# TRADE POLICY, OPENNESS AND INSTITUTIONS

**Dawood Mamoon**
Institute of Social studies (ISS)
PO Box 29776
2502 LT The Hague, The Netherlands
Mamoon@iss.nl
**&**
**S Mansoob Murshed**
Institute of Social studies (ISS)
PO Box 29776
2502 LT The Hague, The Netherlands
The Birmingham Business School
University of Birmingham
Edgbaston, Birmingham B15 2TT, UK.
Centre for the Study of Civil War (CSCW)
PRIO, Oslo, Norway
Murshed@iss.nl
*PRELIMINARY DRAFT*

ABSTRACT

This paper examines the importance of institutions vis-à-vis policies specifically trade policies. A recent literature has tried to demonstrate that more open economies grow faster. On the other hand it has also been asserted that it is not openness per-se but institutions and good governance that matter in promoting growth. This paper attempts to test this hypothesis across a cross-section of nations. Unlike other papers in the field we have tested not only for the degree of openness but also for trade policy indicators as well as a fuller set of six institutional variables. Our broad finding is that although institutions matter, trade policies are also relevant to promoting growth, whereas openness per se has little impact on growth.

October 30th 2004.

Keywords: International Integration; Economic Development
JEL Classification: F 15; O 10

## 1 Introduction

Deleted: :

In poor low-income nations economic growth constitutes the principal avenue for poverty reduction. Redistribution, even when feasible, can never be enough on its own to substantially reduce poverty. Despite the fact that there may be a close link between growth and poverty reduction; growth may result not just from policies that foster it like trade policy reforms, but because certain nations have superior institutions within which the policy framework is determined and executed. This also raises the issue of reverse causality. Higher incomes that are the result of growth in the context of well-functioning institutions, in turn also produce superior institutions that are a function of increased per-capita income. By institutions we imply factors that result in good governance: political stability, voice and accountability, the rule of law, the regulatory framework, bureaucratic quality and the control of corruption (see Kaufmann, Kraay and Zoido-Lobaton, 2002 for example). There is little controversy over the imperative role played by both international trade and institutional quality in fostering growth. Economic development is a phenomenon, which encompasses a multitude of social, economic, political and scientific phenomenon. In practice, accounting for all of these factors in order to explain growth is a difficult task.

**Deleted:** We are also interested in poverty and trade. I will fill this in---this link is via growth, which is the object of the empirical analysis that follows. Institutions versus policy debate. ¶

The purpose of this paper is to empirically examine the contribution of trade policy changes upon poverty in an era of globalisation which makes greater openness imperative. We also analyse the contribution of institutions to growth, as well as other policies such as human capital accumulation.

The link between trade, trade policy changes (including trade liberalisation) and poverty is indirect and contains a number of channels. First, there is the macroeconomic linkage. This includes the effect on poverty of neutral growth, growth that does not alter the distribution of income but raises or lowers all "boats" proportionately. Within this category we may think of growth where the winners can compensate the losers. The second macroeconomic channel concerns alterations in the distribution of income via altering factor of production shares with its subsequent impact on poverty. Changes in the pattern of international trade usually alter factor rewards and may impact on poverty. Thirdly, alterations in relative prices or even the general price level may have a poverty impact, and these price changes may have a macroeconomic origin (fiscal policy, monetary policy, exchange rate policy, supply shocks). Lessons regarding trade liberalisation and its effect on growth are important for poverty reduction, especially for low-income countries where growth is the only practicable means of poverty reduction in the long-run.

With regard to international trade and poverty, it has to be remembered that trade can increase or decrease in the absence of any changes to the trade policy stance (tariffs, non-tariff barriers, export subsidies etc.).[1] Globalisation, factors that are external to an individual nation, may facilitate trade. Technological changes may make certain goods, say imports, cheaper despite trade restrictions. Similarly, a fall in transportation costs or the end of war may alter the relative price of tradables encouraging more international trade. Trade may promote growth but changes in trade

[1] By trade policy we mean governmentally induced mechanisms that restrict, relax or facilitate the international exchange of certain or all goods and services.

policies may not foster more international trade and hence not contribute to growth or poverty reduction.

The rest of the paper is organised as follows. Section 2 contains a review of the literature covering the debate regarding the alternative impact of trade policy or openness on growth, with some authors establishing a direct link between openness and growth, whilst others emphasise the role of good institutions. Sections 3(data and methodology) and 4 (regressions) contain our contribution to the debate. We go well beyond the analysis of Rodrik et al(2004) by including more institutional measures, openness indicators, as well as trade policy variables. Finally, section 5 concludes.

## 2 Trade Policy, Openness and Institutions

Where do the fundamental determinants of growth lie? Apart from the effort required in savings or capital accumulation, do the fundamental determinants of growth lie in policies such as trade policy or human capital accumulation or is growth fostered by good institutions? In an influential paper, Sachs and Warner (1995) argued that countries that were more open (based upon a number of openness indicators) grew faster than countries that were not open, hence creating pre-conditions for poverty reduction. A country was classified as not open based upon violation of any of the indicators. Rodriguez and Rodrik (2000), however, have convincingly argued that the Sachs and Warner (1995) study suffered from sample selection bias and that some openness indicators could be highly correlated to other indicators of good governance or institutional quality. As an example of the first problem, countries in sub-Saharan Africa failed to be counted as open as most of them had state monopolies controlling the export trade. This is not true because "open" economies as defined by Sachs and Warner (1995), such as Indonesia also had state monopolies in petroleum for example. Secondly, another indicator of the lack of openness a black market premium on the exchange rate could be highly related to institutional quality (corruption, regulatory capacity). Most damaging of the Rodriguez and Rodrik critique of Sachs and Warner's assertion that openness promotes growth lies in the fact that an Africa dummy variable capturing the special effect of Africa on cross-national growth could be substituted for the two crucial openness indicators that contributed significantly to growth.

Rodriguez and Rodrik (2000) went on to review some of the key cross-national empirical literature on the relationship between trade policy and economic growth and conclude that there is little evidence that open trade policies, in the sense of lower tariff and non-tariff barriers to trade, are significantly associated with economic growth. The theory on this relationship, in the case of a small economy that takes world prices of tradable goods as given, would predict that: (1) in static models with no market imperfections and other pre-existing distortions, the effect of a trade restriction is to reduce the level of real GDP at world prices. In the presence of market failures such as externalities, trade restrictions may increase real GDP (although they are hardly ever the first-best means of doing so); (2) in standard models with exogenous technological change and diminishing returns to reproducible factors of production, a trade restriction has no effect on the long-run (steady-state)

Dollar and Kraay (2002) have evaluated the role of institutions and international trade in economic development. They provide evidence that countries with better

**Deleted:** ¶
The notions like 'better institutions and more openness' have recently become an integral part of today's 'Convergence and Development' debate. There is no controversy over the imperative role played by both international trade and institutional quality in determining the growth rates of the economies of the world. Indeed processes of growth cannot be explained without the mention of any of these two concepts. But fact remains that economic development is a phenomenon whose boundaries precincts multitude of social, economic, political and scientific phenomenon. In theory, accounting for all of them in order to explain growth is definitely a difficult task, if not impossible. ¶

**Deleted:** However it is wise to seek for the closest determinants of growth rather than indulging into the complex net of infinite variables which all seem to explain growth but also owe this explanation to the few more important and closer determinants of growth. To this effect the current debate on institutions and trade apropos growth goes beyond a mere economic rhetoric and contributes significantly in understanding how growth can be achieved through most efficient means. ¶
¶
Much recently two well known World Bank economists,

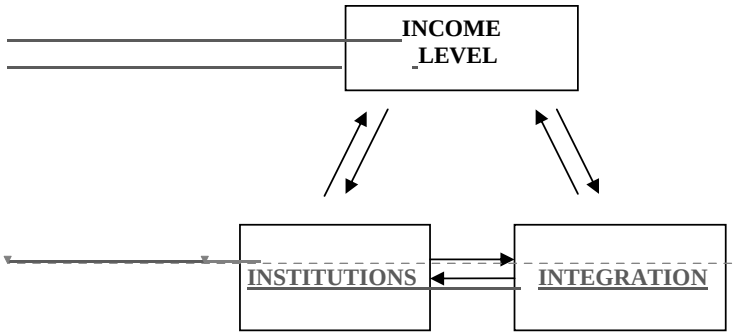
**Deleted:** in detail

**Deleted:** d

institutions and countries that trade more grow faster. However, they have concluded that it is trade which matters more in this nexus as a short term pro-growth strategy. Institutions matter in the long-run. But this conclusion is rejected by Rodrik et al (2002), who find that the quality of institutions 'trumps every thing else'. They conclude that when institutions are controlled for, the measures of integration have at best insignificant effects on the level of per-capita income. But there is a potential reverse causality between per-capita income levels or growth and institutions. For example richer and more developed countries have better institutions and they are more liberalised than more underdeveloped nations. So a pertinent question can be raised whether rich countries are rich because they are more open and have better institutions or does the relationship work in reverse? There is also a debate whether better institutions encourage trade or is it openness and liberalisation which eventually bring improvements to institutions? There is a bit of evidence to suggest that both possibilities exist (see for example: Anderson and Mercuiller, 1999; and Wei, 2000).

Figure 1 below elaborates how the inter relationship between growth, institutions and trade works In short theory and literature both imply that any analysis, which attempts to capture the effects of institutions and openness on growth, would be loaded with the problems of endogeniety and reverse causation: "The extent to which an economy is integrated with the rest of the world and the quality of its institutions are both endogenous, shaped potentially not just by each other but also by income levels. Problems of endogeniety and reverse causality plague any empirical researcher trying to make sense of relationship among these causal factors (Rodrik et al, 2004:2)." Fortunately, there are econometric techniques to address this endogeneity problem.

**Figure 1: Non Linearity of Institutions and Integration**




Secondly, not all institutions may matter. Democracy and voice and accountability may not always contribute to growth, as has been the case in rapidly growing nations such as China and Singapore, see Barro (1996). There is also the issue of human capital and its place in fostering growth, and even aiding the formation of superior institutions. Glaeser et al (2004) bring forth an important missing link to the debate by suggesting that human capital is more important for growth than are institutions. In fact they went one step further by suggesting that human capital actually contributes towards institutional improvement. Their paper presents the view point whereby the potential of developing countries to grow depends more on the leadership (e.g. good or bad dictatorships) rather than institutional quality.

**Deleted:** equatio

**Deleted:**

**Deleted:** Their support for institutions was limited only to its long term relationship with growth.

**Deleted:** Overall the study recommends that trade matters more in determining growth than institutions.

**Deleted:** as they

**Deleted:** ound

**Deleted:** out

**Deleted:** '

**Deleted:** d

**Deleted:** if

**Deleted:** s

**Deleted:** ¶

**Deleted:** <sp>

**Deleted:**

**Deleted:** ¶

**Deleted:** Notwithstanding the importance of institutions in economic development, the economic success of countries like China, which is one of the fastest growing economies of contemporary times and where no institutional constraints are present because of its communist orientation, defies and undermines the superiority of institutional quality over the rest in explaining growth. Similarly, examples like Singapore, which tops the world in institutional quality but which is led by a dictator who uses institutional freedom to his discretion and the recent economic comeback of Pakistani economy with more than a 6 percent growth under the dictatorial rule of General Pervez Musharraf seek to reject such a unilateral approach towards growth.¶
¶
Yes: but this about democracy (voice and accountability) and not necessarily other aspects of governance such as government effectiveness, regulatory burden and political stability.¶
¶

**Deleted:**

**Deleted:** the

**Deleted:** , whereas the good leader ship is the one who invests more on human and physical capital

On the importance of human capital vis-à-vis growth, Schiff (1999), after reviewing recent empirical studies on the subject concludes that poor countries can only grow faster than rich countries if their initial stock of human capital exceeds the average level among other poor nations. For example, if East Asian and South Asian economies are compared, differences in human capital and differences in convergence level seem to move together. For instance, East Asian Developing countries witnessed unprecedented increases in GNP per capita over the last three decades, e.g. 10 times for Malaysia, 65 times for Republic of Korea and 13 times for Thailand. While during the same period for Asian least developed countries (Bhutan, Cambodia and Lao People's democratic Republic) and South Asian developing countries (Bangladesh, India and Pakistan) only a meagre increase of 2 to a little over 5 times took place.

