Economic and Social Horizons in Pakistan

VOLUME 2

by Dr. Dawood Mamoon

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Vol.2

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Agriculture or industry: Rice or garments: Ex-post and ex-ante analysis of Pakistan's falling competitiveness in its main export items

Introduction

The first relevant question that arises: how do economists view the notion of *free trade*? Thankfully, there is a consensus among all opinions[1] that openness to international trade is imperative for economic development. Many studies show that trade is not only the engine of growth but it also sustains it (for example, Sirnivasan & Bhagwati, 2001; Dollar & Kraay, 2004). Proponents of *free markets* believe that the countries, developing as well as developed, that opened up their economies farther, achieved better economic performance through forward linkages such as improved export competitiveness. The accession of the global economy indeed brought prosperity to different areas of the world (Sen, 2002). There is also an assertion that the non-globalizing part of the developing world is falling further and further behind because their production patterns are not competitive as an outcome (Dollar & Kraay, 2004).

The processes of free trade are captured by trade liberalization or open trade policy stance. Literature has introduced various concepts of trade liberalization. Following is the taxonomy for outcome based and incidence based measures of trade following the grouping offered by Rose (2002):

1. openness (e.g. the ratio of trade or imports to GDP), an outcome based measure,
2. trade flows, adjusted for country-characteristics (outcome based),
3. tariffs (policy incidence-based)
4. non-tariff barriers (NTBs) (incidence based),

[1] Dani Rodrik, though, critical to Dollar & Kraay (2002; 2003), accept that trade liberalisation and growth are positively related. (see Rodriguez & Rodrik, 2000) However he also emphasises that it should not be considered a substitute for other development strategy/ies.

5. informal or qualitative measures,
6. composite indices, and,
7. measures based on price on price outcomes.

Rose (2002) provides a nice summary of all these variables. For the readers comfort, we provide a brief nevertheless:

The core openness variable remains the overall trade share (the ratio of nominal imports plus exports to GDP), which has been extensively used in the literature (Frankel & Romer, 1999; Acemoglu, Johnson & Robinson, 2001; Alcala & Ciccone, 2002; Dollar & Kraay, 2002; Rodrik *et al.,* 2004). There are many indicators of trade restrictiveness (incidence based) acting as measures of trade policy. (Edwards, 1998, Greenaway, *et al.,* 2001; Rose, 2002) Literature recommends using simple averages of taxes on imports and exports (Rodriguez & Rodrik, 2000). Simple import duties as a percentage of imports (*Tariffs*) are available from World Development Indicators (WDI) from 1970 to the end of the sample in 1998. Sachs & Warner provide (1995) constructed a composite measure of openness by using tariffs on intermediate inputs and capital goods. Edwards (1998) collected data on total revenues from taxes on international trade as a proportion of total trade. Pritchett (1996) provides weighted average of total import charges, as well as sectoral categories of import charges (manufacturing, agriculture and resources). They can all be considered good proxies of trade restrictiveness and have been employed in the analysis.

The coverage of Non Tariff Barriers (NTBs) in terms of total imports is another widely used measure of trade policy. Sachs & Warner (1995) include frequency of non trade barriers on intermediate inputs in his index. Pritchett (1996) collects data on non-tariff barrier coverage for developing countries from UNCTAD (United Nations Conference on Trade and Development). They are available for four different categories -manufacturing, agriculture and resources respectively. Leamer (1988) used an empirical Hecksher-Ohlin model with nine factors to estimate net trade flows and trade intensity ratios for 183 commodities at the three digit SITC (Standard International Trade Classification) level for 53 countries. He took the differences between predicted and actual trade intensity ratios as indicators of trade barriers. A less structural approach is taken by Hiscox & Kastner (2002). They use fixed country-year residual effects from two gravity models of trade (a simple version which links imports to GDP and distance, and an augmented one which adds measures of wealth, land and capital) to derive measures of trade policy orientation. Sachs & Warner (1995) and Harrison (1996) have utilised a number of price-based measures of trade policy. The black market foreign exchange premium is one of them.

In this paper we are primarily concerned with export competitiveness of Pakistan's export sector viz a viz its economy in general and three sectors (Rice, Readymade Garments, Marble and Granite) in particular

Competitiveness of Pakistan's export sector

The competitiveness is usually equated with strong performance of economies relative to other countries where strong performance can mean economic growth, success in exports and increased well being. A popular definition of competitiveness is that ' the degree to which a nation can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people, over the long term' (OECD, 1992: 237). Trade theory has significantly contributed in explaining competitiveness and each definition of competitiveness has trade as a core notion. Though in the classical realm of comparative advantage competitiveness is captured by differences in technological efficiency or cross country variations in factor endowments which leads to lower production costs for host country when compared to another country or rest of the world, dynamic comparative advantage best captures competitiveness through endogenous growth and trade models where learning by doing produces growth and may also reinforce patterns of specialization over time.

There can be two kinds of measures of competitiveness (a) Ex-post indicators which capture outcomes (b) Ex-ante indicators which measure the determining process. In this section we would focus on Ex-post or outcome based measures of competitiveness.

A simple and linear relationship exists between trade and competitiveness which captures the share of the market (domestic or foreign) by capturing growth performance matrix, terms of trade or other market performance indicators. The real exchange rate is a measure which can help assessing international competitiveness of an economy because it shows the relative costs of the common reference basket of goods between countries (or price ratio of tradeables to non-tradables) converted into common currency (Obsfeld & Rogoff, 2002). Other indicators which can assess the general wellbeing or attractiveness of a country can be foreign direct investment and real income per capita in addition to some other performance based matrices.

For larger developing countries, two opposing trading regimes could be followed. The first one is associated with import substitution (IS) which is associated with the package of policies that aim at protecting the infant industries and discriminating against exports. Such policies include over valued exchange rate system, import controls, high tariffs and quantitative restrictions on imports. The export promotion (EP) strategy on the other hands encourage exports by developing deeper links between domestic and world economy by liberalizing the goods markets. EP is followed by ever increasing tradable sector within overall economic activity which may be captured by rising trade shares. The countries that pursued outward oriented strategy between 1965 and 1990 grew about 2 percentage points faster per year, on average than counties that pursued IS strategy i.e., the East and Southeast Asian economies had better growth performance due to their outward oriented strategy (Khan, 1998).

Pakistan since its since inception in 1947 had been following highly protective and restrictive trading regime and overvalued exchange rate to promote import substitution. Though during the 1960s, some signs of EP emerged when the government introduced the export bonus scheme with import liberalization. Pakistani rupee as devalued in 1970s which was overvalued in last two decades due to fixed exchange rate policy. During 1980s explicit import quotas on non-capital imports were removed and banned or restricted imports were slowly liberalized. As a consequence by 1986, about 29 percent against 41 percent in 1980 of the domestic industrial value added was protected by imports ban and only 3.7 percent in 1986 as opposed to 22 percent in 1980 of import restrictions were still prevalent.

After 1988 however successive governments have pursued a yet more vigorous trade liberalization and also undertaken a range of export promotion measures. As a result almost all NTBs have been replaced with tariffs; the maximum level of tariffs has been reduced to 45 percent in 1997-98 from 225 percent in 1986-87 and all items are now importable except for a few whose entry is conditional on religious, health or security considerations.

Following lines, we under take a brief analysis to gauge the effects of export promotion on competitiveness of exports in particular and Pakistani economy in general. As the above discussion suggests, both exports and Imports have become more competitive in Pakistan with each decade of relative liberalization while witnessing a steep peak after 2000.

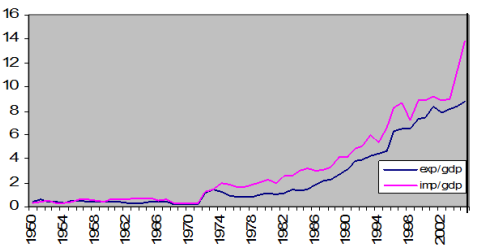


Figure 1. *Export and imports as a proportion of GDP ($)*

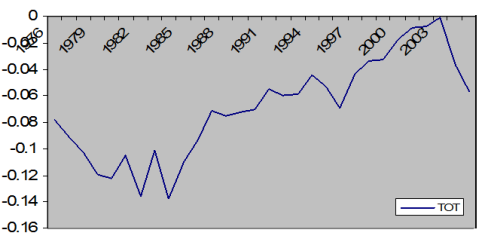


Figure 2. *Trade balance ($)*

Imports have risen more sharply than the exports, which have lead to negative terms of trade. Though, Figure 2 suggests that trade balance has moved in favor of exports in later years of last 50 years especially after

1988 trade reforms showing increased competitiveness of Pakistani export sector in wake of trade liberalization. Nevertheless, a deteriorating trade balance may mean that real exchange rate for importing sector has moved in opposite to the real exchange rate for the exporting sector as feared by Khan (1998).

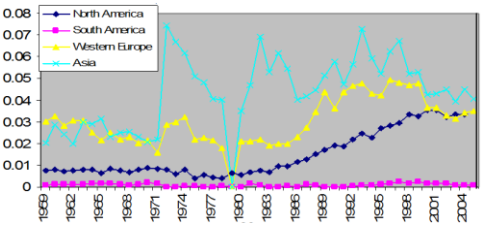
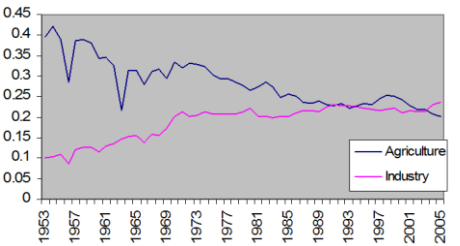
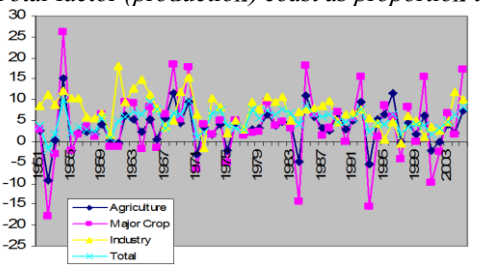


Figure 3. *Direction of exports ($)*

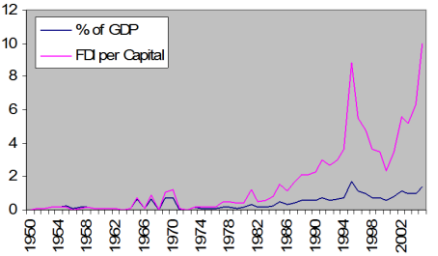
Figure 3 shows direction of exports of Pakistan to North America, South America, Western Europe and Asia. Exports to Asia and Western Europe have been volatile, whereas exports to North America show a steady increase suggesting improved competitiveness for the region over time while exports to South America in comparison to other regions have been negligible at best.



Panel A: *Total factor (production) coast as proportion to GDP (Rs)*



Panel B: *Growth matrix (per capita GDP) total and sector wise*



Panel C: *Foreign direct investment (FDI) ($)*

Figure 4. *Ex-post Competitive Indicators*

Figure 4a suggests that Production costs for agriculture have been declining but that of the industry are increasing. The growth matrix in 4B reveals that agriculture sector despite decreasing production costs have a highly volatile output growth whereas in most of the years it has also been noticed to have been negative following the bad harvests of Pakistan's major crops including Rice. FDI has only improved recently but still at very low levels of GDP. The performance of all these indicators suggest that Pakistani goods whether industrial or Agriculture would not be highly competitive in global markets though the situation has improved in recent years especially post 1990s. Rice and Readymade Garments are both considered as principle commodities in Pakistani tradable sector. The data for Rice exports are available since 1961 whereas the data for Readymade garments was attainable only after 1995. Unfortunately the trends show a visible decline in exports of both commodities suggesting loss of competitiveness. (The data used in this section have been obtained from subsequent Economic surveys of last 30 years conducted by Ministry of Finance, Government of Pakistan).

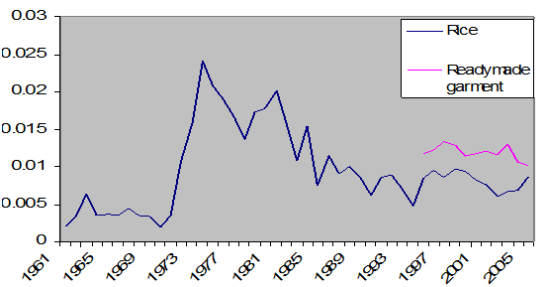


Figure 5. *Export pf principle commodities as proportion of GDP ($)*

Conclusions

Trade reforms of early 1980s improved the performance of the external sector with a visible improvements of both exports and imports for Pakistani economy. However, the competitiveness of domestic productivity could not keep pace with the domestic demand and over the years trade deficit witnessed a steep rise especially after 2002. Pakistani exports became relatively uncompetitive in North American and

European markets. In contrast Pakistan's neighbors like China, India and Bangladesh saw a visible rise in their exports to these destinations. In addition, these countries also improved their trade balance within the region and more South-South trade showed that many of the domestic trade partners of these countries exploited trade as a means to improve domestic competitiveness. Though the production costs of the industrial sector in Pakistan declined visibly over the years, the production patterns expanded horizontally than vertically so suggesting lack of diversification. Despite Pakistan being a predominantly agricultural economy, the costs per hectare harvest in agriculture increased even after liberalization in 1980s. The growth patterns of both agriculture and industry have been very volatile through out 1950 to 2010. Post 2000, foreign direct investment trends showed a clear improvement but soon after 2008, they came back to low levels.

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2.
Gender gap is a trade trap: The road ahead for international development

Introduction

The Sustainable Development Goals (SDGs) are often criticised on the basis of their idealistic targets especially when one considers the lack luster performance of Sustainable Development Goals (MDGs). In this context some view SDGs as the continuation of capitalist rhetoric with the likes of the WTO and the Poverty Reduction Strategy Papers. Nevertheless, there is not much controversy over the stand the SDGs have taken regarding many urgent development issues.

One such issue is women's empowerment. This particular development objective has rightly acknowledged that the key to this goal lies in educating women: "Eliminate gender disparity in primary and secondary education ". Though the timeframe is arguably too strict, the goal is legitimate. Furthermore, Article 10 of the Convention on the Elimination of Discrimination Against Women (CEDAW) specifically provides that "women shall not be discriminated against and shall have equal opportunities in the field of education."

Despite this recognition, education for women continues to be a low priority and remains under-funded in most countries in the South. Women and girls tend to receive fewer resources, less encouragement and little assistance in accessing their right to an education. Despite great emphasis among the intelligentsia and policy makers on the education of women, progress towards equal opportunities for the education for women in the South is still dismal. Who is to blame?

Since the SDGs are primarily a Northern initiative, one probable answer is that SDGs are never followed up with the vigour and spirit in which they were proposed. Donor initiatives are still focused on pro-

growth strategies and macro-economic stability in the South, and as an outcome at the governmental level in developing countries, only lip service is paid to the larger developmental agenda.

As yet there is no significant policy in any of the developing countries which specifically caters to gender issues and women's rights in general, although there are some notable exceptions in South Asia, such as Sri Lanka and the Indian state of Kerala. Women's education aside, developing countries even find it difficult to allocate sufficient resources to primary or secondary education as a whole. In most developing countries, funds are channelled to higher education, rather than to primary or secondary, in an attempt to increase the skilled labour force which is expected to bring significant international outsourcing from developed countries. Since education is already skewed and has a significant male bias in the South, the focus on higher education only exacerbates this male bias.

Gender inequality in education leads to a bias in skill accumulation and therefore earnings in favour of men, particularly once (a) the Southern economies open up to international competition or (b) significant international outsourcing from North to South takes place. This has been the case in India and China where returns to skilled labour have increased primarily to the benefit of men amid international trade and outsourcing since most women in both countries are still uneducated and marketable skills are still male-dominated.

As yet there is no sign of reversal of this situation in favour of women, despite a lot of government rhetoric articulated in the Southern media. The problem is that traditionally the trend in developing countries has been for policies to be pro-growth and market-oriented. Though at present most developing countries are channelling resources towards poverty alleviation, the old trends still prevail and undermine the wider developmental agenda in the name of macro-economic stability. The impression is that much of the talk of channelling resources to the development sector in the South is basically to satisfy donor demands: thus action is widely absent, especially in areas where the donors are less active. Gender equality in education is one such area.

However for the anti-capitalist, pro-socialist lobbies the equation is much simpler. They find no surprise in the apparent failure of the development agenda of gender equality dictated by the North. According to them, the problem does not lie in the fact that women earn less than men on average, or that more women than men are uneducated - the real problem is the lack of economic security for the household as a singular unit in the wake of international competition and depletion of social capital and social safety nets.

According to the pro-socialist stance, women have been exposed to the demands of capitalism, and are exploited because they are less equipped to benefit from the pro-market forces. The limitation faced by capitalism is that it does not distinguish between male and female, as all are labour.

The increasing gender inequalities in education under a capitalist, pro-market oriented system have been an "indirect prophecy" of socialism, as it suggests that free markets further deepen existing inequalities between the haves and have-nots, as it is inherent to the capitalist system that major gains can only accrue to the powerful.

Though the widening inequalities between various sections of the population in the contemporary global economic system has been widely accepted by proponents of the free market paradigm, they still believe in the efficacy of a trickle-down effect from the rich to the poor if a significant development strategy is in place. This is the essence of the PRSPs and the SDGs. However, the slow pace of progress in most areas of the development sector in many developing countries, as well as the persistent neglect of inequalities at the policy level in the South, have caused doubts about these strategies.

What, then, is the way forward, specifically with respect to gender? The issue here is not only one of rights but also of choice. To get high quality education is the right of every individual, irrespective of gender, and it should be the free choice of women either to stay in the household or to work outside or to retain some combination of both. Socialism suggests that the household work done by women should be recognised as economic activity. However, this also means that socialism limits women's choices by over-emphasising her role in household work.

Actually, neither socialism nor capitalism has been able to accommodate free choice for women. If she wishes to, she can work in the market place or in the household as both should be considered 'labour' and it is her right to retain both options. Economic returns to education should not only be attributed to markets but also to household labour.

Education is generally seen in monetary terms in the capitalist economic theory. However, the trend is changing, and the qualitative dividends of women's education are increasingly discussed in development theory. Although research has shown that higher education among women leads to significant decreases in child mortality and fertility rates, mainstream economics still talks about education in terms of market skill value which accrues higher monetary dividends.

This means that a woman who gains higher skills through education has only one option if she wants to gain monetary returns from her education and that is to enter the labour force. If she decides to stay at home, her choice would bring no monetary value as there is no 'value added' associated with household work. This paradigm is the prime cause of the apparent neglect of women's education in the South where most women work in the household.

Growth strategies will be seriously jeopardised if they do not prioritise the education of women. This can be done by finding direct linkages between women's education and processes of growth. In other words, if we could show that countries will benefit more from trade if their female populations are educated, policy makers would be more inclined to focus on women's education.

Trade and gender equation in South Asia

When viewed against the experiences of the East Asian countries, which have experienced export led growth in the 1970s and 1980s, Pakistan's export performance has been less than satisfactory. Currently Pakistan's exports to GDP ratio stands at 13% as compared with 32.2% for Indonesia, 44.4% for Philippines, 56% for Thailand, 39% for Korea and 96% for Malaysia[2]. Not only that these countries have achieved higher growth rates, they have also improved their socio-economic indicators with improved literacy rates among men and women as well as decreased child mortality rates, increased availability of health facilities and decrease in rural unemployment, to name the few. These countries have been able to strike the right balance between their macro economic goals and larger developmental agenda.

Pakistan has to catch up with these countries by embracing strategies where the focus is not only limited to macro economy but also extended to social sector development. The Pakistani Ministry of Commerce increasingly realises the macro-economic part of this equation and adopted a Rapid Export Growth Strategy (REGS) as of 2006 as part of its larger trade policy. On the other hand, a number of initiatives have been taken up by other government agencies to improve the export base and export potential of the country while catering to the poor. The Small and Medium Enterprise Development Agency (SMEDA) has introduced one such measure, under the title of "One Village One Product" to enhance exports and employment opportunities in the rural areas. The initiative is expected to curb poverty and unemployment in the rural areas by opening up a panorama of new jobs at the doorstep of the rural population.

Notwithstanding the importance of such policy initiatives and development projects, the gender discrimination aspect is being ignored like in the past. Pakistan severely lags behind in gender parity when compared to East and South East Asia. Female literacy rates as a percentage of males in some selected East and South-East Asian economies show significant over time improvements and they have more or less reached gender parity in literacy rates (table 1). Malaysia and Indonesia, where the improvements in gender parity are most prominent, are also the economies that have been able to significantly improve their exports in recent years. In comparison, Pakistan has severe gender gaps in literacy rates and the situation hasn't improved much during the last 3 decades, as only 46% of females as a percentage of males are literate today when compared to 37% in 1970.

[2] World Development Indicators, 2006.

Table 1. *Female Literacy Rates as percentage of Males*

1.1.1	Countries	1.1.2	1970	1.1.3	2000
1.1.4	Thailand	1.1.5	84	1.1.6	96
1.1.7	Malaysia	1.1.8	68	1.1.9	90
1.1.10	Indonesia	1.1.11	64	1.1.12	88
1.1.13	Korea	1.1.14	86	1.1.15	97
1.1.16	Philipines	1.1.17	96	1.1.18	99
1.1.19	Pakistan	1.1.20	37	1.1.21	46

Source: World Development Indicators (WDI), 2006.

At present in Pakistan there are 6.4 million children not receiving primary education. Of these left outs, vast majority are girls as 1.9 million are boys whereas 4.5 million are girls. Of the total number of primary schools, about 67 % are for boys and 33% for girls. The overall literacy rate in Pakistan has been improving although at a slow pace. Currently 60 percent of the population is illiterate and women form 70 percent of the illiterate population.

Strong gender disparities exist in educational attainment between rural and urban areas and among the provinces. In 1996-1997 the literacy rate in urban areas was 58.3 percent while in rural areas it was 28.3 percent, and only 12 percent among rural women. There are also considerable inequalities in literacy rates among four provinces, especially disparities between men and women.

The critical link between literacy level and economic growth vis-à-vis other social indicators is well proven both in terms of international and Asian experience. Nevertheless, Pakistan continues to spend a meager amount of its resources i.e., only 4 percent of its gross national product (GNP), on education.

The figures given above show that women in Pakistan have a long way to go to reach equality with men in almost all aspects of education. The magnitude of the task in terms of realizing the 3rd Millennium Development Goal is great which seeks to eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015. Specific attention needs to be given to the persistent gender gaps in skill development in Pakistan while devising trade policies. To this effect, the proposed project not only aims to re-emphasize the importance of 3rd MDG for policy makers in Pakistan but it also seeks to provide guidelines for a fair trade regime by finding the linkage between gender equality in education and international trade flows.

So far, the little research has been undertaken to investigate the links between gendered access to schooling and trade flows. The few contributions available come to contrary conclusions as far the effect of gender equity on growth is concerned. According to Seguino (2000) gender differences in education have spurred growth in Asia. However, she observes that any economic growth which depends on low-wage female labor will fail to erase inequalities in the economy which in turn are harmful to variety of legal, political and social institutions. In fact, the reliance on cheap female labor may very well be reinforcing and ratifying social norms of gender inequality. She emphasises that governments in developing countries should focus on gender equity not only because it is

pro gender but also such a focus would help a country move up the industrial ladder to higher value-added production and move the country out of labor-intensive export led growth trap. If export success and growth come at the expense of gender equality and women's human rights, this may result in long term adverse effects on the terms of trade in developing countries (Cagatay, 2001). Klasen (1999) estimates that the economic growth in South Asia, the Middle East, North Africa and Sub-Saharan Africa could have been 0.9% faster per year then the present trends had these regions pursued more gender balanced education policies. They strongly concluded in favor of gender equity: "In fact it appears that promoting gender equity in education and employment may be one of those few policies that have been termed 'win-win' strategies. It would further economic prosperity and efficiency, promote other critical human development goals such as lower mortality and fertility, and it would be intrinsically valuable as well (p.23)".

The current trends in South Asian economies suggest that they are investing in higher education in anticipation that they will accrue higher economic dividends by climbing up the technology ladder. However without changing the gender dynamics at the grass root levels in education sector would make such pursuit of higher education only half baked and less effective and it may further widen gender inequities as higher education remains to be a male dominated phenomenon in the region. There is need for increased advocacy and awareness on the importance of women education for economic development in South Asia in general and Pakistan in particular.

There is increased need in South Asia to bring focus to increasing gender disparities especially in education which also forms the 3rd MDG. When compared to their counter parts in East Asia and South East Asia, countries in South Asia lags behind in gender parity in education and draw similarities with underdeveloped region of Sub-Saharan Africa (see table 2). Following Klasen (1999), such inequalities may have wider consequences for trade and long term growth potential of these countries. Gender disparity in education is also important for the poverty reduction strategies in these countries

Table 2. *Gender Parity in Education*

		Sub-Saharan Africa	Asia		
			East	South-East	South
Progress toward achieving equal girls' enrolment in primary school		Far from Parity	parity	parity	Far from parity
Girls' primary school enrolment ratios in relation to boys (%)	1990-91	83	93	96	76
	2001-2	86	100	97	85

Source: DFID fact sheet (Retrieved from)

Mapping an effective gender policy in Pakistan

The key public sector stake holders that should work in coordination to implement a gendered sensitised policy that is ingrained in the economic, political and social system of Pakistan can start from Ministry of Commerce, Ministry of Education, Ministry of Labour, Ministry of Women Development, Ministry of Textiles and Industry, Ministry of

Industries and Special Initiatives, National Commission for Human Development, Planning Commission, Export Promotion Bureau, Small and Medium Enterprise Development Authority, State Bank of Pakistan, Economic faculties in universities, Industry stakeholders, Academia.

The government should reach out to Universities in the development of teaching modules, training and lecture series for Economics and other social science faculties of major universities in Pakistan These universities in return would create an impact by publishing policy briefs, newspaper articles and scientific publication in addition to offering courses that link gender with wider political, economic and social landscape of Pakistan

Such initiatives are need of the hour because in Pakistan there is an overall lack of awareness regarding the role of gender inequality in education on trade patterns. It is observed that gender economics as a separate subject is virtually absent in economics faculties of Pakistan's public universities. Though there are some instances of research of gender aspects, it is mostly an individual effort. At departmental level gender studies are virtually non existent. Most graduates enter the job market with out ever studying the role of gender in economic development. So it is no surprise that policy making in Pakistan is also insensitive to gender implication towards development. However the problems at policy making level get even deeper than mere insensitivities towards certain aspects of development. Actually there is a sheer lack of good scientific base for policy making. Government institutions also lack coordination with each other despite deep linkages between their policy objectives.

The research on Gender-Trade link aims to fill above mentioned gaps in academia and policy making by specifically providing evidence in a South Asian context thereby making a case for the relevance of gender inequality to Pakistan's trade discourse. The aim of activities is to bring academic focus to the subject of gender in economics faculties in major universities of Pakistan. It is expected that these activities will train the graduates who will then bring this knowledge to practical use once they enter the Pakistani job market. Secondly these activities will bring gender focus to academic research carried out by teachers and graduate students in these universities. These activities not only aim to bridge the gap between scientific research and policy making in Pakistan but it will help to bring more coordination between different ministries which generally seem to work quite independent to each other despite high levels of correlation between their policy objectives. Scientific publications will further strengthen the validity and urgency of the issue whereas newspaper publications will bring awareness to the civil society of Pakistan as well as help form a pressure group for policy changes in favor of gender equality.

Expected impact on stake holders

Activity 1 Research study:

The research study can contribute to the academic debate on gender gap in education and trade by providing evidence from South Asia. The

study can also encourage future research on the subject as well as provide additional reference point for policy makers nationally and internationally who are interested in bringing a gender balanced dimension to their trade and commerce policies.

Activity 2(a) Teaching modules:

The teaching modules can be provided to the economic faculties of various universities and colleges in Pakistan which will bring increased academic focus to the issue of gender equality especially when discussing trade theories. This way the students of economics will have improved perspective regarding the importance of women education in trade process.

Activity 2(b) Training of teachers:

The training of teachers in an interactive environment will not only motivate the teachers to bring gender aspect to trade debate but also directly disseminate the knowledge on the subject ensuring the proper utilization of teaching modules.

Activity 2(c) Lecture series:

Lecture series can directly engage the students on the debate on gender gap in education and its role in trade as well as economic development for Pakistan and thus help bring the issue as an important part of the curriculum in Pakistani universities.

Activity 2(d) Workshop:

An interactive workshop with policymakers will help search for common grounds in policy making and theory regarding gender gaps in education and trade flows which will form the basis for policy makers to eventually device and/or implement economic policies like trade liberalization while taking into account gender dynamics.

Activity 2(e) Policy brief:

Policy brief can provide specific recommendations to public sector stake holders on how to how to influence gender gap in education while devising trade or commerce policies.

Activity 2(f) Scientific paper:

A publication of scientific papers in a peer reviewed journals providing empirical evidence from South Asia on gender gaps in education and its impact on trade flows will be a significant contribution to this field of literature which may be utilized by the scientific community as well as policy makers internationally and domestically to advocate for reaching more equal opportunities of education among women.

Activity 2(g) Newspaper article:

A series of newspaper articles in Urdu and English in Pakistani newspapers can create awareness among the general public about the issue which will result in increased realization of the urgency to reach this development objective for the larger benefit of the economy and the country.

The capacities of the social science faculties to indulge in teaching and research on practical and current issues of development economics with an enhance gender perspective will increase due to the availability of

teaching modules, lecture series at universities and training of teachers. Similarly the capacity to device and implement for gender sensitize policies by the policy makers in Pakistan will be enhanced by the research input, policy briefs and workshops.

Multiplier effects

In the short term the proposed activities would contribute positively to the debate on gender and trade through research findings. In the short term, the project will contribute to the on going debate regarding the role of gender gap in education on trade flows of the country by providing valuable evidence from South Asia. It will also ensure that gender studies become the important part of Pakistan's academic discourse. It will train the future economic managers and social scientists of the country with gendered perspective of economic development. Policy briefs and workshops will ensure that government and private sector stake holder understand the essence of gender sensitive outcomes and implications of economic policies. This will enable the decision making process to be more gender friendly.

In the short to medium term, these steps will also create general awareness among public regarding the importance of women education as well as advocate for special education policies by the government for women which will eventually ensure that Pakistan takes the path of gender parity. It will also contribute in influencing public sector as well as corporate sector decision making to choose for more gender sensitive outcomes. The project would also increase the resolve to achieve SDGs in Pakistan.

If the government follows a balanced education policy, this will eventually lead to higher skill levels among women leading to increase in their wages. Secondly Pakistan may be able to swiftly climb the technology ladder and indulge in skill labor intensive and relatively capital intensive exports bringing higher growth rates in per capita incomes. Increase gender parity in education would also help curtail income inequalities.

In Pakistan there is an overall lack of awareness regarding the role of gender inequality in education on trade patterns. It is observed that gender economics as a separate subject is virtually absent in economics faculties of Pakistan's public universities. Though there are some instances of research of gender aspects, it is mostly an individual effort. At departmental level gender studies are virtually non existent. Most graduates enter the job market with out ever studying the role of gender in economic development. So it is no surprise that policy making in Pakistan is also insensitive to gender implication towards development. However the problems at policy making level get even deeper than mere insensitivities towards certain aspects of development. Actually there is a sheer lack of good scientific base for policy making. Government institutions also lack coordination with each other despite deep linkages between their policy objectives.

What does gender-trade equation looks like?

A scientific study on the issue can contain a multiple regression analysis on a multi-variate model that assumes that gender gap in education determines the patterns of exports or overall terms of trade in South Asia.

Exports/ GDP = f (Gender gap in Education)

Imports + Exports/ GDP = f (Gender gap in Education)

The tentative model may include some or all of the following control variables in a multiple regression equation form.

- Production of Capital (Technology) Intensive Goods/ GDP
- Governance Indicators (i.e., level of Corruption)
- Environmental Legislation
- Country Dummies
- Gender Wage Differentials
- Population
- Trade Policy Dummies

Possible data sources may include:

- Pakistan Integrated Household Survey
- Pakistan Economic Survey
- Labor Force Survey
- World Development Indicators
- IMF Statistics
- World Economic Outlook
- OECD Data base
- ILO Statistical year book
- UNIFEM Data
- UNDP Human Development report
- Data provided by the partner institutes

Both statistical and institutional analysis may analyze the role of educational inequalities in South Asia in influencing trade in a more comprehensive manner. The former is a quantitative analysis utilising state of the art econometric tools and packages i.e., STATA and the other one is qualitative approach. The econometric analysis can debate the issue of trade and education inequalities with a gendered perspective as the causality in the model runs from gender education inequality to trade. The institutional analysis can reassess the feasibility of the econometric portion as well as provide reference points for policy making.

Conclusions

Generally development goals initiated by the Western intellectual and administrative forum like United Nations or a like organisations are generally appear to fail in most developing countries. The plausible cause

is lack of commitment or capacity on account of developing country governments, that are more concerned with macro-economic stabilisation and growth promotion to fight balance of payment crisis especially lately due to recessionary global business cycle post 2008. It is important that a set of activities are carried out to influence government policies towards greater gender integration at social, political and economic levels. It is the need of the contemporary global society to allow women to be equal stakeholders in economic decision making in developing countries. Some initiatives like micro financing of the poor households in developing South suggest that women have been no less responsible economic agents then men if not more. For example, recently economic pressures in the Kingdom of Saudi Arabia has paved the way for law to enable women to drive – small precursor to what is to come with respect to gender empowerment. This paper takes the issue in a relatively innovative manner and link up gender parity with better trade policy outcomes. The discussion suggests that investment in education of women enables the developing country to get favourable results of trade integration. An argument of such line reflects positively on the policy making agenda in developing countries and motivate the stakeholders to implement gender sensitised policies in social, political and economic prism.

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3.
Governance over economics: Making globalisation good for the poor

Introduction

Today it has become cliché to say that the world is a global village. One may ask, what are the social and economic characteristics of this global village when around the globe, information is just a click away for individuals or is increasingly available to them via 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 strive 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 in business ethics, in economics, not all is about profit making, but about maintaining efficiency while harnessing social harmony.

However, what is *good* economics is still a question to be given a wholesome answer. Economic freedom has leaded the world closer in many ways. One way is that global inequalities have become evident more than ever. The world is more dividing not only on basis of mere ideologies but more importantly there is unequal distribution of economic gains. Developed countries have gained more in recent decades than developing countries. But they also trade among each other freely and enjoy precedence of good institutions with populations who are on average more educated than the populations in developing countries. Developing countries on the other hand suffer from underdeveloped institutions and trade and commerce is still in many cases (i.e., Sub Saharan Africa) an underdeveloped concept and more so because of the presence of many internal conflicts based on ethnicity, language or

religion. On average, developing countries are hostile among each other when compared to developed countries and that can be the legacy of cold war which ended in 1991 with dismantling of Union of Soviet Socialist Republics (USSR).[3]

Irrespective of negative fallout of cold war, and with the end of it in 1990s, a new era started which is now better known as the post Washington consensus period, which saw an increased call of globalisation by asking developing countries to decrease their protection in order to be an integral part of a growing global demand and supply chains. More trade and economic cooperation among developed and developing countries had been seen as one of the best ways through which incomes in developing countries would converge to the levels of their developed counterparts. The focus of recipes of development ever since had been on income generation. The question of distribution of incomes was largely never asked only until recently when there is a significant rise in global income inequality (i.e. see Milanovic, 2006; and Wade, 2004; for a detailed discussion on global income inequality). Rise in global inequalities is seen to be linked with prevalent inequalities among different strata of population within countries which stifle the potential of a country to grow or converge. (A discussion of intra-country inequality has already been carried out in chapter 3, and which is the focus of the larger thesis and this chapter also).

In most of the last 20 years, the criterion of good economic policy and the barometer of good governance focused itself on their effects on per capita income growth in developing countries. Economic efficiency models were transferred to many developing countries who had become adherents to the Washington consensus. Structural Adjustment Plan (SAP) is the most well known one of the recommended programs of economic development, which has been implemented in many developing countries with the help of Bretton Woods's institutions like the World Bank and the International Monetary Fund (IMF).

As per the good advice of Bretton Woods's institutions and in an effort to achieve economic efficiency, most developing countries dismantled their barriers to international trade in goods and services during the last 20 years. As a result, the size of world trade in goods and services dramatically increased. Success stories also emerged as an outcome of contemporary globalisation. China and India, witnessed unprecedented rise in their growth rates as well as significant poverty alleviation. However, for most countries, globalisation came with mixed experiences. Despite integration to the world economy, most countries of Latin America, Africa (sub-Saharan) and some in Asia failed to accomplish decent growth rates. In many countries in the South, poverty increased. Even if some grew at a decent rate, they failed to put a

[3] High military expenditures as a proportion to GDP in many developing countries indicates towards prevalent internal or external conflict, while high military expenditures are born at the cost of public exchequer by crowding out much needed development expenditures.

downward pressure on the increasing trends in poverty levels. For example, Pakistan, which recently witnessed a growth rate of eight per cent, has also witnessed increase in poverty levels from 30 per cent to 35 per cent as of 2005. Even in China and India, the falling poverty trends are not sustainable, as there is evidence of rapidly rising inequalities.

Irrespective of rising trends of poverty in some developing countries and rising within country inequalities in some, a more important fact is that many developing countries encountered conditions of severe economic collapse amid Structural Adjustment Plans. These include mostly the countries in Latin America like Argentina who embraced free market ideology far more intensively than any other country in the developing world. Surprisingly, Argentina had historically been far more developed per capita wise than countries like India, Pakistan, Bangladesh, Cambodia, or regions like Sub Saharan Africa or Mena countries, but instead of converging to the developed country incomes their path to development has seriously been hampered by significant economic collapse post 1980s economic reforms and they are stagnating ever since, still struggling with one macro-economic crises after another.

Where did they go wrong may tell a whole lot about where do most developing countries have gone wrong? It is a story of good policies but bad timing. The policies fail because larger determinants of development are not taken into account. A focus on income generation without looking at prevalent institutions may lead to economic disaster. Mamoon & Murshed (2017) have shown that institutions are as important as good economic policies (i.e. trade policy). Though the focus in chapter 2 was on income and its determinants, the debate needs to be extended to income distribution which can then capture such unequal outcomes which prevent some segments of the societies from gaining goods of economic gains (rising per capita income). In developing countries, other than being poor of the poorest, many are relatively poorer than the others because they are economically and socially excluded because of their ethnic origin, religion or geographical region. It is observed that when these developing countries generate more incomes through policies like integration, the incomes are further distributed un-equally.

This is the same phenomenon as global inequality; where some countries (regions) of the world have gained less than the other countries because of their geographical location, underdeveloped institutions or mere lack of economic capability (because of the presence of deep rooted informal markets). As mentioned above, with the exception of China and India, more developing countries have failed to alleviate poverty even though they have witnessed some short to medium term spurts in per capita income growth rates. The poor remained poor but rich got richer. Has income inequality prevented growth to trickle down to the poor?

