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DOES VALUE-ADDED TRADE REDUCE POVERTY? – AN EMPIRICAL STUDY OF ASEAN AND BRICS COUNTRIES

[1]Ms. Vandita Mishra, [2]Dr. Mahua Bhattacharjee

[1]PhD Scholar, Amity University, Sector 125, Noida, 201305, U.P., India

[2]Associate Professor, Amity University, Sector 125, Noida, 201305, U.P India

ABSTRACT

This paper attempts to examine the extent to which trade and poverty in developing countries are linked. Globalization or the extent of a country's international integration, requires trade to be measured in terms of trade in value added to capture the amount of value, a country adds to its production for exports. Although trade is being used as a tool for development strategies, theoretically the impact of trade on poverty reduction is ambiguous. According to Stolper-Samuelson theorem, the abundant factor tends to gain from trade openness. Hence in developing countries labour being the abundant factor, the poor should directly gain from trade. However, the obvious theoretical impact of trade openness seems to be of ambiguous nature in the empirical literature. Seeking to resolve the ambiguity, this paper examines trade-poverty relationships based on certain country characteristics. The paper uses GMM methodology to perform a cross sectional study for the ASEAN and BRICS nations over the time period 1995-2011. Testing for linearities and non-linearities, it is found that there is no direct relationship between trade openness and poverty, however trade openness reduces poverty in countries where governance is strong, financial sectors are deep and education levels are above average.

Keywords: Trade in value added, Poverty

JEL: C26, F15, I32

1. INTRODUCTION

Trade is an engine of growth – is a very old adage. Trade liberalization and openness are now observed almost universally as the national policy cocktail for economic stability and economic growth and overall wellbeing of individuals. But the continued presence of abject poverty marks a failure of the globalized economy even as we near the 21st century. Hence the question arises, are trade and poverty connected? This paper aims to find linear and non linear linkages if any to bring about policy recommendations for pro-poor growth. The international integration among

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countries in the world, trading not just finished goods but intermediate goods, raw materials, importing unfinished goods and exporting them as final goods or exporting unfinished goods and re-importing the final product, has created a master web of value chains across the globe. Globalization has become a part of life today. Trade liberalizations began as an economic policy aiming for both economic growth and inclusive growth. Most economists believe that open economies fair better in the long run, simultaneously some believe that trade could be inimical to the poor (Winters et al. 2004). Regional integration is an acknowledged feature of globalization trends. Almost all countries are part of atleast one regional bloc. In South East Asia, ASEAN(Association of South East Asian Nations) is one of the oldest (1967) and most dynamic regional bloc. ASEAN countries have the highest trade to GDP ratio amongst the developing world. Since 1990 ASEAN trade has seen a per annum growth rate of nearly 10%. Likewise, trade as an engine of growth has taken a high road for BRICS(Brazil, Russia, India, China, South Africa) economies. Trade among BRICS nations and its trade with the world has been growing at a steady rate. It seems that large gains from trade expected from open economies would improve the standard of living of the people, however the results have been limited, especially for the poor. According to World Bank report 1997, incidence of poverty was close to 1percent in Malaysia and Thailand, around 11 percent in Indonesia and around 25 percent in Philippines. Poverty in Laos and Vietnam in 1995 was 41 and 42 percent respectively. BRICS countries lead the fight against poverty and hunger eradication in the world aiming to overcome it by year 2030.

Welfare gains from trade in terms of specialization, improvement in resource allocation, innovation and technology upgradation as suggested in theoretical forms have not shown much impact in empirical literature, mainly in poverty reduction. Developing countries do not seem to have tapped the potential, or make use of opportunities, that trade has, in upliftment of the poor. This paper fills the gap in literature by analysing how certain country specific characteristics may affect the linkage between trade openness and poverty. The cross sectional results of 15 countries of ASEAN and BRICS during the period 1995-2011 provide interesting results of non-linear linkages between trade openness and poverty. Another way this paper contributes to the gap in the literature is through usage of value chains concept. Trade openness is not measured in the traditional method. As Grossman and Helpman[9] put it, “The measurement of trade as gross values of imports and exports was perhaps appropriate at a time when trade flows comprised mostly finished goods. But such measures are inadequate to the task of measuring the extent of a country’s international integration in a world with global supply chains we would like to know the sources of the value added embodied in the goods and the uses to which the goods are eventually put.” (The Rise of Offshoring: It’s Not Wine for Cloth Anymore.” 2007). This reflects that when the trade flows are measured gross and the value of products that cross borders many times for further processing are counted multiple times. Thus Maurer and Degain put it as,“ With

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the globalization of production, there is a growing awareness that conventional trade statistics may give a misleading perspective of the importance of trade to economic growth and income and that, *what you see is not what you get*" (2010).

