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### **GOOD INSTITUTIONS AND FAIR TRADE: A Road Map to Local and Global Social Harmony**

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## **ABSTRACT**

The paper examines how legal, economic, political and social institutions fare with different measures of inequality in a cross section framework. We differentiate between institutions based on four categories which are legal, economic, political and social. Among legal institutions, rule of law and control for corruption have a stronger impact on inequality than voice and accountability. We find that countries which practice democracy are less prone to unequal outcomes especially when it comes to wage inequality and income inequality whereas autocracy is associated with higher level of wage inequalities but its impact on income inequalities are insignificant. Though under good economic management, autocracies may redistribute incomes from the richest to the poorest, more generally an autocratic set up violates the median voter hypothesis. The results also show that political stability is more sensitive to inequalities than democracy and autocracy which is to say that the countries which are politically stable also form more equal societies. Though in a cross section analysis, our results indicate average sample characteristics of countries chosen which neutralise the single country case sensitivities and thus may have captured the simple observational analogy that most democracies in the world are also the ones which are politically stable and economically efficient whereas most autocracies, unless they are lead by enlightened leadership eventually suffer from unstable or repressed political systems. Economic institutions also play an important role in alleviating global inequalities. Whether the government is functioning effectively and whether it has a robust fiscal and monetary policy seems to have stronger impact on inequality than regulatory quality. Education for all, a proxy for social institutions, has a strong redistributive power. Overall, political stability, control for corruption and rule of law trumps any other institutional proxy in reducing inequalities in a country. On the other hand, middle income group is most likely to benefit from good functioning institutions than any other income group. Once controlling for institutions, openness is associated with increased wage inequalities across nations. However the results for trade policy are mixed. Decrease in import taxes increase wage inequality, whereas decrease in export taxes has an egalitarian effect. The results are applicable only to a larger sample of developed and developing countries and highlight the bottle neck faced by both developing and developed countries in WTO talks which have not been successful as yet in further decrease in trade taxes. In case the situation prevails, the paper calls for more South-South trade which would enable developing countries to decrease the relative wage gaps among labour force.

### **Keywords**

Redistribution, Inequality, Cross Section Models

### **JEL Codes:**

O1, N40

# **GOOD INSTITUTIONS AND FAIR TRADE: A Road Map to Local and Global Social Harmony**

## **1 INTRODUCTION**

Today, it has come to us as a cliché that the world is a global village. One may ask as to what are the social and economic characteristics of this global village when around the globe information is just a click away to individuals or it is increasingly made available to them by their local, regional or global media outlets? As one looks through the eyes of the media, it seems that the world is ever dividing into conflicting political and social ideologies as different interest groups are striving for different realities. Nevertheless, here one can safely say that economics has been resolute to bring a single mutually acceptable point of reference to different stakeholders connecting the concepts of fair globalisation with economic empowerment, freedom of speech, human rights and preservation of environment. Unlike business ethics, in economics all is not about profit making but it is about maintaining efficiency while harnessing social harmony.

In an effort to achieve economic efficiency, most countries have dismantled their barriers to international trade in goods and services during the last couple of decades. As a result, the size of world trade in goods and services has dramatically increased. Few success stories have also emerged as an outcome of contemporary globalisation. China and India, have witnessed unprecedented rise in their growth rates as well as significant poverty alleviation. However for most countries, globalisation has come with mixed experiences. Most rich and middle income countries are experiencing rising economic inequality generated by skill biased technological change, international trade and other factors related to globalisation (Smeeding, 2002). Despite integration to the world economy, most countries of Latin America, Africa (i.e, Sub Saharan Africa) and some in Asia have failed to accomplish decent growth rates. In many countries in the South, poverty has increased. Even if some could grow at a decent rate, they have failed to put a downward pressure on the increasing trends in poverty levels. For example, Pakistan, which has recently witnessed a growth rate of 8 percent, has witnessed increase in poverty levels from 30 percent to 35 percent as of 2005. Even in China and India, the falling poverty trends are not sustainable, as there is an evidence of rapid rising inequalities.

Though, the recent literature suggests that international trade and strong institutions are the key determinants of growth ( i.e, see Dollar and Kraay, 2003; Rodrik et al, 2004; Glaeser et al, 2004a, Mamoon and Murshed, 2005, in the retrospect, the problem of poverty can not be separated from the way in which growth is achieved. So, other than economic growth, what is the point of reference to economic development especially when it is about ensuring equity? Under global processes of production where trading societies learn and coordinate among each other to find common grounds for carrying out contemporary social norms which fits into international standards where business protects labour rights, promotes gender sensitivity, brings efficient social welfare system while following best commerce practices, there are

myriad of common institutions which simultaneously play a role in facilitating each country's smooth exposure to global markets and international competition. Thus it is important to look at the different institutional setups; countries may have while working along with the surge of globalisation.

One of the most commonly quoted institutional factor for determining any country's intellectual, social, economic and cultural progress is the so called notion of Democracy. Since all developed nations are well practiced democracies, this notion generally forms the popular opinion that democracy is the first step to any country's progress. However to change the kaleidoscope a bit, one may also argue that it is their very own economic progress which has been able to sustain democracy in the West. Definitely it is well developed combination of social, legal, political and economic institutions which has worked in an intricate net of coordination to sustain Western economic progress and thus enabling the region to maintain its scientific niche. But where did the West really started it all? There are different answers for different times. For example, to go down in time line, say a 100 years, Western economic progress has been linked to colonialism which was an act of resource exploitation and dictatorial precedence in the garb of monarchies rather than following any course of democratic values. Today, Western economic models work under the prime of information accuracy and thus keep their edge over other regions based on their enhanced level of technology culture.

In developing countries, there has been evidence of rapid economic progress leading to democracy or moving towards democratically aligned economic models of governance. China, South Korea and Taiwan have been growing under one-party dictatorships, the last two eventually turning to democracy whereas China now seriously pushing for property rights to protect private ownership in the country. Recently, Pakistan has become one of the fastest growing economies of the region, even surpassing India, under General Musharraf. Among the transition economies, rapid economic growth was achieved by Kazakhstan under Nazarbaev. Here one may conveniently assume that these countries have performed well under market friendly policies and thus successfully achieved robust economic performance. However the analogy is not that simple and mere good economics is not enough to sustain economic progress. Market friendly policies may not work in the absence of good institutions. The failure of Russian economy and its reform process can be attributed to the lack of a supportive legal, regulatory and political apparatus. In Latin America little attention has been paid to the mechanisms of social insurance and to the safety nets which has resulted in the dissatisfaction with market oriented reforms. India, in comparison to the countries mentioned above, is not only known as the largest democracy in the world due to the sheer size of its population but. India is also one of the fastest growing economies but it has a precedence of sound legal institutions. Due to robust legal institutions, the country is politically less volatile when compared to for example its neighbour Pakistan, even though both countries have in recent decades seen an emergence of multiparty governance setups. However, being developing countries as they are, much like Latin America, social institutions are underdeveloped which may mean that a well meaning democracy may still not exist in Indian case till economic progress reach out to the masses and benefits the impoverished peripheries. It may also be the case that some

institutions may be more important than others. For example, even pro-market dictators can secure property rights as a matter of policy choice (Glaeser, 2004a). Similarly, stronger social institutions lead to improved government functioning: “Education is needed for courts to operate and to empower citizens to engage with government institutions (Ibid. 2004: 3)”

Thus to analyse what makes it tick for good economics where not only economic growth is achieved but its economic dividends are also distributed equally among different strata of population especially in case of developing countries, a cross section analysis of developed and developing countries has been carried out in this paper where different institutional variables along with different proxies of openness/trade policy are employed while focusing their impact on inequality.

## **2 INEQUALITY AS IMPORTANT AS GROWTH**

Though the world after the very surge of colonialism transformed into a land of unequal opportunities, last century has witnessed a worse deal where global inequalities have partly lead to regional inequalities and then the come back of contemporary globalisation entailing post modernism had brought inequality to the very door step of each country where rural and urban divides have been ever increasing so much so that recently it has become of policy importance to consider inequality as a significant factor which may stifle growth promoting strategies and even reverse what good growth may bring to the society.

To account for inequality trends recently observed in developing countries one may start from Latin America where recently high levels of inequalities have been observed in most countries. For example, partly due to the recession in the 1980s, which hit the poor harder than the rich, inequality in most Latin American states except for three (Colombia, Uruguay and Costa Rica) witness sharp rises. Gini coefficients in Latin America have been ranged between 0.45 and 0.60 since early 1950s, which are among the highest in the world. The acute polarisation of income has been rooted in a highly unequal distribution of land and educational opportunities (Cornia et al, 2004). These prevalent inequalities are still stifling the economic potential of the region while institutions remain underdeveloped.

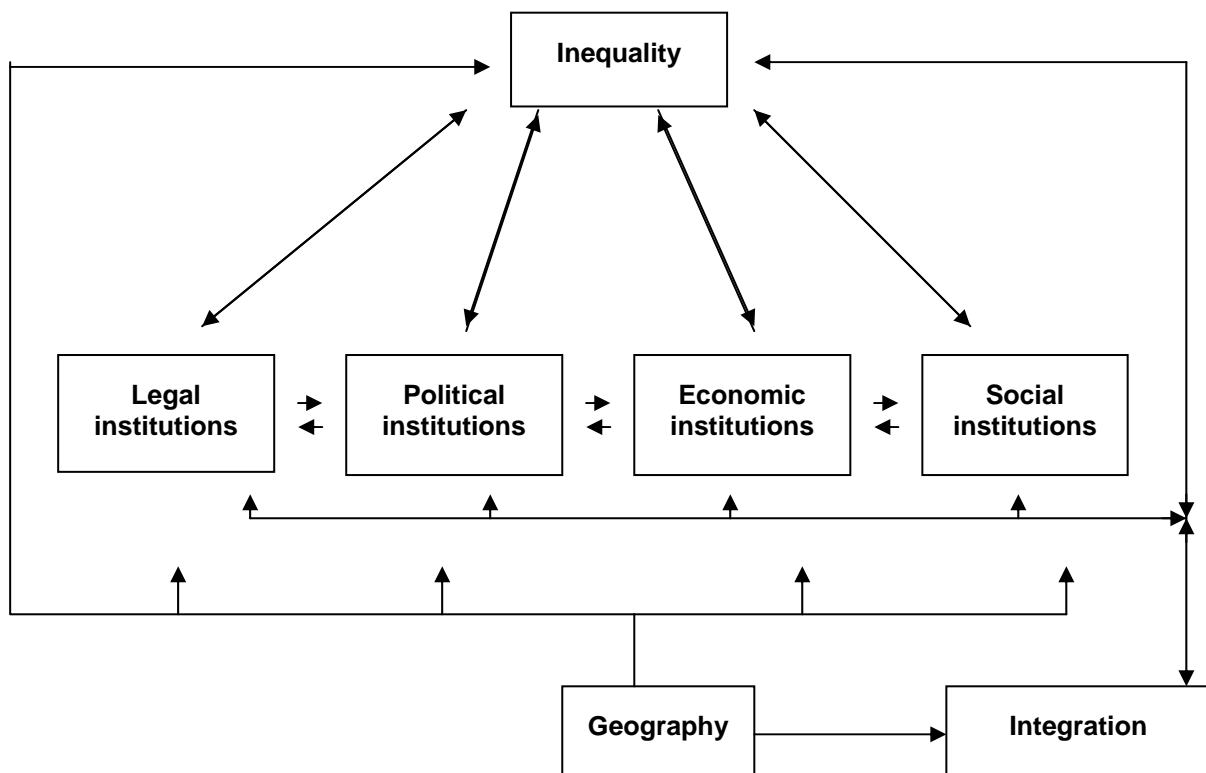
In China income concentration has been rising rapidly since 1985 so that the Gini coefficient reached 0.43 by 1995 and remained more or less at the same level until recently. The rise in income disparity can be attributed to a rise in urban-rural divide arising from a faster expansion of urban activities amid active participation of China in international markets. Among South East Asian economies, the Gini coefficient for Indonesia increased to 0.38 by 1997 from 0.32 in 1987-90. In South Asia, inequality also followed a U-shaped pattern, though it was less pronounced. In India, the experience of 1990s points to a moderate rise in both urban and rural inequality and a larger rise in overall inequality due to widening gap between urban and rural areas. In 1990s the urban inequality rose to 0.36. The Gini coefficient in Pakistan rose from 0.39 in 1960s to 0.41 in 1990s. Much like India, the rise in overall inequality is attributed to a sharp rise in rural inequalities. Inequality in Sub Saharan Africa has been among the highest in world. There is some evidence of falling urban-