In this retrospect, the problem of poverty cannot be separated from the way in which growth is achieved. 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 ground for carrying out contemporary social norms that fit international standards and where business protects labour rights, promotes gender sensitivity, brings efficient social welfare systems while following best commerce practices, there are not one but a myriad combination 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 structures countries may have while working along with the surge of globalisation.

One of the most commonly quoted institutional factors for determining any country's intellectual, social, economic and cultural progress is the 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 that has been able to sustain democracy in the West. It is a well-developed combination of social, legal, political and economic institutions, which has worked in an intricate net of coordination to sustain western economic progress, thus enabling the region to maintain its scientific niche. Where did the West really start it all? There are different answers for different times. To go down a timeline, say a hundred years, western economic progress links 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.

In developing countries, there is 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 completely to democracy. Today China is for the first time seriously emphasising property rights, to protect private ownership, within its own borders. Among the transition economies, Kazakhstan under Nazarbaev achieved rapid economic growth. Here one may assume that these countries 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.

In 2003, Pakistan had become one of the fastest growing economies in South Asia, even surpassing India, under General Musharraf, and finally moving towards democracy while for the first time in Pakistan's politically chequered history, nearly all political parties accepted the electoral verdict as an outcome of free and fair elections. However, the increase in political instability in the last years of Musharraf rule has already stifled the growth rates in the country and currently an economic and political crisis is looming asking whether the good policies of the

dictators are sustainable or whether autocratic rules corrupt the prevalent institutions, irrespective of a possibility of short term economic good will, such that the period, which represents transition to democracy , would be mired with political upheavals which would eventually cause economic collapse. Sometimes, democratic transitions are risky and produce bad economic outcomes. (See Rodrik & Wacziarg, 2005; for a detailed discussion on this).

Thus market-friendly policies may not work in the absence of good institutions. In Russia, the lack of a supportive legal, regulatory and political apparatus has been responsible for the failure of the economy and its reform process. In Latin America, little attention paid to the mechanisms of social insurance and to the safety nets has resulted in dissatisfaction with market-oriented reforms. India, in comparison to the countries mentioned above, is not only the largest democracy in the world in terms of population, but the country is also one of the fastest growing economies in the world with a precedence of sound legal institutions. Due to robust legal institutions, the country is politically less volatile when compared to its neighbour Pakistan, even though both countries have seen an emergence of multiparty governance setups. However, because they are developing countries, much like those in Latin America, social institutions are underdeveloped, which means that a well-meaning democracy may not exist in India until economic progress reaches out to the masses and benefits the impoverished peripheries. It may also be the case that some institutions may be more important than others may. 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.' (Glaeser, 2004a)

Why market friendly policies may fail to work under developing countries? To achieve higher growth rates, economic freedom is a pre-requisite condition. Usually, economic freedom is determined by good economic policies, which as discussed above can be very well a prerogative of good leadership rather than good institutions, especially in case of developing countries. The fundamentals of good economic policies lie in promotion of private sector by implementing rules like private property rights and decreasing the burden of public exchequer. However, in developing countries the private gains may fail to follow equal distribution because of the presence of deep rooted social, ethnic and regional inequalities. Only a democratic structure or prevalence of sound social, political and legal institutions may ensure or promote equal opportunities to private gains in unequal societies.

Thus reliance of economic growth by giving more weight to short term growth strategies is to promote a half baked development recipe which is bound to fail. Most governments have focussed on macro-economic gains. That is why policy advice post Washington Consensus on structural adjustment had a blind following by most developing countries, without asking whether good macro-economics is a sufficient

condition for good development. Globalisation accused if increasing poverty as well as inequality in many countries, due to numerous cases of growth collapse. While at the same time, many suggest that the developing countries have not done enough to avoid disaster. Under the dynamic Hecksher-Ohlin model discussed in chapter 3, it may be that developing countries can not do enough under the biased competition environment prevailing in international markets due to certain protectionary policies of developed nations which is much evident by the political economy of the WTO (World Trade Organisation. (Stiglitz, 2006) Good economic policy advice has to accommodate indigenous limitation of each country. Currently international initiatives like WTO are becoming a symbol of protection than promoter of equal competition opportunities and the bias is seen in favour of the developed countries partly because the negative fall out of globalisation has been felt even in developed countries as 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).

For India and China, it is equal distribution of economic gains which has become more relevant in recent times, while in Latin American countries like Argentina and Brazil, growth and distribution go hand in hand. So what are the key characteristics which matter equally good to income generation and re-distribution of income?

In developing countries, income inequalities can be affected in two ways. (1) Adopt policies which have a redistributive outcome by shifting gains from rich to the poor. (2) Or raise the share of income in sectors which mostly employ the poorer segments of the society. Both institutions and trade may have a strong redistributive power. For example, democracies, as against, oligarchic societies redistribute resources equally to all sections of the society. In a real democratic set-up voice of farmers and industry workers are weighed equally and policies are structured to raise the share of income for both manufacturing and farm industry. Outcomes like increased accountability, preservation of property rights and control for corruption may all have redistributive power. Trade can also lead to redistribution if developing countries are able to trade more in agriculture produce in international markets thus raising the returns to agriculture sector. However, if developing countries fail to compete in international markets, governments may adopt regulation policies which can protect their labour. The scope of protection of agriculture sector in developing countries by means of trade policy measures is limited. Nevertheless. However, more exports in agriculture is necessary for economic empowerment of the rural population whose livelihoods are directly connected with the performance of agriculture sector. Protection of agriculture sector is very common in developed countries, while it has been negatively affecting the farmers in developing countries. To remedy this problem, developing countries can increase trade among each in labor intensive agriculture produce causing rise in income share of agriculture in economic growth.

Government measures such as subsidies can also be utilised to improve on farm activities. Subsidies on pesticides and alike, can improve the produce of agriculture sector significantly improving the livelihoods in rural areas So it is a combination of good institutions and trade, which eventually leads to inequality mitigation and redistribution.

To analyse what makes for good economics where not only economic growth is achieved but most importantly economic dividends are also distributed equally among different strata of the population, this paper conducts a cross-sectional analysis of developed and developing countries as a follow-up of Mamoon & Murshed (2017). In this paper also, different institutional variables, along with different proxies of openness\trade policy are employed while focussing on their impact on inequality.

Inequality as important as growth

After the surge of colonialism, the world became a land of unequal opportunities. The last century witnessed global inequalities partly lead to regional inequalities; and with the return of contemporary globalisation, post-modernism brought inequality to the doorstep of each country. Where rural and urban divides have been ever increasing so that it recently became of policy importance to consider inequality as a significant factor that may stifle growth promoting strategies and even reverse what good growth may bring to society. Income inequality has become as important as issue as per capita income growth because over the last twenty years it is observed that the distributions in poor, middle income and rich countries have grown more unequal.

To account for inequality trends recently observed in developing countries, one may start with observations of high levels of inequalities in most countries of Latin America. For example, due in part to the recession in the 1980s, which hit the poor harder than the rich, inequality in most Latin American countries, except three (Colombia, Uruguay and Costa Rica), witnessed sharp rises. Gini coefficients in Latin America ranged between 0.45 and 0.60 since the early 1950s, which are among the highest in the world. The severe polarisation of income has been due to 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 widening of the urban-rural divide from faster expansion of urban activities amid China's active participation in international markets is responsible for the rise in income disparity. 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-shape pattern, although less pronounced. In India, the experience of the 1990s points to a moderate rise in both urban and rural inequality and a larger rise in overall inequality due to a widening gap between urban and rural areas. In the 1990s, urban

inequality rose to 0.36. The Gini coefficient in Pakistan rose from 0.39 in the 1960s to 0.41 in the 1990s. Much like India, the sharp rise in rural inequalities resulted in the rise in overall inequality. Inequality in sub-Saharan Africa has been among the highest in the world. There is some evidence of a 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 the early 1980s to 0.76 in the early 1990s. Similarly for Kenya, the rural inequalities increased by nine points from 1980 to 1992 and stands at 0.49 (Cornia *et al.* 2004).

Rise in inequality is not only a developing country phenomemon: 'Canada excepted, all the countries of English settlement, led by the United States, have experienced big increases in income inequality over the past 20-30 years. In the United States, the top 1% of the families enjoyed a growth of after-tax income of almost 160 % over 1979-97, while families in the middle of the distribution had a 10% increase. Within the top 1% most of the gains have been concentrated in the top 0.1%. This is not a matter of reward to education. Inequality has expanded hugely among the college-educated. Whatever the causes, the fact is that the United States is now back to the same level of inequality of income as in the decades before1929, the era of the "robber barons" and the Great Gatsby. Income distribution in the United Kingdom grew more unequal more quikly than even in the United States during the 1980s, and is now the most unequal of the big European countries' (Wade, 2004; 12).

Different types of institutions, integration, inequality and the endogeneity factors

There are different measures of inequality which may determine within country inequality and they have been widely discussed in recent literature. (See for example Wade, 2004; Milanovic, 2006). Most studies concentrate on the positive or negative effects of globalisation or integration on income distribution while employing diverse proxies of income distribution. Not many studies concentrate on the effects of institutions on inequality. There is a need to simultaneously model the effects of institutions and integration on income distribution. However, before any such analysis is carried out potential endogenieties between integration and institutions needs to be addressed, so that a statistically valid model is estimated. This section captures the inter connection between institutions, integration and inequality.

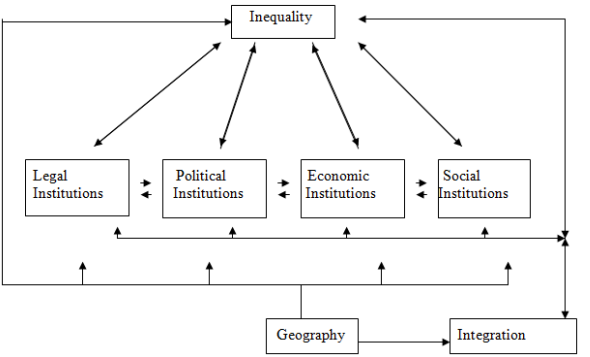

Figure 1. *Endogeneity between institutions, integration and inequality*

There are issues of two-way causality between inequality and institutions (see Keefer & Knack 2002; Chong & Gradstein 2004), and between different types of institutions as shown by Figure 1 and discussed below. Many recent studies (see Chen & Ravallion 2003; Cockburn 2001; Friedman 2000; Lofgren 1999), show that international trade relates significantly to inequality while institutions and integration are also endogenous. (Rodrik *et al.,* 2004) Any empirical analysis that takes institutions as a purely exogenous factor while analysing its effects on inequality may lead to mis-specification bias. Here one can conveniently assume that geography is a purely endogenous concept which may determine the distribution of income as effectively as it explains differences in per capita income growth rates.

Easterly (2001) and Keefer & Knack (2002) suggest that social polarisation negatively affects institutional quality. For example, rising inequalities may lead to political instability and even civil unrest. Chong & Gradstein (2004) find strong evidence of bidirectional 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: '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 & Weeks 2003: 3)

Brink (2008) also emphasised on addressing inequalities in a society to enable the institutions work better: ' Even the best institutions require (some more than others, depending not so much on their quality as on their design) a personal investment on the part of the claimant, sufficient to overcome the resistance of the respondent. Some basic capability on the part of the claimant is a precondition for the effective exercise of

rights. Secondly, institutions are the result of political struggles that also require the investment of substantial personal resources, sufficient to overcome the resistance of those who can anticipate their consequences and would be adversely affected by them. Both the development and the operation of institutions respond to the core inequalities present in society. Until those inequalities are addressed, it is unlikely that a full democratic rule of law will take hold' (p23).

The countries with poor institutions are also likely to have high inequality. For example in Russia in the 1990s, a small group of entrepreneurs were successful in exploiting their political clout to promote their own interests, subverting the emergence of institutions committed to the protection of smaller shareholders and businesses. According to the Corruption Perceptions Index published by Transparency International, among the transition economies, Estonia is 28 and Hungary 31; whereas Russia is 79 and Ukraine 83. In these transition economies, poor performance of public institutions, absence of effective implementation on property rights, and presence of business regulation which favour of influential parties, absence of trust in the courts to resolve business disputes, tax evasion and higher levels of rent seeking have strong correlation with high inequality in the society. (Hellman & 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 & 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 one-party systems, 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, lack of judicial independence and a free press, and high levels of permissiveness towards corruption.

Table 1. *Different Kinds of Institutions*

Institutions	What they Capture
Political Institutions:	Political stability, democracy, the separation of powers
Legal Institutions:	Laws and their enforcements
Economic Institutions:	Promotion of private wealth
Social Institutions:	Human motivations and social structure.

Before discussing in detail the interdependence of different institutions, it is important first to differentiate between them. There are four types of institutions identified: legal, political, economic and social (Williamson, 1999). A hierarchy of institutions are presented in Table 1. Social institutions capture socioeconomic conditions such as health, education and nutrition and can be analogous to human capital which has basis in its historic evolution. For example the reference of Glaeser *et al.*

(2004a) towards the endogeniety between AJR settler mortality with settlers' human capital is one indication of long run transformation of social institution in developing countries. Legal institutions capture the transparency and fairness of the legal system, preservation of 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 and so on. Political institutions represent political stability, democracy, autocracy or dictatorship or rules which promote political process, civil liberties and political rights. Economic institutions comprise state effectiveness at collecting taxes or other forms of government revenue. As well as, the ability to create, deliver and maintain vital national infrastructure, the ability to respond effectively to domestic economic problems; independence of government economic policies from pressure of special interest groups, trade and foreign exchange; competition policy, privatisation, banking reform and interest rate liberalisation, securities and non-bank financial institutions.

The legal, political, economic and social institutions are strong in developed countries while developing countries have mixed experiences. For example, the US and most advanced societies vigorously protect intellectual property rights, but this is not the case in many developing countries. (Rodrik, 1999) Engerman & Sokoloff (2002) link the development of public education, as a social institution, to democratisation as a political process in the US. They argue that while starting at a similar level of development in the 18th century, the US led the way in setting up a system of common schools and promoting literacy, whereas countries in South America and the Caribbean delayed implementing these processes. Gupta *et al.* (1998) find that if government officials use their authority for private gain and indulge in corruption, it 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 government effectiveness as it weakens tax administration and can lead to tax evasion and improper tax exemptions. Higher corruption is associated with increased inequalities in education, land distribution and health spending. Wealthy urban elites can lobby the government for biased social expenditure towards higher education and tertiary health, which tends to benefit high-income groups (Gupta *et al.* 1998).

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

Inequalities may lead to political upheavals against globalisation and integration. Some developing countries may trade with developed countries because of common polity, whereas some countries cannot effectively trade because there lays ideological differences between governance structures. For example, despite Iran being an Oil rich country, do not trade with United States or Israel on ideological grounds while it may establish stronger trade relations with the competitors of United States e.g. Russia and Venezuela. Conflict and political instability also cause countries to trade less effectively with rest of the world causing negative externalities in terms of increased costs of trade. For-example Pakistan and India, despite being neighbours, have a history of conflict, and they do not trade with each other more, despite high costs incurred in terms of competitions and economic rivalry. India is traditionally a democracy, while Pakistan has scored usually low in democracy. Thus there is a strong correlation between inequality and trade through institutions.

Table 2. *Summary Statistics*

Variables	Code	Source	Obs	Std. Dev
Dependent				
GINI Coefficient in Percentage Points as calculated by WIDER, 1995	Gini	UNU/WIDER World Income Inequality Database (WIID) [Retrieved from].	117	(35.00)
UTIP-UNIDO Wage Inequality THEIL Measure, 1999	Theil99	University of Texas Inequality Project (UTIP) [Retrieved from].	155	(0.099)
Lowest income decile, 1995	Low10	UNU/WIDER World Income Inequality Database (WIID) [Retrieved from].	117	(1.05)
Fifth income percentile/ First income percentile, 1995	High20/ Low20	UNU/WIDER World Income Inequality Database (WIID) [Retrieved from].	117	(2.28)
Third income percentile, 1995	Thrd20	UNU/WIDER World Income Inequality Database (WIID) [Retrieved from].	117	(2.22)
Highest income decile, 1995	High10	UNU/WIDER World Income Inequality Database (WIID) [Retrieved from].	117	(7.50)
Endogenous Independent				
Openness Variables				
(Exports +Imports)/GDP at current dollar prices, 1985	Lcopen	World Development Indicators	170	(0.589)
Import Penetration: overall, 1985	Impnov85	Pritchett (1996)	96	(21.08)
Import Penetration: overall, 1982	Impnov82	Pritchett (1996)	95	(23.85)
TARS trade penetration,: overall, 1985	Tars85	Pritchett (1996)	96	(36.91)
TARS trade penetration,: overall, 1982	Tars82	Pritchett (1996)	93	(83.10)
Trade Policy Variables				
Import duties as % imports,1985	Tariffs	World Development Indicators	99	(8.903)
Tariffs on international inputs and capital goods, 1985	Owti	Sachs & Warner (1995)	98	(0.165
Trade taxes/ trade, 1982	Txtrdg	Pritchett (1996)	54	(0.031)
Weighted average of total import charges, 1985	Totimpov85	Pritchett (1996) (Available for developing countries only)	76	(21.30)
Non trade barriers frequency on intermediate inputs, 1985	Owqi	Sachs & Warner (1995)	96	(0.24)
Non-tariff barriers Coverage: overall, 1987	Nontarr87	Pritchett (1996) (Available for developing countries only)	76	(36.305)
Sachs and Warner's composite openness index, 1980	Open80s	Edwards (1998)	61	(0.446)
Institutions				
Political				
Voice and Accountability, 1999 Range: 2.5 to -2.5	Va	Kaufmann, Kraay & Mastruzzi (2003)	170	(0.952)
Political stability, 1999 Range: 2.5 to -2.5	Ps	Kaufmann, Kraay & Mastruzzi (2003)	156	(0.954)
Democracy, 2000	Demo	Polity IV dataset)	123	(4.33)

Range = 0-10 (0 = low; 10 = high), Democracy Score: general openness of political institutions. The 11-point Democracy scale is constructed additively				
Autocracy Range = 0 to -10 (0 = low; -10 = high), general closeness of political institutions. The 11-point autocracy scale is constructed additively	Auto	Polity IV dataset)	123	(3.69)
Legal				
Rule of Law, 1999 Range: 2.5 to -2.5	Rl	Kaufmann, Kraay & Mastruzzi (2003)	166	(0.937)
Control for Corruption, 1999 Range: 2.5 to -2.5	Ctc	Kaufmann, Kraay & Mastruzzi (2003)	159	(0.910)
Economic				
Government effectiveness, 1999 Range: 2.5 to -2.5	Ge	Kaufmann, Kraay & Mastruzzi (2003)	157	(0.893)
Regulatory quality, 1999 Range: 2.5 to -2.5	Rq	Kaufmann, Kraay & Mastruzzi (2003)	166	(0.892)
Social				
Average years of Schooling, 1999	Sch99	Baro & Lee (2001)	109	(2.914)
Instruments				
Natural logarithm of predicted trade shares computed from a bilateral trade equation with 'pure geography' variables,	Lfrkrom	Frankel & Romer (1999)	163	(16.75)
Fraction of the population speaking English	Engfrac	Hall & Jones (1999)	182	(0.236)
Fraction of the population speaking one of the major languages of Western Europe: French, German, Portugese or Spanish	Eurfrac	Hall & Jones (1999)	185	(0.380)
Drop out rate, 1990s	Drop90	Barro & Lee (1999)	125	(0.802)
Number of school days	Schday	Barro &d Lee (1999)	139	(23.43)
Distance from the equator of capital city measured as abs (Latitude)/90	Disteq	Acemoglu, Johnson & Robinson (AJR) (2001)	208	(16.65)

Data and methodology

The six governance indicators utilised in Mamoon & Murshed (2017) are the same employed here for the analysis. They are categorised as rule of law (*Rl*), political stability (*Ps*), regulatory quality (*Rq*), government effectiveness (*Ge*), voice and accountability (*Va*) and control of corruption (*Ctc*). This chapter divides them into four classifications based on their definitions considering *Rl*, and *Ctc* as legal institutions. *Ge* and *Rq* are economic institutions whereas Va and *Ps* is a proxy for Political institutions. This analysis adds two more political indicators namely, democracy (*Demo*) and autocracy (*Auto*) to the analysis from Polity dataset whereas, both range from 0 to 10. The analysis also includes average schooling years in the total population at 25 (*Sch*)) in order to capture the quality of social institutions.

As mentioned above, international trade is also a significant determinant of inequalities in countries across the globe; integration enters the regression model to enhance its explanatory power, while we can also test whether globalisation is a cause to rising inequalities. This paper incorporates not one but eight various concepts of integration based on outcome as well as incidence based measures of trade barriers. The ratio of nominal imports plus exports to GDP (*lcopen*) is the conventional openness indicator. Two other measures of openness are overall trade penetration (*tarshov*) derived from the World Bank's TARS system and overall import penetration (*Impnov*) respectively. 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 this study. Other measures that capture restrictions in overall trade are non-tariff barriers. Overall non-tariff coverage (*Ntarfov*) and non-tariff barriers on intermediate inputs and capital goods (*Owqi*) are used here as two proxies for non-tariff barriers. Sachs & Warner's (1995) openness index (O*pen80*) is utilised as a composite measure of trade policy.

First, comparable and consistent measures of income inequality, whether on a household level or per head basis are difficult, almost implausible and generally fail to provide adequate or accurate longitudinal and cross-country coverage. For example, between-country world PPP income inequality using per capita GDPs, equal country weights (China=Uganda), through a GINI estimate has been found to have increased since 1980s. However between country world PPP income inequality with countries weighted by population has been found to be constant or falling since around 1980s (see Wade, 2004). For this, recent literature on income inequality prefers global income inequality indicator over country specific ones (see Milanovic, 2006). However we are more interested in country specific effects of inequality to differentiate between developed and developing countries. To capture income inequality this chapter employs GINI income inequality index (*Gini*) for both developed and developing countries from UNU/WIDER World Income Inequality Database (WIID).

However, there are many issues revolving around the calculation of GINI index which have also been presented in some detail in WIDER User Guide (2008): 'There are no easy ways to use income/consumption distribution data. Unlike national accounts data which are in principle comparable across countries, there is no agreed basis of definition for the construction of distribution data. Sources and methods might vary, especially across but within countries. This may be the case even if the data comes from the same source. In their influential article on the use of secondary data in studies on income distribution, Atkinnson & Brandolini (2001) discuss quality and consistency in income distribution data both within and across countries. They show how both levels and trends in distributional data can be affected by data choices. In light of this, it is not easy task to construct a secondary database with distribution data. Regardless of different views, the collection of inequality observations is restricted to what in practice is available. In most industrialised countries inequality and poverty are assessed with reference to income, not consumption (Deaton & Zaid, 2002). This tradition is followed in much of Latin America. By contrast, most Asian and African surveys have always collected detailed consumption data. The fact that distribution data can be based on both income and consumption is the first step stone in the construction of comparable statistics. In WIID (reference to WIDER data base) we strived to collect observations with reference to both income and consumption, whenever possible' (p.4).

These are introductory lines of the user manual which have quite nicely summarised the problem faced with the collection of comparable data to construct within country GINI index across a set of countries. To address this critique of data problem faced with the measures of income distribution, this chapter has also employed other concepts of inequality. UTIP-UNIDO Theil measure (*Theil*) calculated by the University of Texas Inequality Project (UTIP) captures wage inequality between skilled and unskilled labour in manufacturing pay sector and available for both developed and developing countries. Several factors motivate this decision. On the data methodological front 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, for nearly 40 years most countries around the world have measured manufacturing pay with reasonable accuracy as a matter of official routine. (Galbraith & Kum 2002). However, literature also relates rise in wage inequality with the behaviour of relative factor supplies (see Acemoglu, 2003).

The same study, nevertheless, indicates that changes in relative demand may also cause changes in relative sill premia, through at least four distinct effects:

1. Own technology development by different countries with different degrees of skill bias.

2. Lack of technical capabilities in some countries to adapt to most recent skilled-bias technologies.
3. Efficiency in adoption of more skilled biased technologies from a global technology frontier.
4. Different trading regimes with different levels of trade opening affecting the demand of skills differentially.

Different degrees of skill bias, or a countries potential to adapt to most recent skilled bias technologies or its efficiency in choosing skilled bias technologies from global technology frontier may all be determined by prevalent institutions. For-example, efficient economic and political institutions would enable the countries to adopt or benefit from skill biased technologies thus raising the demand for skills. This can all be done to achieve better growth rates. For-example, countries like India and China, where a significant population has been educated and skilled in urban clusters, a skilled bias technical progress is underway. This factor has resulted in outsourcing of jobs from the developed countries to India and china's business capitals. The skill premia has significantly gone up, while the relative price of low skilled has fallen down. For-example within the manufacturing sector, low skilled wage usually rise at a far less proportion than skilled labor wage. In most cases, the low skill wage is stagnant because of excess supply of low skilled. The excess supply is sustained by continuously increasing trends of migration from rural to urban.

Some studies argue that international trade play a limited role in the increase in the relative demand for skills (see i.e., Acemoglu 2002). However, such works focus more on wage patterns in developed countries and the evidence of trade in determining skill premia for developed countries is limited since they are leaders in technology whereas technology leaders may not generally import new technologies from other countries and thus technical change for all such technology leaders is an indigenous process. The skill biased technical diffusion effect through trade in developed countries is only possible when they trade among each other. However, for the larger world, which mostly comprises of developing countries, trade is one of the significant sources of technical change especially in the presence of lax intellectual property rights. Acemoglu (2002) suggest that most developing countries are in any case unprepared to utilise most of the technologies adopted by developed countries and thus the scope of technical change through trading with developed countries remain very limited. Here the case of China and India may refute this hypothesis as they have been able to adopt and transfer relatively sophisticated technologies. In recent times, more and more Indian and Chinese enterprises are appearing in the list fortune 500 companies. Further opening up of India and China to world markets post 1990 has brought significant technical change in both countries which must have a significant relationship with a rise in skill premia. Currently many Indian multinationals are incorporating new technologies for indigenous use. For example, TATA has been offering to build the cheapest car in the world, the production of which has only

been delayed because of relocation of production plant to another location due to a dispute over procured land for the plant in State of Bengal. However, one should also note here that early grounds were prepared in India and China in 1970s and 1980s by practicing high protection of industrial sector to catch up to new technologies which are increasingly practiced today in businesses. With skill bias technical change, both countries have witnesses rise in skill premia as India and China are emerging as technology leaders among other less developed countries in Asia.

Acemoglu (2002) scepticism over trade than technical change affecting skill premia is more of an empirical contention and especially for the case of U.S. In another paper though, Acemoglu (1999), already introduce a dynamic model to discuss the possibility of rise in skill premia for both developed and developing countries due to trade between each other which would bring additional technological diffusion effect to developing countries and skill-biased technical change in developed countries. The paper explains its motivation in favour of rise in relative wage inequality among skilled and unskilled, due to trade between developed and developing countries, by incorporating technical change as the dynamic externality: 'increased international trade will have an effect on skill premia by changing the nature of technologies that are being developed, as well as its more direct standard effect. Under most plausible circumstances, trade between U.S and the LDCs (Least Developed Countries) will induce skill-biased technical change in the U.S., and will cause a large increase in U.S. skill premia. Contra to the standard models, this induced technology effect also implies that trade may increase skill premia in the LDCs' (p.26).

Similarly, by drawing comparison of globalisation with soccer, Milanovic (2003b) comes up with an interesting analogy which can partly explain the skill bias in high growth oriented manufacturing sector activities across the globe and its unequal outcomes within countries. As in soccer today where the quality of the game has arisen with the rise in players' skills with matching salaries and where best players are paired to only play with those who are also among the best; to compete in global markets, countries have to raise the share of skills (good jobs) in their population to match the skills (good jobs) in the developed countries because skilled intensive production activities may only take place where appropriate skills are present and these activities in addition to directly benefiting these skills with a high premium, also benefit the country through technology spill over effects which improves the growth potential of the country. India and China have successfully transformed a significant portion of population which can match the rising global skill demand (good jobs) and thus these skilled labor are directly benefiting from globalisation. The solution can vary. In the short run, one solution is to protect low wage labor through regulations such that high wage (good) jobs and low-wage (bad) jobs can co-exist (Acemoglu, 2001a).

As contended by Acemoglu (2002), United States and United Kingdom, who are leaders in technology among other developed nations,

have been witnessing a rise in skill premia which in contrast to India and China may not have lot to do with international trade. However, the downward pressure on the relative wages of lower skilled is partly attributed to job outsourcing to developing countries by many business enterprises located in these Western technology leaders, most of whom have found many urban commerce havens in South Asia and East Asia where skilled labour, only relative to local market standards, is employed in outsourced job market. However, one may note that without efficient technology transfer by developed countries to (or adoption by) the developing ones and by already creating skills among strata of urban population through investment in education, outsourcing business would not have been a cost efficient one. And in the first place, to make technology transfer and adoption possible, trade between developed and developing countries have been a pre-requisite. Thus technical bias change and trade go hand in hand for both developed and developing countries to determine skill premium as is rightly modelled by Acemoglu (1999).

Trade and Globalisation, may also lead to rise in wage inequality because many developing countries pay protection premium to skilled labor in order to pursue a local path to technological development. While availability of cheap and relatively unskilled labor in global technical frontier may cause a downward pressure on wages of unskilled relative to skilled in developed countries as developed countries try to retain their niche in technology and more and more economic activity require higher skills which would then always follow excess demand of more refined skills in the context of local and global factor supply market. Thus production technologies would always move places relative to their skill intensity globally and locally to find cost effective supply of labour which best matches their skill requirement. While international trade would provide the basic frame work for the very possibility of relocation of these these production technologies. In a technology driven world the returns to relative skills would always be high irrespective of production location.

The possibility to find a negative relationship between wage inequality and trade for developing countries would come about if trade between them increase, especially among countries which are at similar technical frontier but their access to technology is unequal: some are ready to adopt more skill biased technologies than the others. A detailed discussion of this scenario has already been presented, discussing the trading opportunities and its skill bias fallout in presence of economic cooperation between say China and Thailand. Further more, by increasing the mean level of education; developing countries can offset the negative effects of trade on labor markets (Mamoon & Murshed, 2008).

And as discussed before, in addition to the trade side, institutional side also play an important role. Like income inequality, there may also be a strong connection between good institutions and smooth labour markets. Thus such questions are also important: Are more educated

societies with better legal, political and economic institutions more capable to absorb the upward pressure which is put by technical bias on relative factor returns? Does the presence of good institutions form grounds for technical change with overall fewer distortions in labor market returns? If yes then good institutions would be expected to put a down ward pressure on wage inequality.

To take a step further from empirical literature on inequality which focus on GINI and to make the analysis more intensive empirically for the robustness of the results, this chapter also employs income deciles and percentiles derived from UNU/WIDER World Income Inequality Database (WIID) as other proxies of inequality. Institutions or integration will be guilty of inequality if it has a negative impact on the incomes of the bottom 10 per cent (*low10*) and positive impact on the income of the top 10 per cent (*high 10).* Income groups are also divided into quintiles anticipating the effect of institutions to be negative for the ratio between the top 20 per cent and bottom 20 per cent (*high20/low*20) and positive for the middle-income groups (*Middle20*) are included. The exercise on income deciles and percentiles will shed light on how institutions and integration relate to income distribution. Of special interest is how quality of institutions relates to the incomes of the middle-class or the ones living in the bottom income share. Each country observation for all inequality measures come from the last year for which data is available and in most cases represent inequality in the mid-1990s. Our basic inequality and income share equations would look like:

Inequality = f (Institutions, Integration, Geography) (1)
Income Share= f (Institutions, Integration, Geography) (2)

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

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

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

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

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

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

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

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

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

The variable $Theil_i$ is Theil index in a country i, LI_i, PI_i, EI_i, and SI_i 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 ε_i is the random error term. Equations based on *Gini*, *High20/Low20*, *Middle20*, *Low20* and *High10* have similar specifications.

As discussed, there are potential endogeneity problems between institutions and integration and between institutions and inequality itself. Therefore the institutional, trade policy and openness proxies presented here were first regressed on a set of instruments. This chapter takes the same set of instruments which were used in chapter 2 to instrument for openness/ trade policy, institutions and human capital which is considered as a social institution in this analysis. Frankel & Romer (1999) (FR) makes up for the instrument for all the outcome and incidence measures of trade barriers utilised in this chapter. FR instrument uses trade/GDP shares constructed based on a gravity equation for bilateral trade flows. Following, Hall & Jones (1999), the extent to which the primary languages of Western Europe are the first languages are taken as instruments for Legal, Political and Economic institutions. Hall and Jones argue that the instruments do not correlate with the error term. Though, it is good to briefly mention again that Acemolgu, Johnson & Robinson (2001) (AJR) 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 the AJR instrument as mentioned in Mamoon & Murshed (2017). According to Glaeser *et al.* (2004a), 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.* 2004a: 8) Also the data for AJR instrument is only available for 64 countries. Although Rodrik *et al.* (2004) 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.

Since years of schooling for proxy for social institutions, dropout rates (*drop90*) and school days in a year (*Schday*) are employed as instruments. As in Rodrik *et al.* (2004) and Hall & Jones (1999), 'distance from the equator', here is another instrument (proxy for

geography) also employed by Hall & Jones (1999). The IV analysis in chapter 2 has already established the statistical validity of these instruments. However, here the instruments enter first stage of the analysis under slightly different specifications. For Legal, Political and Economic institutions, the regression models corresponds to specification in Mamoon & Murshed (2017) when human capital was absent. In this paper, *Sch99* and *Alter* corresponds to Social institutions and thus a new specification has been introduced where Social institutions would enter different inequality equations with a combination of different outcome based (openness, Open) or incidence based (trade policy, TP) respectively. Following is the model specifications for first stage regressions based on instruments:

$$LI_i = \sigma_1 + \varsigma_1 Eng_i + \theta_1 Eur_i + \vartheta_1 FR_i + \tau_1 Disteq + \mathrm{E}_{1i} \quad (11)$$

$$PI_i = \sigma_2 + \varsigma_2 Eng_i + \theta_2 Eur_i + \vartheta_2 FR_i + \tau_2 Disteq + \mathrm{E}_{2i} \quad (12)$$

$$EI_i = \sigma_3 + \varsigma_3 Eng_i + \theta_3 Eur_i + \vartheta_3 FR_i + \tau_3 Disteq + \mathrm{E}_{3i} \quad (13)$$

$$Open_{1i} = \sigma_4 + \varsigma_4 Eng_i + \theta_4 Eur_i + \vartheta_4 FR_i + \tau_4 Disteq + \mathrm{E}_{4i} \quad (14)$$

$$TP_{1i} = \sigma_5 + \varsigma_5 Eng_i + \theta_5 Eur_i + \vartheta_5 FR_i + \tau_5 Disteq + \mathrm{E}_{5i} \quad (15)$$

$$SI_i = \sigma_6 + \varsigma_6 Drop90_i + \theta_6 Schday_i + \vartheta_6 FR_i + \tau_6 Disteq + \mathrm{E}_{6i} \quad (16)$$

$$Open_{2i} = \sigma_7 + \varsigma_7 Drop90_i + \theta_7 Schday_i + \vartheta_7 FR_i + \tau_7 Disteq + \mathrm{E}_{7i} \quad (17)$$

$$TP_{2i} = \sigma_8 + \varsigma_8 Drop90_i + \theta_8 Schday_i + \vartheta_8 FR_i + \tau_8 Disteq + \mathrm{E}_{8i} \quad (18)$$

Where Eng_i and Eur_i are the instruments for legal, economic and political institutions referring to fractions of population speaking English and European languages respectively. *Drop90* is Annua Drop out rates and *Schday is number of schooling days*. Both are instruments for average years of schooling and adult literacy rate. FR_i an instrument for openness and trade policy. $Disteq_i$ a proxy for geography showing distance from the equator. At the second stage, the income share equations employ the predicted values of respective institutional, openness and trade policy variables.

Results

1st Stage results

The first stage results are presented in table 3. All instruments seem to work quite well for the outcome based (openness) measures of trade

barriers and high R-square and F-statistic show that instruments significantly explain the variation in trade shares. However for incidence based (trade policy) measures of trade barriers, F-statistics have declined and range between 7 and 5. For tariffs on international inputs and capital goods (Owti), weighted average for total import charges (*Totimpov85*), Non-tariff barrier coverage (*Nontarr87*) and Sachs and Warners composite openness index (Open80), the FR instrument is significant. FR trade shares are weekly related with import duties (Tariffs) and trade taxes (Txtrdg). For NTBs, instruments are insignificant in all cases, while F-statistics is mere 0.73. Instruments work quite well for Legal, Political, Economic and Social institutions with F-statistic much higher than 10, and high R2, while all instruments are significantly related with all institutional regressors. Low F-statistics for incidence based measures may indicate that instruments employed are weakly related with the regressors.

Discussion on relevance and validity of instruments has already been carried out in chapter 2 and suggests that low F-statistics may not necessary confers to weakness of instruments. Staiger & Stock (1997) rule of thumb of F-test to be equal to or greater than 10 for the good fit of instruments may only hold in case of one instrument and one regressor. When the number of instruments are moderate or large, higher order asymptotic tests, which are already proposed in Mamoon & Murshed (2017), needs to be carried out. Higher order asymptotic tests include (1) obtaining Craag & Donald (1993) critical values to reject 2SLS bias and (2) Anderson-Rubin test of joint significance of endogenous regressors for relevance of instruments; (3) Hansen or Sargan over identification test statistics for erogeneity; and (4) Baum, Schaffer and Still's recommended test for heteroskedasticity robust 1st stage estimate for reducing omitted variable bias. To carry out all these tests, the author refers to IV stage analysis where these higher order asymptotic testing is done and made it available for many of the 2SLS specifications which are run under Eq. 3, 4, 5, 6, 7, 8, 9, and 10. In all these specification different definitions of inequality are utilised along with different specifications of Legal, Political, Economic, Social institutions and integration as regressors.

