developing countries and found that the welfare gain is greater by wiping out volatility compare to an increase in growth by a percentage point. Straub and Tchakarov (2004) also in the view that the minimum volatility has a larger effect on welfare.

Gaies et al. (2020) analyze the influence of financial GLOB on economic growth through the spillover effect of ERV. There use two indicators of financial GLOB which are investment GLOB which includes FDI and portfolio investment, and

indebtedness GLOB which include foreign debt. The results predict that ERV in developing economies represses growth. Moreover, the nominal ERV seems to be a severe hurdle for the developing countries growth in the context of financial GLOB. Because developing countries suffer a lot from ERV.

To sum up, the above literature there is not given a unique consensus on the influence of ERV on economic growth. In other words, the literature on the influence of ERV on growth is inconclusive. The above literature in general agrees with the fact that lower ERV is beneficial for economic growth. Many factors affect the economy like as trade, inflation interest rate, and other country-specific factors like human capital, FD, and institutional settings. Investigating the effect of GLOB on economic growth through ERV. Based on the above literature, ERV slowdown growth in developing countries. On a theoretical basis, this happened due to less-developed financial systems. As a result, these systems cannot hedge the risk which arises due to ERV. The outcome is a decrease in investment, trade, and production.

Moreover, literature explains the linkages between ERV, and determinants of growth which effect affect ERV. To fill the gap in the literature, there is still no study on the impact GLOB on economic growth through the channel of ERV. According to the best of our knowledge, there is only one study by Gaies et al. (2020) that checks the association among financial GLOB on economic growth spillover effect with ERV.

2.3 Trade Openness and Economic Growth

This section briefly explains the TO and economic growth relationship. Economists have recognized the beneficial impact of TO on economic growth ever positive link between TO and growth is not strong. For example, Rodrik (2002) show that the direct impact of TO on economic growth in Alcala and Ciccone (2002) and Dollar and

Kraay (2003) derives from their selection to measure openness by using "real openness" rather than the conventional measures of openness, which always results in positively biased estimations of openness on growth. Additionally, it's feasible that variables left out could result in a favorable link among openness and growth (Hallak & Levinsohn, 2004; Rodriguez & Rodrik, 2000).

The openness effect on growth is moderated and becomes less substantial if one takes into account a geography metric or a measure of institutional quality. Another body of literature argues that TO can effectively promote economic growth, but only when specific policies and sectors are improved, as well as when certain preconditions are met. Rodrik (1998) suggested building up infrastructure, human capital, macroeconomic stability, development of private sector, and the rule of law for the benefits of open trade to be felt most strongly in emerging nations.

Abramovitz (1986) and Howitt (2000) support the idea that host economies should have a high enough level of "social capability" to successfully deploy technologies created in more developed economies. Lack of investment in human capital and R&D limits productivity growth by preventing less developed nations from fully utilizing technology transfers. This is necessary to properly apply technology created in more developed economies.

Numerous studies suggest that TO has a detrimental influence on economic growth, even though technology spillovers, global knowledge transfer, and allocative efficiency are easier to attain under an open trade regime. Trade liberalization places exogenous limits on economic growth claims by (De Matteis, 2004). This is particularly harmful to developing economies because it increases their reliance on global demand and makes them more susceptible to changes in those markets.

In addition, Rodrik (1992) notes that increased openness may result in macroeconomic instability by boosting inflation, depreciating ER, and triggering balance-of-payments crises, while Levine and Renelt (1992) assert that increased openness has a negative impact on domestic investments. Finally, free trade has been implicated as a major cause of economic decline. Moreover, lower tariffs resulting from trade liberalization make imports more desirable than indigenous manufactures. The home economy could lose out in this scenario (Batra & Slottje, 1993; Leamer, 1995).

Overall, it can be said that no certain consensus has been reached on the impact of TO on economic growth in light of the studies in the literature. The literature frequently fails to consistently present the same image, despite the strong theoretical support for the idea that trade growth leads to ongoing economic growth. The flawed way in which trade, as defined in terms of TO, is measured is one of the explanations for this lack of conclusive data. Studies that have already been conducted have received criticism for the quality of their data and methodologies.

Verifiable evidence of the positive impact of trade liberalization on economic growth was established through studies carried out between 1990 and 2000. To start, Dollar (1992) introduced the two indices (real ER distortion index and real ER variability) for assessing trade liberalization and discovered that open economies expanded noticeably faster than the closed economies between 1976 and 1985.

From the perspective of economic growth, the author advises developing nations should quicken the pace of trade liberalization. Furthermore, Sachs et al. (1995) present convincing evidence of the trade-growth nexus and show that open emerging economies have expanded at a pace of 4.49 percent per year whereas open advanced

economies have grown at a rate of 2.29 percent per year. Closed emerging and developed economies, have increased at 0.69 and 0.74 percent per year, respectively.

Edwards (1998) aims to identify different methods via which decision-makers may keep national economies from foreign competition. He demonstrates that open economies experience higher total factor productivity growth. According to his analysis, the results are unaffected by functional form, metrics of TO, estimation method, or time frame. Frankel and Romer (1999) principally concentrate on the endogeneity problem related to the trade-volume measure of openness by utilizing the data from the well-known gravity model of global trade. They discover a favorable association among economic growth and both real and instrumented TO. According to these results, economic development and TO are not mutually exclusive (Back et al., 2000).

The key finding of the empirical research from 1990 to 2000 is that TO and economic growth do indeed have a positive relationship. According to Edwards (1998), this positive association between TO and growth was also resilient to functional form, estimate methods, and time in addition to the openness measures. Additionally, by relying on data from the famous gravity model of global trade, Frankel and Romer (1999) groundbreaking work solved the endogeneity problem related to the trade-volume measure of openness. As a result of these advancements in the literature, policymakers and scholars now believe that TO and economic growth are positively correlated.

The literature was heading towards a broad conclusion and was commonly acknowledged that there was a direct association among TO and economic growth reported between 1990 and 2000. The publishing of a complete review titled "Trade

Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence" by Rodriguez and Rodrik (2000), however, raised doubt on the field of research.

Dollar (1992) and Sachs et al. (1995) have used openness measures which was criticized for many reasons. They have also questioned about the applied approach adopted by Edwards (1998) and the instrumentation methods used by Frankel and Romer (1999). Accordingly, the direct association among TO and economic development shown between 1990 and 2000 was either a result of improper econometric methodologies or improper econometric methodologies or a result of faulty openness measures applied in the earlier studies.

Following the strong analysis of Rodriguez and Rodrik (2000), the prior data (1990–2000) in favor of a direct association among TO and economic growth started to be questioned. Consequently, it appears that no universal agreement has been reached on the trade-growth link, and it is still unclear if TO has any effect on economic growth. To respond to the review of the positive trade-growth link found in Rodriguez and Rodrik (2000) study, supporters of free trade have attempted to analyze the criticism. Rodriguez and Rodrik (2000) criticism of the association between TO and growth has been put aside by (Warner, 2003). He contends that they have disregarded important research showing that there is a link among trade barriers and economic growth. Similarly, Jones (2000) stated that restrictions on trade have detrimental to long-term incomes.

Panagariya (2004) examines the objection raised by Rodriguez and Rodrik (2000) conclude that there is sufficient support for outward-looking policies based on cross-country growth regression. The researcher further contends that disagreements result from our inability to gauge the protective effects of a certain set of trade restrictions.

The criticism of Rodriguez and Rodrik (2000) has also been examined and claim that it is unpersuasive by (Bhagwati & Srinivasan, 2002).

According to Fiestas (2005), despite methodological problems, there is no proof that trade liberalization is bad for economic growth. After trade liberalization, Wacziarg (2001) find that the yearly growth rates were 1.5 percentage points higher for nations with liberalized trade policies throughout the period 1950–1998. These subsequent studies have made an effort to clear up the misunderstanding that was brought about by the criticism of Rodriguez and Rodrik (2000) among researchers and policymakers on the beneficial effects of TO on economic growth.

Controversies never go away, as Edwards (1998) correctly points out. The literature was produced in reaction on the criticism on Rodriguez and Rodrik (2000) first is criticized by (Rodríguez, 2007). Traditional trade policy indicators are not correlated with economic growth, according to Rodríguez (2007), which critically examines the research papers written later by (Dollar & Kraay, 2002; Warner, 2003).

However, that although there may be a connection between TO and growth, either a positive or negative link, it cannot be determined from the data alone. This suggests that the issue is not whether trade and growth have a positive or negative connection. Instead, it involves using advanced methods that can extract information from data, even if that information is not extremely strong. According to Hallak and Levinsohn (2004) the basic regression model is inadequate for capturing the connection among trade policy and economic growth.

Berg and Krueger (2003) analysis of the trade-growth literature emphasize on the research that has been conducted at cross-country, panel regressions, and industry- and firm-level. Trade has a significant impact on economic growth, according to their

analysis. By stating that TO promotes economic growth, at least over the medium term, Winters (2004) also supports this claim. However, there are some problems. After conducting a literature review, López (2005) concludes the empirical research using plant-level data explains how trade liberalization can increase economic growth and productivity for developing nations.

In a similar vein, Anderson and Babula (2008) recently concluded that there is probably a direct relationship among worldwide trade and economic growth. However, they have reservations about how well developing nations can increase productivity through trade liberalization and how endogeneity and measurement concerns are handled in empirical literature. According to Brückner and Lederman (2012), a 1% increase in openness has a 0.5 percent and 0.8 percent per year impact on short- and long-term economic growth, respectively.

Mendoza (2010) states that there is conflicting evidence linking TO with economic growth. According to Brooks and Stone (2010), trade is a significant driver of growth and infrastructure that is essential for trade. Therefore, to fully benefit from the liberalization process, it is necessary to develop excellent policies toward other economic sectors. According to Chang et al. (2009), increased openness will have a higher impact on economic growth if it is accompanied by higher human capital investment, deeper markets, and the infrastructure availability. Both financial and commercial liberalization were taken into account as signs of openness. Consequently, it is necessary to adopt proper policies for FDI (Cuadros et al., 2004).

In order to get the benefits of trade liberalization, it is imperative to concentrate on complementary measures. This is clearly representing a direct association among TO and economic growth, according to the main theme of the recent literature. TO promotes economic growth (Anderson & Babula, 2008; Berg & Krueger, 2003).

However, collectively identified certain contentious problems related to the current empirical literature. In the section that follows, we go over a few well-known problems with the literature that must be properly resolved before we can offer a consensus regarding the relationship between TO and economic growth. These problems resulted from the observed discrepancies among the researchers regarding the trade-growth connection.

The endogenous growth theory, which is based on growth of technology and accumulation of capital. This theory holds that due to a number of channels, including access to high-tech imports and learning by doing in the export of goods, economies with an outward orientation will grow more quickly and have greater economic well-being than those with an inward orientation (protectionist trade economies).

As a result of being exposed to so many cutting-edge and innovative products, local manufacturers may use novel strategies, improving the quality of home goods. Because of the vast corpus of knowledge previously accumulated in the industrialized world, TO essentially advantages emerging nation which contends that developing countries will gain more from trade with more developed countries than with less developed ones (Grossman & Helpman, 1991; Yanikkaya, 2003).

Constructing arguments against is not too difficult. For instance, reciprocal export dumplings or countries with a substantial comparative advantage in the production of commodities may exist in markets with flaws (Brander & Spencer, 1985). A decrease in the barter terms of trade may also affect developing economies, who are mostly the primary producers and exporters. This could cause regional divergence and a shift of resources from the poorest to the richest countries (Prebisch, 1950).

The existence of significant differences between developed and developing nations provides a framework for understanding the observed divergence in economic growth between trading partners, which implies that each economy's initial circumstances will determine whether it heads for an underdevelopment trap or for prosperity (Darity & Davis, 2005). In addition, Multinational Corporation (MNC) practices including subsidiaries and the threat of denying market access result in a hegemonic influence from wealthy countries over weaker states (Bhagwati & Srinivasan, 2002). Therefore, it is essential for developing countries to increase their technological capabilities, diversify their exports into manufactured items, and make investments in their people (Prebisch, 1950).

However, there is still a clear power and economic gap between developed and underdeveloped countries. Complementary reforms will also have an impact on how TO affects economic growth (Lipsey & Lancaster, 1956). For instance, in highly controlled nations, TO would not stimulate growth since resources cannot flow to productive sectors. Basically, trade grows in the creation of incorrect items under rigid economies, which hurts growth (Bolaky & Freund, 2004).

Have a look at the Harris-Todaro model Chang et al. (2009) contends that greater gains from TO would be produced by enhanced education, increased public infrastructure, flexible labor markets, and increased access to financing. However, growing inflation and corruption will offset some of the benefits of openness. If labor market distortions are minimal enough, TO will boost per capita income. The underlying assumption is that in order to obtain the benefits of global trade, complementing policies are necessary. The effect of trade liberalization on the unemployment rate will depend on how many workers are matched and employed,

which suggests the most productive agents will be able to profit from exports (Itskhoki, 2009).

Further, trade liberalization can reduce or raise pay inequality. The success of international trade agreements for developing nations is currently a hot topic in academia and politics due to a variety of problems, including outsourcing, the physical location of businesses, employee skills, and the macroeconomic and political environments.

To sum up, there is massive literature on the nexus of TO and economic growth for both developed and developing countries especially for CEE countries and African countries respectively. However, the results are still inconclusive, literature show mix results. On the best of our knowledge there is no study on the impact of GLOB on economic growth with the interaction of TO. To fill this gap, we take the GLOB, its dimensions and its both aspects on economic growth with the moderating role of TO for developing countries.

2.4 Financial Development and Economic Growth

The linkages between FD and economic growth have been studied in the literature by many researchers like Robinson (1953), Patrick (1966), McKinnon (1973), Shaw (1973), King and Levine (1993), Levine et al. (2000), Rousseau and Sylla (2003), and Bordo and Rousseau (2012) but still remain ambiguous and considered as a vital matter in literature.

The literature on FD and economic growth has attained much attention in empirical level. Generally, most empirical studies highlight that the well-organized financial system enhances the resource allocation efficiently through several ways to enhance economic growth in the long run. The first empirical study which documents the

positive relationship of FD and economic growth by Goldsmith (1969) covering 35 countries for long horizon time period 1860-1963.

The most of literature use either single or both measures of FD which capture its impact on growth either credit markets or stock markets. King and Levine (1993) and in addition to work of Goldsmith analysis the sample of 77 countries from 1960-1989. Thus, these studies not only cover the large time span and large sample of countries but also introduce the innovation in variables selection choice and control of other factors.

In addition, to the measure of credit market measure King and Levine (1993) and Berthélemy and Varoudakis (1996) find that the development of banking sector is a vital determinants of economic growth. The second measure which is stock market development, there are number of studies like as (Atje & Jovanovic, 1993; Bencivenga et al., 1996; Cooray, 2010; Levine & Zervos, 1998). Andersen and Tarp (2003) support the view that stock market development is positive linked with economic growth. Moreover, these empirical works develop wide range of econometric techniques and models.

There are number of study in literature that check simultaneously both measures of FD to investigate on growth. Levine and Zervos (1998) and Beck and Levine (2004) find that both measures such as stock and credit both have direct impact on economic growth. Moreover, Arestis et al. (2001) find that both measure have positive effect on growth but more powerful impact is observe of banking system. Studies which prefer to include both measures (Cheng, 2012; Wu et al., 2010).

However, there is also many studies which support the insignificant influence of financial markets on economic growth, especially for developing countries (Kar et al.,

2011; Naceur et al., 2008; Narayan & Narayan, 2013; Nili & Rastad, 2007; Singh, 1997). Narayan and Narayan (2013) no evidence find about the financial and banking sector that contributes to economic growth in Middle Eastern economies. Some researchers categories countries into grouping by income level in finance growth nexus due to evidence of heterogeneity (Andini & Andini, 2014; Henderson et al., 2013; Rioja & Valev, 2004).

Rioja and Valev (2004) suggest no contribution of stock market in economic growth from the countries group of low-income, however, banks have positive impact on rising the accumulation of capital. Several empirical studies highlights that this relationship exist in accordance to the FD level (Federici & Caprioli, 2009).

The earlier studies on the association among FD and economic growth are significant (McKinnon, 1973; Patrick, 1966). McKinnon (1973) examine the FD raises the economic growth of South Korea since 1964 and concluded that banking sector reforms increased interest rate range between 15-30 percent and decline inflation which enhance return on time deposits. The period of financial reforms which carried from 1965-69 increased export by 10 percent which brought to increased growth by 90 percent. Hence, FD leads to growth.

Moreover, Patrick (1966) also support the view that more FD lead to enhance growth. Financial system generated a lot of financial services in form of assets, primary securities, maturity and other services. The well-organized financial system led to more efficient investment opportunity which effect the economic growth positively. Moreover, McKinnon (1973) Shaw (1973) emphasis the process of saving and investment facilitating through financial liberalization. Both studies are in view for

the adaption of financial system liberalization for the growth of developing economies.

King and Levine (1993) analyzed 57 developing and developed countries and explore the two channels which FD effect economic growth. These two channels of growth are capital accumulation rate and economic efficiency improvement which considered as indicators of growth. They found the positive association between FD and two indicators of growth for both features of current and future growth of the countries.

Moreover, Rousseau and Sylla (2003) explain that channels of FD which lead to growth. To enhance the economic activity which lead to increase demand and need of financial services may be helpful in the later stage of economy's development but the other channels like total factor productivity and debt accumulation is helpful in the early stage of development. They examine the finance growth nexus for Atlantic economies and 6 developing countries including (US, England, Germany, France, Japan and Dutch republic) for two centuries. Their findings suggest that development of domestic financial sector attract capital inflow from other countries that are linked with the capital market GLOB which increase the country long run growth.

The international flow of capital considers as an important facilitator for the development of the domestic financial market. Moreover, this market includes the equity market and the size of the banking sector. The comprehensive concept of these markets includes regulation and supervision (Prasad et al., 2009). The literature support that a well-organized financial system is necessary for economic growth. The developed financial system allocates the resources in the efficient way and lines up the borrowers and lenders. As a result, investment generates employment opportunities and advances public finances and growth (Law et al., 2014).

The quality of institutions can play a significant role in attaining the benefit of financial GLOB for an economy. The determinants of the quality of an institution such as quality of the financial system, quality of bureaucratic, property rights, corruption control, rule of law, political stability, and democratic system (Hadhek & Mrad, 2015; Ju & Wei, 2010; Manasseh et al., 2017; Mishkin, 2009; Roe & Siegel, 2011). Moreover, corruption has an inverse linkages with the financial market development but a positive link with the efficiency of the accountability of governance, rule, and law (Chinn & Ito, 2006; Manasseh et al., 2017).

Manasseh et al. (2017) find that the quality of institutions has a significant impact on the development of financial sector by analyzing the institutional reforms. Moreover, the important determinant of the stock market is the institutions quality. But they captured the quality of institutions just with a legal framework. Nwaolisa et al. (2013) perceived that the share index and capitalization of the total market have positive effects on growth.

Bordo and Rousseau (2012) analyzed the 17 countries data for 125 years (1880-2004) and found that FD enhances economic growth through the channel of trade. FD and trade reinforce each other till 1929 but this relationship disappeared after 1945 the reason behind this vanished was the increase of trade barriers, new wave of economic activity which taken the economies from lower level of growth environment to high growth environment. However, FD has a positive and significant impact on growth through the whole sample. But the impact of trade on economic growth were effective after 1945.

The fundamental association between FD and growth on both panel as well as on cross sectional data are analyzed in literature and suggest that FD affects growth

(Bekaert et al., 2005; Gregorio & Guidotti, 1995; Prasad et al., 2009). Bekaert et al. (2005) analysis the linkages between FD and economic growth for the large sample of countries. They analysis the linkages between equity market liberalization and economic growth and suggest that liberalization of equity market has positive impact on growth. Moreover, the international flow of capital considers as an important facilitator for the development of domestic financial market. Moreover, these markets include equity market and size of banking sector. The comprehensive concept of these market includes regulation and supervision (Prasad et al., 2009).

Hassan et al. (2011) analysis the role of FD on economic growth in different income group countries i.e., lower- and middle-income. They identify the proxy of FD and factor which consider as an important for economic growth across different income group region and time through panel regression and variance decomposition of growth rate of GDP per capita and support the positive relationship between FD and economic growth. The results support bi-direction causality in the middle-income countries like as Middle East and North Africa but uni-directional causality in low-income countries like Sub Saharan Africa.

Furthermore, the variable from real sector which explain the economic growth is government expenditure and trade. Thus, well developed financial system is consider necessary condition for economic development but no sufficient condition. The similar result supported by (Calderón & Liu, 2003; Enisan & Olufisayo, 2009). Calderón and Liu (2003) examine the pooled data from 1960-1994 for 109 industrial and developing countries. Three main findings are as follow: first, the effect FD is more prominent in underdeveloped economies compare to industrial countries, second, the larger the sample size the impact of FD is more on economic growth, and

third the FD increase the productivity and capital accumulation, and observe the channel of productivity growth is more strong compare to capital accumulation.

Levine et al. (2000) analysis cross country data set and support the view that the direct association among financial intermediary development and economic growth. This is in line with the result of Rioja and Valev (2004) they also find that in the intermediate FD country the effect is lager and positive on growth, but the low level of FD, improvement in financial markets lead to uncertainty. Moreover, the well development financial system had small effect.

Narayan (2015) investigates the 43 developing and developed countries and suggests that the direct influence of FD on economic growth as long as countries is above their averages of cross sections. These are consistent with Maten et al., (2008) and Calderón and Liu (2003) who show that the FD has higher impact on the growth of developing countries then developed ones. The well-functioning financial sector help to reduce the real shocks on business cycle (Ibrahim & Alagidede, 2017).

FD enhance the growth effect in contrast to this argument like as (Kaminsky & Reinhart, 1999) is in view that it is not necessary that FD enhance growth but on the other way it mislead sustained development path. Ang (2008) investigate the linkages among FD and economic growth for Malaysia and find the boosting effect of FD on growth that leads to higher growth in output, capital formation and saving which have long run enhance growth.

The literature supports the idea that the well-organized financial system is necessary for the economic growth. The well functional system allocates the resources to most efficient way and line up the borrowers and lenders. As a result investment generate

opportunities for employment, advances public finances and growth (Law et al., 2013).

Most of the studies have been examined on the relationship between FD and economic growth for different income group countries and time span. At the same time there is ambiguity for the conclusion of the FD and economic growth, especially for the group of lower- and middle-income economies. Few researcher support that the FD stimulate the economic for certain level, additionally FD cannot encourage the economic growth (Arcand et al., 2015; Law & Singh, 2014). Thus, the literature regarding the relationship among FD and economic growth is inconclusive. So, it required to make clear the nature of link between FD and economic growth for developing countries.

Hammudeh et al. (2020) examines the overall impact of GLOB on economic growth for the panel of developing economies. By decomposing the countries in to different income group, they find that in the low- and middle-income countries effect of GLOB on growth is an ‘u shape’ no linear but in high-income countries the effect is significantly positive. In addition, the effect of GLOB on economic growth is more profound in the countries which have developed FD and quality of institution.

There is no study according to best of our knowledge that examine the influence of GLOB on economic growth through the role of FD for developing countries. For GLOB we will use KOF index of GLOB 2018.

2.5 Summary

Our motivation is to measuring the impact of overall GLOB and its three dimensions economic, social and political and its two aspects de-facto and de-jure on economic

growth through three channels; ERV, TO (which will consider as input variable), FD is inspired by a few aspects of opinion.

First, the literature on the nexus of GLOB and growth is contrasting. The first strand of literature supports the direct impact of GLOB on economic growth through trade liberalization, technology diffusion, promoting competition, macroeconomic stability and economies of scale. The potential factor for GLOB is global capital market liberalization which have positive impact in developing countries' economic growth (Obstfeld & Rogoff, 1998).

In this context, we discuss many studies related to trade liberalization (EGLOB) and financial integration (financial GLOB). Since late 1999, the developed countries (European countries) transitional countries getting more gains from economic and financial GLOB then developing countries. So, this is motivation to take the analysis of developing economies. According to best of our knowledge, yet no study have investigated the impact of GLOB on economic growth through KOF index of GLOB 2018 which differentiate the de-facto and de-jure aspects expectation of one Bataka (2019) for African economies.

The GLOB impact on economic growth is conditional on the countries willingness to attain the benefit from GLOB (Stiglitz, 2002). In this respect there are many studies who support the views that to foster effect of GLOB on economic growth dependent on many thresholds level like as quality of institutions, well-functioning of financial markets and desire composition of capital (Arestis et al., 2005; Hammudeh et al., 2020; Stiglitz, 2000; Wei, 2006). However, the lack of empirical work validating those above-mentioned propositions in these important works motivates us to consider

the interaction through three channels (ERV, TO and FD) which effect the developing countries growth.

Second, the impact of GLOB on EG is different according to country specific characteristics which leads to absorbing capacity of countries. Example of different countries across the globe like as several economies of Latin America experience significant increase in the inequality during 1980-1990 of trade liberalization period. Same experience for China, India and Hong Kong (Wei & Wu, 2002; Wood & Ridao, 1999). In contrast the South East Asian economies such as Singapore, South Korea and Taiwan experience the higher economic growth in the period of trade liberalization from 1960-1970 and its effect on later as well (Wood & Ridao, 1999).

Conversely, the focus of literature on the adverse impact of financial crises on the real sectors, inequality worsening the effect of GLOB by raising the amount of debts, and distributional conflicting provoking factor (Aryeetey & Ackah, 2011; Cornwall & Cornwall, 2001; Feenstra, 1998; Milanovic, 2003; Singh, 2003; Wood, 1998). This backdrop shows that the GLOB effect on country specific or heterogeneity nature. Thus, we resolve the discussion by pointing out that the nexus between GLOB and growth depends on categories of country on the basis of income group, which is experienced by many countries.

Third, above literature explains the linkages between ERV, determinants of growth which effect affect ERV. To fill the gap in the literature, there is still no study on the impact of GLOB economic growth through the channel of ERV. To the best of our knowledge, there is only one study Gaies et al. (2020) which checks the relationship between financial GLOB on economic growth spillover effect with ERV.

Fourth, we check the phenomenon of GLOB economic growth for developing countries in the context of TO. We discuss the current trend of TO with emphasis on their geographic location and countries are categorized on the basis of income group. In the literature TO is considered as a main driver of EGLOB. So, we will take TO as an input variable to check the nexus of GLOB and economic growth through the interaction of TO.

Finally, literature also emphasizes that the FD is conditional on the GLOB and economic growth relationship. The opportunities of new market created by the GLOB in many countries. To utilize these market opportunities, the country has to require some capital investment; thus, FD plays a moderating vital role in the nexus of GLOB economic growth. The clearer meaning is that through which the gain from GLOB can extend. Only one study in the literature (Hammudeh et al., 2020) which explains the role of FD and governance in GLOB-growth relationship for developed and developing countries. Hence, we investigate the GLOB and economic growth nexus through the moderating effect of FD specifically for developing countries.

CHAPTER 3

METHODOLOGY AND DATA

In this chapter, we have used methods to achieve the research goals mentioned in the introduction. The next step involves developing a theoretical framework that explains the connections between different variables. We will then design an empirical framework to draw conclusions using real data to help us achieve our goals and test our hypotheses.

Section 3.1 explains the theoretical framework, which focuses on the impact of GLOB and the roles of ERV, TO, and FD on economic growth. Section 3.2 discusses the methodology specification, while Section 3.3 presents the empirical framework. In Section 3.4, we provide descriptions of the variables, data, and data sources used in the study. Finally, Section 3.5 offers a summary of the entire chapter.

3.1 Theoretical Framework

To analyze the impact of GLOB on economic growth by explicitly incorporating the role of ERV, TO, and FD. We link the theoretical framework with economic growth from the above-mentioned variables.

The theoretical underpinnings of GATT are to comprehend how GLOB benefits growth. There are two ways to analyze the growth process: one is based on the historical experiences of Western European nations, and the other is based on histories of East Asian Newly Industrialized Countries (NICs), such as Taiwan, South Korea, Hong Kong, and Singapore (Mundial, 1993).

Standard growth theories, such as the neoclassical growth model and endogenous growth theory, posit that globalization can significantly impact economic growth. The

neoclassical growth model, which emphasizes the role of capital accumulation, labor, and technological progress, suggests that globalization facilitates the flow of capital and technology, leading to higher productivity and growth. Endogenous growth theory, which focuses on factors like human capital, innovation, and knowledge spillovers, argues that globalization enhances economic growth by increasing access to new markets, ideas, and technologies. Empirical evidence generally supports these theories, indicating that countries integrated into the global economy tend to experience higher growth rates. However, the effects of globalization can vary based on a country's level of development, institutions, and policies (Grossman & Helpman, 1991).

According to the "Vent-for-surplus" theory, any trading nation can sell its excess resources and goods on the global market, which has a more extensive consumer base and purchasing power than the home market. They can use their labour, money, and natural resources to create more goods and services relative to their own consumption in a developing economy. The extra production can be sold in foreign markets to increase the surplus over time. As a result, production increases which may lead to more jobs, higher incomes, and significant national savings.

A globalized nation enters a competitive market, where effectiveness becomes crucial for profitability. Increasing productivity and competition promotes the development of technical innovation and labour skill enhancement. As a result, an ongoing cycle of innovation, instruction, and training supports economic dynamism. This dynamic environment may result in further investment, innovation, efficiency, and productivity.

Instead of relying on government support, participating in GLOB creates opportunities and competition, promoting these significant effects. When a nation engages in globalization, it is forced to compete, encouraging it to become more effective and innovative, spurring economic growth and raising living standards. Government assistance is not the main force behind these advancements.

Import substitution was common for developing nations to start industrialization programmes (Balassa, 1980). The first step of import substitution aims to replace imported non-durable consumer goods, including apparel, footwear, processed foods, home items, and raw materials like textile fibers, leather, and primary goods, with domestically produced equivalents. In the second stage of import substitution, imports of producer and consumer durables and intermediary items are replaced. These include manufacturing domestically produced machinery, equipment, and home appliances rather than relying on imports from outside.

However, in the second stage of import substitution, the industry becomes capital-intensive and sensitive to economies of scale. A developing economy's domestic demand can be higher than the size of an efficient facility. At low production levels, costs per unit of output in this stage overgrow and may climb further due to organizational and technological inefficiencies; that is frequently the case due to poor infrastructure, a lack of cutting-edge technology, and a lack of suppliers for parts and components. Because it contains simple production procedures, low prices, and only a few technological needs, the first stage is known as the "easy" stage.

However, the second stage is referred to the "difficult" stage due to the difficulties brought on by increased capital needs, economies of scale, and potential inefficiencies. To support the first stage, a certain degree of tariff and non-tariff

barriers on imported replacements can be justified. In addition to assisting domestic producers, this protection promotes the growth of a trained labour force, encourages entrepreneurship, and speeds up technology diffusion (Balassa, 1980). Simply, it makes logical to implement some import restrictions during the initial stage of import substitution to safeguard local businesses, encourage the expansion of skilled labour, and foster knowledge transfer.

Economies of scale are essential during import substitution's second and most challenging stage, which calls for emphasizing horizontal and vertical specialization development. The reduced product variety is achieved by horizontal specialization. Thus, longer production runs are made possible, reducing costs by boosting efficiency so that costs associated with switching between several production processes are kept to a minimum when product diversity is minimal. A further cost-saving measure is employing machinery explicitly designed for a given task.

In developing nations, the limited scale of domestic marketplaces make it difficult for them to achieve both horizontal and vertical specialization. Additionally, they frequently do not have access to qualified labour and cutting-edge technology necessary for creating precise and excellent parts, components, and accessories. A change to an outward-focused policy is required to overcome these challenges and effectively complete the second stage of industrialization. These nations must look beyond their borders and take a more active role in GLOB rather than merely concentrating on home markets. With an external focus, they can access bigger markets, draw in foreign capital, and acquire cutting-edge technology necessary for their industrial development.

Specifically, considering the role of GLOB, innovative theories suggest that FDI and trade integration play the most integral part in EGLOB. Trade integration is further supported as a source of economic progress by optimistic theories in this domain. It improves the diffusion of technology and knowledge through the import of highly technical commodities, which leads to higher economic growth (Almeida & Fernandes, 2008; Baldwin et al., 2005; Barro & Martin, 1997; Bataka, 2019; Grossman & Helpman, 1993). Moreover, economies of scale and the potential advantages of specialization from openness to international trade stimulate economic growth and productivity (Alesina et al., 2000).

According to the neo-classical growth model, capital moves from developed to developing countries due to differential capital return. Capital inflows from developed countries can add to the inadequate savings of developing countries and lower investment costs; thus, promoting investment and economic growth. The flow of FDI, managerial and organizational know-how, technology transfer and research on development becomes a source of financial GLOB (Borensztein et al., 1998). In turn, this might boost the productivity of domestic firms and promote growth.

However, some studies of the endogenous growth model support the view that GLOB is a threat to growth instead of a stimulator. If a country specializes in industries with low potential for productivity growth or little technical innovation, openness to trade

could be detrimental to long-term prosperity (Redding, 1999; Young, 1991).