rural gap but there is rising intra urban and at times intra rural inequalities. For example, in Tanzania the Gini coefficient for rural inequality rose from 0.53 in early 1980s to 0.76 in early 1990s. Similarly for Kenya, the rural inequalities increased by 9 points from 1980 to 1992 and stand at 0.49 (Ibid. 2004).

### 3 DIFFERENT TYPES OF INSTITUTIONS, INTEGRATION, INEQUALITY AND THE ENDOGENISING FACTORS:

There are issues of two way causality between inequality and institutions (i.e., see Keefer and Knack, 2002; Chong and Gradstein, 2004), between different types of institutions as shown by figure 1 and discussed below. Many recent studies (i.e., see Chen and Ravallion, 2003; Cockburn, 2001; Friedman, 2000; Lofgren, 1999) show that international trade is significantly related with inequality while institutions and integration are also endogenous (i.e., Rodrik et al, 2004). Any empirical analysis which takes institutions as a pure exogenous factor while analysing its effects on inequality may lead to miss-specification bias. Here on the line of Rodrik et al. (2004), we assume geography is a pure endogenous concept.

**FIGURE 1**  
Endogeneity between Institutions, Integration and Inequality





Chong and Gradstein (2004) find strong evidence of bi-directional causality between institutions and inequality. Inequality may affect the quality of institutions. For example, high inequality will prevent the poor from investing in education or the ruling class may not invest in education so that the poor majority will not be politically active thus undermining the development of necessary social and political institutions. Easterly (2001) and Keefer and Knack (2002) suggests that social polarisation negatively affects institutional quality. For example, rising inequalities may lead to political instability and even civil unrest.

The countries with poor institutions are also likely to have high inequality. For example in Russia in the 1990s, a small group of entrepreneurs exploited their political power to promote their own interests, subverting the emergence of institutions committed to the protection of smaller share holders and businesses. According to the Corruption Perceptions Index published by Transparency International, among the transition economies, Estonia is placed 28, and Hungary 31; whereas Russia is placed 79, and Ukraine 83. In these transition economies, weak performance of public institutions, infringement of property rights in favour of influential parties, lower willingness to use courts to resolve business disputes, lower level of tax compliance and higher levels of bribery all have been strongly correlated with inequality (Hellman and Kaufman, 2002). Similarly, in several Latin American countries, the ruling elites, the military and large businesses impeded smaller business interests giving rise to significant informal sector. Chong and Gradstein (2004) show that when the political bias in favour of the rich is large, income inequality and poor institutional quality may reinforce each other, indicating endogeneity between the two.

There may also be inter-linkages between various institutions. For example, nearly all developed countries are democracies and most developing countries are either run under one party system, dictatorships or military regimes. The countries with lower levels of economic and human development tend to have lower levels of education, limited political rights, weak or non-existent political competition, lower level of economic freedom and openness, ethno linguistic factionalism, the lack of judicial independence and a free press and high levels of permissiveness towards corruption.

Before discussing the interdependence of different institutions we would first like to differentiate between them. We identify four types of institutions: 1) Legal, 2) Political, 3) Economic and 4) Social. Legal institutions capture the transparency and fairness of legal system, political rights of the citizens, State legitimacy, freedom of speech, independence of judiciary, enforceability of contracts, police effectiveness, access to independent and impartial courts, confidence in judicial system in insuring property rights, prevention of improper practices in public sphere, control of corruption etc. Political institutions represent political stability, democracy, autocracy or dictatorship. Economic institutions include state effectiveness at collecting taxes or other forms of government revenue, states ability to create, deliver and maintain vital national infrastructure, states ability to respond effectively to domestic economic problems, independence of government economic policies from pressure from special interest groups, trade and foreign exchange system,

competition policy, privatisation, banking reform and interest rate liberalisation, securities market and non bank financial institutions etc. Social Institutions capture socio economic conditions such as health, education and nutrition etc.

The legal, political, economic and social institutions are strong in developed countries and for developing countries there are mixed experiences. For example, intellectual property rights are protected vigorously in the US and most advanced societies, but not in many developing countries (Rodrik, 1999). Engerman and Sokoloff (2002) link the development of public education as a social institution to the democratization as a political process in US. According to them, while starting at about the similar level of development in the 18th century, US led the way in setting up a system of common schools and promoting literacy, where as in countries in South America and the Caribbean these processes were much delayed. Gupta et al. (1998) finds that if government officials use their authority for private gain and indulge in corruption that affects the effectiveness of social spending and the formation of human capital by perpetuating an unequal distribution of asset ownership and unequal access to education. Corruption also affects the government effectiveness as it weakens tax administration and can lead to tax evasion and improper tax exemptions. Higher corruption is associated with increases in inequalities in education, land distribution and health spending. Wealthy urban elites can lobby the government to bias social expenditure toward higher education and tertiary health, which tend to benefit high income groups (ibid., 1998).

Furthermore, trade opening in societies with weak institutions may lead to worse economic policies (Segura-Cayuela, 2005). For example, those transition economies where trade reforms were implemented slowly and the government institutions were able to perform well with time, smaller increase in inequality and smaller output decline is occurred. However, the transition economies with weak government setups have performed as ‘passive globalizers’ and the trade-to-GDP ratios in them were quite high, partly accounting for capital flight, while poverty and inequality was increased (Yudaeva, 2002).

#### **4 DATA AND METHODOLOGY**

Much recently Kaufman et al. (2002) formulated aggregate governance indicators for six dimensions of governance covering 175 countries. They relied on 194 different measures of governance drawn from 17 different sources of subjective governance data constructed by 15 different sources including international organizations, political and business risk rating agencies, think tanks and non governmental organizations. The governance indicators have been oriented so that higher values correspond to better outcomes on a scale from -2.5 to 2.5. They are categorized as rule of law ( $Rl$ ), political stability ( $Ps$ ), regulatory quality ( $Rq$ ), government effectiveness ( $Ge$ ), voice and accountability ( $Va$ ) and control of corruption ( $Ctc$ ). We divide them into four classification based on their definitions. We consider  $Rl$ ,  $Va$  and  $Ctc$  as legal institutions.  $Ge$  and  $Rq$  are dubbed as economic institutions whereas  $Ps$  is taken as a proxy for Political institutions. We add two more political indicators

namely democracy (*Demo*) and autocracy (*Auto*) to our analysis from Polity dataset whereas, both ranging from 0 to 10. We have also included social institutions in our analysis. Average Schooling Years in the total population at 25 (*Sch*) and Adult literacy rate (*Altr*) capture the quality of social institutions.

As we mention above, international trade is also a significant determinant of inequalities in countries across the globe, integration enters our regression model to enhance its explanatory power. We incorporate not 1 but 8 various concepts of openness and trade policy in our regression model in order to carry out a robustness check for our results on institutions. We have carefully chosen three specific measures of openness. The ratio of nominal imports plus exports to GDP (*lopen*) is the conventional openness indicator (see Frankel and Romer, 1999; Alcalá and Ciccone, 2002; Rose, 2002; Dollar and Kraay, 2003; Rodrik et al., 2004). Two other measures of openness are overall trade penetration (*tarshov*) derived from World Bank's TARS system and overall import penetration (*Impnov*) respectively (see Rose, 2002). Neither of these measures are direct indicators of trade policy of a country, pointing only towards the level of its participation in international trade. There are indicators of trade restrictiveness acting as measures of trade policy (Edwards, 1998; Greenaway et al., 2001, Rose 2002). Import tariffs as percentage of imports (*Tariffs*), tariffs on intermediate inputs and capital goods (*Owti*), trade taxes as a ratio of overall trade (*Txtrg*) and total import charges (*Totimpov*) can all be considered as good proxies for trade restrictiveness and have also been employed in our study. Other measures which capture restrictions in overall trade are non-tariff barriers. We use overall non-tariff coverage (*Ntarfov*) and non-tariff barriers on intermediate inputs and capital goods (*Owqi*) as two proxies for non-tariff barriers (see Rose, 2002). Moreover there is also a trend in the trade literature to use composite measures of trade policy. Edwards (1998) advocates the Sachs and Warner (1995) openness index (*Open80*) as a proxy for openness.

To capture inequality we not only take GINI income inequality index (*Gini*) from UNU/WIDER World Income Inequality Database (WIID) but also we employ UTIP-UNIDO Theil measure (*Theil*) calculated by University of Texas Inequality Project (UTIP) which captures wage inequality between skilled and unskilled labour. This is motivated by several considerations. First, comparable and consistent measures of income inequality, whether on a household level or per head basis are difficult, almost implausible and generally fails to provide adequate or accurate longitudinal and cross-country coverage. On the other hand, inequality of manufacturing pay, based on UNIDO Industrial Statistics provides indicators of inequality that are more stable, more reliable and more comparable across countries because UNIDO measures are based on a two or three digit code of International Standard Industrial Classification (ISIC) a single systematic accounting framework. Furthermore, manufacturing pay has been measured with reasonable accuracy as a matter of official routine in most countries around the world for nearly forty years (Galbraith and Kum, 2002). Further more we take income deciles and percentiles from UNU/WIDER World Income Inequality Database (WIID) as other proxies of inequality. Institutions or Integration will be guilty of inequality if it has the negative impact on the incomes of bottom 10 percent (*low10*) and positive impact on the income of the top 10 percent (*high10*). We

also take income groups divided into quintiles where the effect of Institutions is anticipated to be negative for the ratio between top 20 percent and bottom 20 percent (*high20/low20*) and positive for the middle income groups (*Middle20*). The exercise on income deciles and percentiles will further shed light on how institutions and integration are related with income distribution. Especially, we are interested to know how quality of institutions are related with the incomes of the middle class or the ones living in bottom of income share. Each country observation for all inequality measures is taken for the latest year for which data is available and in most cases represent inequality in mid 1990s.