Table. 3. *First Stage Regression*

First Stage Results: Openness and Trade Policy												
	Nominal Trade share (lcopen)	Import penetrations 1985 (Impnov85)	Import penetration s 1982 (Impnov82)	TARS trade penetratio n 1985 (Tarshov8 5	TARS trade penetratio n 1982 (Tarshov8 2	Import duties as % Imports (Tariffs)	Tariffs on internatio nal inputs and capital goods (Owti)	Trade taxes (Txtrdg)	Weighted average of total import charges 1985 (Totimpo v85)	Non trade barrier s (Owqi)	Non tariff barriers 1987 (Ntarov8 7)	Sachs and Warner openness 1980 (Open80 s)
Lfrkrom	0.533	11.616	19.811	29.88	46.47	-1.02	-0.078	0.0048	0.3739	-0.036	-18.08	0.195
	(11.5)***	(7.9)***	(7.2)***	(7.4)***	(4.0)***	(-0.8)	(-3.4)***	(0.98)	(3.0)***	(-0.9)	(-3.0)***	(2.9)***
Engfrac	0.407	19.71	20.609	29.78	115.99	-1.49	-0.01	0.001	-0.113	-0.105	4.254	-0.018
	(2.1)**	(2.4)***	(2.2)**	(2.0)**	(2.9)***	(-0.3)	(-0.1)	(0.08)	(-0.23)	(-0.77)	(0.17)	(-0.08)
Eurfrac	-0.208	-6.656	-7.67	-5.23	-4.598	-3.56	-0.067	-0.016	0.164	-0.006	-28.107	0.208
	(-1.9)*	(-1.23)	(-1.21)	(-0.53)	(-0.17)	(-1.30)	(-1.29)	(-1.63)*	(0.67)	(-0.07)	(-2.3)***	(1.43)
Disteq	-0.003	-0.015	-0.21	0.052	-0.534	-0.208	-0.002	-0.0007	0.022	-0.001	-0.238	0.010
	(-1.26)	(-0.14)	(-1.60)	(0.26)	(-0.99)	(-3.8)***	(-2.1)**	(-3.8)***	(2.9)***	(-0.84)	(-0.65)	(3.6)***
N	122	82	84	85	82	85	85	52	66	83	83	54
F	39.00***	18.54***	15.98***	15.56***	7.12***	5.47***	5.36***	5.09***	4.57***	0.73	7.21***	7.44***
R2	0.57	0.49	0.44	0.43	0.27	0.24	0.21	0.30	0.23	0.03	0.03	0.38

First Stage Results: Economic, Legal, Political and Social Institutions									
	Voice and Accountabilit y (Va)	Political Stability (Ps)	Government Effectiveness (Ge)	Regulato ry Quality (Rq)	Rule of law (Rl)	Control for Corruption (Ctc)	Democra cy (Demo)	Autocrac y (Auto)	Average years of schooling, 1999 (Sch99)
Lfrkrom	0.154	0.234	0.229	0.081	0.238	0.254	0.364	0.108	-0.274
	(2.0)**	(2.7)**	(2.9)***	(1.31)	(3.8)***	(3.3)***	(0.83)	(0.28)	(-1.01)
Engfrac	0.621	0.395	0.573	0.324	0.586	0.832	2.623	-0.505	
	(2.0)**	(1.09)	(1.90)*	(1.32)	(1.9)*	(2.7)***	(1.5)	(-0.33)	
Eurfrac	0.698	0.478	0.457	0.572	0.302	0.0326	4.79	-4.73	
	(3.7)***	(2.4**	(2.5)**	(3.8)***	(1.6)*	(1.8)*	(4.7)***	(-5.2)***	

Drop90									-0.049 (-4.4)***
Schday									-0.0092 (-0.68)
Disteq	0.029 (7.8)***	0.032 (6.3)***	0.027 (7.3)***	0.014 (4.8)***	0.031 (8.3)***	0.030 (8.3)***	0.085 (4.8)***	-0.051 (-2.81)***	0.0761 (4.8)***
N	122	116	117	122	122	118	108	108	85
F	27.1***	40.4***	22.2***	14.4***	24.9***	26.6***	16.4***	12.7***	22.1***
R2	0.48	0.59	0.44	0.31	0.46	0.49	0.38	0.33	0.52

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

IV Results

Relevance and exogeniety of instruments

This section undertakes relevance and exogeniety tests under higher order asymptotic framework for the institutional and integration regressors for *GINI, Theil*, *High20/Low20* and *Mid20* some selected number of combinations of these regressors. Relvance and exogeniety tests are also carried out for *Low10* and *High10*, but they are not presented here as the results obtained by former tests would already provide enough information to conclude whether instruments have worked well.

Table 4 provide results for *Gini* Index. Instruments strongly pass the relevance test for any of the combinations of institutions and integration except for *Owqi. Owqi* fails relevance test for not only *Gini* Index, but also for *Theil* index in table 5, *High20/Low20* in table 4.6 and *Mid20* in table 7. This is expected as we already know from 1st stage results that all instruments have been insignificant in case of *Owqi,* while the F-statistic was approximating to 0.

Instruments have been found to be weakly related with *Taiffs* for *Theil99*. For other dependent variables also like *Gini*, *High20/Low20* and *Mid20*, the 2SLS bias in case of *Tariffs* is large. This is also in line with 1st stage results, where most instruments fail to significantly explain Tariffs with the only exception of *Disteq*.

The 2nd stage regressions have suffered more from the problem of endogeniety, especially in case of *High20/Low20* and *Mid 20* when ever, Legal, Political, Economic and Social institutions enter with outcome based (openness) measures of trade barriers. This brings us back to the analysis by Rodrik *et al.* (2004), which was run on per capita income differences and problem of endogeniety was present in all regressions. High20/Low20 and Mid20 are also estimates of incomes but based on percentiles instead of taking incomes of all groups and utilising an average: as in case of per capita income which is average income of all households. The persistent of the presence of endogeniety in specifications where trade shares enter as a regressor indicates the increased possibility that such specifications may suffer from omitted variable bias. Nevertheless, no presence of 2SLS bias which is seen to approximate to 0, in all cases where openness is the regressor show that IV analysis is superior to simple OLS.

In case of trade policy, exogeniety tests are generally passed for all those trade policy proxies which have also passed the Cragg-Donald maximal 2SLS bias test of relevance. Only in case of *Theil99* few trade policy proxies such as *Owti*, *Ntarfov* and *Open80s* in addition to *Owqi* fail over-identification tests. Though the presence of endogeniety between regressors and the error term is not good news for the empirical analysis, it has come as a good news for the theoretical validation of the very regressions which analyse the role of trade in determining wage inequality because it refutes the assertion put forward by Acemoglu (2002) that trade is only weekly related with technology bias which creates increase demand for skilled labor. Presence of endogeniety suggest that trade policies in both developed and developing countries are

inter connected with the adoption of skill bias technologies in more ways then what is generally perceived in literature. The theoretical discussion carried out in section 4.4 to this effect also validates the above finding. Table 4, 5, 6 and 7 shows that for all combinations of regressors and for all dependent variables heterskedasticity robust estimates are utilised.

Table 4. *Multiple tests for the relevance and quality of instruments for Gini index*

			Relevance				Exogeneity
	Endogenous Dependent Variable: GINI Coefficients in Percentage Points as calculated from consumption expenditure by WIDER (Gini)	N	1st Stage heteroskedasticity-robust	Maximal 2SLS Bias (b)	Cragg-Donald N*minEval stat. Chi-sq(3)	Anderson-Rubin test of joint significance of endogenous regressors F-Statistic	Sargan statistic (overidentification test of all instruments) Chi-Sq(2)
	Endogenous Independent Variables : Openness, Institutions (Instruments= Disteq, Lfrkrom, Engfrac, Eurfrac)						
1	Nominal Trade Shares, Voice and Accountability (Lcopen, Va)	97	Robust	0.00	107.83**	4.95***	0.063 (0.969)
2	Nominal Trade Shares, Political Stability (Lcopen, Ps)	89	Robust	0.00	65.24**	4.83***	0.170 (0.918)
3	Nominal Trade Shares, Government Effectiveness (Lcopen, Ge)	90	Robust	0.00	73.53**	5.03***	0.146 (0.929)
4	Nominal Trade Shares, Regulatory Quality (Lcopen, Rq)	96	Robust	0.00	68.52**	4.97***	0.019 (0.988)
5	Nominal Trade Shares, Rule of Law (Lcopen, Rl)	96	Robust	0.00	92.08**	4.79***	0.116 (0.943)
6	Nominal Trade Shares, Control for Corruption (Lcpopen, Ctc)	92	Robust	0.00	69.77**	4.60***	0.102 (0.9505)
7	Nominal Trade Shares, Democracy (Lcopen, Demo)	90	Robust	0.00	53.05**	5.05***	0.031 (0.984)
8	Nominal Trade Shares, Autocracy (Lcopen, Auto)	90	Robust	0.00	46.43**	5.05***	0.016 (0.992)
9	Nominal Trade Shares, Average Years of Schooling (Lcopen, Sch99)	73	Robust	0.00	74.84**	2.39*	1.072 (0.585)
10	Import Penetration, 1985, Rule of Law (Impnov85, Rl)	69	Robust	0.00	62.63**	2.49*	0.268 (0.874)
11	Import Penetration, 1982, Rule of Law (Impnov82, Rl)	69	Robust	0.00	95.07**	17.74***	11.532 (0.0031)***
12	TARS trade Penetration, 1985, Rule of Law (Tarshov85, Rl)	69	Robust	0.00	52.35**	2.49*	0.162 (0.922)
13	TARS Trade Penetration, 1982, Rule of Law (Tarshov82, Rl)	68	Robust	0.00	73.80**	16.61***	10.942 (0.004)***
	Endogenous Independent Variables: Trade Policy, Institutions						

(Instruments= Disteq, Lfrkrom, Engfrac, Eurfrac)							
14	Import duties, Rule of Law (Tariff, Rl)	71	Robust	0.37	3.14**	19.52***	0.778 (0.677)
15	Tariffs on International Inputs and Capital Goods, Rule of Law (Owti, Rl)	71	Robust	0.078	6.79**	2.62**	2.28 (0.319)
16	Trade Taxes, Rule of Law (Txtrdg,Rl)	46	Robust	0.072	6.99**	18.20***	0.943 (0.624)
17	Weighted Average of Total import Charges, 1985, Rule of Law (Totimpov85, Rl)	52	Robust	0.019	9.91**	0.92	0.06 (0.970)
18	Non Trade Barriers, Rule of Law (Owqi,Rl)	70	Robust	0.846	0.81	3.30***	0.928 (0.628)
19	Non Tariff Coverage, 1987, Rule of Law (Ntarfov87, Rl)	52	Robust	0.042	8.27**	0.92	1.762 (0.414)
20	Sachs and Warner Openness, 1980, Rule of Law, (Open80s, Rl)	48	Robust	0.00	7.97**	1.92*	3.45 (0.178)

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

Table 5. *Multiple tests for the relevance and quality of instruments for Theil99*

	Endogenous Dependent Variable: UTIP – UNIDO Wage Inequality THEIL Measure, 1999 (Theil99)	N	Relevance: 1st Stage heteroskedasticity-robust	Relevance: Maximal 2SLS Bias (b)	Relevance: Cragg-Donald N*minEval stat. Chi-sq(3)	Relevance: Anderson-Rubin test of joint significance of endogenous regressors F-Statistic	Exogeneity: Sargan statistic (overidentification test of all instruments) Chi-Sq(2)
	Endogenous Independent Variables : Openness, Institutions (Instruments= Disteq, Lfrkrom, Engfrac, Eurfrac)						
1	Nominal Trade Shares, Voice and Accountability (Lcopen, Va)	122	Robust	0.00	113	3.92***	1.738 (0.419)
2	Nominal Trade Shares, Political Stability (Lcopen, Ps)	116	Robust	0.00	72.73	3.23**	1.058 (0.589)
3	Nominal Trade Shares, Government Effectiveness (Lcopen, Ge)	117	Robust	0.00	91.62	3.38**	1.46 (0.48)
4	Nominal Trade Shares, Regulatory Quality (Lcopen, Rq)	122	Robust	0.00	58.87	3.54***	1.69 (0.42)
5	Nominal Trade Shares, Rule of Law (Lcopen, Rl)	122	Robust	0.00	101.83	3.54***	1.72 (0.42)
6	Nominal Trade Shares, Control for Corruption (Lcpopen, Ctc)	118	Robust	0.00	107.42	3.30**	1.76 (0.41)
7	Nominal Trade Shares, Democracy (Lcopen, Demo)	108	Robust	0.00	68.23**	3.86***	1.877 (0.391)
8	Nominal Trade Shares, Autocracy (Lcopen, Auto)	108	Robust	0.00	47.94**	3.86***	1.393 (0.498)
9	Nominal Trade Shares, Average Years of Schooling (Lcopen, Sch99)	108	Robust	0.00	85.17**	6.85***	2.647 (0.266)
10	Import Penetration, 1985, Rule of Law (Impnov85, Rl)	85	Robust	0.00	75.48	5.28***	1.094 (0.578)
11	Import Penetration, 1982, Rule of Law (Impnov82, Rl)	84	Robust	0.00	60.64	4.87***	0.981 (0.612)

12	TARS trade Penetration, 1985, Rule of Law (Tarshov85, Rl)	85	Robust	0.00	66.09	5.28***	1.339 (0.511)
13	TARS Trade Penetration, 1982, Rule of Law (Tarshov82, Rl)	82	Robust	0.00	28.20	5.08***	0.329
	Endogenous Independent Variables: Trade Policy, Institutions (Instruments= Disteq, Lfrkrom, Engfrac, Eurfrac)						
14	Import duties, Rule of Law (Tariff, Rl)	85	Robust	0.71	1.37	6.46***	6.289 (0.04)**
15	Tariffs on International Inputs and Capital Goods, Rule of Law (Owti, Rl)	85	Robust	0.06	7.41	4.86***	5.596 (0.06)*
16	Trade Taxes, Rule of Law (Txtrdg,Rl)	52	Robust	0.08	6.74	3.47***	4.23 (0.12)
17	Weighted Average of Total import Charges, 1985, Rule of Law (Totimpov85, Rl)	66	Robust	0.02	9.52	3.12***	3.97 (0.13)
18	Non Trade Barriers, Rule of Law (Owqi,Rl)	83	Robust	0.83	0.86	4.71***	0.074 (0.96)
19	Non Tariff Coverage, 1987, Rule of Law (Ntarfov87, Rl)	66	Robust	0.08	6.73	3.12***	6.69 (0.03)**
20	Sachs and Warner Openness, 1980, Rule of Law, (Open80s, Rl)	54	Robust	0.11	5.93	4.86***	6.769 (0.033)**

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

Table 6. *Multiple Tests for the Relevance and Quality of Instruments for High20/Low20*

	Endogenous Dependent Variable: Fifth Income Percentile/ First Income Percentile (High20/Low20)	N	Relevance: 1st Stage heteroskedasticity-robust	Relevance: Maximal 2SLS Bias (b)	Relevance: Cragg-Donald N*minEval stat. Chi-sq(3)	Relevance: Anderson-Rubin test of joint significance of endogenous regressors F-Statistic	Exogeneity: Sargan statistic (overidentification test of all instruments) Chi-Sq(2)
	Endogenous Independent Variables : Openness, Institutions (Instruments= Disteq, Lfrkrom, Engfrac, Eurfrac)						
1	Nominal Trade Shares, Voice and Accountability (Lcopen, Va)	97	Robust	0.00	107.83**	8.65***	9.459 (0.008)***
2	Nominal Trade Shares, Political Stability (Lcopen, Ps)	89	Robust	0.00	65.24**	8.05***	5.894 (0.052)**
3	Nominal Trade Shares, Government Effectiveness (Lcopen, Ge)	90	Robust	0.00	73.53**	8.41***	5.815 (0.054)*
4	Nominal Trade Shares, Regulatory Quality (Lcopen, Rq)	96	Robust	0.00	68.52**	8.33***	12.546 (0.002)***
5	Nominal Trade Shares, Rule of Law (Lcopen, Rl)	96	Robust	0.00	92.08**	8.33***	5.237 (0.072)*
6	Nominal Trade Shares, Control for Corruption (Lcpopen, Ctc)	92	Robust	0.00	69.77**	8.10***	10.155 (0.006)***
7	Nominal Trade Shares, Democracy (Lcopen, Demo)	90	Robust	0.00	53.05**	8.71***	13.916 (0.001)***
8	Nominal Trade Shares, Autocracy (Lcopen, Auto)	90	Robust	0.00	46.43**	8.71***	15.919 (0.0003)***
9	Nominal Trade Shares, Average Years of Schooling (Lcopen, Sch99)	73	Robust	0.00	74.84**	7.34***	2.624 (0.269)
10	Import Penetration, 1985, Rule of Law (Impnov85, Rl)	69	Robust	0.00	62.63**	7.25***	2.463 (0.292)
11	Import Penetration, 1982, Rule of Law (Impnov82, Rl)	69	Robust	0.00	95.07**	2.93**	2.415 (0.298)

12	TARS trade Penetration, 1985, Rule of Law (Tarshov85, Rl)	69	Robust	0.00	52.35**	2.95**	2.378 (0.304)
13	TARS Trade Penetration, 1982, Rule of Law (Tarshov82, Rl)	68	Robust	0.00	73.80**	2.78**	2.242 (0.326)
	Endogenous Independent Variables: Trade Policy, Institutions (Instruments= Disteq, Lfrkrom, Engfrac, Eurfrac)						
14	Import duties, Rule of Law (Tariff, Rl)	71	Robust	0.37	3.14**	5.92***	1.563 (0.457)
15	Tariffs on International Inputs and Capital Goods, Rule of Law (Owti, Rl)	71	Robust	0.078	6.79**	9.75***	3.829 (0.146)
16	Trade Taxes, Rule of Law (Txtrdg,Rl)	46	Robust	0.072	6.99**	8.16***	1.956 (0.376)
17	Weighted Average of Total import Charges, 1985, Rule of Law (Totimpov85, Rl)	52	Robust	0.019	9.91**	5.55***	4.602 (0.101)
18	Non Trade Barriers, Rule of Law (Owqi,Rl)	70	Robust	0.846	0.81	9.02***	1.497 (0.368)
19	Non Tariff Coverage, 1987, Rule of Law (Ntarfov87, Rl)	52	Robust	0.040	8.27**	5.55***	0.264 (0.876)
20	Sachs and Warner Openness, 1980, Rule of Law, (Open80s, Rl)	48	Robust	0.046	7.97**	7.37***	1.791 (0.408)

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

Table 7. *Multiple tests for the relevance and quality of instruments for Mid20*

	Endogenous Dependent Variable: Third Income Percentile (Mid20)	N	Relevance: 1st Stage heteroskedasticity-robust	Relevance: Maximal 2SLS Bias (b)	Relevance: Cragg-Donald N*minEval stat. Chi-sq(3)	Relevance: Anderson-Rubin test of joint significance of endogenous regressors F-Statistic	Exogeneity: Sargan statistic (overidentification test of all instruments) Chi-Sq(2)
	Endogenous Independent Variables : Openness, Institutions (Instruments= Disteq, Lfrkrom, Engfrac, Eurfrac)						
1	Nominal Trade Shares, Voice and Accountability (Lcopen, Va)	97	Robust	0.00	107.83**	18.79***	22.109 (0.000)***
2	Nominal Trade Shares, Political Stability (Lcopen, Ps)	89	Robust	0.00	65.24**	19.45***	13.469 (0.0012)***
3	Nominal Trade Shares, Government Effectiveness (Lcopen, Ge)	90	Robust	0.00	73.53**	19.49***	14.334 (0.0008)***
4	Nominal Trade Shares, Regulatory Quality (Lcopen, Rq)	96	Robust	0.00	68.52**	18.78***	22.543 (0.000)***
5	Nominal Trade Shares, Rule of Law (Lcopen, Rl)	96	Robust	0.00	92.08**	18.78***	11.946 (0.0025)***
6	Nominal Trade Shares, Control for Corruption (Lcpopen, Ctc)	92	Robust	0.00	69.77**	18.41***	13.925 (0.001)***
7	Nominal Trade Shares, Democracy (Lcopen, Demo)	90	Robust	0.00	53.05**	21.00***	26.038 (0.000)***
8	Nominal Trade Shares, Autocracy (Lcopen, Auto)	90	Robust	0.00	46.43**	21.00***	29.529 (0.000)***
9	Nominal Trade Shares, Average Years of Schooling (Lcopen, Sch99)	73	Robust	0.00	74.84**	26.10***	0.380 (0.827)
10	Import Penetration, 1985, Rule of Law (Impnov85, Rl)	69	Robust	0.00	62.63**	16.67***	7.951 (0.018)**
11	Import Penetration, 1982, Rule of Law (Impnov82, Rl)	69	Robust	0.00	95.07**	17.02***	8.349 (0.015)**

12	TARS trade Penetration, 1985, Rule of Law (Tarshov85, Rl)	69	Robust	0.00	52.35**	16.67***	7.114 (0.028)**
13	TARS Trade Penetration, 1982, Rule of Law (Tarshov82, Rl)	68	Robust	0.00	73.80**	16.96***	7.855 (0.019)**
	Endogenous Independent Variables: Trade Policy, Institutions (Instruments= Disteq, Lfrkrom, Engfrac, Eurfrac)						
14	Import duties, Rule of Law (Tariff, Rl)	71	Robust	0.37	3.14**	19.37***	0.997 (0.607)
15	Tariffs on International Inputs and Capital Goods, Rule of Law (Owti, Rl)	71	Robust	0.078	6.79**	22.43***	3.910 (0.142)
16	Trade Taxes, Rule of Law (Txtrdg,Rl)	46	Robust	0.072	6.99**	16.92***	0.297 (0.862)
17	Weighted Average of Total import Charges, 1985, Rule of Law (Totimpov85, Rl)	52	Robust	0.019	9.91**	6.77***	8.673 (0.013)**
18	Non Trade Barriers, Rule of Law (Owqi,Rl)	70	Robust	0.846	0.81	20.23***	2.144 (0.342)
19	Non Tariff Coverage, 1987, Rule of Law (Ntarfov87, Rl)	52	Robust	0.040	8.27**	6.77***	1.037 (0.597)
20	Sachs and Warner Openness, 1980, Rule of Law, (Open80s, Rl)	48	Robust	0.046	7.97**	21.25***	3.783 (0.151)

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

Results on Institutions

Due to sheer number of specifications for which the regressions are carried out for six different dependent variables, it is not possible to present results for both institutions and integration together in single table. Thus, in order to cover all specifications, we discuss results by summarising them into different categories. First we provide results of institutions, divided into 4 categories as Legal, Political, Economic and Social. In later sections, results for integration would be separately discussed.

Table 8 provides detailed results on various definitions of institutions. It is observed that rule of law and control of corruption are the most relevant institutions that help create a more equal society in developed as well as developing countries. Democracy also ensures equality by following median voter hypothesis. In contrast, Government regulation is relevant for inequality mitigation but it is not the most important institution. These results fit nicely with the governance policies in developed and developing countries and their welfare outcomes. For example, in China inequality trends especially in manufacturing pays have been rising that can be partly explained by the Chinese government's early emphasis on strengthening free market economic institutions by introducing property rights and promoting more competition domestically and internationally within the private sector. Corruption was rampant until recently, when President Xi government clamped down on corruption focusing on government officials. This step may enable China to have equal distribution of gains among Chinese population from private sector induced and export led economic growth. Mamoon & Murshed (2017) explains that focus on growth may have led countries like China to prioritise development of economic institutions over legal or political institutions because economic institutions are more closely related with economic growth. However, this trend has been changing recently. More and more governments are investing in the development of legal and political institutions.

Results on integration and inequality

'Globalisation and Inequality' has recently become a hot topic of debate. Trade liberalisation is evidently among many of other pro-market measures, which countries take to integrate with world markets and thus benefit from factors like technological spill-overs. Effects of pro market measures like capital market integration and financial liberalisation has already been captured in the last section through variables like regulatory quality. The results show that, at best, a weak relationship is present between regulatory quality and income distribution or wage inequality.

Mamoon & Murshed (2017) already establishes the importance of trade as a key variable of interest in understanding rise and fall in this measure of inequalities in developing countries. A brief discussion which has been carried out in earlier sections suggests that inequalities (especially skilled bias wage inequality) are also rising in developed countries and, other than indigenous technical bias, there may be some external factors, which may determine the rising trend in inequalities in

developed countries, whereas international trade may be an important one of such factors.

Since the inequality models analysed in this chapter many trade measures (both outcome based and incidence based), a rich set of information is obtained on the link between integration and income or wage inequality for both developed and developing countries. This section presents this information referring to many specifications already analysed in last section, while focusing only on institutions and their effects of inequality. Here the author will analyze the correlations between different measures of trade openness and trade policy with *Gini* and *Theil99*, while institutions would serve as control variables for the robustness of the results. The results on the relationship between trade and relative share of different income groups will not be covered here to avoid excess of information. Nevertheless, openness is found to be significantly related with incomes in developing countries. Branko (2005), using Panel data and under a more comprehensive model specifications by adding variables like foreign direct investment, looks at the impact of openness on the relative income shares of low and high deciles and finds that for poor (least developed) countries openness benefits the rich, whereas for countries who belong to relatively higher income groups within developing countries, openness does appear to favour poor and the middle class.

Dollar (2005) undertakes a comprehensive study to investigate the effects of globalisation on poverty and inequality for the post reform period (1980). Apart from showing that poverty trends have declined in developing countries post 1980 reforms, the paper manages to find no general trend towards higher inequalities within developed and developing countries. In comparison, rise in inequalities is more pronounced in manufacturing sector pay, though wages only constitute a small part of household income in developing countries. The focus of Dollar (2005) has been on global inequality which he finds to be on declining trends. However, there are many studies who have refuted this claim (i.e, see Milanovic 2006; 2005; and Wade, 2004). The claims on significant poverty reduction amidst high growth rates in developing countries has also been refuted since many studies are able to show that excluding India and China from the sample may capture rising trends in poverty in many developing countries. Whether developing countries, who faced increasing trends in poverty, have been unsuccessful globalisers and categorising India and China as success stories of free market reform is a generalisation which can then easily be questioned and thus the claim that 'globalisation has been pro poor' (Milanovic, 2003).

In this section, the author would look at the issue of within country income inequality and its relationship, if any, with international trade while controlling for Legal, Political, Economic and Social institutions which have been analysed in last section.

Table 9; show the results for openness with income inequality. There is no evidence of a significant relationship between openness and within

country income inequality except for two cases (columns 3 and 4). Institutions are significantly and negatively related with income inequalities. Reducing the sample to developing countries only makes insignificance of trade more pronounced. The relative significance of institutions has also declined. Nevertheless, social institutions captured by average years of schooling, significantly decrease inequality for developing countries and the relationship is significant at 5% level. High values of coefficients for Sch99 suggest that education is highly effective in inequality mitigation. Further confidence comes from the statistical validity of the results for Sch99 because model specifications (coloumn 6 and 12) with *Sch99* do not suffer from endogeiniety which has been observed in case of *Rl, Va* or *Ge*. (All such cases are highlighted in grey) Another interesting observation comes forth. For a larger sample, including developed and developing countries, democracy is significantly and negatively related with the *Gini,* telling that democracies are more likely to put a downward pressure on income inequality. However when the sample is reduced for developing countries only (columns 9 and 10), the signs change in favour of autocracy. Now democracy is positively and significantly related with *Gini* and autocracy, which was insignificant for the larger sample, is significantly and negatively related with inequality. The result is simple to interpret. Democracies in developing countries are associated with higher income inequality and autocracies are associated with less income inequality. There are several reasons why democratic experience in developing countries is related with higher income inequality and why autocracies may in fact show a negative relationship. First and foremost, there is a direct link between democracy and higher inequality because there is evidence that transition to a democracy in many developing countries have produced political instability, ethnic conflict and resultantly poor economic outcomes. (Kaplan, 2000; Zakaria, 2003; and Rodrik & Wacziarg, 2005) In literature there is also a distinction between real democracy (Populist democracy) and oligarchic society (Acemoglu, 2003b). In real democracy, the political power is more equally distributed among different social and income groups of the society and thus the poorer segments can use their political voice to implement pro poor tax system in the country. Also in a real democracy, implementation of property rights prevent barriers to entry as against oligarchic society, which may look like a democracy by holding elections but political power lies with economic elites who create monopoly positions in the domestic markets for their businesses and violate property rights. In this context, an autocratic set up, where the leaders have effectively implemented property rights and significantly improved the level playing field for all social groups to carry out good business practices, may lead to decrease in income inequality (Glaser *et al.,* 2004a; and 2004b). Secondly, as explained by Gradstein *et al.,* (2001), culture and social value system also has a very important role to play in inequality mitigation: 'For Muslim, Buddhist/ Hindu and Confucian societies, democracy has either hardly discernible, or even a positive, effect on inequality. Yet these societies

seem to possess some features which make them intrinsically more equal that the Judeo-Christian societies. It could be - although our empirical test does not account for that -that, the same "desired" level of inequality which in the Judeo-Christian societies is achieved through expanded franchise and government-sponsored redistribution, is implemented in the Muslim, Buddhist/Hindu, and Confucian societies, informally, through family and ethnic ties' (p35).

The results in table 9 and 10 give credence to such analysis because results for *Demo* and *Auto* do not change even if Africa is excluded from the developing country sample. Instead, the results become more pronounced (columns 13, 14, 27 and 28), with improved coefficients and significance level for both *Demo* and *Auto* to suggest that the cause of unequal distribution of resources in developing countries is much more than the risky transitions to democracy as is also suggested by Rodrik (2005). It seems to matter what kind of democracies these developing countries implement and practice and what kind of societies they make up.

Table 10, shows the results based on trade policy (*Owti*). They are similar to the ones already discussed above for *Lcopen*. For the larger sample of developed and developing countries, decrease in tariffs rates on international inputs and capital goods bring a significant decrease in income inequality. However, the as for *Lcopen*, results remain highly case sensitive. *Owti* is only significant for 2 (columns 17 and 18) specifications out of total number of 14 specifications including the ones which represent results for reduced samples (developing country only). On basis of these results we cannot claim with surety that trade is significantly related with income inequality.

Insignificant results on the relationship between trade and inequality should not be taken as evidence in favour of globalisation or against it. What the results at best show is that the very construction of Gini, and related methodological problems (also mentioned at the start of the chapter), have a part to play in these results. Further more, despite the sophistication of the analysis, the major deficiency in the kind of analysis done in this section would remain the very limited number of observations utilised for *Gini* against to what has been available by WIDER dataset. The author only includes one yearly observation for every country to best suite the cross section methodology employed in this manuscript. That has significantly decreased the degrees of freedom. This could have been avoided under a Panel analysis. For a Panel of countries, observations for *Gini* go as high as 5313.

However, it is also important to note here is that a panel analysis may not necessarily lead to different results as many studies (i.e, Dollar, 2005) have already utilised such methodology to find no evidence of significant relationship between trade and income inequality. Yet again, such results can always be questioned on the basis of model specifications and certain case sensitivities. Finally, similar to Dollar (2005), our results contribute to the empirical debate and motivate further research into this topic.

Table 11 presents results for wage inequality. It is clear that general openness indicators as well as trade policy measures lead to higher wage inequality in both developed and developing countries. However the only exception is import taxes. Implementing import taxes by protecting local industry has egalitarian effects. This is in line with recent literature on premature de industrialisation that suggests that developed countries have witnessed rise in inequality partly explained by active globalisation that has reversed industrialisation and thus causing political and economic upheavals in favour of anti globalisation movements.

Table 9. *Gini and Openness (Lcopen)*

Dependent Variables	Dependent Variable : Gini													
	(Developed + Developing)						(Developing Only)				(Developing Only) Minus Africa			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Openness														
Nominal Trade Shares (Lcopen)	-0.49	-2.11	-4.71	-5.22	1.22	-0.59	-0.59	-1.08	-0.10	1.33	-1.26	0.67	-0.93	1.09
	(-0.2)	(-0.8)	(-1.6)*	(-1.8)*	(0.4)	(-0.19)	(-0.2)	(-0.3)	(-0.03)	(0.37)	(-0.3)	(0.1)	(-0.2)	0.27
Institutions														
Legal														
Rule of law(Rl)	-7.30						-6.44							
	(-5.0)***						(-1.3)							
Political														
Voice and Accountability (Va)		-5.46						1.40						
		(-4.0)***						(0.5)						
Democracy (Demo)			-0.71						1.35				2.28	
			(-1.8)*						(2.4)**				(3.2)***	
Autocracy (Auto)				0.369						-1.59				-2.80
				(0.7)						(-2.6)**				(-3.5)***
Economic														
Government Effectiveness (Ge)					-8.60						7.64			
					(-5.0)***						(0.9)			
Social														
Average years of schooling (Sch99)						3.80						-4.27		
						(-2.7)***						(-2.2)**		
N	95	96	89	89	89	72	70	71	66	66	64	52	44	44
F-Statistics	13.27***	8.96***	3.14**	1.67	12.62***	9.16***	0.88	0.21	2.87*	3.35	0.44	2.27	5.10*	6.10
R-Square	0.16	0.14	0.03	0.02	0.16	0.15	0.16	0.01	0.11		0.19	0.00	0.36	0.34
2SLS Bias	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.208	0.009	0.000	0.000
Sargan (p)	0.001***	0.000***	0.000***	0.000***	0.000***	0.876	0.001***	0.000***	0.011***	0.025**	0.000***	0.817	0.072*	0.187

Notes: ***, **, * denotes significance at 1%, 5 % and 10% levels respectively; Standard errors corrected for as run Durbin–Wu–Hausman test (augmented regression test) for endogeneity (see Davidson & MacKinnon. 1993).

Table: 10 *Gini and Trade Policy (Owti)*

Independent Variables	Dependent Variable : Gini													
	(Developed + Developing)								(Developing Only)				(Developing Only) Minus Africa	
	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Trade Policy														
Tariffs on intermediate inputs and capital goods (Owti)	-30.05 (-1.04)	3.73 (0.2)	56.50 (1.9)*	66.69 (2.4)**	-48.34 (-1.1)	16.57 (0.6)	-25.02 (-1.1)	-18.61 (-1.10)	-9.18 (-0.5)	-12.46 (-0.7)	-32.26 (-1.1)	-1.29 (-0.1)	3.38 (0.1)	-0.69 (-0.03)
Institutions														
Legal														
Rule of law(Rl)	-0.45 (-3.5)***						-7.13 (-1.3)							
Political														
Voice and Accountability (Va)		-5.80 (-2.0)**						2,61 (0.80)						
Democracy (Demo)			0.33 (0.4)						1.31 (2.2)**				2.34 (2.5)**	
Autocracy (Auto)				-1.13 (-0.9)						-1.68 (-2.5)**				-3.01 (-2.8)***
Economic														
Government Effectiveness (Ge)					-13.23 (-2.8)***						-4.01 (-0.58)			
Social														
Average years of schooling (Sch99)						-2.77 (-2.6)***						-3.29 (2.1)**		
N	70	71	68	51	68	59	53	54	51	51	51	44	34	34
F-Statistics	17.07***	11.80***	3.57**	2.79*	13.57***	14.13***	0.98	1.22	2.79*	3.26**	0.64	2.12	3.16**	3.88**
R-Square	0.18	0.18	0.59	0.15	0.48	0.06	0.45	0.11	0.15	0.22	0.40	0.57	0.06	0.52
2SLS Bias	0.073	O124	0.155	0.027	0.166	0.051	0.041	0.001	0.027	0.019	0.144	0.029	0.181	0.123
Sargan (p)	0.036**	0.000***	0.002**	0.037**	0.028**	0.346	0.027**	0.005***	0.038**	0.092*	0.009***	0.504	0.185	0.336

Notes: ***, **, * denotes significance at 1%, 5 % and 10% levels respectively; Standard errors corrected for as run Durbin–Wu–Hausman test (augmented regression test) for endogeneity (see Davidson & MacKinnon. 1993).

Table 11. *openness / trade policy (All Specifications)*

	Dependent Variable: Theil index								
	1	2	3	4	5	6	7	8	9
	Institutions serve as control variables and are presented in the parenthesis below								
	(V a)	(R l)	(C t c)	(R q)	(G e)	(P s)	(D e m o)	(A u t o)	(S c h)
Independent Variables									
Nominal Trade Shares (Lcopen)	0.032	0.036	0.039	0.029	0.039	0.039	0.041	0.035	0.013
	(1.54)	(1.68)***	(1.77)***	(1.39)	(1.82)***	(1.78)***	(1.70)***	(1.41)	(0.89)
Import Penetrations (Impnov85)	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.0002
	(2.66)*	(2.87)*	(2.88)*	(2.48)**	(3.01)*	(2.86)*	(2.57)*	(2.28)**	(0.38)
Import Penetrations (Impnov85)	0.001	0.002	0.002	0.0002	0.002	0.002	0.002	0.002	0.0003
	(2.68)*	(2.91)*	(2.92)*	(2.63)*	(3.06)*	(2.93)*	(2.67)*	(2.41)**	(0.42)
TARS trade penetration (Tars85)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0001
	(2.84)*	(3.06)*	(3.08)*	(2.66)*	(3.24)*	(3.06)*	(2.75)*	(2.44)**	(0.32)
TARS trade penetration (Tars85)	0.0005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0002
	(2.62)*	(2.56)*	(2.65)*	(2.44)**	(2.74)*	(2.59)*	(2.20)**	(1.98)**	(0.43)
Sachs and Warners Openness (Open80s)	0.007	-0.033	-0.025	-0.062	0.052	0.030	-0.007	-0.047	0.047
	(0.51)	(-0.41)	(-0.28)	(-0.08)	(0.46)	(0.28)	(-0.09)	(-0.84)	(0.60)
Tariffs on intermediate inputs and capital goods	-0.004	0.008	0.012	0.007	0.015	0.004	-0.004	-0.001	0.006
(Owti)	(-0.34)	(0.80)	(0.89)	(1.11)	(0.55)	(0.37)	(-0.96)	(-0.63)	(0.81)
Trade taxes (Txtrdg)	-0.230	-0.324	-0.302	-0.149	-0.425	-0.366	-0.136	-0.058	-0.129
	(-1.34)	(-1.53)	(-1.50)	(-0.86)	(-1.78)***	(-1.63)	(-0.96)	(-0.49)	(-0.86)
Total import charges (Totimpov85)	4.810	2.281	2.504	4.509	2.986	2.441	5.713	4.364	1.079
	(1.50)	(1.84)***	(1.91)***	(1.63)	(1.75)***	(2.03)**	(1.46)	(1.39)	(1.76)***
Non trade barriers (Owqi)	-0.003	-0.002	-0.002	-0.002	-0.002	-0.002	-0.003	-0.003	-0.001
	(-2.32)**	(-1.82)***	(-1.70)***	(-2.31)**	(-1.84)***	(-2.04)**	(-2.56)*	(-2.33)**	(-1.18)
Non trade barriers (Owqi)	-0.800	-1.082	-1.243	-0.522	-1.101	-1.010	-0.487	-0.264	0.050
	(-1.03)	(-0.92)	(-0.85)	(-0.98)	(-0.95)	(-0.94)	(-1.01)	(-0.94)	(0.27)
Non tariff barriers (Ntarfov87)	-0.002	-0.001	-0.0005	-0.002	-0.002	-0.002	-0.002	-0.002	-0.003
	(-1.64)	(-0.82)	(-0.26)	(-1.66)***	(-1.04)	(-1.30)	(-2.09)**	(-2.12)**	(-0.73)

Notes: -*, **, *** corresponds to 1%, 5% and 10% levels of significance respectively - Control variables are in parentheses

Conclusions

This chapter has analysed the effects of different institutions on inequality. Although the literature is limited on the subject, what there is, suggests that there are two-way causalities between institutions and inequality. To explore this it was necessary to solve the problem of endogeneity by utilising a rich set of instruments and employing higher order validation techniques of relevance and exogeniety, and thus a very fine econometric analysis is carried out to understand the role of good institutions, which represent a vast set of legal, political, economic and social outcomes, in inequality mitigation and redistribution. Furthermore, the rich model specification also enabled the analysis to shed light on the link between trade and inequality which is also subject of great interest for many studies lately.