It is intriguing to note that in 1960s when most of these countries were at similar stages of economic development, East Asian developing countries were far ahead of both Asian least developed countries and South Asian developing countries in human capital. In fact, the total literacy rates for East Asian developing countries in the 1960s were as high as 71 percent for the Republic of Korea, 68 percent for Thailand and even Malaysia had a rate of over 50 percent. On the other hand, in case of all Asian least developed countries and South Asian developing countries, the total literacy rates were as low as only 9 percent for Nepal and 15 percent for Pakistan with Cambodia having 38 percent literacy. After three decades, while Asian least developed countries and South Asian developing countries have some what ameliorated their human capital, the total literacy rates are still far below 50 percent in the cases of Bangladesh, Nepal and Pakistan. During the same period, however, East Asian developing countries have more or less achieved the formidable task of educating most of their people. As a result, in the late 1990s, the total literacy rate of the Republic of Korea has reached 98 percent, and Malaysia managed to achieve a rate of about 90 percent. In short, economic progress in East Asia during the 1980s occurred because of their well-developed human capital endowment which gathered momentum in the 1960s or earlier.

## 3 Data and Methodology

In the light of the debate above our growth equation comprises all the core determinants of growth, namely international economic integration (including measures of openness and trade policy), institutions and also human capital. We have also included physical capital:

$$\log y_i = \alpha + \beta N_i + \chi TP_i + \gamma HK_i + \eta PK_i + \varepsilon_i \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

In many ways the equation above is an augmented neo-classical growth model. The variable $y_i$ is income per capita in country i, $N_i$, $TP_i$, $HK_i$, and $PK_i$ are respectively measures for institutions, integration, human capital and physical capital and $\varepsilon_i$ is the random error term.

Human Capital is represented by average schooling years. In order to have an in-depth insight into how institutions or increased integration affects the growth potential of a country, we will employ several concepts of institutions and trade policy openness variables following various definitions prevalent in the literature. For example, we

**Deleted:**
**Deleted:** countrie
**Deleted:** ¶ ¶ Case in point is
**Deleted:** where
**Deleted:** den
**Deleted:** e.g.,
**Deleted:** e.g.,
**Deleted:** i
**Deleted:** a rate of
**Deleted:** particularly,
**Deleted:** the
**Deleted:** the onslaught of East Asian developing countries' rapid
**Deleted:** along with
**Deleted:** reasonably
**Deleted:** started
**Deleted:** to take
**Deleted:** even
**Deleted:** ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ... [1]
**Deleted: Analysis and Results:** ... [2]
**Deleted:** ht
**Deleted:** debate
**Deleted:** of
**Deleted:** the
**Deleted:** ree
**Deleted:** last but not the least
**Deleted:** :
**Deleted:** where
**Deleted:** ¶
**Deleted:** The paragraph above n ... [3]
**Deleted:** S
**Deleted:** Whereas, i
**Deleted:** have used
**Deleted:**
**Deleted:** /

take into account the six different classifications of institutions identified by Kaufman et al (2002), namely rule of law (Rl), political stability (Ps), regulatory quality (Rq), government effectiveness (Ge), voice and accountability (Va) and control of corruption (Ctc).[2] On the integration front, we have carefully chosen three specific measures of openness. For example, ratio of nominal imports plus exports to GDP (lcopen) is the conventional openness indicator (see Frankel and Romer, 1999; Alcala and Ciccone, 2002; Rose 2002, Dollar and Kraay, 2002; 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 of trade restrictiveness and have also been employed in this study. Other measures which capture restrictions in overall trade are non-tariff barriers. We used overall non-tariff coverage (Ntarfov) and non-tariff barriers on intermediate inputs and capital goods (Owqi) as two proxies of non-tariff barriers (see Rose, 2002). More over 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) and Leamer's Openness indicator (Leamer 82) as being apposite proxies of openness. We have also used these composite measures to examine in detail how openness influences growth rate. In short this study has employed 6 institutional and 11 openness variables in an attempt to undertake a comprehensive analysis of how institutional quality and exposure to increased international trade affects the economic performance of a country.

Note that unlike in the comparable study by Rodrik et al (2004) we have (a) included a role for human capital, (b) employed six institutional variables compared to one only in Rodrik et. Al (rule of law), (c) included trade policy variables and not just openness indicators and (d) expanded the set of openness measures employed.

As indicated earlier, there are potential endogeneity problems between growth and institutions, as well as between openness (or trade policy) and growth. One way of cleansing our empirical analysis from endogeneity in explanatory variables and the reverse causality between dependent and independent variables is to adopt Instrumental Variable (IV) regression analysis. As a first step to run IV regressions we have to find appropriate instruments for our 11-openness/ trade policy variables and 6 institutional concepts. The first stage estimation includes instruments for the two explanatory variables with potential endogeneity problems. The estimate in the next stage utilises the predicted variables of these variables for institutions and trade policy/openness in a standard growth regression as in (1).

We followed previous studies, which have not only identified instruments for openness and institutions, but they have also run several robustness checks to validate the power of these instruments. The literature clearly establishes that predicted trade shares following Frankel and Romer (FR) (1999) from a gravity equation is the most

[2] The value of these variables range from -2.5 (worst) to 2.5 (best) for every country in the sample.

**Deleted:** Other t
**Deleted:** onetheless
**Deleted:** such
**Deleted:** not
**Deleted:** and only
**Deleted:** overall trade share
**Deleted:** It is of a pertinent value to also understand how trade policy affects income. Some analysts have tried to use different
**Deleted:** indicators
**Deleted:** s
**Deleted:** duly
**Deleted:** non tariff
**Deleted:** non tariff
**Deleted:** non tariff
**Deleted:** non tariff
**Deleted:** I
**Deleted:** l
**Deleted:** for
**Deleted:** Thus w
**Deleted:** popular
**Deleted:** as
**Deleted:** to investigate
**Deleted:** ¶
¶
Differences with Rodrik et. Al (2002): we utilise more institutional or governance variables, a richer set of openness indicators and above all trade policy indicators. ¶
¶
**Deleted:** ¶
¶
¶
Though correlation among variables gives valuable information, an extensive econometric investigation is pre-requisite. But before embarking on any such exercise let us analyse our selected determinants of growth since some of them are not purely exogenous. For example the richer and more developed countries also have better institutio ... [4]
**Deleted:** to
**Deleted:** e
**Deleted:** i
**Deleted:** i
**Deleted:** go for
**Deleted:** next stage
**Deleted:** estimates
**Deleted:** TP and N
**Deleted:** few
**Deleted:** the

appropriate instrument for openness/ trade policy. On the other hand, the most compelling institutional instrument is the measure of settler mortality suggested by Acemolgu, Johnson and Robinson (2001). But 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 another widely used institutional instrument namely 'fractions of the population speaking English and Western European languages as the first language' which covers as many as 140 countries. Thus following Dollar and Kraay (2002) and Hall and Jones (1999), we use this instrument for our institutional proxies. Following Rodrik et al (2004), we employed 'distance from the equator' as a third instrument (proxy for geography) and is a purely exogenous concept.

Our IV regression model has two equations, where in the first stage we generate predicted values of openness/ trade policy and institutions by regressing them on a set of instruments.

$$N_i = \lambda_i + \phi ENG_i + \nu EUR_i + \tau FR_i + \theta GEO_i + \varepsilon_{Ni} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$TP_i = \pi_i + \varpi FR_i + \varsigma ENG_i + \rho EUR_i + \upsilon GEO_i + \varepsilon_{Ni} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

where $ENG_i$ and $EUR_i$ are our instruments for institutions referring to fractions of population speaking English and European languages respectively. $FR_i$ is instrument for trade policy and $GEO_i$ is proxy for geography showing distance from the equator.

At the second stage the predicted values of respective institutional and openness variables are employed in growth equation (equation 1) along with concepts of human capital and physical capital.

**Deleted:** uch

**Deleted:** e

**Deleted:** former to be the inst

**Deleted:** our

**Deleted:** is a

**Deleted:** for

**Deleted:** shall

**Deleted:** s

**Deleted:** a

**Deleted:** .

## 4 Regression Results

**Table 1: First Stage Regression Results for Instrumental variables:**

| First Stage Results | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **lcopen** | **Impnov** | **Tarshov** | **Tariff** | **Owti** | **Txtrg** | **Totimpov** | **Owqi** | **Ntarfov** |
| Lfrkrom | 0.51<br>(12.7)* | 15.9<br>(7.5)* | 27.6<br>(7.2)* | -1.17<br>(-1.07) | -0.07<br>(-3.7)* | 0.004<br>(0.75) | -15.3<br>(-4.6)* | -0.04<br>(-1.19) | -17.79<br>(-3.01)* |
| Engfrac | 0.37<br>(2.4)* | 16.3<br>(2.3)* | 25.4<br>(2.01)* | -0.98<br>(-0.27) | 0.004<br>(0.07) | 0.002<br>(0.12) | 11.28<br>(0.99) | -0.11<br>(-0.98) | 17.06<br>(0.84) |
| Eurfrac | -0.12<br>(-1.2) | -5.9<br>(-1.6) | -5.5<br>(-0.6) | -3.7<br>(-1.3) | -0.06<br>(-1.3) | -0.18<br>(-1.7)*** | -2.18<br>(-0.32) | -0.001<br>(-0.01) | -28.2<br>(-2.33)* |
| Disteq | -0.77<br>(-0.1) | 0.05<br>(0.57) | 0.1<br>(0.54) | -0.19<br>(-3.9)* | -0.002<br>(-2.3)* | -0.001<br>(-4.04)* | 0.18<br>(0.93) | -0.01<br>(-0.71) | -0.27<br>(-0.77) |
| F-test | 43.9* | 17.4* | 15.8* | 5.6* | 6.04* | 5.9* | 6.1* | 1.04 | 3.88* |
| $R^2$ | 0.55 | 0.43 | 0.41 | 0.19 | 0.21 | 0.32 | 0.26 | 0.04 | 0.18 |

| First Stage Results | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Open80s** | **Leamer82** | **VA** | **PS** | **GE** | **RQ** | **RL** | **CTC** |
| Lfrkrom | 0.16<br>(2.55)* | -0.07<br>(-0.48) | 0.86<br>(2.37)* | 0.26<br>(2.88)* | 0.25<br>(3.31)* | 0.097<br>(1.20) | 0.27<br>(3.42)* | 0.27<br>(3.53)* |
| Engfrac | -0.03<br>(-0.16) | 0.16<br>(0.70) | 0.65<br>(2.03)* | 0.24<br>(0.70) | 0.48<br>(1.6) | 0.286<br>(0.88) | 0.502<br>(1.54) | 0.73<br>(2.43)* |
| Eurfrac | 0.16<br>(1.22) | -0.15<br>(-0.95) | 0.88<br>(4.47)* | 0.64<br>(3.04)* | 0.62<br>(3.39)* | 0.82<br>(4.21)* | 0.51<br>(2.63)* | 0.49<br>(2.73)* |
| Disteq | 0.01<br>(4.03)* | 0.01<br>(3.99)* | 0.02<br>(7.09) | 0.02<br>(6.63)* | 0.02<br>(7.37)* | 0.01<br>(3.76)* | 0.03<br>(8.14)* | 0.029<br>(8.08)* |
| F-test | 7.6* | 4.7* | 26.9* | 17.8* | 24.3* | 11.9* | 25.2* | 28.2* |
| $R^2$ | 0.31 | 0.31 | 0.43 | 0.35 | 0.42 | 0.25 | 0.42 | 0.45 |

t- values in the parenthesis. *, **, *** denotes significance at 1%, 5 % and 10% levels respectively.

It would be interesting to know what information our first stage results give us regarding the quality of instruments. Table 1 suggests that for nearly all specifications of openness and institutional quality, the respective instruments carry the right signs. In some cases where the instruments carry wrong signs, they are also insignificant. Before proceeding to our second stage regressions, we tried to see how predicted values of our openness and institutional variables relate to economic growth in a linear framework. It is interesting to note that the use of instrumental variables provides a much clearer picture of openness/ trade policy and institutions with regard to economic growth and establishes the robustness of our instruments.