The concern of this paper is with poverty not inequality. As trade grows, opportunities from liberalization can impact economic activity hence income inequality may easily widen, whilst overall poverty reduces. The paper is organized as follows. Section 2 concerns with trade-poverty literature review. Section 3 gives the methodology and empirical model of the hypothesis defined. Section 4 includes the empirical analysis and discussion of results. Section 5 concludes the paper.

2. TRADE – POVERTY LINKAGES: A REVIEW

Srinivasan[4] (2002) defined two strands in which trade linked with poverty – static and dynamic. Under static perspective trade provides for investment, comparative advantage, competition, benefits of scale, openness to innovation etc. While on the dynamic perspective, economic growth is the foundation for poverty alleviation. From the static perspective, going back to theory, according to the Stolper-Samuelson Theorem, the abundant factor tends to gain more when a country opens to trade. For a developing economy, labour tends to be the abundant factor. So poor should gain the maximum from trade. Kreuger[1](1983) stated that trade liberalization policy for developing economy should be pro-poor, to benefit the poorest quintile. From the dynamic perspective, economic growth of the economy reduces poverty in the long run. Several economists have used trade-growth relationships with poverty as control variable to check for trade linkages with pro-poor growth.

Empirically, growth regressions across multiple countries have given mixed results. Irvin and Tervio[12] (2002) and Harrison[11](1999) find a significant negative impact of trade on economic growth. Sachs and Warner[17] (1995) used trade shares to obtain trade linkages with economic growth. Dollar and Kraay[7] (2001) also used trade shares and obtained positive linkages of trade with economic growth. Attanasio[2] et al (2004) suggested that chance of people becoming unemployed was higher in the traded goods sector as compared to the non traded goods sector. Due to foreign competition, firms are induced to reduce costs. One of the measures taken is by laying off permanent employees and hiring temporary employees. This could directly increase poverty level.

Poverty could increase if demand for skilled people was more than those for unskilled labour. Winters et al(2004) discussed the rise in poverty as the poor were more often than not unskilled for most jobs. Firms could replace manual labour with mechanical labour, and reduce their demand for unskilled labour (Hanson and Harrison[11], 1999). Goh and Javorcik[8] (2006) said that

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in order for the unskilled to make the best use of comparative advantage and increase incomes, the poor should move from informal unorganized sector to organized sector. Absence of free entry and exit into firms however, further lower the poverty level.

Researchers working with developing countries, Beck[3] et al (2007) obtained no relationship between trade and poverty. Dollar and Kraay[7](2001), Kpodar[13] (2011) obtain no impact of trade on the lowest quintile of poor. Researching on African countries, Huang[18] (2011) obtained a positive relationship. Increase in trade openness coincided with increase in poverty gap and headcount ratio. These results of zero correlation between trade openness and poverty is perhaps because trade affects poverty through several reform measures. Some poor workers work in import competing sectors, where the poor lose from impact of reforms, while some in export promoting sectors where the poor gain from the reforms. Supposedly the net result cancels out to be zero.

Winters[19] et al (2004) suggested that trade liberalization alone is not sufficient to reduce poverty. Trade liberalization along with certain other policies such as those which increase investment, enhance the skills of the labour etc. Linear regression techniques cannot cover these dynamics of simultaneous policy changes. Likewise, domestic politics among institutions such as oligarchic set up or predatory regimes, might bar the poor from gaining from trade liberalization.

Finally, some researchers used non linear regression techniques to obtain some correlation between trade and poverty, by building a globalization index. Trade liberalization leads to increases in productivity of firms. Liang[15] (2006) tested the trade poverty relationship in China using threshold regression techniques, he found that trade and poverty were negatively linked beyond a certain threshold of globalization only. Agenor[1] (2004) examined the trade poverty relationship by setting up a globalization index in his base model. He explains that non-linear variables with square term of globalization showed varying linkage. Up to a certain threshold value, globalization proves detrimental to the poor, while after crossing a certain threshold, globalization seems to reduce poverty. Thus Agenor[1] describes an inverted U shaped laffer type curve on globalization-poverty axes. Agenor[1] explained that during the first stage of open economy rising levels of poverty is seen due to the fact that output of the import competing sectors falls, poverty rises. At later stage as exports grow poverty tends to fall.