The results reconfirmed that good quality institutions lead to decreases in inequality. It also appears that voice and accountability and political stability are more important than democracy. In line with previous studies, the current findings suggest that it may not matter much whether a country is working under a democracy or autocracy if it is about income inequality, but good policies enacted by the country's leaders determine the welfare-enhancing effects through preservation of property and other rights. Good leadership, which not only follows more market friendly policies, also keeps institutional development at the fore of their policy choice and is keen for economic development to succeed. For developing countries, transition to democracies also comes with higher risks of political stability which in turn lead to greater income inequality. Culture and social set up capture democratic outcomes more than democracy itself in developing countries. Societies who highly value equality may redistribute income from rich to the poor even if the larger political set is autocratic in the country. However, autocracies are significantly related with wage inequality, where as democracies may pay higher wages on average in the manufacturing sector.

Table 8 summarises the results of institutions based on relative significance, and shows that rule of law, control for corruption, political stability, government effectiveness and education are the key institutional outcomes which if secured can ensure equal societies. If education is more equally distributed among the population, relative wages of skilled and unskilled labour will have the 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, its effective capacity to

decentralise and its pro-business orientation. Table 8 also shows that the middle-class comes out to be the main beneficiary of good quality institutions over any other income group as *Middle20* equations give the most significant results.

Regarding integration, the findings indicate that openness generally relates to higher wage inequality, although its impact on income inequality is relatively insignificant. This result is also in line with recent literature. However, the findings strongly suggest that levels of trade or trade policies may carry significant positive effects on wage inequality. Especially, international competition by revoking import taxes lead to higher wage inequality. To remedy for rising wage inequalities in developing countries, the analysis favour more regional trade among developing countries where trade may bring labour intensive technical change in the economies of participant countries as has been the case in Europe, where countries trade among each other more due to the EU (European Union), when in comparison with U.S. For example, in countries like China and India, the pace of development suggest 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 a priority and conflicts of interest are resolved or set aside for preparation of economic grounds for social harmony within their populations.

Appendix.

Table 8. *Significance count of institutions*

Independent Variables	Dependent Variables							
	Gini	Theil	High20/Low20	Middle20	Low10	High10	Cases of Significance by rows	Total cases of correct signs
Legal Institutions								
Rule of Law (Rl)	10 out of 12	5 out of 12	9 out of 12	10 out of 12	9 out of 12	10 out of 12	53 out of 72	53 out of 53
(Negative sign)	(10 out of 10)	(5 out of 5)	(9 out of 9)	(0 out of 10)	(0 out of 9)	(10 out of 10)		
Control of Corruption (Ctc)	9 out of 12	5 out of 12	8 out of 12	9 out of 12	8 out of 12	9 out of 12	48 out of 72	48 out of 48
(Negative sign)	(9 out of 9)	(5 out of 5)	(8 out of 8)	(0 out of 9)	(0 out of 8)	(9 out of 9)		
Economic Institutions								
Government Effectiveness (Ge)	8 out of 12	5 out of 12	8 out of 12	9 out of 12	8 out of 12	8 out of 12	46 out of 72	46 out of 46
(Negative sign)	(8 out of 8)	(5 out of 5)	(8 out of 8)	(0 out of 9)	(0 out of 8)	(8 out of 8)		
Regulatory Quality (Rq)	4 out of 12	3 out of 12	2 out of 12	6 out of 12	1 out of 12	5 out of 12	21 out of 72	19 out of 21
(Negative sign)	(3 out of 4)*	(3 out of 3)	(2 out of 2)	(0 out of 6)	(1 out of 1)*	(5 out of 5)		
Political Institutions								
Political Stability (Ps)	9 out of 12	5 out of 12	8 out of 12	9 out of 12	8 out of 12	9 out of 12	48 out of 48	48 out of 48
(Negative sign)	(9 out of 9)	(5 out of 5)	(8 out of 8)	(0 out of 9)	(0 out of 12)	(9 out of 9)		
Voice and Accountability (Va)	7 out of 12	5 out of 12	5 out of 12	7 out of 12	2 out of 12	7 out of 12	33 out of 72	31 out of 33
(Negative sign)	(7 out of 5)	(5 out of 5)	(5 out of 5)	(0 out of 7)	(1 out of 2)*	(7 out of 7)		
Democracy (Dem)	5 out of 12	3 out of 12	4 out of 12	7 out of 12	1 out of 12	5 out of 12	25 out of 72	23 out of 25
(Negative sign)	(5 out of 5)	(3 out of 3)	(4 out of 4)	(0 out of 7)	(1 out of 1)*	(4 out of 5)*		
Autocracy (Aut)	1 out of 12	3 out of 12	0 out of 12	3 out of 12	2 out of 12	2 out of 12	11 out of 72	9 out of 11
(Negative signs)	(1 out of 1)	(0 out of 12)	(0 out of 0)	(3 out of 3)	(0 out of 2)*	(2 out of 2)		
Social Institutions								
Average Schooling Years (Sch)	11 out of 12	9 out of 12	6 out of 12	6 out of 12	5 out of 12	6 out of 12	43 out of 72	43 out of 43
(Negative sign)	(9 out of 9)	(9 out of 9)	(6 out of 6)	(0 out of 7)	(0 out of 5)	(6 out of 6)		
Cases of Significance (by columns)	64 out of 120	51 out of 120	51 out of 120	68 out of 120	47 out of 120	62 out of 120	-	-

Notes: * Observation made that a variable has entered the equation significantly but with a wrong sign; Significance is observed at 1%, 5% and 10% levels.

Country List for Gini		
Aruba	Guyana	Peru
Armenia	Hong Kong,	Philippines
Australia	China	Papua New
Austria	Honduras	Guinea
Azerbaijan	Croatia	Poland
Burundi	Hungary	Portugal
Belgium	Indonesia	Paraguay
Burkina Faso	India	Romania
Bangladesh	Ireland	Russian
Bulgaria	Israel	Federation
Belarus	Italy	Rwanda
Bolivia	Jamaica	Senegal
Brazil	Jordan	Sierra Leone
Central African	Japan	El Salvador
Republic	Kazakhstan	Slovak Republic
Canada	Kenya	Slovenia
Chile	Kyrgyz Republic	Sweden
China	Cambodia	Swaziland
Cote d'Ivoire	Korea, Rep.	Thailand
Cameroon	Lao PDR	Tajikistan
Colombia	St. Lucia	Turkmenistan
Costa Rica	Sri Lanka	Trinidad and
Czech	Lesotho	Tobago
Republic	Lithuania	Tunisia
Germany	Luxembourg	Turkey
Denmark	Latvia	Tanzania
Dominican	Morocco	Uganda
Republic	Moldova	Ukraine
Algeria	Madagascar	Uruguay
Ecuador	Mexico	United States
Egypt, Arab	Malta	Uzbekistan
Rep.	Mongolia	Venezuela, RB
Spain	Mozambique	Vietnam
Estonia	Mauritania	Yemen, Rep.
Ethiopia	Malaysia	Zambia
Finland	Niger	Zimbabwe

Country List for Theil99			
Afghanistan	Dominican	Sri Lanka	Russian
Angola	Republic	Lesotho	Federation
Albania	Algeria	Lithuania	Rwanda
Netherlands	Ecuador	Luxembourg	Saudi Arabia
Antilles	Egypt, Arab	Latvia	Sudan
United Arab	Rep.	Macao, China	Senegal
Emirates	Eritrea	Morocco	Singapore
Argentina	Spain	Moldova	Solomon
Armenia	Ethiopia	Madagascar	Islands
Australia	Finland	Mexico	El Salvador
Austria	Fiji	Marshall	Somalia
Azerbaijan	France	Islands	Sao Tome
Burundi	Gabon	Macedonia,	and Principe
Belgium	United	FYR	Suriname
Benin	Kingdom	Malta	Slovak
Burkina Faso	Georgia	Myanmar	Republic
Bangladesh	Ghana	Mongolia	Slovenia
Bulgaria	Guinea	Northern	Sweden
Bahrain	Gambia,	Mariana	Swaziland
Bahamas, The	The	Islands	Seychelles
Bosnia and	Guinea-	Mozambique	Syrian Arab
Herzegovina	Bissau	Mauritania	Republic
Belize	Equatorial	Mauritius	Togo
Bolivia	Guinea	Malawi	Thailand
Brazil	Greece	Malaysia	Tonga
Barbados	Guatemala	Namibia	Trinidad and
Bhutan	Hong Kong,	Nigeria	Tobago
Botswana	China	Nicaragua	Tunisia
Central	Honduras	Netherlands	Turkey
African	Croatia	Norway	Tanzania
Republic	Haiti	Nepal	Uganda
Canada	Hungary	New Zealand	Ukraine
Chile	Indonesia	Oman	Uruguay
China	India	Pakistan	United States
Cote d'Ivoire	Ireland	Panama	St. Vincent
Cameroon	Iran, Islamic	Peru	and the

France	Nigeria	Congo, Rep.	Rep.	Philippines	Grenadines
United Kingdom	Nicaragua	Colombia	Iraq	Papua New Guinea	Venezuela, RB
Georgia	Netherlands	Cape Verde	Iceland	Poland	West Bank and Gaza
Ghana	Norway	Costa Rica	Israel	Puerto Rico	Samoa
Guinea	Nepal	Cuba	Italy	Korea, Dem. Rep.	Yemen, Rep.
Gambia, The	Pakistan	Cyprus	Jamaica	Portugal	Yugoslavia, Fed. Rep.
Guinea-Bissau	Panama	Czech Republic	Jordan	Paraguay	South Africa
Equatorial Guinea		Germany	Japan	French Polynesia	Congo, Dem. Rep.
Greece		Denmark	Kenya	Qatar	Zambia
Guatemala			Kyrgyz Republic	Romania	Zimbabwe
			St. Kitts and Nevis		
			Korea, Rep.		
			Kuwait		
			Liberia		
			Libya		

Country List for Weighted Average of total Import Charges, 1985(Totimpov85) (Available for Developing Countries Only)		Country List for Non Tariff Barrier Coverage, 1987 (Nontarr87)(Available for Developing Countries Only)	
Angola	Sri Lanka	Angola	Sri Lanka
Argentina	Morocco	Argentina	Morocco
Antigua and Barbuda	Madagascar	Antigua and Barbuda	Madagascar
Burundi	Mexico	Burundi	Mexico
Benin	Malawi	Benin	Malawi
Burkina Faso	Malaysia	Burkina Faso	Malaysia
Bangladesh	Nigeria	Bangladesh	Nigeria
Bahrain	Nicaragua	Bahrain	Nicaragua
Bahamas, The	Nepal	Bahamas, The	Nepal
Belize	Oman	Belize	Oman
Bolivia	Pakistan	Bolivia	Pakistan
Brazil	Peru	Brazil	Peru
Barbados	Philippines	Barbados	Philippines
Central African Republic	Papua New Guinea	Central African Republic	Papua New Guinea
Chile	Paraguay	Chile	Paraguay
China	Qatar	China	Qatar
		Cote d'Ivoire	Sudan

Cote d'Ivoire	Sudan	Cameroon	Senegal
Cameroon	Senegal	Congo, Rep.	Singapore
Congo, Rep.	Singapore	Colombia	Sierra Leone
Colombia	Sierra Leone	Costa Rica	El Salvador
Costa Rica	El Salvador	Cuba	Syrian Arab Republic
Cuba	Syrian Arab Republic	Cayman Islands	Thailand
Cayman Islands	Thailand	Algeria	Trinidad and Tobago
Algeria	Trinidad and Tobago	Ecuador	Tunisia
Ecuador	Tunisia	Egypt, Arab Rep.	Turkey
Egypt, Arab Rep.	Turkey	Ghana	Tanzania
Ghana	Tanzania	Guinea	Uganda
Guinea	Uganda	Grenada	Uruguay
Grenada	Uruguay	Guatemala	St. Vincent and the
Guatemala	St. Vincent and the	Guyana	Grenadines
Guyana	Grenadines	Hong Kong, China	Venezuela, RB
Hong Kong, China	Venezuela, RB	Haiti	Yemen, Rep.
Haiti	Yemen, Rep.	Indonesia	Congo, Dem. Rep.
Indonesia	Congo, Dem. Rep.	India	Zambia
India	Zambia	Iran, Islamic Rep.	Zimbabwe
Iran, Islamic Rep.	Zimbabwe	Jamaica	
Jamaica		Jordan	
Jordan		Kenya	
Kenya		Korea, Rep.	
Korea, Rep.		Kuwait	
Kuwait			

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4.
Integrating the Concepts of Global Freedom: Economics versus Society

Issues in Economic Development Discourse

Society is the derivative of human social evolution. Contemporary globalisation strives to integrate global society on common grounds for understanding and reemphasising all of what becomes the basis of being a human. Since ancient times, the observed practices of human civilisation explain and motivate us to derive the application of concepts like trust, welfare, empowerment and awareness towards unbiased social integration. All such concepts have been harnessed most often locally and sometimes, especially lately at a regional level. Thus, it is pertinant to ask, whether a universal application of unbiased social and economic integration is possible and if yes, then why successful application is thus far, unsuccessful.

Capitalism, a utilitarian point of origin to explain and derive economics of successful commerce and a basis for classical and neo-classical economics, defines social norms as a matter of quantified indicators to bring an overarching picture of reality, which is now known to have been constrained with relativity of approach. Markets rule in capitalism based on their efficiency as they bring equal opportunity to all to carry out commerce as well as provide social welfare at a price freely determined by various integrating market forces. Such successful analogies apply well to developed nations, which work with not only the best of business practices but developed social norms that comply with the best capabilities of all stakeholders. In developed countries, harnessing efficiency not only at the market level but also at the individual level and preserving notions like freedom of expression, human rights, tolerance and rule of law could be possible because a level playing field has been successfully established for all stakeholders through history of lessons with wars, political upheavals and economic crises.

In an effort to develop a similar level playing field in developing countries by influencing their economic policies through the experience

of developed nations, Bretton Woods system formulated a plan to structurally over hall the economies in the South. The fundamental focus of these reforms were on giving markets more free hand to determine higher output per capita so that growth is achieved with higher productivity levels as production activities in developing countries would become more competitive locally and internationally.

In 1980s and early 1990s, many developing countries opened up their economies and became a more integral part of global finance and trade. At least, capital markets witnessed unprecedented growth through out the spectrum in the South. However, growing financial sectors fail to generate real output in most developing countries. Argentina's bad experience with opening up post 1980 would provide good lessons for countries that adopted structural adjustment. If anything, capital market reforms made economic development more fragile for many developing countries. Soon after the reform period, most developing countries found themselves with record foreign debt interest payments on the borrowing they had been doing on the pretext of reforms. Debt became a huge problem mostly for African region. Countries that witness rapid economic growth mostly came from East Asian region that have witnessed rapid capital inflows from developed countries. However, little did they know at the time that capital inflows have put them at higher risks of economic downturn because unlike investment in real sector, financial capital can move out as quickly as it has flown in. Soon it did happen with a small sign of panic in East Asia in 1997, where the countries formally known as 'Asian Tiger' witnessed one of the worst crises in recent financial history of the world. A capital flight of unprecedented proportions left these economies with a financial vacuum. The outcomes for the populations were devastating as the brunt of crises was born by the poor.

In 1999, Kufi Anan, the then UN (United Nations) Secretary General noted the fall out of crises with following lines in the foreword of UN survey report on Asia:

What we once called the 'Asian financial crisis' is now a global economic, social, and political crisis that has had its most devastating impact on society's margins: the millions of poor and vulnerable men, women, and children who are in no way responsible for the fallout but who have nonetheless seen their hopes dashed, and their families thrown into terrible hardship and even destitution.

Post Washington Consensus Debate

Ever since, the policy recommendations by 'the Washington Consensus' have duly been questioned by proponents and the critiques of free markets: 'Much of the glowing praise for the (East Asia) region has, since 1997, been shaken and, in consequence, altered economic thinking in the rest of the world. Debate has been raging and a massive literature has been generated about the nature of the crisis. It is now clear that for the first time in over two decades the free market orthodoxy has been put on the back foot. Where there had been a 'Washington consensus' before--that is, the unanimity of the Breton Woods institutions (the IMF and

World Bank) and the US Treasury in promulgating economic reforms on the basis of free markets in trade and investment, privatization of public assets, and strict control of government expenditure, there is now the emergence of a 'post-Washington consensus' which is critical of the idea that free markets work best and questions the impact of IMF-inspired 'structural adjustment programs', not just in East Asia but throughout the developing world. We can also argue that the 1997 crisis fed into the questioning of the world capitalist order' (Hasan, 2001; 2)

One of the strongest critique against free market ideology came from within : 'More broadly, the IMF was advocating a set of policies which is generally referred to alternatively as the Washington consensus, the neo-liberal doctrines, or market fundamentalism, based on an incorrect understanding of economic theory and (what I viewed) as an inadequate interpretation of the historical data. The IMF was using models that failed to incorporate the advances in economic theory of the past twenty five years, including the work on imperfect information and incomplete markets to which I had contributed. Most importantly, they had departed from the mission for which they had been founded, under the intellectual guidance of Keynes - they actually promoted contractionary fiscal policies for countries facing an economic downturn - and they advocated polices like capital market liberalization, for which there was little evidence that growth was promoted, while there was ample evidence that such policies generated instability. (Stiglitz, 2001)

According to Stiglitz, who had also served as Chief Economist with the World Bank and many like minds, the world economy did not fall back well to the basic assumptions of free market paradigm. 'The reform agenda eventually came to be perceived, at least by its critics, as an overtly ideological effort to impose "neo-liberalism" and "market fundamentalism" on developing nations. The one thing that is generally agreed on about the consequences of these reforms is that things have not quite worked out the way they were intended. Even their most ardent supporters now concede that growth has been below expectations in Latin American (and the "transition crisis" deeper and more sustained than expected in former socialist economies).' (Rodrik, 2006; 974)

The lessons from the failure of reform process were obvious. The political economy of the world is intrinsically related to the economic outcomes. Many emphasize that it is vital to understand the history of development to understand the outcomes of development. The definition of development far exceeds than economic freedoms: Growth of GNP or of individual incomes can, of course, is very important as means to expanding the freedoms enjoyed by the members of society. But freedoms depend also on other determinants, such as social and economic arrangements (for example, facilities for education and health care) as well as political and civil rights (for example, the liberty to participate in public discussion and scrutiny). Similarly, industrialization or technological progress or social modernization can substantially contribute to expanding human freedom, but freedom depends on other influences as well. If freedom is what development advances, then there is

a major argument for concentrating on that overarching objective…. Development requires the removal of major sources of un-freedom: poverty as well as tyranny, poor economic opportunities as well as systematic social deprivation, neglect of public facilities as well as intolerance or over activity of repressive states. (Sen 1999: 3)

As Sen suggests, there are macro and micro agents of economic participation to define freedom. Global freedom for comity of nations may mean free movement of labour and capital while ensuring sustainability of effort. The key word here is sustainability. It is quite evident, from discussion carried out above, that capital inflows are not sustainable in developing countries. There needs to be a way to manage these capital inflows by formulating strategies which can target the real sector of the economy in favour of these inflows. Sustainability of effort represents real change. 'Financial globalisation has not generated increased investment on higher growth in emerging markets. Countries that have grown most rapidly have been those that rely less on capital inflows.' (Rodrik & Subramanian, 2009; 18)

Hence, what becomes more important in development discourse is the real sector of the economy. To this effect, one may focus on international trade. This is not to say that well developed capital markets do not matter. Only in the framework of this discussion, they are less relevant.

Looking at the real side of economic development, a plethora of issues unravel, which needs to be considered for ensuring good economic outcomes. Good macro-economic management policies, regulations that can promote private property rights, infrastructure which can facilitate business, social empowerment which can raise the quality quotient of efforts, and trade facilitation to compete in international markets are among the few of such economic outcomes which can measure economic development far more effectively than income levels. A higher income for developing countries is an end to the comprehensive objective framework which should first represent stable institutional and market outcomes. In this respect the story to development is very simple. However, entangling these outcomes is a complex exercise. The very objective of this paper is to simplify the many relationships these economic outcomes represent to eventually determine economic welfare.

To this effect one should distinguishe between the pronounced factors which can determine economic outcomes, and processes which can facilitate these outcomes. Thus, two broad categories can be drawn. The factors, which eventually determine economic outcome for a country, are growth rates in the economic activity and distributional effects of these growth rates on different social or income groups. The factors which facilitate good economic outcomes may comprise of sound institutions and the extent to which a country is integrated with other countries in the world.

There is a rich set of literature which already investigates income driven determinants and processes of economic development. So much so that it has contributed to an element of confusion to really know what matters: 'Policy makers are condemned to a spray-gun approach: They

shoot their reform gun on as many potential targets as possible, hoping that some will turn out to be the ones they are really after. A successful growth strategy, by contrast, begins by identifying the most binding constraint.' (Rodrik, 2006; p. 982)

Economics versus Society: How to Capture the interlinkages

In the economic analysis of economic growth, as against the *proximate* causes of growth which relate to accumulation of factor inputs, the more *fundamental* causes of growth relate to those variables which can improve the ability and capacity of a country to accumulate factors of production. The fundamental causes can be identified by rediscovering Adam Smith's insight that countries need solid institutions for markets to work. Institutions capture many legal, Political, Economic and Social outcomes which are so necessary for development of the economy and the society. Secure and stable property rights make up for the precedence of strong legal institutions. Representative political institutions with institutionalised representation of minority groups can represent institutions for conflict management. Fiscal and monetary institutions are necessary for ensuring economic stability. Many regulatory institutions which promote a successful market economy are also representation of good economic institutions. Institutions of social contract legitimise the market economy through social stability and social cohesion. All these institutional outcomes are interconnected to each other. To find their effect on growth is not an easy task and more so because the correlation may lead to selection bias, where one institution is preferred over other for reasons other than economic logic. For example, the positive effect of democracy is some time unduly emphasised without looking at what it is really capturing.

International trade, which is viewed by many as engine of growth (Dollar & Kraay, 2002; and 2003), and rightly so, is a good proxy to capture the effect of globalisation on economic growth. Both outcomes based and incidence based measures of trade barriers have been forth coming in the recent empirical literature. By utilising best possible definitions of integration, the author examines the effect of trade in relation to prevalent institutions in income generation. Dollar & Kraay (2002) suggest, trade is good for the poor because it is good for growth; but that is only a half-truth. It is also important to consider Sen's view on poverty, as not only a measurement of deprivation of incomes or incidence of poverty but also, more importantly the deprivation of capabilities, as a means to bring yet more comprehensive approach towards understanding poverty as well as economic development. Proxy for education, utilised in this manuscript takes care of Sen's concern for viewing development as process of enhanced social capabilities of economic agents.

How economic growth is achieved also matter? Economic growth which is captured by growth in per-capita income is an empirical

generalisation which has to be carefully evaluated in relation to the distribution effect of income generation. Recent empirical evidence suggests that inequality increases about as often as it decreases with rising patterns in economic growth in developing countries. (Ferreira & Ravallion, 2008) It is important to separately look at the issue of inequality and its determinants. If the gains of income are only passed to the rich, such societies cannot sustain growth for long because unequal gains to growth would have significant affects on the processes through which growth has been achieved. Unequal economic outcomes can impede development and the process. It can also lead to economic isolation if domestic pressures mount against globalisation. The lessons on the failure of economic reforms in 1990s tell us that economic development is a fragile process. The fragility has already leaded to a paradigm shift in the approaches to development. In most the shift is for right reasons. In 2000, the UN has initiated work on common goals of social development in developing countries under the banner of 'Millennium Development Goals'. The World Bank has joined in to support these initiatives. Though MDGs in most developing countries were not me, they have preceded by SDGs.

'Views about development have changed in the Bank, as they have in development community more broadly. Today, there is a concern about broader objectives, entailing more instruments, than the case was earlier. Development is concerned not only with increasing GDP, but also with raising living standards more broadly. It is concerned with democratic, equitable, and sustainable development. Development is seen as a transformation of society: a dual economy is not a developed economy, and many of the earlier strategies did little to promote this broader economy, and many of the earlier strategies did little to promote this broader transformation of society.' (Stiglitz, 1999)

The current economic and political landscape of the world is under-developed, where many developing countries still suffer from poor institutions which can only improve in the long run. There is no denial that more integration with rest of the world leads to economic gains. But without good institutions, the trading environment would never favour countries with poor institutions. In this respect some developing countries are not ready to integrate fully because integration is not just a matter of eliminating barriers to inter-state commerce. Convergence with global economy needs elimination of divergent social institutions and establishment of robust monetary and fiscal institution which can work through international finance more effectively and a good legal order. In the absence of these factors, global trade should allow second best options where there is room for protection on importing sectors to solve the problem of labor-surplus and capital shortage. However, promoting exports by subsidising them would be a good trade policy and it would also be pro growth. (Rodrik, 2006) The only question is: "Can developing countries export more to the developed countries?" Under current circumstances, where developed countries have heavily protected their agriculture sector, developing countries have limited options to export to.

Their labour intensive agriculture goods are uncompetitive internationally due to highly subsidized agriculture sector in the larger North. But one option remains. If it is about promoting exports, developing countries can do that by trading among selves. Developing countries are not a homogenous group either. Some countries have access to higher technological production frontiers and lie higher on technical ladder than others. Such countries can be good markets for relatively less developed countries. Regional trade among developing countries is a good formula to gain from trade. Then why they do not. For many countries, the possibilities of trade reduce because of national and international conflicts which prevail in many of the developing peripheries of the world.

What can be Concluded

Economic development can encompass society only when the workers are also considered as social and political participants in a society. The proximate determinants of economic development close down to income generation. However if this process of income generation is skewed to the rich because of their participatory value addition in the economic process, the link between economics and society breaks down. So social, political and legal emancipation of the population who are at the risk of being left out of economic process is necessary. MDGs and now the SDGs is the right step in the direction.

Furthermore the paper briefly hints what is not captured by development goals is the need to address civil and international conflicts effecting nations in the South and that is left to be analysed in another space.

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5.
Missing the Peace Train in 2006: Economic and political dynamics of India Pakistan hostility?

Introduction

International economic interactions between nations may involve peaceful trade, or it could be belligerent with reduced economic interaction. Outright war is just one manifestation of the rivalry between nations; the armed peace is equally consistent with aggressiveness. India and Pakistan are a case in point. They have had at least four large scale military confrontations (1948, 1965, 1971 and 1999), but otherwise spend a great deal of time in uncompromising posturing vis-à-vis each other. India, in particular, frequently accuses Pakistan of sponsoring terrorism in her territory. But occasionally they make goodwill gestures, such as sending out peace buses between cities like Delhi and Lahore, and agree to cricket tours. Less frequently, major concessions are made mainly by Pakistan, such as current President Musharraf's willingness to put aside the long standing Pakistani demand and United Nations resolution for a plebiscite to settle the future of Kashmir [Retrieved from].

Polachek (1997) and Polachek & Seiglie (2006) argue that wars and disputes between geographically contiguous states involve greater losses, as more efficient geographically proximate trade is displaced. This effect, however, depends on the absence of alternative trading partners, who despite greater distance may be equally or more efficient. India-Pakistan official trade (as a proportion of Pakistan's total international trade) steadily declined from nearly 20% in the early 1950s, plummeting to almost zero after their war in 1965, and has shown some signs of recovery in the 1990s. But it is still below the levels of the 1950s, which was shortly after the two nations were separated politically. This is despite the fact that India and Pakistan have fairly open economies at the present. Though, Pakistan has traditionally been more open than India.

The opportunity costs of conflict could rise when countries move to higher stages of economic development as they have more to lose from

conflict, and have more resources to negotiate peaceful settlements. For example, the 1990s is considered to be a golden decade for India as on average the Indian economy grew at 5-6% annually. Pakistan has been growing at an average of 6% for the last 3 to 4 years. Traditionally, from the early 1960s up to the early 1990s, Pakistan's was the faster growing economy of the two. In 2006 both countries were in the second most rapidly growing region (South Asia) in the world (World Development Indicators, 2006). However the below figure also shows that yearly fatality rate (number of deaths in the battle) has been more frequent and at historically higher levels for 1990s and the trend continues up till 2002. Considering 2006 peace talks between India and Pakistan the fatality levels have declined considerably in immediate years.

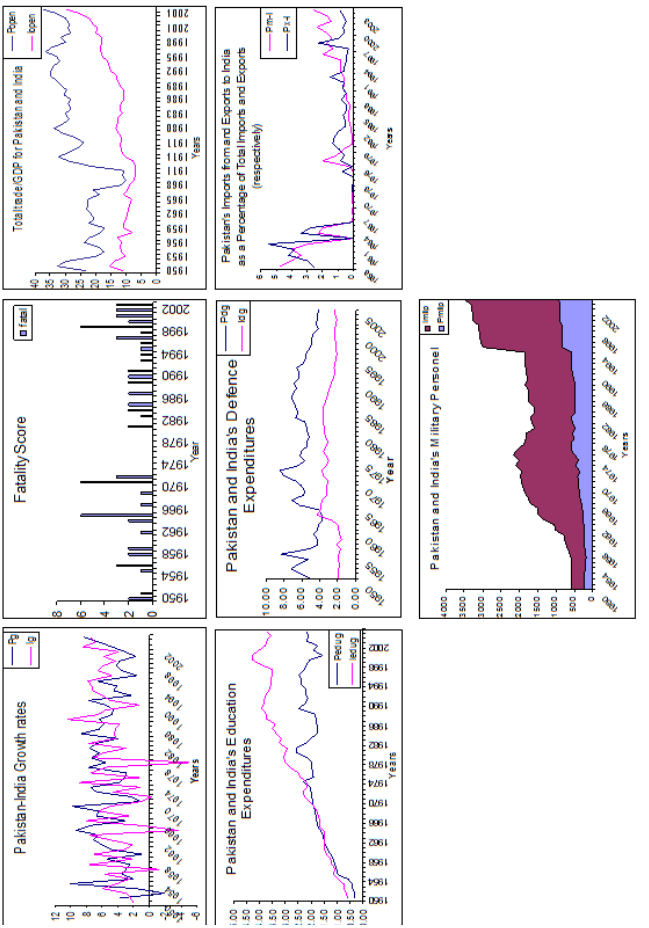

Figure 1. *Does economic growth increase the possibility of peace*

Furthermore, the above figure also shows that military expenditures tend to move inversely with development (education) expenditure, providing *prima facie* evidence that large military expenditure crowds out development in the social sector. Pakistan's military expenditure is consistently above India's except in the mid-1960s when India had wars with both China and Pakistan. In Pakistan's case, military expenditure as a proportion of GDP has historically been at 5%, but rising during and after its 1965 and 1971 wars with India to as high as 8%. The average defence expenditure of Pakistan is 5.5% of GDP in the 1950-2005 period, whereas for India it is about half at 2.8% of GDP. Since the 1990s Pakistan's military expenditure has been falling, and is now at a little above 4% of GDP, which represents a historical low. As Indian education expenditure rose to 4 % of GDP in the1990s, its defence expenditure fell from nearly 4% of GDP in the mid-1960s to less than 3% of GDP (it has rarely been below 2% of GDP). Pakistan's public expenditure on education is stagnating at around 2% of GDP. An important observation which can be made from the figure is a sharp rise in military personnel in recent years despite a fall in proportional defence budgets by both sides indicating a rise in militarization by India and Pakistan corresponding to the rise in fatality levels. Here militarization in India has increased at a much steeper pace than Pakistan which may show Indian security concerns or its hegemonic posture in the region. Again note that the figures are available till year 2002. By 2006, due to Pakistan's peace initiatives and its serious efforts to control cross border movement of unwanted personnel at the Line of Control (LOC) has significantly reduced the hostility levels which may correspond to a possibility of fall in militarization in the region.

Nevertheless, as the varying trends discussed above in the determinants of possible hostilities suggest: there is more to India-Pakistan conflict than merely Pakistan's political orientation and a comparison of bilateral economic growth rates. This is because of the fact that despite high growth rates in India and relatively high democracy scores in Pakistan up to 1999, conflict between the countries escalated in the 1990s. By contrast, in 2006 the dictatorial regime in Pakistan with a strong military orientation and therefore historically less democratic, was making major unilateral concessions to India vis-à-vis their long standing disputes over Kashmir. Could that be related to the very impressive growth record in Pakistan? If anything, conflict between the two nations can be best understood in a multivariate framework where the relevant variables and processes (economic performance, integration with rest of the world, trade between the conflicting nations, military expenditure, democracy, and population) are simultaneously taken into account.

Lessons from quantitative study by Murshed & Mamoon (2007)

A comprehensive exercise has been carried out by Murshed & Mamoon (2007) to objectively analyze the key variables which would

help us understand various overlapping dynamic factors of India-Pakistan conflict. Such an analysis also helps us to device a successful peace strategy based on its economic and security dividends. A simple time series model was devised and an evolutionary analysis of India and Pakistan conflict from 1950 to 2002 was carried out where role of economic development, integration with rest of the world, bilateral trade, military expenditure and democracy was analyzed to see how these variables may have contributed to the increase or decrease in hostilities between these two nations.

Such an exercise is also important to understand the validity of such single point one sided explanations which may substantiate the blame game of the one side by presenting other side to be more belligerent. For example, it is generally perceived in India that strong hold of army and extended dictatorial rules in Pakistan are a significant source of hostilities. Whereas Pakistan accuses India to have shown belligerence based on its historic hostility dating back to 1948 land dispute in Jammu and Kashmir area which also resulted in the first outright war between both countries whereas each side is now holding up to a part of the disputed land divided by a line of control while each side has been claiming the ownership of the entire area [Retrieved from].

Murshed & Mamoon (2007) cover more than 50 years of the India Pakistan history, would help us understand whether the dynamics of conflict have been changing since the prevalence of initial hostilities and if so how one can positively exploit these changing dynamics for making a long term peace strategy.

The study shows that initial hostilities resulting from Kashmir dispute has significantly hampered bilateral trade between the two nations. However, we also find that the converse is also true; more trade between India and Pakistan decreases conflict and any measures to improve the bilateral trade share is a considerable confidence building measure. In the short term, greater Indian access to Pakistani markets will help decrease hostilities between the two countries; whereas in the long run as the peace is achieved, both countries could be exporting more to each other. Lately, there has been a high demand of cheaper Indian raw materials in Pakistani industries. A regional trade agreement along the lines of a South Asian Free Trade Agreement (SAFTA) could enable freer access to the markets of member countries, and has a high potential for the improvement of relations between India and Pakistan on a long term basis. Pakistan and India's degree of openness to world trade is the *dominant* economic factor in conflict resolution. One would imagine that in the counterfactual case of significant mutual inward investment, that too would also decrease mutual belligerent tendencies.

Mamoon & Murshed (2007) also find that Pakistani military expenditure is more sensitive to hostilities with its Eastern neighbor whereas Indian military expenditure is not entirely Pakistan focused as India, the regional hegemon, has other domestic and international concerns to which its defence spending is targeted, besides its disputes with Pakistan. Overall, India may have shown more belligerent behavior

towards its neighbor because of its greater military size. For example, India has unilaterally massed troops on Pakistan's borders in 1951 and 2002. Indeed, there is some reverse causality between military proxies and conflict suggesting that Pakistan's military build ups may be more reactive. Furthermore, it is also important to note that Indian part of Kashmir is house to India's largest military contingent active in suppressing insurgency which India accuses was actively supported by Pakistani side. Overall military expenditures are still at high levels in both countries and are diverting scarce resources away from social development spending, such as on education, and poverty reduction. Education spending has been shown to be good for both peace and economic progress. Though one should note here that optimal level of military expenditure depend on level of economic development. At higher levels of economic development military budgets proportional to GDP may fall but in absolute terms they may very well rise. In other words, higher the levels of economic growth, wider would be the range of optimality in military budgets depending on the national and international security situation as more economically vibrant countries may also have more challenges to face as they are taking off to the next stage of economic prosperity. Thus some times arms race may only indicate the up keeping of deterrence between different parties. As in South Asia region, Indian deterrence is responding to Chinese defense capabilities where as Chinese deterrence may have been focused towards international stakeholders like USA while Pakistan may have to keep its deterrence against Indian military capabilities. While each country may keep its minimum self defined threshold level of deterrence, economic cooperation among them may bring them closer to each other where countries work with shared stakes to global economic well being. But to reach any such scenario, a country needs to become a significant part of global economy and any such status can be achieved party by economically integrating with other economies in the region. Thus irrespective of long term trends in military budgeting, a country may always consider a smart factor division of resources whereby resources are utilized for development in a more effective manner which is to suggest that national budgeting for any set of pre defined alternate years spend more on social welfare while holding onto proportional defense expenditures to some predefined set limits. However any such smart trade offs between development and defense cannot happen under heightened hostilities between neighbors or possibility of any such. In this context resolution of India Pakistan bilateral issues like Kashmir becomes all the more important to achieve sustainable path towards social development in the region while both countries may still retain their respective defense niches to supplement their progressing economic and political status regionally and globally.

In an ideal world democracy between pairs of nations should reduce inter-state hostility according to the democratic peace hypothesis; this relationship in our case is present but weak. Peace initiatives, it should be remembered, are not the sole prerogative of democracies; they can also be

made by countries which are less than perfectly democratic out of economic self-interest. Pakistan, in 2006 made unilateral concessions on many disputed issues with India. Murshed & Mamoon (2007) support the liberal peace hypothesis. Economic progress and poverty reduction combined with greater openness to international trade in general are more significant drivers of peace between nations like India and Pakistan, rather than the *independent* contribution of a common democratic polity. So it is more economic interdependence rather than politics which is likely to contribute towards peaceful relations between India and Pakistan in the near future. In many ways, our finding echo Polcahek's (1997) work across several dyads, where it is argued that democracies cooperate not because they have common political systems, but because their economies are intricately and intensively interdependent. As pointed by Hegre (2000), it is at these higher stages of economic development that the contribution of common democratic values to peace becomes more salient. Meaningful democracy cannot truly function where poverty is acute and endemic, even in ostensible democracies such as India. In the final analysis, it may be that democracy itself is an endogenous by-product of increased general prosperity, as suggested nearly half a century ago by Lipset (1960). Then and only then, will nations be able to fully comprehend Angell-Lanes' (1910) arguments regarding the futility of inter-state conflict.

