International Journal of Management Research and Emerging Sciences
Homepage: http://ijmres.pk/
Volume 9 Issue 1 (2019) PP. 1-7

# DISTRIBUTIONAL EFFECTS OF INTERNATIONAL TRADE: A COMPARATIVE ANALYSIS

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**ABSTRACT**

This paper investigates the distributional effects of international trade using a panel data set from sixty-five developing economies from 1970 to 2015. The study contributes into the literature on trade and inequality by highlighting the heterogeneity of developing economies in shaping the distributional effects of international trade. The empirical analysis shows that the inequality-effect of trade differs between developing economies at different stages of economic development. The high-income developing economies benefit from the trade in terms of inequality-narrowing effect of the trade while low income economies suffer from increasing trade due to inequality-widening effect of the trade. In sum, international trade accentuates, not ameliorates, inequality in low income developing economies. Furthermore, the Kuznets Curve does not hold in poor economies. Our findings are shown to be robust to different specifications, alternative econometrics techniques, control variables and sub-samples.

**KEYWORDS:** International Trade; Economic Development; Inequality; Developing Economies

## 1. INTRODUCTION

One of the robust trends during the last three decades of twenty first century is a rise in inequality all over the world. This increasing trend of inequality persists both between and *within* countries. Another robust trend, in the recent decades, is increasing globalization- irrespective it is measured in international trade flows, financial flows, FDI or offshoring- all over the world. These two parallel trends have developed a natural conjecture that increasing globalization is one of the main causes of increasing inequality. Until 1990s, the researchers mainly relied on the theoretical framework given by the Hecksher-Ohlin (HO) model to understand the relationship between trade and inequality. In an open economy, the HO model suggests more returns for abundant factors of production. The HO model suggests that in developed countries skilled labor benefit from trade while in developing countries unskilled labor benefit from trade. A large body of the literature in the last two decades has pointed out that the reforms in international trade have led to increase in inequality (Berman et. al., 1994; Harrison and Hanson, 1999). The resulting inequality-widening effect of trade has weakened the simplest prediction of the HO model. These research outcomes led the policy makers and researchers to search for other mechanism which cause increase in inequality. Technology, which is biased towards skilled labour force, is another important channel that helps to explain the increasing inequality. Some other explanations of increasing inequality are frictions of labour markets, uneven access to education and immigration.

In recent years, the new theories which emphasis on imperfections of labour market, heterogeneity of firms and incomplete contracts are receiving more focus. These theories provide new mechanisms to explain the effects of trade on inequality. The impact of trade depends upon domestic conditions of globalizing economies. These domestic conditions could be in the form of better markets, better trade unions, better investment climate and better human capital. Theses all enable the poor to avail the benefit of increasing trade. The domestic conditions of developing countries vary depending upon the different stages of economic development. The developing economies with higher levels of economic development develop comparatively better internal conditions that enable the poor to get benefit from increasing trade openness. The empirical literature on inequality effect of trade is generalized for all developing economies ignoring their development stages which play a critical role in developing their capacity to take the advantage of increasing trade openness. The economies at lower stages of economic developed face many unfavourable domestics conditions such as imperfections of labour markets, imperfections in credit markets, and weak human capital.

Since direct impact of trade on inequality could not help to explain the increasing inequality in developing economies, we emphasis on the importance of economic development stage of a trade integrating economy in explaining the inequality effect of trade. This paper investigates the inequality effect of trade by differentiating developing countries according to their development level using a large sample of developing countries over almost four decades. Rest of the study is organized as follows. The review of literature in provided in Section two. Section three describes methodology whereas the Section four explains the data and the estimation procedure. Section five reports the results and discussion of the study. Section six provides conclusion and policy implications.