Moving on to the second stage regression analysis, Table 2A (appendix) provides the results of growth equation with combinations of our 3 openness variables with all the institutional concepts under various specifications. The results are very similar to the ones obtained by Rodrik et al (2004). Institutions clearly trump openness because in most cases it is noted that the latter variable enters into the growth equation with the wrong sign. The insignificance of our openness proxies capturing the level of trade or

**Deleted:** a

**Deleted:** nearly

**Deleted:** we carry out

**Deleted:**

**Deleted:** of

**Deleted:**

**Deleted:** apropos

**Deleted:** Now we can carry out our

**Deleted:** with much confidence.

**Deleted:** over

**Deleted:** a

movements in terms of trade in explaining long term growth rate of a country comes as no surprise. These findings are in accordance with the findings of Dollar and Kraay(2002) and Rodrik (1998), who suggest that the correlation of trade levels and growth performance is at best weak in the long run. Our results reinforce this fact in a more comprehensive manner as we have provided additional specifications to the growth equation by including human capital and physical capital. Especially, the inclusion of human capital has improved the explanatory power of our model as it is evident from higher $R^2$ values and it has helped to anchor the influence of institutions in explaining growth.

In tables 2B and 2C (appendix), we have regressed various measurements of tariff and non-tariff barriers along with institutions under different specifications of equation 1. Interestingly, we find that institutional superiority vis-a-vis trade policy has toned down. In some instances, institutions enter the growth equation insignificantly. The frequency of such cases increases when human capital is present in equation 1. For example, in table 2C government effectiveness, regulatory quality, rule of law and control for corruption have the wrong sign whenever they enter the growth equation with overall non-tariff barriers (ntarfov). Whereas table 2B shows that rule of law also enters into the growth equation with a negative sign with our second proxy of NTBs (owqi) under specification 1. This is an interesting finding in the light of the Rodrik et al (2004) paper, who employed the rule of law as the only proxy for institutions and then go on to claim the superiority of institutions over any other process of growth as they find out that rule of law is always significant and carries the right sign as opposed to their different openness proxies which sometimes carried the wrong signs. Though we also find that institutional superiority is unquestioned in a growth equation which has openness proxies, but in the presence of trade policy variables the superiority of institutions has diminished especially for the rule of law, which has appeared with wrong signs in some cases. Additionally we observe from table 2B that voice and accountability and control for corruption carry negative signs under specification 4 of the growth equation when they are paired with tariffs.

As far as our trade policy variables are concerned, they also can have wrong signs. But unlike Rodrik et al (2004), where in many instances openness variables carry wrong signs and were also significant, our trade policy variables which carry wrong signs are generally insignificant. For example our proxies of import taxes namely tariff (import duties as percentage of imports) in 2B and totimpov (overall weighted average total import charges) in 2C are the trade policy variables which carry wrong signs most frequently. But then they are also the ones who have been insignificant under all specifications and with any of the institutional combinations respectively. On the contrary, ntarof (overall NTBs) and txtrg (overall trade taxes), which are the only significant trade policy variables, always enter the growth equation with the right signs (-ve) showing that trade policy does matter and trade restrictiveness indeed lowers the growth.

It is important to understand why some trade policy variables have the wrong signs or are insignificant, whereas some have passed the test by emerging as significant contributors to growth. With regard to the insignificance of import taxes, one can suggest that their contribution towards growth depends upon the composition of goods imported. For example, for a developing country the availability of technologically superior import goods has positive effects on growth, but if imports

**Deleted:** duly pitched down
**Deleted:** non tariff
**Deleted:** apropos
**Deleted:** further. I
**Deleted:** IMPORTANT: in which cases.
**Deleted:** .
**Deleted:** show
**Deleted:** non tariff
**Deleted:**
**Deleted:** observation
**Deleted:** went
**Deleted:** s
**Deleted:** ied
**Deleted:** show
**Deleted:** does go
**Deleted:** toned
**Deleted:** own
**Deleted:** ¶
**Deleted:** have
**Deleted:** shown
**Deleted:** paper
**Deleted:** However in table 3B, our trade policy variables namely tariff
**Deleted:** s
**Deleted:** I
**Deleted:** in Table 3C
**Deleted:** ied
**Deleted:** have
**Deleted:** Notwithstanding the important role of trade policy in economic growth, in the light of our results
**Deleted:** becomes
**Deleted:** very
**Deleted:** would
**Deleted:** show
**Deleted:** coming out
**Deleted:** agents of
**Deleted:** ell
**Deleted:** R
**Deleted:** ing
**Deleted:** ve
**Deleted:** the

are dominated by consumption goods, a reduction in import taxes may very well hamper the growth potential and cost the public exchequer. The same reasoning applies to totimpov. Rodrik (1998) supports this line of argument, as he found out that change in import taxes fail to influence growth in Sub Saharan African countries. According to him it was export taxes, which if lowered, contribute to growth: However, Esfhani (1991) provides contrary evidence. Similarly Lee (1995) found out that there is a significant impact of imports on growth suggesting import taxes do matter in affecting growth. Thus in the context of a cross sectional study, it is wiser to examine the impact of overall trade taxes (import and export) instead of looking at any one of them in order to have a general insight into the workings of trade taxes apropos economic activity. According to Rodriguez and Rodrik (2000), overall trade taxes captures trade restrictiveness in a more complete manner than any of the other proxies of trade policy as it comprises of both import and export taxes.

Not surprisingly, txtrg (overall trade taxes) comes out to be the most important trade policy variable since it is overwhelmingly significant whenever it enters into the growth equation with political stability, rule of law and control of corruption. In short, txtrg affects growth significantly in 10 out of 20 cases. In the light of previous studies (Rodrik et al, 2004 ; Dollar and Krray, 2002), where openness variables largely remained insignificant whenever they entered the growth equations with institutions, the significance of txtrg in 10 out of 20 cases carries an important policy message for the macroeconomy.

We have also included more specific proxies of trade restrictiveness (tariffs and non-tariff barriers) in an attempt to identify the optimal trade policy tools for policy makers. In Table 2B Owti (tariffs on intermediate inputs and capital goods) and in table 2C Owqi (non-tariff barriers on intermediate inputs and capital goods) have been insignificant under all specifications of our growth equation and with any of the institutional combinations respectively. Though we find ntarfov(overall non-tariff barriers) significant for two specification when it enters the growth equation with rule of law, it does not say much about the role of NTBs in economic growth as ntarfov remains insignificant for the other five institutional proxies we have employed. The insignificance of TB and NTBs does come as a surprise. Dollar and Kraay (2002) share the scepticism over relevance of these measures of trade policy vis-à-vis growth with the likes of Rodriguez and Rodrik (2000) and Frankel and Romer (1999). Perhaps this is the reason why trade policy variables are virtually absent in the recent empirical debate over trade and institutions. For example Frankel and Romer(1999), Acemoglu, Johnson and Robinson (2001), Alcala and Ciccone (2002), Dollar and Kraay (2002) and Rodrik et al (2004) all have tried to find partial effects of trade and institutions on growth by taking into account the general openness indicator (trade over GDP ratio) only.

There are many studies which have tried to capture the effects of trade policy on economic development, i.e., Sachs and Warner (1995), Edwards (1998) and Greenaway, Morgan and Wright (2002) are among the prominent studies which have employed direct proxies of trade policies. They confirm that the countries with policy-induced barriers to international trade grow at a slower pace. Notwithstanding the important role of these studies in giving a useful insight into the 'trade and growth' debate vis-s-vis trade policy, they have two shortcomings: first, in the light of recent evidence provided by Rodrik et al (2004) and Dollar and Kraay (2002), their studies

**Deleted:** s
**Deleted:** such imports may
**Deleted:** and deplete the resources as the fiscal position of the government worsens
**Deleted:** Same explanation goes for
**Deleted:** i
**Deleted:** "Excessive levels of export taxation are an important contributor to the relative decline of few countries (p: 22)."
**Deleted:** dicto
**Deleted:** to this effect as he found out that coefficient on exports becomes insignificant whenever imports are included as a
**Deleted:** regressor in the growth equation meaning all the explainatoryexplanatory power for per-capita GDP growth comes from th ... [5]
**Deleted:** se
**Deleted:** eloquent
**Deleted:** prevalen
**Deleted:** ¶ ... [6]
**Deleted:** To this effect and to ou ... [7]
**Deleted:** we found out in table 3 ... [8]
**Deleted:** in all four specifications
**Deleted:** comes out to
**Deleted:** Under
**Deleted:** the
**Deleted:** pertinent value for a ... [9]
**Deleted:** In this context it won ... [10]
**Deleted:** As mentioned before, w
**Deleted:** so
**Deleted:** non tariff
**Deleted:** as
**Deleted:** find out
**Deleted:** non tariff
**Deleted:** s
**Deleted:** non tariff
**Deleted:** Well, t
**Deleted:** However Dollar and K ... [11]
**Deleted:** May be
**Deleted:** that
**Deleted:** Nevertheless, the imp ... [12]
**Deleted:** e
**Deleted:** one of
**Deleted:** faster
**Deleted:** 1.
**Deleted:** I

are likely to suffer from miss-specification bias as they have not taken account of institutions in their growth equations. Secondly, they have assumed trade policy to be a purely exogenous concept.

Wood (2004), while commenting on the 'trade and growth' debate, not only emphasised that a more convincing basis for trade policy recommendations could only be provided if trade policy variables are included in the regressions, but also pointed out that any such attempt should consider trade policy as an endogenous concept as no trade policy recommendations can be given with out taking second best effects into account as trade policies crucially depend on the functioning of domestic markets of any particular country.

To this effect we have somewhat addressed the endogeneity of trade policy variables by regressing them on a set of instruments. Though the instruments remain very general in nature they do capture certain country specific characteristics. And as our growth equation has institutional proxies and human capital along with trade policy variables, our analysis goes one step further from previous cross sectional studies which have attempted to find out effects of trade policy on economic development.

Though our trade policy variables generally remained insignificant, we do get certain trade proxies which show that trade policy does matter vis-à-vis growth. The importance of any such cases is self evident because we not only dealt with trade policy as an endogenous concept but we have also included institutions and human capital in our growth equation to avoid mis-specification bias – which the earlier cross section studies on similar lines suffered from.

Overall, the results suggest that general openness variables fail to explain growth better than the ones which are direct proxies of trade policy. For example, lcopen, impnov and tarshov have been found insignificant in all specifications of our growth equation suggesting their weak relationship with growth. By contrast, our results suggest that decreases in trade taxes are associated with strong improvements in economic growth.

The supplementary table 2D (appendix) shows the results of composite measures of openness and measures based on residuals, when they are regressed with various institutional concepts. Again we find that institutions, though significant in most instances, are not the most significant factor in determining economic growth as it was the case in table 2A. Here too, we find out that trade liberalisation does matter as Open80s (Sachs–Warner openness measures) is significant when it enters growth [whereas the three openness variables we employed are all insignificant (table 2A)] for regulatory quality and rule of law and Leamer82 (Leamer's measure of trade restrictiveness based on residuals) is highly significant for regulatory quality.

Here the significance of open80s reinforces the importance of trade policy and gives some important insights into the debate. For example, it defines country as open if (i) non-tariff barriers cover less than 40 percent of trade, (ii) average tariff rates are less than 40 percent, (iii) the black market premium was less than 20 percent during the 1980s, (iv) the economy is not socialist, and (v) the government does not control major exports through marketing boards. The rationale for combining these indicators into a single dichotomous variable is that they represent different ways in which

**Deleted:** 2.
**Deleted:** T
**Deleted:** taken
**Deleted:** as a
**Deleted:** z
**Deleted:** she
**Deleted:** world
**Deleted:**
**Deleted:** i
**Deleted:** And t
**Deleted:** o
**Deleted:** ny
**Deleted:** Contrary to that,
**Deleted:** visibly advocate
**Deleted:** :
**Deleted:** IMPORTANT-is this the only significant openness variable?[I think it is more of a trade policy variable, whereas the 3 o
**Deleted:** equation with
**Deleted:** whereas
**Deleted:** non tariff

policy makers can close their economy to international trade. However, according to the evidence provided by Rodriguez and Rodrik (2000), the Sachs-Warner composite measure (open80) mainly derives its strength from the combination of black market premium and the state monopoly of exports, whereas state monopoly on major exports is a well-known equivalent between import and export taxes as it captures cases in which governments tax major exports and therefore reduce the level of trade (exports and imports), and black market premium captures foreign exchange restrictions as a trade barrier. Though they accepted state monopoly of exports as an appropriate proxy of trade restrictiveness, they feared that black market premia is not a good choice as it is highly correlated with inflation, the debt/exports ratio, wars and institutional quality and may simply capture the effect of widespread macroeconomic and political crisis. Well to this effect our IV regression analysis solves the problem of endogeneity of black market premia as we have regressed open80s with set of institutional and openness instruments. It may, therefore, be that both government monopoly over major exports and black market premia are robust proxies of trade restrictiveness.