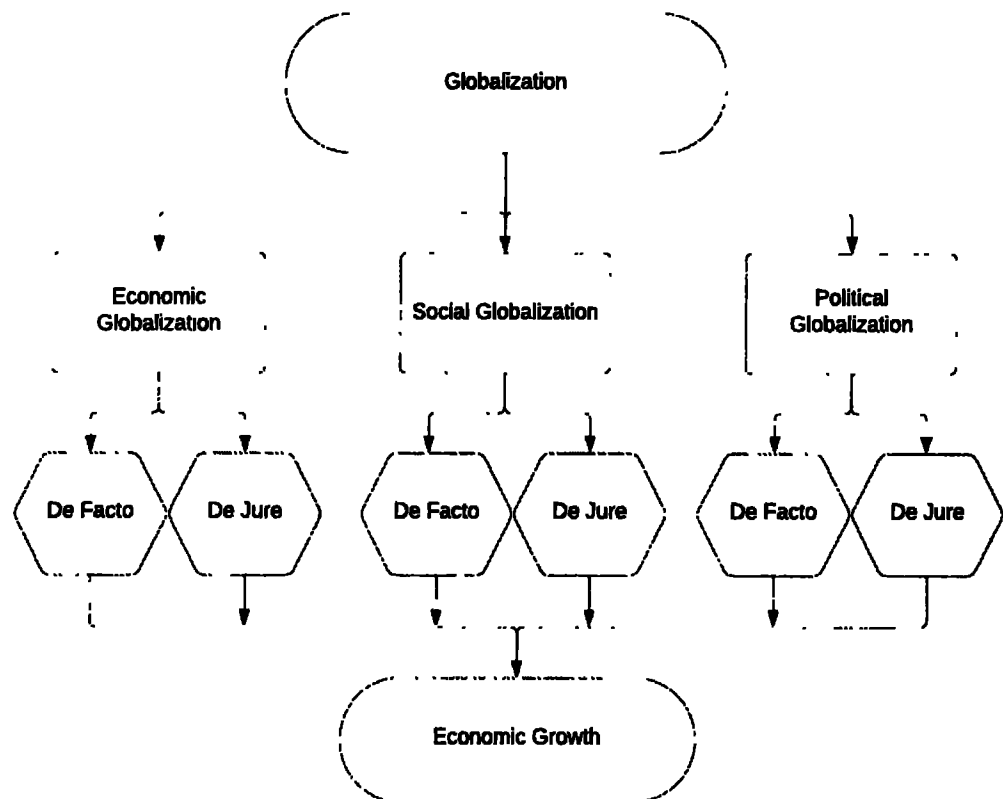


Figure 3.1: Conceptual Framework of Globalization and Economic Growth.

PGLOB offers opportunities to form powerful democratic institutions which are essential for development. It also allows organizations to disseminate the structures and policies of national governments. PGLOB can also facilitate the knowledge exchange on issues related to maintaining international peace and human rights, which are crucial for long-term growth. However, on the other hand, the emergence of egotistic leaders, special interest groups, and conflicts can arise due to PGLOB (Nahavandian & Ghanbari, 2004). PGLOB is observed in this light as hurting economic expansion.

However, SGLOB could be a foundation for advancing social status and developing citizenship rights, resulting in economic participation, volunteerism, public service,

and other activities to enhance the living standard of all citizens, which affects the country's economic growth (Majidi, 2017).

Theoretically, the supporters of rigid ER regimes have demonstrated that ERV decreases growth. Frankel and Rose (2002) found that the volatility in ER is associated with high uncertainty. Moreover, they pointed out this uncertainty could raise transaction costs, hurting production and international trade. While, also contributing to macroeconomic instability, in this regard, De Grauwe (2005) asserts that ambiguity reduces the transparency of prices and the effectiveness of their adjustment mechanisms. According to Rios (2009), nominal ER stability is essential in developing economies to reduce the risk of financial crises and high ERV because these countries' banking sector is still underdeveloped.

Prior studies, including Clark (1973), Cushman (1983), Cote (1994), McKinnon and Ohno (1997), Obstfeld and Rogoff (1998) and Devereux and Engel (2003), investigate the relationship among ERV and the rate of economic growth. These studies seek to identify the factors that most significantly affects economic growth. The research will start with an example from McKinnon and Ohno (1997) study to demonstrate this relationship. This study determines how excessive ERV will hinder economic growth by causing trade uncertainty, skewing investment decisions, and lowering productivity.

Additionally, Cote (1994), Serven (2002), Cheong (2004), and Arize et al. (2008) reach similar findings as McKinnon and Ohno (1997). Most results indicate that a rise in ERV will directly impact trade through a deterioration in trading activity, the unemployment rate, and company cost and profit. Due to increased costs associated

with risk premium, this unpredictability will force the company to increase the price of its products.

The "old" and "new" trade and growth theories, which explain why nations trade with one another, have been used to describe international trade and economic growth. Neoclassical trade theories explain the origins of trade by using Heckscher-Ohlin Samuelson and comparative advantage. According to the Ricardian model, as trade becomes more liberalized, each nation focuses on producing goods with a comparative productivity advantage. This advantage results from variations in technologies or natural resources, not factor endowments, increasing the welfare gains and benefits of trade for that nation.

The Heckscher-Ohlin Samuelson examines the welfare gains in a two-country, two-component model in which each nation exports the good that more extensively utilizes its abundant factor (capital or labor). Since their relative costs and terms of trade are different, both countries gain more from international trade than they would from autarky.

Trade and the pace of economic growth are not correlated in economic growth models. A trade liberalization episode has favorable growth impacts in early growth models, such as the Harrod-Domar model, where capital is the only factor of production (Srinivasan & Bhagwati, 2001). It is achievable if we assume that a positive value constrains the marginal product of capital (MPK). Opening up the economy to trade only temporarily affects the output growth rate if MPK falls to zero (Solow model). Growth is exogenously determined in neoclassical models for closed economies like the model of Solow (1956). The striking aspect of the Solow model is

that it allows developing nations to converge on a steady state level of per capita GDP (gross domestic product) under the assumption of declining returns to scale.

This suggests that two nations with comparable rates of population growth, depreciation, and saving may eventually converge to comparable living standards (Ray, 1998). Harrison (1994) further argues in favour of the Solow model's claim that increased TO brings in capital goods and technology, boosting manufacturing trade, industrial activity, and economic growth.

A more comprehensive range of factors is now being incorporated into new trade theory to cope with some trade realities more complicatedly. Models of endogenous technology development serve as the foundation for theories linking TO to long-term growth. These models suggest that developing nations may achieve long-term economic growth that is now determined endogenously rather than exogenously, as neoclassical growth theory predicts under the presumption of rising returns to scale.

According to Grossman and Helpman (1990), who developed the endogenous growth hypothesis, growth is boosted by openness and FDI inflows. Technology diffusion brings about technological progress, which spurs development. However, Baldwin et al. (2005) present a conflicting theory regarding the effects of endogenous growth on economic growth. They demonstrate that North industrializes and develops more quickly than the South because of market liberalization that leads to global divergence. The standard neoclassical ideas hold that trade is the source of growth.

The endogenous theory demonstrates how nations can collaborate with the process of GLOB through open channels to identify complementary activities like education or job training that aid in their survival and development. Overall, it is clear that while

neoclassical and modern trade theories have many points of agreement, they also have numerous areas of disagreement.

The flow of FDI, capital, goods, and services to host countries or regions is facilitated by openness to international trade. These offer potential sources of economic growth for developing countries. The association between TO and economic growth has been debated and investigated in recent years among academics and researchers.

According to the theory of neoclassical, TO will result in static gains. Gains will result from countries specializing in the manufacture of commodities with lower relative costs compared to the rest of the world and from countries importing items with lower levels of efficiency. Free trade enables nations to allocate economically most productive and efficient labour, increasing overall benefits and output. Land scarcity and declining marginal productivity will cause prices to rise and profit rates to decline in isolated nations, slowing economic progress (Ricardo, 1817).

However, the reallocation of resources requires full-factor mobility across traded and non-trade industries inside each country as a result of trade. This suggests that, among countries with the same technology, trade between nations can occur simply because of the disparity in resource endowments. To make up for any distributional imbalances, international trade in goods can be used instead of trade in factors, which will result in economic convergence between nations (Stolper & Samuelson, 1941).

There are a number of difficulties while implementing the New Trade Theory (NTT), including: the introduction of scale economies in production, which are correlated with company size and market structure. Imperfect markets and product differentiation are two further factors. Losses incurred by small producers who are unable to reach economies of scale may be offset by an increase in wellbeing brought on by a larger variety of consumption options (Bhattacharjea, 2004).

Small nations can benefit from global economic growth following trade liberalization (Helpman, 1984). TO gives developing countries the opportunity to grow economically, overcome barriers on their home markets, and sell surplus goods on international markets (Myint, 1958). Because of the size of the global economy, there are more opportunities for economies of scale and a higher chance that investments in R&D will be profitable (Grossman & Helpman, 1991; Krueger, 1978). When communication across borders is more accessible and effective as a result countries can gain (Krueger, 1978).

It is interesting to note that trade theories, both conventional and new, are unable to control the dynamic effects of trade on growth and development, especially for developing nations. Both models are incapable of taking into account changes in consumer tastes, technological improvements, and income distribution (Bhattacharjea, 2004). Endogenous models based on the growth of technology and the accumulation of knowledge must therefore be taken into account.

In this section, a conceptual framework for how FD might affect economic growth is developed. First, there are two channels via which FD might affect growth: the channel for capital accumulation and the channel for total factor productivity (TFP). The capital accumulation channel, commonly referred to the quantitative channel, which is derived from Gurley and Shaw (1955) "debt-accumulation" theory. Particularly, growth occurs when people set aside money from their discretionary income and use it to build up capital.

The TFP channel places a strong emphasis on the qualitative side of FD in order to efficiently allocate financial resources and manage investment projects. The importance of financial technology innovation in reducing information asymmetry is highlighted. New technologies that boost efficiency can be used with the help of a

stable financial system. The linkages between financial innovation and economic growth is a topic which economists frequently explore. McKinnon (1973), Schumpeter (1934), Shaw (1973), King and Levine (1993) laid the framework for the theory of the association among FD and economic growth.

Schumpeter (1934) emphasized the significance of financial institutions embracing new technologies to promote economic development. He emphasizes that a sound financial system fosters technical advancements, which in turn stimulate economic growth. Then, McKinnon (1973) and Shaw (1973) claim that capital markets free from the restrictions imposed by excessive regulation would promote savings, enhancing the quality and amount of investment, which in turn results in stronger economic growth. According to Creane et al. (2003) the current financial system encourage investment and risk management while also depleting funds from unspent units. These are only a few examples of how the flexible, modern financial system promotes economic growth.

The association among financial progress and economic growth was first empirically studied by (Goldsmith, 1969). He gives the impression that their deep and satisfying connection comes naturally. Robinson (1953) presents a critical perspective on the linkages among FD and economic growth. He argues that FD follows economic expansion and states that "where enterprise leads, finance follows" to illustrate this causation assertion. Since there are always going to be market inefficiencies like transaction costs and information costs, the market is not perfect. The theoretical framework regarding the association among finance and economic growth is best illustrated in Figure 3.2 below (Levine, 1997).

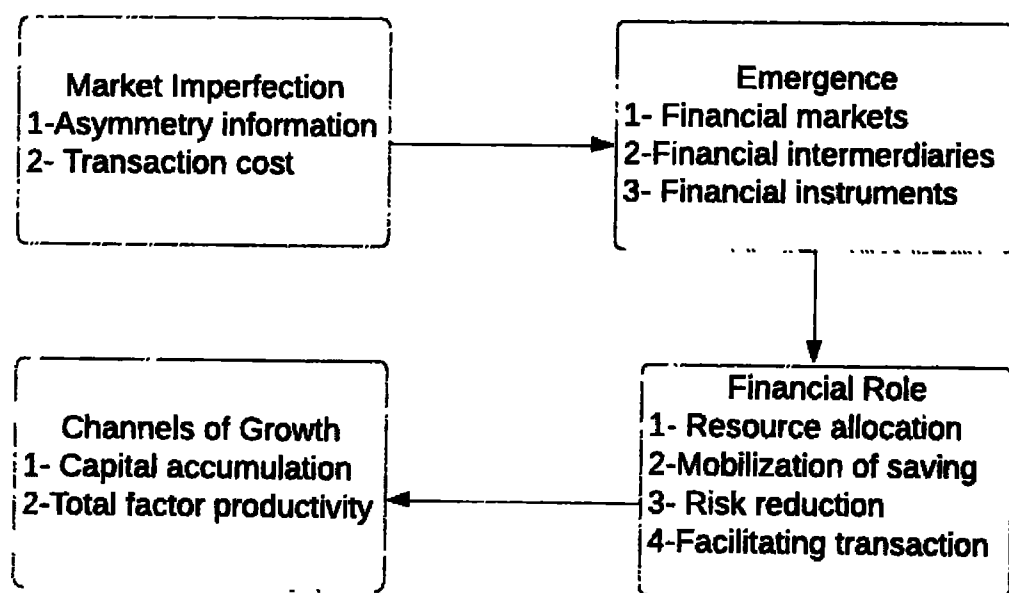


Figure 3.2: Functional approach for Finance and Economic Growth.

The neoclassical growth model fails to predict one of the factors that led to new growth theory development. It is an endogenous growth model that was primarily developed by Romer (1986), with focus on the theory that economic growth is primarily produced by long-run creativity rather than capital accumulation theory as indicated by earlier theories. According to the endogenous growth theory, capital increases because higher rates of saving foster growth. However, an economy needs constant technical advancement in order to achieve higher long-term growth. According to the endogenous growth theory, institutions and human capital promote technical advancements and raise standards of living.

Lucas (1988) pioneering work aided in the advancement of this concept. As was previously mentioned, a sound financial system can promote economic growth through the development of technology, where the established financial system promotes the adoption of creative ideas. Because technical innovation is viewed as an exogenous factor in the neoclassical paradigm, FD is invalid in the context of long-

run growth. While in endogenous growth models, long-term growth is an endogenous variable. These models offer a theoretical foundation for the claim that financial intermediation can have effects on both levels and growth.

Pagano (1993) extended the endogenous growth theory by emphasizing the function of the financial sector during economic growth. In a simple endogenous growth setting, Pagano applies the Rebelo (1991) AK model. It is assumed that the production function exhibits constant returns to scale and that the manufacturing process only requires capital (K_t). The capital formation function is defined as follows since the Pagano model also assumes that there is no population growth and that capital depreciates at a rate $K_{t+1} = I_t + (1 - \delta)K_t$. Additionally, it is believed that a percentage of savings, equal to $(1 - \phi)$, is lost during the financial intermediation process. The amount (ϕ) of total savings, however, is directed towards investment. Savings that are lost during financial intermediation are viewed as a financial system inefficiency. Thus, the steady state growth rate (g) is represented as and the saving-investment relationship is expressed as $I_t = \phi S_t$.

$$g = \frac{k_{t+1} - k_t}{k_t} = \frac{I_t + (1 - \delta)k_t - k_t}{k_t} = \frac{\phi S_t}{k_t} - \delta = A\phi s_t - \delta$$

Where $s_t = \frac{S_t}{Y_t} = \frac{S_t}{AK_t}$

Three potential ways in which FD may impact growth are illustrated by the aforementioned equation:

- Increasing capital's marginal output (A)
- Increasing the percentage of savings going towards investments (ϕ)
- A factor that affects the savings rate(s)

This overview of the fundamental theoretical foundation for the link between FD and economic growth.

3.2 The Empirical Model

The main aim of this research is to empirically analyze the role of ERV, TO, and FD, in the GLOB and economic growth relationship, respectively. It depicts that not only explore the direct impact of ERV, TO, and FD on the economic growth. We are also interested to find the conditions effects of these above-mentioned variables on economic growth. In this perspective, we try to give answers to these questions. Whether, the GLOB has any significant impact on growth or not. Further, the GLOB impact on economic growth is conditional on ERV, TO, and FD respectively and separately. Generally, whether GLOB and ERV magnify the effect on economic growth (vice versa). Also, whether the GLOB and TO amplify the effect on economic growth or other way around. Similarly, whether, the GLOB and FD have strengthen/weakness the effect on economic growth.

As, starting with the first objective of our research, we analyze the impact of GLOB, its dimensions and its aspects on economic growth. Therefore, based on the study of Dreher (2006) and Gygli et al. (2019) the empirical model of this first objective is as follow

$$Growth_{it} = f(GLOB, inflation, GFCF, GGFCE, FR, LE) \quad (3.1)$$

$$Growth_{it} = \alpha_{it}GLOB_{it} + \beta X_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.2)$$

Where, initial is calculating for the conditional convergence. GLOB is overall GLOB on real GDP per capita. X is the vector of control variables, such inflation, gross fixed capital formation (GFCF), general government fixed capital expenditure (GGFCE), fertility rate (FR) and life expectancy (LE). μ_i and ω_t represent country effect and time-specific effect. While, ε_{it} is the error term. In subscripts i and t show the number of countries and time period respectively.

Using instrumental variables that are correlated with $GLOB_{it}$ but not with the error term in the regression model can help to address endogeneity. These instruments satisfy the relevance and exogeneity conditions to provide consistent estimates. These instruments include lagged values of $GLOB_{it}$, and lagged values of other relevant variables, that affect $GLOB_{it}$ but are not directly influenced by it. Implementing appropriate econometric techniques, we enhance the credibility and validity of our empirical analysis. If the endogeneity arises due to the correlation with past growth employing dynamic panel data models such as the Arellano-Bond or GMM estimators can help address this issue by controlling for lagged endogenous variables.

By addressing the potential endogeneity of $GLOB_{it}$ we considered to employ appropriate econometric techniques such as employing advanced panel data methods like the Sys.GMM estimator. This technique allows us to account for endogeneity by using instruments or exploiting the panel structure of the data to control for unobserved heterogeneity and potential omitted variable bias.

To control endogeneity, we have used lagged one period. For all continuous variables and also expressed in logarithms. Additionally, all data has been used as 5 years non-overlapping averages in order to control the problems of measurement errors and autocorrelation. Furthermore, we estimate the same growth equation through GMM. It is especially suitable when model considering with predetermined or endogenous regression based on short time period and large cross-sectional panel (Arellano & Bond, 1991; Arellano & Bover, 1995; Blundell & Bond, 1998).

To eliminate country-specific effects, we take first differences of equation (3.2)

$$Growth_{it} - Growth_{it-1} = \alpha_{it}(GLOB_{it} - GLOB_{it-1}) + \beta(X_{it} - X_{it-1}) + \varepsilon_{it} - \varepsilon_{it-1} \quad (3.3)$$

Levine et al. (2000) suggest the use of instruments for two reasons: to deal with the likely endogeneity of the economic growth and because by construction the new error

term $(\varepsilon_{it} - \varepsilon_{it-1})$ in (3.3) is correlated with the lagged dependent variable, $(Growth_{it} - Growth_{it-1})$. The GMM panel estimator uses the following moment conditions:

$$E[Growth_{it} - \varepsilon_{it} - \varepsilon_{it-1}] = 0 \text{ for } s \geq 2; t = 3, \dots, T$$

$$E[GLOB_{it} - \varepsilon_{it} - \varepsilon_{it-1}] = 0 \text{ for } s \geq 2; t = 3, \dots, T$$

under the assumptions that the error term, ε , is not serially correlated and that the explanatory variables, GLOB, are weakly exogenous that we refer to use this as the difference estimator.

There are, though, statistical shortcomings with this estimator. Alonso-Borrego and Arellano (1999) and Blundell and Bond (1998) show that when the explanatory variables are persistent over time, lagged levels of these variables are weak instruments for the regression equation in differences. To reduce the potential biases associated with the difference estimator, we use a new estimator that combines in a system the regression in differences with the regression in levels. We use a GMM estimator that uses lagged differences of $Growth_{it}$ as instruments for the equation in levels in addition to lagged levels of $Growth_{it}$ as instruments for equations in first differences. Blundell and Bond (1998) suggest that Monte Carlo simulations and asymptotic variance calculations show that this extended GMM estimator offers efficiency gains where the first-difference GMM estimator performs poorly.

The instruments mentioned are appropriate under the following assumption: although there may be correlation between the levels of the right-hand side variables and the country specific effect in the level equation, there is no correlation between the differences of these variables and the country specific effect. The additional moment conditions for the second part of the system which is the regression in levels are:

$$E[(Growth_{it-s} - Growth_{it-s-1})(\mu_i + \varepsilon_{it})] = 0 \text{ for } s = 1$$

$$E[(GLOB_{it-s} - GLOB_{it-1-s-1})(\mu_i + \varepsilon_{it})] = 0 \text{ for } s = 1$$

Given that the lagged levels are used as instruments in the differences specification, only the most recent difference is used as instrument in the levels specification. Using other lagged differences will result in redundant moment conditions [see Arellano and Bover (1995)]. We use the moment conditions above and employ a GMM procedure to generate consistent and efficient parameter estimates.

Therefore, our base line model is as follow

$$Growth_{it} = \alpha_{10} + \alpha_{11}initial + \alpha_{12}GLOB_{it} + \alpha_{13}INF_{it} + \alpha_{14}GFCF_{it} + \alpha_{15}GGFCF_{it} + \alpha_{16}FR_{it} + \alpha_{17}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.4)$$

Eq (3.4) is to check the impact of overall GLOB on economic growth. In the next equations, we introduce the dimensions of GLOB. Eq (3.5) shows the impact of economic dimension of GLOB on economic growth.

$$Growth_{it} = \alpha_{20} + \alpha_{21}initial + \alpha_{22}EGLOB_{it} + \alpha_{23}INF_{it} + \alpha_{24}GFCF_{it} + \alpha_{25}GGFCF_{it} + \alpha_{26}FR_{it} + \alpha_{27}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.5)$$

Eq (3.6) analyzes the impact of the social dimension of GLOB on economic growth.

$$Growth_{it} = \alpha_{30} + \alpha_{31}initial + \alpha_{32}SGLOB_{it} + \alpha_{33}INF_{it} + \alpha_{34}GFCF_{it} + \alpha_{35}GGFCF_{it} + \alpha_{36}FR_{it} + \alpha_{37}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.6)$$

Similarly, Eq (3.7) examines the role of the political dimension of GLOB on economic growth.

$$Growth_{it} = \alpha_{40} + \alpha_{41}initial + \alpha_{42}PGLOB_{it} + \alpha_{43}INF_{it} + \alpha_{44}GFCF_{it} + \alpha_{45}GGFCF_{it} + \alpha_{46}FR_{it} + \alpha_{47}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.7)$$

Similarly, we also analyze the aspects (de-facto and de-jure) of GLOB on economic growth for overall GLOB and its three dimensions. The baseline model of our estimation is given in Eq (3.4).

Further, our second objective related to the impact of GLOB on economic growth by considering the role of ERV.

$$Growth_{it} = \beta_{10} + \beta_{11}initial + \beta_{12}GLOB_{it} + \beta_{13}ERV_{it} + \beta_{14}INF_{it} + \beta_{15}GFCF_{it} + \beta_{16}GGFCF_{it} + \beta_{17}FR_{it} + \beta_{18}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.8)$$

In this objective, we also analyze the influence of ERV in the GLOB-Growth relationship. The said relationship is examined by extending the model which is given in Eq (3.8).

$$Growth_{it} = \beta_{20} + \beta_{21}initial + \beta_{22}GLOB_{it} + \beta_{23}ERV_{it} + \beta_{24}(GLOB_{it} * ERV_{it}) + \beta_{25}INF_{it} + \beta_{26}GFCF_{it} + \beta_{27}GGFCF_{it} + \beta_{28}FR_{it} + \beta_{29}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.9)$$

Where, ERV_{it} is exchange rate volatility for country i in period t . $GLOB_{it} * ERV_{it}$ is the GLOB interaction with ERV. The conditional analysis of GLOB on growth are calculated by taking the partial derivative of Eq (3.9) as follow

$$\frac{\partial Growth_{it}}{\partial GLOB_{it}} = \beta_{22} + \beta_{24}ERV_{it} \quad (3.10)$$

Eq (3.10) explains the effect of ERV in the overall GLOB and growth relationship. The signs of the coefficients of β_{22} and β_{24} show whether the relationship between ERV with overall GLOB and growth is substitute or complementary. If both coefficients have same signs which show the complementry effect, indicating that the role of ERV plays a complementary role to explain the relationship between overall GLOB and growth. While, the subitutue effect shows that both coefficient have oppoiste signs, it shows that the role of ERV plays a substitution role in explaining the overall GLOB and growth relationship.

In the next equation, we analyze the relationship between dimensions of GLOB, and it's both aspects on economic growth by considering the role of ERV. The equation of economic dimension of GLOB is as follows

$$Growth_{it} = \beta_{30} + \beta_{31}initial + \beta_{32}EGLOB_{it} + \beta_{33}ERV_{it} + \beta_{34}INF_{it} + \beta_{35}GFCF_{it} + \beta_{36}GGFCF_{it} + \beta_{37}FR_{it} + \beta_{38}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.11)$$

Similarly, to capture the impact of ERV on the relationship between EGLOB and economic growth. The baseline model of the EGLOB (equation 3.11) extended in the following way.

$$Growth_{it} = \beta_{40} + \beta_{41}initial + \beta_{42}EGLOB_{it} + \beta_{43}ERV_{it} + \beta_{44}(EGLOB_{it} * ERV_{it}) + \beta_{45}INF_{it} + \beta_{46}GFCF_{it} + \beta_{47}GGFCF_{it} + \beta_{48}FR_{it} + \beta_{49}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.12)$$

$EGLOB_{it} * ERV_{it}$ is the interaction term of economic globalization and exchange rate volatility. For conditional effect we take the partial derivative of eq (3.12) with respect to EGLOB.

$$\frac{\partial Growth_{it}}{\partial EGLOB_{it}} = \beta_{42} + \beta_{44}ERV_{it} \quad (3.13)$$

The equation (3.13) captures the role of ERV in the EGLOB and growth relationship. The sign of coefficient of β_{42} and β_{44} reflect whether ERV plays a substitutive or complementary role in explaining the relationship between EGLOB and growth.

Similarly, we analyze the impact of the SGLOB and ERV on economic growth.

$$Growth_{it} = \beta_{50} + \beta_{51}initial + \beta_{52}SGLOB_{it} + \beta_{53}ERV_{it} + \beta_{54}INF_{it} + \beta_{55}GFCF_{it} + \beta_{56}GGFCF_{it} + \beta_{57}FR_{it} + \beta_{58}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.14)$$

Next, to analyze the role of ERV in the nexus of SGLOB and economic growth.

$$Growth_{it} = \beta_{60} + \beta_{61}initial + \beta_{62}SGLOB_{it} + \beta_{63}ERV_{it} + \beta_{64}(SGLOB_{it} * ERV_{it}) + \beta_{65}INF_{it} + \beta_{66}GFCF_{it} + \beta_{67}GGFCF_{it} + \beta_{68}FR_{it} + \beta_{69}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.15)$$

For conditional effect we take the partial derivative of eq (3.15) with respect to SGLOB.

$$\frac{\partial Growth_{it}}{\partial SGLOB_{it}} = \beta_{62} + \beta_{64}ERV_{it} \quad (3.16)$$

The role of ERV is complemenatry or substitutive between the SGLOB and growth relationship depends on the sign of β_{62} and β_{64} . If both coefficient have same signs

then the role of ERV plays is complementray in explaining the relationship between SGLOB and growth.

In this way, we analyze the last dimension of GLOB which is political.

$$Growth_{it} = \beta_{70} + \beta_{71}initial + \beta_{72}PGLOB_{it} + \beta_{73}ERV_{it} + \beta_{74}INF_{it} + \beta_{75}GFCF_{it} + \beta_{76}GGFCF_{it} + \beta_{77}FR_{it} + \beta_{78}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.17)$$

In next equation we analyze the role of ERV in the nexus of PGLOB and economic growth.

$$Growth_{it} = \beta_{80} + \beta_{81}initial + \beta_{82}PGLOB_{it} + \beta_{83}ERV_{it} + \beta_{84}(PGLOB_{it} * ERV_{it}) + \beta_{85}INF_{it} + \beta_{86}GFCF_{it} + \beta_{87}GGFCF_{it} + \beta_{88}FR_{it} + \beta_{89}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.18)$$

To find the conditional effect of ERV on economic growth. We take the partial derivative of Eq (3.18) with respect to PGLOB.

$$\frac{\partial Growth_{it}}{\partial PGLOB_{it}} = \beta_{82} + \beta_{84}ERV_{it} \quad (3.19)$$

The signs of β_{82} and β_{84} explain that there is complementary or substitutive role of ERV in explaining the relationship between PGLOB and growth. Similarly, we also do the same analysis for the both aspects (de-facto and de-jure) of GLOB for overall and its three dimensions GLOB separately.

Similarly, for the third objectives which is related to considering the role of TO on the nexus of GLOB and economic growth.

The base line equation (3.20) shows the impact of overall GLOB and TO on economic growth.

$$Growth_{it} = \theta_{10} + \theta_{11}initial + \theta_{12}GLOB_{it} + \theta_{13}TO_{it} + \theta_{14}INF_{it} + \theta_{15}GFCF_{it} + \theta_{16}GGFCF_{it} + \theta_{17}FR_{it} + \theta_{18}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.20)$$

Moreover, in next equation we analyze the role of TO in the relationship of GLOB and economic growth. This relationship is examined by extending the baseline model of growth Eq (3.20).

$$Growth_{it} = \theta_{20} + \theta_{21}initial + \theta_{22}GLOB_{it} + \theta_{23}TO_{it} + \theta_{24}(GLOB_{it} * TO_{it}) + \theta_{25}INF_{it} + \theta_{26}GFCF_{it} + \theta_{27}GGFCF_{it} + \theta_{28}FR_{it} + \theta_{29}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.21)$$

In Eq (3.21), $GLOB_{it}$ show the overall GLOB for country i and period t . The $GLOB_{it} * TO_{it}$ shows the GLOB interaction term with TO. We take the partial derivative of Eq (3.21) with respect to overall GLOB.

$$\frac{\partial Growth_{it}}{\partial GLOB_{it}} = \theta_{22} + \theta_{24}TO_{it} \quad (3.22)$$

The condition effect of GLOB on economic growth through the channel of TO is shown in Eq (3.22) which depicts the magnitude and direction of the relationship of TO with overall GLOB and growth. The signs of coefficients of θ_{22} and θ_{24} show that there is complementray or substitute effect between TO and GLOB.

Next, we analyze the both dimensions of GLOB (social and political)¹ on economic growth. The 1st dimension is social dimension, the Eq (3.23) shows the impact of SGLOB and TO on economic growth.

$$Growth_{it} = \theta_{30} + \theta_{31}initial + \theta_{32}SGLOB_{it} + \theta_{33}TO_{it} + \theta_{34}INF_{it} + \theta_{35}GFCF_{it} + \theta_{36}GGFCF_{it} + \theta_{37}FR_{it} + \theta_{38}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.23)$$

Similarly, we analyze the conditional impact of SGLOB and TO on economic growth.

$$Growth_{it} = \theta_{40} + \theta_{41}initial + \theta_{42}SGLOB_{it} + \theta_{43}TO_{it} + \theta_{44}(SGLOB_{it} * TO_{it}) + \theta_{45}INF_{it} + \theta_{46}GFCF_{it} + \theta_{47}GGFCF_{it} + \theta_{48}FR_{it} + \theta_{49}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.24)$$

Similarly, the Eq (3.25) capture the conditional impact of SGLOB on economic growth.

$$\frac{\partial Growth_{it}}{\partial SGLOB_{it}} = \theta_{42} + \theta_{44}TO_{it} \quad (3.25)$$

The conditional effect is obtained by taking the partial derivatives of Eq (3.25) with respect to SGLOB. The signs of θ_{42} and θ_{44} implies the complementarity or substitutability effect of TO in explaining the relationship with SGOB and growth.

¹ For the channel of TO we just take two dimensions of GLOB and exclude the economic dimension because TO refers to economic integration, import export and tariff. Here, we take TO as input variable.

Next, we explore the impact of second dimension of GLOB and TO on economic growth.

$$Growth_{it} = \theta_{50} + \theta_{51}initial + \theta_{52}PGLOB_{it} + \theta_{53}TO_{it} + \theta_{54}INF_{it} + \theta_{55}GFCF_{it} + \theta_{56}GGFCF_{it} + \theta_{57}FR_{it} + \theta_{58}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.26)$$

Further, we analyze the role of interactive impact of PGLOB and TO.

$$Growth_{it} = \theta_{60} + \theta_{61}initial + \theta_{62}PGLOB_{it} + \theta_{63}TO_{it} + \theta_{64}(PGLOB_{it} * TO_{it}) + \theta_{65}INF_{it} + \theta_{66}GFCF_{it} + \theta_{67}GGFCF_{it} + \theta_{68}FR_{it} + \theta_{69}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.27)$$

The above Eq (3.27) shows the impact of PGLOB and TO for country i and time period t on economic growth. In this equation is $(PGLOB_{it} * TO_{it})$ show the interaction of PGLOB and TO.

$$\frac{\partial Growth_{it}}{\partial PGLOB_{it}} = \theta_{62} + \theta_{64}TO_{it} \quad (3.28)$$

The above equation captures the conditional impact of PGLOB on growth, we take the partial derivative of Eq (3.27) with respect to PGLOB. The signs of θ_{62} and θ_{64} coefficients in Eq (3.28) show that there is complementarity or substitutability role of TO in explaining the relationship between PGLOB and growth.

Similarly, we also repeat the same analysis for both aspects of GLOB for overall and the two dimensions of GLOB on economic growth separately.

Further, we move to the last objective of our research to explore the role of FD in the relationship between GLOB and economic growth. Eq (3.29) shows the effect of overall GLOB and FD on economic growth.

$$Growth_{it} = \lambda_{10} + \lambda_{11}initial + \lambda_{12}GLOB_{it} + \lambda_{13}FD_{it} + \lambda_{14}INF_{it} + \lambda_{15}GFCF_{it} + \lambda_{16}GGFCF_{it} + \lambda_{17}FR_{it} + \lambda_{18}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.29)$$

In Eq (3.29) we introduce the FD on the base line model of equation (3.4). From this equation we analyze the impact of overall GLOB and FD on growth nexus. Further, in next equation we introduce the interactive term of GLOB and FD.

$$Growth_{it} = \lambda_{20} + \lambda_{21}initial + \lambda_{22}GLOB_{it} + \lambda_{23}FD_{it} + \lambda_{24}(GLOB_{it} * FD_{it}) + \lambda_{25}INF_{it} + \lambda_{26}GFCF_{it} + \lambda_{27}GGFCF_{it} + \lambda_{28}FR_{it} + \lambda_{29}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.30)$$

The interactive term is $(GLOB_{it} * FD_{it})$ show the interaction of overall globalization and financial development for country i and period t . The conditional effect is capture through given in eq (3.31) by taking the partial derivative of Eq (3.30).

$$\frac{\partial Growth_{it}}{\partial GLOB_{it}} = \lambda_{22} + \lambda_{24}FD_{it} \quad (3.31)$$

Eq (3.31) shows the role of FD in explaining the relationship between overall GLOB and economic growth. The signs of λ_{22} and λ_{24} depicts the there is complementary or substitutive role of FD in explaining the relationship between overall GLOB and economic growth.