Our basic inequality and income share equations would look like:

$$Inequality = f(Institutions, Integration, Geography) \quad (1)$$

and

$$Income Share = f(Institutions, Integration, Geography) \quad (2)$$

Corresponding to equation 1, our inequality model based on *Theil index* has 8 equations, whereas each equation corresponds to a different institutional or integration classification. The model specifications for *Gini*, *High20/Low20*, *Middle20*, *Low10* and *High10* contain same 8 equations each with same variable specifications.

$$Theil_{1i} = \alpha_1 + \beta_1 LI_i + \chi_1 Open_i + \varepsilon_{1i} \quad (3)$$

$$Theil_{2i} = \alpha_2 + \beta_2 PI_i + \chi_2 Open_i + \varepsilon_{2i} \quad (4)$$

$$Theil_{3i} = \alpha_3 + \beta_3 EI_i + \chi_3 Open_i + \varepsilon_{3i} \quad (5)$$

$$Theil_{4i} = \alpha_4 + \beta_4 SI_i + \chi_4 Open_i + \varepsilon_{4i} \quad (6)$$

$$Theil_{5i} = \alpha_5 + \beta_5 LI_i + \chi_5 TP_i + \varepsilon_{5i} \quad (7)$$

$$Theil_{6i} = \alpha_6 + \beta_6 PI_i + \chi_6 TP_i + \varepsilon_{6i} \quad (8)$$

$$Theil_{7i} = \alpha_7 + \beta_7 EI_i + \chi_7 TP_i + \varepsilon_{7i} \quad (9)$$

$$Theil_{8i} = \alpha_8 + \beta_8 SI_i + \chi_8 TP_i + \varepsilon_{8i} \quad (10)$$

The variable is *Theil* Index in a country I,  $LI_i$ ,  $PI_i$ ,  $EI_i$ , and  $SI_i$  and are respectively measures for legal, political, economic and social institutions, whereas  $Open_i$  measures general openness in the economy and  $TP_i$  is a measure for trade policy and  $\varepsilon_i$  is the random error term. Please refer to appendix 1 for information on equations based on *Gini*, *High20/Low20*, *Middle20*, *Low20* and *High10*.

As we have discussed, there are potential endogeneity problems between institutions and integration and between institutions and inequality itself. To this effect we have first regressed our institutional, trade policy and openness proxies on a set of instruments. Frankel and Romer (1999) suggests that we can instrument for openness by using trade/GDP shares constructed on the basis of a gravity equation for bilateral trade flows. The FR approach consists of first regressing bilateral trade flows (as a share of country's GDP) on measures of country mass, distance between the trade partners, and a few other geographical variables, and then constructing a predicted aggregate trade share for each country on the basis of coefficients estimated. Hall and Jones (1999) employed distance from the equator and the extent to which the primary languages of Western Europe are spoken as first languages today as instruments for institutions. Hall and Jones made an argument that the instruments are not correlated with the error term. Acemolgu, Johnson and Robinson (2001) identify the mortality of European settlers as a potential instrument. Using two ex post assessments of institutional quality – risk of expropriation by the government and constraints on the executive – as measures of institutions, they showed that settler mortality is a strong predictor of institutions. However there are two drawbacks for AJR instrument. First, the data is only available for 64 countries. Though Rodrik et al. (2004) have extended it to 80 countries; it still covers a relatively low number when compared to ‘the extent to which the primary languages of Western Europe are spoken as first languages today’ which covers as many as 140 countries. Secondly, according to Glaeser et al. (2004b), AJR instrument of settler mortality fails to be orthogonal to the error term. ‘Settler mortality is strongly correlated not just with ancient, but also with the modern, decease environment, suggesting that it might be the decease environment, rather than history, that matters for economic development. Secondly settler mortality is strongly correlated with human capital accumulation, suggesting that it cannot be used as an instrument for institutions (Glasear et al., 2004b:8).’ Thus following Dollar and Kraay (2003) and Hall and Jones (1999), we use ‘fractions of the population speaking English (*Engfrac*) and Western European languages as the first language (*Eurfrac*)’ as an instrument for legal, economic and political institutions. Since we are using years of schooling and adult literacy rate as a proxy for social institutions we looked for instruments which can capture the qualitative and quantitative properties in education sector. Total public spending on education (as a percentage of GDP) and primary public-teacher ratio are the two instruments proposed by Mamoon and Murshed (2005). The former instrument captures the quality of education and the later instrument captures the quantity of education. As in Rodrik et al. (2004), we employ ‘distance from the equator’ as another instrument (proxy for geography) also employed by Hall and Jones (1999).

$$LI_i = \sigma_1 + \zeta_1 Eng_i + \theta_1 Eur_i + \vartheta_1 FR_i + \tau_1 Disteq + E_{1i} \quad (11)$$

$$PI_i = \sigma_2 + \zeta_2 Eng_i + \theta_2 Eur_i + \vartheta_2 FR_i + \tau_2 Disteq + E_{2i} \quad (12)$$

$$EI_i = \sigma_3 + \zeta_3 Eng_i + \theta_3 Eur_i + \vartheta_3 FR_i + \tau_3 Disteq + E_{3i} \quad (13)$$

$$Open_{1i} = \sigma_4 + \zeta_4 Eng_i + \theta_4 Eur_i + \vartheta_4 FR_i + \tau_4 Disteq + E_{4i} \quad (14)$$

$$TP_{1i} = \sigma_5 + \zeta_5 Eng_i + \theta_5 Eur_i + \vartheta_5 FR_i + \tau_5 Disteq + E_{5i} \quad (15)$$

$$SI_i = \sigma_6 + \zeta_6 Tlex_i + \theta_6 Ptr_i + \vartheta_6 FR_i + \tau_6 Disteq + E_{6i} \quad (16)$$

$$Open_{2i} = \sigma_7 + \zeta_7 Tlex_i + \theta_7 Ptr_i + \vartheta_7 FR_i + \tau_7 Disteq + E_{7i} \quad (17)$$

$$TP_{2i} = \sigma_8 + \zeta_8 Tlex_i + \theta_8 Ptr_i + \vartheta_8 FR_i + \tau_8 Disteq + E_{8i} \quad (18)$$

Where and are our instruments for legal, economic and political institutions referring to fractions of population speaking English and European languages respectively. Tlex is total public spending on education as a percentage of GDP and Ptr is primary pupil-teacher ratio and both are instruments for average years of schooling and adult literacy rate. is instrument for openness and trade policy. is proxy for geography showing distance from the equator. At the second stage the predicted values of respective institutional, openness and trade policy variables are employed in the inequality and income share equations.

## 5 RESULTS

### 5.1 Legal Institutions

*Voice and Accountability* stands for the following (i) Does State legitimately represent its citizens (ii) Legal system/ transparency and fairness (iii) Political rights (iv) Freedom of speech (v) Business have voice to express and they are informed (Kaufman et al, 2002). The channels of communication are vital for development, particularly for electoral democracies that are in the process of establishing more effective political and economic institutions. In societies where press freedom is combined with wide spread access to the mass media this is positively associated with good governance and with human development, through the role of the press in promoting the voice of disadvantaged groups in the policy making process and strengthening the accountability of governments to citizens and thus decreasing inequality (Norris, 2001:8).

*Rule of Law* captures (i) Enforceability of contracts (ii) Losses and costs of crime (iii) Kidnapping of foreigners (iv) crime (v) Corruption of bank officials (vi) Extent of tax evasion (vii) Costs of organised crime for business (viii) Police effectiveness in safeguarding personal security (ix) independence of the judiciary from interference by the government and/or parties to the dispute (x) Private business has recourse to independent and impartial courts for challenging the legality of government (xi) Financial assets and wealth are well protected (xii) Private business are more likely to settle disputes outside court (xiii) Concern with level of crime (xiv) Black market (xv) Property rights (xvi) Feeling of personal safety (xvii) Equal opportunities to access justice (xviii) Equality before the law (xix) Courts – fair and impartial (xx) courts –

affordable (xxi) Courts – consistent (xxii) Court’s enforceability (xxiii)  
Confidence in judicial system today in insuring property rights (xxiv) General  
constraint – functioning of judiciary (xxv) Obstacles to competition – violation  
of patents (xxvi) quality of courts (xxvii) Parallel economy as obstacle to  
business development (Kaufman et al., 2002).

‘High inequality can impede the economic performance of a country by obstructing the formation of governance structures that enhance productivity. Where this is the case, inequality is likely to be the result of a distribution of property rights that is inefficient as well as inequitable. If so, there may be a plausible set of alternative distributions that are both more equitable and more efficient; i.e., which foster competition on the basis of a more level playing field.’  
(Roy and Weeks, 2003: 3)

*Control for Corruption* is measured by (i) Improper practices in the public sphere (ii) Frequency of additional payments (iii) Dishonest courts (iv) Corruption as obstacle to business (v) Bribery (% of Gross Revenues) (vi) State Capture (BPS) (vii) Percent of public officials viewed to be corrupt (viii) Percent who believe the government is corrupt (ix) Additional Payments: bureaucracy (x) Additional payments: judiciary (xi) Severity of corruption within the state (xii) Political risk index: Internal causes of political risk: Mentality, including xenophobia, nationalism, corruption, nepotism, willingness to compromise (Kaufman et al., 2002).

Barreto (1996) finds that corruption is positively and significantly correlated with inequality, implying that increased income inequality is associated with greater corruption. Tanzi (1995) argues that the benefits from corruption are likely to accrue to the better connected individuals in society, who mostly belong to high-income groups. It has been further contended that corruption creates incentives for higher investment in capital intensive projects and lower investment in labor intensive projects (UNDP, 1997), thus increasing the wage inequality. Gupta et al. (1998) show that a worsening of corruption index of a country by one standard deviation (2.52 points on a scale of 0 to 10) is associated with an increase in the GINI coefficient of about 4.4 points.

Tables 1a and 1b (appendix I) show the results for Legal institutions. The results suggest that wage inequality (*Theil*) is more sensitive to legal institutions than overall income distribution (*Gini*). Results based on the ratio of income percentiles (*High20/Low20*) and income deciles show that voice and accountability, rule of law and control for corruption has a strong redistributive power. The relationship between legal institutions and income of the middle income groups (*Middle20*) as well as low income groups especially for *R/* and *Ctc* is positive and significant. This means that good quality legal institutions not only to reach out to the middle income groups but they are also altruistic to the poorest of the poor. The evidence quite robustly suggests that redistribution of income takes place from the richest to the middle class or lower middle class as all the three proxies of legal institutions are negatively and significantly related with the incomes of the richest 10 percent or 20 percent in most of the cases.