## 2. LITERATURE REVIEW

The literature on the relationship between inequality and trade is based on the theoretical model of Heckscher-Ohlin (HO). The HO model suggests that trade leads to specialization in the products which utilize abundant inputs for production such as unskilled labor force is abundant in developing economies. The increasing trade increases demand of unskilled labor which, in turn increase the wages of labor. Therefore, trade helps to reduce inequality gap. However, predictions of the HO model are based on the simple assumption of identical technologies across countries. In reality, technologies are different between developed and developing counties and technology diffusion from developed to developing country also determine distributional effects of trade. Technology diffusion creates skill perineum which, in turn, leads to a rise in demand and wages of the skilled labor. In this way, trade led to a rise in inequality in developing countries that is in contrast to the predictions of the HO model (see, for further details, Berman et. al., 1994; Autor et. al., 1998). Barba et al. (2002) argue that increasing trade openness helps to improve the technology of production by importing mature and used capital goods. Similarly, Acemoglu (2003) asserts that international flows of capital goods help to upgrade technology.

Technology upgrading is also caused by increasing exports because exporters from developing countries replace outdated technologies for having a better access in the markets of developed countries. The empirical literature suggests that exports based on advance technology ensure high profits (see, for details, Yeaple, 2005). Hanson and Harrison (1999) exhibit that demand for white color workers is comparatively higher in exports sector in comparison to non-exporting sector of production in Mexico. Thus, increasing trade in the form of exports tends to increase inequality. Likewise, another study by Berman and Machine (2004) shows inequality-widening effect of trade in the case developing economies. Recently, Majeed (2010) shows that increasing trade leads to increase in inequality in Pakistan. Thus, the literature provides a link of trade with inequality but do not take the role of different development stages in determining the inequality impact of trade. We fill the gap by investigating the association between trade and inequality at different levels of economic development.

### 2.1 Theory of inequality determinants

This section comprises a brief discussion of some other causes of inequality such as economic development, financial development, inflation, and human capital among others. Kuznets (1995) predicted a non-monotonic association between economic development and inequality. Such a non-monotonic association implies that at lower levels of economic development inequality increases. However, over the path of development trickle down process begins which benefits the poor segment of society as well. The empirical literature on the presence of Kuznets Curve provides mixed evidence. A study by Ahluwalia (1976) supports the Kuznets's point of view. Nevertheless, some later studies do not confirm the validity of Kuznets Curve (see for example, Deininger and Squire, 1998).

Financial sector development is one of the important causes of cross-country variation in inequality. The empirical studies on the relationship between financial development and inequality normally find inequality-narrowing effect of financial development (see, for example, Galor and Zeira, 1993; Banerjee and Newman, 1993). However, some studies also report inequality-widening effect of financial development (see, for example, Lamoreaux, 1986, Maurer and Haber, 2003). The argument for inequality-widening impact of financial development is that at lower levels of financial development financial services are limited to incumbents, therefore increasing their income relative to the poor. Greenwood and Jovnovie, (1990) predicted an inverted U-shaped relationship between financial development and income inequality. They argue that the poor have limited access to finical system at lower levels of financial development and therefore financial development helps the rich while at higher levels of financial development the poor also benefit from financial development. It implies that, initially inequality increases and later it falls. Inflation is another important cause of inequality. It hits the poor hard by decreasing their real income. In developing counties, trade unions are weak and minimum wage laws are dysfunctional in the presence of poor governance and, therefore, wages either increase less proportionally to increase in prices or remain unchanged (MacDonald and Majeed, 2010; Majeed, 2015).

The role of government in ameliorating inequality is important as government revenues can be used for redistribution and transfers in favor of the poor. However, the effectiveness of pro poor programs from government side depends on fair and smooth transfers. For example, Papanek and Kyn (1986) test the inequality ameliorating effect of government intervention but they did not find evidence to support the contention that government intervention helps the poor. They argue that these are the elites and privileged groups in the form of politicians, bureaucrats and army which mainly benefit from government spending. Some other studies show that the role of government spending in ameliorating inequality is significant (Stock, 1978; Boyd, 1998; MacDonald and Majeed, 2010). The effect of population growth on inequality is generally considered positive. Deaton and Paxon (1997) point out that population growth increases the size of families in the poor stratum. This leads to more dependency burden that causes high inequality and poverty. The impact of human capital on inequality is expected to be negative because investment in human capital helps to enhance skills, productivity and income. This study contributes in the literature by addressing the following questions: what is the effect of trade on cross-country inequality? Second, does this effect depend on the different levels of economic development in developing countries?