3. EMPIRICAL ANALYSIS

3.1 Sample

The objective of this paper is to test if value added trade and poverty are correlated and to test how certain country specific characteristics can affect the linkage between trade openness and poverty. Pooled time series data of 15 countries (ASEAN and BRICS) over the period 1995-

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2009 is used. The three country specific characteristics that are focused upon in this paper are, governance, education and finance. These factors could relocate resources from low productive sectors to high productive sectors and make the best use of opportunities provided by trade liberalization for the poor. Finance is measured by the credit to GDP ratio for each country every year. A developed finance sector of a country could provide faster credit in areas which actually need, thus relocating credit to appropriate direction. Education is measured by primary school education level. More the population is educated, more easily they can acquire the industry needed skills. Governance quality is measured by the bureaucracy quality of the institutions. A clean bureaucratic system helps reduce transaction costs of trade.

3.2 Model

The classical trade openness-poverty model given by Chang et al (2009):

$$POV_{i,t} = \beta_1 TO_{i,t} + \beta_2 X_{i,t} + \varphi_t + \mu_i + e_{i,t} \quad (1)$$

Here the subscripts, i and t represent country and year respectively. Poverty is the log of a poverty indicator, TO is a measure of trade openness, X is the matrix of control variables : Finance, Governance, Education. Φ_t is the time invariant effect. μ_i is the country specific effect and lastly $e_{i,t}$ is the equation error term. To test for education, better governance and financial deepening an interaction term is added to the equation 1. The regression equation now becomes :

$$POV_{i,t} = \beta_1 TO_{i,t} + \beta_2 X_{i,t} + TO_{i,t} * x_{i,t} + \varphi_t + \mu_i + e_{i,t} \quad (2)$$

Here, $TO_{i,t} * x_{i,t}$ is the interaction term. $x_{i,t}$ corresponds interchangeably for bureaucracy quality, finance and education level for each country i and every year t.

3.2.1 Variables

3.2.2.1 Trade Openness: Generally, Trade Openness is measured as (Total Exports + Total Imports)/GDP. Traditional measures of trade record gross flows of goods each time they cross borders, hence it leads to multiple counting. Gross exports and imports value thus overstate the trade to GDP ratio. Hence to overcome this problem, trade in value added is used. Hence,

$$\text{Trade Openness}_{i,t} = (\text{VA Trade in Agriculture/Value added in GDP of Agr})_{i,t} + (\text{VA Trade in Industry/Value added in GDP of Indus})_{i,t} + (\text{VA Trade in Services/Value added in GDP of Ser})_{i,t}$$

The value added content is obtained from the world input output table. Let there be S sectors and N countries in a given year t. Output in each sector of each country is produced using domestic factors (capital, labor, etc.) and intermediate inputs, which may be sourced from home or foreign suppliers. To track shipments of final and intermediate goods, a four-dimensional notation

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denoting source and destination country is defined, as well as source and destination sectors for shipments of intermediates. i is defined to be the source country, j to be the destination country, s to be the source sector, and s' to be the destination sector. The market clearing condition is

$$Y_{it}(s) = \Sigma_j f_{ijt}(s) + \Sigma_j \Sigma_{s'} m_{ijt}(s,s')$$

$Y_{it}(s)$ is the value of output in sector s of country i.

$\Sigma_j f_{ijt}(s)$ is the value of final goods shipped from sector s in country i to country j

$\Sigma_j \Sigma_{s'} m_{ijt}(s,s')$ is the value of intermediates from sector s in country i shipped to sector s' in country j. Gross bilateral exports, denoted as $x_{ijt}(s)$, include goods destined for both final and intermediate use abroad.

Here $x_{ijt}(s) = \Sigma_j f_{ijt}(s) + \Sigma_{s'} m_{ijt}(s,s')$

These market clearing conditions can be stacked to form the global input-output system. First, the total value of production in each sector in the S × 1 vector y_{it} is collected. Second, shipments of final goods from i to country j into S × 1 vectors f_{ijt} is organized. Third, use of intermediate inputs from i to country j by $A_{ijt}\, y_{jt}$ where A_{ijt} is an S×S input-output is defined. Then we can rewrite the S × N market clearing conditions from market clearing condition as: $y_t = A_t\, y_t + f_t$ where,