Next, we examine the dimensions of GLOB and FD on economic growth. First, Eq (3.32) captures the impact of economic dimension of GLOB and FD for country i and period t .

$$Growth_{it} = \lambda_{30} + \lambda_{31}initial + \lambda_{32}EGLOB_{it} + \lambda_{33}FD_{it} + \lambda_{34}INF_{it} + \lambda_{35}GFCF_{it} + \lambda_{36}GGFCF_{it} + \lambda_{37}FR_{it} + \lambda_{38}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.32)$$

Further, we analyze the interaction of economic globalization on growth.

$$Growth_{it} = \lambda_{40} + \lambda_{41}initial + \lambda_{42}EGLOB_{it} + \lambda_{43}FD_{it} + \lambda_{44}(EGLOB_{it} * FD_{it}) + \lambda_{45}INF_{it} + \lambda_{46}GFCF_{it} + \lambda_{47}GGFCF_{it} + \lambda_{48}FR_{it} + \lambda_{49}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.33)$$

The conditional effect of EGLOB on economic growth is capture through Eq (3.34).

$$\frac{\partial Growth_{it}}{\partial EGLOB_{it}} = \lambda_{42} + \lambda_{44}FD_{it} \quad (3.34)$$

The sign of coefficients of λ_{42} and λ_{44} show the complementary or substitutability role of FD in explaining the relationship between EGLOB with growth.

Similarly, we examine the remaining two dimensions of GLOB on economic growth.

For social dimension of GLOB is as follow

$$Growth_{it} = \lambda_{50} + \lambda_{51}initial + \lambda_{52}SGLOB_{it} + \lambda_{53}FD_{it} + \lambda_{54}INF_{it} + \lambda_{55}GFCF_{it} + \lambda_{56}GGFCF_{it} + \lambda_{57}FR_{it} + \lambda_{58}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.35)$$

In Eq (3.36) we examine the interactive impact of SGLOB and FD on economic growth.

$$Growth_{it} = \lambda_{60} + \lambda_{61}initial + \lambda_{62}SGLOB_{it} + \lambda_{63}FD_{it} + \lambda_{64}(SGLOB_{it} * FD_{it}) + \lambda_{65}INF_{it} + \lambda_{66}GFCF_{it} + \lambda_{67}GGFCF_{it} + \lambda_{68}FR_{it} + \lambda_{69}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.36)$$

To find the condition effect of SGLOB on economic growth, we take the partial derivative of above equation with respect to SGLOB.

$$\frac{\partial Growth_{it}}{\partial SGLOB_{it}} = \lambda_{62} + \lambda_{64}FD_{it} \quad (3.37)$$

Similarly, the last dimension of GLOB is political by considering the role of FD. Eq (3.38) analyze the impact of PGLOB and FD on economic growth.

$$Growth_{it} = \lambda_{70} + \lambda_{71}initial + \lambda_{72}PGLOB_{it} + \lambda_{73}FD_{it} + \lambda_{74}INF_{it} + \lambda_{75}GFCF_{it} + \lambda_{76}GGFCF_{it} + \lambda_{77}FR_{it} + \lambda_{78}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.38)$$

To find the conditional effect of PGLOB on economic growth by considering the role of FD.

$$Growth_{it} = \lambda_{80} + \lambda_{81}initial + \lambda_{82}PGLOB_{it} + \lambda_{83}FD_{it} + \lambda_{84}(PGLOB_{it} * FD_{it}) + \lambda_{85}INF_{it} + \lambda_{86}GFCF_{it} + \lambda_{87}GGFCF_{it} + \lambda_{88}FR_{it} + \lambda_{89}LE_{it} + \mu_i + \omega_t + \varepsilon_{it} \quad (3.39)$$

$(PGLOB_{it} * FD_{it})$ is the interaction term of PGLOB and FD of country i in period t .

That captures the conditional effect PGLOB on economic growth by taking the partial derivatives of Eq (3.39) with respect of PGLOB.

$$\frac{\partial GLOB_{it}}{\partial PGLOB_{it}} = \lambda_{82} + \lambda_{84}FD_{it} \quad (3.40)$$

The signs of λ_{82} and λ_{84} show that there is complementary (same signs of both coefficients) or subsutite (opposite signs of both coefficients) effect of FD in explaining the relationship between PGLOB and growth. We also do the same

analysis for both aspects of GLOB for overall and three dimensions of GLOB for the role FD.

3.3 Estimation Methods

This study is based on panel analysis. The advantages of panel data are that we can have more observations and hence, more degrees of freedom that can result in any worthwhile conclusion. Moreover, Baltagi and Raj (1992) mention that it improves the accuracy of estimations and gives the researcher chance to handle heterogeneities across time and cross sections. Furthermore, Hsiao (2022) highlights a number of benefits, including the ability to manage the impact of omitted variables and the investigation of dynamic correlations. We included physical capital as human capital instead of labor, taking into consideration the Solow (1956) growth hypothesis.

Our main independent variables may be influenced by factors within the model, which can lead to potential problems of endogeneity. This issue makes traditional estimation methods like ordinary least squares (OLS) and fixed effects (FE) biased and unreliable. Specifically, when there are unobservable differences among individuals or groups that remain constant over time, OLS estimates can be misleading. Opoku and Yan (2019) suggest using the FEM or within estimator as an alternative approach to address this weakness of OLS. However, it's important to note that the fixed effects estimator relies on certain assumptions. In particular, for consistent estimates, it assumes that the current values of the independent variables are not influenced by past values of the dependent variable (Wintoki et al., 2012).

Opoku and Yan (2019) and Bollmann et al. (2019) suggest that the instrumental variable (hereafter IV) technique is commonly used to address the issue of endogeneity. They state that when the instruments used in the analysis do not directly affect the outcome variable (such as growth), but instead influence it indirectly

through the endogenous variable, the IV approach can be helpful in identifying the causes of the outcome variable. However, they also acknowledge that this approach has limitations. One limitation is that the selected instruments may not effectively influence the endogenous variables. As a result, regression estimates relying on such instruments may be unreliable and inconsistent.

3.3.1 Generalized Method of Moments

In recent decades, researchers have addressed the issues of endogeneity and unobserved heterogeneity by employing the Generalized Method of Moments (GMM) technique. This approach utilizes the lagged values of the endogenous variable as instruments to account for endogeneity (Roodman, 2009). The use of GMM was first formalized by Holtz-Eakin et al. (1988) and subsequently expanded upon by Arellano and Bover (1995) Blundell and Bond (1998). Therefore, in the current study, we utilize the GMM estimator to perform our estimation. This choice aligns with similar research conducted by other scholars in studies such as Teixeira and Queirós (2016) and Opoku and Yan (2019) who also utilized GMM estimation.

According to Arellano and Bond (1991), the use of the GMM estimate technique is best for data of panel studies (Alam & Shah, 2013). The GMM is used to control for measurement errors, autocorrelation and omitted biases variables in panel data set (Hillier et al., 2011). Additionally, the GMM technique presents the best estimation results and controls endogeneity bias, which refers to the tendency of independent variables and error terms to interfere with the optimal outcome (Ullah et al., 2018). Furthermore, Hansen-test is used to determine if the instrument is appropriate for the model (Jara et al., 2019; Nekhili et al., 2020). A demonstration of the GMM method for addressing endogeneity issues that are ordinarily common in the analysis of globalization and economic growth.

In the literature, two common types of GMM estimators are discussed: Difference GMM and Sys.GMM. Difference GMM involves converting the equation into first differences, which helps to remove country-fixed effects. The lagged values of the endogenous variables are then used as instruments for these differences. Moreover, Sys.GMM combines the first difference equation with a second equation, creating a system of two equations. The first equation in differences, is instrumented with lagged levels, while the second equation in levels, is instrumented with lagged differences.

However, according to Bond et al. (2001), there may be a potential issue with the reliability of difference GMM estimates, especially when dealing with small-time series data. This is known as the weak instruments problem, where the instruments used in the analysis may not be strongly correlated with the endogenous variables. To address this concern, for the empirical analysis in our current work, we have chosen to use Sys.GMM instead of Difference GMM.

In simpler terms, difference GMM transforms the equation to look at changes over time, while Sys.GMM uses a combination of difference and level equations. We have used Sys.GMM due to concerns about the reliability of Difference GMM when dealing with limited time series data. Moreover, AR(1) and AR(2) are the first and second order serial correlation tests asymptotically distributed as $N(0,1)$ with the H_0 of no (1st and 2nd order serial correlation), were employed to assess instrument reliability. These tests are based on the null hypothesis "the Instruments are valid" and the hypothesis that there is no serial correlation present in the error term. Moreover, the GMM model removes endogeneity by "internally transforming the data transformation refers to a statistical process where a variable's past value is subtracted from its present value (Roodman, 2009).

In this way, the number of observations is reduced and this process (internal transformation) enhances the efficiency of the GMM model (Wooldridge, 2012). Furthermore, two kinds of transformation methods, known as first difference transformation (one-step GMM) and second-order transformation (two-step GMM), can also be used as GMM estimators. However, the first-difference transformation (one-step GMM) has some limitations.

For instance, if a variable's recent value is missing, then the first-difference transformation (where a variable's past value is deducted from its current value) could result in the loss of too many observations (Roodman, 2009). In order to avoid potential data loss owing to the internal transformation problem with the first-step GMM, Arellano and Bover (1995) recommended the use of a second order transformation (two-step GMM).

The second-order transformation (two-step GMM) applies 'forward orthogonal deviations which means that instead of subtracting the previous observations of a variable from its current value, the two-step GMM model subtracts the average of all future available observations of a particular variable (Roodman, 2009). Using a two-step GMM model, researchers can prevent unnecessary data loss.

Therefore, in the case of a balanced panel dataset, a two-step GMM model provides more efficient and consistent estimates for the involved coefficients (Arellano & Bover, 1995) these methods were combined with a generalized estimation modelling, two-step Sys.GMM. In dynamic panel data models, GMM is frequently chosen over 3SLS because of its versatility in managing endogeneity, dynamic structures, and a wide range of instruments. In order to assure instrument validity, handle higher-order serial correlation, and better capture the lagged dynamics of the data, AR(2) is utilized in place of AR(1). This study also uses the two-steps Sys.GMM estimation technique

considering previous research to analyze the nexus between GLOB and economic growth for developing countries.

3.4 Data Description

The main purpose of this study is to understand how GLOB, ERV, TO, and FD affect growth. However, one of the biggest difficulties researcher faces, especially in panel studies, is getting high-quality data. In the following section, we provide a description of our data set. We discuss the chosen variables, how they were created, and the information available about their availability.

3.4.1 Selection of Sample countries and Data Period

In this study, we recognize that having a longer time period and more countries in the sample is usually beneficial for econometric analysis. However, due to data limitations, we have used an unbalanced panel dataset consisting of 46 countries over the period from 1980 to 2018. The specific list of countries included in our analysis provided in the appendix. The decision to select this time period and number of countries was primarily driven by the availability of data.

Instead of using yearly data, we have chosen to use non-overlapping 5-year averages to create 8 time periods in our analysis². This decision was made in order to minimize the influence of business cycle effects on error terms and reduce serial correlation compared to using annual data (Islam, 1995). Additionally, using a larger sample size than the time period is necessary for GMM estimator (Opoku & Yan, 2019). By employing these 5-year averages, we aim to address these considerations and improve the robustness of our results.

² The 5-years non overlapping eight time periods are 1980-84, 1985-89, 1990-94, 1995-99, 2000-04, 2005-09, 2010-14, 2015-18. The last period contains 4years data because the non-availability of data.

3.4.2 Selection of Variables, Definition and Construction

In this sub-section, we provide an explanation for selection of certain variables for our study. We have one dependent variable, which is the variable, and several independent variables. Among the independent variables, there are four core variables that are of primary interest in our analysis. Additionally, we have included six control variables to account for other factors that may influence the relationship between the core variables and the dependent variable.

3.4.2.1 Dependent Variable

The dependent variable in our study is economic growth, which is measured as the logarithmic difference of real per capita GDP. We follow the approach used in previous literature to capture changes in economic growth over time. The per capita GDP is measured in constant prices of \$2017, and the data for this variable (Bhanumurthy & Kumawat, 2020; Dreher, 2006; Gaies et al., 2020; Gygli et al., 2019; Hassan 2019; Iamsiraroj, 2016; Xu et al., 2021). By using this measure, we aim to analyze the changes in economic growth across countries and time periods.

3.4.2.2 Explanatory Variables

Our explanatory variables consist of a set of core variables and control variables. In the following section, we provide a detailed discussion of these variables. The main variables use for this study are GLOB, ERV, TO, and FD.

Globalization

The literature suggest that the dimensions of GLOB is important (Keohane & Nye, 2000). In light of this, Dreher (2006) introduced a new GLOB indicator called the KOF Index of GLOB, that incorporates its economic, social, and political dimensions and employs the main components approach to integrate them into an overall score. Currently, the KOF Index of GLOB is thought to be the most accurate way to measure GLOB (Dreher et al., 2008; Gygli et al., 2019; Potrafke, 2015).

One of the most comprehensive way is to measure globalization is the KOF Index of Globalization, which encompasses economic, social and political aspects. It can be used for a long time because it offers time series data, thus making its findings more strong. The KOF index methodology is standardized and transparent so that all measurements are uniform in terms of reliability across different countries globally.. The most recent literature has used this index to support this claim (Lee et al., 2015; Majidi, 2017; Samimi & Jenatabadi, 2014).

Exchange Rate Volatility

For the ERV we take real effective ER from international financial statistics. Different scholars have included the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) into the ARCH family since Bollerslev (1986) proposed it as a method to estimate ERV (Barguelli et al., 2018; Ehigiamusoe & Lean, 2019; Janus & Riera, 2015; Olamide et al., 2022).

The method of conditions variance has the capacity to capture clustering volatility and unconditional return distribution with large tails by permitting changes over time due to past errors (Ehigiamusoe & Lean, 2019; Olamide et al., 2022). GARCH as a model

is helpful for modelling the fluctuation in the ER relative to conventional time series and econometric models that work under the assumption of constant variance (Alagidede & Ibrahim, 2017; Olamide et al., 2022). Additionally, the challenge of estimating negative variance parameters in an empirical application for ARCH prompted the development of an ARCH model extension with flexible lag structure. (Bollerslev, 1986; Katusiime et al., 2016; Olamide et al., 2022).

The conditional variance of the ER is described by the GARCH (1, 1) as follows.

$$EX_t = \beta_0 + \sum_{i=1}^p \beta_i EX_{t-i} + \varepsilon_t \quad (3.41)$$

$$\sigma_t^2 = \delta_0 + \sum_{i=1}^p \theta_i \varepsilon_{t-i}^2 + \sum_{j=1}^q \varphi_j \sigma_{t-j}^2 \quad (3.42)$$

In equation (3.41) EX_t represent the current period ER and EX_{t-1} represent the one period lag ER. σ_t^2 (volatility) shows the one period forward forecast of ER variance on the basis of past information. σ_{t-1}^2 pervious volatility GARCH term and ε_{t-1}^2 related to the previous information concerning the ARCH term. Hence, the eq (3.42) is stated to the equation of conditional variance.

Trade Openness

TO is a measure of how much a country is involved in international trade, which includes both exports and imports of goods and services. It is calculated as a percentage of the country's GDP. This measurement helps us understand how much the economy relies on global trade.

Importantly, this measure does not specifically indicate whether a country has liberalized trade policies or not. Instead, it focuses on the actual level of trade happening and how open the economy is to international exchanges. The main aim of using this measure is to understand how globalization affects a country's economic

growth, rather than examining the specific trade policies in place. The measure of TO is import plus export as a percentage of GDP (Dreher, 2006; Iamsiraroj, 2016; Zahonogo, 2018).

Interest rate disparities, political constancy, economic performance and monetary policy are factors that affect foreign ER. The level of TO will be dependent on the country's trade policies, tariffs imposed, regulations and trade agreements. If a country has free trade agreements and low tariffs, they will have high levels of TO even when their ER is unstable.

Countries may adopt strategies aimed at increasing their TO through reducing tariffs as well as entering into international agreements without aiming at ensuring stability in terms of the ER. In relation to International Market sentiments as well as speculation that drive short term volatility in ER, TO is generally a long-term policy outcome where changes take place slowly over time due to policy reforms and international negotiations. So ERV and TO do not overlapped.

Financial Development

Numerous studies in literature use either single or both measures of FD which capture its impact on growth either credit markets or stock markets. The measure of credit market measure King and Levine (1993) and Berthélemy and Varoudakis (1996) find that the banking sector development is a vital determinants of economic growth. The proxy of FD is DCTPSB (domestic credit to private sector by banks). This means it measures how much money is lent by banks within a country compared to the overall economic output of that country. When the domestic credit levels are higher, it means that people and businesses are borrowing more money from banks. This suggests that there is a greater dependence on the banking sector for obtaining funds and financial

support. Hence, we use the proxy of FD is DCTPSB (Chang et al., 2013; Gurgul & Lach, 2014).

Control Variables

To generate precise estimation findings, we select the control variables in accordance with the economic growth literature (Barro, 1991; Barro, 1996; Levine & Renelt, 1992). In their regression analysis, Levine and Renelt (1992) examined around 50 control variables to understand their relationship with economic growth. They found that certain variables were closely connected to economic growth. These variables include the initial income level of a country, domestic investment, government consumption, inflation, fertility rate, and life expectancy. These factors were identified as important indicators that affect the economic growth of a country.

In this study, we have included some traditional factors that are commonly associated with economic growth. These factors include the logarithm of initial GDP per capita, government investment, government expenditure, and inflation.

The first control variable is the logarithm of initial GDP per capita, which is measured at \$2017 prices. This variable serves multiple purposes in our analysis. Firstly, it adds a dynamic element to our model, allowing us to examine any convergence or divergence in the growth processes of the countries included in our sample. Secondly, it provides insights into the initial economic conditions of the countries, which can influence their subsequent growth patterns.

The second control variable we consider is physical capital, which is measured using gross fixed capital formation as a percentage of GDP. The role of physical capital in economic growth is emphasized in various growth models. Gross fixed capital formation (GFCF) as a percentage of GDP is a proxy of domestic investment as

higher domestic investment stimulates economic growth (Barro, 1991; Mankiw et al., 1992; Njindan Iyke, 2018). Including this variable allows us to capture the importance of physical capital accumulation in the economic growth processes of the sampled countries.

The third variable General Government final consumption expenditure (GGFCE) as percentage of GDP as a proxy of government consumption although, the effect of government consumption on growth is not evident in the literature. On the one hand, the increase in government consumption leads to a crowding out and inefficiencies. While, on the other hand, investment in infrastructure and the legal framework facilitates the process and stimulates growth (De Haan & Sturm, 2000).

The fourth variable is life expectancy (LE) is the proxy of human capital and fifth variable is fertility rate (FR) is the proxy of population growth. Higher population has inverse relationship with growth (Dreher, 2006). Most of empirical studies considered LE and FR not considering ageing issue so we follow the literature for considering variables that's why we are not adding ageing variable . All variables are converted to logarithm transformation. Macroeconomic variable extracted from the Penn World Tables 10. By incorporating these control variables, we aim to gain a better understanding of the factors that contribute to economic growth in our study.

3.5 Summary

This chapter focuses on the methodological framework used in our study. It includes the theoretical connection between the variables we are examining, the model we were used to analyze them using suitable statistical techniques, and the description of the data we have collected. We also explored the theoretical background related to our

main variables, which are ERV, TO, and FD, with a specific focus on their impact on economic growth.

We have created a basic growth model that considers various factors that contribute to economic growth, such as investment, government consumption expenditure, inflation, fertility rate, and life expectancy. In addition to these factors, we have also included our main variables of interest: ERV, TO, and FD as independent variables. We collected most of the data from the same source, but for some variables, we had to use different sources depending on their availability and suitability. To estimate the model accurately and address issues of endogeneity and reverse causality, we adopted a technique called Two-Step Sys.GMM, which is effective in handling these problems.

CHAPTER 4

RESULTS AND DISCUSSION

This chapter is divided into four sections to address the main objectives of the study and summarizes the key findings. First section of this chapter describes the relationship between GLOB and economic growth. Second section present the channel of ERV in explaining the relationship between GLOB and economic growth. Third section depicts the role of TO in explaining linkages between GLOB and economic growth. The last section shows the impact of FD in explaining the relationship between GLOB and economic growth for developing countries.

4.1 Summary Statistics and Correlation Analysis

From the summary statistics Table 4.1 (panel A), it can be seen that over the period of 1980-2018, the description of the data contains the mean, standard deviation, minimum and maximum value of each variable. All variables' data are average of 5-year non-overlapping window. Average is considered as a measurement of central tendency of whole set of the values of variable. As a measure of dispersion, standard deviation demonstrates how each value varies from the variable's mean value. The smallest and largest values in a data set are known as the minimum and maximum, which provide insight into the range of data.

The mean value of GLOB is approximately 3.852 and the mean value of initial is 10.544. The averages of growth (3.220), ERV (2.125), TO (4.151), FD (0.570),

Table 4.1: Summary Statistics and Correlation Matrix

Variables	Growth	Initial	GLOB	ERV	TO	FD	INF	GFCF	GGFCE	FR	LE
Panel A: Summary Statistics											
N	354	353	358	368	329	368	358	358	358	357	357
Mean	3.220	10.544	3.852	2.125	4.151	0.570	-1.087	-1.781	-1.760	1.245	4.138
Std Dev	4.075	2.292	0.264	11.332	0.503	1.454	0.363	0.494	0.525	0.487	0.164
Min	-18.272	5.589	2.878	0.004	2.555	-7.246	-2.131	-3.939	-4.929	0.127	3.692
Max	28.969	16.689	4.399	4.927	5.400	4.283	-0.062	-0.332	-0.593	2.029	4.379
Panel B: Correlation Matrix											
Growth	1										
Initial	-0.014**	1									
GLOB	0.157***	0.430***	1								
ERV	-0.161***	0.056	-0.181	1							
TO	0.112**	-0.433***	0.355***	-0.151***	1						
FD	0.335***	-0.172***	0.505***	-0.237***	0.428***	1					
INF	-0.076	-0.028	0.338***	0.059	0.129 ***	0.234***	1				
GFCF	0.159***	0.320***	0.363***	0.086*	0.017	0.147***	0.316***	1			
GGFCE	-0.089*	-0.187***	0.016	0.008	0.313***	0.029	-0.031	-0.160***	1		
FR	-0.020	-0.376***	-0.703***	0.118**	-0.267***	-0.350***	-0.158***	-0.276***	-0.325***	1	
LE	0.085	0.318	0.665***	-0.082	0.290***	0.315***	0.187***	0.408***	0.268***	-0.791***	1
Note: ***show the level of significance at 1%,** show the level of significance at 5% and * shows the level of significance at 10%. N = No of observation, STDEV = Standard Deviation, Min = Minimum, Max = Maximum, initial= log of initial GDP per capita, GLOB= Overall globalization, ERV= Exchange rate volatility, TO= Trade openness, FD= Financial Development, INF= Inflation, GFCF= Gross fixed capital formation, GGFCE= General government fixed capital expenditure, FR= Fertility rate, LE = Life expectancy											

inflation (-1.087), GFCF (-1.781), GGFCE (-1.760), fertility rate (1.245), life expectancy (4.138). The standard deviation of initial is (2.292), GLOB (0.264), ERV (11.332), TO (0.503), FD (1.454), inflation (0.363), GFCF (0.494), GGFCE (0.525), fertility rate (0.487) and life expectancy (0.164).

The results of the correlation matrix are given in Table 4.1 (panel B). The results report the coefficient of explanatory variables. The correlation coefficient assesses whether there is a linear relationship between two variables. GLOB is positively related to TO, FD, inflation, government investment, and life expectancy. While, adversely correlated with fertility rate. The Growth is positively correlated with most of variables like as initial, GLOB, TO, FD, GFCF, and negatively correlated with ERV and GGFCE, the coefficient of correlation is small in case of initial.

The initial is negatively correlated with TO, FD, GGFCE, fertility rate and positively correlated with GLOB and GFCF. The values of correlation coefficient of GLOB are positively correlated to TO, FD, inflation, GFCF, life expectancy and negatively correlated with fertility rate. The ERV is positively correlated with GFCF and fertility rate. While, negatively correlated with TO and FD. The TO variable is positively correlated with FD, inflation, GGFCE, life expectancy are inversely associated with fertility rate.

FD is positively correlated to inflation, GFCF, life expectancy and inversely correlated with fertility rate. Inflation is positively related with GFCF and with life expectancy. However, negatively correlated with fertility rate. GFCF and GGFCE both are positively correlated with life expectancy and negatively correlated with fertility rate.

In order to analyze the GLOB impact and its dimensions on economic growth, two models have been developed and employed for panel estimation techniques such as Pooled OLS, Fixed-Effects (FE) have been used while to address the endogeneity Sys.GMM models have been applied to each model³. The results of FEM given in appendix. While, Sys.GMM results are reported in the main text as it is the most appropriate estimation technique in or analysis.

4.2 Overall Globalization and Economic Growth

Table 4.2 illustrates the relationship of GLOB and its different dimensions with economic growth. The first column shows that the overall GLOB impact on economic growth. The second column show the impact of EGLOB, 3rd and 4th columns show the impact of SGLOB and PGLOB on economic growth respectively.

The coefficient of initial of GDP per capita is negative and significant which shows the conditional convergence. Conditional convergence means that countries with lower incomes have the potential to grow faster and catch up with higher income countries. However, it does not mean that all countries will become equally rich or that the income gap will disappear completely. The speed and extent of convergence can differ between countries and depend on factors like the economic, social and political (Cho et al., 2002; Mathur, 2005).

³ The first model analyzes the impact of overall GLOB on economic growth through FEM. Hausman test suggest that FEM model is appropriate in all models (GLOB and its all three dimensions).

Table 4.2: Impact of Globalization and its Dimensions on Economic Growth by using Two step Sys.GMM

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Initial	-1.916** (0.013)	-0.633** (0.047)	-5.130*** (0.000)	-2.074*** (0.000)
GLOB	0.015** (0.015)	-	-	-
EGLOB	-	0.022** (0.048)	-	-
SGLOB	-	-	-0.033** (0.013)	-
PGLOB	-	-	-	0.019*** (0.000)
INF	-0.049*** (0.005)	-0.077*** (0.009)	-0.012 (0.718)	-0.010*** (0.001)
GFCF	0.034** (0.052)	0.028*** (0.001)	0.049** (0.025)	0.025** (0.021)
GGFCE	-0.015** (0.027)	-0.010** (0.033)	-0.063*** (0.001)	0.051 (0.910)
FR	-0.026 (0.893)	-0.016 (0.892)	-0.013*** (0.005)	0.047 (0.889)
LE	-0.023 (0.606)	0.010 (0.639)	0.030 (0.161)	0.030 (0.583)
Constant	-8.891 (0.739)	3.465 (0.827)	66.429*** (0.007)	20.424** (0.015)
F-Stat	91.82*** (0.000)	58.61*** (0.000)	40.81*** (0.000)	81.94*** (0.000)
Instruments	42	35	13	39
AR(2) P-value	-1.61 (0.107)	-1.31 (0.190)	-1.25 (0.212)	-1.14 (0.252)
Hansen P-value	41.77 (0.169)	26.73 (0.479)	6.66 (0.247)	38.43 (0.168)
Obs	350	305	350	350
Countries	46	46	46	46
Note: Same as mentioned in table 4.1, except GLOB is overall globalization, EGLOB is economic globalization, SGLOB is social globalization, and PGLOB is political globalization.				

The coefficient associated with GLOB in column 1 is positive and significant which indicates that GLOB promotes economic growth such as access to international capital, emergence of new opportunities, transfer of technology, improved communication, energy, the working environment, and quality of work. This finding is in line with the following studies (Bataka, 2019; Dreher, 2006; Gygli et al., 2019).

In all four of the models the initial coefficient is negative and significant demonstrating conditional convergence (Barro, 1991; Chowdhary et al., 2011; Levine et al., 2000; Mankiw et al., 1992). The convergence is observed in GLOB and its all dimensions (Villaverde & Maza, 2011). GLOB has a positive and significant impact on economic growth in overall and its different dimensions except SGLOB.

Inflation in general has a significant and negative coefficient which means that it hinders economic growth. Inflation reduces the purchasing power of money which has a detrimental effect on economic expansion (Bataka, 2019; Dreher, 2006; Gurgul & Lach, 2014). In addition, the inflation rate also encourages spending rather than saving. When expenses are rising, people are more likely to acquire more products before they become more expensive because money placed aside for future usage will be worth less, this discourages people from saving. Savings are necessary to increase the quantity of money in the financial market (Barro & Martin, 2004).

According to important studies by Barro (1991) and Rahman et al. (2019), it is anticipated that the variable GFCF would have a positive and significant impact on economic growth. This means that it is predicted that the amount of money invested in long-term assets, such as buildings and machinery, would have a beneficial effect. The results of this study support those previous findings which are the provision of infrastructural facilities and subsidies results in a positive effect for increased in government spending.

The literature indicates ambiguous, inconsistent about the association among government consumption and economic growth (Dreher, 2006; Nyasha & Odhiambo, 2019). Some studies contend that it creates an environment for economic actors to

flourish and as a result has crowding-in effects. Having a good infrastructure and a fair legal system can help promote economic growth (Hansson, 2000).

However, some researches claim that it has a detrimental influence on economic growth because it creates inefficiencies, imbalances, and most importantly crowd-out private investment. Our results support that higher government consumption expenditure has a detrimental effect on economic growth because the requirement of huge financing is generally fulfilled through heavy taxes, internal and external debts in developing countries. This indicates that increase in the size of government leads to inefficiencies.

Fertility rate is insignificant in all model except SGLOB that indicates a negative and significant relationship between fertility rate and economic growth. The reason behind this negative relationship is that it is difficult for developing countries to afford the increase in per capita public expenditure that is required to eliminate hunger, malnutrition and poverty to ensure essential services like health care and education.

Moreover, column 2 and 4 of Table 4.2 respectively show that economic and PGLOB have a beneficial effect on growth (Chang et al., 2013; Chang & Lee, 2010). However, in column 3, SGLOB has a negative and significant impact on growth. Our findings are in line with Kilic (2015) view that in comparison to SGLOB, economic and PGLOB is more beneficial for developing countries.

4.2.1 De-Facto Aspect of Overall Globalization and Economic Growth

Table 4.3 presents the findings of the de-facto aspect of GLOB. The first column indicates the influence of overall de-facto GLOB, while, the second, third, and fourth

columns display the effects of economic, social, and political de-facto aspect on economic growth.

Table 4.3: Impact of De-facto Aspect of Globalization on Economic Growth by using Two step Sys.GMM

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Initial	-1.992** (0.026)	-2.598*** (0.000)	-4.065*** (0.001)	-2.355*** (0.000)
GLOB	0.013* (0.051)			
EGLOB	-	-0.014** (0.042)	-	-
SGLOB	-	-	-0.059* (0.085)	-
PGLOB	-	-	-	0.015*** (0.005)
INF	-0.011** (0.018)	-0.036** (0.029)	-0.047 (0.232)	-0.012*** (0.001)
GFCF	0.031** (0.049)	0.048*** (0.000)	0.050*** (0.009)	0.015* (0.065)
GGFCE	-0.025** (0.014)	-0.029*** (0.001)	-0.052*** (0.001)	-0.086** (0.027)
FR	-0.020 (0.315)	-0.046** (0.023)	-0.094** (0.014)	-0.015 (0.629)
LE	-0.003 (0.963)	0.038 (0.449)	0.012 (0.235)	0.088 (0.122)
Constant	26.356* (0.095)	26.896 (0.271)	21.623 (0.585)	18.291*** (0.002)
F-Stat	2.99*** (0.000)	33.35*** (0.000)	4.05*** (0.002)	5.38*** (0.000)
Instruments	39	13	15	41
AR(2)	-1.35 (0.178)	-1.25 (0.212)	-0.67 (0.504)	-0.93 (0.353)
Hansen P-value	37.27 (0.203)	9.65 (0.140)	9.25 (0.235)	35.57 (0.348)
Obs	350	309	302	309
Countries	46	46	45	46
Note: Same as mentioned in table 4.1 and table 4.2.				

Overall de-facto and PGLOB have a positive and direct impact on economic growth, but negative effects are observed for the de-facto aspects of economic and social dimensions of GLOB.

However, the political de-facto GLOB has a large magnitude and significant coefficient relative to the remaining dimensions and overall GLOB. Thus, our findings validate that political de-facto GLOB holds greater importance in developing countries.

4.2.2 De-Jure Aspect of Overall Globalization and Economic Growth

Increased political de-facto GLOB contributes to enhanced economic growth. Inflation, government consumption, and fertility rate have a detrimental effect on economic growth, aligning with existing literature (Barro & Martin, 2004; Bataka, 2019; Villaverde & Maza, 2011). Economic growth is influenced positively and significantly by investment and life expectancy.

The Table 4.4 shows the results of de-jure aspect of GLOB on economic growth. De-jure GLOB and its dimensions have a positive and significant impact on growth except SGLOB which has negative effect. Thus, the magnitude of EGLOB among all dimensions is highest. However, political de-jure is also highly significant to enhance economic growth. It shows that when developing countries have political stability and implement suitable policies, it leads to an increase in economic growth. The control variables in de-jure analysis are significant and in line with the literature.