## 1. METHODOLOGY

This section comprises the econometric model for income inequality. In this section, we introduce a methodological framework for inequality. The baseline model is based on the Kuznets Curve which has been used by many empirical studies such as Iradian (2005).

$$Log\ Ineq_{it} = \delta\gamma_{it} + \delta_1 logY_{it} + \delta_2 (logY_{it})^2 + \delta_3 X_{it} + \varepsilon_{it} \quad (1)$$

Where 'i' indicates country and 't' indicates time. The Log Ineqit is the natural logarithm of the Gini index in country i at year t and stands for inter individual inequality in country i at this given period, Log Yit is the natural logarithm of income per capita, adjusted with PPP, Log Yit2 is a square term of per capita income, X is a set of control variables and εit is an error term. According to the Kuznets Curve the relationship between inequality and economic development is non-monotonic. Thus the expected coefficient of $\delta_1$ is greater than zero while expected coefficient of $\delta_2$ is less than zero. In equation 2 we control for trade which is the key variable of concern in this study.

$$Log\ Ineq_{it} = \delta\gamma_{it} + \delta_1 logY_{it} + \delta_2 (logY_{it})^2 + \delta_3 (\frac{Trade}{Y})_{it} + \delta_4 X_{it} + \varepsilon_{it} \quad (2)$$

According the HO model the expected sign of $\delta_3$ is negative while according to some recent studies such as Berman and Machine (2004) the expected sign could be positive as well.

$$Log\ Ineq_{it} = \delta\gamma_{it} + \delta_1 logY_{it} + \delta_2 (logY_{it})^2 + \delta_3 (\frac{Trade}{Y})_{it} + \delta_4 (\frac{Trade*Dev}{Y})_{it} + \delta_5 X_{it} + \varepsilon_{it} \quad (3)$$

In equation 3 we control for interactive effect of trade and economic development. The expected sign of $\delta_4$ is negative. The inequality also influences by other variables such as human capital, population growth and the size of the government. The government spending can play significant role in ameliorating inequality given that rent seeking activities and avoided and spending are pro poor. The investment in human can also help to reduce inequalities. These additional control variables are referred with the row matrix X.

## 3. DATA

In this study we measure inequality using Gini coefficient which is widely used in the empirical literature. It is derived from the Lorenz Curve which shows the relationship between share of population and share of income received. The minimum value of Gini could be zero showing perfect inequality and the maximum value could be one which represents perfect equality. Since cross-country data on inequality may have definitions and methodological differences, to overcome this issue we follow Iradain (2005) and take the averages of two survey years. Over data set covers 65 developing economies over the period 1970-2015. The data set for Gini is derived from WIDER-UNDP (2015). The data on real per capita GDP, secondary school enrolment (a proxy of human capital), population growth, government expenditures (as share of GDP) and trade (it is a sum of export and imports as percentage of GDP) are extracted from World Bank, World Development Indicators online data base, (2015). The data on inflation, private credit, M2 as % of GDP, and financial development are extracted from International Financial Statistics online data base, (2015). The private credit as % of GDP represents claims on the non-financial private sector. The level of financial development is determined by adding M2 as a % of GDP and credit to private sector as % of GDP.