$$A_t = \begin{pmatrix} A_{11t} & A_{12t} & \ldots & A_{1Nt} \\ A_{21t} & A_{22t} & \ldots & A_{2Nt} \\ \vdots & \vdots & \ldots & \vdots \\ \vdots & \vdots & \ldots & \vdots \\ A_{N1t} & \ldots & \ldots & A_{NNt} \end{pmatrix} \quad y_t = \begin{pmatrix} y_{1t} \\ y_{2t} \\ \vdots \\ \vdots \\ y_{Nt} \end{pmatrix} \quad f_t = \begin{pmatrix} \Sigma_j f_{1jt} \\ \Sigma_j f_{2jt} \\ \Sigma_j f_{3jt} \\ \vdots \\ \Sigma_j f_{Njt} \end{pmatrix}$$

A_t is the global input-output matrix. It concisely summarizes the entire structure of within-country, cross-country, and cross-sector intermediate goods linkages at date t. Rearranging the equation, output vector is reframed as : $y_t = (I - A_t)^{-1} f_t$.

The matrix $(I - A_t)^{-1}$ is the "Leontief inverse" of the global input-output matrix. The Leontief inverse tells us how much output from each country and sector is required to produce a given vector of final goods, where here the vector of final goods is total world absorption of final

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goods f_t . The gross output required to produce f_t includes the final goods themselves plus all the intermediate goods used up in successive rounds of the production process.

To compute the value added content of trade, final demand f_t is split into destination specific vectors $\tilde{f}_{jt}$, where $\tilde{f}_{jt}$ is the (SN × 1) vector of final goods absorbed in country j. Then equation can be re-written as:

$$Y_t = \Sigma_j (I - A_t)^{(-1)} f`_{jt} \quad \text{where } f`_{jt} = \begin{pmatrix} f_{1jt} \\ f_{2jt} \\ : \\ : \\ f_{Njt} \end{pmatrix}$$

Inside the summation, $(I - A_t)^{-1} f`_{jt}$ is the vector of output used directly and indirectly to produce final goods absorbed in country j.

The gross exports of a country consist of domestic value added content and foreign value added content. The Trade Openness variable is concerned with the domestic value added content of the gross exports, as that measures the domestic country's input to the exports. Domestic Value Added to gross exports is obtained from the input output tables provided by the OECD-TiVA Database. The domestic value added is obtained industry-wise. Agriculture, Industry and Services, which are added to obtain total domestic value added. Likewise foreign value added content of gross imports is added to trade openness and finally the $TO_{i,t}$ variable is formed.

3.2.2.2 Poverty: The variable poverty, is calculated in two standard ways. Poverty headcount ratio and poverty gap ratio. Headcount ratio measures the population percentage having income level or consumption level below a certain predefined poverty level. Poverty gap ratio is measured by the mean difference of income from the poverty line proportioned to the poverty line. There are three poverty lines described by World Bank. The poverty line used is $1.25 income.

3.2.2.3 Control Variables: Three variables used as control are : Education level, bureaucracy quality and credit to GDP ratio which measures finance. Bureaucracy quality data is obtained from International Country Risk Guide (ICRG). It measures the strength, stability and

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impartiality of the government. Macroeconomic variable- Inflation measures price instability in the economy and the Credit to GDP ratio measures financial deepening of the economy.

3.3. Methodology

Generalized Method of Moments (GMM) estimator developed by Blundell and Bond (1998) is used in the model. The model tests the coefficients. Hansen test is done to verify the consistency of the estimator and to test for over-identifying variables. If the null hypothesis is not rejected it implies that, there is no correlation between instrumental variables and the error term, thus fulfilling the orthogonality conditions. To check for correlation, a serial correlation test is performed. It shows that second order correlation does not exist between the errors.

3.4 Results

The results of the basic regression, with no interaction term in Equation 1, with poverty headcount ratio (Table 1) and poverty gap ratio (Table 2) is shown below. The variables are all log transformed. The coefficients are read as elasticities. A positive sign of the coefiicient indicate the increase in headcount of the poor or increase in the poverty gap. The results are consistent with empirical literature. The negative coefficients of the income per capita imply that higher income countries have low levels of poverty. Education, finance, governance have no significant linkages with poverty variables. Likewise trade openness is not linked with poverty, both headcount and poverty gap show no significance. Linear models did not show any relationship. Hence, nonlinear model is considered next. The country specific characteristics which are the interaction terms viz. trade openness and governance, education and finance are shown in table 1 and table 2 in columns 2,3 and 4.