In 2006, there was lot of uncertainty on both sides for any significant change in India-Pakistan relationships despite Pakistani regime's bold decision to re evaluate its traditional stand on Kashmir as well as using bilateral trade as a confidence building measure. Some in Pakistan feared that peace initiatives like reducing tariffs for Indian goods would mean greater dependency on Indian produce. Taking into account the historically high hostility levels between two countries, any peace initiative or confidence building measure which leads to more market access to India is viewed with scepticism in Pakistan, as many fear that dependence on India may expose Pakistan to unnecessary pressures from India, and make it vulnerable to one sided solutions to the Kashmir dispute. Our analysis shows that in the long run the dependency on Indian cheap goods would actually decline and both countries would end up being equal trading partners. Thus more bilateral trade, far from creating any power imbalance between India and Pakistan, would equally distribute the gains. Pakistan may also fulfil its import needs more from the other developing countries such as China.

However, Murshed & Mamoon (2007) presents some evidence of competition between India and Pakistan to trade with the rest of the world as our findings suggest that hostilities with its neighbour has a greater negative effect on Pakistan's trading capabilities when compared to India. Hostilities on its Eastern border areas has over the time limited the scope of Pakistani domestic markets to effectively benefit from outside competition despite the fact that Pakistan is traditionally a more open economy. Though with peace, trade with rest of the world would increase for both countries in the short run, in the long run Pakistan would benefit

more than India because of its greater openness and Indian trade would decline if India does not open up its economy further. In 2002, when Pakistan found some breathing space after a decade long economic crunch, which the country found itself into since late 1980s due to a mounting debt burden amid international sanctions, and as it was managing to benefit from international markets as sanctions were lifted for its cooperation in the War on Terror, an army build up by the Indian side on Pakistani borders, the largest in history, may show that India has used hostilities to offset Pakistan's economic capabilities. Though negative effects for Pakistan have been greater, continued level of heightened hostilities also carried negative effects for India. For example, figure presented above show a dip in terms of trade of both countries in year 2002, where Pakistan's terms of trade witnessing a deeper plunge due to Indian military build-up on its borders.

Murshed & Mamoon (2007) also find that peace is not only good news for the economy, it is also good for security capabilities of both nations as decrease in hostilities would increase the efficiency of national defence apparatus of both countries in the longer run, as we find that both countries would decrease level of militarization while may still incur higher defence expenditures only at higher levels of GDP to import high end technology military imports much like developed nations who keep smaller but well equipped armies. Though, such long run scenario is based on the assumption that Kashmir dispute would be solved.

May be a similar vision of economic and security prospects of peace have motivated Pakistani side to take peace initiatives when President Musharraf had become the first Pakistani leader to show some flexibility in solving Kashmir dispute while showing willingness to set aside Pakistan's traditional demand of plebiscite in Kashmir and Jammu region; a demand which has always been rejected by the Indian side for last 30 years or so. Pakistan has proven to have made a genuine effort towards peace in the region where they had also decreased tariffs on number of Indian products. How ever how India has undermined Pakistani peace initiatives by its continuous lukewarm response is matter of another debate as it appears how international community fairs with Pakistan in future matter for Indian policy towards Pakistan a lot. In this context, it can be suggested that India is playing an old game where it is buying its time out of peace yet again as it did in 1970s when after East Pakistan debacle, India back tracked on its commitment over plebiscite in Kashmir and eventually won over the argument at least on international forums where now a days indeed any demand of self determination of a segment of Kashmiri population out of a economically prospering nation like India seems an unconvincing argument especially under an international economic wisdom which is in favour of globalisation.

There is also evidence that in 2006 Indian army did not share the same enthusiasm as was shown by the government of Indian Prime Minister Manmohan Singh. For example early this year on 8 January 2007, Indian army by going against their government line came out in the local media strongly opposing any consideration by Indian side to the proposal put on

table by Pakistan to administer Jammu and Kashmir in a joint management framework to further curtail down hostilities:

A spokesman of the Army here stressed that there could not be a joint management between a military dictator of Pakistan and a democracy like India. The spokesman described "joint management" as a "dangerous proposal" because it would dilute India's control on two-thirds of the original state of J and K. For the first time the Army has come out against the much-hyped proposal of Pakistan with the spokesman saying that Pakistan is toying with the idea of an "out-of-box" solution called "joint management" of the J and K state, but it was dangerous for India. [Retrieved from].

Quite interestingly, on December 2006, Prime Minister Manmohan Singh asked both sides to forget about the past in favor for an optimistic future as he rightly realized that the destinies of both nations are intricately interconnected. A day before the statement came out, Pakistan decreased tariffs on a significant number of main Indian goods imported to the country, which could have easily been took as an indirect indication of giving India a status of most favored nation. It makes an insightful observation then that few days later in January 2007, Indian army leadership would undermine the whole atmosphere of peace building by an uncalled for press statement while also making a political comment by referring to the prevalent governance structure in Pakistan. This may suggest either lack of Indian sincerity towards peace building in the region or it may indicate that Indian army may have a Kashmir or Pakistan policy which is somewhat exogenous to what is being planned out in the Indian Prime Minister secretariat and thus seriously undermine the effectiveness and credibility of the Indian government to carry out its own foreign policy yet again questioning the fundamentals of Indian democracy.

Cross border challenges for post 2008 democratic Pakistan

The tensions between India and Pakistan have been escalated amid global financial crises and relative plummeting of growth rates in both countries. Currently hostilities are at the highest for the last 15 years or so. The talk of surgical strikes within Pakistani borders is common talk across the border. Pakistan is maligned by India in international forums frequently and even at prime ministerial level. SAARC summit in Pakistan was cancelled last year due to the boycott of India. While the air of confrontation is happening actively from the Indian side, unrest in Indian held Kashmir has been at its peak not seen since the advent of 21st century. From the Pakistani side, the two successive democratic governments of Pakistan People's Party and Pakistan Muslim League Nawaz are trying hard to bring India to the negotiation table but with little success. A docile reaction to Indian war mongering has created many rifts between civil military relationships in Pakistan. The current geo political situation in South Asia is mired with uncertainty due to worsening

Pakistan India relationship. As rightly pointed out by Murshed & Mamoon (2007), democratic orientation has a very limited role to play in bringing India and Pakistan closer to peace as suggested by the recent history of the subcontinent. If any, economic success on account of both countries would create an environment where India may respond to Pakistan's peace initiatives. India has missed the 2006 peace train. The discussion in above sections and in light of Murshed & Mamoon (2007) analysis suggest that India has been trying to find ways out of peace. The only deterrence for Pakistan to extreme hostile action or high level of hostilities from across the border is a strong military posture from the Pakistani side. It is in Indian interest to weaken that posture to dominate regional politics and economics. The domestic political and social issues are a clear handicap of Pakistan to take up a road to sustainable and stable democratic path. Constant hostilities emanating from the Indian side is not helping the situation in favor of democratic governments of Pakistan. Such is the challenging situation despite a dovish stance of incumbent political party PML N towards India. This provides a circumstantial evidence that India has hijacked the peace within South Asia and is ready to miss opportunities of peaceful solutions to bilateral disputes in the future also.

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6.
Post conflict reconstruction efforts in tribal areas of Pakistan through informal education

Framing the Argument for Informal Education in FATA

Education has always been a matter of utmost precedence for the civilized societies. It is a critical determinant for the growth of human society and its economic progress. Societies who invest heavily on education realize its long lasting and extensive effects. Unfortunately Pakistan has always been deprived of quality education. The role of private sector is viable in this regard that is trying hard to fill the void potentially that springs from state's inability and incompetency to provide quality education to its masses. Everybody talks about the importance of education in the country in general and in tribal areas particularly to overcome the problems these areas are confronting with. But state has been failed to provide any university in the region. According to Article 37 of Constitution of 1973 it is the responsibility of state to remove illiteracy and provide compulsory and free education to all citizens of Pakistan. The data provided by government often does not reflect truly the ground realities. It is common practice that in settled areas of other provinces and even in capital territory the buildings of schools and government institutions are used for other businesses then how this is not practiced in the areas where already there is least interest for education. Education can play the best role in mitigating the conflicts in tribal areas of Pakistan.

FATA is the periphery of Pakistan that is notorious to have been host to the Talibanisation movement. After army's Zarb-e-Azab action, terrorist networks are broken there. But it is time to

reconstruct the area to consolidate the local population that has witnessed a wave of extremism for decades. One important step is to bring them to mainstream. Economic, political and social infrastructure needs to be built. The informal economic landscape is to be changed to formal one. This means people should be encouraged to undertake formal business activities. Banks should be opened as the first step so that local population has opportunities to have credit for investment opportunities. As post conflict reconstruction steps, civil law enforcement authorities should make a visible presence to control law and order situation.

But most importantly, the local population needs counseling on peace and security. One step for this social emancipation is to open up formal schooling system with a carefully introduced syllabus that not only make them feel patriotic to be part of Pakistan but also teaching them human ethics and essence of peaceful behavior in the society. These schools would most probably cater to children and young adults. There is also a valid question as to the extent local population would willingly participate in academic activities and attend formal educational facilities. After decades of witnessing active conflict, one should expect a strong feeling of skepticism by local population with any quasi secular academic opportunities they would be provided with. Secondly networks of interest groups who benefit from informal setup of FATA would definitely present strong opposition. It is difficult pyscologically to accept new ideas and people don't leave their comfort zones easily that had become their life style for decades.

Secondly, we are talking about changing the mind set of the whole population. It's the adults who decide whether their children should go to education institutions or not. So these adults need awareness and in most cases targeted convincing regarding the inclusion of theirs and their children into the formal and mainstream process of development. This kind of awareness activity cannot be achieved by only providing formal educational infrastructure with right quality and quantity. In post conflict reconstruction, the concept of informal education turns out to be a very successful strategy. It has been practiced with great success in many African countries that had earlier witnessed conflict.

Informal education targets its audience with a need based approach. It also is known to have been successful in delivering awareness to small groups. Population is seen to be more receptive and welcoming to informal ways of delivering educational contents. It is also accessible to populations irrespective of their age groups. Informal educational plans also click well with the intricacies of the local culture at micro level. It is also cheaper. For

informal education no expensive infrastructure for education is required as it is in case of formal education. Informal education system also promotes volunteerism and is far more efficient and smoothly executed than a formal educational activity. In short government should facilitate a massive informal education plan for FATA. Volunteers or paid consultants should plan out these informal educational activities at village level. Mosques that are present in every locality should work as facilitation places. No expensive infrastructure is required and could be planned and executed in shorter time lines. The informal teaching is participatory and engages with local anthropology so the recipients would be more responsive to the contents of the activity.

Cultural, customary and social practices had kept tribal areas in a highly susceptible position. Tribal traditions not only confine the children from accessing the education but also withdraw them from their constitutional and basic human rights to education. Devastation of infrastructure and internal displacement of millions of people because of government operations against militancy had strapped down education from their primacy. State has also witnessed a stiff resistance by militants for education. They have been targeting the schools, colleges and other educational institutions. Most of them have been destroyed or closed due to security threats. Inadequate formal systems are finding it hard to provide the education to the individuals and society efficiently and effectively. In this regard informal learning can offer more and better education at all levels, to a growing number of people, particularly tribal areas of Pakistan where it needs a long way to go. The scant success of current formal education systems to meet the prevailingdemands, has shown to a growing number of researchers the urgent need to provide alternatives that escape from the formal standards, in order to solve these problems. The inadequacy and the incapacity of formal educational models to meet the needs of individuals and of society at large must lead to the search for alternatives that escape that mold. The legitimacy of schools is based upon their role as credentialing agencies while informal learning will derive its legitimacy only from its ability to meet real social needs. The rigid structure of formal schools, mainly based on laws and regulations than on the real needs of students, offering a curriculum that leans away from individuals and from society, far more concerned with performing programmes than with reaching useful objectives, obeying a rigid set of clerical-administrative procedures, has long since fallen short of meeting individual and social needs. In order to meet the demands of education, informal learning can play an important role. The term

informal learning' has been utilized progressively as a part of grown-up training for a few reasons. It gives a basic difference to formal learning or preparing that recommends more noteworthy opportunity for learners. It perceives the social significance of gaining from other individuals, however infers more prominent extension for individual office than socialization. It attracts regard for the discovering that happens in the spaces encompassing exercises and occasions with a more obvious formal reason, and happens in a much more extensive assortment of settings than formal instruction or preparing. It can likewise be considered as a correlative accomplice to gaining for a fact, which is generally understood more as far as individual than interpersonal learning.

Civil society and NGOs can make a difference under the state's vigilance. Informal learning, starting from the basic needs of students, is concerned with the establishment of strategies that are compatible with reality.In this case learning occurs independently, outside the curricula ofeducational institutions and it does not demand prerequisites in terms of previous schooling. Students can be taught according to their interests and competencies. Students can acquire knowledge through work activity that regularly gives rise to learning. Participation in group activities includes team working towards a common outcomeand groups set up for special purposes. Working with others allow students to observe and listen to others and to participate in activities and hence to learn some new practices and new perspectives to gain different kinds of knowledge and expertise. Working in pairs boosts motivation and confidence and if well-supported and successful; helps to tackle challenging tasks. Learning through different interaction patterns will help children to give respect to others point of view, creating harmony and tolerance within the group hence in society. Thus workingfor the betterment of the society in collaboration with other stakeholders.Keeping the socio-economic conditions of such areas in mind; some monetary benefits can be offered to the parents if they send their children to school regularly. In this way dropout rate of schools can be minimized and controlled. Skilled based learning is also a good and rapid way to change the standard of living of the people.This type of learning can directly help people to earn and improve their livelihood. Better standard of living will help them to focus on their children's better and bright future.

Motivations from literature

The priority areas towards conflict mitigation have generally been related to macro reforms. Social programming did not receive as much attention in post conflict areas as security, political and economic sector reforms. Yet the potential for peace to be sustained in the longer term may be heavily dependent on education as a key factor to address social or cultural tensions (Smith & Vaux, 2003; Wedge, 2008). As suggested in previous section mosques may provide a good place for delivering informal education to all age groups. Such need arises especially because of remoteness of the locations where civic networks are absent as well as formal schooling facilities. There is a precedence of utilizing local institutions of conflict transformation by institutionalizing them with amendments that are suitable to modern laws. Such has been commonly practiced as a broader agenda for reconciliation process in Africa (Ndangiza, 2007). As part of the reconciliation process, the first step is to apply decentralization and devolution of power to local authorities and communities because too much power in the center is detrimental to the tribal peripheries according to the dependency theory (Kauzya, 2007).

There is a huge literature that talks about faith based schooling systems and has been prevalent since many centuries. These faith based schools exist in developed as well as developing countries. Most of such schools impart modern education curricula to its students in addition to religious education (De Ruyter, 2001). However mosques in tribal belts of Pakistan are primarily the places of worship and only, if any, religious education is imparted. The need based approach to imparting formal education may only work if these places of worships are utilized in a manner that some part of modern education curricula is taught to the locals through informal means. The ones who participate in delivering such informal education to the tribal population are more of mediators than teachers. The personal integrity that is the characteristics of the tribal culture should be promoted and channeled towards positive behavior.

The modern curricula may contain civic and citizenship education to start with. The curricula should be inquiry based to help the students investigate what it means to be a citizen in terms of common rights and responsibilities rather than identity factors such as ethnicity, religion or culture (Alexander *et al.,* 2010; Ben-Porath, 2006). The pedagogies should promote active learning through community based projects (Green *et al.,* 2006). For example, in post conflict Northern Ireland where children grow up in communities that define themselves as either British or Irish, the

citizenship curriculum focuses on equality and humanrights (Connolly *et al.,* 2002).

The primary skills imparted to the locals may include the development of generic skills such as communication skills, the ability to draw on multiple sources of information and evaluate conflicting evidence. For example the teaching of history is an important concern in relation to conflict (Cole, 2007). Single narrative histories may be switched to multiple perspective narratives. There is a strong role of the government to facilitate such initiatives that can enable the national and international stakeholders to go to tribal belts of Pakistan and start intensive informal education activities as part of the post conflict reconstruction efforts. The intellectual stimuli for the contents of these informal activities can come from various fields like intercultural, feminist and historical/political education; community work and trauma work. All these fields have developed concepts of constructive conflict management. Such skills should be imparted to the locals that can develop certain personality traits in them. These may include:

a) Self Esteem
b) Tolerance of frustration and ambiguity
c) Self awareness, awareness of others and empathy
d) Communication and interaction skills
e) Awareness of personal and cultural attitudes to conflict behavior in conflict situations
f) Ability to analyse and evaluate conflicts
g) Practical skills to manage and overcome conflict

These traits if imparted to the local irrespective of their age groups would become a great source of self reflection to own and prevailing attitudes towards conflict. The potential to change behaviors towards more peaceful reactions should be experienced in real form (Maringer & Steinweg, 1997). The learning outcomes should be based on non-violent and voluntary learning, resource orientation, gender specific learning and fostering attitudes. If ample resources are provided for these informal educational activities, such activities may comprise of following:

a) biographical work
b) discussions with witnesses
c) drama, psychodrama and pantomime
d) problem solving and group work
e) creative art work
f) media work

In making such informal educational activities accessible to the whole tribal belt of Pakistan inter-institutional cooperation with the

civil society in urban areas is paramount. This should mean developing links with health organisations, psychological services and the mosques –that host the informal education activities. Key figures in the local communities should also be engaged in order to make the outreach of the informal programs more effective (Fischer & Tumler, 2000).

The informal educational programs should be delivered in both national and local languages. This means that the teachers should be able to effectively communicate in both national language Urdu and local language Pushto. This will facilitate cultural exchange and national cohesion within tribal areas.

It is also quite important that the educators should set aside their own preconceptions regarding the political and social anthropology of the tribal areas by promoting ideas from younger participants among the groups and then balancing it with the cultural and social experiences of the senior members that have evolved through the local family values (Bauch, 1999; Rudolph, 1999; Paisajoven & GTZ, 1999). Young people from non-Western conflict regions often have more exposure towards the culture of modern world. Thus educated urban youth should be encouraged to volunteer for missionary visits to the tribal areas where they can influence the local youth towards more modern and mainstream ways of life style.

The conflict in tribal lands that are distant from the center of mainstream economic, political and cultural activities are usually ignited by exploiting the power of youth at these locations because generally their world view of modern society and its values are informed and motivated not by social cohesion, the community and social capital but by so called and self-perceived economic and political exploitation – may it be true (Africa Dialogue, 2012). So informal education exercises by NGOs, urban educational institutions or international development organisations by targeting these disenfranchised youth has high probability of success in favor of peace (Bronkhorst, 2011).

There is a strong possibility that the mediators through informal education may influence the traditional councils and administration setups in the tribal areas like jarga, that work on the philosophy of crude deterrence, towards more informed and unbiased and gender sensitized decisions. There is a strong role of traditional tribal leaders in supporting outside informal post conflict initiatives. The role of native administration has been especially utilized to the benefit of locals in peace and pacification of conflict afflicted tribal lands in Africa and Asia (Elhussein, 1989).

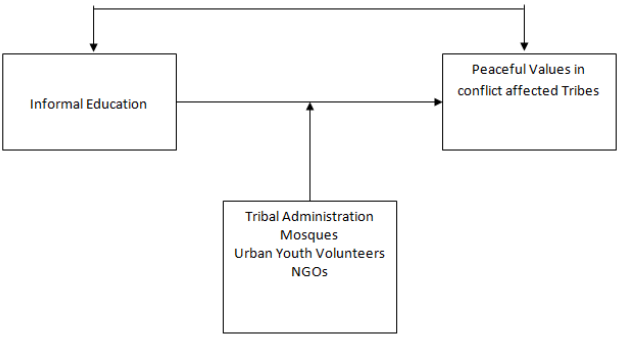

Figure 1. *Soft Intervention in Post Conflict FATA*

Concluding guidelines for peace education in tribal areas

Due to the proximity of FATA to Afghanistan, it has been exposed to conflict since last many centuries. However, the recent dynamics of conflict are more of an outcome of a prolonged war on terrorism that the US is waging in Afghanistan. The recent initiatives by Pakistan army in order to bring peace to this conflict zone by waging Zarb-e-Azb against the Taliban factions are met with much success. The Taliban have been pushed towards Afghanistan and their sanctuaries in FATA are demolished. However with decades of active conflict, the tribal areas of Pakistan have not seen any integration to mainland Pakistan. Currently infrastructure is being built with the help of Pakistan army and efforts to bring locals into mainstream are being worked upon. This paper is an effort to supplement these post conflict reconstruction efforts by suggesting that informal means of education are utilized in order to efficiently enable wider access to local population to win over the minds in favor of national integration. The formal means of education asks both time and money and would not be available to the locals in an immediate timeframe. The paper suggests that informal means of education is also quite responsive to the cultural intricacies of the locals and would exploit the local anthropology towards the benefit of presenting with the dividends of peace to the locals. The paper asks for volunteerism on behalf of urban youth to come and give education to locals of all age groups in FATA. The Mosques that are present in every small town and village may be the place where these informal education activities can take place. The paper also asks for the local tribal administration to be taken on board for such initiatives.

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7.
Economics case study: Harvard Business School pedagogy techniques: From teaching entrepreneurship to influencing business policy through research

Economics and Business teaching in Silos

It is true that the foundation of business function derives its theory from economics. However the link of business and economics ends here in education syllabus for both business graduates and economics students. In Pakistan, the education in economics subject is heavily inclined towards theory in Universities where the subject is taught as a main degree program. Students of economics undergo myriad of subjects that all teach them different aspects of economic theory and if the degree allows they write a thesis that is mostly concerned with secondary data analysis. Economics students may also write technical reports or term papers that may in most cases refer to issues that are macro in nature. For example the most popular subject lines are Inflation, Money markets, banking structure, Fiscal Policy, Gender, Legal institutions, conflict, and etc. These are all very important topics. The students are benefitted with a greater awareness of the issues that are vital for the development of a nation. Many think tanks, ministries or international organizations are working on these issues. However, the technical work of these organizations are mostly guided by international consultants that in all cases have international degrees from either Europe or US. The degree programs in Europe or US are very multidisciplinary in nature to cater to international development issues. However as mentioned such orientation is missing in economics degree programs in Pakistan. So the graduates of economics mostly are absorbed in academic institutions where they are concerned with teaching same theory they have learned in their degree program without linking it with its micro application to markets or society they live in.

Instead the micro application of the issues being dealt by markets or society is more generally covered in the business degree programs in

Pakistan. The Business degrees utilize many methodologies in classroom or outside to equip the students with skills that are more practically outward oriented. For example, students undertake case studies of organizations where as these organizations are not limited to private businesses but also cover government and non government bodies and international organizations. The most important aspect of business studies in Pakistan is that they are taught and guided to understand and carry out primary data analysis. Primary data is one of the most informative sources for micro analysis at firm level. This is a right skill every business is looking for in their employees. Not only that, with 8th amendment passed in Pakistan, the local body governance structure is looking for the same skill set for their employees in facilitating local governments for technical or managerial insights. For example, product research at both firm level and government level need skills that can decipher primary sources of information. Once done, these bodies are also looking for skills that require analysis of the information and its presentation that can be associated with the base line of the matter.

Why University of Management and Technology graduates in Economics tend to be different? At UMT faculty understands this gap between the degree programs of Economics and Business studies. The economics students are allowed and encouraged to take courses from Business studies. Additionally, the courses at Economics department are formatted in a way that allow students to understand the practical application of the subject through specific teaching methodologies that heavily involve students in the class room learning. The Economics degree program at UMT is preparing students for not only academic positions in colleges or universities but it is also preparing them for roles in businesses and other non business entities . In UMT Economics department, the slogan has beenthat Business needs Economics and so does Economics needs Business.

Application of economics in modern business practices

For Neo Classical thought, the private sector is the sole source of prosperity for the nation. Businesses form, compete and bring economic efficiency by innovating in the process. Government at best is the regulator introducing laws to avoid market failure within the economic system. US capitalism has been seen as a success story till recently where corporate sector has been one of the sources of making it a world super power. However there was a draw back within the system as Thomas Picketty recently observed in his book 'Capitalism in 21st century' that returns to capitalist system only favors the capitalists (Read entrepreneurs). His data analysis gave credence to the socialist thought that capitalism is akin to exploitation supported by recent trends of high inequality in US.

In theory, economic agents work on incentives, and efficiency of the system follows. The very idea and management and execution of the idea is well incentivized under capitalist economic system. Enterprenuers take the biggest chunck of returns for their effort of chanelling capital into

production and dissemination of the product. Even though China has a socialist orientation, It has greatly benefitted from capitalist incentive structure introduced to their private sector regulatory framework. However also in China inequalities are on the rise.

The main critique with Business orientation is that it is always profit oriented whereas the profit is accrued by the enterprenuer. No doubt 21st century has seen a remarkable rise in number of billionaires be it US or China for example. This has created discontent among the working class as they feel exploited by the system. Since working class is most prominent part of the population, this discontent has enabled the intellectuals to claim that capitalism has failed but same critics haven't come up with any alternate idea.

Yes, the government can play a role to redistribute the returns to capital towards workers but in economic theory and psychology such measures will be a severe blow to the incentive to work in the first place. Such a step will surely create problems of moral hazarad and free riding and innovation and efficiency would be greatly diminished as is the case with Socialist systems during cold war era including Russia.

It has to be understood by alternate theorists that Businesses cannot function without maintaining profit margins. The larger the business is, higher should be the profit margin to minimize uncertainty it faces due to competition. The rising costs are always chasing the businesses unless they innovate and expand their market. Businesses should also minimize the costs as what has been witnessed in practice by multinationals by outsourcing ventures. The stakes involved are not only for the enterprenuer but the workers also. A large business is a complex network of functions that all should align themselves on making the business process efficient to maximize the revenues and minimize the costs. The profit is a positive externality that is in most distributed to the top brass of the business but regulatory laws also ensure that the workers are also beneficiaries.

Since profits are inherent to a business process, it translates into the psychology of both workers and the top brass. The example of Enron shows that business ethics were flouted in the race towards profiteering and even lies and deception was introduced to the book keeping that eventually lead to the collapse of the business as well as the shareholders returns. The economic process of incentive cannot be isolated from the psychology of business ethics. Since the primacy of mainstream economics is based on self interest, the valid focus on profit making leads to violation of business ethics.

One of the ideas to address this problem is recently introduced by Harvard Business School's professor Michael Porter (see Porter *et al.,* 2011) . According to him if businesses can focus on business process and product innovation in a manner that directly benefit the social groups of the society as consumers or workers then such a business may very well focus on profits and aslo such a business behavior will satisfy the very critics of capitalism. The brilliance of the idea is that it doesn't take away the incentive structure from the enterprenuer but challenges him/her to

create innovation with a social target in mind. With the implementation of shared values society will be brought closer to businesses and the disenfranchisement from post capitalist expressionism would transform towards the benefit of entrepreneur.

How entrenched is micro economics of business competitiveness with the macro economy? Case of CPEC

Assume a two country model. Country A is US and country B is Pakistan. What is then the probability of a success of a start up firm in US and Pakistan? US has a very different economic, political and social landscape than Pakistan. We have seen recent success stories in US like Facebook, Google and earlier Micro soft that are global brand names. What did Pakistan miss and can Pakistani firms compete with these brand names?

The hypothesis in this article I want to bring forward is that there is absence of level playing field in competition for both US and Pakistani firms. Without the availability of level playing field Pakistani firms will still miss the boat in all its probability and it would be very difficult for them to transform into global brands. So what is this level playing field I am referring to?

One can bring about the income hypothesis first if it can to some extent determine the differences in level of development in both US and Pakistan. The percapita of US is significantly different than that of Pakistan. To achieve the same percapita Pakistan may have to achieve annual growth rates of at least 6% for more than 5 decades. The proximate determinants of growth are capital market and trade libralisation. Both happened in Pakistan since 1980s. However rise in incomes have not been sustained at the minimum of 6%. Services sector blossomed but the larger peripheries remained impoverished and underdeveloped. For a Pakistani firm to become a global brand it has to achieve competitiveness locally. However healthy national competition for Pakistani firms are not forthcoming because it is restricted to local clusters. In other words Pakistani firms are in most reinventing the wheel. The learning by doing that should happen with the open door competition policy failed to occur. International brands are dominating the national landscape.

Furthermore focusing on incomes as a bench mark to provide level playing field has been seen to be futile. Because per capita is an average concept that may increase in value but it hides the skewness in the patterns of income rise within the population. Thus inequalities in the society cannot be ignored. The level playing field should be over encompassing concept. Political and social development is as necessary as the macro economy. First social and political development means that income rise has indeed improved the life style of the common man. The peripheries are the potential market for local firms to enter into competition and improve their local competitiveness. Domestic commerce and new cities have been emphasized by Dr Nadeemul Haque who is Pakistan's one of the most prominent economists. The idea is that

Pakistani firms should achieve competitiveness locally by entering into the new local markets that leave their status as peripheries by urbanization phenomenon. In other words cluster formation transform the peripheries into mainstream. Here there is no invinsible hand but a strong role of the government to do that.

Some words for current economic landscape in Pakistan. China Pakistan Economic Corridor (CPEC) strives to bring economic peripheries into mainstream. Currently infrastructure is being developed. Industrial zones are the future and also new cities in the agenda. Further more the government has been providing the impetus to the development of society by committing to Sustainable Development Goals (SDGs). This means that an environment of efficient local competition is being harnessed and Pakistani firms may take up a regional role if not global one.

Understanding the complex welfare equation for social entrepreneurship

Simplifying economics of the economy

Economics works in simple ways. Any domestic economy is divided into three sectors: Agriculture, Manufacturing and Services. The economic activity is placed in either of these three sectors to make up for production profile of any country.

Since early twenty first century a due focus had been given to services sector by the developing countries in order to keep with the pace of progress in developed countries. Banking, Telecom and Information Technology have been vigorously promoted in order to achieve higher growth rates. The business cycle also favored these countries from Sub Saharan Africa to Asia to Latin America. Decent growth rates were achieved but in most countries they appeared to be not sustainable.

Services sector in most developing countries did not support manufacturing or agriculture but promoted consumer economies. Now there is a visible shift to the policy recommendations for these countries. The lagging behind manufacturing and agriculture sector is drawing attention.

The literature for this attention is coming from the global institutions that reside in the west. There are direct and indirect references being made by this literature towards giving due attention to agriculture and manufacturing sectors. The prime reason is that most developing countries primarily remain agro base. This means that a significant portion of the populations are employed in agriculture sector. So agriculture transformation is being thought upon.

However the solutions have to be developing country specific. We know that international agreements like TRIPS promote protection of agriculture sector of developed countries. Furthermore biotechnology creates dependency of agro based products from the West. For example seeds for many crucial crops like wheat are genetically engineered to create barriers to reproduction process. This has been the reason BRICs

made a case for developing countries and WTO talks have continuously failed between developed and developing countries.

Nevertheless, developing countries have to embrace bio technology in their agri production to bring efficiency to production and the very sector. But the process should not be biased against small farmers as it has happened in India.

The second important sector that is manufacturing has also been ignored in most developing countries. History tells us that Asian tigers like South Korea protected their manufacturing sector in 1980s and thus today are hub to manufacturing exports with a visible contribution to growth and per capita incomes. Agri technology is directly linked with the manufacturing sector. If a country has a manufacturing base, it can produce high end technology inputs that may be used in efficient cropping.

So developing countries need also to have a robust industrial base. Technology development is worth its deal only when these developing countries can apply it in manufacturing sector. Be it for consumer goods.

One can note the importance of manufacturing sector from the fact that recent literature from academicians and practitioners are criticizing the de industrialization process in West. The reason of the critique is simple. Ignoring industrial sector by outsourcing it to countries like China and India, US for example has created disharmony in occupational balance within its population. This has systematically created discontent with even democratic precedence that is the bastion of modern social network being painfully developed and practiced by US. For example, movements of white supremacy clearly on racial grounds has gained alarming strength in the country that is called a country of immigrants. Even Neo Nazism has taken strong roots though in the guise of the very white supremacy movement. Recent victor of Donald Trump is the prove of this disharmony. So de industrialization of absence of active industrialization challenge democratic precedence in countries.

So the slogan in developing countries should be that agriculture for poverty alleviation, industrialization for jobs anddemocracy; and services for facilitation.

What went wrong with economics policy making

It has been more than some 50 good years that IMF and World Bank have taken upon themselves to bring development to the developing world. Their more convincing policy recommendation started from structural adjustment plans (SAP) that were implemented in most developing countries. It recommended that developing countries should structurally over haul their economies primarily focusing on the liberalization of their financial sectors. Most developing countries opened up their capital markets to global integration. It exposed them to greater risks if not anything else. The rational of the risk accumulation is simple. World financial markets commonly find themselves in financial bubbles. When they bust they sweep the credit gains globally. Any global investor would want to diversify their portfolio risk and looking for investments in

financial markets that are less integrated. So as a start if any developing country liberalise their financial market the risk diversification motive encourage international investors to invest in that market. But when the integration is complete, it is open to the risk of the receding business cycles. So any shock in global finance would be shared by that market too. This is the story of East Asia financial crises of 1998. The credit that came easy after integration with global financial system, went away even quicker and billions of dollars were lost in a matter of days. Access to international finance eventually realizes itself into investment in industry but short term portfolio investments create an artificial inflow of financial prosperity in a country. Mackinnon and Shaws idea of liberalization and its gains failed miserably.

Trade liberalization was also promoted by IFIs in developing countries in addition to financial liberalization. Again following their influence in developing countries through billion dollars worth of loans and intellectual capital, IFIs negotiated with developing countries to leave protection and apply libralisation of their goods market. Countries like Pakistan, Vietnam, Argentina, Brazil and regions like Sub Saharan Africa liberalized and turned in to consumer economies. Trade deficits increased with alarming rates. These countries simply could not export to the same proportion they could export. Countries like South Korea, India and China protected their manufacturing industries and thus did not become active part of the world trading system in 1980s but could develop a robust manufacturing base to eventually export more to outside world. The Stolper and Samuelson's basic trade theory collapsed that predicted that developing countries would prosper in agriculture by opening up to world trade.

Most of the developing countries that implemented structural adjustment plans of 1990s witnessed a sharp increase in poverty levels as growth rates did not materialize. So IFIs came up with poverty reduction strategies. It was comprehensive policy tool for the developing countries that was combined with Millenium Development Goals (MDGs). Social sector was the perceived policy focus of the PRSPs and IFI vision. However fundamentals of policy prescriptions remained same. For higher growth developing countries need to liberalise trade and finance. Social safety nets for the poor should be built that can complement the liberalization process. Clearly the early 2000s had the winners in countries that earlier protected their real sectors. They were able to export. Countries like Pakistan remained in the quagmire of recession. Global financial crises didn't help either. Since risks were shared for integration, the crises that started in US hit every developing country that had liberalized its economy except for China.

Growth rates collapsed. So a more focus was given to the idea of regional integration through regional trading agreements but conflicts amongst each other prevented many developing countries to apply the agreements in letter and spirit.

IFIs tried for another time after learning from their earlier mistakes and made an effort to make growth inclusive by making an all out focus

on the society. Failure of MDGs didn't deter them and they initiated Sustainable Development Goals. This is the story of this decade. Government ministries in the developing South are seriously heading their advice; and frameworks of development are mapped so that the end beneficiary is the poor man.

In other words society and economics is seen in one prism that is fresh change in capitalist economics intellectual approach (Chicago School of Thought). In other words a focus on markets had not delivered results. However the critcs of capitalism and capitalist institutions like IMF and World Bank claim that it has been all along a conspiracy. Social development and Poverty Alleviation are just slogans. What these IFIs giveare loans and create dependency among developing countries to influence their social and economic governance. It's a conspiracy theory of the center exploiting the developing peripheries of the world. Capitalism is a wrong choice of application of economic system for these developing countries.

Irrespective of the critics, one should not discredit the stream of intellect that form the capitalist economics. There is a valid possibility that there is a gap between the intellect that created the motivation of IFIs policy recommendations and actual understanding on the ground. For example, the country heads of these IFIs in developing countries are primarily concerned with loan disbursement in a similar fashion that bank manager would work. The amount of loan that is given to the country is the barometer of success of the country head of these IFIs.

Then comes the management and monitoring of the projects under which the loan has been disbursed. The linear monitoring and evaluation frameworks are un capable of successfully executing the projects that face complexity of actors and destination characteristics involved. In other words the loans were disbursed in all sincerity by highly qualified teams of country missions of these IFIs but not managed well due to complexity issues in loan management and specific project evaluations in which the loan is utilized.

For example, issues like corruption, asymmetric information of actors involved and poor project delivery are the externalities these IFIs fail to take into account in their evaluations. Most loans show success on paper but on ground not much change has been observed telling a story of indigenous dynamics of every developing country that has utilized these loans. So PRSPs and SDGs appear more of a rhetoric for the critics where some go as far as calling it a conspiracy of the Center on developing peripheries of the world.

Need for welfare through social entrepreneurship

The linear definition of poverty is that of poverty line. It is an income centric determinant of welfare. GDP growth that is assumed to trickle down to fairly lead an increase in incomes of the poor was the policy choice of every developing country since much recently. However it was observed that the trickle down effect was not happening in most developing countries. Many countries witnessed high or decent growth

rates but they were biased towards the richest segments of the society. In other words, income increase was witnessed by upper income deciles than its over-encompassing effect. Income inequality was on the rise.

Thus the top agenda of the donors during 2001-2010 was also to work for inequality mitigation within the developing South. However the focus on inequality mitigation couldn't surpass its rhetoric. The governments within developing countries were still asked to achieve high growth rates. Due to 2008 global recession, growth rates plummeted world over. Safety nets for the poor were the second best option. However the money for the safety nets were gathered from external donors . The loan based safety nets were not sustainable in the long run.

Then came Thomas Picketty's popular book namely 'Capitalism in 21st Century' that received significant popularity internationally. He presented the idea with help of historic data that rate of return of capital is much higher than the growth rate of the American economy. What it meant was that capitalism favors the capitalists and not the labor. It was quite an apt idea. World has witnessed a rise in number of billionaires recently, whereas the world's poor have increased in number in relative terms.

The deindustrialization in capitalist societies have seen a rise in relative wage inequality amongst the educated and uneducated/less educated. It had clear implications for democratic precedence in the West as well as the East. Racism and class struggle has especially increased in the West. That lead to a dominant role of conservative political forces in the West. Inequalities also lead to election surprises where on one hand extremist Hindu forces won elections in the largest democracy India while white supremacy voted Trump to power in the oldest democracy USA.

World is struggling to curtail the inequalities that had political and economic consequences the world over. To curtail this, the new buzz word was introduced. The focus on growth was not abandoned by the capitalists but there was an addendum and that is the very growth and its processes should be 'inclusive'.

Generally inequality is not considered to be of a significant matter in capitalist economics literature. The capitalist accrues maximum gain because of his idea, management of the business idea and for the risk taking in the market. The employees are distributed the gains according to their intellectual contribution in capital creation. So less educated or uneducated form the bottom of the income gain pyramid and that is equality in capitalism. The question of equity is not well addressed.