Table 4.4: Impact of De-Jure Aspect of Globalization on Economic Growth by using Two step Sys.GMM

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Initial	-1.872** (0.022)	-9.474*** (0.003)	-4.661*** (0.000)	-1.540** (0.012)
GLOB	0.039** (0.040)	-	-	-
EGLOB	-	0.059** (0.028)	-	-
SGLOB	-	-	-0.069** (0.023)	-
PGLOB	-	-	-	0.010*** (0.005)
INF	-0.042** (0.014)	-0.031*** (0.010)	-0.053 (0.107)	-0.038** (0.013)
GFCF	0.030** (0.047)	0.014** (0.027)	0.068*** (0.001)	0.0171** (0.028)
GGFCE	-0.022** (0.022)	-0.088** (0.031)	-0.059*** (0.000)	-0.095*** (0.006)
FR	-0.018 (0.323)	-0.014 (0.146)	-0.012*** (0.001)	-0.023 (0.544)
LE	-0.023 (0.957)	-0.012 (0.600)	0.056 (0.601)	0.030 (0.611)
Constant	0.340 (0.988)	118.181 (0.367)	66.576 (0.145)	7.071 (0.250)
F-Stat	3.39*** (0.000)	25.17*** (0.000)	34.67*** (0.000)	27.95*** (0.000)
Instruments	42	15	10	41
AR(2)	-1.49 (0.137)	-1.58 (0.115)	-1.60 (0.109)	-1.34 (0.179)
Hansen P-value	37.53 (0.311)	6.82 (0.448)	0.09 (0.955)	38.77 (0.225)
Obs	350	263	309	309
Countries	46	46	46	46
Note: Same as mentioned in table 4.1 and table 4.2.				

4.3 Globalization, its Dimensions, Exchange Rate Volatility and Economic Growth

GLOB and ERV are related as stated in the introduction and in the literature review section. Hence both reinforce each other in explaining the effect on economic growth. In this subsection, we use our baseline model that are equations 3.7, 3.10, 3.13, and 3.16 to describe and explain the direct empirical linkages among the variables. Two estimators FEM and two-step Sys.GMM are employed in this context. In comparison to FEM and two-step Sys.GMM estimates, the latter are normally considered to be more reliable and robust. While, the estimates of FE are utilized as a benchmark⁴, our main focus is on the explanation of the two-step Sys.GMM estimates. Additionally, it is crucial to note that while utilizing both estimators, we use robust standard errors to address the issues of heteroscedasticity and autocorrelation, following (Newey & West, 1987).

Table 4.5 presents the results of analyzing the GLOB impact on economic growth using the two-step Sys.GMM method, with the focus on the channel of ERV. In first column, the results of baseline are shown by adding ERV for overall GLOB. The second column shows the results of the moderating role of GLOB and ERV in explaining their impacts on growth. The third, fourth, and fifth columns show similar results for the interactive effect of each of EGLOB, SGLOB, PGLOB and ERV respectively.

⁴ The results of FEM are given in the appendix. Where appendix 1 reports the baseline results of effect of GLOB and its dimensions on economic growth. While, appendix 2 reports the results relating of GLOB and economic growth with moderating role of ERV. Appendix 3, 4 and 5 present similar results about TO and FD respectively.

After incorporating the variable of ERV in the model, initial is negative and significant which shows the conditional convergences. The coefficients of GLOB are positive and significant in the all dimensions of GLOB.

Table 4.5: Impact of Globalization on Economic Growth: Role of Exchange Rate Volatility by using Two step Sys.GMM

Variables	Model (1)	Model (1) with interaction	Model (2)	Model (2) with interaction	Model (3)	Model (3) with interaction	Model (4)	Model (4) with interaction
Initial	-0.212* (0.051)	-1.789** (0.035)	-0.220*** (0.007)	-4.684** (0.046)	-0.021* (0.097)	-0.220* (0.089)	-0.542*** (0.002)	-0.610*** (0.000)
GLOB	2.936*** (0.008)	0.898* (0.068)	-	-	-	-	-	-
EGLOB	-	-	0.055** (0.014)	-0.029* (0.090)	-	-	-	-
SGLOB	-	-	-	-	1.956** (0.012)	3.553*** (0.000)	-	-
PGLOB	-	-	-	-	-	-	1.951** (0.030)	0.039*** (0.008)
ERV	-0.041* (0.072)	1.434** (0.025)	-0.073*** (0.005)	0.632* (0.085)	-0.069*** (0.000)	-0.175*** (0.008)	-0.064*** (0.001)	-0.083*** (0.004)
(GLOB*ERV)	-	-0.403** (0.024)	-	-	-	-	-	-
(EGLOB*ERV)	-	-	-	-0.203** (0.045)	-	-	-	-
(SGLOB*ERV)	-	-	-	-	-	0.044* (0.062)	-	-
(PGLOB*ERV)	-	-	-	-	-	-	-	0.005* (0.095)
INF	-2.018*** (0.001)	-5.429** (0.017)	-6.275*** (0.005)	-1.552* (0.691)	-7.920*** (0.001)	-3.391*** (0.002)	-1.934*** (0.001)	-2.557* (0.060)
GFCF	1.639***	3.308*	2.334***	42.046	2.819***	12.681**	12.267***	19.176

	(0.003)	(0.058)	(0.002)	(0.103)	(0.000)	(0.015)	(0.001)	(0.477)
GGFCE	-0.061 (0.738)	-1.979** (0.017)	-0.574 (0.205)	-3.888* (0.085)	-0.479 (0.284)	-3.743 (0.253)	-4.882 (0.121)	-4.042 (0.546)
FR	0.716 (0.334)	-0.657 (0.761)	0.925 (0.234)	-10.977* (0.088)	1.025 (0.205)	0.580 (0.126)	0.135 (0.625)	0.108 (0.676)
LE	1.423 (0.350)	-0.102 (0.980)	1.921 (0.301)	0.055 (0.816)	-1.267 (0.530)	-0.004 (0.904)	3.403 (0.135)	1.970 (0.604)
Constant	-12.945 (0.116)	-14.499 (0.581)	-0.297 (0.974)	73.549** (0.050)	9.651 (0.377)	-14.593** (0.032)	-16.745 (0.150)	-6.502 (0.574)
F-Stat	51.40*** (0.000)	53.76*** (0.000)	62.50*** (0.000)	24.16*** (0.004)	83.55*** (0.000)	77.27*** (0.000)	- (0.000)	48.14*** (0.000)
Instruments	13	41	37	14	30	44	13	18
AR(2)	-1.29 (0.198)	-1.45 (0.147)	-0.97 (0.331)	-1.05 (0.292)	-1.14 (0.254)	-1.42 (0.157)	-0.76 (0.395)	-0.96 (0.336)
Hansen	3.93 (0.416)	40.53 (0.117)	30.24 (0.352)	5.62 (0.230)	24.40 (0.274)	39.29 (0.245)	1.46 (0.833)	2.38 (0.967)
OBS	350	350	304	309	304	304	304	304
Countries	46	46	46	46	46	46	46	46
Note: Same as mentioned in table 4.1 and table 4.2, except this table report the role of ERV in the relationship between overall GLOB and its three dimensions.								

It means that GLOB encourage economic growth. The ERV has a negative and significant impact on economic growth in case of GLOB and all its dimensions.

ERV refers to the fluctuations in a country's currency value in concerning its imports and exports. When a country's currency is weaker, it becomes more expensive to import goods but cheaper for foreign buyers to purchase its exports, thus stimulating export activity. Over time, the strength or weakness of a country's currency can affect its trade deficit. ERV may cause the delay in investment in that case when there is an irreversible investment decision and higher cost of adjustment to ERV (Goldberg & Kolstad, 1994; Katusiime et al., 2016). ERV may hinder the effect of economic growth, as there is an underdeveloped capital market and high macroeconomic instability (Schnabl, 2008). ERV impacts both the supply and demand sides of the economy and has a harmful effect on long-term economic growth (Ibrahim et al., 2016).

To assess how GLOB and its various dimensions affect economic growth while considering the influence of ERV, we introduce interaction terms between GLOB, its dimensions, and ERV. These interaction terms are represented by equations (3.8, 3.11, 3.14, 3.17). We estimate it through two steps Sys.GMM and the results are given in Table 4.5. We use two specifications; first specification includes main variables like initial, GLOB, ERV and control variables. The second specification includes the interaction term of GLOB, its dimensions and ERV. Both models meet the AR(2) and Hansen J-test requirements, which are crucial for the validity of the GMM results.

4.3.1 Conditional Analysis of Overall Globalization on Economic Growth at Varying Level of Exchange Rate Volatility

In order to examine the impact of overall GLOB on economic growth through the channel of ERV, we have taken the partial derivative of Eq (3.8) with respect to GLOB.

$$\frac{\partial \text{Growth}_{it}}{\partial \text{GLOB}_{it}} = 0.899 - 0.403\text{ERV}_{it} \quad (4.1)$$

It is evident from equation (4.1), both coefficients have the opposite signs. This indicates that the ERV play a substituting role in explaining the GLOB relationship with economic growth. The negative sign of an interactive term indicates that the role of ERV weakens the GLOB and economic growth relationship⁵.

Table 4.6: Conditional Effects of Globalization on Economic Growth at Varying Level of Exchange Rate volatility

Percentiles of ERV	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	8.974* (0.069)	-0.304* (0.083)	2.205** (0.0-18)	0.0585*** (0.001)
P50(Medium)	8.951* (0.069)	-0.316* (0.073)	2.206** (0.018)	0.0586*** (0.001)
P75(High)	8.860* (0.070)	-0.361** (0.042)	2.207** (0.018)	0.0587*** (0.001)
Note: Same as mentioned in table 4.1.				

At varying level of percentiles (25th, 50th, 75th) the coefficients of interactive term are positive and significant in most of the models (overall, social and political GLOB) but

⁵ We have done a similar analysis for the dimensions of GLOB, including economic, social, and PGLOB. For EGLOB, the coefficient of the interaction term is negative, indicating that the presence of ERV weakens the relationship between GLOB and economic growth. However, in the case of social and PGLOB, the sign of the interaction term is positive, revealing that the role of ERV strengthens the relationship between GLOB and economic growth

their magnitude is decreasing over the percentile⁶. This means that as ERV increases, this leads to decrease the overall GLOB impact on economic growth.

Higher volatility in the ER may lead to decrease in investment specifically foreign investment as a result of higher risk premium and interest rates. Consumption and investment decisions are also affected by higher ERV. It may increase macroeconomic volatility (Arratibel et al., 2011). Hence, we can conclude that the impact of ERV weakens the linkages between GLOB and economic growth. In second column, at varying level of ERV the sign of coefficients is negative but their magnitude is decreasing over the percentile. Whereas, in 3rd and 4th columns, at varying level of ERV the signs of all coefficients are positive.

4.3.2 De-Facto Aspect of Globalization, it Dimensions, Exchange Rate Volatility and Economic Growth

Table 4.7 report the results of the impact of de-facto measures of GLOB, its dimensions on economic growth. Initial is negative and significant in all cases which shows the convergence which is consistent with pervious result. De-facto measure of overall GLOB and its dimensions have positive and significant impact except SGLOB on economic growth. ERV is negative and significant in all cases that show it hinder the economic growth because ERV makes the economic condition unclear and discourages investment. Fluctuation in currency rates has an impact on global competitiveness.

The inflation rate, which is a measure of macroeconomic instability, affects the investor's decision to make an investment. The investment decline has a detrimental effect on the economic growth. Developing countries have underdeveloped capital

⁶ The role of ERV weakens the relationship between GLOB and economic growth. However, in the case of SGLOB and PGLOB the sign of interactive term is positive which reveals that the role of ERV strengthen the relationship between GLOB and economic growth.

Table 4.7: Impact of De-Facto Globalization, its dimensions on Economic Growth through ERV by using Two step Sys.GMM

Variables	Model (1)	Model (1) with interaction	Model (2)	Model (2) with interaction	Model (3)	Model (3) with interaction	Model (4)	Model (4) with interaction
Initial	-0.189* (0.057)	-0.320*** (0.005)	-0.225** (0.046)	-0.176* (0.074)	-0.488*** (0.002)	-0.244** (0.012)	-0.627*** (0.002)	-0.613*** (0.001)
GLOB	0.016* (0.075)	0.028** (0.018)	-	-	-	-	-	-
EGLOB	-	-	0.017** (0.042)	0.015** (0.024)	-	-	-	-
SGLOB	-	-	-	-	-0.067* (0.086)	0.011* (0.094)	-	-
PGLOB	S-	-	-	-	-	-	0.031* (0.081)	0.029** (0.033)
ERV	-0.045** (0.042)	-0.126** (0.042)	-0.060* (0.088)	-0.014*** (0.000)	-0.061*** (0.002)	-0.095*** (0.000)	-0.072*** (0.003)	-0.099*** (0.002)
(GLOB* ERV)	-	0.023* (0.095)	-	-	-	-	-	-
(EGLOB* ERV)	-	-	-	0.033*** (0.001)	-	-	-	-
(SGLOB* ERV)	-	-	-	-	-	0.011* (0.099)	-	-
(PGLOB* ERV)	-	-	-	-	-	-	-	0.009* (0.067)
INF	-0.018*** (0.004)	-0.026*** (0.000)	-0.063*** (0.001)	-0.066*** (0.000)	-0.123 (0.900)	-8.161*** (0.002)	-2.268*** (0.000)	-5.443*** (0.000)
Invest	1.620*** (0.002)	2.294*** (0.000)	1.232*** (0.000)	1.836*** (0.000)	6.953 (0.105)	2.643** (0.037)	1.953*** (0.000)	1.173*** (0.000)
Govt. CONS	-0.771** (0.044)	-0.833* (0.068)	-0.835** (0.063)	-0.598 (0.197)	-1.307*** (0.001)	-3.821 (0.331)	-0.993** (0.049)	-5.347 (0.110)
FR	0.338 (0.607)	0.640 (0.387)	0.165 (0.547)	0.435 (0.543)	-1.663* (0.043)	0.179 (0.545)	-0.164 (0.448)	0.030 (0.901)
LE	1.844 (0.210)	1.268 (0.483)	2.050 (0.369)	1.333 (0.435)	-0.073 (0.395)	-0.016 (0.727)	0.006 (0.824)	0.044 (0.186)
Constant	-9.486 (0.209)	-10.483 (0.207)	-9.927 (0.339)	-8.690 (0.274)	23.228* (0.053)	1.607 (0.693)	2.076 (0.520)	6.246 (0.074)

F-Stat	38.19***	17.94***	85.22***	91.16***	34.43***	64.87***	95.09***	97.71***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Instruments	13	14	22	18	41	36	14	15
AR(2)	-1.27	-1.35	-1.07	-1.27	-0.17	-0.72	-1.21	-0.84
	(0.202)	(0.176)	(0.283)	(0.205)	(0.865)	(0.472)	(0.226)	(0.402)
P-Value	3.43	3.63	11.10	3.37	40.30	24.41	0.89	1.25
	(0.488)	(0.458)	(0.602)	(0.909)	(0.149)	(0.553)	(0.971)	(0.940)
Obs	350	309	304	304	297	297	304	304
Countries	46	46	46	46	45	45	46	46
Note: Same as mentioned in table 4.1, 4.2 and 4.5, except this table report the results of de facto aspect of GLOB.								

market and high macroeconomic instability. These results are consistent with the literature (Barguelli et al., 2018; Dollar & Kraay, 2003; Janus & Riera, 2015; Morina et al., 2020; Schnabl, 2008; Vieira 2013).

In order to examine the impact of de-facto aspect of GLOB on economic growth through the role of ERV, we have taken the derivative with respect to DFGLOB⁷.

$$\frac{\partial Growth_{it}}{\partial DFGLOB_{it}} = 0.028 + 0.023ERV_{it} \quad (4.2)$$

It is evident from equation (4.2), both coefficients have the same signs, this implying that at higher ERV, the de-facto aspect of GLOB impact on economic growth become stronger. The ERV moderating effects show that its plays a complementary role in explaining the de-facto relationship with economic growth⁸.

Table 4.8: Conditional Effects of De-Facto Aspect of Globalization on Economic Growth at Varying Level of Exchange Rate volatility

Percentile of ERV	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	2.850** (0.018)	1.593** (0.024)	1.1643* (0.094)	0.0302** (0.032)
P50(Medium)	2.851** (0.018)	1.595** (0.023)	1.1649* (0.093)	0.0307** (0.030)
P75(High)	2.856** (0.018)	1.603** (0.023)	1.1675* (0.093)	0.0329** (0.025)
Note: Same as mentioned in table 4.1.				

At varying level of percentiles (25th, 50th, & 75th) the coefficients of interactive term are positive and significant. Moreover, their magnitude is increasing over the percentile. This implies that as ERV increases, it enhances the impact of the de-facto aspect of GLOB on economic growth. In other words, the influence of ERV

⁷ In chapter 3 we mentioned that we do similarly analysis for both aspects of GLOB (de-facto and de-jure). We did not mention their equations in the thesis that's why we don't mentioned equations number of both aspects of GLOB.

⁸ We have done same analysis for the all dimensions of GLOB for de-facto aspects. All dimensions also have similar results which show the ERV strengthen the relationship between de-facto aspect of GLOB and economic growth.

strengthens the connections between GLOB and economic growth. We also observed similar results when examining different dimensions of GLOB in relationship with economic growth.

4.3.3 De-Jure Aspect of Globalization, its Dimensions and Economic Growth: Role of Exchange Rate Volatility

Table 4.9 presents the findings regarding the impact of the de-jure aspect of GLOB on economic growth through ERV. The findings show that GLOB has a direct and significant influence on economic growth, except for SGLOB when considering the baseline models. However, GLOB is significant in all interaction models. Interactive coefficient is significant in all models but in overall de-jure GLOB is negative. However, all dimensions the coefficients are positive.

The inflation coefficient is negative and significant in all cases except EGLOB with its interactive term. This shows that inflation has hindered the GLOB and economic growth linkages. The coefficients of GFCF are positive and significant in most of the models which show that government investment boost the de-jure aspect of GLOB and economic growth linkages.

Table 4.9: Impact of De-Jure Globalization on Economic Growth through ERV by using Two step Sys.GMM

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) With Interaction	Model (3)	Model (3) With Interaction	Model (4)	Model (4) With Interaction
Initial	-0.225** (0.041)	-0.246** (0.024)	-0.225** (0.035)	-0.581** (0.028)	-0.240* (0.068)	-0.305* (0.088)	-0.449*** (0.0039)	-0.484*** (0.002)
GLOB	0.029*** (0.005)	0.031*** (0.002)	-	-	-	-	-	-
EGLOB	-	-	0.013** (0.011)	0.055** (0.046)	-	-	-	-
SGLOB	-	-	-	-	1.462 (0.079)	2.036** (0.025)	-	-
PGLOB	-	-	-	-	-	-	0.047*** (0.010)	0.050*** (0.007)
ERV	-0.042* (0.063)	0.362*** (0.008)	-0.045** (0.042)	-0.302** (0.028)	-0.065*** (0.006)	-0.145*** (0.004)	-0.053 (0.042)	-0.084*** (0.007)
(GLOB*ERV)	-	-0.113*** (0.006)	-	-	-	-	-	-
(EGLOB*ERV)	-	-	-	0.099* (0.087)	-	-	-	-
(SGLOB*ERV)	-	-	-	-	-	0.027* (0.068)	-	-
(PGLOB*ERV)	-	-	-	-	-	-	-	0.009* (0.094)
INF	-0.020*** (0.001)	-0.022*** (0.000)	-0.014*** (0.009)	-0.093 (0.121)	-0.087*** (0.000)	-0.089*** (0.000)	-0.017** (0.060)	-0.018** (0.038)
GFCF	0.016*** (0.003)	0.017*** (0.002)	0.016*** (0.002)	0.074 (0.436)	0.027*** (0.004)	0.028*** (0.002)	-0.097 (0.978)	-0.103 (0.976)
GGFCE	-0.051 (0.183)	-0.051 (0.177)	-0.061* (0.099)	-0.067 (0.436)	-0.011* (0.066)	-0.012* (0.070)	-0.027 (0.641)	-0.028 (0.624)
FR	0.085 (0.273)	0.081 (0.299)	0.054 (0.412)	-0.018 (0.611)	0.052 (0.637)	-0.012 (0.922)	0.043 (0.873)	0.027 (0.919)
LE	0.014 (0.339)	0.013 (0.376)	0.029* (0.054)	0.027 (0.648)	-0.627 (0.859)	-0.059 (0.322)	0.028 (0.495)	0.028 (0.494)

Constant	-13.192 (0.128)	-13.323 (0.128)	-11.973 (0.107)	9.178 (0.168)	8.655 (0.642)	8.793 (0.361)	1.889 (0.632)	1.924 (0.622)
F-Stat	45.69*** (0.000)	56.63*** (0.000)	66.40*** (0.000)	73.93*** (0.000)	36.54*** (0.000)	22.58*** (0.000)	41.54*** (0.000)	39.93*** (0.000)
Instruments	13	41	14	41	13	11	34	12
AR(2)	-1.27 (0.205)	-1.24 (0.214)	-1.25 (0.212)	-1.04 (0.299)	-1.18 (0.239)	-1.24 (0.216)	-0.69 (0.493)	-0.64 (0.525)
P-Value	4.23 (0.375)	4.29 (0.368)	3.98 (0.409)	30.73 (0.162)	39.76 (0.163)	39.67 (0.137)	0.64 (0.726)	0.58 (0.749)
Obs	350	350	350	309	309	304	304	304
Countries	46	46	46	46	46	46	46	46
Note: Same as mentioned in table 4.1, 4.2 and 4.5, except this table reports the results of de jure aspect of GLOB.								

To examine the conditional effect of de-jure aspect of GLOB and ERV on economic growth. We have taken the partial derivative with respect to de-jure GLOB which is given below

$$\frac{\partial Growth_{it}}{\partial DJGLOB_{it}} = 0.031 - 0.113ERV_{it} \quad (4.3)$$

It is evident from equation (4.3), both coefficients have the opposite signs. This shows that ERV play a substitution role in explaining the of relationship the de-jure aspect of GLOB with economic growth. The negative sign of an interactive term indicates that the role of ERV weakens the de-jure aspect of GLOB and economic growth relationship⁹.

Table 4.10: Conditional Analysis for De-Jure Aspect of Globalization at Varying Level of Exchange Rate Volatility

Percentile of ERV	Model (1)	Model (2)	Model (3)	Model (4)
P25(low)	3.157*** (0.002)	0.058** (0.035)	2.036** (0.025)	0.0511*** (0.007)
P50(Medium)	3.151*** (0.002)	0.063** (0.022)	2.038** (0.025)	0.0517*** (0.000)
P75(High)	3.126*** (0.003)	0.085*** (0.007)	2.044** (0.025)	0.0539*** (0.008)
Note: Same as mentioned in table 4.1				

Table 4.10 presents the results of percentile analysis for de-jure aspects of GLOB and ERV on economic growth. At varying level of percentile, the overall de-jure GLOB and its dimensions are positive and significant but in overall GLOB magnitude decreases over the percentile. Unlike overall de-jure GLOB, the dimensions of de-jure GLOB magnitude increase over the percentile.

⁹ We have done same analysis for all dimensions of GLOB for de-jure aspect. But in all dimensions, we found the same sign of coefficients which shows the role of ERV strengthen the de-jure GLOB and economic growth.

Table 4.11: Impact of Globalization on Economic Growth through the Channel of Trade Openness by using Two step Sys.GMM

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-0.588*** (0.005)	-0.342* (0.067)	-0.383*** (0.004)	-0.027* (0.069)	-0.302** (0.017)	-0.400** (0.017)	-0.409*** (0.008)	-0.423** (0.018)
GLOB	0.064** (0.011)	0.019*** (0.002)	-	-	-	-	-	-
EGLOB	-	-	0.080*** (0.000)	-0.103** (0.035)	-	-	-	-
SGLOB	-	-	-	-	0.086*** (0.005)	-0.066* (0.087)	-	-
PGLOB	-	-	-	-	-	-	0.019** (0.032)	0.079** (0.027)
TO	-0.027** (0.049)	0.054** (0.031)	-0.027*** (0.008)	-0.010*** (0.001)	-0.011* (0.097)	-0.098** (0.010)	0.006* (0.083)	0.038* (0.072)
(GLOB*TO)	-	-0.001** (0.036)	-	-	-	-	-	-
(EGLOB*TO)	-	-	-	0.001*** (0.002)	-	-	-	-
(SGLOB*TO)	-	-	-	-	-	0.001*** (0.008)	-	-
(PGLOB*TO)	-	-	-	-	-	-	-	-0.004* (0.093)
INF	-0.027*** (0.000)	-0.018*** (0.008)	-0.007*** (0.000)	-0.016 (0.515)	-0.011*** (0.000)	-0.064*** (0.007)	-0.015*** (0.010)	-0.021*** (0.001)
GFCF	0.021*** (0.005)	0.016** (0.035)	0.024*** (0.000)	0.032 (0.541)	0.020*** (0.000)	0.014*** (0.000)	0.012* (0.080)	0.018** (0.038)
GGFCE	-0.045 (0.451)	-0.065 (0.272)	-0.061 (0.113)	-0.059 (0.137)	-0.016*** (0.009)	-0.096*** (0.001)	-0.094** (0.034)	-0.017** (0.047)
FR	0.044 (0.318)	0.078** (0.036)	0.055 (0.861)	0.098 (0.826)	0.022 (0.527)	-0.015 (0.613)	0.120 (0.866)	0.033 (0.681)
LE	0.044 (0.350)	0.039 (0.104)	0.038 (0.349)	0.058 (0.336)	-0.007 (0.840)	0.017 (0.675)	0.035* (0.078)	0.021 (0.143)
Constant	-17.674 (0.102)	-22.008 (0.064)	11.005** (0.011)	8.667* (0.096)	0.703 (0.840)	12.585** (0.030)	-16.806 (0.117)	-11.091 (0.209)

F-Stat	39.06*** (0.000)	64.16*** (0.000)	69.71*** (0.000)	69.33*** (0.000)	57.82*** (0.000)	40.65*** (0.000)	80.96*** (0.000)	67.61*** (0.000)
Instruments	33	41	40	34	13	14	29	30
AR(2)	-1.10 (0.270)	-1.56 (0.118)	-1.04 (0.297)	-1.58 (0.114)	-0.58 (0.565)	0.32 (0.751)	-0.89 (0.371)	-0.12 (0.908)
P-value	35.47 (0.157)	33.44 (0.350)	36.83 (0.217)	30.18 (0.179)	2.59 (0.628)	3.33 (0.504)	17.69 (0.608)	20.43 (0.431)
Obs	350	280	280	275	285	275	321	280
Countries	46	45	45	45	45	45	45	45
Note: Same as mentioned in table 4.1 and table 4.2, except this table report the results of the role TO with GLOB and its three dimensions. Dependent variable is growth								

4.4 Overall Globalization, its dimensions and Economic Growth: Role of Trade Openness

Table 4.11 present the impact of GLOB on economic growth by through the channel of TO. Table column includes the results of baseline and interactive models for overall GLOB and its dimensions. The results of two step Sys.GMM suggest that the coefficient of initial level of GDP per capital is negative and significant which means that the all models show convergence. The coefficients of GLOB are significant in all models but in most of the models it is positive and, in few models, it is negative like as interactive term of EGLOB and SGLOB.

Our estimation findings indicate that trade may be detrimental to growth when a nation has a focus on low-quality goods but once a nation has an emphasis on high-quality goods and their export portfolio meets a certain standard of quality, trade has benefits for growth (Huchet-Bourdon et al., 2018).

The 2nd column of table shows that the results of interactive term of GLOB and TO model. The results suggest that GLOB and TO are positively and significantly associated with growth. Like as 1% increase in GLOB and TO leads to an increase growth by 1.9 and 5.4 percent respectively. In comparison to both, TO has more impact on economic growth as compared to GLOB. These results are consistent with (Kim & Lee, 2012; Yucel, 2009). The remaining variables sign are consistent with literature. The same analysis has been done for the dimensions of GLOB. The results of base line model for all dimensions are consistent with overall GLOB except SGLOB. TO in case of SGLOB boost up the economic growth.

4.4.1 Conditional Analysis of Overall Globalization on Economic Growth at Varying Level of Trade Openness

In order to investigate the influence of overall GLOB on economic growth through the channel of TO, we analyzed the derivative of Eq (3.20) with respect to overall GLOB.

$$\frac{\partial Growth_{it}}{\partial GLOB_{it}} = 0.019 - 0.001TO_{it} \quad (4.4)$$

It is evident from equation (4.4) both coefficients have the opposite signs. These findings reveals that a partial increase in trade openness creates an overall GLOB inverse relationship with economic growth.

Table 4.12: Conditional Effects of Overall Globalization on Economic Growth at Varying Level of Trade Openness

Percentile	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	0.137*** (0.005)	-0.013 (0.683)	0.006 (0.773)	0.057** (0.026)
P50(Medium)	0.112** (0.014)	0.025 (0.404)	0.038 (0.125)	0.048** (0.036)
P75(High)	0.083* (0.073)	0.073** (0.042)	0.077** (0.019)	0.036* (0.084)
Note: Same as mentioned in table 4.1.				

In other words, they can partially replace each other in their impact on economic growth. The negative sign of an interactive term indicates that the role of TO weakens the de-jure aspect of GLOB and economic growth relationship¹⁰.

In Table 4.12 presented the results of percentile analysis for overall GLOB and TO on economic growth. At varying level of percentile, the overall GLOB and its dimensions are positive and significant but in overall and in PGLOB its magnitude

¹⁰ We have done same analysis for all dimensions of GLOB for the analysis of overall GLOB. But in all dimensions, we found the opposite sign of coefficients for overall GLOB and its all dimensions which shows the role of TO weaken the relationship between GLOB and economic growth.

and significance decrease over the percentile. However, in EGLOB and SGLOB the magnitude increases over the percentile. Both are significant at a higher level which is at 75th percentile.

4.4.2 De-Facto Aspect Globalization, Trade Openness and Economic Growth

The results presented in Table 4.13 show the impact of de-facto aspect of overall GLOB on economic growth. The coefficient of GLOB in all models (base line and interaction) are positive and significant which shows that it leads to an increase the economic growth in overall and its two dimensions. The coefficient of TO is negative and significant which is in line with the overall GLOB. Inflation is negative and significant in all models. Moreover, the government investment is positive and significant in all models. Government consumption is negative and significant in all cases except SGLOB.

We have taken the derivative of equation with respect to overall de-facto GLOB, in order to examine the impact of de-facto aspect of GLOB on economic growth through the role of TO.

$$\frac{\partial Growth_{it}}{\partial DGLOB_{it}} = 0.067 - 0.005TO_{it} \quad (4.5)$$

Table 4.13: Impact of De-Facto Globalization on Economic Growth through Trade Openness by using Two step Sys.GMM

Variables	Model (1)	Model (1) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-0.621*** (0.001)	-0.242* (0.068)	-0.432** (0.012)	-0.224** (0.027)	-0.649*** (0.004)	-0.383** (0.043)
GLOB	0.010** (0.018)	0.067** (0.016)	-	-	-	-
SGLOB	-	-	0.086** (0.029)	0.085*** (0.009)	-	-
PGLOB	-	-	-	-	0.018** (0.039)	0.054*** (0.005)
TO	-0.028** (0.048)	0.031 (0.074)	-0.020* (0.083)	0.037* (0.091)	-0.017* (0.097)	0.021** (0.050)
(GLOB*TO)	-	-0.005** (0.045)	-	-	-	-
(SGLOB*TO)	-	-	-	-0.007* (0.064)	-	-
(PGLOB*TO)	-	-	-	-	-	-0.003** (0.022)
INF	-0.084*** (0.000)	-0.047* (0.100)	-0.012*** (0.000)	-0.056*** (0.002)	-0.036* (0.080)	-0.045*** (0.006)
GFCF	0.023*** (0.001)	0.017** (0.048)	0.021*** (0.001)	0.010** (0.018)	0.083* (0.054)	0.021*** (0.001)
GGFCE	-0.075** (0.041)	-0.010*** (0.006)	-0.016* (0.075)	-0.015*** (0.005)	-0.086 (0.271)	-0.380 (0.870)
FR	0.110 (0.748)	0.017 (0.695)	-0.027 (0.321)	0.013 (0.895)	-0.093 (0.244)	0.021 (0.858)
LE	0.047 (0.266)	0.058* (0.096)	-0.078 (0.109)	0.116 (0.599)	0.043 (0.197)	0.012 (0.510)
Constant	12.310** (0.013)	4.807 (0.391)	10.627** (0.020)	-5.517 (0.596)	1.037 (0.808)	3.657 (0.705)
F-Stat	41.94*** (0.000)	56.55*** (0.000)	27.30*** (0.000)	24.76*** (0.000)	43.40*** (0.000)	99.30*** (0.000)
Instruments	40	27	12	12	15	15
AR(2)	-1.01	-0.44	-0.47	-0.48	0.28	-0.15

P-value	(0.314)	(0.661)	(0.640)	(0.633)	(0.780)	(0.881)
Hansen	37.69	19.52	0.53	1.01	2.55	3.92
P-value	(0.190)	(0.300)	(0.912)	(0.602)	(0.636)	(0.789)
Obs	280	285	277	277	275	275
Countries	45	45	44	44	45	45
Note: Same as mentioned in table 4.1, 4.2 and table 4.1, except this table report the results of de facto aspect of GLOB.						

It is evident from equation (4.5), both coefficients have the opposite signs. This shows that partial increase in trade openness leads to inverse effect of de-facto aspect of GLOB on economic growth, TO play a substitution role in explaining the relationship of de-facto GLOB and with economic growth. The negative sign of an interactive term indicates that the role of TO weakens the de-facto aspect of GLOB and economic growth relationship¹¹.