## 4. RESULTS AND DISCUSSION

In this study, we follow the following strategy for the estimation procedure: First, we draw parameter estimates for full sample of the selected developing economies at different levels of economic development using OLS. Second, for sensitivity analysis some additional control variables used. Third, replicate the baseline results by applying different econometric techniques such as General Method of Moments to analyse the robustness of findings and to tackle the likely problem of endogeneity. Table 1 reports the results for inequality and trade at different levels of economic development. Columns (2 &3) show that the impact of trade on inequality is inequality-widening at 1 % level of the significance. This finding implies that countries at lower levels of economic development are unable to take favourable effects of the trade. Our findings confirm that the HO model does not hold in low income countries. These economies lack better conditions to take the favourable effects of trade. Furthermore, our results show that the Kuznets Curve does not hold in low income countries.

Conversely, this effect disappears at relatively high levels of economic development in columns 4 & 5 where the results for lower middle-income countries have been reported. In these columns, the coefficient of trade variable changes its sign from being positive to negative, however, its effect is insignificant. It implies that trade does not exert a significance influence on inequality in lower middle-income countries. In the next column 6 & 7 when the results for high middle-income countries are replicated then inequality effect of trade turns out to be positive and significant at 1% level of significance. Thus trade ameliorates inequality in high middle-income developing countries. In particular, a 1% increase in trade-to-GDP ratio leads to 0.19% increase in inequality in low income countries while 0.15% increase in inequality in high income countries. Overall, these findings suggest that the effect of trade openness in low income countries is inequality-widening while it is inequality-narrowing in high-middle income countries. Thus, the HO model is rejected in low income developing countries while it is confirmed in high middle-income countries. Another interesting finding is that the effect of government spending is insignificant in low-income developing countries while it is significant with a negative sign in high-income developing countries implying that the government plays a significant role in reducing inequalities in high-income developing countries. It is noteworthy that the Kuznets Curve holds in high middle-income countries.

**Table1: Inequality in developing countries at different levels of income**

| Variables | (1) LIC | (2) LIC | (3) LMIC | (4) LMIC | (5) HMIC | (6) HMIC |
|---|---|---|---|---|---|---|
| Per Capita | -1.148 | -1.148 | 1.352*** | 0.774* | 3.587*** | 3.316*** |
| GDP | (-1.296) | (-1.296) | (2.951) | (1.746) | (7.126) | (6.565) |
| Per Capita | 0.0838 | 0.0838 | -0.0834*** | -0.0454* | -0.213*** | -0.195*** |
| GDP Squared | (1.390) | (1.390) | (-3.065) | (-1.743) | (-7.017) | (-6.361) |
| Trade | 0.193*** | 0.193*** | -0.0756* | -0.0429 | -0.115*** | -0.149*** |
| Openness | (5.856) | (5.856) | (-1.761) | (-0.936) | (-3.885) | (-4.462) |
| Human | -0.134*** | -0.134*** | -0.114*** | -0.0338 | -0.305*** | -0.108 |
| Capital | (-3.164) | (-3.164) | (-3.082) | (-0.828) | (-3.052) | (-0.867) |
| Government | 0.0333 | 0.0333 | -0.283*** | -0.254*** | -0.202*** | -0.131** |
| Expenditure | (0.679) | (0.679) | (-8.614) | (-8.280) | (-3.561) | (-2.127) |
| Inflation | | | | 0.000445 | | -3.67e-07 |
| | | | | (1.404) | | (-0.000774) |
| Population | | | | 0.0761*** | | 0.0922** |
| | | | | (4.789) | | (2.395) |
| Financial | | | | 0.00319 | | 0.0913** |
| Development | | | | (0.115) | | (2.069) |
| Constant | 7.171** | 7.171** | -0.0879 | 1.407 | -8.839*** | -9.302*** |
| | (2.216) | (2.216) | (-0.0469) | (0.779) | (-3.926) | (-4.130) |
| Observations | 80 | 80 | 110 | 107 | 81 | 80 |
| R-*squared* | 0.397 | 0.397 | 0.506 | 0.598 | 0.682 | 0.730 |