Whereas, inclusive growth is the old wine in the new bottle. What changed is the introduction of wider definitions of poverty that are more qualitative in nature and are popularly known as multidimensional poverty measures. From gender to health to education form the lack of capabilities of the population or otherwise. Inclusive growth means that the legal, political and social status of the population increase with growth and it is not only about the incomes. How to achieve this new rhetoric is not yet clear.

Harvard's Social Progress Index puts some light on the matter but it is also a very new measurement of development focusing its progress in developed countries than developing countries. The developing countries need not follow the highly unequal path of development as it happened in capitalist countries like the USA.

For that focus on income growth and income inequality is nevertheless an important factor. Incomes present the due capacity of a country to achieve financially its social, political or legal goals' setting. One way to curtail income inequalities is to focus on all the three sectors of the economy i.e. Agriculture, Industry and Services.

From technology introduction in agriculture to cluster development for industries are the steps in the right direction. This way the poor farmer is to be included in the mainstream as well as giving jobs to the millions of unskilled labor that dwell in developing peripheries of an underdeveloped country in a more general sense.

Further Building the Context for Measures: Harvard's Social Progress Index

Income remains one of the most important factors to consider for any country's development. The per capita incomes of developed countries are far greater than that of developing countries. High incomes in developed countries than correlate to factors like technology, innovation, democracy, gender equality, and freedom of expression. So one simple way to determine progress in developing countries is to say how much convergence has been achieved to the extent of the incomes in developed countries. Convergence of incomes between developed and developing countries can happen if in many cases these developing countries grow in economic activity annually at decent rates for extended periods of time. That may in most cases mean growth rates of above 6 percent. We have example of China and India. They have progressed in income growth spanning decades and convergence has occurred. The direct beneficiaries of this convergence have been the poor in these countries.

Growth rate of GDP has been a key policy tool to evaluate a county's progress and a target for national and international stakeholders to judge economic development within a developing country since 1980s. However there are only few success stories of growth achievers within developing countries and majority of Africa and larger Asia could not achieve economic growth. Yes, most developing countries were able to grow in spurts but growth rates plummeted in long term where as convergence of incomes to the likes of developed countries require persistence in economic performance.

What did these poor performers miss? Surprisingly the cause is the very focus on economic growth itself. The fundamental issue in growth targeting is to achieve it in long run but countries have to start it from somewhere. Growth achieved in any such starting point is then expected to sustain itself for number of years spanning decades. The focus of the national governments were to set targets for expansion of economic activity in initial years resulted in promotion of such sectors that

contributed most in value addition. Services sectors that employ the already highly educated were promoted and urbanization was encouraged. In the trail for short term growth, significant segments of the poor households were missed who could not be employed in these thriving services sectors or who dwell in rural areas. Further more urgency in improvement of income levels caused many developing countries to ignore social and political development. Simply put the growth was not inclusive.

The short term economic growth though achieved had been temporary. Focus on incomes has misguided policy makers for long. In order to sustain in the long run what has been attained in the short run; governments need to complement economic policies with such steps that directly cause social and political development of the society. Furthermore agriculture and industrial sector should also contribute to significant income generation and technology will play a key role in it.

Social Progress Index (SPI) (see Porter *et al.,* 2014) that is exogenous to GDP has been developed in association with Harvard Business School that disaggregates performance in terms of social and technical progress of a country. Such performance indexes should supplement growth frameworks to gauge economic performance. SPI closely relates with income levels across countries so convergence of incomes ensure that socially viable policies with improvements in education and health sector takes place.

Pedagogy and research for social entrepreneurship

Case Study of HBS Course on Competitiveness

It was February 2016. The author was part of the organizing team of NBEAC that is the accreditation body of business schools in Pakistan hosted by HEC. So he attended its annual event that calls upon academicians and practitioners from all over the world to brainstorm on improving the quality of business education in Pakistan. One of the well known academician and practitioners invited to the inaugural session was none other thatDrIshratHussain who is the Director of one of the most prestigious business school namely IBA. He gave an excellent speech. The most striking point for me was that he mentioned that Business Schools in Pakistan should enable their graduates to understand the application of business not only as a corporate entity but also what it has to offer to the society. He was quite right especially in the context of Pakistan where at least 30 percent of the population is below poverty line. Successive governments have tried to create safety nets for the poor but with little success. Any Economist would tell you that its private sector activity that matters in improving the livelihood of the local population and government initiatives, though worth while, are eventually not sustainable. Sasta Roti (Cheap Loaf) scheme by Chief Minister Shebaz Sharif of Punjab Province in Pakistan is good example to this effect. Government runs on taxes and thus can only facilitate redistribution of wealth by channeling economic resources of a country but does not directly generate economic activity.

In addition to some other responsibilities at UMT, the author had been also asked to teach Harvard Business School course namely Micro Economics of Competitiveness since 2013. he was also sent to HBS by UMT for a short training to Boston. He had a great time there understanding the pedagogy practices adopted by HBS and the technical aspects of the course. The course was based on case study methodology. There were nearly 40 case studies written by Michael Porter himself. Some were as old as written in 1980s. The cases were concerned with different successful businesses and countries from all the geographic locations of the globe. In addition to this Michael Porter introduced to the attendees his latest contribution to the competitiveness literature that was about the concept of Corporate Shared Values. It was different from Corporate Social Responsibility that itself has been a relatively new concept of business ethics introduced in early 2000s.

The analogy between CSR and CSV is simple. CSR is the cost to the business and thus has not been successful. In later lines I will explain why especially in the context of Pakistan. CSV is about the very business process that contributes to the welfare of the society while not deviating from profit maximization.

When in 2014, the author first taught the course where he included case studies as per HBS standard course outline and included two projects. First project asked the students to analyse CSR activity of the business they select and the second one focused on CSV activity. The course went very well where students learnt about businesses and surrounding economic and social environments of regions like Latin America, Africa and East Asia. In addition to this they also got to know that CSR activities are generally insignificant part of business revenues or profits in Pakistan. They learnt that CSR is a direct cost to business and any corporate entity would not like rising cost and thus also understanding in detail the limitation of CSR. Since CSV is a new concept, they learnt that it is more of rhetoric than its actual application at different multinationals operating in Pakistan.

Since HBS course was offered to MS and PhD students at UMT, students also considered case studies to be very simplistic. The research side was not effectively covered with these case studies. I should mention here that UMT post graduate students are taught advance level research articles and thus an improvisation from my side to the HBS course was naturally required.

Since 2015, the author made some changes in the course contents. Now his course was focused on Corporate Shared Values. Naturally, after spending initial lectures on explaining students the concept of competitiveness and its application to society, the course was now focused in preparation of two business plans. In the first half of the course, students used to prepare a business plan for an existing firm. The purpose was that students understand in detail how there selected business works. The business plan includes competitors analysis, substitute environment, price strategy as well as the national economic and social environment in which the business compete.

The second half of the course was spent on preparing a business plan for a hypothetical firm. This was the most important part of not only the HBS course but student learning. The restriction for the hypothetical business selection was that it has to adhere to shared values. The first requirement was that students understand well the concept of CSV. Then they create a business plan for a firm that adheres to CSV. (see Porter *et al.,* 2002; 2006 and 2011).

Such business plans were the real challenge for the students. It is easy to conceptualise an idea of a business or a business process that adheres to CSV. For example, providing clean drinking water with the likes of Nestle mineral water bottling to the shanty towns of Lahore metropolis is a great idea. Transforming such a concept into a business plan is not an easy task. Business plan is basically a detailed feasibility report. Clean drinking water as a business idea means that there has to be a right pricing strategy that makes the business profitable but also affordable to poor people. Then hypothetical or real competitors analysis has to be taken into account in addition to other fundamentals of the business plan.

Since it is the intellectual property of UMT, I wont be discussing the actual business plans students worked on in my course. Usually for such business ideas, multinationals allocate millions of dollars in Research and Development. We can have TATA's Nano car in mind. It took some good amount of money and time to apply the idea of cheap and affordable car to practice in India. It is interesting to visualize that UMT MS and PhD graduates are exposed to this high end learning of business phenomenon in one of the courses in their degree program. They are taught the knowledge of the future that is coming to business education in Pakistan. They are well versed in establishing the link between business and society.

Such courses enable UMT graduates one step ahead to other business schools in Pakistan.

Case study of CPEC and need for researchto guide policy

The author worked at Ministry of Commerce, Government of Pakistan from 2009-2011 as Director Research in its premier research think tank namely Pakistan Institute of Trade and Development (PITAD). The think tank was then recently conceived to formulate and give guide lines to Pakistan's billions dollars worth of trade policy. He worked on numerous projects there providing recommendations to how Pakistani government facilitate trade in both goods and services with its partner countries.

There he had a chance to work on Free Trading Agreements (FTAs) that Pakistan has signed or in process of signing with countries that are of strategic importance to the country. The one important FTA was with China. My team did an intensive research on product level and evaluated costs and benefits analysis on the FTA. It became apparent that due to the FTA, Pakistani small manufacturing industry had become highly uncompetitive. It is much cheaper to import from China than to produce domestically. Hundreds of thousands of jobs were lost due to the FTA.

Despite the apparent risk of losing out markets to China, Pakistani government did nothing to make Pakistan's small manufacturing industry more competitive. A silent force was behind implementing the FTA in letter and spirit. The only rational we were told for the FTA was that China is Pakistan's time tested friend. In other words the FTA was a concession to China for its friendship and it didn't seem to matter how much loss the local trader in Pakistan had to bear.

There are provisions within any FTA to protect segments of certain industry or certain products, but Pakistan never exercised such kind of protection through a negative list. At the ministry we were paving the way for a bigger prize from China and that was China Pakistan Economic Corridor (CPEC). The assumption all along was to increase economic stakes of China within Pakistani economy. Another assumption of CPEC was that local industries would be promoted by Chinese investments that would primarily build the infrastructure for connectivity within different provinces that will facilitate local commerce.

However the flipside of the matter is being discussed today that brings doubts to CPEC. The possibility has been presented that China would be building up businesses that is to be owned by Chinese in the industrial zones that are to be formulated under CPEC. This argument puts at risk any indigenous manufacturing base of Pakistan. This makes CPEC a clear threat to large and small businesses in Pakistan. This also makes me question what forms base of our friendship with China?

The silent negotiators are ready to sell Pakistan for their strategic depth. Is it so? The question is a valid one to be answered in a logical terms. If Pakistan protects and promotes its local industry under CPEC, it is really a game changer for Pakistani people. Millions of jobs would be created as well as Pakistani business will mark a significant presence in international markets with a steep rise in national exports such that Pakistan scores a trade surplus and GDP growth rates more than 6-7 percent.

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8.
Globalization, political orientation and wage inequality: From Donald Trump's election to Angela Merkal's re-election

Introduction

Unequal distribution of the benefits of accelerated globalisation, since 1980, has disadvantaged sub-Saharan and even, Latin American countries in terms of either negative or indifferent growth rates (Murshed, 2003). This has occurred, despite the fact that most of these nations became more open in the sense of rising shares of international trade in national income. Associated with this phenomenon of increasing openness is, rising within-nation income inequality post-1980. Increased trade, particularly of the inter-industry variety, alters the composition of output in the economy away from non-traded goods towards traded products. This will affect the functional distribution of income, usually raising the demand for the factor of production employed intensively in the traded sector. In the developed world, it is skilled labour and we have witnessed an increase in the skilled-unskilled labour relative wage premium. In many OECD countries, this has meant a more unequal personal distribution of income. As far as developing countries are concerned, especially in those that export unskilled labour intensive manufactured goods, we would expect a fall in the skilled-unskilled labour relative wage premium leading to reduced inequality, since the unskilled are more numerous within the population. Yet this is generally not true, and inequality in the developing world has risen, mirroring events in the OECD. What accounts for this paradox? Perhaps developing countries have such quantities of unskilled labour that unskilled wages will not respond to increased demand. This certainly appears likely in cross-country studies where China and India are included. Alternatively, other less populous developing countries may be exporting relatively more skilled labour intensive products such as semi-conductors or capital-intensive commodities as is the case with fuels and minerals. Finally, an expansion in international trade may raise the demand for, and reward of,

skilled labour even when the country in question is exporting unskilled labour intensive products due to skill shortages and other factor complementarities.

Many studies have tried to capture the relationship between trade liberalisation and income inequality. A paper by Dollar & Kraay (2004) concludes that liberalisation does not significantly affect the distribution of income, and at most, the relationship is of neutral nature. However, their results have been widely challenged because of their methodology and variable choice. (Ravallion, 2003; Amann *et. al.,* 2002) Ravallion (2003) points out that increased openness can lead to a rise in the demand for relatively skilled labour, which tends towards less equal distribution in poor relative to rich countries. Arbache, Dickerson & Green (2004) find that imported technology raised the relative demand for highly skilled labour in Brazil and thus lowered the relative wages of less educated groups. Behrman, Birdsall & Szekely (2001) observe that inequality has increased in seven out of 18 Latin American countries that initiated market reforms in the mid-1980s. Jayasuriya (2002) accepts that trade liberalisation may have reduced consumption poverty in South Asia, but is sceptical about the purportedly neutral distributional effects of liberalisation. Many suggest that the distribution of the positive effects of liberalisation is somewhat skewed towards urban households rather than rural ones, and to wealthy rather than poor households (see Chen & Ravallion, 2003; Cockburn, 2002; Friedman, 2000; Lofgren, 1999). The evidence in this regard comes mainly from Latin America because most of the economies there undertook rigorous reform policies in the mid-1980s following the debt crisis in that decade. Legovini, Bouillon & Lustig (2001) find that inequality in Mexico rose sharply between 1984 and 1994, and rising returns to skilled labour accounted for 20 per cent of the increase in the inequality in household income. Similarly, Hanson & Harrison (1999) find that the reduction in tariffs and the elimination of import licenses accounts for 23 per cent of the increase in the relative wages of skilled labour during 1986-90, thus providing evidence for the role liberalisation played in rising inequality in Mexico. Other country studies on Brazil, Chile, Colombia and Venezuela, also show that skilled workers received increased premiums after liberalisation when compared to their unskilled counterparts. (World Bank, 2001) Therefore, the balance of the evidence points to increased globalisation inducing greater income inequality.

Irrespective of the exact nature of the cause of trade-induced inequality, it is sensible to presume that nations with higher stocks of human capital will experience less of the un-equalising spiral consequent upon globalisation and trade liberalisation. Investment in education may yield a double dividend. It cannot only promote growth, but also suppresses inequality by both bequeathing skills as well as moderating rises in skill-premia following an expansion of international trade. More generally, Tinbergen (1975) pointed out that changes in wage inequality are a result of the opposing forces that technological change (skilled labour demand) and education (skilled labour supply/ human capital)

exert on relative wages. Eiche & Garcia-Penalosa (2001: 19) suggest that human capital accumulation plays a dual role in development. Because the stock of educated workers in an economy determines both the degree of income inequality and its rate of growth, making the parameters of the demand for and supply of labour crucial determinants of inequality increases or decreases as an economy accumulates human capital.

The aim of this study is to examine the impact of increased trade on inequality, and investigate whether a higher human capital stock moderates this unequalising aspect of international trade; specifically the skilled-unskilled wage differential. High initial endowments of human capital, captured by data on average years of schooling for example, imply a more egalitarian society compared to countries with a lower human capital endowment. When societies that are more equal, open up their economies further, increased trade is likely to induce less inequality because the supply of skills better matches demand. Yet greater international exposure also brings about technological diffusion, see Winters (2004), further raising skilled labour demand. This may raise wage inequality, in contrast to the initial egalitarian level effect of human capital. This proposed study will attempt to measure these two opposing forces. Another purpose of this analysis is to examine what type of education most reduces inequality. In settings of low human capital endowments, as measured by literacy or low primary school enrolment, a policy of relative neglect of primary in favour of expenditure on tertiary education may have a less than benign influence on inequality.

We also include institutions in our analysis. Discussion on institutions is generally absent in this debate. The proposal contends that here may also be a strong connection between good institutions and smooth labour markets. Thus such questions are also important: Are more educated societies with better legal, political and economic institutions more capable to absorb the upward pressure relative ages of the skilled against unskilled? Does the presence of good institutions form grounds for technical change with overall fewer distortions in labor market returns? If yes then good institutions would be expected to put a down ward pressure on wage inequality.

A note on theil wage inequality

The analysis employs theUTIP-UNIDO wage inequality Theil measure calculated by University of Texas Inequality Project (UTIP) based on UNIDO 2001. This data set is a set of measures of the dispersion of pay across industrial categories in the manufacturing sector, drawn from the Industrial database published annually by United Nations Industrial Development Organisation (UNIDO). The Theil index is decomposable (Conceicao & Galbraith 2001). If individuals are grouped in a mutually exclusive, completely exhaustive way, overall inequality can be separated into a between group component and a within group component. Thus, there is no interaction between these two components and so these measures are additively decomposable. Moreover of all entropy-based measures, the Theil index is one of only two measures for

which the weights in the within groups component add to one. Therefore, overall inequality is the result of adding the two independent components: inequality between groups and inequality within groups.

This chapter employs the Theil index or more specifically a measure of inequality in manufacturing pay between skilled and unskilled labour, instead of taking measures of absolute inequality, which would capture the personal income distribution (GINI). Several considerations motivate this decision. First, comparable and consistent measures of income inequality, whether on a household level or per head basis are difficult, almost implausible and generally fail to provide adequate or accurate longitudinal and cross-country coverage. By contrast, 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, measuring manufacturing pay accurately is routine in most countries around the world (Galbraith & Kum, 2002).

Second, pay is major source of household income. Changes in income inequality reflect changes in wage inequality. Fields (1980) offers evidence that pay inequalities in the manufacturing sector are the driving force behind the evolution of inequality. Furthermore as discussed above, processes of globalisation through technological change raises the concentration of skilled workers in advanced sectors against unskilled workers in the backward sector. Since manufacturing is the sector most affected by modern technological change, income inequality would certainly have an inter-industrial feature that would show up in changing pay differentials between advanced and backward manufacturing industries (Galbraith & Kum, 2002).

Third, the principal reason for using the UTIP-UNIDO wage inequality Theil measure is that the researcher is more interested in the functional distribution of income. Changes in the functional distribution between skilled and unskilled labour, will in turn affect the personal income distribution in countries that are unskilled labour abundant. Inequality will rise as the skilled-unskilled labour wage premium increases and vice versa.

The UTIP- UNIDO wage inequality measure is the between-group component of Theil's T statistic, an entropy measure whose functional form is defined as:

$$T = \sum (\frac{Y_i}{Y}) T_i + \sum \frac{Y_i}{Y} \log(\frac{Y_i / Y}{N_i / N}) = T^W + T^B$$

Where T^w and T^B indicate within-group and between-group inequality measures respectively. N and Y stand for total employment and total pay respectively, and subscript $_i$ denotes group identity. As mentioned, UTIP

captures T^B as their inequality measure, where groups are defined as categories within the UNIDO industrial classification codes.

Theil is not a measure with a closed scale between 0 and 1 (or 0% and 100%), like in case of the GINI index. For resource distributions described by only two quantiles, the Theil index is 0 for 50:50 distributions, 0.5 for 74: 26 distributions, 1 for 82:18 distributions, 2 for 92:8 distributions and 4 at 98:2 distributions. Theil at 1 is close to an 80:20 distribution, which is very close to a distribution often referred to as "Pareto Principle".[4] The UNIDO-UTIP Theil Index provides inequality between groups only (One being skilled and other being unskilled). Though the data is not available for within group inequality, we cannot discount it because there may also be rise in inequality within skilled labor. For example if skills are captured by education level, rising within group inequality would mean that returns to higher levels of education and returns to lower levels of education do not change at the same proportion.

Here, we want to capture the effect of education (skilled) versus no education (unskilled) on relative wages. We would also analyze effect of higher skills within the framework to check if wage inequality between skilled and unskilled labor are rising also because of returns to higher education are rising at higher proportion when compared with overall levels of education. In other words, is wage inequality also pushed by favoring higher skills in developing countries, or presence of skills (having education) a factor decisive enough to explain rise in wage gaps between skilled labor and unskilled labor? There is already some evidence that secondary education is more important in alleviating wage inequality than higher levels of education suggesting close correlation between higher levels of education and wage dispersion (Acemoglu, 2001). Investing in higher education alone is less effective in alleviating wage inequality. Since Theil captures wage inequality and not wage equality, we can easily test the positive effect of higher education in wage inequality. We are not saying that decreasing higher levels of education would then decrease wage inequality as is generally true with interpretations upon getting a positive sign (say between Theil Index and higher levels of education). If there is a positive correlation, then the only way to minimize the education bias of inequality is to raise the overall education levels of the population, which in turn would distribute skills homogenously within the population.

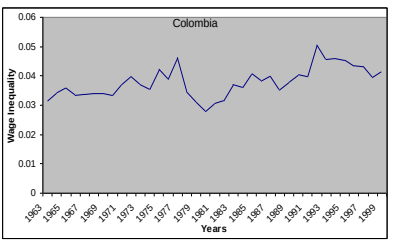
The between group inequality, T^B, ranges from 0 to less than 1 (0.36 for the current UNIDO data set). On the hind sight, this suggests that adding within group inequality T^w would further add up to increase the

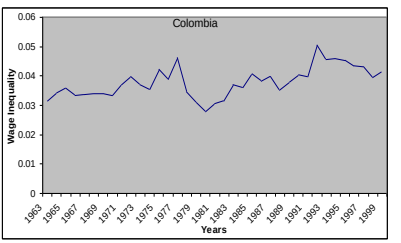
[4] This is a special case of the wider phenomenon of Pareto distributions. If the parameters in the Pareto distribution are suitably chosen, then one would have not only 80% of effects coming from 20% of causes, but also 80% of that top 80% of effects coming from 20% of that top 20% of causes, and so on (80% of 80% is 64%; 20% of 20% is 4%, so this implies a "64-4 law") [Retrieved from].

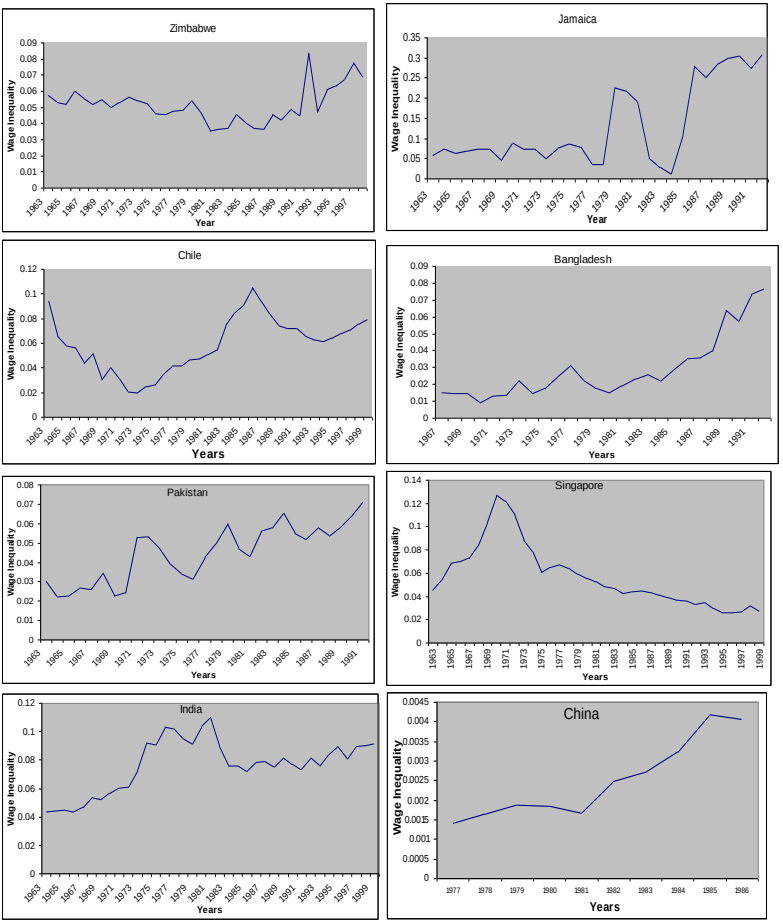
value of T closer to 1 meaning that over all wage inequality between skilled and unskilled is steeper than what is captured by T^B only. As suggested; by checking the relationship between higher levels of education and 'between group wage inequality' T^B, we would be able to see whether between group inequality is also present. It is possible if higher levels of education are more sensitive to wage inequality than average levels of education which include primary, secondary and higher.

The UTIP data set provides Theil inequality measures for nearly 3,200 country/year observations, covering more than 150 countries during the period 1963 to 1999. Figure 1 illustrates trends in wage inequality between skilled and unskilled workers, over time in selected developing countries and is representative of different regions. All the country graphs, except one, show that wage inequality has been on the rise in the 1980s and 1990s. The only exception is Singapore, which belongs to a group associated with the 'East Asian Miracle' of the 1980s. However, this miracle remained confined to a few countries and as it is evident from the graphs, Singapore is not representative of the developing world. Since the 1980s and 1990s are associated with *Structural Adjustment Policies* under which many developing countries embraced trade liberalization, it is safe to suggest that the above trends in wage inequality also relate to these market reforms. The end of the chapter lists all developing countries, and the latest year for which the Theil wage inequality index is available.

Singapore is one such country which invested heavily on social development and raised the average education levels of its population. Is this the reasons why wage inequality is falling in Singapore post liberalization? In social development, Singapore indeed represents the good side of the story. The other side of the story is more applicable to developing countries where larger segments of the population are un-educated. Over all trend in developing countries post liberalization should be a rise in wage dispersion when skill bias technical change raise skill premia by favoring the educated over uneducated.







Graph 1. *Trends in Wage Inequality in Developing Countries*

Primary analysis

The initial analysis devised a basic model for wage inequality between skilled and unskilled workers which was dependent on integration as well as initial skills and have 2 equations (see Mamoon & Murshed, 2008)

$$\text{Wage } Inequality = f[Integration, Skills_0] \quad (2)$$

(+)(-)

Here integration represents trade liberalization and Skills represent pre liberalization education levels. In confirmation to their model specifications, Mamoon & Murshed (2008) find that

(1) Trade liberalization is associated with higher wage inequality and
(2) Developing countries with a higher level of initial human capital do well against rising wage inequality.

This initial research provides empirical evidence that establishes the negative role of trade liberalization in welfare generation. One of the primary cause of rise in wage inequality in developing countries is also highlighted which is inadequate supply of human capital before the liberalization process was initiated.

However the study had many limitations. First it is undertaken on a cross section data which allocates single observation to each country. Secondly the Wage inequality equation is very simple in nature depending on only two explanatory variables. Third, it does not examine how education is related with wage inequality post liberalization. The proposed study intends to extend on the methodology and empirical model.

Data and methodology

The first step in this study is to extend the dataset from cross section to panel. Our empirical model based on panel data would have the following form

$$WageInequality = f[Integration, PoliticalOrientation, Skills_1] \quad (3)$$
$$\qquad\qquad +\qquad\qquad -\qquad\qquad -$$

Here *Integration* represents trade liberalization, which has a positive impact on wage inequality. *Institutions* represent political orientation and have a negative/ positive impact on wage inequality. $Skills_1$ captures education levels achieved.

Table 1. *Data and Sources*

Variable	Description/ Source	Period
Wage Inequality	Theil Index/ University of Texas Inequality Project	1963-1999
Integration	Openness/World Development Indicators	1960-2009
	Trade Policy/ World Trade Map	1980-2008
Institutions	Democracy, Autocracy/Polity IV project	1960-2009
	Corruption/Transparency International	1975-2009
	Economic and Political Risk/ International Country Risk Guide	1984-2009
Skills	Average years of schooling/ Baro and Lee Data set	1960-1999
	Average years of primary schooling/Baro and Lee Data set	1960-1999
	Average years of secondary schooling/Baro and Lee Data set	1960-1999
	Average years of higher schooling/Baro and Lee Data set	1960-1999
	Average years of schooling for males/Baro and Lee Data set	1960-1999
	Average years of schooling for females/Baro and Lee Data set	1960-1999

Results

Table 2 presents results for democracy. It can be observed that countries that are politically stable and that have empowered the local polity through transparent and inclusive electoral process witness less wage inequality upon trade liberalization. This has generally been the case in most developed countries of the North especially the EU.

Improved educational attainments all across the sample of developed and developing countries also contain inequality in wages. The role of politics-as opposed to strict market forces – in the 20th century reduction and subsequent widening of inequality is also confirmed by a World Bank Report (1993) on eight countries (Japan, Republic of Korea, Taiwan, Singapore, Honk Kong, Thailand, Malaysia, Indonesia) which used to be known as the tiger economies. It describes how, with well publicized programs of shared growth they all deliberately reduced their income differentials during the period 1960-1980. Policies variously included land reform, subsidies to lower fertilizer prices to boost rural incomes, wealth sharing programs, and large scale public housing programs, and assistance to worker cooperatives. The report says that in each case governments reduced inequalities primarily because they faced challenges to their legitimacy, often from communist rivals, and needed to win wider public support. Thus it is in their self interest to strengthen the precedence of democratic values at local governance structures that took development initiatives at grass roots level. For example South Korea faced North Korea, Taiwan and Hong Kong faced the claims of China, and the communist guerilla forces operated widely. So here, as in the rich developed countries, it is a mistake to think that main changes in inequality have resulted simply from impersonal market forces rather than from political and ideological processes.

Table 3 suggests that less than benign democratic setup including outright dictatorships have beendetrimental to skilled and unskilled wage equality. Partly the results depict the situation in high growth economies in the developing peripheries that have actively embraced and promoted free market economic policies by opening up industry and services to international competition and thus creating an enabling environment for economic growth but could not keep pace in political empowerment of the population. Furthermore most developing countries have promoted tertiary education in contrast to school education and thereby provided an indirect subsidy to the rich and skilled that benefit from international competition (Mamoon & Murshed, 2013).

Conclusions

Political orientation of a country matters in determining the inequality trends in both developed and developing countries. International trade is observed to have caused wage inequality and that in return has affected the political process within countries resulting in change in the policies that have created inequality in the first place. For example, Donald Trump victory amid his anti globalizationcampaignin 2016 indicates that the anti-globalization sentiment was shared by majority in US that is eventually resulting in the possible reverse of US initiatives that promoted international competition in theory and practice. Same is true for British vote in favor of BRIXIT in 2016. In contrast to these examples, the re-election of Angela Merkal in Germany and Abe in Japan in 2017 suggests that people eventually seek economic equality within the national borders and fair globalization. Chinese president Xi has clamped down corruption

in the country that was seen as a serious measure towards making the elite accountable and thus he was also re-elected. So there is a clear friction between national politics and un equal outcomes of globalization. In order to achieve higher growth rates, embracing globalization is important but it should be coupled with greater political and social empowerment of the population.

Table 2. *Second Stage Regression Results for Democracy*

Dependent Variable: Theil Index												
Independent Variables	1	2	3	4	5	6	7	8	9	10	11	12
Openness	0.18***	0.98***	0.31***	0.11***	0.66***	0.40***						
Trade Policy							-1.59***	-1.11***	-1.52***	-1.88***	-1.27***	-1.09***
Democracy	-1.04***	-1.02***	-1.24***	-1.99***	-2.56***	-0.88***	-1.19***	-1.67***	-1.03***	-1.44***	-1.16***	-1.52***
Average Years of Schooling	-0.26***						-0.70***					
Average Years of Primary Schooling		-0.02***						-0.87***				
Average Years of Secondary Schooling			-0.45***						-0.78***			
Average Years of Higher Schooling				0.71						-0.65***		
Average Years of Schooling for Males					0.31						-0.99***	
Average Years of Schooling for Females						-0.67**						-0.02**
N	444	444	444	444	444	444	444	444	444	444	444	444
F	42.89***	42.02***	61.97***	56.43***	72.90***	82.63***	71.57***	67.99***	62.89***	68.71***	52.09***	42.16***
R	0.67	0.71	0.82	0.78	0.66	0.59	0.73	0.55	0.46	0.52	0.61	0.74

Notes: *, **, *** denotes significance at 1%, 5 % and 10% levels respectively. Standard errors are corrected for as we run Durbin–Wu–Hausman test (augmented regression test) for endogeneity (see Davidson and MacKinnon. 1993).

Table 3. *Second Stage Regression Results for Autocracy*

	Dependent Variable: Theil Index											
Independent Variables	13	14	15	16	17	18	19	20	21	22	23	24
Openness	0.11***	0.27***	0.31***	0.19***	016***	0.34***						
Trade Policy							-12.38***	-12.41***	-11.92***	-9.56***	-18.67***	-11.09***
Autocracy	0.54***	0.02***	0.24***	-0.95***	0.32***	0.48***	0.19***	0.36***	0.35***	0.14***	0.22***	0.17***
Average Years of Schooling	-1.11**						-1.94***					
Average Years of Primary Schooling		-1.67***						-2.23***				
Average Years of Secondary Schooling			-1.35***						-1.80***			
Average Years of Higher Schooling				-1.12***						-1.43***		
Average Years of Schooling for Males					-1.06***						-1.79***	
Average Years of Schooling for Females						-1.67**						-1.02**
N	444	444	444	444	444	444	444	444	444	444	444	444
F	55.09***	60.85***	66.97***	71.43***	65.30***	88.43***	73.67***	71.92***	55.81***	78.71***	62.49***	52.47***
R	0.86	0.81	0.83	0.78	0.76	0.69	0.78	0.85	0.66	0.72	0.81	0.65

Notes: *, **, *** denotes significance at 1%, 5 % and 10% levels respectively. Standard errors are corrected for as we run Durbin–Wu–Hausman test (augmented regression test) for endogeneity (see Davidson and MacKinnon. 1993).

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9.
Skilled-unskilled wage asymmetries as an outcome of skewed international trade patterns in the South

"Openness and trade liberalization are now seen almost universally as key components of the national policy cocktail required for economic growth and aggregate economic well being. They are believed to have been central to the remarkable growth of industrial countries since the mid- 20th century and to the examples of successful economic development since around 1970. The continued existence of widespread and abject poverty, on the other hand, represents perhaps the greatest failure of the contemporary global economy and the greatest challenge it faces as we enter the 21st century". Alan Winters (2000).

"Comprehensive trade reform can be helpful in reducing poverty provided it is accompanied by appropriate enabling policies." Global Poverty report (World Bank, 2001a).

Introduction

Many studies have tried to capture the relationship between trade liberalization and income inequality. A recent paper by the two well known World Bank economists, Dollar & Kraay (2004), concludes that liberalization does not carry any significant effects on income distribution and at best the relationship is of neutral nature. However their results have been challenged by many on the basis of their methodology and variable choice (i.e., see Ravallion, 2003; Amann *et. al.,* 2002; Srinivasam & Bhagwati, 2002). Murshed (2003) pointed out that Dollar and Kraay only considered successful globalizers, mainly from Asia, in their analysis and excluded the unsuccessful globalizers from their sample in order to capture trade and poverty relationships. Furthermore there is ample empirical evidence in the literature which rejects the notion that trade is insignificantly related with inequality. For example, Behrman *et. al.,* (2001) noticed that in 7 out of 18 Latin American countries that initiated market reforms in the mid 1980s, inequality has actually increased in recent times. The rest of the economies in their sample showed that inequality was approximately same in 1990s to the levels of 1980s. Jayasuriya (2002), though accepted that liberalization has reduced consumption poverty in South Asia, showed skepticism concerning

neutral distributional effects of liberalization. A more clear line is adopted by single country case studies. Many suggest that the distribution of the positive effects of liberalization is some what skewed towards urban households rather than rural and wealthy households rather than poor.[5] It is further noticed in many studies[6] that liberalization process in many developing countries seems to be biased against low-skilled labor. The empirical verification in this regard comes mainly from Latin American region primarily because most of the economies in the region undertook rigorous reform policies in the mid 1980s as part of their structural adjustment plans and also witnessed grappling inequality in Post reform periods. Ligovini *et. al.,* (2001) found out that inequality in Mexico rose sharply between 1984 and 1994 and rising returns to skill labor accounted for 20 percent of the increase in the inequality in household per capita income. Similarly, Hanson & Harrison (1999) found that the reduction in tariffs and the elimination in import licenses account for 23 percent increase in the relative wages of skilled labor over the period of 1986-1990 thus providing evidence for the role liberalization played in rising inequality in Mexico. Other country studies on Brazil, Chile, Colombia and Venezuela, also show that skilled workers received increased premiums after liberalization when compared to their unskilled counterparts (World Bank, 2001b). Such empirical evidence contradicts the basic trade theory which suggests that trade liberalization would result in an increase in demand for low-skilled in a developing country, thereby improving the relative earnings of this group compared with the more skilled. The evidence further feeds the fears of Ravallion (2003) that openness to trade can lead to the demand for relatively skilled labor, which tends to be more inequitably distributed in poor countries than rich ones. He also proposed caution regarding the results of David & Dollar (2004) paper concerning neutral inequality effects of trade reform on the base of latter's methodology and referred to his own empirical work which found that reform process do carry unequal distributional effects.

Trade liberalisation and movements in relative wages

We employ the UTIP-UNIDO wage inequality 'THEIL' measure calculated by University of Texas Inequality Project (UTIP), instead of taking measures of absolute inequality which captures the personal income distribution i.e. GINI. This is because we are more interested in the functional distribution of income. Changes in the functional distribution between skilled and unskilled labour, will in turn predictably impact on the personal income distribution in countries that are unskilled labour abundant. Inequality will rise as the skilled-unskilled labour wage premium increases and vice versa. Since, the Theil Index is based on

[5] See for example, Chen & Ravallion (2003), Cockburn (2001), Friedman (2000), Lofgren (1999).
[6] i.e., Behrman *et. al.,* (2001).

UNIDO 2001, the wages of skilled and unskilled labor represent sectoral wage rates, including manufacturing industries for which the UNIDO Industrial Statistics Database (UISDB) provides detailed time-series data for most countries in the world.