## 5.2 Economic Institutions

*Government Effectiveness* measures (i) Operation Risk Index : Bureaucratic delays (ii) State's ability to formulate and implement national policy initiatives (iii) Effectiveness at collecting taxes or other forms of government revenue (iv) State's ability to create, deliver and maintain vital national infrastructure (v) State's ability to respond effectively to domestic economic problems (vi) Institutional failure: A deterioration of government capacity to cope with national problems as a result of institutional rigidity or gridlock (vii) Government policy/ Pro-business orientation (viii) Government decentralisation, independent and responsibilities or local and regional governments, and legislative and executive transparency (ix) Wasteful government expenditure (x) Public service vulnerability to political pressure (xi) Government economic policies are independent of pressure from special interest groups (xii) Quality of public health (xiii) quality of public education (xiv) quality of central bank (Kaufman et al., 2002).

Every government must maintain a sustainable fiscal policy, which includes a deficit that is manageable in the short term, and the associated public debt it creates being serviceable. More concentration of resources on social sector is always pro-poor. The value added tax has received exaggerated appreciation and has not faced its due criticism. In the world when poverty reduction strategies are implemented and inequalities are growing, value added tax needs to give way to more pro poor tax system (Roy and Weeks, 2003). Inflation in many developing countries is an outcome of political decision when government has a lax monetary policy and is unable or unwilling to increase taxes. High inflation has a negative distribution effects. In developed countries sometimes monetary policy outcomes are related with increased inequalities. Khalifa (2005), shows that a positive shock to Federal Reserve fund rates in US induce a larger and more persistent increase in the unemployment ratio of the low skilled relative to that of high skilled, indicating that low skilled bear the brunt of the increase in unemployment after a contractionary policy.

*Regulatory Quality* stands for (i) Restrictions on ownership of Business by non-residents (ii) Restriction on ownership of equities (iii) Price liberalisation (iv) Trade & Foreign exchange system (v) Competition Policy (vi) Commercial law effectiveness (vii) Commercial law extensiveness (viii) Financial regulations: extensiveness (ix) Financial Regulations: effectiveness (x) Large scale privatisation (xi) small scale Privatisation (xii) Governance and enterprise restructuring (xiii) Banking reform and interest rate liberalisation (xiv) Securities market and non bank financial institutions (xv) Bankruptcy law (xvi) Minimal administrative regulations that constrain businesses (xvii) Wage/ Price Controls (Kaufman et al, 2002). The results in Table 2 show that regulatory quality has weak relationship with the traditional measures of inequality.

Table 2 (appendix I) indicates that government effectiveness is negatively and significantly related with wage inequality between skilled and unskilled. However, the relationship is weak at best with *Gini*. Though it doesn't mean that effectiveness of government policies don't carry redistributive effects. Our results show that if the governments which work in the interest of public; they have a significant and positive effect on the incomes of the poor and middle



class, where as they are negatively and significantly related with the incomes of the elite. The results in Table 1 indicate that though regulatory quality has weak relationship with the traditional measures of inequality but it has positive and relatively significant effects on the income share of middle income groups.

### 5.3 Political Institutions

We have utilised 3 proxies for political institutions namely, *political stability*, *democracy* and *autocracy*. Political stability generally measures for conflict: (i) Military coup risk (ii) Major insurgency Rebellion (iii) Political terrorism (iv) Political Assassination (v) Civil War (vi) Major Urban Riot (vii) New government honors commitments of previous government (Kaufman et al., 2002).

There is a rich literature which suggests inequality as a cause of conflict and civil violence. For example, Murshed and Gates (2003) find the causes of conflict in Nepal to persistent inequalities in the region: 'It has also to be remembered that poverty, the lack of employment opportunities and other forms of horizontal inequality assist Maoist recruitment and retention, making life in Maoist cadres a relatively attractive options (p.10).' Justino (2004) shows that redistributive policies have played an important role in the prevention and reduction of internal unrest in India and have been a central factor in preventing smaller scale conflicts from escalating into violent civil wars. Though many recent studies show that conflict and civil unrest is endogenous to prevalent inequalities, it may also be that these conflicts further deepen inequalities in the society. Our results in table 3a (appendix II) show that this is exactly what happens. Political stability is the key to a more equal society and it is especially favourable to the wages of the unskilled population. Furthermore, politically stable societies not only redistribute incomes to the middle income groups but they also benefit the lowest segments of the society equally.

The results in Table 3a (appendix II) indicate that political stability is one of the key factors to a more equal society and it is especially favourable to the wages of the unskilled population. Furthermore, politically stable societies not only redistribute incomes to the middle income groups but they also benefit the lowest segments of the society equally. However, in comparison to political stability index, democracy has a weak relationship with inequality. The average effects of democracy on inequality have generally been insignificant. This is inline with the existing evidence which doesn't find any robust relationship between democracy and inequality in a cross country regression. 'Indeed a casual inspection of recent events in East Europe as well as in East Asia casts doubts that any such simple relationship may exist. It has been argued that, in the East European countries, democratization of the 90's actually resulted in an increase income inequality. Similarly, some of the East Asian countries such as South Korea, Taiwan, Singapore have had among the most egalitarian income distributions in the world, yet their political record is far from democratic' (Gradstein et al., 2001: 1). According to Glaeser et al. (2004b), it is good leadership that matters and not whether a country has democratic setup or ruled under a dictatorship. Nevertheless, our results do show that democracy seem to favour middle class more than anybody else confirming the median voter argument that democratised countries with greater inequality of factor

income tend to redistribute more to the less affluent (Milanovic, 2000). However, Democracy appears to be marginally better option than autocracy as any cases of significance as is shown in table 3b indicates that on average for the comity of nations democracy is good for decreasing wage inequalities, where as autocracy seems to move in opposite direction.

So what lessons can we draw from these results? Should it be that a country may compromise on democracy and follow a rather politically repressed system lead by a dictatorial rule? Both questions are very applicable to developing countries where most of the underperforming economies are lead by dictatorial setups whether it is Asia, Africa or Latin America. However as mentioned above there are salient exceptions too where it seems that the definition of Western democracy has not been fulfilled but an enlightened model of economic management has been adopted and success has been achieved as far as growth dividends are concerned. So how one may contrast such exceptions with the ones where autocracy has lead to repressed market structures? Is it all about market efficiency to defend autocratic structure if one may wish to? Our results puts some light to these questions if equity and not only growth is the objective for a developing country policy apparatus. If some how less democratic political system may strengthen legal, social and economic institutions and promote political stability, it would not matter whether a western model of democracy be implemented by its word and spirit or some case specific combination of political and social methodologies are adopted. Definitely democracy is not a sufficient condition in itself for contributing towards equity or even economic progress of a country. Rather democracy is just another part of the jigsaw puzzle which may only fit in properly at its right time when other institutional variables have evolved appropriately to support its conceptual application. Most democracies must have been autocracies or near autocracies when the political process in any country started out and this simply means mere concentration on democracy is futile to find solutions for institutional or macro economic progress. Rather democracy can be considered as a notion suggesting an objective and well developed end for the confirmation of economic, social, cultural and scientific development rather than a mean to an end. However, in today's rapidly transforming world where some developing countries may benefit from global markets more than others, they would find themselves under increasing pressure from their populations to transform into a more democratised system of governance once they witnessed higher level of economic and institutional development. In such scenarios, countries which may be doing good under well defined autocratic set ups may not only just have to decide to bring Western models of democracy to align their social development with global standards, but most importantly they have to decide about the timings of such critical transitions so that the economic progress they have achieved is well sustained as any abrupt changes may always carry higher risks.

## **5.4 Social Institutions**

Education enhances the earnings potential of the poor, both in competing for jobs and earnings and as a source of growth and employment. The distribution of physical and human capital emerges from the theoretical and empirical

literature as the key to distributional consequences of growth, and a determinant of growth itself (Kanbur, 1998:20). The results in Table 4 (appendix II) shows that average years of schooling (*Sch*) is negatively related with the *Gini*, and the relationship is significant in most cases suggesting countries which have a more educated population are also the ones where distribution of income is relatively less unequal. For example, in US the percapita income of the richest decile exceeds that of second richest decile by 60 percent only, where as in Latin America where *Gini* is also one of the highest among developing countries, the richest decile exceeds that of the second richest decile by 160 percent. In comparison to Latin America, US has highly educated population with average years of schooling at little more than 12 years and 99 percent of the adult population being literate.

Increased educational attainment also leads to less wage inequality. Along with the processes of globalisation the comparative advantage of developed nation lies in high skill intensive goods as lower skill intensive goods and services are being outsourced to developing nations. As the skill demand is increasing at greater pace than its supply, so is the wage of more skilled and educated labor thus increasing wage inequalities in developed nations. Harrigan and Balaban (1999) show that relative factor supply is an important factor in determining the growing return to skill in US during 1963-91. Given the current situation of increasing inequality in most developed societies, of which globalisation is seen as a much-cited culprit, policy makers have been very keen to demand further public funding for schooling (Pereira and Martin, 2000: 2). Similarly education inequalities have led to wage inequality in developing countries specifically Latin America. Coincidentally, Latin America has a Gini coefficient (about 0.50 for the region as a whole) which is approximately 15 points above the average for the rest of the world (Mamoon, 2005). Londoño and Székely (1997) estimate that the low level of education of Latin American workers and the enormous inequality in educational assets account for the largest portion of the region's excessive inequality, larger than other contributing factors – lower physical capital accumulation, the relative abundance of natural resources, and a high concentration of land resources. In Latin America, only a relatively small proportion of the total population has completed secondary or higher education. These relatively few skilled workers earn a substantial wage premium due to their limited supply. Thus a poor distribution of education contributes to differentials in the returns to different levels of education, magnifying the effect of education gaps on income inequality.

Results in table 4 show that average years of schooling and adult literacy rate are significantly and negatively related with wage inequality, confirming that countries where education is more equally distributed or levels of average schooling are higher; wage inequality would be less severe. Though *Altr* is weakly related with the income shares, results for *Sch* do imply that education has a strong redistributive power from richer segments of the society to the less affluent. A comparison of coefficients of *Middle20* and *Low10* suggests that education benefits middle class more than the poor.

## 5.5 Integration and Inequality

Table 5 (appendix II) show results of IV augmented regression coefficients for several openness and trade policy proxies when the dependent variable is *Theil Index*. First we would like to mention here that on the line of Dollar and Kraay (2004), we have also found that there is no systematic relationship between changes in trade volumes and changes in household income inequality (*Gini*). So here we only discuss the results based on *Theil Index*.