An interesting observation comes out from Rodriguez and Rodrik (2000) that athough trade taxes are closer proxy for trade restrictiveness than TBs and NTBs, NTBs are nevertheless a reliable proxy of trade policy: "An examination of simple averages of taxes on imports and exports and NTB coverage ratios leaves us with the impression that these measures in fact do a decent job of rank ordering countries according to the restrictiveness of their trade regimes (p:60)". This is in line with our earlier results where we found out that trade (export and import) taxes are better proxies of trade restrictiveness as txtrg was the most significant measure out of six including tariffs and non-tariff barriers - txtrg was significant in 10 out of 20 cases and was only followed by ntarfov (overall non-tariff barriers) which was significant in only 2 out of 20 cases, whereas the rest were overwhelmingly insignificant (table 2B and 2C). So, we can conclude along the liones of Rodriguez and Rodrik (2000) that NTBs follow trade taxes as a reliable proxy for trade restrictiveness.

We have shown that more open trade policy leads to increased economic activity. Now we turn to institutions and their apparent role in economic development. Tables 2(A, B and C) re-inforces the already established fact that institutional development is the key to growth as our six institutions proxies have largely been significant for nearly all specification while paired with any of the openness and trade policy variables. But it would be interesting to know which institutional concepts matter more apropos growth? Table 3 provides coefficients of institutions under specification 4 of the growth equation. Note that specification 4 is the one which only employs institutions and integration in order to explain growth and is the one followed by Rodrik et al (2004).

Table 3 shows that regulatory quality is the most important institutional definition in determining the pace of convergence in a country as they have one of the highest coefficients in nearly all instances. The superiority of regulatory quality is self evident because it is most closely related to market outcomes as it captures the policy choices which dictate market outcomes. For example, it measures the incidence of market-

**Deleted:** i

**Deleted:** So we can safely say here

**Deleted:** ¶
¶
CarefuL: Sachs and Warner torn to bits by Rdriguez and rodrik who can get the same results for growth by using Africa and Asia dummies instead of the openness indicators described above. (sir I think I have taken into to account of this, as I described that if anything Rodriguez and Rodrik accept that Sachs openness measure at best represent black premia or govt monopoly over exports)¶

**Deleted:** ibid

**Deleted:** :

**Deleted:** ????

**Deleted:** is

**Deleted:** though

**Deleted:** make

**Deleted:** to

**Deleted:** Well these

**Deleted:** s

**Deleted:** supplement

**Deleted:** non tariff

**Deleted:** non tariff

**Deleted:** Well in the retrospect of the above observation we can say that trade taxes are only seconded by NTBs as a reliable proxy of trade restrictiveness. ¶

**Deleted:** Above w

**Deleted:** Well t

**Deleted:** Please n

**Deleted:** The difference between their methodology and ours is that they used only rule of law as the proxy of institutions whereby they checked the validity of their results by using different definitions of integration. We on the other hand have used 6 institutional proxies and employed 11 integration concepts to validate the results for each institutional proxy in our growth equation. In short, for the specification 4 of our growth equation, we have 11 coefficients for each institutional definition and would be robustness check in itself in determining the superiority of a particular institutional concept.¶
¶
¶
As expected, table 4 shows that

**Table 3: Institutional Comparisons**

| | va | ps | ge | Rq | rl | ctc |
|---|---|---|---|---|---|---|
| **Lcopen** | 1.34<br>(10.9)* | 1.55<br>(9.7)* | 1.55<br>(10.9)* | 2.11<br>(8.7)* | 1.40<br>(12.4)* | 1.48<br>(11.3)* |
| **Impnov** | 1.46<br>(8.8)* | 1.54<br>(8.6)* | 1.56<br>(9.6)* | 2.18<br>(8.2)* | 1.41<br>(11.1)* | 1.47<br>(9.9)* |
| **Tarshov** | 1.48<br>(8.6)* | 1.54<br>(8.5)* | 1.57<br>(9.5)* | 2.19<br>(8.1)* | 1.41<br>(10.9)* | 1.47<br>(9.8)* |
| **Tariffs** | -0.97<br>(-0.1) | 0.61<br>(0.6) | 0.33<br>(0.2) | 0.49<br>(0.3) | 0.19<br>(0.2) | -0.19<br>(-0.1) |
| **owti** | 1.46<br>(5.5)* | 1.48<br>(5.6)* | 1.71<br>(5.5)* | 1.93<br>(4.9)* | 1.34<br>(6.8)* | 1.49<br>(6.1)* |
| **txtrdg** | 0.25<br>(3.7)* | 0.97<br>(3.2)* | 1.04<br>(3.9)* | 1.80<br>(2.8)* | 0.85<br>(3.6)* | 0.76<br>(3.6)* |
| **totimpov** | 1.91<br>(3.5)* | 1.11<br>(3.7)* | 2.4<br>(3.2)* | 1.54<br>(4.1)* | 1.80<br>(3.8)* | 2.43<br>(3.7)* |
| **owqi** | 1.65<br>(4.6)* | 1.54<br>(6.0)* | 1.64<br>(5.4)* | 2.18<br>(5.5)* | 1.34<br>(6.8)* | 1.49<br>(6.1)* |
| **ntarfov** | 0.61<br>(1.5) | 1.86<br>(2.4)** | 2.60<br>(1.4) | 0.71<br>(1.1) | 0.93<br>(2.1)** | 1.18<br>(1.8)*** |
| **Open80s** | 1.20<br>(2.7)* | 1.35<br>(1.9)*** | 1.36<br>(2.5)** | 1.30<br>(1.8)*** | 0.53<br>(1.0) | 0.60<br>(1.14) |
| **Leamer82** | 1.05<br>(6.18)* | 1.31<br>(3.6)* | 1.21<br>(4.6)* | 1.71<br>(5.3)* | 1.18<br>(3.9)* | 1.01<br>(4.4)* |

t- values in the paranthesis. *, **, *** denotes significance at 1%, 5 % and 10% levels respectively

unfriendly policies such as protection of imports, control on foreign ownership, obstacles to foreign bidders on public contracts, real personal tax as burden to work initiative, real corporate tax as burden to entrepreneurship, legal framework as obstacle to competitiveness, customs as burden to international trade, price controls and competition laws as obstacles to competition. The key to development may lie in market friendly regulations whereby which the workings of financial and commercial institutions improve and adequate business development takes place amid increased competition. The importance of prudential regulation can be judged from the fact that today many developing countries have done well, despite being run by autocratic set ups where institutional concepts like voice and accountability are poor. China and Singapore are the prime examples in this regard.

**Deleted:**

**Deleted:** It is a fact that

**Deleted:** is to follow

**Deleted:** whereby

**Deleted:** government effectiveness,

**Deleted:** , and control for corruption would hardly score better, because they promoted pro-market regulations

**Deleted:** s

Regulatory quality is followed by Government effectiveness as the most important institutional proxy. It is again an expected result because government effectiveness is very close to regulatory quality in the sense that the former focuses on inputs required for the government to be able to produce and implement robust policies whereas the later captures these policies rather. So ‘government effectiveness’ basically measures the quality of public service provision, the quality of bureaucracy, the independence of the civil service from political pressures, and the credibility of the government’s

commitment to policies. In other words, it captures the efficient functioning of government machinery. It is true that any government, which promotes pro market policies by encouraging businesses and providing healthy environment of competition and fair play, is an effective government and a pre-requisite for growth and national development. The third institutional concept which matters more is political stability because it captures political instability arising from conflict by armed conflict, social unrest, politically motivated violence or terrorist threat.

Political stability is followed by rule of law and control for corruption. 'Rule of Law' measures respect of agents for the rules of the society and the confidence in the supremacy of law and captures the public perception of the incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of the contracts. In short it counts for the success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions. On the other hand 'control for corruption' measures corruption within the legal, financial or economic system, which distorts competitive environment, and reduces the efficiency of government and business by enabling people to abuse positions of power through bribes, patronage and nepotism. 'Voice and accountability' is the institutional proxy which matters least. It captures various aspects of the political process, civil liberties and political right and measures the transparency of political, commercial and legal institutions.

## 5 Conclusions

Notwithstanding the importance of institutions, a pertinent question arises whether institutions rule over trade or what have you? Clearly no body can negate the role of institutions in determining the economic development of the country. Institutions, whether it is rule of law or voice and accountability or political stability or regulatory quality or control of corruption or government effectiveness, are all pre requisite for development and are catalyst for the success of any development strategy. But the fact remains that institutions or institutional development is a long term phenomenon and is not an objective policy concept for a short term economic strategy to achieve higher economic growth. That is why even after finding institutions to rule over integration, Rodrik et al (2004) conclude their paper with following lines: " How much guidance do our results provide to policy makers who want to improve the performance of their economies? Not much at all. Sure, it is helpful to know that geography is not destiny, or that focusing on increasing the economy's links with world markets is unlikely to yield convergence. But the operational guidance that our central result on the primacy of institutional quality yields is extremely meagre." Our paper, on the contrary, suggests that trade does matter and substantiates the earlier studies regarding the importance of trade policy specifically trade taxes in determining economic growth.

## References:

Acemoglu, Daron, Simon Johnson and James A. Robinson (2001), 'The Colonial Origins of Comparative Development: An Empirical Investigation,' *American Economic Review*, Vol. 91, No. 5, pp. 1369-1401
http://emlab.berkeley.edu/users/chad/e236c_f04/ajr2001.pdf

Alcala, Francisco and Antonio Ciccone (2001), 'Trade and Productivity,' CEPR Discussion Paper No. 3095

Anderson, James E., and Marcouiller, D. (1999), 'Trade, Insecurity, and Home Bias: An Empirical Investigation,' NBER Working Paper No. 7000.

Dollar, David and Aart Kraay (2002), 'Institutions, Trade and Growth,' Paper Prepared for the Carnegie Rochester Conference on Public Policy.

Edwards, Sebastian (1998), 'Openness, Productivity and Growth: What Do We Really Know?' *The Economic Journal*, Vol. 108, pp. 383-398.

Esfahani, H. S, (1991) 'Exports, Imports and Economic Growth in Semi-Industrialised Counties,' *Journal of Development Economics*, Vol. 35, pp. 93-116.

Frankel, Jaffery, and David Romer (1999), ' Does Trade Cause Growth?' American Economic Review, 89(3), 379-399.

Glaeser, Edward, L., La Porta, R., Lopez-de-Silanes, F., and Shleifer (2004), ' Explaining Growth: Institutions, Human Capital, and Leaders,' (PD: Preliminary Draft) http://www.brook.edu/es/commentary/journals/bpea_macro/papers/20040325_glaeser.pdf

Greenaway D., Morgan, W., and Wright, P. (2001), 'Trade Liberalisation and Growth in Developing Countries,' *Journal of Development Economics*, vol.67, pp. 229-224.

Hall, Robert E., and Charles Jones (1999), 'Why do Some Countries Produce So Much More Output per Worker than Others?' *Quaterly Journal of Economics*, Vol. 114, pp. 83-116

Kaufman, Daniel, Aaart Kraay and Zoido-Lobaton (2002), 'Governance Matters II: Updated Indicators for 2000/01,' Policy Research Working Paper 2772, The World Bank. http://www.worldbank.org/wbi/governance/pdf/govmatters2.pdf

Lee, J. W. (1995), 'Capital Goods Imports and Long- Run Growth,' *Journal of Development Economics*, Vol 48, pp. 91-110.

Rodrik, Dani (1998), 'Trade Policy and Economic Performance in Sub-Saharan Africa,' NBER Working Paper 6562.

Rodriguez, Francisco and Rodrik, Dani (2000), 'Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence,' Macroeconomics Annual 2000, Ben Bernanke and Kenneth Rogoff, eds., MIT Press for NBER.

Rodrik, Dani (2003), 'Ïnstitutions, Integration, and Geography: In the Search of the Deep Determinants of Economic Growth' in Rodrik, ed., In Search of Prosperity: Analytic Country Studies on Growth, Princeton University Press, Princeton, NJ.

Rodrik, Dani, Subramanian, Arvind, and Trebbi, Francesco (2004), 'Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development,' *Journal of Economic Growth*, Vol. 9, no. 2, pp. 131-165

Deleted: ¶

Deleted: ¶

Rose, K., Andrew (2002), 'Do WTO Members Have a More Liberal Trade Policy?' NBER Working Paper 9347.