The basic formula of Theil index is as follows.

$$Theil \equiv \sum_{i=1}^{n} \underbrace{\left[\frac{x_i}{\sum_{j=1}^{n} x_j} \right]}_{\text{weight is share of aggregate income}} \cdot \underbrace{\ln\left(\frac{x_i}{\bar{x}} \right)}_{\text{income relative to mean}} \tag{1}$$

Whereas under perfect equality, i.e. everybody gets the mean income, the index takes the value equal to zero:

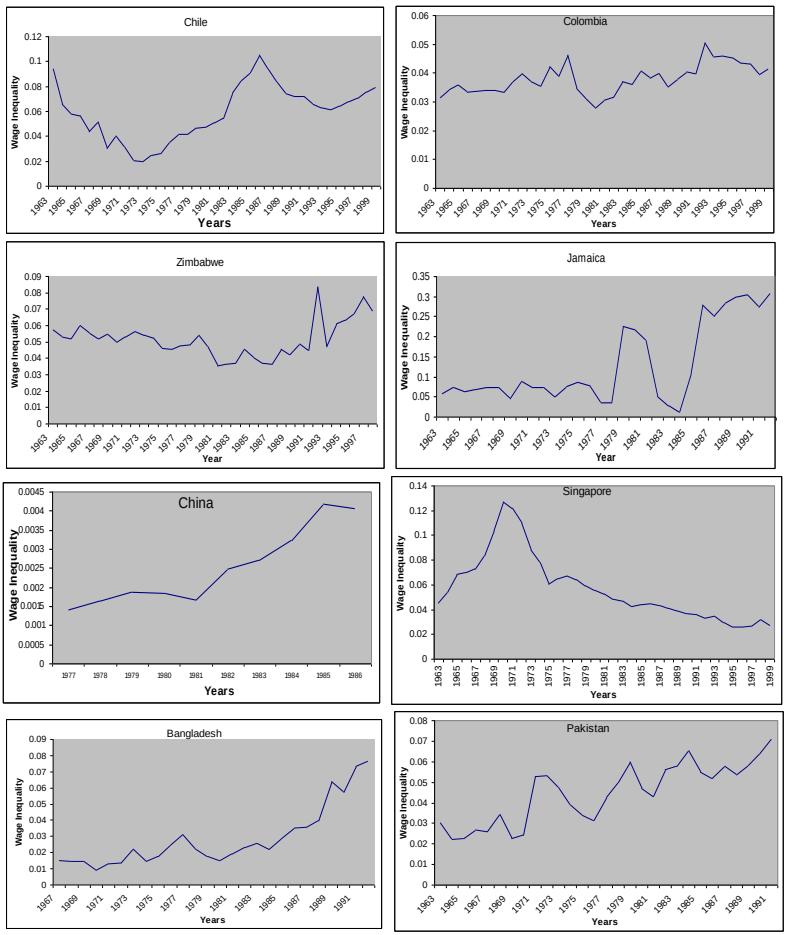
$$Theil \equiv \sum_{i=1}^{n} \left[\frac{\bar{x}}{\sum_{j=1}^{n} \bar{x}} \right] \cdot \ln\left(\frac{\bar{x}}{\bar{x}} \right) = \sum_{i=1}^{n} \left[\frac{1}{n} \right] \cdot \ln(1) = 0 \tag{2}$$

However in the case of perfect inequality, one person takes all and everyone else gets nothing. The individuals can be ordered in the sum from $i=1,...,n$ from lowest to highest income.

$$Theil \equiv \underbrace{\lim_{x_i \to 0} \left\{ \sum_{i=1}^{n-1} \left[\frac{x_i}{\sum_{j=1}^{n} \bar{x}} \right] \cdot \ln\left(\frac{x_i}{\bar{x}} \right) \right\}}_{=0} + \left[\frac{n \cdot \bar{x}}{n \cdot \bar{x}} \right] \cdot \ln\left(\frac{n \cdot \bar{x}}{\bar{x}} \right) = \ln(n) \tag{3}$$

The value of Theil index depends upon the size of the population, as in (3). For example, consider a society with two people where one person has everything and compare it to a society with four people where one person has everything, also. Which society is more unequal? There are more poor persons per rich person in the society of four people, so the Theil index will be greater in that case. The UTIP dataset provides the Theil index for nearly 160 developing and developed countries, and the time series spans 40 years, from the early 1960s to the late 1990s.

Figure 1 illustrates trends in wage inequality over time in selected developing countries and is representative of different regions. All the country graphs, except one, show that wage inequality has been on the rise in 1980s and 1990s. The only exception is Singapore which belongs to group associated with the "East Asian Miracle" of the 1980s. This miracle, however, is confined to a few countries, and is not representative of the developing world, as is evident from above graphs. Since 1980s and 1990s are associated with 'Structural Adjustment Policies' under which many developing countries embraced liberalization, it is safe to imply that the above trends in wage inequality is related to these market reforms.



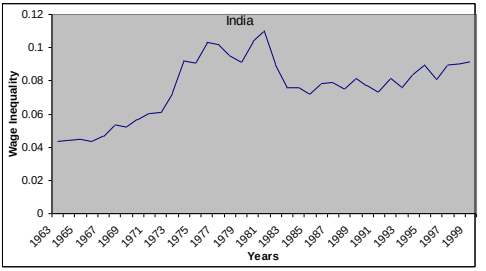


Figure 1. *Structural Adjustment Policies.*

The object of this paper is to see whether this proposition holds across some 124 developing countries and economies in transition. Appendix 3 lists these countries, and the latest year for which the Theil wage inequality index was available for them.

To this effect the paper initially proposes a simple OLS regression model:

$$THEIL_i = \alpha + \beta OPEN_i + \gamma HK_i + \chi Disteq_i + \varepsilon_i \qquad (4)$$

Where $THEIL_i$ is wage inequality in country i, $OPEN_i$ and HK_i are respectively measures for openness/trade policy and human capital and ε_i is the random error term, whereas $Disteq_i$ (distance from the equator) is a proxy for geography. Inclusion of human capital and geography variables will enhance the explanatory power of our model because on the one hand human capital plays important role in inequality in a post liberalization period since international trade favors skilled labor over unskilled and on the other hand country locations determine patterns of trade subsequently affecting inequality.

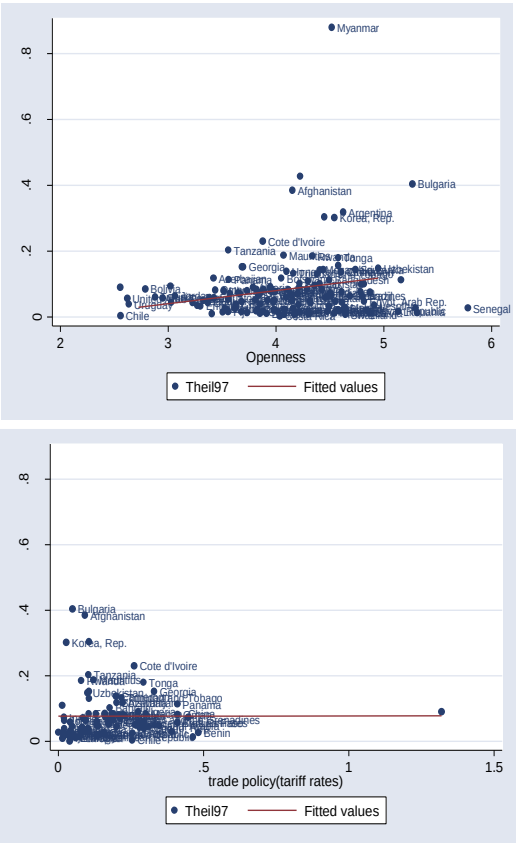


Figure 2. *Openness (Exports+Imports/GDP, 1985) , Tariffs (Import Duties as a % Imports, 1985) and Wage Inequality (Theil Index, 1997).*

Before undertaking any regression analysis, let us take a look at simple graphs (figure 2) showing bi-variate relationship between openness and inequality. The first graph in the figure shows that trade shares are positively related with increases in inequality and confirms our hypothesis that international trade is biased towards the wages of skilled labor in developing countries. However interestingly, the second graph in figure 2 fails to develop any definite association between tariffs[7] and inequality substantiates the findings of Dollar & Kraay (2004) that the relationship between integration and inequality is at best insignificant. Well the lesson which can be drawn from figure 2 is that the choice of

[7] Movement in tariffs captures country's trade policy and also shows its level of openness.

openness/trade policy variable matters apropos its relation with inequality. This calls for a robustness check.

To this effect the OLS regression analysis (Appendix 1) utilizes several concepts of openness and trade policy in addition to trade shares and tariff rates. Here a study by Rose (2004) has been of great use because his paper identifies nearly 60 different measures of openness/trade policy. 28 of these measures, which suit the data requirements, are employed in this paper (Please refer to Appendix 2 which gives detailed information about these measures). Nevertheless our core openness variable remains to be overall trade share (the ratio of nominal imports plus exports to GDP).

As far as the signs of the coefficients of 28 openness/trade policy variables are concerned, Tables 1a and 1b show that they have been overwhelmingly positive under all specifications satisfying the assertion that openness is positively associated with increased wage inequality. However the coefficients have very small values suggesting limited role they play in explaining inequality. Small R^2 values with any of the specifications of Eq (4) suggest the same. Additionally only 7 out of 28 openess/trade policy concepts have turned out to be significant which suggest that the relationship between trade and inequality is weak in nature. In the light of these results we cannot confidently claim that openness cause increased relative wage inequality by favoring skilled labor.

The OLS regression though useful is always suspected to suffer from econometric problems such as endogeneity among variables especially under cross section analysis. Though Geography is a pure exogenous variable here, the level of integration of an economy depends upon its location in the world map (Rodrik *et. al.,* 2004). Similarly, human capital depends on the fact how open a country is. Though simple Stolper-Samuelson theory would suggest that the returns to skill would decline and with them incentives for education when a skilled-scarce developing country opens up (see Wood & Ridao-Cano, 1999), in a multidimensional Stolper Simuelson model which is nearer to real life, endogenous growth with constant returns to R & D or skills-bias in tradables as oppose to non tradables could very well lead to increase in returns to education upon openness (Arbache *et. al.,* 2004). Openness can also lead to more efficient education technologies thus improving the level of human capital in a country (Winters, 2004). Here we have to extract the dependency of trade policy/openness on human capital by finding a right instrument for the former variable.

The literature clearly establishes that predicted trade shares following Frankel & Romer (FR) (1999) from the gravity equation is the most appropriate instrument for openness/ trade policy (see, Dollar & Kraay, 2002; Rodrik *et. al.,* 2004; Acemolgu, Johnson & Robinson, 2001; Hall & Jones, 1999). Furthermore, following the likes of Rodrik *et. al.,* (2004), distance from the equator has been chosen as the second instrument for openness/trade policy variables.

Our Instrumental Variable (IV) Regression (or 2 Stage Least Square) model has two equations

$$THEIL_i = \sigma + \kappa OPEN_i + \nu HK_i + \varepsilon_{1i} \quad (5)$$

$$OPEN_i = \varsigma + \tau FR_i + \psi Disteq_i + \varepsilon_{2i} \quad (6)$$

Here FR_i stands for predicted trade shares from gravity equations computed by Frankel & Romer (1999).

In the 1st stage, equation (6) has been used to generate predicted values of openness/ trade policy variables by regressing them on the two instruments. The predicted openness/trade policy variables are then employed in equation (5) as the second and final stage of IV regression analysis. Please note that the only difference between eq (5) and equation (4) is that the former does not carry $Disteq_i$ variable which is instead used as an instrument in eq (6).

Before we carry out the IV analysis, let us look at simple bivariate graphs between predicted trade shares and predicted tariff rates with Theil index to see whether this time we can get a clearer picture regarding openness inequality relationship. Figure 3 visibly shows that inequality moves positively with openness. The predicted values of openness/trade policy provide a much clear trends in openness-inequality movements. On the one hand the first graph of figure 3 shows that increase in trade shares after liberalization leads to higher inequality and on the other hand the second graph suggests that decrease in tariffs carries unequal distributional effects on wages. One of the reasons for decrease in relative wages of unskilled labor, as tariffs fall, is that the heavily protected sectors in many developing countries tend to be the sectors that employ a high proportion of unskilled workers (Goldberg & Pavcnik, 2004).

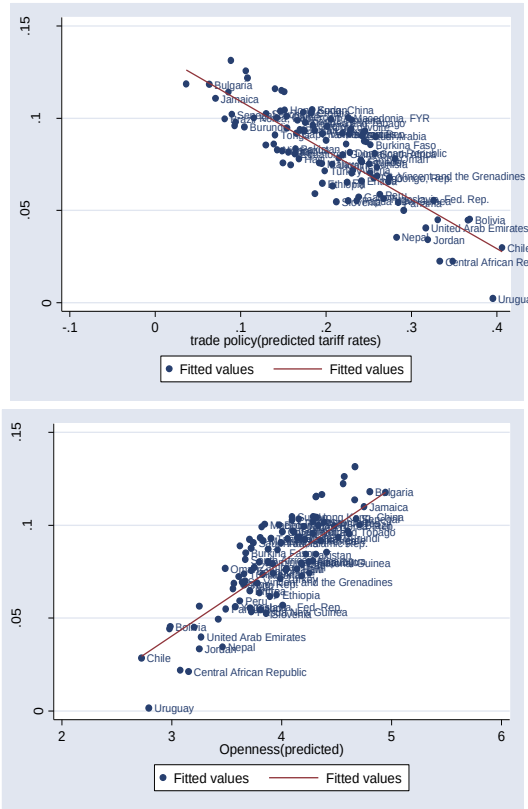


Figure 3. *Openness (Predicted values of 'Exports+Imports/GDP', 1985), Tariffs (Predicted values of 'Import Duties as a % Imports', 1985) and Wage Inequality (Theil Index, 1997).*

Table 2 (Appendix 1) gives IV regression results with 58 different specifications. The results confirm the findings of figure 3. All openness/ trade policy variables carry expected signs and nearly all of them are significantly related with wage inequality. Under the light of these results it can be safely suggested that trade liberalization significantly worsens the distribution of wages among skilled and unskilled labor in developing countries. Further more, human capital is negatively related to inequality showing that the countries which start out with relatively developed human capital do well apropos wage inequality. This is an expected result and in line with theory that the countries, where human capital is evenly distributed, are less prone to adverse wage distributions among labor (Fisher, 2001; Tuelings & Van Rens, 2002; Eiche, 2001; and Bourguignon & Morrisson, 1990; Tilak, 1989).

Human capital, trade and unequal wages

According to Tinbergen (1975) inequality is determined by the opposing effects that technology (skilled labor demand) and education (skilled labor supply) exerted on the relative wages. Following the line proposed by Tinbergen, the role of human capital vis-à-vis inequality becomes complex once we bring trade liberalization into the picture as trade effects the demand of skilled labor through technology transfer and processes of learning by doing. For example, human capital under liberalization can cause wage inequality in a developing country, where there is unequal distribution of skilled and unskilled labor, because global integration cause upward pressure on the wages of the skilled labor as demand of skilled labor exceeds its supply

Recently, Eiche *et. al.,* (2001: 19) accepted this fact and suggested that human capital plays a dual role in development because the stock of educated workers in an economy determine both the degree of income inequality and the rate of growth, and the parameters of the demand for and supply of labor are crucial determinants of whether inequality increases or decreases as an economy accumulates human capital. Arbache *et. al.,* (2004) also confirms this assertion as they found out that imported technology has raised the relative demand for highly skilled labor in Brazil and thus lowered the wages of low level education groups.

Figure 4, below shows that trade liberalization improves human capital in developing countries. This is true because as explained above, increased international trade is followed by technology transfer which in turn improves the general skill level in a developing country as learning by doing takes place and skilled labor supply tries to adjust with its excess demand. This means that part of human capital is endogenous to the processes of openness as hinted by many endogenous growth models. Here the part of skilled human capital which is endogenous to integration will have its own effect on relative wages and inequality. And this effect is expected to be different from the one which is attributed to the initial human capital endowments in a country.

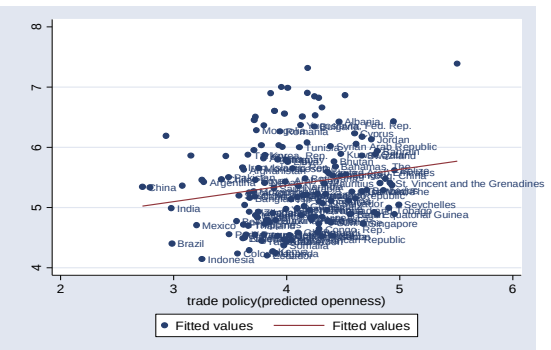
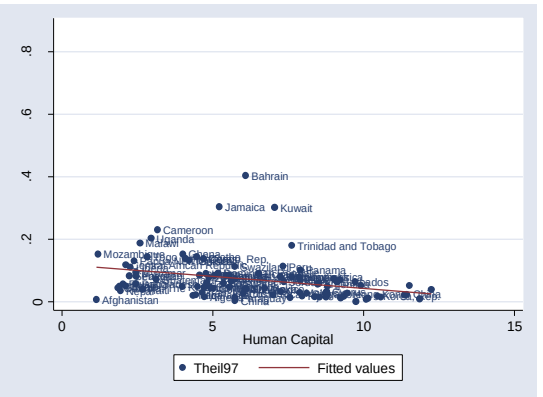
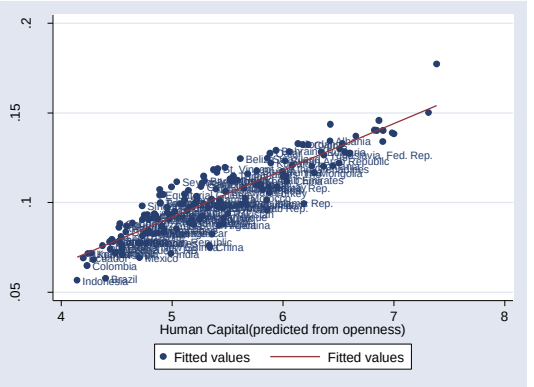


Figure 4. *Openness (Predicted values of 'Exports+Imports/GDP', 1985) and HK.*

We know from above discussion that wage inequality in many developing countries has deteriorated amid more international trade. In order to know whether human capital accumulation, which is directly accrued through processes of trade, is guilty of aggravating wage inequality in developing countries, the paper generates predicted values of human capital by regressing them on FR (1999) predicted trade shares. Figure 5 shows two graphs. First one illustrates a simple relation ship between human capital and wage inequality and suggests that countries with better human capital do well apropos inequality. The second graph, where we predicted human capital on FR trade shares, follows the opposite line and confirms that human capital accumulation which is owed to global integration, carry augmented effects on wage inequality. Now this leads to another question as to why would human capital under liberalized trade work against wage equality in developing countries? The answer is simple. Generally in most developing countries human capital is unevenly distributed (Ravallion, 2003). Thomas, Wang & Fan (2000) and Domenech & Castello (2002) have found out that Gini coefficient of the distribution of human capital in Sub Saharan Africa and South Asia respectively, is the highest in the world. Berthelemy (2004) came up with the same conclusion not only for Sub Saharan Africa and South Asia but also for Middle East and North Africa (MENA). According to Berthelemy (2004), the unequal distribution of income in these regions are due to inequitable education policies of their respective governments who pay on average much more attention to secondary and tertiary education than primary education.





One of the reasons for this biasness in education policies in these developing countries towards higher education is the fact that elementary education has a very limited direct role in determining growth rates. According to Barro (1999) the rate of economic growth responds more to secondary or higher education levels rather than elementary schooling. This is true because processes of growth are deeply linked with higher education instead of primary education. For example, in developing countries international trade, which is one of the key determinants of growth, favors either highly qualified university graduates or those who have at least finished their high school. The sole reason that India and China have been the haven for international outsourcing and trade in contemporary times is because they have managed to accumulate relatively educated and skilled human capital by investing on higher education. It is expected that over the next five years, 3.3 million services and industry jobs and $ 136 billion in wages will be outsourced only from United States, while most of them finding their way to the Indian or Chinese Shores. Only in India, on any given day in New Delhi, Bombay and Bangalore, the call goes for a new call center recruits who are sufficiently educated to communicate in English and have at least acquired a high school diploma. At least, as far as international trade is concerned, it is quite evident that the Southern countries which are benefiting today and which will benefit the most in near future are those who have transformed a portion of their labor force into relatively skilled intensive by investing generously on its higher education programs. Well, these countries are also the ones which have been the fastest growing economies of recent times.

So it is no surprise that in order to be competitive in a race to the top, developing countries generally have a tendency to invest in higher education at the cost of primary education to achieve greater growth. Recently, Pakistan has also fallen for this trap as its current education policy is skewed towards higher education, whereas primary education is being overlooked. Only last year the government increased its higher education budget to Rs 5 billion from a meager amount of Rs 800 million

five years ago - an increase of nearly 400 percent. For this year the government has allocated double the amount of last year for higher education. Such a focus on higher education is unprecedented in the history of this country. However allocation of funds to primary education is in contrast with such heavy investments in higher education since the budget for primary education has been increased by a meager average of 4 percent for the last few years. Though, in coming years Pakistan will definitely reap the fruits of its higher education focus and compete with other developing countries in international markets for its cheap and skilled human capital, it should also get ready for increased distortions in domestic labor markets as the relative wages of unskilled labor would decline amid increased international trade. This apparent pro growth higher education policy of Pakistan at the cost of primary education may very well be good for income generation but it definitely excludes the poor and unskilled and will subsequently lead to increased wage and income inequalities in the country.

In order to show how income inequalities increase with education inequality Gregorio & Lee (1999) worked with a traditional model of human capital where the level of earnings (Y) is accrued by an individual with S years of schooling:

$$\log Y_s = \log Y_o + \sum_{j=1}^{s} \log(1 + r_j) + u \tag{9}$$

where r_j is the rate of return to the jth year of schooling. The function can be approximated by:

$$\log Y_s = \log Y_o + rS + u. \tag{10}$$

Where as the distribution of earnings can be written as:

$$Var(\log Y_s) = Var(rS) = \bar{r}^2 Var(S) + \bar{S}^2 Var(r) + 2\bar{r}\bar{S}Cov(r, S). \tag{11}$$

A sharp rise in educational inequalities Var(S) would unambiguously lead to higher wage inequality in equation (11) if other variables are held constant. On the same account, rise in wage inequality is a clear outcome if Var(r) is high. Here we know that returns to higher education are greater than returns to primary education in developing countries because of excess demand of skilled labor as rapid technology diffusion amid trade liberalization takes place and skilled labor supply lags behind.

However, equation (11) also suggests that under the assumption of other things as constant, if the covariance between the return to education and the level of education is negative, an increase in schooling can reduce wage inequality. Well there is some empirical evidence that there is a negative relationship between the return to education and average years of schooling (Teulings & Van Rens, 2002). The negative value of Cov (r, S)

suggest that as the relative supply of high skilled workers go up and that of unskilled workers go down, the relative wages of skilled labor decreases. Though Cov(r, S) gives some useful information apropos wage inequality, the information can very well be misleading because movements in relative wages are as much a function of 'skilled labor demand' as it is of skilled labor supply. For example, through trade liberalization, there is a constant transfer of technology in developing countries which increase the demand for skilled labor as learning by doing takes place. If this increased demand for skilled labor is more than its supply, there is a good possibility that wages of skilled labor rise instead of plummeting. And if the wages of unskilled labor fail to rise simultaneously because unskilled labor are in excess supply in developing countries, the wage inequality will very well increase and the negative relationship between level of schooling and returns to education Cov (r, S) might not hold at all. This fact is recognized by Dur & Tuelings (2002) when they admitted that in the Tinbergen's (1975) famous race between technology (skilled labor demand) and education (skilled labor supply), technology has been a clear winner of recent times.

In short the key to equality of relative wages in developing countries do not lie as much in Cov (r, S) but in the value of Var(S). Our discussion suggests that the inequalities, which we witness today in developing countries, have two important determinants. First there are significant inequalities in educational attainments. Second, the processes of international trade transform these education inequalities into wage inequalities by favoring the skilled labor.

Well to this effect, in order to solve for wage inequality in developing countries, the respective governments need to increase the mean level of human capital through a balanced education policy whereby primary education is given as much importance as higher education. An equitable education policy will not only decrease Var(S), it will also lead to a negative value of Cov(r, S) as the overall supply of low skilled and uneducated workers go down and supply of educated work force increases. Dur & Tuelings (2002) have called for subsidies to all levels of education as they argue that the mean level of education gives rise to general equilibrium effects that reduce wage inequality.

Conclusions

The paper has found out that contrary to the claims of neo-classical paradigm, openness does have significant effects on wage inequality. The empirical evidence provided in the paper supports the argument that international trade is biased towards skilled workers in developing countries and with an increase of trade after liberalization, the wages of skilled workers are most likely to increase in South, where as poor who are largely unskilled shall increasingly become the hostage of such process.

This conclusion has some serious implications for the success of poverty reduction strategies in developing countries because inequality is

one of the two channels through which poverty is affected. The newly adopted common wisdom that growth always trickles down to decrease poverty if supplemented by certain relevant development strategies e.g. micro finance schemes etc may be true but ignoring the inequality part vis-a-vis poverty is a fatal mistake especially when pro poor growth policies e.g. liberalization or opening up leads to increases in the formal variable (inequality). The general perception among the right that inequality is never that significant to offset pro poor growth effects is not true and has to be re-evaluated also.

Recently, the World Bank has accepted this fact since its webpage[8] on "Poverty" advices policy makers that poverty reduction and social development cannot be achieved by focusing on growth strategies with out any understanding of their effects on the distribution of income and wealth: "The benefits of growth for the poor may be eroded if the distribution of income worsens. But policies that promote better income distribution are not well understood; learning more about the impact of policies on distribution should be high on the agenda".

All in all, it is apposite to conclude that more and more people might be able to live above poverty line with increases in growth attributed to the so-called reform process - thus showing some improvements regarding extreme poverty, but if inequality is on rise more and more people are worse off and an increase of the gap between have and have nots can not be defended with any academic jargon and is definite welfare loss. Thus it becomes all more important to understand inequality and its determinants. If free trade is guilty of increasing inequality among people or societies, the process has to be sterilized against such a phenomenon.

The paper makes some suggestions to this effect. It tries to find those channels through which liberalization causes wage inequality. In line with previous studies we have found out that education is the key to explain the increasing gap in relative wages. Though the paper supports the argument that those countries which starts out with higher level of human capital do well on inequality front, it also suggests that human capital which is accrued through the liberalization process is guilty of unequal distribution of wages among skilled and unskilled labor. One explanation is that governments in the developing countries invest in higher education at the cost of primary education in order to accrue quicker benefits from processes of growth and thus become prone to wage inequality after trade liberalisation.

The paper carries very important guide lines for policy makers. In order to neutralize the unequal effects of trade, the focus of policy makers should be on education. The countries, which have greater frequency of educated people, are in a better position to benefit from international trade. However there is a caveat. Generally the governments in developing countries tend to focus their education policy on higher education in the anticipation that investments in higher education would

[8] Web address: [Retrieved from].

accrue faster dividends by exploiting the international business environment. Though they are right, they need to realize that they should not promote higher education at the cost of primary education. Since literature suggests that many developing countries are guilty of promoting higher education at the cost of primary education, only a limited segment of the society participates in activities emanating from international trade, whereas the majority which is excluded is also be barred from the benefits of growth and its processes (i.e., trade) at least in the short term. The cases in point are China and India who have been the most prominent beneficiaries of international trade. Though, both the countries are able to achieve high growth rates as their relatively skilled and cheaper human capital (a direct outcome of their higher education focus) has utilized the recent surge of international outsourcing by multinationals, they have suffered from increasing inequality because large portions of the population are left out because they were illiterate and unskilled.

Appendix 1

Table 1a: *OLS Regression Results with different Specifications^*

Theil Indx	1	2	3	4	Theil Indx	1	2	3	4
lcopen	0.04	0.035	0.003	0.03	Impen2a	-0.0003	-0.0003	-0.001	-0.001
	(2.58)*	(2.6)*	(1.8)**	(1.82)***		(-0.15)	(-0.12)	(-0.5)	(-0.49)
hk	-0.009	-0.008			hk	-0.003	-0.004		
	(-2.1)**	(-2.1)**				(-0.7)	(-0.8)		
disteq	0.0002		0.0002		disteq	-0.0002		-0.0003	
	(0.35)		(0.23)			(-0.3)		(-0.34)	
n	70	70	114	114	n	58	58	72	72
R^2	0.11	0.11	0.03	0.02	R^2	0.01	0.01	0.005	0.0035
impen1o	0.0004	0.0004	0.0001	0.0001	Impen2r	0.002	0.002	0.0015	0.001
	(0.8)	(0.95)	(0.28)	(0.27)		(2.6)*	(2.67)*	(1.5)	(1.5)
hk	-0.005	-0.005			hk	-0.007	-0.007		
	(-0.9)	(-1.13)				(-1.5)	(-1.5)		
disteq	-0.0003		-0.0005		disteq	0.00009		-0.0003	
	(-0.4)		(-0.59)			(0.1)		(-0.3)	
m	59	59	73	73	n	58	58	72	72
R^2	0.03	0.02	0.006	0.001	R^2	0.12	0.12	0.03	0.03
impen1m	0.0009	0.001	0.0005	0.0005	Tars1o	0.0005	0.0005	0.0005	0.0005
	(1.2)	(1.34)	(0.69)	(0.71)		(1.8)***	(1.9)***	(1.7)***	(1.7)***
hk	-0.005	-0.006			hk	-0.007	-0.007		
	(-1.1)	(-1.3)				(-1.39)	(-1.5)		
disteq	-0.0003		-0.0005		disteq	-0.0001		-0.0004	
	(-0.3)		(-0.6)			(-0.04)		(0.4)	
n	59	59	73	73	n	59	59	73	73
R^2	0.04	0.04	0.011	0.007	R^2	0.07	0.07	0.04	0.04
Impen1a	0.001	0.001	0.00001	-0.00001	Tars1m	-0.001	0.0002	0.0001	-0.0001
	(0.46)	(0.48)	(0.01)	(0.001)		(-0.27)	(0.36)	(-0.17)	(-0.18)
Hk	-0.003	-0.004	-0.0005		Hk	-0.004	-0.005		
	(-0.71)	(-0.9)	(-0.6)			(-0.73)	(-0.36)		
disteq	-0.003				disteq	-0.0004		-0.0005	
	(-0.71)					(-0.48)		(-0.59)	
n	59	59	73	73	n	59	59	73	73
R^2	0.02	0.01	0.18	0.0000	R^2	0.02	0.015	0.005	0.0005
Impen1r	0.0003	0.0002	-0.0007	-0.0007	Tars1a	-0.0008	-0.0004	-0.0009	-0.0006
	(0.02)	(0.09)	(-0.45)	(-0.5)		(-0.5)	(-0.29)	(-0.7)	(-0.5)

Hk	-0.0033	-0.004			Hk	-0.003	-0.004		
	(-0.65)	(-0.9)				(-0.6)	(-0.9)		
disteq	-0.0005		-0.0005		disteq	-0.0007		-0.0007	
	(-0.5)		(-0.6)			(-0.7)		(-0.8)	
n	59	59	73	73	n	59	59	73	73
R^2	0.02	0.01	0.007	0.003	R^2	0.02	0.43	0.01	0.003
Impen2o	0.0004	0.0005	0.0003	0.0003	Tars1r	0.002	0.003	0.003	0.003
	(1.3)	(1.3)	(0.7)	(0.75)		(4.8)*	(4.9)*	(5.2)*	(5.3)*
hk	-0.006	-0.005			hk	-0.009	-0.01		
	(-1.1)	(-1.19)				(-2.2)**	(2.3)**		
disteq	0.00001		-0.0002		disteq	0.0002		-0.0004	
	(0.01)		(-0.3)			(0.35)		(-0.6)	
n	58	58	72	72	n	59	59	73	73
R^2	0.04	0.04	0.009	0.008	R^2	0.31	0.31	0.28	0.28
Impen2m	0.0002	0.0003	0.0002	0.0002	Tars2o	0.0003	0.0003	0.00006	0.00006
	(0.4)	(0.46)	(0.31)	(0.35)		(1.3)	(1.4)	(0.61)	(0.6)
hk	-0.004	-0.004			hk	-0.006	-0.006		
	(-0.81)	(-0.94)				(-1.2)	(-1.3)		
disteq	-0.001		-0.0002		disteq	0.0001		-0.0007	
	(-0.81)		(-0.29)			(0.1)		(-0.8)	
n	58	58	72	72	n	57	57	70	70
R^2	0.01	0.01	0.003	0.001	R^2	0.04	0.05	0.01	0.005

Notes: -*, ** and *** denotes 1%, 5% and 10% level of significance respectively. ^ For variable descriptions please refer to appendix 1.

Table 1b: *OLS Regression Results with different Specifications^*

Theil Indx	1	2	3	4	Theil Indx	1	2	3	4
Tars2m	-0.0001	-0.00006	-0.0001	-0.0001	totgvm	-0.0006	-0.0006	-0.0009	-0.0009
	(-0.21)	(-0.13)	(-0.3)	(-0.27)		(-1.3)	(-1.4)	(-1.9)***	(-1.9)**
hk	-0.003	-0.003			hk	-0.005	-0.006		
	(-0.54)	(-0.71)				(-1.00)	(-1.2)		
disteq	-0.0003		-0.001		disteq	-0.0003		-0.0004	
	(-0.34)		(-0.77)			(-0.37)		(-0.5)	
n	57	57	70	70	n	55	55	70	70
R^2	0.01	0.01	0.009	0.05	R^2	0.05	0.05	0.05	0.05
Tars2a	-0.002	-0.001	-0.0007	-0.0005	totgva	-0.0008	-0.0009	-0.001	-0.001
	(-1.3)	(-1.14)	(-0.8)	(-0.62)		(-1.8)***	(-1.91)***	(-2.4)**	(2.38)**
hk	-0.002	-0.003	-0.0008		hk	-0.006	-0.006		
	(-0.47)	(-0.77)	(-0.9)			(-1.16)	(-1.31)		
disteq	-0.0008				disteq	-0.0003		-0.0006	
	(-0.8)					(-0.39)		(-0.66)	
n	57	57	70	70	n	55	55	70	70
R^2	0.04	0.04	0.02	0.005	R^2	0.08	0.07	0.08	0.076
Tars2r	0.0017	0.0017	0.0002	0.0002	totgvr	-0.0002	-0.003	-0.0005	-0.0006
	(3.8)*	(3.9)*	(1.19)	(1.13)		(-0.48)	(-0.52)	(-1.02)	(-1.04)
Hk	-0.008	-0.008			hk	-0.004	-0.0045		
	(-1.9)***	(-1.9)***				(-0.74)	(-0.91)		
disteq	0.0003		-0.0007		disteq	-0.0005		-0.0006	
	(0.34)		(-0.86)			(-0.55)		(-0.65)	
n	57	57	70	70	n	55	55	70	70
R^2	0.228	0.227	0.029	0.018	R^2	0.02	0.018	0.022	0.015
tariffs	-0.0015	-0.0015	-0.0006	-0.0007	owqi	-0.038	-0.04	-0.049	-0.052
	(-1.2)	(-1.2)	(-0.4)	(-0.5)		(-1.03)	(-1.1)	(-1.4)	(-1.5)
Hk	-0.008	-0.008			Hk	-0.005	-0.005		
	(-1.5)	(-1.6)				(-1.1)	(-1.2)		
disteq	-0.0001		0.0003		disteq	-0.0002		-0.0005	
	(-0.1)		(0.4)			(-0.28)		(-0.66)	
n	59	59	82	82	n	59	59	72	72
R^2	0.05	0.05	0.005	0.003	R^2	0.04	0.04	0.03	0.02
owti	-0.053	-0.055	-0.075	-0.077	nontaro	-0.0003	-0.0003	-0.0003	-0.0003

	(-0.9)	(-1.0)	(-1.4)	(-1.4)		(-0.8)	(-0.9)	(-1.1)	(-1.05)
Hk	-0.005	-0.005			Hk	-0.004	-0.005		
	(-1.13)	(-1.2)				(-0.9)	(-1.1)		
disteq	-0.0003		-0.0006		disteq	-0.0004		-0.0007	
	(-1.13)		(-0.8)			(-0.5)		(-0.7)	
n	59	59	72	72	n	55	55	70	70
R^2	0.04	0.03	0.03	0.027	R^2	0.03	0.03	0.02	0.01
txtrg	0.096	0.089	0.19	0.165	nontarm	-0.0002	-0.0002	-0.0002	-0.0002
	(0.19)	(0.18)	(0.48)	(0.43)		(-0.68)	(-0.76)	(-0.89)	(-0.88)
hk	-0.002	-0.002			hk	-0.0004	-0.005		
	(-0.26)	(-0.29)				(-0.49)	(-1.02)		
disteq	0.0006		0.0005		disteq	-0.004		-0.0006	
	(0.51)		(0.54)			(-0.49)		(-0.7)	
n	40	40	46	36	n	55	55	70	70
R^2	0.01	0.006	0.01	0.005	R^2	0.03	0.024	0.018	0.011
totgvo	-0.0006	-0.0006	-0.0009	-0.0009	nontara	-0.0002	-0.0002	-0.0003	-0.0003
	(-1.3)	(-1.42)	(-1.8)**	(-1.94)		(-0.8)	(-0.85)	(-1.09)	(-1.06)
hk	-0.005	-0.0058			hk	-0.004	-0.005		
	(-1.0)	(-1.15)				(-0.8)	(-1.03)		
disteq	-0.0003		-0.0005		disteq	-0.0005		-0.0007	
	(-0.37)		(-0.53)			(-0.5)		(-0.74)	
n	55	55	70	70	n	55	55	70	70
R^2	0.05	0.05	0.05	0.05	R^2	0.03	0.027	0.024	0.016

Notes: *, ** and *** denotes 1%, 5% and 10% level of significance respectively. ^ For variable descriptions please refer to appendix 1.

Table 2a. *IV Regression Results With Different Specifications^*

	1	2		1	2		1	2
lcopen	0.037	0.027	impen2m	0.002	0.003	tars1r	0.003	0.004
	(2.25)*	(1.14)		(1.7)**	(2.2)*		(2.4)*	(2.8)*
hk	-0.008		hk	-0.007		hk	-0.009	
	(-2.12)*			(1.4)			(-2.14)*	
F-test	3.5*	1.3	F-test	1.8	4.9*	F-test	3.4*	8.2*
n	70	100	n	58	72	n	59	73
R^2	0.11	0.04	R^2			R^2	0.30	0.23
impen1o	0.0014	0.002	impen2a	0.007	0.01	tars2o	0.001	0.0004
	(2.0)*	(2.2)*		(1.7)**	(2.1)*		(1.7)*	(1.5)
hk	-0.008		hk	-0.006		hk	-0.008	
	(-1.65)**			(-1.2)			(-1.6)	
F-test	2.3**	5.1*	F-test	1.7	4.5*	F-test	1.8	2.2
n	59	73	n	58	72	n	57	70
R^2	_	_	R^2	_	_	R^2	_	_
impen1m	0.002	0.003	impen2r	0.003	0.005	tars2m	0.001	0.001
	(2.1)*	(2.3)*		(1.9)**	(2.2)*		(1.6)	(1.5)
hk	-0.009		hk	-0.008		hk	-0.009	
	(-1.7)**			(-1.7)**			(-1.5)	
F-test	2.4**	4.9*	F-test	2.2	4.5*	F-test	1.6	2.4
n	59	73	n	58	72	n	57	70
R^2			R^2	0.1		R^2		
impen1a	0.007	0.01	tars1o	0.001	0.0012	tars2a	0.003	0.003
	(1.91)**	(2.2)*		(2.1)*	(2.8)*		(1.39)	(1.7)**
hk	-0.005		hk	-0.009		hk	-0.004	
	(-0.9)			(-1.8)**			(0.87)	
F-test	2.2	4.9*	F-test	2.5*	6.16*	F-test	1.2	2.8**
N	59	73	n	59	73	n	57	70
R^2			R^2	0.03		R^2		
impen1r	0.009	0.009	tars1m	0.002	0.002	tars2r	0.002	0.001
	(1.7)**	(1.9)**		(1.9)**	(2.1)*		(1.96)*	(1.2)
hk	-0.012		hk	-0.012		hk	-0.009	
	(-1.6)**			(-1.8)**			(1.85)**	
F-test	1.7	3.6**	F-test	2.09	4.5*	F-test	2.3**	1.5
n	59	73	n	59	73	n	57	70
R^2	_		R^2	_	_	R^2	0.21	_

impen2o	0.001	0.002	tars1a	0.005	0.005	tariffs	-0.005	-0.016
	(1.8)**	(2.3)*		(1.7)**	(2.1)*		(-0.72)	(-1.1)
hk	-0.007		hk	-0.003		hk	-0.014	
	(-1.5)			(-0.5)			(-1.12)	
F-test	1.9	5.1*	F-test	1.7	4.31*	F-test	0.92	1.38
n	58	72	n	59	73	n	59	78
R^2	0.006	_	R^2	_	_	R^2	_	_

Notes: * and ** denote significance at 5% and 10% level. ^ For variable descriptions please refer to appendix 1.