Table 4.14: Conditional Effects of De-Facto Aspect of Globalization on Economic Growth at Varying Level of Trade Openness

Percentile of TO	Model (1)	Model (3)	Model (4)
P25(Low)	0.043** (0.047)	0.051** (0.015)	0.038** (0.013)
P50(Medium)	0.033 (0.112)	0.036* (0.073)	0.031** (0.029)
P75(High)	0.020 (0.338)	0.018 (0.438)	0.022* (0.100)
Note: Same as mentioned in table 4.1.			

In Table 4.14 presented the results of percentile analysis for de-facto aspect of GLOB and TO on economic growth. At varying level of percentile, the overall GLOB is going to insignificant and magnitude is decreasing over the percentiles. However, in the case of PGLOB in its dimensions the coefficients are positive and significant and in case of SGLOB its magnitude and significance decrease over the percentile.

¹¹ We have done a similar analysis for the two dimensions of GLOB, namely social and political. Interestingly, we discovered that the coefficients for overall GLOB and its dimensions had opposite signs. This suggests that TO weakens the relationship between GLOB and economic growth specifically for developing countries.

4.4.3 De-Jure Aspect of Overall Globalization, Trade Openness and Economic Growth

The results for De-Jure aspect of GLOB on economic growth for the channel of TO. GLOB have a direct and significant impact on economic growth for overall GLOB and its dimensions in all base line. However, in interaction models the impact of interaction term is positive and significant except EGLOB. It indicates that the restrictions and traffic have a negative impact on economic growth. The coefficients of TO have a negative impact on economic growth which is consistent with the overall GLOB model. Inflation has a negative and significant impact on the economic growth, and this is similar with the prior studies. Government investment has a direct and significant impact on economic growth.

Table 4.15: Impact of De-Jure Globalization on Economic Growth through Trade Openness by using Two step Sys.GMM

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-0.601*** (0.001)	-0.275** (0.027)	-0.461*** (0.000)	-0.515*** (0.000)	-0.026** (0.020)	-0.244* (0.090)	-0.411*** (0.001)	-0.421*** (0.002)
GLOB	0.093*** (0.006)	0.061*** (0.000)	-	-	-	-	-	-
EGLOB	-	-	0.041** (0.015)	-0.062** (0.038)	-	-	-	-
SGLOB	-	-	-	-	0.014*** (0.002)	0.014* (0.088)	-	-
PGLOB	-	-	-	-	-	-	0.051*** (0.001)	0.014*** (0.000)
TO	-0.020** (0.046)	0.037** (0.014)	-0.017** (0.037)	-0.075*** (0.000)	-0.010 (0.091)	-0.023*** (0.003)	0.007** (0.066)	0.075*** (0.004)
(GLOB*TO)	-	-0.006*** (0.010)	-	-	-	-	-	-
(EGLOB*TO)	-	-	-	0.001*** (0.002)	-	-	-	-
(SGLOB*TO)	-	-	-	-	-	0.003*** (0.002)	-	-
(PGLOB*TO)	-	-	-	-	-	-	-	-0.001*** (0.005)
INF	-0.081*** (0.000)	-0.049*** (0.000)	-0.047*** (0.007)	-0.026 (0.210)	-0.053*** (0.000)	-0.024*** (0.002)	-0.011** (0.015)	-0.015*** (0.006)
GFCF	0.043*** (0.000)	0.016*** (0.002)	0.024*** (0.001)	0.019** (0.022)	0.033*** (0.000)	0.028*** (0.000)	0.085*** (0.002)	0.084*** (0.001)
GGFCE	0.036 (0.500)	-0.057** (0.017)	-0.067* (0.071)	-0.064* (0.095)	-0.080** (0.032)	-0.010*** (0.000)	-0.086*** (0.008)	-0.082*** (0.010)
FR	0.015 (0.869)	0.038 (0.165)	-0.024 (0.494)	-0.025 (0.542)	0.033 (0.435)	0.038 (0.624)	-0.017 (0.848)	0.011 (0.889)

LE	-0.031 (0.261)	0.026 (0.406)	0.003 (0.943)	0.006 (0.905)	-0.029 (0.436)	-0.013 (0.461)	0.021 (0.534)	0.020 (0.482)
Constant	29.636** (0.039)	-15.562 (0.032)	15.721*** (0.002)	18.962*** (0.001)	3.936 (0.501)	18.132** (0.037)	1.384 (0.719)	-5.005 (0.216)
F-Stat	50.06*** (0.000)	40.95*** (0.000)	38.69*** (0.000)	57.08*** (0.000)	58.83*** (0.000)	60.86*** (0.000)	55.13 (0.000)	41.29*** (0.000)
Instruments	12	19	42	43	13	13	12	13
AR(2)	-0.39 (0.697)	-0.37 (0.710)	-0.62 (0.533)	-1.40 (0.161)	-1.26 (0.206)	-0.39 (0.699)	-0.17 (0.863)	-0.40 (0.688)
Hansen P-value	2.58 (0.461)	3.87 (0.919)	37.68 (0.264)	36.43 (0.312)	7.60 (0.108)	15.42 (0.350)	0.40 (0.941)	0.75 (0.860)
Obs	280	280	280	280	285	280	280	280
Countries	45	45	45	45	45	45	45	45
Note: Same as mentioned in table 4.1, 4.2 and table 4.11 except this table reports the results of de jure aspect of GLOB.								

In order to examine the impact of de-jure aspect of GLOB on economic growth by considering the role of TO, we have taken the derivative with respect to de-jure GLOB.

$$\frac{\partial Growth_{it}}{\partial DJGLOB_{it}} = 0.061 - 0.006TO_{it} \quad (4.6)$$

It is evident from equation (4.6), both coefficients have the opposite signs. This shows that the TO plays a substitution role in explaining the relationship of de-jure GLOB with economic growth. The negative sign of an interactive term indicates that the role of TO weakens the de-jure aspect of GLOB and economic growth relationship¹².

Table 4.16: Conditional Effects of De-Jure Aspect of Globalization on Economic Growth at Varying Level of Trade Openness

Percentile of TO	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	6.144*** (0.000)	-0.005 (0.779)	1.481* (0.084)	0.091*** (0.000)
P50(Medium)	6.132*** (0.000)	0.019 (0.279)	1.488* (0.082)	0.069*** (0.000)
P75(High)	6.116*** (0.000)	0.049** (0.020)	1.497* (0.080)	0.043*** (0.007)
Note: Same as mentioned in table 4.1				

In Table 4.16 presented the results of percentile analysis for de jure aspect of GLOB and TO on economic growth. At varying level of percentile, the de-jure overall GLOB and de-jure PGLOB have a significant impact but its magnitude is

¹² We do same analysis for the dimensions of GLOB for de-jure aspect. In overall GLOB and PGLOB have opposite sign which show that TO weaken the relationship between De-jure aspect of GLOB. However, in the case of economic and PGLOB have same sign which indicates that TO strengthen the linkage between de-jure GLOB and economic growth.

decreasing over the percentiles. However, de-jure SGLOB significance is constant over the percentiles. While, EGLOB is significant over the percentile.

4.5 Overall Globalization, its dimensions, Financial Development and Economic Growth

In the last objective we have analyzed the GLOB and economic growth linkages through the channel of FD. For this purpose, we introduce the interaction of GLOB with FD. Table 4.18 presented the results of linkages between GLOB and economic growth by adding the variable of FD.

In first column of the table shows the impact of overall GLOB, FD and control variables on economic growth. 2nd column of the table shows the results of the interactive model of overall GLOB with FD. 3rd column of the table shows the impact of EGLOB, FD and control variables on economic growth. The 4th column shows the interaction of EGLOB with FD. The 5th and 6th columns of the table show the impact of SGLOB with interaction of GLOB and FD respectively. 7th and 8th column show the results of the impact of PGLOB and interaction with FD respectively.

The coefficient of initial is negative and significant in all models which show the conditional convergence. The coefficient of overall GLOB is positive and significant which shows that overall GLOB enhances the economic growth. The findings show that GLOB significantly influences economic growth. The estimated GLOB coefficient has a positive sign, as would be predicted.

Table 4.17: Impact of Globalization and its Dimensions on Economic Growth through Financial Development by using Two step Sys.GMM

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-0.548*** (0.003)	-0.564*** (0.002)	-0.365** (0.014)	-0.213** (0.048)	-0.541** (0.017)	-0.444* (0.051)	-0.674*** (0.000)	-0.408*** (0.000)
GLOB	0.049** (0.014)	0.065*** (0.002)	-	-	-	-	-	-
EGLOB	-	-	0.071*** (0.002)	0.109*** (0.000)	-	-	-	-
SGLOB	-	-	-	-	0.018* (0.075)	0.023** (0.035)	-	-
PGLOB	-	-	-	-	-	-	0.034* (0.077)	-0.021** (0.025)
FD	0.056* (0.085)	0.017** (0.024)	0.062* (0.093)	0.016** (0.057)	0.073** (0.042)	0.017** (0.036)	0.032* (0.085)	-0.015*** (0.005)
(GLOB*FD)	-	-0.166* (0.064)	-	-	-	-	-	-
(EGLOB*FD)	-	-	-	-0.217** (0.037)	-	-	-	-
(SGLOB*FD)	-	-	-	-	-	-0.196** (0.025)	-	-
(PGLOB*FD)	-	-	-	-	-	-	-	0.243*** (0.000)
INF	-3.502*** (0.001)	-0.034*** (0.001)	-0.011*** (0.003)	-0.062* (0.080)	-0.014*** (0.001)	-0.074*** (0.001)	-0.064*** (0.000)	-0.072*** (0.000)
GFCF	2.495*** (0.007)	0.024*** (0.002)	0.029*** (0.003)	0.020** (0.012)	0.018*** (0.001)	0.011** (0.035)	0.015*** (0.001)	0.026*** (0.000)
GGFCE	-0.386 (0.481)	-0.345 (0.517)	-0.035 (0.288)	0.031 (0.368)	-0.021*** (0.003)	-0.017*** (0.000)	-0.066* (0.093)	-0.010*** (0.009)
FR	0.637* (0.094)	0.636* (0.085)	0.453 (0.177)	0.541* (0.083)	0.910 (0.409)	-0.206 (0.844)	0.370 (0.699)	0.838 (0.170)
LE	0.019 (0.616)	-0.007 (0.837)	0.022 (0.543)	0.037 (0.344)	0.004 (0.914)	-0.022 (0.598)	0.041 (0.156)	0.040*** (0.009)
Constant	-14.815 (0.105)	-19.092** (0.038)	9.864** (0.016)	1.665 (0.711)	-1.886 (0.737)	-2.519 (0.693)	5.700 (0.112)	3.695 (0.582)
F-Stat	34.52***	91.99***	41.70***	12.24***	24.13***	69.54***	10.92***	77.14***

	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)
Instruments	37	38	40	24	37	41	14		
AR(2)	-1.51	-1.51	-1.55	-1.03	-1.48	-0.86	-1.12	-1.22	19
P-value	(0.130)	(0.131)	(0.121)	(0.305)	(0.139)	(0.388)	(0.263)	(0.221)	
Hansen	37.24	36.27	38.26	20.02	37.33	40.58	1.43	4.44	
P-value	(0.114)	(0.136)	(0.137)	(0.130)	(0.112)	(0.117)	(0.921)	(0.880)	
Obs	309	309	309	304	268	304	309	309	
Countries	46	46	46	46	46	46	46	46	
Note: Same as mentioned in table 4.1, and table 4.2 except this table report the results of the role of FD with GLOB and its three dimensions. Dependent variable is growth									

Note: Same as mentioned in table 4.1., and table 4.2 except this table report the results of the role of FD with GLOB and its three dimensions. Dependent variable is growth

This outcome is in line with the arguments made by Stiglitz (2004) and Mishkin (2009), who contend that GLOB can be a significant driver of economic growth. The results indicate that FD has a significant influence on economic growth. The coefficient of FD is also positive and significant which shows that well developed FD boost the economic growth.

The coefficients of FD in all base line models are positive and significant which depicts the developed financial system enhance the economic growth, by increasing the saving rate, mobilizing and pooling resources, producing investment information, facilitating and encouraging the inflows of foreign capital, and optimizing capital allocation, it promotes economic growth through technological advancement and capital accumulation.

According to economic theory, the growth of the financial sector is facilitated by a well-organized financial system. In order to encourage economic growth, the accumulation of physical capital, economic efficiency, and financial resources are distributed to manufacturing sectors in an organized financial system (Abbas et al., 2022).

Inflation negative and have a significant influence on economic growth which depicts that inflation hinder economic growth. The government investment coefficient has a significant impact on economic growth, which indicates investment boost the economic growth¹³. To ensure the accuracy of the GMM results, all estimated models meet the requirements of AR (2), and Hansen J-test.

¹³ We have done the same analysis for the three dimensions of GLOB.

4.5.1 Conditional Analysis of Overall Globalization on Economic Growth at Varying Level of Financial Development

In order to analyze the impact of overall GLOB on economic growth through the channel of FD, we have taken the derivative of equation (3.32) with respect to overall GLOB.

$$\frac{\partial Growth_{it}}{\partial GLOB_{it}} = 0.065 - 0.166FD_{it} \quad (4.7)$$

It is evident from equation (4.7), both coefficients have the opposite signs. This shows that that a partial increase in FD explains a GLOB inverse relationship with economic growth. FD play a substitution role in explaining the relationship of GLOB with economic growth. The negative sign of an interactive term indicates that the role of FD weakens the overall GLOB and economic growth relationship¹⁴.

Overall, the findings of conditional effects show that GLOB has a boosting impact on economic growth at different levels of FD. FD promotes growth in developing countries. FD has an impact on growth via productivity growth and capital accumulation (Beck & Levine, 2004; Calderón & Liu, 2003; Masten et al., 2008).

Table4.18: Conditional Effects of Globalization on Economic Growth at Varying Level of Financial Development

Percentiles of FD	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	6.522*** (0.002)	0.090*** (0.000)	2.338** (0.036)	-2.133** (0.025)
P50(Medium)	6.513*** (0.002)	0.077*** (0.000)	2.327** (0.037)	-2.119** (0.026)
P75(High)	6.499*** (0.002)	0.059*** (0.000)	2.310** (0.037)	-2.098** (0.027)
Note: Same as mentioned in table 4.1.				

¹⁴ We do same analysis for the dimensions of GLOB. In overall GLOB and PGLOB have opposite sign which show that TO weaken the relationship between De-jure aspect of GLOB. However, in the case of economic and PGLOB have same sign which indicates that TO strengthen the linkage between de-jure GLOB and economic growth.

The conditional impact of FD is shown in above table at the 25th, 50th, and 75th percentiles. At varying level of percentile, in the overall GLOB, EGLOB and SGLOB the coefficients of percentile are positive and significant but magnitude decrease over the percentile. However, the coefficient of PGLOB has a significant and inverse impact but its magnitude is increasing over the percentiles.

4.5.2 De-Facto Aspect of Globalization on Economic Growth at Varying Level of Financial Development

To assess the de-facto aspect of GLOB on economic growth by including the FD variable, and the results are reported in Table 4.20. According to Sys.GMM, initial is negative and significant which show convergence. The coefficient of de-facto aspect of GLOB is direct and significant which show that the actual flow of GLOB increases economic growth. FD is also positive and significant which show that it plays an important role in boosting economic growth. The inflation coefficient is inverse and significant which show the negative relationship between GLOB and economic growth. However, the government investment has direct and significant influence on growth¹⁵.

¹⁵We have done the same analysis for de facto aspect for the dimensions of GLOB and find the same results like overall de-facto aspects of GLOB except PGLOB because its show that de-factor PGLOB hinders economic growth.

Table 4.19: Impact of De-Facto Globalization on Economic Growth and its Dimensions through Financial Development by using Two step Sys.GMM

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-0.558*** (0.002)	-0.376*** (0.002)	-0.270* (0.083)	0.031* (0.074)	-0.225*** (0.005)	-0.311** (0.011)	-0.390* (0.064)	-0.689** (0.043)
GLOB	0.055* (0.084)	0.119*** (0.002)	-	-	-	-	-	-
EGLOB	-	-	0.017* (0.081)	0.0070* (0.064)	-	-	-	-
SGLOB	-	-	-	-	0.013* (0.055)	0.018** (0.043)	-	-
PGLOB	-	-	-	-	-	-	-0.018* (0.095)	-0.042*** (0.007)
FD	0.066* (0.082)	0.012* (0.098)	0.061* (0.079)	0.015* (0.079)	0.064* (0.081)	0.093** (0.036)	0.070* (0.098)	-0.037* (0.086)
(GLOB*FD)	-	-0.018** (0.045)	-	-	-	-	-	-
(EGLOB*FD)	-	-	-	-0.019* (0.090)	-	-	-	-
(SGLOB*FD)	-	-	-	-	-	-0.010* (0.068)	-	-
(PGLOB*FD)	-	-	-	-	-	-	-	0.514** (0.042)
INF	-0.012*** (0.002)	-0.028*** (0.000)	0.011*** (0.001)	-0.007** (0.017)	-0.068*** (0.000)	-0.063*** (0.000)	-0.129*** (0.009)	-0.010*** (0.007)
GFCF	0.030***	0.021***	0.032***	0.028***	0.044	0.002***	0.026**	0.024

	(0.007)	(0.002)	(0.008)	(0.005)	(0.211)	(0.000)	(0.025)	(0.037)
GGFCE	-0.049 (0.152)	-0.065 (0.183)	0.045 (0.946)	-0.005* (0.083)	-0.019 (0.000)	-0.074** (0.013)	-0.045*** (0.000)	-0.056*** (0.000)
FR	0.367 (0.283)	0.341 (0.230)	0.047 (0.223)	0.072 (0.767)	0.086 (0.723)	-0.085 (0.786)	-0.429 (0.168)	-0.013 (0.756)
LE	0.014 (0.722)	0.009 (0.777)	0.022 (0.570)	0.017 (0.595)	0.022 (0.563)	-0.031 (0.210)	-0.012 (0.967)	0.089* (0.100)
Constant	14.223*** (0.004)	-1.077 (0.734)	5.032 (0.364)	18.156 (0.246)	-1.411 (0.793)	19.916** (0.052)	17.118 (0.312)	-10.229 (0.621)
F-Stat	39.33*** (0.000)	44.24*** (0.000)	34.83*** (0.000)	41.19*** (0.000)	91.28*** (0.000)	62.09*** (0.000)	65.28*** (0.000)	48.90*** (0.000)
Instruments	40	36	39	27	39	34	17	23
AR(2)	-1.48 (0.138)	-1.52 (0.129)	-1.45 (0.148)	-1.44 (0.150)	-0.63 (0.527)	-0.55 (0.583)	-0.97 (0.33)	-0.56 (0.573)
P-value	38.90 (0.156)	27.38 (0.390)	39.00 (0.153)	39.32 (0.145)	3.30 (0.509)	37.46 (0.197)	40.75 (0.269)	39.32 (0.208)
Obs	309	309	309	309	296	303	304	
Countries	46	46	46	46	46	46	46	46
Note: Same as mentioned in table 4.1, 4.2 and 4.17 except this table reports the results of de facto aspect of GLOB.								

To examine the impact of de-facto GLOB on economic growth through the channel of FD, we take the partial derivative of equation with respect to de-facto GLOB.

$$\frac{\partial Growth_{it}}{\partial DFGLOB_{it}} = 0.119 - 0.018FD_{it} \quad (4.8)$$

It is evident from equation (4.8), both coefficients have the opposite signs. This shows that the FD play a substitution role in explaining the relationship of de-facto aspect of GLOB with economic growth. The negative sign of an interactive term indicates that the role of FD weakens the overall de-facto GLOB and economic growth relationship¹⁶.

Table 4.20: Conditional Effects of De-Facto Aspect of Globalization on Economic Growth at Varying Level of Financial Development

Percentiles of FD	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	0.102*** (0.002)	0.053* (0.065)	1.865** (0.044)	-4.231*** (0.007)
P50(Medium)	0.092*** (0.002)	0.042* (0.080)	1.859** (0.044)	-4.203*** (0.007)
P75(High)	0.076*** (0.003)	0.026 (0.177)	1.850** (0.044)	-4.158*** (0.007)
Note: Same as mentioned in table 4.1.				

In Table 4.20 presented the results of percentile analysis for overall de-facto measure of GLOB and FD on economic growth. At varying level of percentile, in the overall GLOB, EGLOB and SGLOB the coefficients of percentile are positive and significant but magnitude decrease over the percentile.

¹⁶ Same analysis has done with the dimensions of GLOB for de-facto aspects. The results also follow the same pattern as overall de-facto GLOB. So, all dimensions of GLOB and FD play substitution role in explaining the relationship with economic growth.

Table 4.21: Impact of De-Jure aspect of Globalization on Economic Growth through Financial Development by using Two step Sys.GMM

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-0.056*** (0.000)	-0.543*** (0.000)	0.509*** (0.000)	-0.492*** (0.000)	-0.378** (0.014)	-0.369** (0.026)	-0.487*** (0.001)	-0.059*** (0.000)
GLOB	0.079*** (0.000)	0.019*** (0.000)	-	-	-	-	-	-
EGLOB	-	-	0.046*** (0.000)	0.087*** (0.001)	-	-	-	-
SGLOB	-	-	-	-	0.030*** (0.001)	0.021** (0.021)	-	-
PGLOB	-	-	-	-	-	-	0.030** (0.076)	0.016*** (0.008)
FD	0.049** (0.043)	0.019* (0.063)	0.051** (0.037)	0.051** (0.013)	0.044* (0.099)	0.016*** (0.002)	0.035* (0.076)	0.011** (0.013)
(GLOB*FD)	-	-0.245* (0.084)	-	-	-	-	-	-
(EGLOB*FD)	-	-	-	-0.191** (0.048)	-	-	-	-
(SGLOB*FD)	-	-	-	-	-	-0.018*** (0.004)	-	-
(PGLOB*FD)	-	-	-	-	-	-	-	-0.015* (0.070)
INF	-0.010*** (0.000)	-0.094*** (0.001)	-0.083*** (0.000)	-0.083*** (0.000)	-0.052*** (0.001)	-0.060** (0.016)	-0.088*** (0.000)	-0.057*** (0.000)
GFCF	0.024*** (0.000)	-0.094*** (0.001)	0.024*** (0.000)	0.023*** (0.000)	0.033*** (0.003)	0.097** (0.033)	0.011** (0.015)	0.012*** (0.000)

GGFCE	0.024*** (0.000)	-0.037 (0.137)	-0.050** (0.025)	-0.043* (0.053)	-0.413 (0.432)	-0.063** (0.029)	-0.064** (0.021)	-0.058** (0.026)
FR	0.053** (0.035)	0.060** (0.024)	0.035* (0.074)	0.032* (0.096)	0.801** (0.027)	0.073 (0.818)	0.030 (0.881)	-0.089 (0.742)
LE	0.037 (0.162)	0.028 (0.332)	0.048* (0.060)	0.031 (0.259)	0.018 (0.331)	-0.309 (0.889)	0.132 (0.429)	0.839 (0.635)
Constant	8.814 (0.005)	6.211 (0.101)	9.741*** (0.000)	8.556*** (0.003)	-16.209 (0.069)	0.786 (0.943)	2.637 (0.721)	-0.179 (0.984)
F-Stat	94.90*** (0.000)	18.84*** (0.000)	87.32*** (0.000)	51.30*** (0.000)	32.15*** (0.000)	61.66*** (0.000)	55.54*** (0.000)	64.71*** (0.000)
Instruments	18	19	18	19	34	41	33	18
AR(2)	-1.29 (0.198)	-1.22 (0.221)	-1.19 (0.233)	-1.12 (0.264)	-1.50 (0.133)	-0.91 (0.364)	-0.99 (0.323)	-0.68 (0.949)
P-value	3.16 (0.958)	3.41 (0.946)	3.01 (0.964)	2.45 (0.982)	31.88 (0.162)	36.96 (0.213)	23.00 (0.520)	6.41 (0.602)
Obs	309	309	309	309	309	309	309	304
Countries	46	46	46	46	46	46	46	46
Note: Same as mentioned in table 4.1, 4.2 and 4.17 except this table reports the results of de jure aspect of GLOB.								

However, the coefficient of PGLOB has a negative and significant impact but its magnitude is increasing over the percentiles.

4.5.3 De-Facto Aspect of Globalization, and Financial Development on Economic Growth

To examine the impact of de-jure GLOB on economic growth. The results of this aspect are presented in Table 4.21. The coefficient of initial is negative and significant which shows the conditional convergence. The coefficient of GLOB shows that the overall de-jure GLOB increases economic growth. Moreover, the coefficient of FD is also positive and significant.

To analyze the impact of de-jure aspect of GLOB on economic growth through the role of FD. We take the partial derivative of equation with respect to de-jure GLOB.

$$\frac{\partial Growth_{it}}{\partial DJGLOB_{it}} = 0.019 - 0.245FD_{it} \quad (4.9)$$

It is evident from equation (4.9), both coefficients have the opposite signs. This shows that the FD play a substituting role in explaining the relationship of overall de-jure aspect of GLOB and with economic growth. The negative sign of an interactive term indicates that the role of FD weakens the overall de-jure aspect of GLOB and economic growth relationship.

Table 4.22: Conditional Effects of De-Jure Aspect of Globalization on Economic Growth at Varying Level of Financial Development

Percentile of FD	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	0.096*** (0.000)	0.215*** (0.000)	2.121** (0.022)	1.639*** (0.008)
P50(Medium)	0.083*** (0.000)	0.204*** (0.000)	2.110** (0.022)	1.633*** (0.008)
P75(High)	0.062*** (0.007)	0.187*** (0.000)	2.094** (0.023)	1.624*** (0.009)
Note: Same as mentioned in table 4.1.				

To access the results percentile analysis for overall de-jure aspect of GLOB and FD on economic growth presented in Table 4.22. At varying level of percentile, in the overall de-jure aspect GLOB and its three dimensions the coefficients of percentile are positive but its magnitude decreases over the percentile.

4.6 Summary of the Chapter

To sum up, this chapter comprehends the empirical results and discussion. First, it shows the summary statistics and correlation analysis which indicates the relationship among the variables. Next, we examined the impact of GLOB, its dimensions and its aspects on growth through FEM and Sys.GMM. We just report the results of Sys.GMM in main text and the results of FEM is given in appendix. First, the results support the view that GLOB and its dimension boost growth but de-facto SGLOB, de-jure SGLOB and de-facto EGLOB hinders the growth.

Second, the impact of ERV in explaining the association among GLOB and economic growth depicts that ERV have inverse and significant influence on growth due to many reasons such as uncertainty which leads to risks, reduce competitiveness, reduction in FDI, and inefficient allocation of resources. Further,

the results of first moderating term show that it weakens the linkages between overall GLOB and growth. However, the results of both aspect of GLOB show that ERV as moderating effect strengthen the relationship between GLOB and growth. Moreover, this impact is stronger in de-facto aspect of GLOB. However, the impact of ERV on real flows tends to more immediate and visible, as it directly affects the prices, competitiveness, and risk perception of international trade and investment.

Similarly, the impact of TO on economic growth has also been analyzed. Additionally, the results indicates that overall GLOB, its all dimensions, and both the aspects show that TO has a negative and significant impact on economic growth for developing countries except the overall political dimension and de-jure PGLOB. The adverse effect of TO on economic growth is due to different reasons developing countries often rely on the export of raw materials and agricultural products, unfavorable terms of trade, and face challenges in competing with more advanced and technologically sophisticated economies. The results show that TO weakens the relationship between GLOB and economic growth in all dimensions and both aspects.

Further, we examine the impact of FD on economic growth. The results show that FD has a direct influence on economic growth in all dimensions and both aspects of GLOB. A well-developed financial system is important for growth because it channels money for individuals and businesses, manages risk, and efficiently uses resources. However, the results suggest that the role of FD weakens the relationship between overall GLOB and economic growth. Moreover, similar results have been found for its all dimensions and in both aspects.

CHAPTER 5

CONCLUSION AND POLICY RECOMMENDATIONS

This chapter summarizes the study's main findings and suggests policies based on those findings. The first section presents the conclusion drawn from the study, while the second section outlines the policy recommendations that arise from our analysis.

5.1 Main Findings

This study examines how GLOB and its dimensions affect the economic growth in the selected developing countries by differentiating between GLOB's de-jure and de-facto aspects for the ERV, TO, and FD channels through dynamic panel Sys.GMM. Our analysis results align with the literature, which shows that GLOB promotes economic growth. Our first objective's results depict that economic and political dimensions positively and significantly impact economic growth, but the social dimension negatively impacts economic growth.

In contrast to the literature, we have distinguished both GLOB's aspects for developing countries. The analysis of the de-facto aspect reveals that GLOB and its political dimension boost growth, whereas the economic and social dimensions of GLOB hinder economic growth. In de-facto terms, the positive results are more pronounced for GLOB and PGLOB. It indicates that as actual international flows increase in EGLOB and SGLOB, they restrain growth. The de-jure aspect of GLOB, consisting of policies and conditions, reveals that GLOB positively and significantly impacts growth except for de-jure SGLOB. The results of de-jure measures are more pronounced in overall GLOB, EGLOB, and PGLOB. Politically connected countries

have fewer institutional barriers to trade in products, services, and financial flows, and on average, they build their economies rapidly.

The second objective of our study was to analyze how GLOB, its dimensions and its aspects affect economic growth through the ERV channel. The findings indicate that ERV hurts economic growth for various reasons. These reasons include increased uncertainty which leads to risk, reduced international competitiveness, a reduction in FDI, and higher ERV leads to inefficient allocation of resources. Further, the results show that the role of ERV weakens the relationship between overall GLOB and economic growth.

The results of both aspects of GLOB also show that ERV has a negative impact on economic growth for overall GLOB as well as for all dimensions of GLOB. However, the role of ERV in both aspects shows that ERV strengthens the relationship between GLOB and growth. Moreover, the impact of ERV on the said relationship is stronger in the de-facto aspect of GLOB. ERV can have significant impacts on real flows. Restrictions or controls on capital flows can also influence the movement of capital across borders. However, the impact of ERV on real flows tends to be more immediate and visible, as it directly affects the prices, competitiveness, and risk perceptions of international trade and investment.

Our third objective of the study focused on the second channel, TO. The results show that overall GLOB, all its dimensions, and both aspects show that TO negatively and significantly impacts economic growth for developing countries except for the overall, political dimension and de-jure aspect of PGLOB. The adverse effect of TO on economic growth is due to several reasons. Developing countries often face challenges in competing with more advanced and

technologically sophisticated economies. Developing countries rely heavily on the export of primary commodities like raw materials and agricultural products. TO can result in developing countries facing unfavorable terms of trade, where the prices of their exports decline relative to the prices of their imports. This can lead to a deterioration of their trade balance and reduced income from exports, which can negatively affect economic growth. Further, the results suggest the role of TO in explaining the relationship between GLOB and economic growth. The results support that the role of TO weakens the relationship between GLOB and economic growth in all dimensions and both aspects.

Our last objective is the analysis of the impact of GLOB on economic growth through the channel of FD. The impact of FD is positive and significant for overall GLOB, in all dimensions and both aspects of GLOB. Having a strong financial system is very important for making the economy grow. Because it helps people and businesses get money more easily, use resources efficiently, invest in new ideas, manage risks, and save money. Additionally, the percentile analysis shows the role of FD in the relationship between GLOB and economic growth. The results suggest that the role of FD weakens the relationship between overall GLOB and economic growth. Moreover, similar results were found for all dimensions and in both aspects.

5.2 Policy Implications

According to the findings of this study, this research gives these recommendations based on research findings and can help individuals, investors, lenders, and policymakers in their decision-making processes.

This study supports the view that GLOB creates a conducive environment for growth in developing countries. Developing countries need to improve their

participation in trade and FDI. PGLOB improves through participation in the political decision-making process in the context of the international arena. This study also reveals the rigidity of the institutions and policies in developing countries that govern GLOB. The orientation of the economic policies of emerging countries towards GLOB, particularly in terms of social and PGLOB, must be reassessed to promote growth. Moreover, for de-facto GLOB actions to mirror de-jure GLOB efforts, these countries must closely monitor GLOB policy implementation.

Developing countries should focus on policies that control and keep their ER less volatile, which means avoiding sudden and unpredictable changes in the value of their currency compared to other currencies. Governments should also focus on improving their economy by keeping inflation low, managing money efficiently, and making changes to strengthen their country's economy. These steps can make developing countries less vulnerable to sudden changes in ER. It is also important for countries to expand their trading partners and support industries within their own countries. By selling more goods to different countries and not relying too much on one country or currency, in this way, developing countries can reduce the negative effects of ER changes. Overall, a combination of stable ER, a strong economy, and diverse trading can help developing countries deal with problems caused by changes in ER and have steady economic growth.

Developing countries that heavily rely on a small number of primary products or low-value goods are generally expected to be more vulnerable to the negative effects of TO. The policymakers should prioritize diversifying their economies by encouraging the growth of new industries and sectors, which in turn requires investment in education and training, improving infrastructure, and promoting innovation and technological progress.

Developing countries should focus on increasing productivity, investing in research and development, upgrading infrastructure, and creating a business-friendly environment to make their domestic industries more competitive. They should also address market failures, such as limited access to credit for small businesses or lack of information, by implementing policies that provide credit and financial services to small businesses, promoting transparency, and supporting institutions that protect property rights and enforce contracts.

The policymakers should make an appropriate policy that improves the financial institutions to promote transparency, accountability, and good governance. The government should enforce strict supervision and risk management practices to maintain the financial system's stability. Investing in secure payment systems to reduce transaction costs and encourage economic activity is also essential. Governments can promote a culture of saving and investment by offering tax incentives, establishing pension schemes, and introducing investment-friendly regulations. Developing capital markets, embracing financial innovation and technology, and their effective regulation can attract investors and boost economic activity. Establishing regulatory frameworks that align with international standards and conducting regular assessments to ensure effectiveness is necessary.