Sala-i-Martin, Xavier (2002), 'The Disturbing "Rise" of Global Income Inequality,' NBER Working Paper Series, No. w8904.

Sachs, Jeffrey D. and Andrew Warner (1995), 'Economic Reform and Process of Global Integration,' Brookings Papers on Economic Activity, (1), 1-118.

Schiff, Aaron (1999), 'The Connection between Education and Growth: A Summary of Recent Cross-Country Empirical Evidence,' Unpublished http://www.crnec.auckland.ac.nz/crnec/aaron/edugrow.pdf

Wei, Shang-Jin (2000), 'Natural Openness and Good Government,' NBER Working Paper No. W7765.

Wood, Christina (2004), 'The Empirics of Trade and Growth: Where are the Policy recommendations,' forthcoming International Economics and Economic Policy http://www.ires.ucl.ac.be/DP/IRES_DP/2004-13.pdf

## Appendix:

**Table 2A: Second Stage Regression Results for Openness and Institutions**

| | LnY | (lcopen) 1 | 2 | 3 | 4 | LnY | (impnov) 1 | 2 | 3 | 4 | LnY | (tarshov) 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VA | lcopen | -0.77 | -0.08 | -0.05 | -0.03 | impnov | -0.004 | -0.005 | -0.01 | -0.01 | tarshov | -0.003 | -0.003 | -0.01 | -0.01 |
| | | (-0.5) | (-0.5) | (-0.3) | (-0.2) | | (-0.9) | (-0.9) | (-1.3) | (-1.3) | | (-1.0) | (-1.0) | (-1.4) | (-1.4) |
| | va | 0.88 | 0.90 | 1.31 | 1.34 | va | 0.78 | 0.74 | 1.39 | 1.46 | va | 0.77 | 0.72 | 1.41 | 1.48 |
| | | (3.7)* | (3.8)* | (10.6)* | (10.9)* | | (2.8)* | (2.6)* | (8.6)* | (8.8)* | | (2.7)* | (2.6)* | (8.4)* | (8.6)* |
| | hk | 0.16 | 0.15 | | | hk | 0.17 | 0.19 | | | hk | 0.17 | 0.20 | | |
| | | (2.6)* | (2.6)* | | | | (2.4)** | (2.9)* | | | | (2.6)** | (2.9)* | | |
| | pk | 0.006 | | 0.02 | | pk | 0.02 | | 0.03 | | pk | 0.02 | | 0.03 | |
| | | (0.5) | | (1.6)*** | | | (1.7)^ | | (1.8)^ | | | (1.7)^ | | (1.8)^ | |
| | **F-test** | 60* | 81.3* | 40.4* | 60.4* | **F-test** | 51.7* | 69.1* | 29.1* | 39.9* | **F-test** | 52.3* | 69.5* | 28.1* | 38.5* |
| | $R^2$ | 0.69 | 0.69 | 0.42 | 0.40 | $R^2$ | 0.71 | 0.70 | 0.39 | 0.34 | $R^2$ | 0.71 | 0.71 | 0.37 | 0.31 |
| PS | lcopen | -0.09 | -0.08 | -0.09 | -0.07 | impnov | -0.01 | -0.01 | -0.01 | -0.01 | tarshov | -0.005 | -0.005 | -0.01 | -0.01 |
| | | (-0.6) | (-0.6) | (-0.4) | (-0.3) | | (-1.5) | (-1.6) | (-1.6) | (-1.5) | | (-1.5) | (-1.6) | (-1.5) | (-1.4) |
| | ps | 1.08 | 1.06 | 1.55 | 1.55 | ps | 1.10 | 1.07 | 1.50 | 1.54 | ps | 1.30 | 1.01 | 1.5 | 1.54 |
| | | (3.7)* | (3.9)* | (9.2)* | (9.7)* | | (2.9)* | (2.9)* | (8.4)* | (8.6)* | | (2.9)* | (2.9)* | (8.3)* | (8.5)* |
| | hk | 0.11 | 0.12 | | | hk | 0.09 | 0.11 | | | hk | 0.11 | 0.13 | | |
| | | (1.6) | (1.7)*** | | | | (1.0) | (1.2) | | | | (1.4) | (1.5) | | |
| | pk | -0.11 | | -0.01 | | pk | 0.01 | | 0.01 | | pk | 0.01 | | 0.01 | |
| | | (-0.7) | | (-0.8) | | | (0.6) | | (0.8) | | | (0.6) | | 0.79 | |
| | **F-test** | 46.6* | 66.1* | 30.2* | 47.3* | **F-test** | 39.0* | 53.3* | 26.5* | 37.8* | **F-test** | 41.8* | 57.2* | 25.8* | 37.1* |
| | $R^2$ | 0.62 | 0.63 | 0.26 | 0.27 | $R^2$ | 0.62 | 0.63 | 0.36 | 0.33 | $R^2$ | 0.65 | 0.66 | 0.35 | 0.33 |
| GE | lcopen | -0.22 | 0.21 | -0.03 | -0.24 | impnov | -0.02 | -0.01 | -0.02 | -0.01 | tarshov | -0.01 | -0.01 | -0.01 | -0.01 |
| | | (-1.4) | (-1.4) | (-1.4) | (0.19) | | (-1.8)^ | (-1.8)^ | (-2.2)** | (-2)** | | (-1.8)^ | (1.6) | (-2.1) | (1.9)** |
| | ge | 1.26 | 1.26 | 1.53 | 1.55 | ge | 1.58 | 1.54 | 1.51 | 1.56 | ge | 1.42 | 1.01 | 1.51 | 1.57 |
| | | (3.6)* | (3.7)* | (10.4)* | (10.9)* | | (2.4)** | (2.4)** | (9.5)* | (9.6)* | | (2.5)** | (2.6)* | (9.3)* | (9.5)* |
| | hk | 0.05 | 0.05 | | | hk | -0.04 | -0.01 | | | hk | 0.01 | 0.01 | | |
| | | (0.6) | (0.6) | | | | (-0.4) | (-0.1) | | | | (0.1) | (1.5) | | |
| | pk | 0.001 | | 0.02 | | pk | 0.02 | | 0.02 | | pk | 0.02 | | 0.02 | |
| | | (0.1) | | (0.02) | | | (1.1) | | (1.2) | | | (1.1) | | (1.1) | |
| | **F-test** | 47.5* | 65.2* | 38.7* | 60.1* | **F-test** | 26.9* | 36.6* | 34.4* | 47.4* | **F-test** | 31.2* | 57.2* | 33.2* | 46.3* |
| | $R^2$ | 0.62 | 0.62 | 0.42 | 0.42 | $R^2$ | 0.45 | 0.45 | 0.49 | 0.45 | $R^2$ | 0.52 | 0.66 | 0.48 | 0.44 |
| RQ | lcopen | -0.63 | -0.05 | 0.41 | 0.41 | impnov | -0.002 | -0.002 | 0.001 | 0.001 | tarshov | -0.002 | -0.002 | -0.001 | 0.001 |
| | | (-0.5) | (-0.4) | (1.7)^ | (1.7)^ | | (-0.5) | (-0.5) | (0.2) | (0.2) | | (-0.8) | (-0.8) | (-0.01) | (0.1) |
| | rq | 0.86 | 0.94 | 2.11 | 2.11 | rq | 0.72 | 0.68 | 2.17 | 2.18 | rq | 0.73 | 0.68 | 2.17 | 2.19 |
| | | (2.6)* | (2.8)* | (8.2)* | (8.7)* | | (2.2)** | (1.9)^ | (7.6)* | (8.2)* | | (2.2)** | (1.9)** | (7.6)* | (8.1)* |
| | hk | 0.21 | 0.21 | | | hk | 0.24 | 0.25 | | | hk | 0.24 | 0.25 | | |
| | | (3.8)* | (3.8)* | | | | (4.3)* | (4.1)* | | | | (4.3)* | (4.1)* | | |
| | pk | 0.22 | | -0.005 | | pk | 0.01 | | -0.01 | | pk | 0.01 | | -0.004 | |
| | | (-0.03) | | (-0.3) | | | (0.58) | | (-0.2) | | | (0.7) | | (-0.18) | |
| | **F-test** | 71.0* | 93.5* | 24.9* | 38.9* | **F-test** | 67.3* | 91.7* | 22.9* | 34.3* | **F-test** | 66.3* | 90.2* | 23.1* | 34.3* |
| | $R^2$ | 0.75 | 0.75 | 0.13 | 0.14 | $R^2$ | 0.78 | 0.78 | 0.29 | 0.30 | $R^2$ | 0.78 | 0.78 | 0.30 | 0.30 |
| RL | lcopen | -0.22 | -0.21 | -0.14 | -0.116 | impnov | -0.01 | -0.01 | -0.01 | -0.01 | tarshov | -0.005 | -0.005 | -0.01 | -0.01 |
| | | (-1.8)^ | (-1.8)^ | (-0.8) | (-0.7) | | (-1.8)^ | (1.9)^ | (-1.9)^ | (1.8)^ | | (-1.8)^ | (-1.9)^ | (-1.7)^ | (-1.6) |
| | rl | 0.97 | 0.97 | 1.37 | 1,40 | rl | 0.89 | 0.87 | 1.38 | 1.41 | rl | 0.81 | 0.79 | 1.38 | 1.41 |
| | | (4.2)* | (4.4)* | (11.9)* | (12.4)* | | (2.8)* | (2.8)* | (10.6)* | (11.1)* | | (2.8)* | (2.7)* | (10.4)* | (10.9)* |
| | hk | 0.11 | 0.11 | | | hk | 0.12 | 0.13 | | | hk | 0.15 | 0.16 | | |
| | | (1.7)^ | (1.8)^ | | | | (1.5) | (1.6) | | | | (1.9)** | (2.1)** | | |
| | pk | -0.007 | | 0.009 | | pk | 0.01 | | 0.01 | | pk | 0.01 | | 0.01 | |
| | | (-0.1) | | (0.8) | | | (0.72) | | (0.6) | | | (0.73 | | (0.6) | |
| | **F-test** | 84.2* | 116.3* | 51.8* | 78.2* | **F-test** | 65.6* | 87.6* | 44.2* | 63.4* | **F-test** | 68.7* | 91.6* | 42.8* | 62.1* |
| | $R^2$ | 0.78 | 0.79 | 0.55 | 0.55 | $R^2$ | 0.77 | 0.77 | 0.61 | 0.61 | $R^2$ | 0.78 | 0.78 | 0.60 | 0.59 |
| CTC | lcopen | -0.028 | -0.29 | -0.41 | -0.40 | impnov | -0.01 | -0.01 | -0.01 | -0.01 | tarshov | -0.01 | -0.01 | -0.01 | -0.01 |
| | | (-1.1)** | (-2.0)** | (-2.2)** | (-2.0)** | | (-1.8)^ | (1.9)^ | (-2.6)** | (-2)** | | (-1.9)^ | (-1.9)^ | (2.5)** | (-2.3)** |
| | ctc | 0.85 | 0.88 | 1.42 | 1.48 | ctc | 0.89 | 0.97 | 1.36 | 1.47 | ctc | 0.79 | 0.86 | 1.3 | 1.47 |
| | | (3.6)* | (3.6)* | (10.9)* | (11.3)* | | (2.3)* | (2.3)* | (10.1)* | (9.9)* | | (2.3)** | (2.3)** | (9.9)* | (9.8)* |
| | hk | 0.14 | 0.13 | | | hk | 0.11 | 0.11 | | | hk | 0.15 | 0.15 | | |
| | | (2.1)** | (2.0)** | | | | (1.1) | (1.0) | | | | (1.6) | (1.6) | | |
| | pk | o.o8 | | 0.02 | | pk | 0.04 | | 0.04 | | pk | 0.03 | | 0.04 | |
| | | (1.6) | | (1.5) | | | (2.2)** | | (2.5)** | | | (2.2)** | | (2.5)** | |
| | **F-test** | 70.1* | 91.2* | 44.3* | 65.1* | **F-test** | 48.6* | 54.6* | 40.4* | 50.8* | **F-test** | 52.4* | 60.2* | 39.1* | 49.7* |
| | $R^2$ | 0.75 | 0.73 | 0.49 | 0.46 | $R^2$ | 0.70 | 0.64 | 0.57 | 0.49 | $R^2$ | 0.72 | 0.67 | 0.56 | 0.48 |

t- values in the paranthesis. *, **, ^ denotes significance at 1%, 5 % and 10% levels respectively.