*Note: LIC (Low Income Countries); LMIC (Low Middle Income Countries); HMIC (High Middle Income Countries)*
**, **, *** show statistically significant at the 10%, 5%, and 1% levels, respectively.*

Table 2 reports the results using Limited Information Maximum Likelihood (LIML) econometrics technique. In columns (2 & 3) our findings show that trade openness causes inequality-widening effect in low-income countries

while results reported in columns 4 & 5 for low middle-income countries show that trade causes inequality-narrowing effect. In low middle-income countries, the parameter estimate on inequality turns out to be significant while it was insignificant in benchmark regression. Similarly, in high middle-income countries the parameter estimate on inequality turns out to be negative and significant confirming the inequality-narrowing effect of trade openness (see columns 6 & 7). The effect of government spending is insignificant in low-income countries while it is significant in middle-income countries implying that government is not playing a role in reducing inequalities in low-income counties. The presence of the Kuznets Curve is not confirmed in low income countries while it exists in high middle-income countries.

**Table2: Inequality in developing countries at different levels of income with LIML**

| Variables | (1) LIC | (2) LIC | (3) LMIC | (4) LMIC | (5) HMIC | (6) HMIC |
|---|---|---|---|---|---|---|
| Per Capita | -1.873 | -2.902* | 1.617** | 0.614 | 4.774*** | 4.495*** |
| GDP | (-1.286) | (-1.960) | (2.444) | (0.928) | (4.733) | (4.747) |
| Per Capita | 0.134 | 0.205** | -0.0940** | -0.0313 | -0.277*** | -0.258*** |
| GDP Squared | (1.350) | (2.028) | (-2.373) | (-0.785) | (-4.801) | (-4.751) |
| Trade | 0.204*** | 0.199*** | -0.161*** | -0.128** | -0.123*** | -0.141*** |
| Openness | (4.934) | (4.816) | (-2.863) | (-2.439) | (-3.264) | (-3.540) |
| Human | -0.154*** | -0.00760 | -0.161*** | -0.0499 | -0.309** | -0.0250 |
| Capital | (-2.597) | (-0.0936) | (-3.081) | (-0.963) | (-2.509) | (-0.152) |
| Government | 0.0233 | 0.0114 | -0.240*** | -0.220*** | -0.141** | -0.0524 |
| Expenditure | (0.460) | (0.236) | (-6.703) | (-6.280) | (-2.447) | (-0.837) |
| Population | | 0.113** | | 0.0869*** | | 0.113** |
| | | (2.500) | | (4.760) | | (2.535) |
| Inflation | | 0.00146 | | 0.00095 | | -0.00055 |
| | | (0.630) | | (0.927) | | (-0.697) |
| Anderson-Rubin | 0.02 | 0.14 | 12.06 | 5.35 | 2.90 | 1.48 |
| chi2-Test | (0.99) | (0.93) | (0.01) | (0.07) | (0.23) | (0.49) |
| Basmann-Test | 0.009 | 0.05 | 5.45 | 2.30 | 1.28 | 0.60 |
| | (0.99) | (0.94) | (0.01) | (0.11) | (0.29) | (0.55) |
| Constant | 9.849* | 12.83** | -1.129 | 2.074 | -14.46*** | -15.01*** |
| | (1.855) | (2.430) | (-0.416) | (0.783) | (-3.148) | (-3.484) |
| Observations | 58 | 57 | 83 | 83 | 66 | 66 |
| R-squared | 0.392 | 0.467 | 0.510 | 0.571 | 0.684 | 0.726 |

*Note: LIC (Low Income Countries); LMIC (Low Middle Income Countries); HMIC (High Middle-Income Countries)*
**, **, *** show statistically significant at the 10%, 5%, and 1% levels, respectively.*

Finally, Table 3 reports the results for benchmark findings for different levels of income using General Method of Moments (GMM) econometrics technique. Our benchmark findings remain consistent. The effect of trade is inequality-widening in low-income developing countries while this effect turns out to be inequality- narrowing in high middle-income countries. Thus, economies at higher levels of economic development are in a better position to take the favourable effect of trade. Furthermore, economies at the higher level of economic development also benefit from the trickle-down effects of economic development as our results have confirmed the presence of the Kuznets Curve in these economies.