References

- Abbas, Z., Afshan, G., & Mustifa, G. (2022). The effect of financial development on economic growth and income distribution: an empirical evidence from lower-middle and upper-middle-income countries. *Development Studies Research*, 9(1), 117-128.
- Abramovitz, M. (1986). Catching up, forging ahead, and falling behind. *The Journal of Economic History*, 46(2), 385-406.
- Agenor. (1998). Capital inflows, external shocks, and the real exchange rate. *Journal of International Money and Finance*, 17(5), 713-740.
- Agenor. (2003). Benefits and costs of international financial integration: Theory and facts. *World Economy*, 26(8), 1089-1118.
- Aghion, P., Bacchetta, P., Ranciere, R., & Rogoff, K. (2009). Exchange rate volatility and productivity growth: The role of financial development. *Journal of Monetary Economics*, 56(4), 494-513.
- Ahmad, M. (2019). Globalisation, economic growth, and spillovers: A spatial analysis. *Margin: The Journal of Applied Economic Research*, 13(3), 255-276.
- Ahmed, A. D. (2013). Effects of financial liberalization on financial market development and economic performance of the SSA region: An empirical assessment. *Economic Modelling*, 30(1), 261-273.
- Ahmed, A. D. (2016). Integration of financial markets, financial development and growth: Is Africa different? *Journal of International Financial Markets, Institutions and Money*, 42(3), 43-59.
- Ahmed, A. D., & Mmolainyane, K. K. (2014). Financial integration, capital market development and economic performance: Empirical evidence from Botswana. *Economic Modelling*, 42(7), 1-14.
- Aizenman, J., Edwards, S., & Riera-Crichton, D. (2012). Adjustment patterns to commodity terms of trade shocks: the role of exchange rate and international reserves policies. *Journal of International Money and Finance*, 31(8), 1990-2016.
- Ajao, M. G., & Igbekoyi, O. E. (2013). The determinants of real exchange rate volatility in Nigeria. *Academic Journal of Interdisciplinary Studies*, 2(1), 459-471.
- Aka, B. F. (2006). Openness, globalization and economic growth: Empirical evidence from Cote D'Ivoire. *international Journal of applied econometrics and quantitative studies*, 3(2), 67-86.
- Al-Abri, A. (2013). Real exchange rate volatility, terms-of-trade shocks, and financial integration in primary-commodity exporting economies. *Economics Letters*, 120(1), 126-129.
- Alagidede, P., & Ibrahim, M. (2016). Evidence from Ghana. Working Paper.
- Alagidede, P., & Ibrahim, M. (2017). On the causes and effects of exchange rate volatility on economic growth: Evidence from Ghana. *Journal of African Business*, 18(2), 169-193.
- Alam, A., & Shah, S. Z. A. (2013). Determinants of foreign direct investment in OECD member countries. *Journal of Economic Studies*, 40(4), 515-527.
- Alcala, F., & Ciccone, A. (2002). Trade and Productivity," Paper presented at the NBER Summer Institute (Boston, Massachusetts: National Bureau of Economic Research). *Working paper* 765, 33.
- Alesina, A., Spolaore, E., & Wacziarg, R. (2000). Economic integration and political disintegration. *American Economic Review*, 90(5), 1276-1296.

- Almas, H., & Sangchoon, L. (2010). The relationship between globalization, economic growth and income inequality. *Journal of Globalization Studies*, 1(2), 87-117.
- Almeida, R., & Fernandes, A. M. (2008). Openness and technological innovations in developing countries: evidence from firm-level surveys. *The Journal of Development Studies*, 44(5), 701-727.
- Alonso-Borrego, C., & Arellano, M. (1999). Symmetrically normalized instrumental-variable estimation using panel data. *Journal of Business & Economic Statistics*, 17(1), 36-49.
- Alper, A. E. (2017). Exchange rate volatility and trade flows. *Fiscaeconomia*, 1(3), 14-39.
- Andersen, T. B., & Tarp, F. (2003). Financial liberalization, financial development and economic growth in LDCs. *Journal of International Development: The Journal of the Development Studies Association*, 15(2), 189-209.
- Anderson, L., & Babula, R. (2008). Openness and long-run economic progress. *Journal of International Economics and Commerce*, 1-20. doi: Available at: http://www.usitc.gov/publications/332/journals/openness_growth_link.pdf
- Andini, M., & Andini, C. (2014). Finance, growth and quantile parameter heterogeneity. *Journal of Macroeconomics*, 40(4), 308-322.
- Ang, J. B. (2008). A survey of recent developments in the literature of finance and growth. *Journal of Economic Surveys*, 22(3), 536-576.
- Arcand, J. L., Berkes, E., & Panizza, U. (2015). Too much finance? *Journal of Economic Growth*, 20(2), 105-148.
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58(2), 277-297.
- Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, 68(1), 29-51.
- Arestis, P., Demetriades, P. O., & Luintel, K. B. (2001). Financial development and economic growth: the role of stock markets. *Journal of Money, Credit and Banking*, 33(1), 16-41.
- Arestis, P., Nissanke, M., & Stein, H. (2005). Finance and development: Institutional and policy alternatives to financial liberalization theory. *Eastern Economic Journal*, 31(2), 245-263.
- Aristotelous, K. (2001). Exchange-rate volatility, exchange-rate regime, and trade volume: evidence from the UK-US export function (1889-1999). *Economics Letters*, 72(1), 87-94.
- Arize, A. C., Osang, T., & Slottje, D. J. (2008). Exchange-rate volatility in Latin America and its impact on foreign trade. *International Review of Economics & Finance*, 17(1), 33-44.
- Armstrong, D. (1998). Globalization and the social state. *Review of International Studies*, 24(4), 461-478.
- Arratibel, O., Furceri, D., Martin, R., & Zdzienicka, A. (2011). The effect of nominal exchange rate volatility on real macroeconomic performance in the CEE countries. *Economic Systems*, 35(2), 261-277.
- Aryeetey, E., & Ackah, C. (2011). The global financial crisis and African economies: Impact and transmission channels. *African Development Review*, 23(4), 407-420.
- Atje, R., & Jovanovic, B. (1993). Stock markets and development. *European Economic Review*, 37(2-3), 632-640.
- Back, K., Cao, C. H., & Willard, G. A. (2000). Imperfect competition among informed traders. *The Journal of Finance*, 55(5), 2117-2155.

- Baddeley, M. (2006). Convergence or divergence? The impacts of globalisation on growth and inequality in less developed countries. *International Review of Applied Economics*, 20(3), 391-410.
- Baele, L., Ferrando, A., Hördahl, P., Krylova, E., & Monnet, C. (2004). Measuring financial integration in the euro area: ECB occasional paper.
- Bagella, M., Becchetti, L., & Hasan, I. (2006). Real effective exchange rate volatility and growth: A framework to measure advantages of flexibility vs. costs of volatility. *Journal of Banking & Finance*, 30(4), 1149-1169.
- Bagwati, J. (1998). The capital myth. *Foreign Affairs*, 77(3), 7-12.
- Bahmani-Oskooee, M., & Gelan, A. (2018). Exchange-rate volatility and international trade performance: Evidence from 12 African countries. *Economic Analysis and Policy*, 58(2), 14-21.
- Balassa, B. A. (1980). *The process of industrial development and alternative development strategies* (Vol. 141): World Bank Washington, DC.
- Baldwin. (1992). The new protectionism: A response to shifts in national economic power *International Economic Policies and their Theoretical Foundations* (pp. 661-678): Elsevier.
- Baldwin, Braconier, H., & Forslid, R. (2005). Multinationals, endogenous growth, and technological spillovers: theory and evidence. *Review of International Economics*, 13(5), 945-963.
- Baltagi, B. H., & Raj, B. (1992). A survey of recent theoretical developments in the econometrics of panel data. *Empirical Economics*, 17(1), 85-109.
- Barguelli, A., Ben-Salha, O., & Zmami, M. (2018). Exchange rate volatility and economic growth. *Journal of Economic Integration*, 33(2), 1302-1336.
- Barro. (1991). Economic growth in a cross section of countries. *The Quarterly Journal of Economics*, 106(2), 407-443.
- Barro. (1996). Democracy and growth. *Journal of Economic Growth*, 1(1), 1-27.
- Barro, & Martin. (1997). Technological Diffusion. *Convergence, and Growth, Journal of Economic Growth*, 2(1), 26.
- Barro, & Martin. (2004). *Economic growth* second edition: Cambridge MA.: The MIT Press.
- Barry, H. (2010). Globalization and economic growth in Sub-Saharan Africa. *Gettysburg Economic Review*, 4(1), 42-86.
- Bataka, H. (2019). De jure, de facto globalization and economic growth in Sub-Saharan Africa. *Journal of Economic Integration*, 34(1), 133-158.
- Batra, R., & Slottje, D. J. (1993). Trade policy and poverty in the United States: Theory and evidence, 1947-1990. *Review of international Economics*, 1(3), 189-208.
- Batten, J. A., & Vo, X. V. (2009). An analysis of the relationship between foreign direct investment and economic growth. *Applied Economics*, 41(13), 1621-1641.
- Bayoumi, T., & Eichengreen, B. (1993). One money or many? On analyzing the prospects for monetary unification in various parts of the world *Working Paper* (pp. 1-34).
- Beck, T., & Levine, R. (2004). Stock markets, banks, and growth: Panel evidence. *Journal of Banking & Finance*, 28(3), 423-442.
- Beck, T., & Levine, R. (2005). *Legal institutions and financial development*: Springer.
- Bekaert, G., Harvey, C. R., & Lundblad, C. (2005). Does financial liberalization spur growth? *Journal of Financial economics*, 77(1), 3-55.
- Belke, A., & Kaas, L. (2004). Exchange rate movements and employment growth: An OCA assessment of the CEE economies. *Empirica*, 31(2-3), 247-280.
- Benassy, Coupet, M., & Mayer, T. (2007). Institutional determinants of foreign direct investment. *World economy*, 30(5), 764-782.

- Bencivenga, V. R., Smith, B. D., & Starr, R. M. (1996). Equity markets, transactions costs, and capital accumulation: an illustration. *The world Bank Economic Review*, 10(2), 241-265.
- Berg, A., & Krueger, A. O. (2003). *Trade, growth, and poverty: A selective survey*. Paper presented at the Annual World Bank Conference on Development Economics.
- Berthélemy, J.-C., & Varoudakis, A. (1996). Financial development, policy and economic growth. *Financial development and economic growth: Theory and experiences from developing countries*, London: Routledge, 66-93.
- Bhagwati, J., & Srinivasan, T. N. (2002). Trade and poverty in the poor countries. *American Economic Review*, 92(2), 180-183.
- Bhanumurthy, N., & Kumawat, L. (2020). Financial globalization and economic growth in South Asia. *South Asia Economic Journal*, 21(1), 31-57.
- Bhattacharjea, A. (2004). Export Cartels-A Developing Country Perspective. *Journal of World Trade*, 38(2), 331-359.
- Bianco, & Loan, N. C. T. (2017). FDI inflows, price and exchange rate volatility: New empirical evidence from Latin America. *International Journal of Financial Studies*, 5(1), 1-17.
- Bleaney, M., & Greenaway, D. (1998). External disturbances and macroeconomic performance in Sub-Saharan Africa: CREDIT Research Paper.
- Bleaney, M., & Greenaway, D. (2001). The impact of terms of trade and real exchange rate volatility on investment and growth in sub-Saharan Africa. *Journal of Development Economics*, 65(2), 491-500.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143.
- Bolaky, B., & Freund, C. L. (2004). *Trade, regulations, and growth* (Vol. 3255): World Bank Publications.
- Bollerslev, T. (1986). Generalized autoregressive conditional heteroskedasticity. *Journal of Econometrics*, 31(3), 307-327.
- Bollmann, G., Rouzinov, S., Berchtold, A., & Rossier, J. (2019). Illustrating instrumental variable regressions using the career adaptability–job satisfaction relationship. *Frontiers in Psychology*, 10(3), 1-16.
- Bong, A., & Premaratne, G. (2019). The impact of financial integration on economic growth in Southeast Asia. *The Journal of Asian Finance, Economics, and Business*, 6(1), 107-119.
- Bordo, M. D., & Rousseau, P. L. (2012). Historical evidence on the finance-trade-growth nexus. *Journal of Banking & Finance*, 36(4), 1236-1243.
- Borensztein, E., De Gregorio, J., & Lee, J.-W. (1998). How does foreign direct investment affect economic growth? *Journal of International Economics*, 45(1), 115-135.
- Bostan, I., & Firtescu, B.-N. (2018). Exchange rate effects on international commercial trade competitiveness. *Journal of Risk and Financial Management*, 11(2), 1-11.
- Bosworth, B., Collins, S. M., & Chen, Y.-c. (1995). *Accounting for differences in economic growth*: Brookings Institution Washington, DC, USA.
- Brander, J. A., & Spencer, B. J. (1985). Export subsidies and international market share rivalry. *Journal of International Economics*, 18(1-2), 83-100.
- Brooks, D. H., & Stone, S. F. (2010). Infrastructure and trade facilitation in Asian APEC. *Asian Development Review*, 27(1).
- Brückner, M., & Lederman, D. (2012). Trade causes growth in sub-Saharan Africa. *World Bank Policy Research Working Paper*(6007).
- Busse, M., & Hefeker, C. (2007). Political risk, institutions and foreign direct investment. *European Journal of Political Economy*, 23(2), 397-415.

- Byrne, J. P., & Philip Davis, E. (2005). The impact of short-and long-run exchange rate uncertainty on investment: A panel study of industrial countries. *oxford Bulletin of Economics and Statistics*, 67(3), 307-329.
- Calderón, C., & Liu, L. (2003). The direction of causality between financial development and economic growth. *Journal of Development Economics*, 72(1), 321-334.
- Campa, J., & Goldberg, L. S. (1995). Investment in manufacturing, exchange rates and external exposure. *Journal of International Economics*, 38(3-4), 297-320.
- Cashin, P., Céspedes, L. F., & Sahay, R. (2004). Commodity currencies and the real exchange rate. *Journal of Development Economics*, 75(1), 239-268.
- Cavallari, L., & d'Addona, S. (2013). Nominal and real volatility as determinants of FDI. *Applied Economics*, 45(18), 2603-2610.
- Chang, Berdiev, A. N., & Lee, C.-C. (2013). Energy exports, globalization and economic growth: The case of South Caucasus. *Economic Modelling*, 33(4), 333-346.
- Chang, Berdiev, A. N., & Lee, C.-C. (2013). Energy exports, globalization and economic growth: The case of South Caucasus. *Economic Modelling*, 33, 333-346.
- Chang, Kaltani, L., & Loayza, N. V. (2009). Openness can be good for growth: The role of policy complementarities. *Journal of Development Economics*, 90(1), 33-49.
- Chang, & Lee, C.-C. (2010). Globalization and economic growth: A political economy analysis for OECD countries. *Global Economic Review*, 39(2), 151-173.
- Chang, Lee, C.-C., & Hsieh, M.-C. (2011). Globalization, real output and multiple structural breaks. *Global Economic Review*, 40(4), 421-444.
- Chen, J., & Quang, T. (2014). The impact of international financial integration on economic growth: New evidence on threshold effects. *Economic Modelling*, 42(7), 475-489.
- Cheng, S.-Y. (2012). Substitution or complementary effects between banking and stock markets: Evidence from financial openness in Taiwan. *Journal of International Financial Markets, Institutions and Money*, 22(3), 508-520.
- Cheong, C. (2004). Does the risk of exchange rate fluctuation really affect international trade flows between countries? *Economics Bulletin*, 6(4), 1-8.
- Chinn, M. D., & Ito, H. (2006). What matters for financial development? Capital controls, institutions, and interactions. *Journal of Development Economics*, 81(1), 163-192.
- Cho, G., Sheldon, I. M., & McCorriston, S. (2002). Exchange rate uncertainty and agricultural trade. *American Journal of Agricultural Economics*, 84(4), 931-942.
- Chowdhary, R., Jore, S., Thakur, R., Agrawal, K., & Geete, V. (2011). Convergence of GDP per capita in ASEAN countries. *Prestige International Journal of Management and Research*, 3(2), 1-9.
- Chowdhury, A. R., & Wheeler, M. (2015). The impact of output and exchange rate volatility on fixed private investment: evidence from selected G7 countries. *Applied Economics*, 47(25), 2628-2641.
- Clark. (1973). Uncertainty, exchange risk, and the level of international trade. *Economic Inquiry*, 11(3), 302-313.
- Clark. (2000). Governance in a Globalizing World, chapter Environmental globalization: Brookings Institution Press.
- Combes, J.-L., Kinda, T., Ouedraogo, R., & Plane, P. (2019). Financial flows and economic growth in developing countries. *Economic Modelling*, 83(8), 195-209.
- Cook, P., & Kirkpatrick, C. (1997). Globalization, regionalization and third world development. *Regional Studies*, 31(1), 55-66.
- Cooray, A. (2010). Do stock markets lead to economic growth? *Journal of Policy Modeling*, 32(4), 448-460.
- Cornwall, J., & Cornwall, W. (2001). Globalization, the Distribution of Power, and Full Employment *What Global Economic Crisis?* (pp. 104-121): Springer.

- Cote, A. (1994). Exchange rate volatility and trade: A survey. In 94-5 (Ed.), *Working Paper*: Bank of Canada.
- Creane, M. S., Mobarak, M. A. M., Sab, M., & Goyal, R. (2003). *Financial development and growth in the Middle East and North Africa*: International Monetary Fund.
- Cuadros, A., Orts, V., & Alguacil, M. (2004). Openness and growth: Re-examining foreign direct investment, trade and output linkages in Latin America. *Journal of Development Studies*, 40(4), 167-192.
- Cuñado, J., Biscarri, J. G., & De Gracia, F. P. (2006). Changes in the dynamic behavior of emerging market volatility: Revisiting the effects of financial liberalization. *Emerging Markets Review*, 7(3), 261-278.
- Cushman, D. O. (1983). The effects of real exchange rate risk on international trade. *Journal of International Economics*, 15(1-2), 45-63.
- Cushman, D. O. (1986). Has exchange risk depressed international trade? The impact of third-country exchange risk. *Journal of International Money and Finance*, 5(3), 361-379.
- Dal Bianco, S., & Loan, N. C. T. (2017). FDI inflows, price and exchange rate volatility: New empirical evidence from Latin America. *International Journal of Financial Studies*, 5(1), 1-17.
- Darby, J., Hallett, A. H., Ireland, J., & Piscitelli, L. (1999). The impact of exchange rate uncertainty on the level of investment. *The Economic Journal*, 109(454), 55-67.
- Darity, W., & Davis, L. S. (2005). Growth, trade and uneven development. *Cambridge Journal of Economics*, 29(1), 141-170.
- Das, D. K. (2010). Another perspective on globalization. *Journal of International Trade Law and Policy*, 9(1), 46-63.
- De Grauwe, P., Grimaldi, Marianna. (2005). Heterogeneity of agents, transactions costs and the exchange rate. *Journal of Economic Dynamics and Control*, 29(4), 691-719.
- De Haan, J., & Sturm, J.-E. (2000). On the relationship between economic freedom and economic growth. *European Journal of Political Economy*, 16(2), 215-241.
- De Matteis, A. (2004). International trade and economic growth in a global environment. *Journal of International Development*, 16(4), 575-588.
- De Nicolò, G., & Juvenal, L. (2014). Financial integration, globalization, and real activity. *Journal of Financial Stability*, 10(C), 65-75.
- Demir, F. (2010). Exchange rate volatility and employment growth in developing countries: Evidence from Turkey. *World Development*, 38(8), 1127-1140.
- Devereux, M. B., & Engel, C. (2003). Monetary policy in the open economy revisited: Price setting and exchange-rate flexibility. *The Review of Economic Studies*, 70(4), 765-783.
- 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), 523-544.
- Dollar, D., & Kraay, A. (2002). Growth is Good for the Poor. *Journal of Economic Growth*, 7(3), 195-225.
- Dollar, D., & Kraay, A. (2003). Institutions, trade, and growth. *Journal of Monetary Economics*, 50(1), 133-162.
- Doyle, E. (2001). Exchange rate volatility and Irish-UK trade, 1979-1992. *Applied Economics*, 33(2), 249-265.
- Dreher, A. (2006). Does globalization affect growth? Evidence from a new index of globalization. *Applied Economics*, 38(10), 1091-1110.
- Dreher, A., Gaston, N., & Martens, P. (2008). Measuring globalisation. *Gauging its Consequences* Springer, New York.

- Economou, F., Hassapis, C., Philippas, N., & Tsionas, M. (2017). Foreign direct investment determinants in OECD and developing countries. *Review of Development Economics*, 21(3), 527-542.
- Edison, H. J., Levine, R., Ricci, L., & Sløk, T. (2002). International financial integration and economic growth. *Journal of International Money and Finance*, 21(6), 749-776.
- Edwards, S. (1992). Trade orientation, distortions and growth in developing countries. *Journal of Development Economics*, 39(1), 31-57.
- Edwards, S. (1998). Openness, productivity and growth: what do we really know? *The Economic Journal*, 108(447), 383-398.
- Edwards, S., & Yeyati, E. L. (2005). Flexible exchange rates as shock absorbers. *European Economic Review*, 49(8), 2079-2105.
- Egbetunde, T., & Akinlo, A. E. (2015). Financial globalization and economic growth in Sub-Saharan Africa: Evidence from panel cointegration tests. *African Development Review*, 27(3), 187-198.
- Ehigiamusoe, & Lean. (2019). Do economic and financial integration stimulate economic growth? A critical survey. *Economics*, 13(1), 2-27.
- Ehigiamusoe, & Lean. (2019). Influence of real exchange rate on the finance-growth nexus in the West African region. *Economies*, 7(1), 1-21.
- Elbadawi, I. A., Kaltani, L., & Soto, R. (2012). Aid, real exchange rate misalignment, and economic growth in Sub-Saharan Africa. *World Development*, 40(4), 681-700.
- Enisan, A. A., & Olufisayo, A. O. (2009). Stock market development and economic growth: Evidence from seven sub-Sahara African countries. *Journal of Economics and Business*, 61(2), 162-171.
- Fagerberg, J. (1994). Technology and international differences in growth rates. *Journal of Economic Literature*, 32(3), 1147-1175.
- Fainstein, S. S. (2001). Inequality in global city-regions. *DisP-The Planning Review*, 37(144), 20-25.
- Falvey, R., Foster, N., & Greenaway, D. (2012). Trade liberalization, economic crises, and growth. *World development*, 40(11), 2177-2193.
- Federici, D., & Caprioli, F. (2009). Financial development and growth: An empirical analysis. *Economic Modelling*, 26(2), 285-294.
- Feenstra, R. C. (1998). Integration of trade and disintegration of production in the global economy. *Journal of Economic Perspectives*, 12(4), 31-50.
- Feldmann, H. (2011). The unemployment effect of exchange rate volatility in industrial countries. *Economics Letters*, 111(3), 268-271.
- Fiestas, I. (2005). The effects of trade liberalization on growth, poverty and inequality. *CILAE Nota técnica NT/04*, 5.
- Franke, G. (1991). Exchange rate volatility and international trading strategy. *Journal of International Money and Finance*, 10(2), 292-307.
- Frankel, & Romer, D. H. (1999). Does trade cause growth? *American Economic Review*, 89(3), 379-399.
- Frankel, & Rose, A. (2002). An estimate of the effect of common currencies on trade and income. *The Quarterly Journal of Economics*, 117(2), 437-466.
- Friedman, M. (1953). The case for flexible exchange rates. *Essays in Positive Economics*, 157(2), 203.
- Friedrich, C., Schnabel, I., & Zettelmeyer, J. (2013). Financial integration and growth—Why is Emerging Europe different? *Journal of International Economics*, 89(2), 522-538.
- Gaies, B., Goutte, S., & Guesmi, K. (2020). Does financial globalization still spur growth in emerging and developing countries? Considering exchange rates. *Research in International Business and Finance*, 52(2), 1-19.

- Ghosh, A. R., Gulde, A.-M., Ostry, J. D., & Wolf, H. C. (1997). Does the nominal exchange rate regime matter? : National Bureau of Economic Research Cambridge, Mass., USA.
- Goldberg, L. S., & Kolstad, C. D. (1994). Foreign direct investment, exchange rate variability and demand uncertainty: National Bureau of Economic Research Cambridge, Mass., USA.
- Goldsmith, R. (1969). *Financial Structure and Development*, Yale Uni. Press, New Haven.
- Gourdon, J., Maystre, N., & De Melo, J. (2008). Openness, inequality and poverty: Endowments matter. *Journal of International Trade and Economic Development*, 17(3), 343-378.
- Gourinchas, P.-O., & Jeanne, O. (2013). Capital flows to developing countries: The allocation puzzle. *Review of Economic Studies*, 80(4), 1484-1515.
- Gregorio, & Guidotti. (1995). Financial development and economic growth. *World Development*, 23(3), 433-448.
- Gregorio, & Wolf, H. C. (1994). Terms of trade, productivity, and the real exchange rate. *NBER working paper*(w4807).
- Grossman, G. M., & Helpman, E. (1990). Trade, innovation, and growth. *The American economic review*, 80(2), 86-91.
- Grossman, G. M., & Helpman, E. (1991). Endogenous product cycles. *The economic journal*, 101(408), 1214-1229.
- Grossman, G. M., & Helpman, E. (1991). Trade, knowledge spillovers, and growth. *European Economic Review*, 35(2-3), 517-526.
- Grossman, G. M., & Helpman, E. (1993). *Innovation and growth in the global economy*: MIT press.
- Gurgul, H., & Lach, Ł. (2014). Globalization and economic growth: Evidence from two decades of transition in CEE. *Economic Modelling*, 36(1), 99-107.
- Gurley, J. G., & Shaw, E. S. (1955). Financial aspects of economic development. *The American Economic Review*, 45(4), 515-538.
- Gygli, S., Haelg, F., Potrafke, N., & Sturm, J.-E. (2019). The KOF globalisation index—revisited. *The Review of International Organizations*, 14(3), 543-574.
- Hadhek, Z., & Mrad, F. (2015). Trade openness, institutions and economic growth. *European Journal of Economics, Finance and Administrative Sciences*, 75(1), 96-104.
- Hall, J. A. (2000). Globalization and nationalism. *Thesis Eleven*, 63(1), 63-79.
- Hallak, J. C., & Levinsohn, J. A. (2004). Fooling ourselves: evaluating the globalization and growth debate: National Bureau of Economic Research Cambridge, Mass., USA.
- Hammudeh, S., Sohag, K., Husain, S., Husain, H., & Said, J. (2020). Nonlinear relationship between economic growth and nuances of globalisation with income stratification: Roles of financial development and governance. *Economic Systems*, 44(3), 1-17.
- Hansson, Å. (2000). Government size and growth: an empirical study of 21 OECD countries. [Chapter 4]. *Åsa Hansson, Limits of Tax Policy, Lund Economics Studies*, 7(90), 1-33.
- Harrison. (1994). Productivity, imperfect competition and trade reform: Theory and evidence. *Journal of international Economics*, 36(1-2), 53-73.
- Hassan, M. K., Sanchez, B., & Yu, J.-S. (2011). Financial development and economic growth: New evidence from panel data. *The Quarterly Review of Economics and Finance*, 51(1), 88-104.
- Hassan , S. (2019). A gravity model analysis for trade between the GCC and developed countries. *Cogent Economics & Finance*, 7(1), 1703440.
- Hausmann, R., Panizza, U., & Rigobon, R. (2006). The long-run volatility puzzle of the real exchange rate. *Journal of International Money and Finance*, 25(1), 93-124.

- Helpman, E. (1984). A simple theory of international trade with multinational corporations. *Journal of Political Economy*, 92(3), 451-471.
- Henderson, D. J., Papageorgiou, C., & Parmeter, C. F. (2013). Who benefits from financial development? New methods, new evidence. *European Economic Review*, 63(7), 47-67.
- Henry, P. B. (2000). Stock market liberalization, economic reform, and emerging market equity prices. *The Journal of Finance*, 55(2), 529-564.
- Hermes, N., & Lensink, R. (2003). Foreign direct investment, financial development and economic growth. *The Journal of Development Studies*, 40(1), 142-163.
- Hillier, D., Pindado, J., Queiroz, V. d., & Torre, C. d. l. (2011). The impact of country-level corporate governance on research and development. *Journal of International Business Studies*, 42(1), 76-98.
- Holtz-Eakin, D., Newey, W., & Rosen, H. S. (1988). Estimating vector autoregressions with panel data. *Econometrica: Journal of the Econometric Society*, 56(6), 1371-1395.
- Howitt, P. (2000). Endogenous growth and cross-country income differences. *American Economic Review*, 90(4), 829-846.
- Hsiao, C. (2022). *Analysis of panel data*: Cambridge university press.
- Huchet-Bourdon, M., Le Mouél, C., & Vijil, M. (2018). The relationship between trade openness and economic growth: Some new insights on the openness measurement issue. *The World Economy*, 41(1), 59-76.
- Humphrey, T. M. (1974). The quantity theory of money: its historical evolution and role in policy debates. *FRB Richmond Economic Review*, 60(3), 2-19.
- Husain, A. M., Mody, A., & Rogoff, K. S. (2005). Exchange rate regime durability and performance in developing versus advanced economies. *Journal of Monetary Economics*, 52(1), 35-64.
- Iamsiraroj, S. (2016). The foreign direct investment–economic growth nexus. *International Review of Economics & Finance*, 42, 116-133.
- Iamsiraroj, S. (2016). The foreign direct investment–economic growth nexus. *International Review of Economics & Finance*, 42(2), 17.
- Ibrahim, & Alagidede, P. (2017). Financial sector development, economic volatility and shocks in sub-Saharan Africa. *Physica A: Statistical Mechanics and its Applications*, 484(20), 66-81.
- Ibrahim, Mazlina, A., Azman-Saini, W., & Zakaria, M. F. M. (2016). Financial integration–growth nexus: A quantile regression analysis. *Journal of Economic Integration*, 31(3), 531-546.
- Incekara, A., & Savrul, M. (2012). *The effect of globalization on foreign trade and investment in Eurasian countries*. Paper presented at the International Conference On Eurasian Economies.
- Ioan, B., Mozi, R. M., Lucian, G., Gheorghe, F., Horia, T., Ioan, B., & Mircea-Iosif, R. (2020). An empirical investigation on determinants of sustainable economic growth. Lessons from Central and Eastern European Countries. *Journal of Risk and Financial Management*, 13(7), 1-25.
- Islam, N. (1995). Growth empirics: a panel data approach. *The Quarterly Journal of Economics*, 110(4), 1127-1170.
- Itskhoki, O. (2009). *International trade and labor markets: Unemployment, inequality and redistribution*: Harvard University.
- Iwai, N., & Thompson, S. R. (2012). Foreign direct investment and labor quality in developing countries. *Review of Development Economics*, 16(2), 276-290.
- Janus, & Riera. (2015). Real exchange rate volatility, economic growth and the Euro. *Journal of Economic Integration*, 30(1), 148-171.

- Jara, M., López-Iturriaga, F., San-Martín, P., & Saona, P. (2019). Corporate governance in Latin American firms: Contestability of control and firm value. *BRQ Business Research Quarterly*, 22(4), 257-274.
- Jones, R. W. (2000). *Globalization and the theory of input trade* (Vol. 8): MIT Press.
- Ju, J., & Wei, S.-J. (2010). Domestic institutions and the bypass effect of financial globalization. *American Economic Journal: Economic Policy*, 2(4), 173-204.
- Kaminsky, G. L., & Reinhart, C. M. (1999). The twin crises: the causes of banking and balance-of-payments problems. *American Economic Review*, 89(3), 473-500.
- Kandil, M. (2004). Exchange rate fluctuations and economic activity in developing countries: Theory and evidence. *Journal of Economic Development*, 29(1), 85-108.
- Kandil, M., Shahbaz, M., Mahalik, M. K., & Nguyen, D. K. (2017). The drivers of economic growth in China and India: globalization or financial development? *International Journal of Development Issues*, 16(1), 54-84.
- Kandilov, I. T., & Leblebicioğlu, A. (2011). The impact of exchange rate volatility on plant-level investment: Evidence from Colombia. *Journal of Development Economics*, 94(2), 220-230.
- Kar, M., Nazlıoğlu, Ş., & Ağır, H. (2011). Financial development and economic growth nexus in the MENA countries: Bootstrap panel granger causality analysis. *Economic Modelling*, 28(1-2), 685-693.
- Katusiime, L., Agbola, F. W., & Shamsuddin, A. (2016). Exchange rate volatility–economic growth nexus in Uganda. *Applied Economics*, 48(26), 2428-2442.
- Keohane, & Nye, J. S. (2000). Globalization: What's new? What's not?(And so what?). *Foreign Policy*, 118(1), 104-119.
- Khoshnevis, & Shakouri. (2017). The globalization, financial development, renewable energy, and economic growth. *Energy Sources, Part B: Economics, Planning, and Policy*, 12(8), 707-714.
- Kilic, C. (2015). Effects of Globalization on Economic Growth: Panel Data Analysis for Developing Countries. *Petroleum-Gas University of Ploiesti Bulletin, Technical Series*, 67(1), 1-11.
- Kim, & Lee, J.-H. (2012). A Sensitivity Analysis Regarding the Impacts of Trade Openness and Globalization Growth: Empirical Evidence from Korea. *Journal of International Logistics and Trade*, 10(2), 47-60. doi: 10.24006/jilt.2012.10.2.47
- Kim, & Lin. (2009). Trade and growth at different stages of economic development. *Journal of Development Studies*, 45(8), 1211-1224.
- Kinda. (2012). Foreign ownership, sales to multinationals and firm efficiency: the case of Brazil, Morocco, Pakistan, South Africa and Vietnam. *Applied Economics Letters*, 19(6), 551-555.
- Kinda. (2014). The quest for non-resource-based foreign direct investment: Do taxes matter. *Washington, DC: IMF working paper*.
- King, R. G., & Levine, R. (1993). Finance and growth: Schumpeter might be right. *The Quarterly Journal of Economics*, 108(3), 717-737.
- Klein, M. W., & Olivei, G. P. (2008). Capital account liberalization, financial depth, and economic growth. *Journal of International Money and Finance*, 27(6), 861-875.
- Kočenda, E., Maurel, M., & Schnabl, G. (2013). Short-and Long-term Growth Effects of Exchange Rate Adjustment. *Review of International Economics*, 21(1), 137-150.
- Kok, R., & Ersoy, B. A. (2009). Analyses of FDI determinants in developing countries. *International Journal of Social Economics*, 36(1/2), 105-125.
- Kose, Prasad, E., & Terrones, M. (2009). Does openness to international financial flows raise productivity growth? *Journal of International Money and Finance*, 28(4), 554-580.