**Table 2B: Second Stage Regression Results for Trade Restrictiveness and Institutions**

| | LnY | (tariffs) 1 | 2 | 3 | 4 | LnY | (Owti) 1 | 2 | 3 | 4 | LnY | (txtrdg) 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VA | tariffs | 0.03 | 0.02 | 0.44 | -0.39 | Owti | 0.29 | 0.36 | 0.42 | 0.36 | txtrdg | -13.4 | -4.11 | -5.38 | 1.33 |
| | | (0.5) | (0.5) | (0.4) | -0.21 | | (0.2) | (0.2) | (0.2) | (0.2) | | (-0.8) | (-0.3) | (-0.3) | (0.1) |
| | va | 1.04 | 1.04 | 4.04 | -0.97 | va | 0.81 | 0.78 | 1.44 | 1.46 | va | 0.49 | 0.68 | 1.09 | 1.25 |
| | | (2.9)* | (3.0)* | (0.6) | (-0.1) | | (2.3)** | (2.2)** | (5.3)* | (5.5)* | | (1.2) | (2.0)** | (2.5)** | (3.7)* |
| | hk | 0.15 | 0.16 | | | hk | 0.17 | 0.19 | | | hk | 0.14 | 0.14 | | |
| | | (1.8)^ | (1.8)^ | | | | (2.4)* | (2.6)* | | | | (1.7)^ | (1.8)^ | | |
| | pk | 0.001 | | 0.003 | | pk | 0.02 | | 0.02 | | pk | 0.02 | | 0.02 | |
| | | (0.1) | | (0.1) | | | (1.2) | | (1.2) | | | (0.6) | | (0.4) | |
| | **F-test** | 43.8* | 61.7* | 2.3^ | 4.7* | **F-test** | 45.9* | 62.7* | 27.5* | 41.4* | **F-test** | 41.5* | 58.1* | 30.1* | 42.5 |
| | $R^2$ | 0.67 | 0.67 | - | - | $R^2$ | 0.69 | 0.69 | 0.38 | 0.37 | $R^2$ | 0.79 | 0.79 | 0.69 | 0.65 |
| PS | tariffs | 0.001 | 0.003 | -0.06 | -0.14 | Owti | 1.15 | 0.92 | 0.23 | -0.07 | txtrdg | -20.5 | -14.2 | -24.3 | -17.8 |
| | | (0.02) | (0.1) | (-0.8) | (-0.9) | | (0.5) | (0.4) | (0.1) | (-0.03) | | (-1.8)^ | (-1.5) | (-2.1)** | (-1.6) |
| | ps | 0.89 | 0.89 | 1.08 | 0.61 | ps | 1.31 | 1.27 | 1.49 | 1.48 | ps | 0.51 | 0.61 | 0.78 | 0.97 |
| | | (3.3)* | (3.4)* | (1.9)^ | (0.6) | | (2.1)** | (2.1)** | (5.4)* | (5.6)* | | (1.8)** | (2.5)** | (2.5)** | (3.2)* |
| | hk | 0.16 | 0.17 | | | hk | 0.04 | 0.05 | | | hk | 0.10 | 0.11 | | |
| | | (1.9)** | (2.1)** | | | | (0.3) | (0.4) | | | | (1.2) | (1.3) | | |
| | pk | 0.001 | | 0.01 | | pk | -0.01 | | 0.001 | | pk | 0.04 | | 0.06 | |
| | | (0.1) | | (0.4) | | | (-0.4) | | (0.02) | | | (1.3) | | (2.0)** | |
| | **F-test** | 52.9* | 71.5* | 32.1* | 26.5* | **F-test** | 26.1* | 38.1* | 26.4* | 41.7* | **F-test** | 36.4 | 57.8* | 20.2 | 27.9* |
| | $R^2$ | 0.73 | 0.72 | 0.48 | 0.01 | $R^2$ | 0.48 | 0.52 | 0.39 | 0.41 | $R^2$ | 0.77 | 0.80 | 0.56 | 0.51 |
| GE | tariffs | 0.03 | 0.03 | -0.06 | -0.18 | Owti | 4.66 | 3.98 | 3.18 | 2.53 | txtrdg | -17.11 | -12.47 | -16.79 | -8.21 |
| | | (0.5) | (0.6) | (-0.6) | (-0.7) | | (0.9) | (0.9) | (1.1) | (0.9) | | (-1.3) | (-1.1) | (-1.4) | (-0.7) |
| | ge | 1.01 | 1.08 | 0.98 | 0.33 | ge | 2.12 | 1.98 | 1.75 | 1.71 | ge | 0.9 | 1.04 | 0.84 | 1.04 |
| | | (2.6)* | (2.6)* | (1.4) | (0.2) | | (1.5) | (1.6) | (4.9)* | (5.5)* | | (1.7)^ | (2.3)** | (2.8)** | (3.9)* |
| | hk | 0.16 | 0.16 | | | hk | -0.09 | -0.07 | | | hk | -0.04 | -0.05 | | |
| | | (1.8)^ | (1.7)^ | | | | (-0.3) | (-0.3) | | | | (-0.2) | (-0.4) | | |
| | pk | 0.01 | | 0.01 | | pk | -0.02 | | -0.01 | | pk | 0.02 | | 0.03 | |
| | | (0.8) | | (0.8) | | | (-0.6) | | (-0.5) | | | (0.4) | | (0.9) | |
| | **F-test** | 41.2* | 50.1* | 33.4* | 17.9* | **F-test** | 11.8* | 1.89* | 22.2* | 38.3* | **F-test** | 32.1* | 44.9* | 28.1* | 41.4* |
| | $R^2$ | 0.66 | 0.61 | 0.51 | - | $R^2$ | - | 0.01 | 0.25 | 0.33 | $R^2$ | 0.74 | 0.74 | 0.68 | 0.67 |
| RQ | tariffs | -0.01 | -0.01 | -0.14 | -0.19 | Owti | -1.48 | -1.45 | -2.3 | -2.3 | txtrdg | -25.6 | -12.0 | -19.4 | -10.9 |
| | | (-0.2) | (-0.1) | (-1.5) | (-1.4) | | (-1.3) | (-1.3) | (-1.1) | (-1.1) | | (-1.3) | (-1.1) | (-1.1) | (-0.7) |
| | rq | 1.10 | 1.18 | 1.01 | 0.49 | rq | 0.45 | 0.42 | 1.87 | 1.93 | rq | 0.12 | 0.91 | 1.45 | 1.8 |
| | | (1.8)^ | (1.9)^ | (0.9) | (0.3) | | (1.2) | (1.1) | (4.6)* | (4.9)* | | (0.1) | (1.4) | (1.7)^ | (2.8)* |
| | hk | 0.19 | 0.18 | | | hk | 0.25 | 0.26 | | | hk | 0.19 | 0.14 | | |
| | | (2.3)** | (2.1)** | | | | (4.1)* | (3.9)* | | | | (1.3) | (1.3) | | |
| | pk | -0.01 | | -0.01 | | pk | 0.01 | | 0.01 | | pk | 0.05 | | 0.03 | |
| | | (-0.4) | | (-0.2) | | | (0.6) | | (0.8) | | | (0.8) | | (0.6) | |
| | **F-test** | 51.5* | 67.6* | 17.6* | 17.3* | **F-test** | 62.8* | 87.0* | 25.4* | 38.5* | **F-test** | 31.1* | 59.7* | 24.1* | 32.8* |
| | $R^2$ | 0.73 | 0.72 | 0.04 | - | $R^2$ | 0.78 | 0.79 | 0.39 | 0.38 | $R^2$ | 0.73 | 0.81 | 0.62 | 0.56 |
| RL | tariffs | -0.01 | -0.003 | -0.12 | -0.21 | Owti | -0.58 | -0.39 | 0.02 | -0.21 | txtrdg | -23.6 | -18.1 | -25.9 | -18.4 |
| | | (-0.3) | (-0.1) | (-1.4) | (-1.1) | | (-0.4) | (-0.3) | (0.01) | (-0.1) | | (-2.2)** | (-1.8)^ | (-2.4)** | (-1.8)^ |
| | rl | 0.68 | 0.71 | 0.62 | 0.19 | rl | 0.51 | 0.57 | 1.34 | 1.34 | rl | 0.59 | 0.71 | 0.66 | 0.85 |
| | | (3.3)* | (3.4)* | (1.1) | (0.2) | | (1.3) | (1.6) | (6.4)* | (6.8)* | | (1.9)^ | (2.5)** | (2.5)** | (3.6)* |
| | hk | 0.17 | 0.18 | | | hk | 0.20 | 0.91 | | | hk | 0.03 | 0.03 | | |
| | | (2.7)* | (2.8)* | | | | (2.2)** | (2.1)** | | | | (0.3) | (0.3) | | |
| | pk | 0.001 | | 0.01 | | pk | 0.005 | | 0.001 | | pk | 0.04 | | 0.05 | |
| | | (0.2) | | (0.3) | | | (0.4) | | (0.1) | | | (1.6) | | (1.9)^ | |
| | **F-test** | 86.3* | 114.7* | 22.7* | 15.8* | **F-test** | 76.1* | 102.7* | 43.0* | 66.7* | **F-test** | 43.2* | 64.8* | 28.4* | 43.9* |
| | $R^2$ | 0.83 | 0.82 | 0.26 | - | $R^2$ | 0.82 | 0.82 | 0.62 | 0.63 | $R^2$ | 0.80 | 0.81 | 0.66 | 0.67 |
| CTC | tariffs | 0.001 | 0.007 | -0.18 | -0.27 | Owti | 0.41 | 0.82 | 1.87 | 1.75 | txtrdg | -29.0 | -26.3 | -25.1 | -19.6 |
| | | (0.1) | 0.16 | (-1.1) | (-1.1) | | (0.2) | (0.4) | (0.81) | (0.7) | | (-2.2)** | (-1.7)^ | (-2.5)** | (2.0)** |
| | ctc | 0.56 | 0.62 | 0.22 | -0.19 | ctc | 0.66 | 0.74 | 1.46 | 1.49 | ctc | 0.63 | 0.80 | 0.62 | 0.76 |
| | | (2.3)** | (2.4)** | (0.2) | (-0.1) | | (1.5) | (1.6) | (5.7)* | (6.1)* | | (1.5) | (1.6) | (2.8)* | (3.6)* |
| | hk | 0.21 | 0.21 | | | hk | 0.19 | 0.18 | | | hk | -0.02 | -0.06 | | |
| | | (2.9)* | (2.9)* | | | | (1.9)** | (1.8)** | | | | (-0.1) | (-0.3) | | |
| | pk | 0.01 | | 0.01 | | pk | 0.01 | | 0.01 | | pk | 0.06 | | 0.05 | |
| | | (1.1) | | (0.4) | | | (1.1) | | (0.7) | | | (1.7) | | (2.2)* | |
| | **F-test** | 62.6* | 80.2* | 11.6* | 9.3* | **F-test** | 55.4* | 67.9* | 32.9* | 50.7* | **F-test** | 26.3* | 29.6* | 29.6* | 42.5* |
| | $R^2$ | 0.78 | 0.76 | - | - | $R^2$ | 0.76 | 0.73 | 0.50 | 0.50 | $R^2$ | 0.67 | 0.60 | 0.68 | 0.66 |

t- values in the paranthesis. *, **, ^ denotes significance at 1%, 5 % and 10% levels respectively.