**Table 3: Inequality in developing countries at different levels of income with GMM**

| Variables | (1) LIC | (2) LIC | (3) LMIC | (4) LMIC | (5) HMIC | (6) HMIC |
|---|---|---|---|---|---|---|
| Per Capita | -1.793 | -2.175 | 1.771*** | 0.855 | 4.792*** | 4.201*** |
| GDP | (-1.213) | (-1.412) | (2.599) | (1.098) | (4.785) | (5.324) |
| Per Capita | 0.128 | 0.153 | -0.104*** | -0.0462 | -0.278*** | -0.243*** |
| GDP Squared | (1.277) | (1.439) | (-2.606) | (-1.026) | (-4.910) | (-5.374) |
| Trade | 0.201*** | 0.223*** | -0.158*** | -0.136* | -0.118*** | -0.177*** |
| Openness | (5.279) | (4.191) | (-2.673) | (-1.888) | (-3.584) | (-4.060) |
| Human | -0.155*** | -0.0349 | -0.145*** | -0.0336 | -0.314** | -0.188 |
| Capital | (-3.059) | (-0.426) | (-2.879) | (-0.593) | (-2.391) | (-1.080) |
| Government | 0.0158 | 0.0269 | -0.262*** | -0.227*** | -0.154** | -0.111* |
| Expenditure | (0.320) | (0.578) | (-8.374) | (-6.962) | (-2.477) | (-1.694) |
| Inflation | | 0.00197 | | 0.00146 | | -0.000730 |
| | | (0.686) | | (1.544) | | (-1.304) |
| Population | | 0.0834* | | 0.0830*** | | 0.0687 |
| | | (1.665) | | (4.223) | | (1.395) |
| Financial | | 0.0583 | | 0.0279 | | 0.0655 |
| Development | | (1.190) | | (0.650) | | (1.174) |
| Constant | 9.594* | 10.09* | -1.750 | 0.992 | -14.50*** | -12.79*** |
| | (1.765) | (1.803) | (-0.633) | (0.315) | (-3.125) | (-3.559) |
| *Hansen's J* | 0.20 | 0.11 | 5.42 | 3.52 | 1.28 | 0.82 |
| *chi2 Test* | (0.99) | (0.94) | (0.07) | (0.17) | (0.53) | (0.66) |
| Observations | 58 | 57 | 83 | 80 | 66 | 65 |
| R-squared | 0.391 | 0.458 | 0.510 | 0.574 | 0.683 | 0.748 |

*Note: LIC (Low Income Countries); LMIC (Low Middle Income Countries); HMIC (High Middle Income Countries)*
**, **, *** show statistically significant at the 10%, 5%, and 1% levels, respectively.*

To check the validity of instrument variables Anderson-Rubin chi2, Basmann and Hansen tests have been applied. The p-values of these tests do not reject the null hypothesis and, therefore, instrument variables are valid and our results are not plagued by the endogeneity problem.

## 5. CONCLUSION

This paper investigates the inequality effects of international trade using a panel data set from sixty five developing economies from 1970 to 2015. The study contributes into the literature on trade and inequality by highlighting the heterogeneity of developing economies in shaping the distributional effect of international trade. The empirical analysis shows that the inequality-effect of trade differs between developing economies at different stages of economic development. The high income developing economies benefit from the trade in terms of inequality-narrowing effect of the trade while low income developing economies suffer from increasing trade due to inequality-widening effect of the trade. This result is not sensitive to the specifications estimated, the estimation methods, control variables and subsamples. In addition, our results show that the role of government can be conducive to ameliorate inequality as evidence has clearly shown that the inequality-impact of government spending is stable in all regressions for high middle-income developing countries. Moreover, the Kuznets Curve also holds in this sample of countries. Findings of the study suggest that the government of low-developing economies need to implement more protectionist policies to safeguard the benefits of the poor while the government of high income developing economies may more liberalize their economies to take the advantages of an open economy. Furthermore, the analysis implies that the government of poor counties need to increase their spending to ameliorate sufferings of the poor.