The rationale for expecting an effect of trade on wage inequality is based on the standard Heckscher-Ohlin-Samuelson (H-O-S) trade model. As Slaughter (2000) puts it: ‘... [Free] trade lowers the real wage of the scarce factor and raises that of the abundant factor compared to autarky’ (p. 131). Assuming that developed countries are generally abundant in skilled labor, increasing trade with developing countries, which are unskilled labor abundant, should raise the wages of skilled workers relative to unskilled in developed countries. However, wage inequality may also be an outcome of more trade in the developing country context. An explanation for rising wage inequality after liberalization can be that developing countries protect the unskilled intensive of the two goods, and not the skill intensive prior to liberalization. So after liberalization the producers of unskilled intensive good face increased costs amid more outside competition in the absence of government subsidies. Thus an increased downward pressure is exerted to the wages of the unskilled labor force employed in the production of that unskilled good. Mamoon (2004) has identified at least 9 different effects through which wage inequality increases as an outcome of more international trade. In table 5, the results for openness indicators confirm that increased globalisation captured by an increase in the movement of goods and services leads to augmentation in wage inequality.

However, the results for trade policy are mixed. The trade policy variables which have a significant relationship with wage inequality are overall trade taxes (*Txtrdg*), total import charges (*Totimpov*) and non tariff coverage (*Ntarfov*). *Totimpov* and *Ntarfov* are negatively associated with wage inequality and the relationship is significant in 8 out of 10 cases for *Totimpov* and 3 out of 10 for *Ntarfov*. The results depict that if a country follow a more open policy by decreasing import taxes as well as non tariff barriers, it will have a positive effect on wage inequality. In developed countries, wage inequality is a phenomenon caused by increase in outsourcing to the developing countries. Thus high import taxes may be a used as a protection policy to provide some kind of breathing space to lower skilled worker who are increasingly losing jobs to developing country labour force. Increase in wage inequality in developing countries may be explained by lower import taxes or non tariff barriers by suggesting that due to their comparative disadvantage in skilled labour production activities domestically and protection against their unskilled intensive agricultural goods in developed countries. Our third significant variable (*Txtrdg*) has a positive relationship with wage inequality and it is significant in 5 out of 10 cases. This suggests that any decrease in trade taxes (export taxes specifically ) will lead to a decrease in wage inequality. Promoting exports have an egalitarian effect then accepting imports. Here the conflicting results among different measures of trade policy are due to the fact that decreasing the price for exporting goods may lead to their higher demand

following economies of scale argument and thus rise in wages of the most extensively used labour, whereas protection on imports may make more sense considering lack of consensus among developed and developing countries in simultaneously decreasing levels of protection in their import substitution sectors. Decreasing import taxes may have strong political effects in both developed and developing countries if not done simultaneously by both economic groups. That is the reason why World Trade Organisation (WTO) talks have yet to reach a consensus. However, here one may give a policy recommendation that at least decreasing export taxes by any country irrespective of its belonging to any economic group may help to wage the gap between skilled and unskilled labour because more exports may mean more growth. Decreasing export taxes in a country should also be supplemented by a smart export promotion policy to compete in the international markets. However, one may take caution on this because generally the least developed countries export capacity to developed nations has been curtailed due to high protection in agriculture sector. Developing countries are able to export more semi skilled or skilled intensive goods as can be seen in Indian and Chinese case. Trade among developing countries has yet to reach optimal levels. In such a scenario, taking out developed country from the sample, results for  $Txtrdg$  might change. Decrease in export taxes may increase inequality in such a scenario as we find in another paper. (See Dawood and Mansoob, 2007).

## 6 CONCLUSIONS

This paper is an attempt to gauge the effects of different institutions on inequality. Though the literature is limited on the subject, the existing one suggests that there are two way causalities between institutions and inequality. To this effect we solve the problem of endogeneity by utilising a set of instruments already in use for institutions. We used a rich set of openness and trade policy variables as controls in our multiple regression equations.

Our results have reconfirmed that good quality institutions lead to decrease in inequality. It also appears that it is political stability that is more important than democracy. In line to previous studies, we find that it may not matter much whether a country is working under a democracy or autocracy, but it is good policies of the leaders which eventually determine the welfare enhancing effects through preservation of property rights etc. Good leadership which not only follow more market friendly policies but also keep institutional development at the fore of their policy choice is a key to economic development. Tables 6 (appendix II) summarises our results on institutions on the basis of relative significance, and shows that political stability, rule of law, control for corruption and government effectiveness are the key institutions regarding inequality mitigation. If education is more equally distributed among the population, relative wages of skilled and unskilled labour will have least amount of distortions especially when the country opens up to international trade. Among economic institutions, regulation is less important when compared to government's independent fiscal and monetary policy and its effective capacity to decentralise and its pro business orientation. Table 6 also show that Middle class comes out to be the main beneficiary of good quality

institutions than any other income group as *Middle20* equations give most significant results.

Regarding integration we find that openness is generally related with higher wage inequality, though its impact on income inequality is insignificant at best. This result is also in line with recent literature. However we also find that level of openness or trade policies may carry significant positive effects in widening the wage gaps between skilled and unskilled labour. The reason for the continuous failure of WTO talks has also been supported by our study as our results show that opening up of protected sectors to increased international competition by revoking import taxes lead to higher wage inequality. The paper recommends more regional trade where by developing countries trade among each other if due to protection their exporting capabilities to the developed countries have been strangled especially in case of agriculture produce. For example, in countries like China and India, the pace of development suggests that both countries are fast climbing the technology ladder and would form significant pockets of services sector oriented high technology dependent production areas which may draw similarities with developed nations in both supply and demand and relative factor prices. Trade within developing countries may seek to exploit such emerging pockets. Countries like Pakistan may also increasingly join in if regional economics is put on priority and conflict of interest are resolved or set aside for preparing economic grounds for social harmony within their populations.

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## APPENDIX I

**TABLE 1a:**  
**IV Augmented Regression Coefficients for Legal Institutions (Va and RI)**

Independent Variables	Dependent Variables					
	Theil	Gini	High20/Low20	Middle20	Low10	High10
Va (Lcopen)	-0.02 (-1.50)	-3.42 (-0.63)	-4.04 (-2.92)*	1.43 (4.74)*	0.259 (1.71)***	-4.37 (-4.20)*
Va (Impnov85)	-0.03 (-2.07)**	2.73 (0.30)	-4.53 (-2.28)**	1.39 (3.38)*	0.17 (0.87)	-3.99 (-2.82)*
Va (Impnov82)	-0.02 (-1.64)***	-5.60 (-3.36)*	-4.29 (-2.62)*	1.51 (4.05)*	0.26 (1.49)	-4.50 (-3.51)*
Va (Tarshov85)	-0.03 (-2.27)**	4.95 (0.51)	-4.68 (-2.25)**	1.42 (3.31)*	0.187 (0.91)	-4.07 (-2.76)*
Va (Tarshov82)	-0.04 (-2.48)**	-0.04 (-2.48)**	-4.81 (-2.57)**	1.52 (3.91)*	0.28 (1.51)	-4.48 (-3.37)*
Va (Open80s)	-0.06 (-1.12)	9.09 (0.38)	-6.18 (-1.28)	1.13 (1.54)	-0.11 (-0.24)	-3.01 (-1.14)
Va (Tariffs)	-0.05 (-0.75)	-19.34 (-1.03)	-16.18 (-0.90)	3.91 (1.10)	2.34 (0.89)	-11.68 (-1.05)
Va (Owti)	-0.05 (-2.21)**	27.60 (1.09)	-4.14 (-1.42)	1.50 (2.13)**	0.23 (0.64)	-4.39 (-1.81)***
Va (Txtrdg)	0.08 (1.10)	-12.74 (-2.25)**	-7.76 (-1.58)	3.15 (2.52)**	0.82 (1.46)	-10.76 (-2.40)**
Va (Totimpov)	0.01 (0.47)	1.33 (0.05)	-0.34 (-0.08)	-0.56 (-0.76)	-0.69 (-1.84)***	2.59 (1.02)
Va (Owqi)	-0.07 (-1.24)	5.44 (0.30)	0.924 (0.17)	0.27 (0.17)	-0.46 (-0.52)	0.054 (1.01)
Va (Ntarfov)	-0.03 (-0.67)	18.95 (0.74)	-3.77 (-0.72)	0.16 (0.17)	-0.26 (-0.52)	-0.06 (-0.02)
RI (Lcopen)	-0.02 (-1.48)	-2.77 (-0.46)	-5.08 (-3.44)*	1.82 (5.59)*	0.48 (3.03)*	-5.75 (-5.14)*
RI (Impnov85)	-0.04 (2.30)**	-5.76 (-0.62)	-5.49 (-2.76)*	1.81 (4.48)*	0.48 (2.50)**	-5.61 (-4.04)*
RI (Impnov82)	-0.03 (-1.80)***	-7.23 (-4.39)*	-5.23 (-2.91)*	1.77 (4.81)*	0.49 (2.79)*	-5.55 (-4.39)*
RI (Tarshov85)	-0.04 (-2.49)**	7.39 (0.77)	-5.66 (-2.77)*	1.86 (4.46)*	0.52 (2.63)*	-5.79 (-4.05)*
RI (Tarshov82)	-0.04 (-2.43)**	-7.33 (-4.27)*	-5.31 (-2.82)*	1.79 (4.69)*	0.50 (2.75)*	-5.61 (-4.26)*
RI (Open80s)	-0.02 (-0.70)	18.97 (0.94)	-9.05 (-2.15)**	2.43 (3.76)*	1.09 (2.68)*	-8.32 (-3.60)*
RI (Tariffs)	0.02 (0.33)	-18.23 (-2.33)**	-10.64 (-1.85)***	3.44 (2.51)*	2.24 (2.00)**	-12.07 (-2.41)**
RI (Owti)	-0.05 (-2.22)**	19.88 (1.15)	-6.22 (-2.51)**	2.31 (3.69)*	0.97 (2.78)*	-7.69 (-3.44)*
RI (Txtrdg)	0.02 (0.74)	-15.05 (-2.77)*	-9.16 (-2.17)**	3.37 (2.95)*	1.31 (2.26)**	-11.24 (-2.85)*
RI (Totimpov)	0.007 (0.18)	22.50 (0.59)	-8.57 (-1.30)	1.59 (1.42)	0.61 (1.14)	-5.06 (-1.30)
RI (Owqi)	-0.09 (-1.04)	16.56 (0.54)	-1.09 (-0.24)	1.13 (1.06)	0.17 (0.33)	-3.05 (-0.76)
RI (Ntarfov)	0.02 (0.48)	30.20 (0.92)	-12.71 (-1.60)	2.82 (1.80)***	1.38 (1.58)	-9.71 (-1.72)***

-, \*\*, \*\*\* corresponds to 1%, 5% and 10% level of significance respectively.