**Table 2C: Second Stage Regression Results for Trade Restrictiveness and Institutions**

| | LnY | (totimpov) 1 | 2 | 3 | 4 | LnY | (Owqi) 1 | 2 | 3 | 4 | LnY | (ntarfov) 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VA | totimpov | 0.012 | 0.01 | 0.01 | 0.01 | Owqi | 4.1 | 4.3 | 4.4 | 4.4 | ntarfov | -0.01 | -0.01 | -0.02 | -0.02 |
| | | (0.7) | (0.7) | (0.7) | (0.7) | | (0.9) | (0.9) | (0.7) | (0.8) | | (-1.1) | (-0.9) | (-1.6) | (-1.3) |
| | va | 1.94 | 1.70 | 1.94 | 1.91 | va | 0.81 | 0.80 | 1.61 | 1.65 | va | 0.11 | 0.09 | 0.50 | 0.61 |
| | | (1.3) | (1.3) | (3.1)* | (3.5)* | | (1.6) | (1.6) | (4.2)* | (4.6)* | | (0.4) | (0.3) | (1.3) | (1.5) |
| | hk | -0.04 | -0.03 | | | hk | 0.27 | 0.28 | | | hk | 0.28 | 0.31 | | |
| | | (-0.1) | (-0.1) | | | | (1.7)^ | (1.8)^ | | | | (5.5)* | (6.4)* | | |
| | pk | -0.02 | | -0.01 | | pk | 0.01 | | 0.02 | | pk | 0.01 | | 0.03 | |
| | | (-0.4) | | (-0.03) | | | (0.6) | | (0.6) | | | (0.9) | | (1.9)** | |
| | **F-test** | 4.29* | 6.54* | 4.05* | 6.25* | **F-test** | 14.3* | 18.8* | 11.0* | 16.9* | **F-test** | 24.9* | 33.5* | 8.09* | 9.8* |
| | $R^2$ | - | - | - | | $R^2$ | 0.02 | - | - | - | $R^2$ | 0.64 | 0.67 | 0.18 | 0.17 |
| PS | totimpov | 0.01 | 0.01 | 0.01 | 0.01 | Owqi | 2.6 | 2.4 | 2.02 | 0.82 | ntarfov | -0.001 | -0.001 | 0.001 | 0.0003 |
| | | (0.7) | (0.8) | (0.9) | (0.9) | | (0.7) | (0.7) | (0.4) | (0.2) | | (-0.02) | (-0.1) | (0.02) | (0.02) |
| | ps | 0.31 | 0.26 | 1.02 | 1.11 | ps | 0.99 | 0.99 | 1.58 | 1.54 | ps | 1.5 | 1.39 | 1.9 | 1.86 |
| | | (1.1) | (1.0) | (3.3)* | (3.7)* | | (1.8)^ | (1.8)^ | (4.9)* | (6.0)* | | (1.1) | (1.2) | (2.0)** | (2.4)** |
| | hk | 0.30 | 0.32 | | | hk | 0.17 | 0.17 | | | hk | 0.01 | 0.02 | | |
| | | (5.2)* | (6.0)* | | | | (0.9) | (0.9) | | | | (0.1) | (0.1) | | |
| | pk | 0.01 | | 0.04 | | pk | -0.004 | | -0.03 | | pk | -0.01 | | -0.01 | |
| | | (0.9) | | (1.8)^ | | | (0.2) | | (-0.9) | | | (-0.9) | | (-0.2) | |
| | **F-test** | 19.5* | 26.1* | 5.9* | 7.12* | **F-test** | 18.3* | 26.5* | 15.6* | 31.7* | **F-test** | 6.7 | 10.2 | 4.3* | 6.5** |
| | $R^2$ | 0.59 | 0.59 | - | - | $R^2$ | 0.28 | 0.31 | 0.02 | 0.26 | $R^2$ | | | | |
| GE | totimpov | 0.03 | 0.03 | 0.04 | 0.04 | Owqi | 4.4 | 4.28 | 5.6 | 3.61 | ntarfov | -0.04 | -0.02 | 0.02 | 0.02 |
| | | (1.1) | (0.9) | (1.7)^ | (1.8)^ | | (1.1) | (1.1) | (0.8) | (0.85) | | (-0.7) | (-0.8) | (0.4) | (0.6) |
| | ge | 1.61 | 2.4 | 2.4 | 2.4 | ge | 1.04 | 1.05 | 1.71 | 1.64 | ge | -2.32 | -1.6 | 2.4 | 2.6 |
| | | (1.1) | (0.8) | (2.8)* | (3.2)* | | (1.6) | (1.6) | (3.9)* | (5.4)* | | (-0.6) | (-0.7) | (0.9) | (1.4) |
| | hk | 0.09 | -0.06 | | | hk | 0.19 | 0.19 | | | hk | 0.55 | 0.56 | | |
| | | (0.4) | (-0.1) | | | | (1.0) | (0.9) | | | | (1.3) | 1.58 | | |
| | pk | -0.02 | | -0.02 | | pk | -0.01 | | -0.01 | | pk | 0.06 | | -0.03 | |
| | | (-0.5) | | (-0.6) | | | (-0.3) | | (-0.5) | | | (0.7) | | (-0.3) | |
| | **F-test** | 6.41* | 4.54* | 3.4* | 5.1* | **F-test** | 12.5* | 18.2* | 8.7* | 22.9* | **F-test** | 2.3^ | 5.9* | 2.3^ | 3.07** |
| | $R^2$ | - | - | - | - | $R^2$ | - | - | - | - | $R^2$ | | | | |
| RQ | totimpov | 0.005 | 0.005 | 0.01 | 0.01 | Owqi | 3.83 | 3.81 | -2.37 | -1.04 | ntarfov | -0.01 | -0.01 | -0.02 | -0.19 |
| | | (0.7) | (0.8) | (0.6) | (0.6) | | (0.9) | (0.9) | (-0.6) | (-0.3) | | (-1.4) | (-1.3) | (-1.6) | (-1.5) |
| | rq | 0.33 | 0.25 | 1.34 | 1.54 | rq | 0.74 | 0.71 | 2.04 | 2.18 | rq | -0.11 | -0.13 | 0.49 | 0.71 |
| | | (1.0) | (0.7) | (3.7)* | (4.1)* | | (1.1) | (0.9) | (4.7)* | (5.5)* | | (-0.3) | (-0.3) | (0.8) | (1.1) |
| | hk | 0.29 | 0.31 | | | hk | 0.34 | 0.34 | | | hk | 0.3 | 0.32 | | |
| | | (4.2)* | (4.3)* | | | | (2.3)** | (2.2)* | | | | (4.5)* | (4.5)* | | |
| | pk | 0.01 | | 0.02 | | pk | 0.01 | | -0.004 | | pk | 0.01 | | 0.02 | |
| | | (0.6) | | (0.9) | | | (0.2) | | (-0.1) | | | 0.82 | | (1.2) | |
| | **F-test** | 20.8* | 27.9* | 7.32 | 8.5* | **F-test** | 15.5* | 21.8* | 16.2* | 29.4* | **F-test** | 22.3* | 30.2* | 7.9* | 10.1* |
| | $R^2$ | 0.63 | 0.63 | 0.22 | 0.16 | $R^2$ | 0.13 | 0.16 | 0.11 | 0.24 | $R^2$ | 0.65 | 0.65 | 0.21 | 0.21 |
| RL | totimpov | 0.005 | 0.01 | 0.02 | 0.02 | Owqi | -0.58 | -0.39 | 0.02 | -0.21 | ntarfov | -0.01 | -0.01 | -0.02 | -0.02 |
| | | (0.6) | (0.7) | (1.5) | (1.5) | | (-0.4) | (-0.3) | (0.01) | (-0.1) | | (-1.7) | (-1.4) | (-2.2)** | (-2.3)** |
| | rl | 0.15 | 0.11 | 1.9 | 1.8 | rl | -0.51 | 0.57 | 1.34 | 1.34 | rl | -0.19 | -0.11 | 0.78 | 0.93 |
| | | (0.3) | (0.2) | (2.9)* | (3.8)* | | (1.4) | (1.6) | (6.4)* | (6.8)* | | (-0.46) | (-0.3) | (1.4) | (2.1)** |
| | hk | 0.31 | 0.33 | | | hk | 0.20 | 0.19 | | | hk | 0.33 | 0.33 | | |
| | | (2.7)* | (2.9)* | | | | (2.2)** | (2.1)** | | | | (3.2)* | (3.2)* | | |
| | pk | 0.01 | | -0.02 | | pk | 0.005 | | 0.01 | | pk | 0.01 | | 0.01 | |
| | | (0.5) | | (-0.6) | | | (0.4) | | (0.1) | | | (0.88) | | (0.32) | |
| | **F-test** | 21.4* | 28.03* | 4.4* | 7.2* | **F-test** | 76.1* | 102.7* | 43.0* | 66.7* | **F-test** | 20.4* | 29.7* | 9.5* | 13.0* |
| | $R^2$ | 0.64 | 0.63 | - | - | $R^2$ | 0.82 | 0.82 | 0.62 | 0.63 | $R^2$ | 0.61 | 0.64 | 0.31 | 0.30 |
| CTC | totimpov | 0.06 | 0.04 | 0.04 | 0.03 | Owqi | 0.40 | 0.81 | 1.87 | 1.74 | ntarfov | -0.02 | -0.01 | -0.17 | -0.01 |
| | | (0.6) | (0.6) | (1.9)^ | (2.1)** | | (0.2) | (0.4) | (0.8) | (0.7) | | (-1.5) | (-1.4) | (-1.4) | (-1.0) |
| | ctc | 3.66 | 2.70 | 2.6 | 2.43 | ctc | 0.65 | 0.74 | 1.46 | 1.49 | ctc | -0.79 | -0.71 | 0.69 | 1.18 |
| | | (0.5) | (0.5) | (2.9)* | (3.7)* | | (1.5) | (1.6) | (5.7)* | (6.1)* | | (-1.1) | (-1.0) | (0.9) | (1.8)^ |
| | hk | -0.17 | -0.05 | | | hk | 0.19 | 0.18 | | | hk | 0.29 | 0.41 | | |
| | | (-0.2) | (-0.1) | | | | (1.9)** | (1.8)** | | | | (3.2)* | (3.5)* | | |
| | pk | -0.01 | | -0.01 | | pk | 0.01 | | 0.01 | | pk | 0.01 | | 0.02 | |
| | | (-0.2) | | (-0.4) | | | (1.1) | | (0.7) | | | (0.9) | | (1.1) | |
| | **F-test** | 1.77 | 4.0* | 4.04** | 6.89* | **F-test** | 55.4* | 67.9* | 32.9* | 50.7* | **F-test** | 12.1* | 17.9* | 10.1* | 13.6* |
| | $R^2$ | 0.15 | - | - | - | $R^2$ | 0.76 | 0.73 | 0.50 | (0.5) | $R^2$ | 0.36 | 0.43 | 0.39 | 0.41 |

t- values in the paranthesis. *, **, ^ denotes significance at 1%, 5 % and 10% levels respectively.