## REFERENCES

Acemoglu, D. (2003). Patterns of skill premia. *Review of Economic Studies*, 70, 199-230.

Ahluwalie M. S. (1976). Income distribution and development: Some stylized facts. *American Economic Review*, 66, 1-28.

Autor, D., Katz, L., & Krueger, A. B. (1998). Computing inequality: have computers changed the labor market? *Quarterly Journal of Economics*, 113, 1169–1214.

Banerjee, A. and Newman (1993), Occupational choice and the process of development. *Journal of Political Economy*, 101, 274-298.

Barba Navaretti, G., & Solaga, I. (2002). Weightless machines and costless knowledge—An empirical analysis of trade and technology diffusion. *CEPR Discussion Paper No. 3321*, Centre for Economic Policy Research, London.

Berman, E., & Machin, S. (2004). Globalization, skill-biased technological change and labour demand. In E. Lee, & M. Vivarelli (Eds.),Understanding Globalization, Employment and Poverty Reduction (pp. 39–66). New York: Palgrave Macmillan.

Berman, E., Bound, J., & Griliches, Z. (1994). Changes in the demand for skilled labor within U.S. manufacturing industries. *Quarterly Journal of Economics*, 109, 367–398.

Boyd, R. L. (1998), Government involvement in the economy and distribution of income: A cross country study. *Population Research and Policy Review*, 7, 223-238.

Deaton, Angus S. and Christina H. P. (1997). The effect of economic and population growth on the national saving and inequality. *Demography*, 34, 97-114.

Deininger, K. and L. Squire (1998), New ways of looking at old issues: Inequality and growth. *Journal of Development Economics*, 57, 259-287.

Galor, O. and J. Zeira (1993). Income distribution and macroeconomics, *Review of Economic Studies*, 60, 35-52.

Iradian, Garbis (2005). Inequality, poverty and growth: cross country evidence. *IMF Working Paper*, 5, unpublished.

Greenwood, J. and B. Javanovic (1990). Financial development, growth and distribution of income. *Journal Political Economy*, 98,1076-1102.

Hanson, G. and A. Harrison (1999). Trade and wage inequality in Mexico. Industrial and Labor Relations Review, 52 (2), 271-288

Kuznet, S. (1955). Economic growth and income inequality. *American Economic Review*, 1-28.

Lamoreaux, N. (1986). Bank, kinship, and economic development: The New England case. *Journal of Economic History*, 56, 647-667.

MacDonald, Ronald and M. T. Majeed (2010). Distributional and poverty consequences of globalization: a dynamic comparative analysis for developing countries. Working Paper, University of Glasgow, 2010–22.

Majeed, M Tariq (2010). Poverty and Employment: Empirical evidence from Pakistan. The Forman Journal of Economic Studies, 6, 103-117.

Majeed, M. T. (2015). Distributional Consequences of Globalization: Is Organization of the Islamic Conference Countries Different? *The International Trade Journal*, *29*(3), 171-190.

Maurer, N. and S. Haber (2003). Bank concentration, related lending and economic performance: evidence from Mexico. Stanford University Mimeo.

Papanek, Gustav F., and O. Kyn (1986). The effect on income distribution of development, the growth rate, and economic strategy. *Journal of Development Economics*, 23, 55-65.

Stock, S. (1978). The effect of direct growth. *American Sociological Review*, 43, 880-888.

Yeaple, S. R. (2005). A simple model of firm heterogeneity, international trade and wages. *Journal of International Economics*, 65, 1–20.