- Kose, Prasad, E. S., & Terrones, M. E. (2003). Financial integration and macroeconomic volatility. *IMF Staff Papers*, 50(1), 119-142.
- Krifa, & Matei. (2010). Business climate, political risk and FDI in developing countries: Evidence from panel data. *International Journal of Economics and Finance*, 2(5), 54-65.
- Krueger, A. O. (1978). Alternative trade strategies and employment in LDCs. *The American Economic Review*, 68(2), 270-274.
- Law, Azman-Saini, W., & Ibrahim, M. H. (2013). Institutional quality thresholds and the finance-growth nexus. *Journal of Banking & Finance*, 37(12), 5373-5381.
- Law, & Singh, N. (2014). Does too much finance harm economic growth? *Journal of Banking & Finance*, 41(4), 36-44.
- Law, Tan, & Azman. (2014). Financial development and income inequality at different levels of institutional quality. *Emerging Markets Finance and Trade*, 50(1), 21-33.
- Leamer, E. E. (1995). The Heckscher-Ohlin model in theory and practice: International Finance Section, Department of Economics, Princeton University
- Lee, C.-C., Lee, C.-C., & Chang, C.-P. (2015). Globalization, economic growth and institutional development in China. *Global Economic Review*, 44(1), 31-63.
- Levine, R. (1997). Financial development and economic growth: views and agenda. *Journal of Economic Literature*, 35(2), 688-726.
- Levine, R., Loayza, N., & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *Journal of Monetary Economics*, 46(1), 31-77.
- Levine, R., & Renelt, D. (1992). A sensitivity analysis of cross-country growth regressions. *The American Economic Review*, 82(4), 942-963.
- Levine, R., & Zervos, S. (1998). Capital control liberalization and stock market development. *World Development*, 26(7), 1169-1183.
- Levy-Yeyati, E., & Sturzenegger, F. (2003). To float or to fix: Evidence on the impact of exchange rate regimes on growth. *American Economic Review*, 93(4), 1173-1193.
- Lipsey, & Lancaster, K. (1956). The general theory of second best. *The Review of Economic Studies*, 24(1), 11-32.
- López, R. A. (2005). Trade and growth: Reconciling the macroeconomic and microeconomic evidence. *Journal of Economic Surveys*, 19(4), 623-648.
- Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3-42.
- Mahmood, I., Ehsanullah, M., & Habib, A. (2011). Exchange rate volatility & macroeconomic variables in Pakistan. *Business Management Dynamics*, 1(2), 11-22.
- Majidi, A. F. (2017). Globalization and economic growth: The case study of developing countries. *Asian Economic and Financial Review*, 7(6), 589-599.
- Manasseh, C. O., Mathew, T. E., & Ogbuabor, J. E. (2017). Investigating the nexus between institutional quality and stock market development in Nigeria: An autoregressive distributed lag (ARDL) approach. *African Development Review*, 29(2), 272-292.
- Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A contribution to the empirics of economic growth. *The Quarterly Journal of Economics*, 107(2), 407-437.
- Marques, L. M., Fuinhas, J. A., & Marques, A. C. (2017). Augmented energy-growth nexus: Economic, political and social globalization impacts. *Energy Procedia*, 136(5), 97-101.
- Masten, A. B., Coricelli, F., & Masten, I. (2008). Non-linear growth effects of financial development: Does financial integration matter? *Journal of International Money and Finance*, 27(2), 295-313.
- Mathur, S. K. (2005). Economic growth & conditional convergence: Its speed for selected regions for 1961-2001. *Indian Economic Review*, 40(2), 185-208.

- McKenzie, M. D. (1999). The impact of exchange rate volatility on international trade flows. *Journal of Economic Surveys*, 13(1), 71-106.
- McKinnon. (1973). Money and capital in economic development (Washington, DC: Brookings Institution).
- McKinnon, & Ohno. (1997). *Dollar and yen: resolving economic conflict between the United States and Japan*: MIT press.
- Mendoza, R. U. (2010). Trade-induced learning and industrial catch-up. *The economic journal*, 120(546), F313-F350.
- Menhas, R., Mahmood, S., Tanchangya, P., Safdar, M. N., & Hussain, S. (2019). Sustainable development under belt and road initiative: A case study of China-Pakistan economic corridor's socio-economic impact on Pakistan. *Sustainability*, 11(21), 1-24.
- Milanovic, B. (2003). The two faces of globalization: against globalization as we know it. *World Development*, 31(4), 667-683.
- Mishkin, F. S. (2009). Globalization and financial development. *Journal of Development Economics*, 89(2), 164-169.
- Morina, F., Hysa, E., Ergün, U., Panait, M., & Voica, M. C. (2020). The effect of exchange rate volatility on economic growth: Case of the CEE countries. *Journal of Risk and Financial Management*, 13(8), 2-13.
- Mottaleb, K. A., & Kalirajan, K. (2010). Determinants of foreign direct investment in developing countries: A comparative analysis. *Margin: The Journal of Applied Economic Research*, 4(4), 369-404.
- Mundell, R. A. (1961). A theory of optimum currency areas. *The American Economic Review*, 51(4), 657-665.
- Mundial, B. (1993). *The East Asian miracle: economic growth and public policy*: World Bank.
- Musila, J. W., & Yiheyis, Z. (2015). The impact of trade openness on growth: The case of Kenya. *Journal of Policy Modeling*, 37(2), 342-354.
- Myint, H. (1958). The "classical theory" of international trade and the underdeveloped countries. *The Economic Journal*, 68(270), 317-337.
- Naceur, S. B., Ghazouani, S., & Omran, M. (2008). Does stock market liberalization spur financial and economic development in the MENA region? *Journal of Comparative Economics*, 36(4), 673-693.
- Nahavandian, M., & Ghanbari, M. (2004). *We and globalization*. Tehran: Institute for Humanities and Cultural Studies.
- Narayan, P. K., & Narayan, S. (2013). The short-run relationship between the financial system and economic growth: New evidence from regional panels. *International Review of Financial Analysis*, 29(4), 70-78.
- Ndambendia, H., & Hayky, A. (2011). Effective Real Exchange Rate Volatility and Economic Growth in Sub-Saharan Africa: Evidence from Panel Unit Root and Cointegration Tests. *IUP Journal of Applied Finance*, 17(1), 85-94.
- Nekhili, M., Gull, A. A., Chtioui, T., & Radhouane, I. (2020). Gender-diverse boards and audit fees: What difference does gender quota legislation make? *Journal of Business Finance & Accounting*, 47(1-2), 52-99.
- Neto, D. G., & Veiga, F. J. (2013). Financial globalization, convergence and growth: The role of foreign direct investment. *Journal of International Money and Finance*, 37(6), 161-186.
- Newey, W. K., & West, K. D. (1987). Hypothesis testing with efficient method of moments estimation. *International Economic Review*, 28(3), 777-787.
- Nguyen, Su, T. D., & Nguyen, T. V. H. (2018). Institutional quality and economic growth: the case of emerging economies. *Theoretical Economics Letters*, 8(11), 1943-1957.

- Nili, M., & Rastad, M. (2007). Addressing the growth failure of the oil economies: The role of financial development. *The Quarterly Review of Economics and Finance*, 46(5), 726-740.
- Njindan Iyke, B. (2018). The real effect of currency misalignment on productivity growth: evidence from middle-income economies. *Empirical Economics*, 55(4), 1637-1659.
- Noorbakhsh, F., Paloni, A., & Youssef, A. (2001). Human capital and FDI inflows to developing countries: New empirical evidence. *World Development*, 29(9), 1593-1610.
- Norris, P. (2000). Global governance and cosmopolitan citizens. *Governance in a Globalizing World*, 155, 173-175.
- Nwaolisa, E. F., Kasie, E. G., & Egbunike, C. F. (2013). The impact of capital market on the growth of the Nigerian economy under democratic rule. *Oman Chapter of Arabian Journal of Business and Management Review*, 34(983), 1-10.
- Nyasha, S., & Odhiambo, N. M. (2019). Government size and economic growth: A review of international literature. *Sage Open*, 9(3), 1-15.
- Obstfeld, & Rogoff, K. (1995). Exchange rate dynamics redux. *Journal of Political Economy*, 103(3), 624-660.
- Obstfeld, & Rogoff, K. S. (1998). Risk and exchange rates: National bureau of economic research Cambridge, Mass., USA.
- Olamide, E., Ogujiuba, K., & Maredza, A. (2022). Exchange rate volatility, inflation and economic growth in developing countries: Panel data approach for SADC. *Economies*, 10(3), 1-19.
- Olimpia, N., & Stela, D. (2017). Impact of globalisation on economic growth in Romania: An empirical analysis of its economic, social and political dimensions. *Studia Universitatis „Vasile Goldis” Arad—Economics Series*, 27(1), 29-40.
- Opoku, E. E. O., & Yan, I. K.-M. (2019). Industrialization as driver of sustainable economic growth in Africa. *The Journal of International Trade & Economic Development*, 28(1), 30-56.
- Pagano, M. (1993). Financial markets and growth: An overview. *European Economic Review*, 37(2-3), 613-622.
- Pallage, S., & Robe, M. A. (2003). On the welfare cost of economic fluctuations in developing countries. *International Economic Review*, 44(2), 677-698.
- Panagariya, A. (2004). Miracles and debacles: In defence of trade openness. *World Economy*, 27(8), 1149-1171.
- Patrick, H. T. (1966). Financial development and economic growth in underdeveloped countries. *Economic Development and Cultural Change*, 14(2), 174-189.
- Perée, E., & Steinherr, A. (1989). Exchange rate uncertainty and foreign trade. *European Economic Review*, 33(6), 1241-1264.
- Pino, G., Tas, D., & Sharma, S. C. (2016). An investigation of the effects of exchange rate volatility on exports in East Asia. *Applied Economics*, 48(26), 2397-2411.
- Potrafke, N. (2015). The evidence on globalisation. *The World Economy*, 38(3), 509-552.
- Prasad, Rogoff, & Kose. (2009). Financial globalization and economic policies. *Brookings Global Economy and Development Working Paper*(34).
- Prebisch, R. (1950). The economic development of Latin America and its principal problems: Naciones Unidas Comisión Económica para América Latina y el Caribe (CEPAL).
- Quinn, D., Schindler, M., & Toyoda, A. M. (2011). Assessing measures of financial openness and integration. *IMF Economic Review*, 59(3), 488-522.
- Rahman, M. M., Rana, R. H., & Barua, S. (2019). The drivers of economic growth in South Asia: evidence from a dynamic system GMM approach. *Journal of Economic Studies*, 46(3), 564-577.

- Ranjan, V., & Agrawal, G. (2011). FDI inflow determinants in BRIC countries: A panel data analysis. *International Business Research*, 4(4), 255-263.
- Rao, B. B., & Vadlamannati, K. C. (2011). Globalization and growth in the low income African countries with the extreme bounds analysis. *Economic Modelling*, 28(3), 795-805.
- Rapetti. (2013). Macroeconomic policy coordination in a competitive real exchange rate strategy for development. *Journal of Globalization and Development*, 3(2), 1-31.
- Ray, D. (1998). *Development economics*: Princeton University Press.
- Rebelo, S. (1991). Long-run policy analysis and long-run growth. *Journal of Political Economy*, 99(3), 500-521.
- Redding, S. (1999). Dynamic comparative advantage and the welfare effects of trade. *Oxford Economic Papers*, 51(1), 15-39.
- Ricardo, D. (1817). *On the Principles of Political Economy and Taxation*: London.
- Rioja, F., & Valev, N. (2004). Does one size fit all?: a reexamination of the finance and growth relationship. *Journal of Development Economics*, 74(2), 429-447.
- Rios, A. D. (2009). Exchange rate regimes, globalisation, and the cost of capital in emerging markets. *Emerging Markets Review*, 10(4), 311-330.
- Robinson, J. (1953). The Generalization of the General Theory, in: The Rate of Interest and Other Essays (MacMillan, London).
- Rodríguez, F. (2007). Openness and growth: what have we learned? [DESA Working Paper 51]. 1-17.
- Rodríguez, F., & Rodrik, D. (2000). Trade policy and economic growth: a skeptic's guide to the cross-national evidence. *NBER macroeconomics annual*, 15(2000), 261-325.
- Rodrik, D. (1992). The limits of trade policy reform in developing countries. *Journal of Economic perspectives*, 6(1), 87-105.
- Rodrik, D. (1998). Who needs capital-account convertibility? [Working Paper]. *Essays in International Finance*, 207, 55-65.
- Rodrik, D. (2002). Feasible globalizations: National Bureau of Economic Research Cambridge, Mass., USA.
- Roe, M. J., & Siegel, J. I. (2011). Political instability: Effects on financial development, roots in the severity of economic inequality. *Journal of Comparative Economics*, 39(3), 279-309.
- Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, 94(5), 1002-1037.
- Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal*, 9(1), 86-136.
- Rose, A. K. (2000). One money, one market: the effect of common currencies on trade. *Economic Policy*, 15(30), 08-45.
- Rourke, K. H., & Williamson, J. G. (2001). *Globalization and history: the evolution of a nineteenth-century Atlantic economy*: MIT press.
- Rousseau, P. L., & Sylla, R. (2003). Financial systems, economic growth, and globalization *Globalization in historical perspective* (pp. 373-416): University of Chicago Press.
- Sa'idu, B. M., Umaru, A., & Yusuf, M. I. (2014). How do globalization channels affect economic growth? Evidence from Nigeria. *European Scientific Journal*, 10(1), 133-150.
- Sachs, J. D., Warner, A., Åslund, A., & Fischer, S. (1995). Economic reform and the process of global integration. *Brookings papers on economic activity*, 1995(1), 1-118.
- Samimi, P., & Jenatabadi, H. S. (2014). Globalization and economic growth: Empirical evidence on the role of complementarities. *PloS One*, 9(4), 1-7.

- Samuelson, P. A., & Nordhaus, W. D. (2009). *Macroeconomics 19e*: McGraw-Hill Higher Education, Maidenhead.
- Schnabl, G. (2008). Exchange rate volatility and growth in small open economies at the EMU periphery. *Economic Systems*, 32(1), 70-91.
- Schnabl, G. (2009). Exchange rate volatility and growth in emerging Europe and East Asia. *Open Economies Review*, 20(4), 565-587.
- Schumpeter, J. A. (1934). The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle.
- Sekkat, Véganzones Varoudakis, & Marie, A. (2007). Openness, investment climate, and FDI in developing countries. *Review of Development Economics*, 11(4), 607-620.
- Senadza, B., & Diaba, D. D. (2017). Effect of exchange rate volatility on trade in Sub-Saharan Africa. *Journal of African Trade*, 4(1-2), 20-36.
- Sercu, P., & Vanhulle, C. (1992). Exchange rate volatility, international trade, and the value of exporting firms. *Journal of Banking & Finance*, 16(1), 155-182.
- Serven, L. (2002). *Real exchange rate uncertainty and private investment in developing countries* (Vol. 2823): World Bank Publications.
- Sharifi, H., Mirfatah, Maryam. (2012). The impact of exchange rate volatility on foreign direct investment in Iran. *Procedia Economics and Finance*, 1(1), 365-373.
- Shaw. (1973). Financial deepening in economic development.
- Shaw. (1973). Financial Deepening in Economic Growth, vol. 19 (73.21): Oxford University Press, Oxford.
- Singh, A. (1997). Financial liberalisation, stockmarkets and economic development. *The Economic Journal*, 107(442), 771-782.
- Singh, A. (2003). Capital account liberalization, free long-term capital flows, financial crises and economic development. *Eastern Economic Journal*, 29(2), 191-216.
- Sinha, D., & Sinha, T. (2000). An aggregate import demand function for Greece. *Atlantic Economic Journal*, 28(2), 196-209.
- Smarzynska Javorcik, B. (2004). Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages. *American Economic Review*, 94(3), 605-627.
- Smith, C. W. (1986). Investment banking and the capital acquisition process. *Journal of financial economics*, 15(1-2), 3-29.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics*, 70(1), 65-94.
- Srinivasan, T. N., & Bhagwati, J. (2001). Outward-orientation and development: are revisionists right? *Trade, development and political economy: Essays in honour of Anne O. Krueger* (pp. 3-26): Springer.
- Stiglitz, J. E. (2000). Capital market liberalization, economic growth, and instability. *World Development*, 28(6), 1075-1086.
- Stiglitz, J. E. (2002). *Globalization and its Discontents* (Vol. 500): WW norton New York.
- Stiglitz, J. E. (2004). Globalization and growth in emerging markets. *Journal of Policy Modeling*, 26(4), 465-484.
- Stolper, W. F., & Samuelson, P. A. (1941). Protection and real wages. *The Review of Economic Studies*, 9(1), 58-73.
- Straub, R., & Tchakarov, I. (2004). Non-fundamental exchange rate volatility and welfare. *Available at SSRN 526991*.
- Suci, S. C., Asmara, A., & Mulatsih, S. (2015). The impact of globalization on economic growth in ASEAN. *Bisnis & Birokrasi*, 22(2), 79-87.
- Teixeira, A. A., & Queirós, A. S. (2016). Economic growth, human capital and structural change: A dynamic panel data analysis. *Research Policy*, 45(8), 1636-1648.

- Thorsten, & Daniel, R.-C. (2015). Real exchange rate volatility, economic growth and the Euro. *Journal of Economic Integration*, 30(1), 148-171.
- Tille, C. (2008). Financial integration and the wealth effect of exchange rate fluctuations. *Journal of International Economics*, 75(2), 283-294.
- Tsai, M.-C. (2007). Does globali zation affect human well-being? *Social Indicators Research*, 81(1), 103-126.
- Türedi, S., & Altınar, A. (2016). Economic and political factors affecting corruption in developing countries. *Int. J. Eco. Res*, 7(1), 104-120.
- Ullah, S., Akhtar, P., & Zaefarian, G. (2018). Dealing with endogeneity bias: The generalized method of moments (GMM) for panel data. *Industrial Marketing Management*, 71(4), 69-78.
- Umaru, H., Aguda, N., & Davies, N. O. (2018). The effects of exchange rate volatility on economic growth of West African English-speaking countries. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 8(4), 131-143.
- Verspagen, B. (1991). A new empirical approach to catching up or falling behind. *Structural Change and Economic Dynamics*, 2(2), 359-380.
- Vieira, F. V., & MacDonald, R. (2016). Exchange rate volatility and exports: a panel data analysis. *Journal of Economic Studies*, 43(2), 203-221.
- Vieira, M. D. S., Gomes Bottecchia, Luiz C. (2013). Growth and exchange rate volatility: a panel data analysis. *Applied Economics*, 45(26), 3733-3741.
- Villaverde, J., & Maza, A. (2011). Globalisation, growth and convergence. *The World Economy*, 34(6), 952-971.
- Vithessonthi, C., & Tongurai, J. (2012). The impact of capital account liberalization measures. *Journal of International Financial Markets, Institutions and Money*, 22(1), 16-34.
- Vo, D. H., Vo, A. T., & Zhang, Z. (2019). Exchange rate volatility and disaggregated manufacturing exports: Evidence from an emerging country. *Journal of Risk and Financial Management*, 12(1), 1-25.
- Volz, U. (2016). Regional financial integration in East Asia against the backdrop of recent European experiences. *International Economic Journal*, 30(2), 272-293.
- Wacziarg, R. (2001). Measuring the dynamic gains from trade. *The world bank economic review*, 15(3), 393-429.
- Warner, A. (2003). Once more into the breach: Economic growth and integration. *Center for global development working paper*(34).
- Wei, S.-J. (2006). Connecting two views on financial globalization: Can we make further progress? *Journal of the Japanese and International Economies*, 20(4), 459-481.
- Wei, S.-J., & Wu, Y. (2002). Negative alchemy? Corruption, composition of capital flows, and currency crises *Preventing currency crises in emerging markets* (pp. 461-506): University of Chicago Press.
- Winters, L. A. (2004). Trade liberalisation and economic performance: an overview. *The Economic Journal*, 114(493), 4-21.
- Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial economics*, 105(3), 581-606.
- Wood. (1998). Globalisation and the rise in labour market inequalities. *The Economic Journal*, 108(450), 1463-1482.
- Wood, & Ridao, C. (1999). Skill, trade, and international inequality. *Oxford Economic Papers*, 51(1), 89-119.

- Wooster, R. B., & Diebel, D. S. (2010). Productivity spillovers from foreign direct investment in developing countries: A meta-regression analysis. *Review of Development Economics*, 14(3), 640-655.
- Wu, J.-L., Hou, H., & Cheng, S.-Y. (2010). The dynamic impacts of financial institutions on economic growth: Evidence from the European Union. *Journal of Macroeconomics*, 32(3), 879-891.
- Xu, X., Abbas, H. S. M., Sun, C., Gillani, S., Ullah, A., & Raza, M. A. A. (2021). Impact of globalization and governance determinants on economic growth: An empirical analysis of Asian economies. *Growth and Change*, 52(2), 1137-1154.
- Yahya, Razzaq, S., & Mehboob, S. (2019). Corruption and Globalization Nexus with Economic Growth of Selected SAARC Countries. *European Online Journal of Natural and Social Sciences: Proceedings*, 8(3), pp. 133-139.
- Yanikkaya, H. (2003). Trade openness and economic growth: a cross-country empirical investigation. *Journal of Development Economics*, 72(1), 57-89.
- Ying, Y.-H., Chang, K., & Lee, C.-H. (2014). The impact of globalization on economic growth. *Romanian Journal of Economic Forecasting*, 17(2), 25-34.
- Young, A. (1991). Learning by doing and the dynamic effects of international trade. *The Quarterly Journal of Economics*, 106(2), 369-405.
- Yucel, F. (2009). Causal relationships between financial development, trade openness and economic growth: the case of Turkey. *Journal of Social Sciences*, 5(1), 33-42.
- Zahonogo, P. (2018). Globalization and economic growth in developing countries: evidence from Sub-Saharan Africa. *The International Trade Journal*, 32(2), 189-208.

Appendix

Table A1: Impact of Globalization and its dimensions on Economic Growth through Fixed Effect Model

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Initial	-4.257*** (0.000)	-3.666*** (0.000)	-4.735*** (0.000)	-4.070*** (0.000)
GLOB	0.011*** (0.000)	-	-	-
EGLOB	-	0.078*** (0.001)	-	-
SGLOB	-	-	0.024*** (0.000)	-
PGLOB	-	-	-	0.017*** (0.000)
INF	-0.023** (0.037)	-0.012 (0.250)	-0.037*** (0.003)	-0.065** (0.031)
GFCF	0.029*** (0.001)	0.031*** (0.000)	0.036*** (0.000)	0.025*** (0.003)
GGFCE	0.014 (0.740)	0.016** (0.048)	0.012 (0.110)	-0.020 (0.687)
FR	0.055 (0.356)	-0.026 (0.894)	0.095 (0.630)	0.077 (0.906)
LE	0.062 (0.536)	0.016*** (0.003)	0.015 (0.140)	0.026*** (0.008)
Constant	13.98 (0.364)	-46.704* (0.057)	37.043*** (0.002)	26.789** (0.017)
R-Sqr	0.2454	0.2295	0.2558	0.2352
F-Stat	9.85*** (0.000)	8.98*** (0.000)	10.36*** (0.000)	9.27*** (0.000)
Hausman	43.93*** (0.000)	32.93*** (0.000)	45.39*** (0.000)	55.32*** (0.000)
Breusch pagan	317.72*** (0.000)	361.4*** (0.000)	336.31*** (0.000)	238.56*** (0.000)
Obs	265	246	264	264
Countries	46	46	46	46

Note: Same as mentioned in table 4.1, and table 4.2.

Table A2: Impact of De-Facto aspect of Globalization on Economic Growth by using Fixed Effect Model

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Initial	-3.741*** (0.000)	-3.386*** (0.000)	-5.676*** (0.000)	-6.661*** (0.000)
GLOB	0.089*** (0.001)	-	-	-
EGLOB	-	0.092*** (0.002)	-	-
SGLOB	-	-	0.072*** (0.000)	-
PGLOB	-	-	-	0.052* (0.086)
INF	-0.062** (0.043)	-0.040* (0.085)	-0.015* (0.051)	0.626 (0.505)
GFCF	0.026*** (0.002)	0.027*** (0.000)	0.014** (0.010)	0.018*** (0.010)
GGFCE	-0.013 (0.788)	0.083 (0.204)	0.063 (0.273)	-0.057 (0.170)
FR	-0.071 (0.712)	-0.011*** (0.007)	-0.012*** (0.001)	-0.061*** (0.000)
LE	0.013** (0.020)	0.015** (0.050)	-0.003 (0.961)	0.013*** (0.001)
Constant	-36.962 (0.106)	36.942*** (0.000)	45.098*** (0.000)	25.540 (0.140)
R-Sqr	0.2247	0.1860	0.2495	0.3714
F-Stat	8.73*** (0.000)	9.70*** (0.000)	13.77*** (0.000)	21.19*** (0.000)
Hausman	31.28*** (0.000)	44.86*** (0.000)	84.73*** (0.000)	63.52*** (0.000)
Bresuch pagan	259.86*** (0.000)	339.14*** (0.000)	549.83*** (0.000)	235.88*** (0.000)
Obs	264	350	342	304
Countries	46	46	45	46

Note: Same as mentioned in table 4.1 and table 4.2.

Table A3: Impact of De-Jure aspect of Globalization on Economic Growth by using Fixed Effect Model

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Initial	-3.741*** (0.000)	-3.650*** (0.000)	-4.781 (0.000)	-4.714*** (0.000)
GLOB	0.089*** (0.001)	-	-	-
EGLOB	-	0.010** (0.012)	-	-
SGLOB	-	-	0.021*** (0.000)	-
PGLOB	-	-	-	0.019*** (0.000)
INF	-0.062** (0.043)	-0.014 (0.210)	-0.074*** (0.007)	-0.080*** (0.007)
GFCF	0.026*** (0.002)	0.023*** (0.010)	0.026*** (0.000)	0.025*** (0.002)
GGFCE	-0.013 (0.788)	-0.044 (0.401)	-0.055 (0.207)	-0.027 (0.580)
FR	-0.071 (0.712)	-0.014 (0.451)	-0.044 (0.800)	0.076 (0.242)
LE	0.013** (0.020)	0.0193*** (0.000)	-0.017 (0.843)	0.026*** (0.007)
Constant	-36.962 (0.106)	-37.318 (0.115)	53.966*** (0.000)	29.419*** (0.006)
R-Sqr	0.2247	0.1998	0.2558	0.2811
F-Stat	8.73*** (0.000)	7.52*** (0.000)	12.57*** (0.000)	11.79*** (0.000)
Hausman	31.28*** (0.000)	27.56*** (0.000)	51.59*** (0.000)	92.32*** (0.000)
Bresuch pagan	259.86*** (0.000)	273.14*** (0.000)	248.49*** (0.000)	226.42*** (0.000)
Obs	264	264	309	264
Countries	46	46	46	46

Note: Same as mentioned in table 4.1 and table 4.2.

Table A4: Impact of Overall Globalization and its dimensions on Economic Growth through ERV by using Fixed Effect Model

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) With Interaction	Model (4)	Model (4) with Interaction
Initial	-4.393*** (0.000)	-4.711*** (0.000)	-3.573*** (0.000)	-3.288*** (0.000)	-4.708*** (0.000)	-7.381*** (0.000)	-3.811*** (0.000)	-7.624*** (0.000)
GLOB	14.384*** (0.000)	0.250*** (0.001)	-	-	-	-	-	-
EGLOB	-	-	7.431*** (0.001)	6.498*** (0.000)	-	-	-	-
SGLOB	-	-	-	-	8.782*** (0.000)	0.152*** (0.000)	-	-
PGLOB	-	-	-	-	-	-	5.564*** (0.001)	0.125*** (0.000)
ERV	-0.058** (0.042)	-0.062** (0.029)	-0.054* (0.069)	0.342** (0.039)	-0.057 (0.045)	-0.051** (0.048)	-0.043* (0.062)	-0.050* (0.054)
(GLOB*ERV)	-	0.011* (0.090)	-	-	-	-	-	-
(EGLOB*ERV)	-	-	-	0.110** (0.025)	-	-	-	-
(SGLOB*ERV)	-	-	-	-	-	0.016** (0.011)	-	-
(PGLOB*ERV)	-	-	-	-	-	-	-	0.010* (0.068)
INF	-2.227** (0.046)	-8.614*** (0.002)	-1.088 (0.329)	-5.257** (0.039)	-2.330** (0.036)	-1.513 (0.135)	-0.802 (0.387)	1.066 (0.216)
INV	3.154*** (0.000)	3.177*** (0.000)	3.223*** (0.000)	2.604*** (0.000)	3.384*** (0.000)	3.050*** (0.000)	2.244*** (0.001)	8.662** (0.039)
Govt. Cons	1.626** (0.039)	1.080 (0.123)	1.687** (0.039)	0.497 (0.436)	1.089 (0.168)	0.617 (0.336)	0.542 (0.406)	0.385 (0.555)
FR	3.480* (0.100)	-0.091 (0.868)	0.309 (0.879)	-1.648 (0.287)	0.974 (0.597)	-5.951*** (0.000)	-0.951 (0.535)	-1.587*** (0.003)
LE	0.136 (0.177)	0.126 (0.141)	14.482*** (0.008)	11.086*** (0.006)	0.041 (0.697)	7.829* (0.060)	10.596*** (0.010)	0.159** (0.041)
Constant	-12.257 (0.397)	44.087*** (0.000)	-39.553 (0.109)	-22.862 (0.194)	22.818** (0.049)	54.251*** (0.003)	-16.918 (0.341)	72.507*** (0.000)

R-squ	0.287	0.275	0.241	0.208		0.416	0.182	0.404
F-Stat	10.58*** (0.000)	11.46*** (0.000)	8.36*** (0.000)	8.64*** (0.000)		19.74*** (0.000)	8.26*** (0.000)	18.78*** (0.000)
Hausman	41.41*** (0.000)	55.47*** (0.000)	29.52*** (0.000)	39.09*** (0.000)		130.15*** (0.000)	56.27*** (0.000)	201.28*** (0.000)
Bresuch pagon						342.88*** (0.000)	412.38*** (0.000)	-
Obs	264	309	264	350		304	350	304
Countries	46	46	46	46		46	46	46
Note: Same as mentioned in table 4.5.								

Table A5: Conditional Effects of Globalization on Economic Growth at Varying Level of Exchange Rate Volatility

Percentile	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	0.250*** (0.000)	6.495*** (0.000)	0.150*** (0.000)	0.1256*** (0.000)
P50(Medium)	0.251*** (0.000)	6.489*** (0.000)	0.151*** (0.000)	0.1257*** (0.000)
P75(High)	0.253*** (0.000)	6.464*** (0.000)	0.152*** (0.000)	0.1258*** (0.000)
Note: Same mentioned in table 4.1.				

Table A6: Impact of Overall De-Facto Aspects of Globalization and its dimensions on Economic Growth through ERV by using Fixed Effect Model

Variables	Model (1)	Model (1) With Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-3.808*** (0.000)	-6.831*** (0.000)	-3.280*** (0.000)	-6.373*** (0.000)	-4.650*** (0.000)	-8.267*** (0.000)	-3.761*** (0.000)	-6.325*** (0.000)
GLOB	9.513*** (0.000)	7.440*** (0.001)	-	-	-	-	-	-
EGLOB	-	-	3.730*** (0.003)	2.720** (0.025)	-	-	-	-
SGLOB	-	-	-	-	0.067* (0.092)	0.113*** (0.002)	-	-
PGLOB	-	-	-	-	-	-	0.063* (0.066)	0.063** (0.036)
ERV	-0.066** (0.025)	-0.050* (0.057)	-0.037* (0.099)	-0.051** (0.049)	-0.046* (0.070)	-0.929*** (0.004)	-0.060** (0.038)	-0.063** (0.018)
(GLOB*ERV)	-	0.013** (0.032)	-	-	-	-	-	-
(EGLOB*ERV)	-	-	-	0.014** (0.027)	-	-	-	-
(SGLOB*ERV)	-	-	-	-	-	0.287*** (0.005)	-	-
(PGLOB*ERV)	-	-	-	-	-	-	-	0.012** (0.033)
INF	-5.407* (0.074)	-0.074 (0.939)	-0.137 (0.883)	-0.359 (0.711)	0.027 (0.980)	3.948 (0.101)	-2.651 (0.357)	0.011 (0.991)
INV	3.376*** (0.000)	1.163** (0.023)	2.053*** (0.003)	2.805*** (0.000)	4.019 (0.392)	4.357 (0.248)	1.670** (0.021)	3.170 (0.991)
Govt. Cons	1.740** (0.031)	0.598 (0.360)	-3.882 (0.319)	1.046 (0.112)	-1.141 (0.796)	-1.463 (0.710)	0.664 (0.373)	1.229* (0.063)
FR	0.146 (0.940)	-1.632*** (0.002)	-1.719 (0.227)	-6.597*** (0.000)	-1.481*** (0.002)	-2.341*** (0.000)	-2.394 (0.174)	-6.385*** (0.000)
LE	9.759* (0.081)	7.917* (0.064)	10.769*** (0.009)	1.621*** (0.002)	0.167** (0.049)	0.075 (0.304)	0.240*** (0.007)	0.149* (0.054)
Constant	-21.930 (0.339)	18.857 (0.321)	-14.389 (0.408)	22.105*** (0.002)	44.854*** (0.000)	88.279*** (0.000)	27.901*** (0.001)	72.790*** (0.000)
R-squ	0.257	0.393	0.184	0.390	0.163	0.373	0.174	0.371

F-Stat	9.09*** (0.000)	17.94*** (0.000)	8.34*** (0.000)	17.73*** (0.000)	6.09*** (0.000)	16.09 (0.000)	6.73*** (0.000)	16.34*** (0.000)
Hausman	25.24*** (0.000)	119.52*** (0.000)	37.22*** (0.000)	112.24*** (0.000)	32.66*** (0.000)	35.05*** (0.000)	40.89*** (0.000)	111.70*** (0.000)
Bresuch pagon	348.01*** (0.000)	339.11*** (0.000)	287.06*** (0.000)	367.85*** (0.000)	623.93*** (0.000)	625.95*** (0.000)	451.52*** (0.000)	456.39*** (0.000)
Obs	264	304	350	304	302	297	309	304
Countries	46	46	46	46	45	45	46	46
Note: Same as mentioned in table 4.7								

Table A7: Conditional Effects of De -Facto Aspect of Globalization on Economic Growth at Varying Level of Exchange Rate Volatility

Percentile of ERV	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	7.441*** (0.001)	2.720** (0.024)	0.122*** (0.001)	0.063** (0.034)
P50(Medium)	7.442*** (0.001)	2.721** (0.024)	0.138*** (0.000)	0.064** (0.032)
P75(High)	7.443*** (0.001)	2.724** (0.024)	0.203*** (0.000)	0.067** (0.025)
Note: Same as mentioned in table 4.1.				