**Table 2D: Second Stage Regression Results for Composite Measures of Openness and Institutions**

| | LnY | (Open80s) 1 | 2 | 3 | 4 | LnY | (Leamer82) 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| VA | Open80s | 0.68 | 0.59 | 0.53 | 0.44 | Owqi | 0.32 | 0.28 | 0.40 | 0.35 |
| | | (0.59) | (0.53) | (0.39) | (0.32) | | (0.79) | (0.73) | (0.91) | (0.77) |
| | va | 0.26 | 0.29 | 1.15 | 1.20 | va | 0.82 | 0.81 | 1.02 | 1.05 |
| | | (0.51) | (0.58) | (2.61)* | (2.75)* | | (3.87)* | (3.85)* | (6.22)* | (6.18)* |
| | hk | 0.27 | 0.27 | | | hk | 0.07 | 0.08 | | |
| | | (3.67)* | (3.63)* | | | | (1.02) | (1.19) | | |
| | pk | 0.008 | | 0.01 | | pk | 0.01 | | 0.29 | |
| | | (0.67) | | (0.83) | | | (1.03) | | (1.86)*** | |
| | **F-test** | 61.3* | 84.4* | 31.04* | 1 0.60* | **F-test** | 42.4* | 57.83* | 47.1* | 62.5* |
| | $R^2$ | 0.83 | 0.83 | 0.61 | 0.59 | $R^2$ | 0.82 | 0.81 | 0.81 | 0.79 |
| PS | Open80s | 1.79 | 1.42 | 0.64 | 0.50 | Owqi | -0.02 | 0.10 | -0.02 | -0.03 |
| | | (0.93) | ( 0.89) | (0.34) | (0.27) | | (-0.04) | (0.21) | (-0.03) | (-0.05) |
| | ps | -0.47 | 0.20 | 1.30 | 1.35 | ps | 0.93 | 0.92 | 1.28 | 1.31 |
| | | (-0.33) | (-0.17) | (1.78)*** | (1.95)*** | | (2.99)* | (3.08)* | (3.45)* | (3.67)* |
| | hk | 0.38 | 0.34 | | | hk | 0.07 | 0.06 | | |
| | | (1.55) | (1.52) | | | | (0.81) | (0.77) | | |
| | pk | 0.02 | | -0.002 | | pk | -0.01 | | 0.01 | |
| | | (0.57) | | (-0.07) | | | (-0.52) | | 0.41 | |
| | **F-test** | 26.12* | 48.4* | 18.1* | 26.4* | **F-test** | 26.3* | 38.6* | 16.14* | 23.5* |
| | $R^2$ | 0.62 | 0.72 | 0.37 | 0.36 | $R^2$ | 0.71 | 0.72 | 0.48 | 0.46 |
| GE | Open80s | 2.01 | 1.82 | 0.05 | -0.08 | Owqi | -0.14 | -0.03 | -0.11 | -0.17 |
| | | (0.79) | (0.76) | (0.03) | (-0.05) | | (-0.32) | (-0.08) | (-0.17) | -0.25 |
| | ge | -0.48 | -0.39 | 1.31 | 1.36 | ge | 0.99 | 0.99 | 1.17 | 1.21 |
| | | (-0.34) | (-0.28) | (2.34)** | (2.49)** | | (3.25)* | (3.35)* | (4.40)* | (4.57)* |
| | hk | 0.38 | 0.38 | | | hk | 0.029 | 0.02 | | |
| | | (1.55) | (1.52) | | | | (0.32) | (0.23) | | |
| | pk | 0.01 | | 0.01 | | pk | -0.001 | | 0.01 | |
| | | (0.63) | | (0.18) | | | (-0.11) | | (0.97) | |
| | **F-test** | 22.06* | 33.9* | 27.3* | 39.4* | **F-test** | 37.6* | 53.39* | 28.0* | 38.5* |
| | $R^2$ | 0.55 | 0.60 | 0.58 | 0.56 | $R^2$ | 0.80 | 0.80 | 0.71 | 0.67 |
| RQ | Open80s | 1.14 | 1.12 | 2.25 | 2.19 | Owqi | 1.26 | 1.41 | 1.47 | 1.46 |
| | | (1.19)*** | (1.90)*** | (1.89)*** | (1.85)*** | | (2.14)** | (2.21)** | (3.9)* | (3.9)* |
| | rq | 0.30 | 0.34 | 1.23 | 1.30 | rq | 1.62 | 1.79 | 1.66 | 1.71 |
| | | (0.55) | (0.63) | (1.69)*** | (1.84)*** | | (2.64)** | (2.61)** | (5.09)* | (5.34)* |
| | hk | 0.26 | 0.25 | | | hk | 0.02 | -0.008 | | |
| | | (2.88)* | (2.76)* | | | | (0.19) | (-0.06) | | |
| | pk | 0.006 | | 0.008 | | pk | 0.02 | | 0.02 | |
| | | 0.41 | | (0.29) | | | (1.17) | | (1.28) | |
| | **F-test** | 42.8* | 57.6* | 14.5* | 21.8* | **F-test** | 30.48* | 34.67* | 34.4* | 49.6* |
| | $R^2$ | 0.76 | 0.75 | 0.19 | 0.19 | $R^2$ | 0.76 | (0.70) | (0.75) | (0.74) |
| RL | Open80s | 1.86 | 1.85 | 2.50 | 2.4 | Owqi | -0.36 | -0.14 | -0.42 | -0.35 |
| | | (1.70)*** | (1.70)*** | (1.41) | (1.39) | | (-0.87) | (-0.4) | (-0.46) | (-0.43) |
| | rl | -0.459 | -0.47 | 0.47 | 0.53 | rl | 0.91 | 0.84 | 1.19 | 1.18 |
| | | (-0.82) | (-0.84) | (0.87) | (1.0) | | (3.81)* | (3.84)* | (3.59)* | (3.99)* |
| | hk | 0.405 | 0.41 | | | hk | 0.05 | 0.059 | | |
| | | (2.98)* | (3.01)* | | | | (0.78) | (0.85) | | |
| | pk | 0.01 | | 0.02 | | pk | -0.02 | | -0.003 | |
| | | (0.75) | | (0.96) | | | (-1.40) | | -0.11 | |
| | **F-test** | 25.7* | 34.5 | 16.06* | 24.5* | **F-test** | 49.7* | 73.9* | 19.85* | 31.19* |
| | $R^2$ | 0.6 | 0.59 | 0.30 | 0.32 | $R^2$ | 0.85 | 0.86 | 0.59 | 0.61 |
| CTC | Open80s | 1.98 | 2.01 | 1.97 | 2.05 | Owqi | -0.35 | -0.21 | -0.12 | -0.21 |
| | | (1.35) | (1.37) | (1.12) | (1.13) | | (-0.70) | (-0.49) | (-0.17) | (-0.28) |
| | ctc | -0.37 | -0.39 | 0.60 | 0.60 | ctc | 0.74 | 0.71 | 0.98 | 1.01 |
| | | (-0.62) | (-0.67) | (1.18) | (1.14) | | (2.96)* | (3.51)* | (4.14)* | (4.37)* |
| | hk | 0.36 | 0.37 | | | hk | 0.09 | 0.09 | | |
| | | (3.21)* | (3.39)* | | | | (1.14) | (1.21) | | |
| | pk | 0.006 | | 0.03 | | pk | -0.008 | | 0.0179 | |
| | | (0.33) | | (1.57) | | | (-0.44) | | (0.88) | |
| | **F-test** | 23.5* | 31.01* | 21.6* | 29.3* | **F-test** | 34.5* | 54.3* | 27.45* | 38.2* |
| | $R^2$ | 0.56 | 0.55 | (0.48) | (0.43) | $R^2$ | 0.78 | 0.81 | 0.71 | 0.68 |

t- values in the paranthesis. *, **, *** denotes significance at 1%, 5 % and 10% levels respectively.

**Deleted:** ¶
¶
¶
¶
¶
¶
¶
¶
¶

## Data and Sources:

Deleted: ¶
¶
¶
¶
¶
¶
¶
¶
¶
¶
¶
¶
¶
¶
¶

**Ctc:** Control of Corruption, Year: 1997/98. Source: Kaufman et al.

**Disteq:** Distance from Equator of capital city measured as abs (Latitude)/90. Source: Rodrik, Subramanian & Trebbi (2002)

**Engfrac:** Fraction of te 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.

**Hk:** Average Schooling Years in the total population at 25,Year, 1999. Source: Barro & Lee.

**Impnov:** Import Penetration Overall, 1985, 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..

**Leamer82:** Leamer's Measure of Openness based on Residuals, Year: 1982. Source: Rose (2002).

**Logfrankrom:** 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).

**LnY:** Natural logarithm of Per Capita Income at purchasing Power Prices (PPP), Year: 2000. Source: World Development Indicators (WDI), 2002.

**Ntarfov**: Non-tariff Barriers Coverage, Overall. Year 1987, Source: Rose (2002)

Deleted: Non tariff

**Open80:** Sachs and Warners (1995) composite openness index. Source: Rose (2002).

**Owti**: Tariffs on intermediate inputs and Capital Goods, Year: 1985, Source: Barro and Lee

**Owqi:** Non-tariff Barriers, Frequency on Intermediate Inputs and Capital Goods, Year: 1985. Source: Rose (2002).

Deleted: Non tariff

**Pk:** Gross Capital Formation as a percentage of GDP, Year: 2000. Source: World Development Indicators (WDI), 2002.

**Ps:** Political Stability, Year: 1997/98. Source: Kaufman et al.

**Rl:** Rule of Law**,** Year: 1997/98. Source: Kaufman et al.

**Rq:** Regulatory Quality, Year: 1997/98. Source: Kaufman et al.

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

**Tarshov:** TARS trade Penetration Overall, Year: 1985, Source: Rose (2002)

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

**Txtrg:** Trade Taxes/ Trade, Year: 1982, Source, Rose (2002).

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

**Page 5: [1] Deleted** **Staff Group 1** **9/19/2004 2:28:00 PM**

**Page 5: [2] Deleted** **Staff Group 1** **9/19/2004 6:38:00 PM**

**Analysis and Results:**

In the lig

**Page 5: [3] Deleted** **Staff Group 1** **9/19/2004 4:12:00 PM**

The paragraph above needs to be expanded. We are positing an augmented form of the Mankiw AK neoclassical growth model. The AK model itself is an augmented version of the Solow model, because growth is a function of physical plus human capital. In addition to that we are stating that growth depends on deep structural and unchangeable characteristics of the economy, viz. institutions. Furthermore, we are also trying to capture the effects of policy choices in two guises: direct (trade policy) and indirect (openness, which is a consequence of past policies).

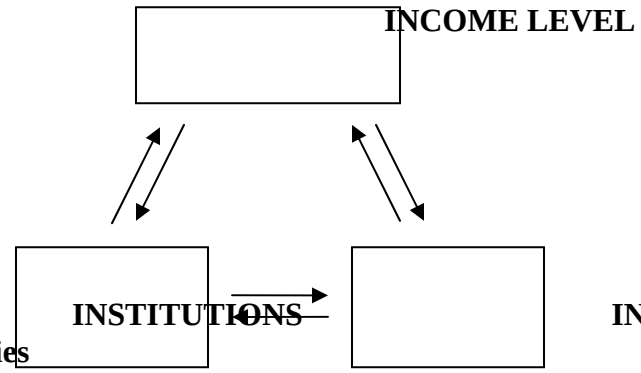
**Page 6: [4] Deleted** **Staff Group 1** **9/19/2004 6:39:00 PM**

Though correlation among variables gives valuable information, an extensive econometric investigation is pre-requisite. But before embarking on any such exercise let us analyse our selected determinants of growth since some of them are not purely exogenous. For example the richer and more developed countries also have better

institutions and they are more liberalised then the ones who are underdeveloped. So a pertinent question can be raised whether rich countries are rich because they are more open and have better institutions or the equations works in reverse? There is also a debate whether better institutions encourage trade or it is openness and liberalisation which eventually bring improvements to institutions? There is a bit of evidence to suggest that both possibilities exist (see for example: Anderson and Mercuiller, 1999; and Wei, 2000). Figure 1 below elaborates how the inter relationship between growth, institutions and trade works.

In short theory and literature both imply that any analysis, which attempts to capture the effects of institutions and openness on growth, would be laced with the problems of endogeniety and reverse causation: "The extent to which an economy is integrated with the rest of the world and the quality of its institutions are both endogenous, shaped potentially not just by each other but also by income levels. Problems of endogeniety and reverse causality plague any empirical researcher trying to make sense of relationship among these causal factors (Rodrik et al, 2002:2)."

**Figure 1: <u>Non Linearity of Institutions and Integration</u>**




There is a potential reverse causality on two counts: Income-Integration + trade policy back to income; Income-Institutions back to income.

| Page 10: [5] Deleted | Staff Group 1 | 9/19/2004 5:45:00 PM |
|---|---|---|

regressor in the growth equation meaning all the explainatoryexplanatory power for per-capita GDP growth comes from the import variable.

| Page 10: [6] Deleted | Staff Group 1 | 9/19/2004 5:50:00 PM |
|---|---|---|

IMPORTANT: Somewhere you need to mention that the TP variables carry the "right" sign: trade restrictiveness lowers growth. ( I have tried to mention it above).

| Page 10: [7] Deleted | Staff Group 1 | 9/19/2004 5:50:00 PM |
|---|---|---|

To this effect and to our anticipation

| Page 10: [8] Deleted | ISS-User | 8/30/2004 7:40:00 PM |
|---|---|---|

we found out in table 3B that there is a significant relationship between trade taxes and growth as txtrg

| Page 10: [9] Deleted | Staff Group 1 | 9/19/2004 5:53:00 PM |
|---|---|---|

pertinent value for a relatively confident judgement over the role of trade policy in macroeconomic activity

| Page 10: [10] Deleted | Staff Group 1 | 9/19/2004 5:54:00 PM |
|---|---|---|

In this context it won't be an over-statement to conclude that decreasing trade taxes should be the priority of policy makers to boost trade and growth.

| Page 10: [11] Deleted | Staff Group 1 | 9/19/2004 5:58:00 PM |
|---|---|---|

However Dollar and Kraay (2002), provides an explanation that the drawback of using simple averages of tariff rates might give inordinate weight to categories of goods that are relatively unimportant for a country whereas in case of non tariff barriers, the data reports the number of tariff lines on which one of a small number of easily identifiable NTBs is in force. In fact,

| Page 10: [12] Deleted | Staff Group 1 | 9/27/2004 9:27:00 AM |
|---|---|---|

Nevertheless, the importance of finding an appropriate trade policy variable has been very much recognised.