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Table 1: Poverty Headcount Ratio

	(1)	(2)	(3)	(4)
Trade Openness(TO) (log)	0.756(1.46)	4.95*(2.55)	6.84**(1.8)	4.7(3.2)
GDP per capita (log)	-0.78**(-3.44)	-5.6***(-2.9)	-4.7**(-2.6)	-9.4**(-2.5)
Education (log)	-0.33(-0.74)	-2.5(-1.3)	-3.5*(-2.1)	3.5(1.7)
Inflation (log)	0.15(1.5)	0.24(0.40)	3.67(2.1)	9.5(2.17)
Governance (log)	-.08(-1.3)	-.35*(-0.64)	-2.7(-1.1)	2.6(0.1)
Credit/GDP (log)	-.32(-2.4)	7.89(2.1)	-2.4(-1.2)	-3.1(-2.2)
Credit/GDP * TO		-2.7*(-1.55)		
Education * TO			-2.4**(-3.4)	
Governance * TO				-1.09*(-2.3)
Constant	3.5**(1.9)	-2.6(-1.7)	-3.1(-2.11)	2.1(1.8)
No. of Countries	15	15	15	15
Hansen Test	0.21	0.89	0.78	0.86
AR(2)	0.35	0.27	0.65	0.35

Significant at * 10%, ** 5%, *** 1%

The coefficient on trade openness variable shows, high level of poverty is correlated with higher levels of trade openness. However, with the introduction and significance of the interaction terms it can be seen that higher poverty can be reversed to lower levels of poverty when education, bureaucracy quality and finance have combined effect on poverty. Intuitively, poverty levels will fall when, education improves, credit to GDP ratio is higher and governance becomes better. Thus when financial deepening is fair, education level improves the skills of people and bureaucracy is more stable, poverty tends to fall with rise in trade openness.

From the interaction terms in column 2, it is first seen if the trade-poverty relationship changes with the finance variable, i.e. the credit to GDP ratio. The coefficient of financial depth is found to be significant and negative. This suggests that poverty reduction with greater trade openness is possible when the financial sector is deep and developed. When private credit reaches deep into the economy such that the poor gain from it, it is then that poverty falls. A threshold of 9.5% of private credit to GDP is estimated, beyond which the poor could benefit from it. The sample average is 19.2% quite above it, hence countries like, India, Singapore, Malaysia gain from it.

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Column 3 describes the link of human capital with trade-poverty. The negative and significant coefficient indicates the reversal of higher poverty level to lower levels with increased trade openness. With suitable learning skills, people are able to better utilize the benefits accrued from trade openness. It is seen that trade openness starts being favourable to the poor, once the percentage of population having completed primary education exceeds 50%.

Column 4 shows the link of bureaucracy quality with trade-poverty. Stable and impartial government can reverse the rise in poverty over time. From the sample it is estimated that if bureaucracy quality is 1.75 then trade openness could be beneficial to the poor. The sample has an average of 1.25. Hence the environment of the economy could be beneficial in reversing the rise in poverty if bureaucracy quality is high. Closing of old enterprises and emergence of new enterprises allows the economy scope for adjustment.

Table 2: Poverty Gap Ratio

	(1)	(2)	(3)	(4)
Trade Openness(TO) (log)	1.56(2.73)	3.08*(4.8)	5.67**(2.7)	3.4(5.7)
GDP per capita (log)	-2.48**(-3.37)	-4.0***(-1.1)	-5.6**(-3.4)	-4.7**(-4.6)
Education (log)	-2.33(-1.57)	-4.3(-4.5)	-3.4*(-2.8)	5.7(4.3)
Inflation (log)	3.15(4.5)	2.30(0.58)	9.43(3.0)	4.2(4.18)
Governance (log)	-.23(-3.3)	-1.55*(-4.34)	-8.7(-3.1)	5.6(3.5)
Credit/GDP (log)	-.02(-1.4)	8.9 (5.4)	-3.84**(-5.2)	-4.3**(-3.7)
Credit/GDP * TO		-7.9*(-4.98)		
Education * TO			-3.9**(-2.6)	
Governance * TO				-5.09**(-4.3)
Constant	6.25***(2.4)	-28.9*(-2.7)	-28.9*(-2.7)	-1.76(-1.8)
No. of Countries	15	15	15	15
Hansen Test	0.12	0.45	0.51	0.26
AR(2)	0.41	0.82	0.78	0.56

Significant at * 10%, ** 5%, *** 1%

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4. CONCLUSION

Although trade liberalization is an important tool for growth and development of the economy, trade alone cannot play the role in upliftment of the poor. Theoretically, the poor should gain the most from trade openness, however, empirically the trade-poverty relationship has been quite ambiguous. Certain economists claim a positive correlation between trade and poverty, some claim negative impact, while others have obtained no significant direct relationship. Trade liberalization combined with certain other policies of the government can reverse the rising poverty levels.