- Control variables are in parenthesis

**TABLE 1b**  
**Augmented Regression Coefficients for Legal Institutions (Ctc)**

Independent Variables	Dependent Variables					
	Theil	Gini	High20/Low20	Middle20	Low10	High10
Ctc (Lcopen)	-0.02 (-1.44)	-2.79 (-0.44)	-5.39 (-3.31)*	1.87 (5.47)*	0.46 (2.76)*	-5.88 (-5.03)*
Ctc (Impnov85)	-0.03 (-2.21)**	4.85 (0.54)	-5.01 (-2.52)*	1.64 (4.32)*	0.37 (2.05)**	-5.01 (-3.88)*
Ctc (Impnov82)	-0.02 (-1.71)***	-6.45 (-4.22)*	-4.81 (-2.69)*	1.62 (4.72)*	0.41 (2.42)**	05.02 (-4.29)*
Ctc (Tarshov85)	-0.03 (-2.41)**	6.71 (0.71)	-5.20 (-2.52)*	1.69 (4.29)*	0.41 (2.15)**	-5.19 (-3.87)*
Ctc (Tarshov82)	-0.04 (-2.41)**	-6.51 (-4.06)*	-4.88 (-2.60)*	1.64 (4.55)*	0.41 (2.35)**	-5.04 (-4.12)*
Ctc (Open80s)	-0.02 (-0.70)	17.32 (0.79)	-9.33 (-1.89)***	2.47 (3.32)*	1.03 (2.34)**	-8.38 (-3.25)*
Ctc (Tariffs)	0.05 (0.57)	-22.77 (-1.74)***	-13.10 (-1.45)	4.32 (1.87)***	2.77 (1.54)	-15.19 (-1.81)***
Ctc (Owti)	-0.05 (-2.19)**	22.76 (1.13)	-6.29 (-2.19)**	2.35 (3.31)*	0.91 (2.44)**	-7.74 (-3.11)*
Ctc (Txdtrdg)	0.02 (0.94)	-12.50 (-2.99)*	-7.56 (-2.12)**	2.84 (3.20)*	1.04 (2.30)**	-9.89 (-3.09)*
Ctc (Totimpov)	0.02 (0.34)	17.59 (0.43)	-5.13 (-0.73)	0.33 (0.30)	-0.32 (-0.59)	-0.27 (-0.07)
Ctc (Owqi)	-0.10 (-0.94)	12.77 (0.45)	0.12 (0.02)	0.79 (0.63)	-0.10 (-0.14)	-1.78 (-0.36)
Ctc (Ntarfov)	0.04 (0.34)	46.44 (1.04)	-15.14 (-1.33)	2.82 (1.37)	1.06 (1.02)	-9.29 (-1.29)

-, \*\*, \*\*\* corresponds to 1%, 5% and 10% level of significance respectively.

- Control variables are in parentheses

**TABLE 2**  
**Augmented Regression Coefficients for Economic Institutions (Ge and Rq)**

Independent Variables	Dependent Variables					
	Theil	Gini	High20/Low20	Middle20	Low10	High10
Ge (Lcopen)	-0.025 (-1.54)	-5.18 (-0.74)	-6.56 (-3.61)*	2.19 (5.63)*	0.552 (2.97)*	-6.817 (-5.17)*
Ge (Impnov85)	-0.039 (-2.34)**	3.25 (0.33)	-6.47 (2.87)*	2.02 (4.56)*	0.49 (2.40)**	-6.17 (-4.13)*
Ge (Impnov82)	-0.028 (-1.86)***	-7.86 (-4.37)*	-6.13 (-2.99)*	1.97 (4.84)*	0.51 (2.67)*	-6.08 (-4.43)*
Ge (Tarshov85)	-0.04 (2.55)**	4.86 (0.48)	-6.67 (-2.89)*	2.08 (4.53)*	0.53 (2.49)**	-6.37 (-4.12)*
Ge (Tarshov82)	-0.04 (-2.53)**	-7.87 (-4.20)*	-6.21 (-2.90)*	1.98 (4.68)*	0.51 (2.57)*	-6.07 (-4.25)*
Ge (Open80s)	-0.05 (-1.30)	24.23 (0.90)	-11.46 (-1.89)***	2.72 (3.02)*	0.96 (2.00)**	-8.91 (-2.92)*
Ge (Tariffs)	0.07 (0.39)	-25.83 (-1.56)	-15.53 (-1.36)	4.99 (1.69)***	3.11 (1.38)	-17.08 (-1.63)
Ge (Owti)	-0.07 (-2.40)**	15.37 (1.08)	-8.17 (-2.29)**	3.02 (3.25)*	1.12 (2.44)**	-9.79 (-3.04)*
Ge (Txdtrdg)	0.04 (0.94)	-14.73 (-2.64)**	-8.72 (-1.93)***	3.40 (2.80)*	1.18 (2.09)**	-11.76 (-2.71)*
Ge (Totimpov)	-0.01 (-0.13)	14.53 (0.35)	-4.59 (-0.63)	0.18 (0.16)	-0.48 (-0.84)	0.75 (0.19)
Ge (Owqi)	-0.09 (-1.08)	7.04 (0.31)	-1.47 (-0.33)	1.26 (1.16)	0.04 (0.07)	-3.28 (-0.80)
Ge (Ntarfov)	-0.05 (-0.47)	47.62 (0.88)	-17.76 (-1.27)	3.42 (1.30)	1.19 (0.98)	-10.64 (-1.21)
Rq (Lcopen)	-0.03 (-1.44)	-5.43 (-0.59)	-4.48 (-1.93)***	1.72 (3.10)*	0.10 (0.40)	-5.01 (2.65)*
Rq (Impnov85)	-0.04 (-1.73)***	2.09 (0.14)	-4.72 (-1.48)	1.44 (2.05)**	-0.07 (-0.23)	-3.75 (-1.54)
Rq (Impnov82)	-0.03 (-1.37)	-5.54 (-1.85)***	-5.30 (-1.73)***	1.71 (2.52)*	0.05 (0.16)	-4.73 (-2.30)**
Rq (Tarshov85)	-0.05 (-1.92)***	5.69 (0.37)	-4.66 (-1.40)	1.39 (1.92)***	-0.09 (-0.28)	-3.53 (-1.41)
Rq (Tarshov82)	-0.05 (-2.13)***	-4.86 (-1.61)	-5.00 (-1.60)	1.53 (2.24)**	0.02 (0.07)	-4.09 (-1.74)***
Rq (Open80s)	-0.02 (-0.36)	21.53 (0.62)	-4.44 (-0.62)	-0.14 (-0.10)	-1.22 (-1.43)	2.34 (0.47)
Rq (Tariffs)	0.04 (0.46)	3.53 (0.29)	-3.09 (-0.32)	-4.40 (-0.15)	-0.46 (-0.40)	3.50 (0.36)
Rq (Owti)	-0.05 (-1.57)	43.10 (1.14)	0.47 (0.10)	0.25 (0.18)	-0.73 (-1.01)	0.50 (0.10)
Rq (Txdtrdg)	0.15 (1.19)	-26.61 (-1.68)***	-16.89 (-1.36)	6.64 (1.82)***	1.67 (1.21)	-22.75 (-1.77)***
Rq (Totimpov)	-0.005 (-0.11)	1.29 (0.04)	3.60 (0.56)	-1.87 (-1.66)	-1.47 (-2.40)**	7.49 (1.91)***
Rq (Owqi)	-0.08 (-1.23)	5.43 (0.22)	3.93 (0.45)	0.53 (0.17)	-0.32 (-0.15)	2.56 (0.27)
Rq (Ntarfov)	-0.13 (-1.15)	65.02 (1.15)	-3.70 (-0.37)	-1.00 (-0.58)	-0.97 (-1.03)	4.48 (0.74)

-, \*\*, \*\*\* corresponds to 1%, 5% and 10% level of significance respectively.

- Control variables are in parentheses

**TABLE 3a**  
**Augmented Regression Coefficients for Political Institutions (Ps)**

Independent Variables	Dependent Variables					
	Theil	Gini	High20/Low20	Middle20	Low10	High10
Ps (Lcopen)	-0.03 (-1.57)	-4.68 (-0.64)	-6.39 (-3.57)*	2.19 (5.49)*	0.58 (3.11)*	-6.87 (-5.10)*
Ps (Impnov85)	-0.04 (-2.23)**	4.08 (0.37)	-6.72 (-2.67)*	2.17 (4.03)*	0.54 (2.28)**	-6.68 (-3.69)*
Ps (Impnov82)	-0.03 (-1.76)***	-8.38 (-3.85)*	-6.31 (-2.72)*	2.09 (4.20)*	0.54 (2.41)*	-6.47 (-3.87)*
Ps (Tarshov85)	-0.04 (-2.41)**	5.87 (0.52)	-6.95 (-2.69)*	2.24 (3.99)*	0.59 (2.38)**	-6.91 (-3.68)*
Ps (Tarshov82)	-0.04 (-2.38)**	-8.73 (-3.81)*	-6.54 (-2.70)*	2.17 (4.13)*	0.57 (2.48)**	-6.69 (-3.81)*
Ps (Open80s)	-0.05 (-1.14)	31.25 (1.06)	-13.32 (-1.95)***	3.21 (2.80)*	1.25 (2.12)**	-10.64 (-2.70)*
Ps (Tariffs)	-0.002 (-0.02)	-22.35 (-1.87)***	-13.51 (-1.59)	4.32 (2.01)**	2.69 (1.61)	-14.72 (-1.95)***
Ps (Owti)	-0.07 (-2.33)**	25.14 (1.13)	-7.36 (-2.27)**	2.84 (3.13)*	1.09 (2.39)**	-9.31 (-2.94)*
Ps (Txtrdg)	-0.03 (-0.29)	-14.12 (-3.37)*	-8.26 (-2.09)**	3.25 (3.64)*	1.14 (2.47)**	-11.23 (-3.54)*
Ps (Totimpov)	0.0003 (0.01)	17.57 (0.39)	-4.33 (-0.55)	-0.03 (-0.03)	-0.69 (-1.05)	1.45 (0.33)
Ps (Owqi)	-0.09 (-1.10)	15.14 (0.50)	-1.16 (-0.23)	1.28 (1.05)	0.10 (0.17)	-3.40 (-0.75)
Ps (Ntarfov)	-0.03 (-0.42)	67.45 (1.33)	-14.16 (-1.19)	1.98 (0.98)	0.42 (0.44)	-5.59 (-0.82)

-, \*\*, \*\*\* corresponds to 1%, 5% and 10% level of significance respectively.