Table A8: Impact of Overall De-Jure Aspects of Globalization and its dimensions on Economic Growth through ERV by using Fixed Effect Model

Variables	Model (1)	Model (1) With Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with interaction
Initial	-4.939*** (0.000)	-4.795*** (0.000)	-3.200*** (0.000)	-6.403*** (0.000)	-3.893*** (0.000)	-7.781*** (0.000)	-4.302*** (0.000)	-7.060*** (0.000)
GLOB	0.179*** (0.000)	1.090*** (0.000)	-	-	-	-	-	-
EGLOB	-	-	2.967** (0.022)	2.222* (0.091)	-	-	-	-
SGLOB	-	-	-	-	5.016*** (0.000)	0.109*** (0.002)	-	-
PGLOB	-	-	-	-	-	-	6.994*** (0.000)	0.186*** (0.000)
ERV	-0.047 (0.081)	-0.058** (0.040)	-0.029 (0.201)	-0.044* (0.093)	-0.038* (0.087)	-0.755** (0.050)	-0.040* (0.074)	-0.046* (0.058)
(GLOB*ERV)	-	0.011* (0.095)	-	-	-	-	-	-
(EGLOB*ERV)	-	-	-	0.015** (0.027)	-	-	-	-
(SGLOB*ERV)	-	-	-	-	-	0.200* (0.057)	-	-
(PGLOB*ERV)	-	-	-	-	-	-	-	0.012** (0.019)
INF	-7.492 (0.009)	-2.310** (0.026)	-0.709 (0.449)	-0.092 (0.922)	-0.617 (0.494)	4.681* (0.061)	-1.123 (0.216)	-1.345 (0.139)
INV	3.248*** (0.000)	2.767*** (0.000)	2.271*** (0.001)	2.556*** (0.000)	2.427*** (0.000)	5.313 (0.197)	2.163*** (0.001)	2.330*** (0.000)
Govt. Cons	0.818 (0.247)	0.979 (0.165)	0.150 (0.817)	0.771 (0.243)	0.348 (0.548)	-9.165** (0.023)	0.611 (0.335)	0.453 (0.462)
FR	-0.950 (0.569)	0.332 (0.578)	-1.746 (0.249)	-6.225*** (0.000)	-1.400 (0.316)	-1.587*** (0.001)	0.471 (0.755)	-0.976 (0.574)
LE	8.190* (0.071)	0.162* (0.057)	1.484*** (0.002)	14.595*** (0.000)	3.813 (0.385)	6.601 (0.126)	11.539*** (0.004)	10.280*** (0.006)
Constant	24.654 (0.199)	3.702 (0.769)	-19.567 (0.291)	15.290 (0.414)	15.887 (0.373)	57.848*** (0.003)	-24.046 (0.167)	27.741* (0.091)
R-squ	0.263	0.285	0.168	0.386	0.209	0.402	0.222	0.464
F-Stat	11.39*** (0.000)	11.28*** (0.000)	7.51*** (0.000)	17.45*** (0.000)	9.82*** (0.000)	18.63*** (0.000)	10.61*** (0.000)	24.02*** (0.000)

Hausman	50.60*** (0.000)	51.27*** (0.000)	28.70*** (0.000)	100.23*** (0.000)	46.92*** (0.000)	126.72*** (0.000)	78.11*** (0.000)	138.31*** (0.000)
Bresuch Pagon	367.74*** (0.000)	339.84*** (0.000)	354.40*** (0.000)	358.24*** (0.000)	348.89*** (0.000)	349.99*** (0.000)	354.80*** (0.000)	334.53*** (0.000)
Obs	309	309	350	304	350	304	350	304
Countries	46	46	46	46	46	46	46	46
Note: Same as mentioned in table 4.9.								

Table A9: Conditional Effects of De-Jure Aspect of Globalization on Economic Growth at Varying Level of Exchange Rate Volatility

Percentile	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	11.090*** (0.000)	2.2230* (0.090)	0.011*** (0.001)	0.186*** (0.000)
P50(Medium)	11.091*** (0.000)	2.2238* (0.090)	0.127*** (0.000)	0.187*** (0.000)
P75(High)	11.093*** (0.000)	2.2272* (0.089)	0.172*** (0.000)	0.190*** (0.000)
Note: Same as mentioned in table 4.1.				

Table A10: Impact of Overall Globalization and its dimensions on Economic Growth through Trade openness by using Fixed Effect Model

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-5.422*** (0.000)	-5.210*** (0.000)	-6.970*** (0.000)	-3.642*** (0.000)	-6.157*** (0.000)	-5.987*** (0.000)	-4.697*** (0.000)	-4.421*** (0.000)
GLOB	0.024*** (0.000)	0.031*** (0.000)	-	-	-	-	-	-
EGLOB	-	-	0.093* (0.053)	0.011** (0.016)	-	-	-	-
SGLOB	-	-	-	-	0.026*** (0.000)	0.033*** (0.000)	-	-
PGLOB	-	-	-	-	-	-	0.016*** (0.000)	0.024*** (0.000)
TO	0.032** (0.026)	0.097*** (0.007)	0.032 (0.011)	0.079*** (0.000)	0.038*** (0.002)	0.065*** (0.000)	0.050*** (0.000)	0.017 (0.004)
(GLOB*TO)	-	-0.001** (0.048)	-	-	-	-	-	-
(EGLOB*TO)	-	-	-	-0.006*** (0.050)	-	-	-	-
(SGLOB*TO)	-	-	-	-	-	-0.009*** (0.006)	-	-
(PGLOB*TO)	-	-	-	-	-	-	-	-0.001** (0.049)
INF	-0.347 (0.149)	-0.028 (0.238)	0.014 (0.102)	0.053 (0.959)	-0.075*** (0.010)	-0.073** (0.011)	-0.054 (0.536)	-0.081 (0.422)
GFCF	-0.273 (0.480)	-0.031 (0.421)	-0.033 (0.465)	-0.014 (0.773)	0.025 (0.959)	-0.014 (0.976)	0.065 (0.378)	0.017 (0.034)
GGFCE	-0.413 (0.326)	-0.056 (0.187)	-0.058 (0.197)	-0.088* (0.079)	-0.070 (0.136)	-0.089* (0.057)	0.049 (0.469)	0.097 (0.198)
FR	-0.254 (0.561)	-0.021 (0.626)	-0.020*** (0.000)	-0.014*** (0.008)	-0.089 (0.601)	-0.047 (0.779)	-0.020 (0.892)	-0.095 (0.587)
LE	0.013* (0.099)	0.108 (0.200)	0.055 (0.541)	-0.080 (0.443)	-0.062 (0.528)	-0.010 (0.276)	0.010** (0.015)	0.046 (0.631)
Constant	41.435*** (0.000)	37.066*** (0.000)	66.956*** (0.000)	19.381 (0.139)	50.450*** (0.000)	40.546*** (0.002)	-0.020 (0.911)	34.882*** (0.002)
R-Sqr	0.2422	0.253	0.381	0.230	0.277	0.300	0.225	0.226

F-Stat	10.71*** (0.000)	10.06*** (0.000)	17.48*** (0.000)	17.69*** (0.000)	11.11*** (0.000)	11.04*** (0.000)	19.73*** (0.000)	17.56*** (0.000)
Hausman	71.07*** (0.000)	64.24*** (0.000)	131.78*** (0.000)	55.97*** (0.000)	73.73*** (0.000)	83.05 (0.000)	60.45*** (0.000)	63.33*** (0.000)
Bresuch Pagon	285.23*** (0.000)	468.37*** (0.000)	479.88*** (0.000)	465.93*** (0.000)	480.59*** (0.000)	471.61*** (0.000)	453.46*** (0.000)	471.95*** (0.000)
Obs	280	321	280	285	285	285	321	286
Countries	45	45	45	45	45	45	45	45
Note: Same as mentioned in table 4.11.								

Table A11: Conditional Effects of Globalization on Economic Growth at Varying Level of Trade Openness

Percentile of TO	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	0.265*** (0.000)	0.078* (0.065)	0.293*** (0.000)	0.192*** (0.000)
P50(Medium)	0.241*** (0.000)	0.065 (0.134)	0.275*** (0.000)	0.168*** (0.000)
P75(High)	0.212*** (0.000)	0.048 (0.295)	0.252*** (0.000)	0.137*** (0.001)
Note: Same as mentioned in table 4.1.				

Table A12: Impact of De-Facto aspect of Globalization on Economic Growth through Trade Openness through Fixed Effect Model

Variables	Model (1)	Model (1) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-4.285*** (0.000)	-4.220*** (0.000)	-5.589*** (0.000)	-6.234*** (0.000)	-6.665*** (0.000)	-3.015*** (0.000)
GLOB	0.066*** (0.004)	0.023*** (0.000)	-	-	-	-
SGLOB	-	-	0.071*** (0.000)	0.027*** (0.000)	-	-
PGLOB	-	-	-	-	0.059** (0.038)	0.093** (0.028)
TO	0.042*** (0.004)	0.011*** (0.003)	0.033** (0.014)	0.090*** (0.002)	0.178** (0.039)	0.080*** (0.000)
(GLOB*TO)	-	-0.001** (0.035)	-	-	-	-
(SGLOB*TO)	-	-	-	-0.001** (0.019)	-	-
(PGLOB*TO)	-	-	-	-	-	-0.007* (0.059)
INF	-0.038 (0.670)	-0.055 (0.550)	-0.141 (0.113)	-0.023* (0.057)	0.051** (0.023)	-0.020 (0.434)
GFCF	0.075 (0.320)	0.080 (0.290)	0.068 (0.351)	-0.191 (0.709)	-0.013*** (0.000)	0.018** (0.030)
GGFCE	0.053 (0.446)	0.401 (0.571)	-0.024 (0.562)	-0.048 (0.320)	0.062 (0.329)	0.062 (0.411)
FR	-0.019 (0.174)	-0.183 (0.193)	-0.027** (0.047)	-0.044 (0.313)	-0.195*** (0.000)	-0.012** (0.026)
LE	0.092** (0.048)	0.087* (0.059)	0.047 (0.293)	0.022** (0.027)	0.012 (0.117)	-0.062 (0.546)
Constant	-13.653 (0.471)	1.631 (0.934)	18.935 (0.309)	42.923*** (0.000)	64.275*** (0.000)	13.575 (0.321)
R-Sqr	0.191	0.204	0.257	0.250	0.358	0.224
F-Stat	17.95*** (0.000)	17.63*** (0.000)	11.55 (0.000)	18.50*** (0.000)	15.80*** (0.000)	17.43*** (0.000)
Hausman	51.79*** (0.000)	43.97*** (0.000)	78.47*** (0.000)	63.62*** (0.000)	163.43*** (0.000)	37.39*** (0.000)

Breuch Pagon	482.33***	479.81***	401.45***	561.68***	470.29***	446.96***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Obs	321	321	318	282	279	285
Countries	45	45	44	44	45	45
Note: Same as mentioned in table 4.13.						

Table A13: Conditional Effects of Globalization on Economic Growth at Varying Level of Trade Openness

Percentile of TO	Model (1)	Model (3)	Model (4)
P25(Low)	0.043** (0.047)	0.216*** (0.000)	0.058* (0.079)
P50(Medium)	0.033 (0.112)	0.193*** (0.000)	0.044 (0.172)
P75(High)	0.020 (0.338)	0.165*** (0.001)	0.025 (0.443)
Note: Same as mentioned in table 4.1.			

Table A14: Impact of De-Jure aspect of Globalization on Economic Growth through Trade Openness by using Fixed Effect Model

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-5.635*** (0.000)	-6.280*** (0.000)	-4.178*** (0.000)	-4.447*** (0.000)	-5.092*** (0.000)	-4.728*** (0.000)	-7.874*** (0.000)	-4.585*** (0.000)
GLOB	0.022*** (0.000)	0.328*** (0.000)	-	-	-	-	-	-
EGLOB	-	-	0.010*** (0.004)	0.018*** (0.003)	-	-	-	-
SGLOB	-	-	-	-	0.020*** (0.000)	0.031*** (0.000)	-	-
PGLOB	-	-	-	-	-	-	0.017*** (0.000)	0.023*** (0.000)
TO	0.037*** (0.006)	0.096*** (0.010)	0.044*** (0.006)	0.010*** (0.007)	0.037** (0.019)	0.012*** (0.000)	0.031** (0.023)	0.011** (0.002)
(GLOB*TO)	-	-0.001* (0.051)	-	-	-	-	-	-
(EGLOB*TO)	-	-	-	-0.001* (0.095)	-	-	-	-
(SGLOB*TO)	-	-	-	-	-	-0.001*** (0.001)	-	-
(PGLOB*TO)	-	-	-	-	-	-	-	-0.001** (0.044)
INF	-0.078 (0.376)	-0.092 (0.685)	-0.032 (0.221)	0.012 (0.965)	-0.072 (0.457)	-0.063 (0.506)	0.016** (0.031)	0.050 (0.559)
GFCF	-0.045 (0.225)	0.030 (0.713)	0.128 (0.883)	0.072 (0.933)	-0.019*** (0.006)	-0.018*** (0.006)	-0.015*** (0.010)	-0.016 (0.017)
GGFCE	-0.062 (0.130)	0.042 (0.561)	-0.020*** (0.002)	-0.010** (0.028)	-0.020*** (0.002)	-0.024*** (0.000)	-0.016*** (0.009)	-0.021 (0.002)
FR	0.060 (0.892)	0.018 (0.287)	-0.011 (0.464)	-0.033 (0.844)	0.030 (0.862)	0.045 (0.791)	-0.042 (0.807)	0.025 (0.160)
LE	0.016** (0.041)	0.013*** (0.008)	0.020*** (0.000)	0.020*** (0.000)	0.033 (0.735)	-0.030 (0.757)	0.168** (0.039)	0.094* (0.076)
Constant	39.385*** (0.000)	-7.136 (0.731)	-45.381** (0.028)	-44.074** (0.034)	34.647*** (0.003)	29.014** (0.012)	59.259*** (0.000)	-14.235 (0.524)
R-Sqr	0.263	0.287	0.240	0.229	0.266	0.299	0.457	0.291
F-Stat	22.01***	40.33***	25.16***	17.66***	20.52***	21.99***	33.96***	20.58***

	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Hausman	82.61*** (0.000)	56.36*** (0.000)	38.62*** (0.000)	34.72*** (0.000)	74.54*** (0.000)	91.76*** (0.000)	120.78*** (0.000)	52.36*** (0.000)			
Bresuch Pagon	468.91*** (0.000)	459.40*** (0.000)	488.14*** (0.000)	495.78*** (0.000)	394.56*** (0.000)	476.23*** (0.000)	459.64*** (0.000)	427.04*** (0.000)			
Obs	321	285	285	285	285	285	280	285			
Countries	45	45	45	45	45	45	45	45			
Note: Same as mentioned in table 4.15.											

Table A15: Conditional Effects of De-Jure Globalization on Economic Growth at Varying Level of Trade Openness

Percentile	Model (1)	Model (2)	Model (3)	Model (4)
P25(low)	0.273*** (0.000)	0.134*** (0.001)	0.238*** (0.000)	0.188*** (0.000)
P50(Medium)	0.249*** (0.000)	0.111*** (0.002)	0.206*** (0.000)	0.167*** (0.000)
P75(High)	0.220*** (0.000)	0.082** (0.024)	0.167*** (0.000)	0.141*** (0.000)
Note: Same as mentioned in table 4.1.				

Table A16: Impact of Globalization and its dimensions on Economic Growth through Financial Development by using Fixed Effect Model

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-4.258*** (0.000)	-7.420*** (0.000)	-7.521*** (0.000)	-6.802*** (0.000)	-5.245*** (0.000)	-7.125*** (0.000)	-7.244*** (0.000)	-7.282*** (0.000)
GLOB	0.282*** (0.000)	0.300*** (0.000)	-	-	-	-	-	-
EGLOB	-	-	0.132*** (0.001)	0.053*** (0.007)	-	-	-	-
SGLOB	-	-	-	-	0.291*** (0.000)	0.067*** (0.000)	-	-
PGLOB	-	-	-	-	-	-	0.194*** (0.000)	0.051** (0.012)
FD	-9.232** (0.039)	0.025** (0.043)	0.015* (0.078)	-0.010* (0.097)	-0.085* (0.099)	-0.016* (0.090)	-0.851 (0.074)	-0.023* (0.091)
(GLOB*FD)	-	-0.428** (0.017)	-	-	-	-	-	-
(EGLOB*FD)	-	-	-	0.163* (0.068)	-	-	-	-
(SGLOB*FD)	-	-	-	-	-	0.211* (0.077)	-	-
(PGLOB*FD)	-	-	-	-	-	-	-	0.261** (0.054)
INF	-0.041* (0.096)	0.041* (0.081)	0.930 (0.318)	0.021 (0.351)	-0.087*** (0.004)	-0.030 (0.236)	0.021*** (0.009)	-0.265 (0.920)
GFCF	0.035 (0.343)	-0.012*** (0.000)	0.035 (0.415)	0.023*** (0.000)	0.010** (0.025)	0.026*** (0.000)	-0.010*** (0.003)	0.078* (0.077)
GGFCE	-0.065* (0.076)	-0.089** (0.012)	-0.035 (0.411)	0.754 (0.245)	-0.090** (0.038)	0.0247 (0.502)	-0.475 (0.446)	0.039 (0.550)
FR	0.031 (0.945)	-0.865** (0.049)	-0.022*** (0.000)	-0.041*** (0.003)	-0.836 (0.635)	-0.014** (0.018)	-0.393** (0.022)	-0.012** (0.016)
LE	0.141* (0.068)	0.068 (0.375)	0.046 (0.528)	0.013*** (0.001)	-0.027 (0.745)	-0.059 (0.884)	0.128* (0.085)	0.244*** (0.002)
Constant	29.235*** (0.000)	68.276*** (0.000)	85.776*** (0.000)	9.834 (0.591)	53.575*** (0.000)	66.256*** (0.000)	70.829*** (0.000)	48.977*** (0.000)
R-Sqr	0.216	0.403	0.411	0.399	0.249	0.443	0.388	0.385
F-Stat	10.23***	18.77***	21.53***	18.39***	10.59***	22.08***	19.87***	17.35***

	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Hausman	63.76*** (0.000)	217.96*** (0.000)	163.10*** (0.000)	129.32° (0.000)	60.98° (0.000)	192.34° (0.000)	145.55° (0.000)	144.88° (0.000)				
Bresuch Pagon	335.04*** (0.000)	335.89*** (0.000)	365.68*** (0.000)	384.12*** (0.000)	339.43*** (0.000)	352.55*** (0.000)	384.78*** (0.000)	379.08*** (0.000)				
OBS	350	305	300	304	309	304	304	304				
Countries	46	46	46	46	46	46	46	46				
Note: Same as mentioned in table 4.17.												

Table A17: Conditional Effects of Globalization on Economic Growth at Varying Level of Financial Development

Percentile	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	0.261*** (0.000)	5.366*** (0.006)	6.802*** (0.000)	5.170** (0.011)
P50(Medium)	0.237*** (0.000)	5.375*** (0.006)	6.814*** (0.000)	5.184*** (0.010)
P75(High)	0.200*** (0.000)	5.389*** (0.006)	6.832*** (0.000)	5.207*** (0.010)
Note: Same as mentioned in table 4.1.				

Table A18: Impact of De-Facto Aspect of Globalization and its dimensions on Economic Growth through Financial Development by using Fixed Effect Model

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-3.956*** (0.000)	-7.105*** (0.000)	-7.392*** (0.000)	-7.410*** (0.000)	-5.147*** (0.000)	-6.868*** (0.000)	-7.255*** (0.000)	-6.660*** (0.000)
GLOB	0.025*** (0.000)	0.004* (0.054)	-	-	-	-	-	-
EGLOB	-	-	0.026** (0.039)	0.026** (0.056)	-	-	-	-
SGLOB	-	-	-	-	0.079*** (0.000)	0.086*** (0.000)	-	-
PGLOB	-	-	-	-	-	-	0.064** (0.035)	0.104*** (0.010)
FD	-0.086* (0.098)	-0.024* (0.072)	1.857* (0.059)	-0.010* (0.086)	-0.007** (0.049)	-0.013** (0.027)	0.153* (0.098)	0.024*** (0.051)
(GLOB*FD)	-	0.031* (0.061)	-	-	-	-	-	-
(EGLOB*FD)	-	-	-	0.017** (0.035)	-	-	-	-
(SGLOB*FD)	-	-	-	-	-	0.014* (0.095)	-	-
(PGLOB*FD)	-	-	-	-	-	-	-	-0.027* (0.054)
INF	-0.451 (0.685)	0.017 (0.534)	0.040* (0.083)	0.017* (0.052)	-0.012 (0.147)	-0.025** (0.014)	0.052** (0.028)	0.018** (0.043)
GFCF	0.283 (0.796)	0.016 (0.796)	0.055 (0.930)	0.088** (0.036)	0.012** (0.044)	0.018* (0.006)	-0.092** (0.011)	-0.060 (0.359)
GGFCE	0.283 (0.695)	0.314 (0.630)	-0.063 (0.149)	0.067 (0.318)	-0.010 (0.764)	0.012* (0.083)	0.421 (0.520)	-0.017* (0.007)
FR	-0.0174 (0.336)	-0.234*** (0.000)	-0.080*** (0.000)	-0.022*** (0.000)	-0.031*** (0.010)	-0.010** (0.026)	-0.023*** (0.000)	-0.054*** (0.000)
LE	0.047 (0.336)	0.075 (0.367)	0.005 (0.223)	0.020*** (0.008)	0.024 (0.507)	0.026 (0.733)	0.090 (0.239)	0.014* (0.067)
Constant	16.852	66.196***	63.053***	68.145***	25.775	50.844***	82.932***	62.223***

	(0.422)	(0.000)	(0.001)	(0.000)	(0.105)	(0.000)	(0.000)	(0.000)
R-Sqr	0.162	0.340	0.365	0.384	0.243	0.306	0.402	(0.000)
F-Stat	6.20*** (0.000)	14.26*** (0.000)	17.70*** (0.000)	17.31*** (0.000)	11.60*** (0.000)	12.20*** (0.000)	20.71*** (0.000)	0.327 13.50*** (0.000)
Hausman	45.12*** (0.000)	140.45*** (0.000)	142.57*** (0.000)	388.70*** (0.000)	83.47*** (0.000)	105.69*** (0.000)	256.34*** (0.000)	132.34*** (0.000)
Bresuch Pagon	332.83*** (0.000)	353.65*** (0.000)	356.34*** (0.000)	378.31*** (0.000)	393.83*** (0.000)	589.04*** (0.000)	441.73*** (0.000)	417.73*** (0.000)
Obs	309	304	300	304	342	302	300	305
Countries	46	46	46	46	46	46	46	46
Note: Same as mentioned in table 4.19.								

Table A19: Conditional Effects of De-Facto Aspect of Globalization on Economic Growth at Varying Level of Financial Development

Percentile	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	4.647* (0.051)	2.696* (0.054)	8.875*** (0.000)	0.079** (0.021)
P50(Medium)	4.665** (0.050)	2.705* (0.053)	8.883*** (0.000)	0.063* (0.052)
P75(High)	4.692** (0.048)	2.720* (0.051)	8.895*** (0.000)	0.040 (0.242)
Note: Same as mentioned in table 4.1.				

Table A20: Impact of De-Jure aspect of Globalization and its dimensions on Economic Growth through Financial Development by using Fixed Effect Model

Variables	Model (1)	Model (1) with Interaction	Model (2)	Model (2) with Interaction	Model (3)	Model (3) with Interaction	Model (4)	Model (4) with Interaction
Initial	-4.512*** (0.000)	-7.623*** (0.000)	-6.247*** (0.000)	-4.071*** (0.000)	-7.803*** (0.000)	-7.198*** (0.000)	-7.667*** (0.000)	-8.420*** (0.000)
GLOB	0.024*** (0.000)	0.071*** (0.001)	-	-	-	-	-	-
EGLOB	-	-	0.096*** (0.003)	0.070* (0.087)	-	-	-	-
SGLOB	-	-	-	-	0.021*** (0.000)	0.023*** (0.000)	-	-
PGLOB	-	-	-	-	-	-	0.021*** (0.000)	0.019*** (0.000)
FD	-0.069* (0.092)	-0.022* (0.077)	0.007 (0.087)	-0.016* (0.100)	-0.076* (0.098)	0.010* (0.093)	-0.076* (0.090)	0.008* (0.097)
(GLOB*FD)	-	0.027* (0.078)	-	-	-	-	-	-
(EGLOB*FD)	-	-	-	0.046* (0.094)	-	-	-	-
(SGLOB*FD)	-	-	-	-	-	-0.019** (0.031)	-	-
(PGLOB*FD)	-	-	-	-	-	-	-	-0.019*** (0.007)
INF	-0.098 (0.294)	-0.020 (0.408)	-0.029 (0.274)	0.046 (0.852)	0.022** (0.011)	-0.030 (0.755)	0.017** (0.037)	0.003** (0.022)
GFCF	0.018 (0.610)	0.086** (0.048)	0.025*** (0.000)	-0.018*** (0.000)	-0.668 (0.283)	0.010** (0.020)	-0.441 (0.469)	-0.306 (0.464)
GGFCE	-0.082** (0.025)	0.059 (0.927)	-0.095 (0.135)	-0.013*** (0.001)	-0.013** (0.031)	0.089 (0.889)	-0.010* (0.072)	-0.228 (0.726)
FR	0.024 (0.599)	-0.012 (0.012)	-0.050*** (0.002)	-0.597 (0.231)	-0.034** (0.043)	-0.070 (0.127)	-0.551 (0.763)	-0.003* (0.058)
LE	0.016** (0.027)	0.015* (0.056)	0.094** (0.020)	0.036*** (0.000)	0.016 (0.833)	0.016 (0.834)	0.013* (0.059)	0.090 (0.247)
Constant	29.251*** (0.001)	51.303*** (0.000)	34.589* (0.052)	29.717*** (0.001)	78.341*** (0.000)	67.192*** (0.000)	63.013*** (0.000)	76.769*** (0.000)
R-Sqr	0.226	0.405	0.369	0.389	0.405	0.397	0.426	0.459
F-Stat	10.85*** (0.000)	18.89*** (0.000)	18.30*** (0.000)	10.43*** (0.000)	21.31*** (0.000)	18.29*** (0.000)	23.20*** (0.000)	19.70*** (0.000)

Hausman	71.68*** (0.000)	137.05*** (0.000)	123.47*** (0.000)	104.59*** (0.000)	129.08*** (0.000)	116.17*** (0.000)	144.03*** (0.000)	178.72*** (0.000)
Bresuch Pagon	322.88*** (0.000)	329.33*** (0.000)	343.31*** (0.000)	352.45*** (0.000)	333.97*** (0.000)	352.13*** (0.000)	330.68*** (0.000)	335.58*** (0.000)
Obs	350	304	304	309	304	305	304	264
Countries	46	46	46	46	46	46	46	46
Note: Same as mentioned in table 4.21.								

Table A21: Conditional Effects of De-Jure Aspect of Globalization on Economic Growth at Varying Level of Financial Development

Percentiles	Model (1)	Model (2)	Model (3)	Model (4)
P25(Low)	7.220*** (0.001)	0.069*** (0.000)	0.215*** (0.000)	0.178*** (0.000)
P50(Medium)	7.235*** (0.001)	0.059*** (0.000)	0.204*** (0.000)	0.167*** (0.000)
P75(High)	7.258*** (0.001)	0.042*** (0.000)	0.187*** (0.000)	0.150*** (0.000)
Note: Same as mentioned in table 4.1.				

Table A22: List of Countries

Series	Country	Region	Series	Country	Region	Series	Country	Region
1	Algeria	Middle East & North Africa	16	Equatorial Guinea	Sub-Saharan Africa	32	North Macedonia	Europe & Central Asia
2	Armenia	Europe & Central Asia	17	Fiji	East Asia & Pacific	33	Pakistan	South Asia
3	Belize	Latin America and the Caribbean	18	Gabon	Sub-Saharan Africa	34	Papua New Guinea	East Asia & Pacific
4	Bolivia	Latin America and the Caribbean	19	Gambia	Sub-Saharan Africa	35	Paraguay	Latin America and the Caribbean
5	Brazil	Latin America and the Caribbean	20	Georgia	Europe & Central Asia	36	Philippines	East Asia & Pacific
6	Bulgaria	Europe & Central Asia	21	Ghana	Sub-Saharan Africa	37	Romania	Europe & Central Asia
7	Burundi	Sub-Saharan Africa	22	Grenada	Latin America and the Caribbean	38	Russian Federation	Europe & Central Asia
8	Cameroon	Sub-Saharan Africa	23	Guyana	Latin America and the Caribbean	39	Sierra Leone	Sub-Saharan Africa
9	Central African Republic	Sub-Saharan Africa	24	Iran, Islamic Rep	Middle East & North Africa	40	South Africa	Sub-Saharan Africa
10	China	East Asia & Pacific	25	Lesotho	Sub-Saharan Africa	41	St Vincent and the Grenadines	Latin America and the Caribbean
11	Colombia	Latin America and the Caribbean	26	Malawi	Sub-Saharan Africa	42	Togo	Sub-Saharan Africa
12	Congo, Dem Rep	Sub-Saharan Africa	27	Malaysia	East Asia & Pacific	43	Tunisia	Middle East & North Africa
13	Costa Rica	Latin America and the Caribbean	28	Mexico	Latin America and the Caribbean	44	Uganda	Sub-Saharan Africa
14	Dominica	Latin America and the Caribbean	29	Morocco	Middle East & North Africa	45	Ukraine	Europe & Central Asia
15	Dominican Republic	Latin America and the Caribbean	30	Nicaragua	Latin America and the Caribbean	46	Zambia	Sub-Saharan Africa
			31	Nigeria	Sub-Saharan Africa			

Table A23: Variables Definition and Data Sources

Types of Variables		Variables Name	Definition	Data Source
Dependent Variable		Growth	Log differences of real per capita GDP. Real GDP at constant 2017 national prices.	PWT, 10
Explanatory Variables	Core Variables	Globalization	The index measure economic, social and political dimensions of globalization.	KOF index of Globalization 2018.
		Exchange Rate Volatility	Volatility measured by Garch (1,1) Real effective Exchange Rate.	IFS
		Trade Openness	Export plus imports (as % of GDP).	WDI
		Financial Development	Domestic credit to private sector (as % of GDP).	WDI
	Control Variables	Inflation	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly.	WDI
		Domestic Investment (GFCF)	Gross fixed capital formation (as % of GDP).	WDI
		Government Expenditure (GGFCE)	General government final consumption expenditure (as % of GDP).	WDI
		Life Expectancy (LE)	LE as a proxy of Human capital. Human capital	PWT, 10

			index, based on years of schooling and returns to education	
		Fertility Rate (FR)	FR used as a proxy of population Growth. Population in millions	WDI

Table A24: Components of Globalization

A. Data on Economic integration	
(i)	Components of De Facto (Actual Flows)
	Trade (in percentage of GDP)
	Foreign direct investment (in percentage of GDP)
	Portfolio investment (in percentage of GDP)
	Income payments to foreign nationals (in percentage of GDP)
(ii)	Components of De Jure (Restrictions)
	Hidden imports barriers
	Tariff rate
	Taxes on international organization
	Capital account restrictions
B. Data on political engagement	
	Embassies in country
	Membership in international organizations
	Participation in UN Security Council missions
C. Data on social globalization	
(i)	Data on personal contact
	Outgoing telephone traffic
	Transfer (in percentage of GDP)
	International tourism
	Telephone average costs of call to USA
	Foreign population (in percentage of total population)
(ii)	Data on information flows
	Telephones mainlines (per 1000 people)
	Internet hosts (per capita)
	Internet users (as a share of population)
	Cable television (per 1000 people)
	Daily newspapers (per 1000 people)
	Radios (per 1000 people)
(iii)	Data on cultural proximity
	Number of McDonald's restaurants (per capita)