Non-linearities described in this model shows that trade-openness in conjunction with complimentary policies generate poverty reversing results. More trade openness results in lowering of poverty when educated population in the country is high, financial deepening is present and bureaucracy is stable and strong. Thus these policies aim at building new institutions for education, providing new investment for credit availability aiming at inclusive growth. These policies would help reallocate resources from less productive to more productive and promising economic activities.

REFERENCES

1. Agenor, P.R. Does Globalization hurt the poor? IEEP 1(1) 21-51
2. Attanasio, O. Goldberg, P. Pavenik, N. 2004 Trade reforms and wage inequality in Colombia, J.Dev Econ 74, 331-366
3. Beck,T. Demirgue-Kunt, A.Levine, R., 2007 Finance, inequality and the poor. J. Econ Growth 12, 27-49.
4. Bhagwati, J., Srinivasan, T.N., 2002 Trade and Poverty in the poor countries AEA Pap. Proc. 92 (2) 180-183.
5. Blundell, R., Bond, S., 1998 Initial conditions and moment restrictions in dynamic panel data models. J.Econ 87 (1) 115-143.
6. Chang, R., Kaltani, L., Loazaya, N.V. 2009. Openness can be good for growth: the role of policy complementarities. J.Dev. Econ 90 (1), 33-49.
7. Dollar, D., Kraay,A., 2001 Trade growth and Poverty, mimeo. Development Research Group, The World Bank, Washington.
8. Goh, C., Javorcik, B.S. 2006. Trade protection and industry wage structure in Poland. In:Harrison, A. (Ed.), Globalization and Poverty: University of Chicago Press for NBER, Chicago IL.
9. Grossman, G.M., Helpman, E., 1991. Innovation and Growth in the Global Economy, MIT Press, Cambridge, MA and London.

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

10. Guillaumont Jeanneney, S., Kpodar, K., 2011 Financial development and poverty reduction : can there be a benefit without a cost? J.Dev. Stud 47 (1), 143-163.

11. Harrison,A., Hanson, G. (1999) Who gains from trade reform? Some remaining puzzles. J.Dev. Econ 59, 125-154.

12. Irvin, D., Tervio,M. Does trade raise income? J.Int. Econ 58(1) 1-18

13. Kpodar. K., Singh, R., 2011 Does financial structure matter for poverty? Evidence from developing countries. World Bank Policy Research Working Paper p. WPS5915.

14. Kreuger, A., 1983. Trade and employment in developing countries. Synthesis and Conclusions, vol 3, NBER, New York.

15. Liang, Z., (2006) Threshold estimation on the globalization-poverty nexus : evidence from China. Research Paper UNU-WIDER United Nations University.

16. Rodriguez, F. Rodrik, D., 2001. Trade Policy and economic growth : a skeptic's guide to the cross national evidence. NBER Macroeconomics Annual 2000. Vol 15, MIT Press. Cambridge, MA, pp. 261-325.

17. Sachs, J., Warner A., 1995. Economic reform and the process of economic integration. Brookings papers of Economic Activity, vol 1, pp 1-95.

18. Singh R., Huang, Y., 2011 Financial deepening, property rights and poverty : evidence from Sub Saharan Africa. IMF Working Paper, WP/11/196 Washington International Monetary Fund.

19. Winters A., McCulloch, N., McKay, A.,2004 Trade liberalization and poverty: The evidence so far. J.Econ. Lit. XLII, 72-115.

Appendix 1

Summary Statistics

Variable	Mean	Standard Deviation
Poverty Headcount	43	28.5
Poverty Gap	14.8	12.4
Trade Openness	68.5	23.6
Inflation	30.2	85.2
GDP per capita	3200	2876
Education	50	23.5
Bureaucracy Quality	1.25	0.78
Private Credit/GDP	19.2	21.8

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Appendix 2. List of Countries

1. India
2. China
3. Brazil
4. South Africa
5. Russia
6. Cambodia
7. Vietnam
8. Indonesia
9. Thailand
10. Malaysia
11. Singapore
12. Philippines
13. Myanmar
14. Laos
15. Brunei