Table 2b: *IV Regression Results With Different Specifications^*

	1	2		1	2
owti	-0.31	-0.26	totgvr	-0.004	-0.004
	(-234)*	(-1.7)**		(-1.7)**	(-2.1)*
hk	-0.004		hk	-0.008	
	(-1.56)			(-1.2)	
F-test	3.3*	3.4*	F-test	1.7	4.4*
n	73	109	n	55	70
R^2	0.08	0.01	R^2	_	_
txtrg	3.34	3.05	owqi	-0.23	-0.39
	(1.40)	(1.38)		(-0.88)	(-1.3)
hk	0.014		hk	-0.008	
	(0.74)			(-1.3)	
F-test	2.2	3.9	F-test	0.8	1.5
n	49	66	n	59	72
R^2			R^2		
totgvo	-0.002	-0.002	nontaro	-0.002	-0.002
	(2.1)**	(-2.5)**		(-1.6)**	(2.1)*
hk	-0.009		hk	-0.013	
	(-1.5)			(-1.5)	
F-test	2.6***	6.6*	F-test	1.6	4.5*
n	55	70	n	55	70
R^2			R^2		
totgvm	0.002	-0.002	nontarm	-0.002	-0.002
	(-2.1)*	(-2.6)*		(-1.6)	(2.02)*
hk	-0.009		hk	-0.015	
	(-1.5)			(-1.5)	
F-test	2.6**	6.6*	F-test	1.42	4.1*
n	55	70	n	55	70
R^2	_	_	R^2	_	_
totgva	-0.002	-0.002	nontara	-0.003	-0.002
	(-2.2)*	(-2.6)*		(-1.2)	(-1.9)**
hk	-0.009		hk	-0.018	
	(-1.7)**			(-1.3)	
F-test	2.7**	6.8*	F-test	0.9	3.5**
n	55	70	n	55	70
R^2			R^2		

Appendix 2

Data and Sources

Black: Black Market Premium, Year: 1985. Source: Rose (2002).
Disteq: Distance from Equator of capital city measured as abs (Latitude)/90. Source: Rodrik, Subramanian & Trebbi (2002)
heritage: Heritage Foundation Index, Source: Rose (2002).
hk: Average Schooling Years in the total population at 25,Year: 1999. Source: Barro R & J. W. Lee data set, [Retrieved from].
hyr: Average Years of Higher Schooling in the Total Population at 25, Year: 1999. Source: Barro R & J. W. Lee data set, [Retrieved from].
Impen1o: Import Penetration: overall, 1985. Source: Rose (2002).
Impen1m: Import penetration: Manufacturing, 1985. Source: Rose (2002).
Impen1a: Import Penetration: Agriculture, 1985. Source: Rose (2002).
Impen1r: Import Penetration: Resources, 1985. Source: Rose (2002).
Impen2o: Import Penetration: overall, 1982. Source: Rose (2002).
Impen2m: Import penetration: Manufacturing, 1982. Source: Rose (2002).
Impen2a: : Import Penetration: Agriculture, 1982. Source: Rose (2002).
Impen2r: Import Penetration: Resources, 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: 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).
Nontaro: Non- Taiff Barriers Coverage: Overall, 1987. Source: Rose (2002).
Nontarm: Non- Taiff Barriers Coverage: manufacturing, 1987. Source: Rose (2002).
Nontara: Non- Taiff Barriers Coverage: agriculture, 1987. Source: Rose (2002).
Nontarr: Non- Taiff Barriers Coverage: resources, 1987. Source: Rose (2002).
Open80: 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)
Tars1o: TARS Trade Penetration: overall, 1985. Source: Rose (2002).
Tars1m: TARS Trade Penetration: manufacturing, 1985. Source: Rose (2002).
Tars1a: TARS Trade Penetration: agriculture, 1985. Source: Rose (2002).
Tars1r: TARS Trade Penetration: resources, 1985. Source: Rose (2002).
Tars2o: TARS Trade Penetration: overall, 1982. Source: Rose (2002).
Tars2m: TARS Trade Penetration: manufacturing, 1982. Source: Rose (2002).
Tars2a: TARS Trade Penetration: agriculture, 1982. Rose (2002).
Tars2r: TARS Trade Penetration: resourses, 1982. Rose (2002).
Tariffs: Import Duties as percentage imports, Year:1985. Source: World Development Indicators (WDI), 2002.
Theil97: 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.
Totgvo: Weighted Average of Total Import Charges: overall, 1985. Source: Rose (2002)
Totgvm: Weighted Average of Total Import Charges: manufacturing, 1985. Source: Rose (2002)
Totgva: Weighted Average of Total Import Charges: agriculture, 1985. Source: Rose (2002)
Totgvr: Weighted Average of Total Import Charges: resourses, 1985. Source: Rose (2002)
Txtrg: Trade taxes / trade, 1982. Source: rose (2002)

Appendix 3

List of Countries

Afghanistan (1988)	Dominican Republic (1985)	Malaysia (1997)	Sri Lanka (1994)
Albania (1997)	Ecuador (1997)	Mauritania (1978)	St. Vincent and the Grenadines (1994)
Algeria (1997)	Egypt, (1997)	Mauritius (1997)	Sudan (1972)
Angola (1993)	El Salvador (1997)	Mexico (1997)	Suriname (1993)
Argentina (1996)	Equatorial Guinea (1990)	Moldova (1994)	Swaziland ((1994)
Armenia (1997)	Eritrea (1988)	Mongolia (1994)	Syria (1997)
Azerbaijan (1994)	Ethiopia (1997)	Morocco (1997)	Togo (1981)
Bahamas, The (1990)	Fiji (1997)	Mozambique (1994)	Thailand (1994)
Bahrain (1992)	Gabon (1994)	Myanmar (1997)	Tonga (1994)
Bangladesh (1990)	Gambia, The (1981)	Namibia (1994)	Trinidad and Tobago (1994)
Barbados (1997)	Ghana (1995)	Nepal (1996)	Tunisia (1997)
Belize (1992)	Guatemala (1997)	Nicaragua (1985)	Turkey (1997)
Benin (1981)	Haiti (1988)	Nigeria (1994)	Taiwan (1997)
Bhutan (1989)	Honduras (1994)	Oman (1997)	Tanzania (1990)
Bolivia (1997)	Hong Kong, China (1997)	Pakistan (1996)	Uganda(1988)
Bosnia (1990)	India (1997)	Panama (1997)	Ukraine (1997)
Botswana (1997)	Indonesia (1997)	Papua New Guinea (1989)	United Arab Emirates (1985)
Brazil (1994)	Iran, Islamic Rep (1993)	Paraguay (1991)	Ukraine (1997)
Bulgaria (1997)	Iraq (1985)	Peru (1994)	Uruguay(1997)
Burkina Faso (1981)	Jamaica (1990)	Philippines (1997)	Venezuela (1994)
Burundi (1990)	Jordan (1997)	Puerto Rico (1997)	Western Samoa (1972)
Cameroon (1997)	Kenya (1997)	Qatar (1994)	Yemen (1986)
Cape Verde (1993)	Korea, Rep. (1997)	Romania (1994)	Yoguslavia (1997)
Central African Republic (1993)	Kuwait (1997)	Rwanda (1985)	Zambia (1994)
Chile (1997)	Kyrgyz Republic (1994)	Saudi Arabia (1989)	Zimbabwe (1997)
China (1985)	Latvia (1997)	Senegal (1997)	
Colombia (1997)	Lesotho (1994)	Seychelles (1988)	
Congo, Rep. (1988)	Liberia (1985)	Singapore (1997)	
Costa Rica (1997)	Libya (1980)	Slovak Republic (1997)	
Cote d'Ivoire (1997)	Lithuania (1997)	Slovenia (1997)	
Croatia (1994)	Macao, China (1997)	Somalia (1986)	
Cuba (1988)	Macedonia, FYR (1996)	South Africa (1997)	
Cyprus (1997)	Madagascar (1988)		
	Malawi (1997)		

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10.
Can micro credit schemes be introduced by formal banking sector?

Introduction

Over the last decade micro- financing as poverty alleviation measure has really come to age and is supposed to be one of the cheap and painless -for governments- cure for poverty...(Morduch, 1999).

Both the extent of income-generating opportunities and ability to respond to such opportunities are determined to a great degree by the access of affordable financial services. Increasing the access to poor households to micro-finance[i] (MF) is therefore being actively pursues internationally and would appear to have become the mantra of today's development orthodoxy. Once almost exclusively the domain of donors and experimental projects, MF has evolved during the last decade with prospects of viability, offering a broader range of services, and significant opportunities for expansion. Development practitioners, policy makers, and multilateral and bilateral lenders, recognize that providing efficient MF services is important for variety of reasons. Improved access to MF services can enable the poor to smoothen their consumption, manage their risks better, build their assets, develop their micro-enterprises, enhance their income earning capacity, and enjoy an improved quality of life.

Micro enterprise lending, and micro enterprise development were first introduced in United States. While poverty is a curse, poor economic performance is slavery. Poverty yields individual human indignity, and economic decline causes national misery. Therefore, it is no wonder that many great philosophers, economists and social activists have been pressing for the alleviation of poverty and acceleration of economic growth. However, the quality of life and economic growth have circular cause and effect relationship with human dignity, education, healthy living, skills and business opportunities. Unfortunately, one third of the world's population is still suffering from hunger, draught and lack of basic necessities of life.

The governments in the third world are waging a war against poverty through the micro-credit scheme. Micro-finance program is being used as an instrument for poverty alleviation, employment generation and economic revival in this country like many other parts of the world. The micro-credit movement is revolutionizing international development, and the governments world over are doing there best to help the poor with micro-credit facilities. They have allowed setting-up of private investment banks to disburse small loans for alleviating poverty. Micro-credit can stimulate the economy by granting credit facilities to the help less and needy.

Globalization and free market system has provided the upper hand to the developed countries. At the same time, natural tendencies in the free market system have brought about an enormous concentration economic gains in very few hands. Despite the great social and technological strides of the past few decades, the absolute number of poor people on the globe has never been greater. More than a billion people live on a less than 1$ a day. Every day, one hundred thousand people enter the global labor force, but only one in five is expected to find formal employment. The persistence of mass unemployment and poverty remains the most pressing problems in the world. Even as we witness the fall of authoritarian regimes and the burgeoning democracy throughout the globe, one third of the world's population has yet to attain the most rudimentary levels of economic well being and security in their lives.

Micro-credit is essential for the alleviation of poverty and revival of economic growth in part through promoting human settlements, education, agriculture, skill development, small business, and healthy living. A key ingredient of poverty is human dignity. Micro-credit program ensures human dignity through pledge free loans, simple procedures, new social contract, right to counseling, fair earning, and is devoid of bureaucratization. In the current global economic climate, micro-credit is poverty alleviation tool.

Micro-credit is the extension of small loans to groups of poor people; especially women, for the purpose of creating self-employment opportunities. Poverty demeans the lives of the poor, not only through material deprivation but also social isolation, as it creates the feelings of helplessness and humiliation among the poor, and micro-finance can change their fate. Micro-credit is a fast growing movement through out the world for poverty alleviation and economic revival. Grameen Bank in Bangladesh, ACCION International in Latin America and many global NGOs have been playing very important roles in the economic revival and poverty alleviation. More than a thousand organizations, in more than sixty countries around the world, are working for micro-credit programs, and 50 million people world wide are toady receiving the benefits of micro-credit loans. Grameen Bank has lent more than $2billion, ACCION International, $485 million to 310,000 to low-income entrepreneurs in 14 countries.

Key global institutions and actors have adopted micro-credit as a targeted strategy for poverty reduction at grass roots level. These institutions and actors include the world Bank, the International Monetary Fund (IMF), Regional Development Banks, Bi-lateral Development

Agencies and a broad spectrum of the NGO community. Micro-credit has also been recommended by the International Labour Organization (ILO), as a strategy to minimize income insecurity. Micro-credit is now at work in 43 countries.

Despite all this, about 95 percent of some 180 million poor households in the Asia and Pacific Region (the Region) still have little access to affordable institutional MF services. Significant resources are required to meet the potential demand. Thus there is a need to build MF systems that can grow and provide MF services on permanent basis to an increasing number of poor through domestic resource mobilization.

Relevant issues in the sustainability of micro credit schemes

As said above, there is no doubt about the important contribution of MF in poverty alleviation. Today some leading MFIs e.g., Grameen Bank, have created financial methodologies that serve increasing numbers of poor and generate repayment rates that compare favorably with the loan performance of many traditional commercial banks. By using these methodologies, MFIs have achieved increasing levels of sustainability, even to the point of outright profits without subsidies (Hulme, 1999).[ii] Nevertheless, most MFIs, especially the NGOs involved, have encountered serious problems of sustainability, suggesting there may be serious flaws in the finance approach that need to be acknowledged. These flaws appear to emerge from organizational design -that is, property rights and governance structures, features that are generally strengths in Direct Financial Institutes (DFIs) i.e., traditional commercial banks. At the same time, most of the MFIs usually are not responding to the wide spread demand for the deposit services from their clients, demand effectively serviced by DFIs[iii]. Thus majority of MFIs world over, especially the NGOs involved, are still dependent upon the loans or grants from outside sources in order to finance the poor in a manner, which is far from sustainable and efficient (Rhyne, 1998).[iv]

The objective of this paper is to identify the financial methodology/ies, which enable an MFI to sustain its functions. However, here I intend to follow an unconventional approach which is not yet being employed in Micro-finance Literature: Since MFIs are after all financial institutes[v], with a primary aim of providing credit to a specific segment of population, which are generally involuntary, excluded by the direct financial institutes e.g. commercial banks, because they cannot fulfill the eligibility pre-requisites for credit[vi]- one can start to evaluate micro credit schemes through the determinants of efficiency like impact of size, international variables, ownership, control and governance on profit, cost, allocative, technical, pure technical and scale efficiency measures. Since such respective efficiency measures give us vital information about the structure of different MFIs with similar financial methodologies, one can identify what are the comparative traits of sustainable and unsustainable MFIs. The common traits are as follows:

Policy environment

Despite general improvement in the policy environment for financial sector programs, the policy environment for MF in many countries remains unfavorable for sustainable growth in MF operations. For example, in countries such as Veit Nam and the people's Republic of China, ceilings on interest rates limit the ability of MFIs to expand and diversify. Relevant policy reforms for MF include interest rate reforms for micro credit and savings, creating an environment sufficiently flexible to accommodate a wide array of MF service providers to meet the diverse demand, and redefining the role of state and central banks in MF development to facilitate participation of private sector financial institutions (Goodwin-Groen, 2000).

Financial infrastructure

Inadequate financial infrastructure, (legal, information, and supervision and regulation) is another major problem. Most governments have focused on creating institutions or special programs to disburse funds to the poor with little attention to building financial infrastructure that supports, strengthens, and ensures their sustainability. Thus MFIs can develop sustainable commercial services on a permanent basis, and expand their scope of operations and outreach, only if they operate within an appropriate financial infrastructure such as information systems and training facilities. The legal framework and supervision and regulation of MFIs, including self regulation and performance standards of MFIs need to set up to facilitate sound growth and improve the capacity of MFIs to leverage funds in the market and provide competition (Matin *et al.,* 1999).

Financial viability

Inadequate emphasis on financial viability is the most serious problem of MFIs especially in the South Asian Region. This prevails among many NGOs, government directed microcredit programs, state owned banks, and co-operatives providing MF services. As a result only few MFIs are sustainable; most are not moving toward sustainability and reducing subsidy dependence. Whereas, viability is critical for expanding the outreach to achieve the primary objective of poverty reduction. The institutional development support for viability need to encompass (i) ownership and governance, (ii) diversified products and services, (iii) management information systems and accounting policies and practices, (iv) management of portfolio quality and growth, (v) systems and procedures and financial technology for reducing transactional costs, and (iv) training facilities (McGuire, 1998).

Pro-poor innovations

Those in resource-poor and low-population density areas, the poorest of the poor, and ethnic minorities often tend to be excluded by financial institutions due to risk-return considerations, although the social returns to reaching these clients may be high. Therefore, it is important to support MFIs and other financial institutions to expand the services to these categories through innovative programs and development of financial technology that contribute to breaking these barriers through pilot projects

and other measures that aim at establishing linkages between formal financial institutions and informal service providers (Qureshi *et al.,* 1996; Bennet & Cuevas, 1996).

Social intermediation

The low level of social development, a distinctive characteristic of the poor in the Region, is another major constraint. This is particularly true with respect to poorest, women in poor households, poor in resource-poor and remote areas, and ethnic minorities. Investment in social intermediation is necessary to increase the capacity of the poor to access and productively use MF services. Such investments, among other things, should support; (i) awareness building program on a broad range of MF services; (ii) information dissemination on service providers; (iii) basic literacy, numeracy, and skills training for women, ethnic minorities, and other disadvantaged groups; and (iv) social mobilization for formation of community-based organizations and solidarity groups to actively participate in MF markets (see for example Christen, 1997; Hulme & Mosley, 1996; Otero & Elisabeth, 1994).

Commercial banks in MF

Many commercial banks in developing countries are beginning to examine the micro-finance market. Stiff banking competition in many countries has forced some to diversify into new markets. Some seek a new public image. Others have heard about the profits of successful micro-enterprise banks in Indonesia and financial NGOs-turned-banks in other countries. During the last five years or so, their exploration of this new market has been facilitated by donor funded loan guarantees, central bank rediscount lines, and specialized technical assistance. Although the initial resources for loans frequently came from donor funded credit programs, commercial banks in time began to draw their own deposit sources for a growing share of their total funds for micro loans (Baydas *et al.,* 1997). While traditional commercial banks and finance companies are beginning to look at ways to service the large number of potential clients for small loans, many microenterprise lending NGOs with heavy case loads have begun to scale up operations by transforming themselves into regulated banks or specialized financial institutions offering micro-deposit facilities as well as micro-loans. The new NGOs-turned-banks and the traditional banks are beginning to converge on a single potentially profitable market but from two sharply contrasting financial worlds (Hulme & Mosley, 1996). NGO and bank operations, however hardly begin to cover the demand for micro-finance services, NGO programs are generally minuscule in each country, and the banking sector is still by and large just entering this market niche, although in some countries banks already are larger providers of loans to micro-enterpreneurs than NGOs (Almeyda, 1996).

Important questions for research in mainstreaming micro credit

(i) Despite some success stories in MF, why there is still a large number of MFIs far from effective and sustainable?

(ii) Does, among a diversified set of MFIs following different financial methodologies, is it possible to identify one single ideal financial model or modus operandi - which if followed will give us sustainability in micro-finance? OR, Is there a financial model for an MFI, which achieves sustainability through minimizing processing costs, increase productivity of the staff and rapidly expand the scale of their micro-enterprise portfolios- that is increase the number of loans?

(iii) Do MFIs need to offer a similar services as a traditional commercial bank in order to gain effectiveness and efficiency? And can a MFI really follow a traditional commercial bank without hampering its primary goal of providing finance to the very poor segments of any population?

(iv) Since commercial banks are, allegedly, the most effective and efficient financial models, which can facilitate supply and demand of finance in any economy on sustainable basis – what is the feasibility of these financial institutions in entering MF industry? In other words can commercial banking provide a financial methodology for the provision of MF at sustainable levels?

Banking sector research frameworks to analyse micro credit schemes for their sustainability

Since our aim is to get different efficiency measures to find the most efficient and sustainable MFI model, we can primarily follow the finance literature where recently, this practice have extensively been done on the commercial banks, investment banks etc in the banking system (see for example Isik & Hasan, 2002; Esho, 2001; Sathye, 2001; Rime, 2001; Altunbas, Liu, Molyneux & Seth, 1999; Berger & Young, 1997; Spong *et al.,* 1995).

Here we present a brief discussion on what these efficiency measures are and how they can be estimated. Efficiency of a production unit means a comparison between the observed and the optimal values of its outputs and inputs. Measures of efficiency include cost efficiency and X-efficiency. Cost efficiency means that a firm minimizes its expenditure given the services it provides without reducing service quality (Athanassopolous, 1998). X-efficiency is also called overall efficiency. By overall efficiency we mean the cost of producing observed output if both technical and allocative efficiencies are assumed relative to observed cost (Forsund, & Sarafolou, 2000). Berger *et al.,* (1991) used the term X-efficiency for all technical and allocative efficiencies of individual firms distinguishing from scale and scope efficiencies. Overall efficiency can further be decomposed into technical efficiency and allocative efficiency. Allocative efficiency measurement is the extent to which input choices fail to satisfy the marginal equivalences for cost minimization. Technical efficiency is defined as: a firm is technical efficient if it can produce

existing level of output with at least one less unit of input, or with existing inputs it can produce at least one more output. Technical efficiency can further decomposed into scale efficiency and pure technical efficiency. Scale efficiency is defined relatively to the form of the locus of technical efficiency production plans. It is investigated by analysis of the shape of the frontier. Pure technical efficiency can be obtained by dividing the technical efficiency by scale efficiency.

To measure efficiency there are several techniques. The most frequently used techniques to estimate efficiency are 1) free disposal hull (FDH), 2) stochastic frontier approach (SFA), 3) thick frontier approach (TFA), 4) distribution free approach (DFA) and 5) data envelopment analysis (DEA). The DEA and FDH are non-parametric approaches and they put relatively little structure on the specification of the best-practice frontier. The DEA is a linear programming technique where the set of best-practice frontier observations are those for which no other decision making unit or linear combination of units has as much or more of every output (given inputs) or as little or less of every input (given outputs). The DEA does not require the explicit specification of the form of the underlying production relationship. The FDH is a special case of the DEA model where the points on lines connecting the DEA vertices are not included in the frontier. Because the FDH is interior to the DEA frontier, so FDH gives larger estimates of average efficiency than DEA (Coelli, 1996). These two approaches assume no prior assumption regarding the functional form and they do not require random error.

The other three approaches SFA, TFA, and DFA are parametric approaches. The SFA, which is also called econometric approach, specifies a functional form for the cost, profit, or production relationship among inputs, outputs and environmental factors, and allows for random error. The SFA gives a composed error model where inefficiencies are assumed to follow an asymmetric distribution, while random error follows a symmetric distribution. The logic is that the inefficiencies must have a truncated distribution because inefficiencies cannot be negative. This method makes it difficult to separate inefficiency from random error in composed error framework. The DFA approach also specifies a functional form for the frontier, but separates the inefficiencies from random error in a different way. The DFA assumes that the efficiency of each firm is stable over time, whereas random error tends to average out to zero overtime. The estimate of inefficiency for each firm is determined as the difference between its average residual and the average residual of the firm on the frontier. The thick frontier approach (TFA) specifies a functional form and assumes that deviations from predicted performance values within the highest and lowest performance quartiles of observations represent random error, while deviations in predicted performance between the highest and lowest quartiles represent the inefficiencies. This approach does not impose distributional assumptions on either inefficiency or random error. The TFA provides overall not for individual firms.[vii]

It is not an easy task to determine which technique is better than the others. But by addressing the main limitations of each technique we can see that which method is more appropriate to measure efficiencies in

MFIs. There are enough frontier studies of financial institutions to make some comparison of measurement techniques to draw some conclusions (for a review, see Berger & Humphrey, 1997). The established approaches to efficiency measurement differ primarily in how much shape is imposed on the random error and inefficiency. Parametric approaches have the disadvantage relative to nonparametric methods of having to impose more structure on the shape of the frontier by specifying functional form (Berger *et al.,* 1998).

The DEA approach can be more preferred approach because it has advantages over other techniques. According to Schmidt (1985) non-parametric techniques are better than deterministic approach to measure efficiency. Buregr & Humphrey (1997) describe the power of frontier analysis- according to them DEA has two main advantages: 1) It allows individuals with a very little institutional knowledge or experience to select "best practice" firms within a industry, assign numerical efficiency values, broadly identify over use of input and/or output underproduction, and relate these results to issues of government policy or academic research interest. 2) If individuals have sufficient institutional background, frontier analysis allows selecting best practice within complex service operations, a determination not always possible with traditional benchmarking techniques due to lack of a powerful optimizing methodology such as linear programming. DEA identifies the efficient peers for the inefficient financial institutions and objectively determines the productivity improvements. As such, it is a valuable benchmarking tool for management that can become part of a continuous improvement program, Another motivation to use DEA is that it does not require price data. It can easily handle multiple output case. Yet, another motivation is the desire to see how efficiency is related to observable characteristics of the firm. DEA provides evaluation of individual units instead of group of units or organization. DEA provides both sources and amounts of inefficiency which all of the regression approaches do not identify. There is no statistical inference needed to be determined and attached to DEA weights as needed for regression coefficients. In short DEA might be the best approach to employ in our efficiency analysis for our to be selected MFIs.

Guidelines for further research on supply side dynamics of micro credit

It is adamant from the literature that there is a consensus reached among researchers, policy makers, development experts and development agencies on the positive and vital contribution of MF in poverty reduction. Despite the fact that MF literature has gained momentum nearly a decade, or more, ago, the issue of sustainability, which covers the supply side dynamics of MF, is far from solved. The debate is still going on how to get this so good for poor 'MF' sustainable. Despite the immense importance of this issue of sustainability, MF literature has mainly concentrated itself on the demand side and the there are not many studies, which have empirically evaluated sustainability dynamics of MF. So in this respect, the paper intends to make a significant contribution in

the literature by dealing specifically with the supply side dynamics of micro finance. Here it is important to note that the paper propose to deal with the issue of sustainability in a rather innovative way by measuring cost and profit efficiencies of different MFIs .This is can be done by identifying MFIs with same financial methodologies and putting them in one group. It will create several groups of MFIs with similar financial models. This way one may get the efficiency measures of each group and provides important information about the structure of MFIs and their workings. It will help identifying the most efficient or in other words the most sustainable MFI model. The efficiency approach has been very popularly used in the finance literature to understand the working of banks in banking sector recently, and previously been used extensively in macroeconomic literature on different economic sectors (i.e., manufacturing, agriculture etc).

In short this study intends to be the pioneering one in its own way in dealing with the issue of MF: We, here, try to fill a missing segment in the literature of MF - which has dealt the issue of MF as purely the one of development economics and have ignored the finance connection – by providing an empirical evidence on the workings of financial models adopted by MFIs and their affect on MFI sustainability.

Conclusions: Future of micro credit by finding ways to finance micro enterprises

The paper tries to the issue of sustainable microfinance institutions by focusing on the issue of financial methodologies of MFIs. In this section, I would like to add some more dimensions into it by working on the notion that a MFI can not be sustainable or successful if 1) it is just forwarding loans for the sake of loans/demand side dynamics instead of forwarding it to more efficient businesses no matter how small they are 2) They are exploiting the information constraints faced by the donors or government. On the contrary efficient micro credits may require preferring finance for the businesses which are more profitable in a more liberalized and integrated world and that can solve for the issue of unsuccessful loans.

For example, in 2005, most of the East Asian countries' WTO accession lead to a changed production patterns in their economies because, with accession, the domestic businesses in these economies are exposed to increased international competition. In the absence of any significant protection or subsidies most of the developing economies would focus more on the labor intensive products at which they have comparative advantage over developed countries. However they might get into more technically advanced production patterns[viii] with the passage of time because of the more liberalized markets and presumably increased foreign investment, but primarily they will focus on to where the edge lies.

In the liberalized scenario the developing countries compete with each other for the demand of their labor intensive goods in third markets. And with the presence of an Economic Giant like China, the smaller countries like Pakistan has to device policies or policy responses, through which,

they can benefit from the liberalized trade with the developed world as well as trading and competing with the developing one. Because, the absence of such policy responses resuls in a negative impact through a loss of market share in third markets[ix] in the products in which a smaller developing country might have comparative advantage as compared to the developed ones but could not exploit the advantage because of the loss of share against another developing country which is relatively more competitive and efficient in similar labour intensive goods. Countries that loose competitiveness due to a lack of any substantial policy response may also see declining returns to capital and the apparent investments by foreign as well as domestic investors may well divert to a third and more competitive economy.

The increased finances especially for micro businesses will have a far reaching effects on the economy as well as the poverty level and employment levels.[x] Presumably those new entrants in labor intensive products shall end up being profitable because of the increased international demand of these products and simultaneously favorable and appropriate government policies, we can well say that it would lead to a sustainable mechanism of financing for small enterprises.

With identification of such labor intensive products in which say Pakistan can take an edge, availability microcredit should also be worked out and preferred in such products. But here the issue of adverse selection[xi] and moral hazard is needed to be addressed.

The information constraints can be exploited at two stages of microcredit. MFIs, who are heavily depending on the government and donors for the funds and who also are working at a very high costs and seem far from sustainable may be the cases of moral hazard or adverse selection. The second case of the exploitation of information constraint can well be the borrowers or micro enterprises, who are getting the money from MFIs, because by doing so they can get away with strictly positive rents whereby work at a high costs that would have been their costs had they been inefficient.

Notes

[i] Micro Finance is the provision of a range of financial services such as deposits, loans, payment services, money transfers, and insurance to poor and low income households and their microenterprises, Micro Credit/Finance Institutions (e.g., rural banks, credit unions, cooperatives, village credit societies, NGOs, and charities etc) are defined as institutions whose major business is the provision of MF services.

[ii] For more detail please see Christen, Ryne, Vogel, & McKean (1995)

[iii] Where as the most successful path breaking MFIs i.e., Grameen Bank (Bangladesh), BancoSol (Bolivia) etc, have transformed themselves into regulated financial intermediaries that incorporate deposit services as a growing part of their services

[iv] e.g., Please refer to the discussion about the MFIs working in our sample region (South East Asia) discussed in the Appendix.

[v] In recent years there is an increased interest in the literature of finance to measure determinants of efficiency of financial institutes, especially commercial banks, to identify the institutions which are both cost and profit efficient or to know the characteristics of efficient banking. (see for example Isik & Hasan, 2002; Esho, 2001; Sathye, 2001; Rime, 2001; Altunbas, Liu, Molyneux & Seth, 1999; Berger & Young, 1997; Spong *et al.,* 1995). Such analysis enabes the author to also extract the more efficiently sustained banking

methodologies. Thus similar analysis on MFIs will give us information about their viable path towards sustainability.

[vi] For example high collateral requirements.

[vii] For further details, see Berger & Humphrey (1997) and Berger *et al.,* (1998).

[viii] WTO accession will increase foreign investment in developming countries as trade liberalisation lowers production costs and the price of capital goods. And increases the rental rates, resulting in rising returns to capital, McKibbin & Tang (2000) and Walmsley, Hertal & Ianchovchina (2002).

[ix] The South East Asian countries lost market share in textiles and apparel in japan, where China's exports of textiles and apparel are not quota constrained, Ianchovichina & Walmsley (2003).

[x] Since the demand for labor intensive goods will increase in the liberalised scenario- it means that the increased amount of small businesses venturing in the labor intensive products would lead to higher level of employment for unskilled labour. And unskilled labour are mostly less trained or less educated and would have a quite high probability of coming into the poverty line or under the definition of being poor.

[xi] Adverse selection allows the firm to extract a rent from its interaction with government even if its bargaining power is poor. (Laffont & Tirole, 1993).

Appendix

Micro finance industry in South East Asia[xi]

Bangladesh

It was 1976 that the first Grameen Bank project was established and, in time, demonstrated that lending to the poor could be an economically viable activity. Its experience was followed, in Bangladesh, by the establishment of other major micro finance programs by some of the existing NGOs with large multi-sectoral programs, such as the Bangladesh Rural Advancement Committee (BRAC) and Proshika. The success of these programs led to the rapid replication and multiplication of microfinance throughout Bangladesh both by NGOs with multi-sectoral programs and by specialized NGOs, newly established as MFIs on the Grameen Bank model. However there are no reliable data on the size or outreach of the microfinance sector in Bangladesh. Estimates of the number of NGOs with mf programs in Bangladesh (henceforth refered to as MFIs) range from 500-600 to over a thousand. The Credit and Development (CDF), a Dhaka based MFI networking organization, makes a valiant attempt to keep track. Its statistical booklet provides self reported, and partially verified, info from 524 MFIs. These include all the well-known large MFIs in Bangladesh and it is, therefore, likely that coverage is of the order of 95 percent of NGO mf activity in the country. Interestingly, the CDF statistics show the organizational concentration of MFI activity in Bangladesh: the membership of the top 20 organizations on its list is 83 percent of the total for 524 MFIs and loans outstanding are 88%. The micro finance outreach of CDF's 524 reporting MFIs amounts to an active membership of 8.7 million in June 1999. Add to this 2.4 million members of Grameen Bank, 1.3 million members of five ongoing Bangladesh Rural Development Board (BRDB) projects, and 270,000 members of the Ministry of Youth's Thar project, and the total MF coverage reaches some 12.7 million families. Government of Bangladesh's estimate is that 47 percent of the population, or some 9.9 million families of a total of 126 million people or 21 million families, are poor. If that is correct, micro finance services reach over 80 percent of them.

India

Bankers and senior government officers are fond of describing the Government of India's main poverty alleviation program, the Integrated Rural Development Program (IRDP), as the world's largest program for providing micro-loans to poor people. In nearly 20 years, it has resulted in financial assistance of around Rs250 billion to roughly 550 families. In addition over the past 20-25 years, and more rigorously during the 1990s there was advent of significant number of NGOs into MF. Current estimates of the number of NGOs engaged in mobilizing savings and providing micro-loan services to the poor- roughly since 1994- lie in the range of 400-500 organizations. Initially, many of these NGOs were funded by donor support in the form of revolving funds and administrative grants. In recent years, the National Bank for Agriculture and Rural Development (NABARD), the Small Industries Development Bank of India (SIDBI), and microfinace promotion organizations such as Rashtriya Mahila Kosh (RMK, the National Women's fund) have also started taking an active interest in providing bulk loans to MFIs. This has resulted in MFIs becoming intermediaries between the largely public sector development finance institutions and retail borrowers living in rural areas or urban slums. In another model, NABARD has taken to refinancing commercial bank loans to self-help groups (SHGs) in order to facilitate relationships between the banks and poor borrowers.

MFIs in India operate in a situation that is characterized by some 60 million families living below the poverty threshold- perhaps 35 percent of the country's population. Yet, the cumulative outreach by MFIs to such families is no more than 1.5 million (2.5 percent). Thus, even without attempting any estimate of the effective demand for micro finance services among the poor, it seems there is likely to be a huge demand-supply gap for credit as well as a failure to exploit the potential for savings.

Pakistan

Approximately 42 percent of the 130.6 million population in Pakistan are affected by poverty. As in many Asian countries, there are not yet many compelling examples of MFIs, be they government organization, NGO or bank, that have developed a product and methodology that has proven to be financially sustainable and capable of reaching significant number of micro enterpreneurs. However there is nonetheless an interesting range of models and products, and the industry is young and still experimenting.

According to the MF Pakistan Report (SEBCON 1999), NGOs working in micro finace can be grouped into three tiers. The top includes the large regional rural support programs (RSPs). The original NGO is the Aga Khan Rural Support Proramme (AKRSP) that is located in the Frontier and Northern Areas. The next tier consists of those working in several districts of one province. The include the Orangi Pilot Project (OPP) working in the slums of Karachi and Kashf Foundation based in Lahore. OPP is the only major NGO in Pakistan, which does not require savings by its group borrowers. Then there are thousands of village level development NGOs with little knowledge of micro finance other than their beneficiaries need access to credit.

There are at least seven banks that are currently providing financial services to micro enterprenuers in some form. They are Habib Bank, First Women bank, First Investment Bank< Agricultural Development bank of Pakistan as well as the National Bank of Pakistan, Bank of Kyber and Bank of Punjab. Under the State Bank of Pakistan's prudential regulations, banks are able to make uncollateral requirements for micro-entrepreneurs' access to bank finance is not present.

There are two leasing companies in Pakistan that reach the MF market; both are listed on the stock exchange. Orix is larger with a net cash flow from operations of Rs134.5 million at June 1998 and a net profit of Rs. 103.9 million. It also serves medium-size businesses. Network Leasing Corporation is smaller and only focuses on the micro and small market with net cash flow from operations of Rs. 5.9 million at June 1998 and a net profit of Rs. 8.1 million. These companies usually lease lathes, fax machines, sewing machines, and refrigerators to microentrepreneurs, with a value of around Rs, 11k-40k for 3 years. Specifically, as of June 1999, Network Leasing Corporation's average lease size was Rs 181k and 22 percent of the portfolio was leased to women.

Sri Lanka

Both the commercial banks and Regional Rural Development Banks (RRDBs) have been used as conduits for government poverty alleviation programs involving elements of credit. Thus, the Janasaviya program, which operated from 1989 to 1994, included MF disbursed through the state commercial banks and RRDBs, among other conduits. The Janasaviya Trust Fund (from 1991) and its successor, the National Development Trust Fund (to end-1997), relied heavily on rural branch banking networks for disbursements. Another major government program, Samurdhi (from 1995), relies on credit managed by the two state banks, while the Small Farmers and Landless Credit (SFLC) project (from 1990) employed RRDBs as conduits.

There were 1, 418 Cooperative Rural banks (CBRs), small institutions affiliated to multi-purpose cooperative societies, at the end of 1999. They are effective moblizers of savings, with more than 5.3 million individual savings accounts (in a population of about 19 million). They held more deposits than RRDBs. CBRs have been an important source of liquidity for People's Bank, the state institution which was their handling bank until 1992.

There are also a number of substantial and well performing NGOs providing MF in Sri Lanka, both on their own account and as agents for government and externally financed programs. These include Sarvodaya Economic Enterprises Development Services (SEEDS) and Janashakthi.

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