- Control variables are in parenthesis

**TABLE 3b**  
**IV Augmented Regression Coefficients for Political Institutions**  
**(Demo and Auto)**

Independent Variables	Dependent Variables					
	Theil	Gini	High20/Low20	Middle20	Low10	High10
Demo (Lcopen)	-0.004	-0.93	-0.649	0.23	-0.01	-0.63
	(-1.25)	(-0.63)	(-1.66)***	(2.68)*	(-0.25)	(-2.15)**
Demo (Impnov85)	-0.005	0.53	-0.79	0.21	-0.01	-0.51
	(-1.53)	(0.24)	(-1.65)***	(2.13)**	(-0.02)	(-1.56)
Demo (Impnov82)	-0.004	(-0.88)	-0.915	0.27	0.02	-0.74
	(-1.04)	(-2.15)**	(-1.99)**	(2.93)*	(0.36)	(-2.41)**
Demo (Tarshov85)	-0.006	1.15	-0.79	0.19	-0.01	-0.45
	(-1.77)***	(0.50)	(-1.56)	(1.90)**	(-0.27)	(-1.33)
Demo (Tarshov82)	-0.005	-0.91	-0.97	0.27	0.02	-0.73
	(-1.50)	(-2.10)**	(-2.02)**	(2.79)*	(0.51)	(-2.27)**
Demo (Open80s)	-0.007	3.51	-0.67	-0.02	-0.17	0.34
	(-1.15)	(0.69)	(-0.67)	(-0.11)	(-1.32)	(0.48)
Demo (Tariffs)	-0.01	2.08	0.43	-0.39	-0.24	1.58
	(-1.81)***	(0.93)	(0.33)	(-0.81)	(-1.10)	(0.92)
Demo (Owti)	-0.007	5.84	0.13	-0.05	-0.13	0.41
	(-1.99)**	(1.11)	(0.19)	(-0.24)	(-1.12)	(0.53)
Demo (Txtrdg)	0.023	-1.83	-1.16	0.52	0.06	-1.72
	(1.14)	(-1.74)***	(-1.13)	(2.20)**	(0.55)	(-2.06)**
Demo (Totimpov)	0.0009	-0.64	0.59	0.24	-0.19	0.97
	(0.17)	(-0.14)	(0.74)	(1.84)***	(-2.86)*	(2.11)**
Demo (Owqi)	-0.01	3.04	0.40	-0.07	-0.13	0.458
	(-1.47)	(0.55)	(0.06)	(-0.17)	(-0.72)	(0.31)
Demo (Ntarfov)	-0.007	4.47	0.44	-0.19	-0.12	1.52
	(-1.13)	(0.94)	(0.85)	(-1.28)	(-1.50)	(-0.61)
Auto (Lcopen)	0.006	1.20	0.70	-0.17	0.07	0.38
	(1.24)	(0.61)	(1.11)	(-1.49)	(1.23)	(0.98)
Auto (Impnov85)	0.006	-0.19	0.92	-0.16	0.06	0.29
	(1.35)	(-0.06)	(1.45)	(-1.20)	(0.96)	(0.65)
Auto (Impnov82)	0.0041	0.69	0.64	-0.26	0.03	0.63
	(0.85)	(1.17)	(0.97)	(-1.94)***	(0.49)	(1.43)
Auto (Tarshov85)	0.006	0.99	0.94	-0.12	0.07	0.17
	(1.60)	(-0.33)	(1.43)	(-0.92)	(1.06)	(0.37)
Auto (Tarshov82)	0.005	0.63	-0.19	-0.23	0.02	0.55
	(1.34)	(1.06)	(-0.18)	(-1.74)***	(0.38)	(1.22)
Auto (Open80s)	0.004	-1.88	-0.47	0.26	0.27	-1.16
	(0.75)	(-0.39)	(-0.38)	(1.11)	(2.02)**	(-1.39)
Auto (Tariffs)	0.01	-1.89	-0.71	0.361	0.21	-1.14
	(2.39)**	(-1.16)	(-0.75)	(1.00)	(1.38)	(-1.15)
Auto (Owti)	0.008	-5.80	-0.55	0.23	0.22	-1.04
	(2.04)**	(-1.08)	(-0.34)	(0.77)	(1.60)	(-1.04)
Auto (Txtrdg)	-0.02	-0.70	-0.88	-0.04	0.25	-0.03
	(-0.97)	(-0.44)	(-0.93)	(-0.12)	(1.28)	(-0.03)
Auto (Totimpov)	0.0002	1.04	-0.62	-0.31	0.23	-1.28
	(0.04)	(0.19)	(-0.44)	(-2.07)**	(2.88)*	(-2.34)**
Auto (Owqi)	0.011	-2.96	-0.25	0.13	0.18	-0.68
	(1.88)***	(-0.53)	(-0.62)	(0.26)	(0.91)	(-0.40)
Auto (Ntarfov)	0.008	-5.68	-0.44	0.27	0.16	-1.11
	(1.46)	(-1.06)	(-0.25)	(1.59)	(1.64)	(-1.83)***

-\*, \*\*, \*\*\* corresponds to 1%, 5% and 10% level of significance respectively.

- Control variables are in parentheses

**TABLE 4**  
**IV Augmented Regression Coefficients for Social Institutions (Sch and Altr)**

Independent Variables	Dependent Variables					
	Theil	Gini	High20/Low20	Middle20	Low10	High10
Sch (Lcopen)	-0.02	-2.41	-1.07	0.58	0.17	-1.90
	(-4.37)*	(-4.18)*	(-2.75)*	(4.49)*	(2.89)*	(-4.03)*
Sch (Impnov85)	-0.02	-2.08	-0.79	0.48	0.16	-1.57
	(-3.73)*	(-3.07)*	(-1.80)***	(3.29)*	(2.14)**	(-3.06)*
Sch (Impnov82)	-0.03	-2.12	-0.85	0.50	0.15	-1.63
	(-3.79)*	(-3.24)*	(-1.99)**	(3.52)*	(2.11)**	(-3.30)*
Sch (Tarshov85)	-0.02	-2.16	-0.79	0.49	0.17	-1.60
	(-3.72)*	(-3.06)*	(-1.73)***	(3.24)*	(2.26)**	(-3.00)*
Sch (Tarshov82)	-0.02	-2.20	-0.86	0.51	0.17	-1.66
	(-3.85)*	(-3.29)*	(-1.96)***	(3.52)*	(2.28)**	(-3.28)*
Sch (Open80s)	-0.02	-0.62	-0.12	0.16	0.004	-0.56
	(-2.92)*	(-0.56)	(-0.20)	(0.71)	(0.03)	(-0.69)
Sch (Tariffs)	-0.004	-5.32	-1.92	1.12	0.52	-3.56
	(-0.24)	(-1.37)	(-1.02)	(1.43)*	(1.19)	(-1.37)
Sch (Owti)	-0.02	-1.59	-0.27	0.33	0.15	-1.10
	(-3.17)*	(-1.54)	(-0.38)	(1.36)	(1.43)	(-1.34)
Sch(Txtrdg)	-0.01	-2.64	-1.38	0.64	0.14	-2.18
	(-1.45)	(-2.51)**	(-1.89)***	(2.70)*	(1.26)	(-2.63)*
Sch (Totimpov)	-0.02	0.86	0.82	-0.12	-0.14	0.46
	(-2.05)**	(0.62)	(0.74)	(-0.38)	(-0.97)	(0.42)
Sch (Owqi)	-0.01	0.7	0.34	0.07	-0.09	-0.26
	(-2.47)**	(0.02)	(0.23)	(0.13)	(-0.35)	(-0.14)
Sch (Ntarfov)	-0.04	2.50	1.93	-0.51	-0.27	1.77
	(-1.02)	(0.90)	(0.90)	(-0.75)	(-1.15)	(0.77)
Altr (Lcopen)	-0.002	-0.17	-0.12	0.04	0.01	-0.14
	(-2.41)**	(-2.89)*	(-2.06)**	(3.03)*	(2.06)**	(-2.99)*
Altr (Impnov85)	-0.002	-0.10	-0.10	0.02	0.007	-0.07
	(-3.11)*	(-1.28)	(-1.25)	(1.31)	(0.89)	(-1.17)
Altr (Impnov82)	-0.002	-0.11	-0.11	0.03	0.01	-0.09
	(-3.12)*	(-1.45)	(-1.38)	(1.55)	(0.88)	(-1.50)
Altr (Tarshov85)	-0.002	-0.10	-0.10	0.03	0.01	-0.07
	(-3.25)*	(-1.24)	(-1.21)	(1.24)	(0.99)	(-1.17)
Altr (Tarshov82)	-0.001	-0.12	-0.11	0.03	0.01	-0.09
	(-1.78)***	(-1.49)	(-1.40)	(1.54)	(1.07)	(-1.47)
Altr (Open80s)	-0.0001	0.08	0.02	-0.01	-0.01	0.04
	(-0.07)	(0.54)	(0.15)	(-0.37)	(-0.92)	(0.35)
Altr (Tariffs)	-0.002	0.36	0.24	-0.08	-0.03	0.25
	(-2.72)*	(1.00)	(0.83)	(-0.96)	(-1.05)	(0.93)
Altr (Owti)	-0.001	0.02	0.06	-0.01	-0.001	0.02
	(-1.10)	(0.19)	(0.84)	(-0.24)	(-0.13)	(0.17)
Altr (Txtrdg)	-0.001	-0.10	-0.05	0.02	-0.002	-0.12
	(-1.10)	(-0.78)	(-0.37)	(0.99)	(-0.23)	(-1.04)
Altr (Totimpov)	-0.001	0.13	0.02	0.02	-0.01	0.09
	(-1.88)***	(1.72)***	(0.16)	(0.49)	(-1.80)***	(1.43)
Altr (Owqi)	-0.001	-0.06	0.00	-0.02	0.00	-0.07
	(-2.44)**	(-0.38)	(0.00)	(-1.54)	(0.00)	(-0.52)
Altr (Ntarfov)	-0.001	0.19	0.11	-0.04	-0.02	0.14
	(-1.58)	(1.58)	(0.58)	(-1.41)	(-1.77)***	(1.37)

-, \*\*, \*\*\* corresponds to 1%, 5% and 10% level of significance respectively.

- Control variables are in parentheses

**TABLE 5**  
**IV Augmented Regression Coefficients for Openness / Trade Policy**

Independent Variables	Dependent Variables									
	1	2	3	4	5	6	7	8	9	10
	(Va)	(RI)	(Ctc)	(Rq)	(Ge)	(Ps)	(Demo)	(Auto)	(Sch)	(Altr)
Lcopen	0.032 (1.54)	0.036 (1.68)***	0.039 (1.77)***	0.029 (1.39)	0.039 (1.82)***	0.039 (1.78)***	0.041 (1.70)***	0.035 (1.41)	0.013 (0.89)	0.004 (0.16)
Impnov85	0.001 (2.66)*	0.002 (2.87)*	0.002 (2.88)*	0.002 (2.48)**	0.002 (3.01)*	0.002 (2.86)*	0.002 (2.57)*	0.002 (2.28)**	0.0002 (0.38)	0.0003 (0.46)
Impnov82	0.001 (2.68)*	0.002 (2.91)*	0.002 (2.92)*	0.0002 (2.63)*	0.002 (3.06)*	0.002 (2.93)*	0.002 (2.67)*	0.002 (2.41)**	0.0003 (0.42)	0.0005 (0.80)
Tarshov85	0.001 (2.84)*	0.001 (3.06)*	0.001 (3.08)*	0.001 (2.66)*	0.001 (3.24)*	0.001 (3.06)*	0.001 (2.75)*	0.001 (2.44)**	0.0001 (0.32)	0.0002 (0.51)
Tarshov82	0.0005 (2.62)*	0.001 (2.56)*	0.001 (2.65)*	0.001 (2.44)**	0.001 (2.74)*	0.001 (2.59)*	0.001 (2.20)**	0.001 (1.98)**	0.0002 (0.43)	0.0004 (0.88)
Open80s	0.007 (0.51)	-0.033 (-0.41)	-0.025 (-0.28)	-0.062 (-0.08)	0.052 (0.46)	0.030 (0.28)	-0.007 (-0.09)	-0.047 (-0.84)	0.047 (0.60)	-0.042 (-0.61)
Tariffs	-0.004 (-0.34)	0.008 (0.80)	0.012 (0.89)	0.007 (1.11)	0.015 (0.55)	0.004 (0.37)	-0.004 (-0.96)	-0.001 (-0.63)	0.006 (0.81)	0.006 (1.19)
Owti	-0.230 (-1.34)	-0.324 (-1.53)	-0.302 (-1.50)	-0.149 (-0.86)	-0.425 (-1.78)***	-0.366 (-1.63)	-0.136 (-0.96)	-0.058 (-0.49)	-0.129 (-0.86)	-0.086 (-0.65)
Txtrdg	4.810 (1.50)	2.281 (1.84)***	2.504 (1.91)***	4.509 (1.63)	2.986 (1.75)***	2.441 (2.03)**	5.713 (1.46)	4.364 (1.39)	1.079 (1.76)***	0.777 (1.15)
Totimpov	-0.003 (-2.32)**	-0.002 (-1.82)***	-0.002 (-1.70)***	-0.002 (-2.31)**	-0.002 (-1.84)***	-0.002 (-2.04)**	-0.003 (-2.56)*	-0.003 (-2.33)**	-0.001 (-1.18)	-0.001 (-1.45)
Owqi	-0.800 (-1.03)	-1.082 (-0.92)	-1.243 (-0.85)	-0.522 (-0.98)	-1.101 (-0.95)	-1.010 (-0.94)	-0.487 (-1.01)	-0.264 (-0.94)	0.050 (0.27)	0.041 (0.23)
Ntarfov	-0.002 (-1.64)	-0.001 (-0.82)	-0.0005 (-0.26)	-0.002 (-1.66)***	-0.002 (-1.04)	-0.002 (-1.30)	-0.002 (-2.09)**	-0.002 (-2.12)**	-0.003 (-0.73)	-0.0004 (-0.52)

-, \*\*, \*\*\* corresponds to 1%, 5% and 10% level of significance respectively.

- Control variables are in parenthesis.



**TABLE 6**  
**Significance Count of Institutions**

Independent Variables	Dependent Variables							Cases of Significance by rows	Total cases of correct signs
	Theil	Gini	High20/Low20	Middle20	Low10	High10			
<b>Legal Institutions</b>									
Voice and Accountability (Va) (Negative sign)	5 out of 12 (5 out of 5)	3 out of 12 (3 out of 3)	5 out of 12 (5 out of 5)	7 out of 12 (0 out of 7)	2 out of 12 (1 out of 2)*	7 out of 12 (7 out of 7)	29 out of 72	28 out of 29	
Rule of Law (Rl) (Negative sign)	5 out of 12 (5 out of 5)	4 out of 12 (4 out of 4)	9 out of 12 (9 out of 9)	10 out of 12 (0 out of 10)	9 out of 12 (0 out of 9)	10 out of 12 (10 out of 10)	47 out of 72	47 out of 47	
Control of Corruption (Ctc) (Negative sign)	5 out of 12 (5 out of 5)	4 out of 12 (4 out of 4)	8 out of 12 (8 out of 8)	9 out of 12 (0 out of 9)	8 out of 12 (0 out of 8)	9 out of 12 (9 out of 9)	45 out of 72	45 out of 45	
<b>Economic Institutions</b>									
Government Effectiveness (Ge) (Negative sign)	5 out of 12 (5 out of 5)	3 out of 12 (3 out of 3)	8 out of 12 (8 out of 8)	9 out of 12 (0 out of 9)	8 out of 12 (0 out of 8)	8 out of 12 (8 out of 8)	41 out of 72	41 out of 41	
Regulatory Quality (Rq) (Negative sign)	3 out of 12 (3 out of 3)	2 out of 12 (2 out of 2)	2 out of 12 (2 out of 2)	6 out of 12 (0 out of 6)	1 out of 12 (1 out of 1)*	5 out of 12 (5 out of 5)	19 out of 72	18 out of 19	
<b>Political Institutions</b>									
Democracy (Dem) (Negative sign)	3 out of 12 (3 out of 3)	3 out of 12 (3 out of 3)	4 out of 12 (4 out of 4)	7 out of 12 (0 out of 7)	1 out of 12 (1 out of 1)*	5 out of 12 (4 out of 5)*	30 out of 72	28 out of 30	
Autocracy (Aut) (Negative signs)	3 out of 12 (0 out of 12)	0 out of 12 (0 out of 0)	0 out of 12 (0 out of 0)	3 out of 12 (3 out of 3)	2 out of 12 (0 out of 2)*	2 out of 12 (2 out of 2)	10 out of 72	8 out of 10	
Political Stability (Ps) (Negative sign)	5 out of 12 (5 out of 5)	4 out of 12 (4 out of 4)	8 out of 12 (8 out of 8)	9 out of 12 (0 out of 9)	8 out of 12 (0 out of 12)	9 out of 12 (9 out of 9)	53 out of 72	53 out of 53	
<b>Social Institutions</b>									
Average Schooling Years (Sch) (Negative sign)	9 out of 12 (9 out of 9)	6 out of 12 (6 out of 6)	6 out of 12 (6 out of 6)	7 out of 12 (0 out of 7)	5 out of 12 (0 out of 5)	6 out of 12 (6 out of 6)	39 out of 72	39 out of 39	
Adult Literacy Rate (Altr) (Negative sign)	8 out of 12 (8 out of 8)	2 out of 12 (1 out of 2)*	1 out of 12 (1 out of 1)	1 out of 12 (1 out of 1)	3 out of 12 (1 out of 3)*	1 out of 12 (1 out of 1)	16 out of 72	14 out of 16	
Cases of Significance (by columns)	51 out of 120	31 out of 120	51 out of 120	68 out of 120	47 out of 120	62 out of 120	-	-	

\* Observation made that a variable has entered the equation significantly but with a wrong sign

Significance is observed at 1%, 5% and 10% levels

## DATA AND SOURCES

- Altr:** Adult Literacy Rate, Year: 1999, Source: WDI (2002)
- Auto:** Autocracy, Year: 1999, Source: Polity IV dataset
- Ctc:** Control for Corruption, Year: 1997/98. Source: Kaufman et al. (2002)
- Demo:** Democracy, (numeric) Range = 0-10 (0 = low; 10 = high), Democracy Score: general openness of political institutions. The 11-point Democracy scale is constructed additively. Year: 1999, Source: Polity IV dataset
- Disteq:** Distance from Equator of capital city measured as  $\text{abs}(\text{Latitude})/90$ . Source: Rodrik, Subramanian & Trebbi (2002)
- Engfrac:** Fraction of the population speaking English. Source: Rodrik, Subramanian & Trebbi (2002)
- Eurfrac:** Fraction of the population speaking one of the major languages of Western Europe: English, French, German, Portuguese, or Spanish. Source: Rodrik, Subramanian & Trebbi (2002)
- Ge:** Government Effectiveness, Year: 1997/98. Source: Kaufman et al. (2002)
- Gini:** Coefficient in Percentage Points as calculated by WIDER. Year: 1995, Source: UNU/WIDER World Income Inequality Database (WIID) <http://www.wider.unu.edu/wiid/wiid.htm>
- High10:** Highest Income Decile, Year: 1995, Source: UNU/WIDER World Income Inequality Database (WIID) <http://www.wider.unu.edu/wiid/wiid.htm>
- High20:** Fifth Income Percentile, Year: 1995, Source: UNU/WIDER World Income Inequality Database (WIID) <http://www.wider.unu.edu/wiid/wiid.htm>
- Sch:** Average Schooling Years in the total population at 25, Year: 1999. Source: Barro R & J. W. Lee data set, <http://post.economics.harvard.edu/faculty/barro/data.html>
- Impnov85:** Import Penetration: overall, 1985. Source: Rose (2002).
- Impnov82:** Import Penetration: overall, 1982. Source: Rose (2002).
- Lcopen:** Natural logarithm of openness. Openness is given by the ratio of (nomnal) imports plus exports to GDP (in nominal US dollars), Year: 1985. Source: Penn World Tables, Mark 6.
- Logfrankrom (FR):** Natural logarithm of predicted trade shares computed following Frankel and Romer (1999) from a bilateral trade equation with 'pure geography' variables. Source: Frankel and Romer (1999).
- Low10:** Lowest Income Decile, Year: 1995, Source: UNU/WIDER World Income Inequality Database (WIID) <http://www.wider.unu.edu/wiid/wiid.htm>
- Low20:** First Income Percentile, Year: 1995, Source: UNU/WIDER World Income Inequality Database (WIID) <http://www.wider.unu.edu/wiid/wiid.htm>
- Nontarfov:** Non- Taiff Barriers Coverage: Overall, 1987. Source: Rose (2002).
- Open80s:** Sachs and Warners (1995) composite openness index. Source: Rose (2002).
- Owqi:** Non Trade Barriers Frequency on intermediate inputs, Capital goods, 1985. Source: Rose (2002).
- Owti:** Tariffs on Intermediate and Capital Goods, 1985. Source: Rose (2002)
- Ps:** Political Stability, Year: 1997/98. Source: Kaufman et al. (2002)
- Ptr:** Pupil Teacher Ratio, Primary, Year: 1999, Source: WDI (2002)
- Rl:** Rule of Law, Year: 1997/98. Source: Kaufman et al. (2002)
- Rq:** Regulatory Quality, Year: 1997/98. Source: Kaufman et al. (2002)

**Tarshov85:** TARS Trade Penetration: overall, 1985. Source: Rose (2002).

**Tarshov82:** TARS Trade Penetration: overall, 1982. Source: Rose (2002).

**Tariffs:** Import Duties as %age imports, Year:1985. Source: World Development Indicators (WDI), 2002.

**Theil:** UTIP-UNIDO Wage Inequality THEIL Measure - calculated based on UNIDO2001 by UTIP, Year: 1997. Source: University of Texas Inequality Project (UTIP) <http://utip.gov.utexas.edu>.

**Tlex:** Public Spending on Education, Total (as a percentage of GDP), Year: 1999, Source: WDI (2002)

**Thrd20:** Third Income Percentile, Year: 1995, Source: UNU/WIDER World Income Inequality Database (WIID) <http://www.wider.unu.edu/wiid/wiid.htm>

**Totimpov:** Weighted Average of Total Import Charges: overall, 1985. Source: Rose (2002)

**Txtrg:** Trade taxes / trade, 1982. Source: rose (2002)

**Va:** Voice and Accountability, Year: 1997/98. Source: Kaufman et al. (2002)