Cross-country differences in income inequality: Where do South Asian countries stand?

Selim Raihan

In recent years, there has been a growing interest among general people, researchers and policy makers in income inequality, its causes, and its effects. The most popular index of income inequality is the 'Gini index' which measures the inequality among levels of income of the people of any country. A Gini coefficient of zero means perfect equality, where everyone has the same income, and a Gini coefficient of 1 (or 100%) expresses maximum inequality.

For meaningful comparisons among different countries with respect to their levels and trends in income inequality we need comparable data. National surveys on household incomes and expenditures in different countries provide data on the Gini index of these countries for some years. However, we are not in a position to use these data for cross-country comparisons due to various reasons. In those surveys there are differences in the population covered, differences in coverage on geography, age and employment status, differences in the definition on welfare (whether to use market income or consumption data), differences in the use of equivalence scale (whether to use household per capita or household adult equivalence), and differences in the treatment of various other items, such as non-monetary income and imputed rents. The Standardized World Income Inequality Database (SWIID), introduced in 2008, provides a dataset on income inequality that facilitates comparability for the largest possible sample of countries and years. A custom missing-data algorithm is used to standardize data on cross-country income inequality using the data from national surveys (Solt, 2016). The SWIID database, the World Economy Database (WED) version 9.1 has generated a time series database on the “Gini index” for 207 countries over the period between 1970 and 2015 by filling missing observations with the help of different estimation methods.

Using the WED 9.1, we have produced a scatter plot diagram with data on Gini indices for 207 countries in 1980 in the horizontal axis and data on Gini indices of the same countries in 2015 in the vertical axis. In the scatter plot, dots around the 45 degree line are the countries with 'no or very small' changes in Gini indices during 1980-2015; dots above the 45 degree line are the countries which experienced an increase in the Gini index; and finally, dots below the 45 degree line are the countries which experienced a decline in the Gini index. Out of those 207 countries, 18 experienced 'no or very small' changes in Gini indices, 109 experienced increases and 80 experienced declines. Among the 8 South Asian countries, 5 countries (Afghanistan, Bangladesh, India, Pakistan and Sri Lanka) observed rises while the rest 3 countries (Bhutan, Maldives and Nepal) experienced declines. We also brought China and South Korea into the picture, and it appears that the Gini index in China increased quite astonishingly, whereas that of South Korea declined.

We have also categorized the values of Gini index as follows: a Gini index value lower than 30 is considered low; an index value between 30 and less than 40 is considered medium; an index value between 40 and less than 50 is considered high; and an index value above 50 is considered very high. Depending on these classifications, we can observe some interesting movements of the South Asian countries during 1980 and 2015. Afghanistan moved from a status of low inequality to medium inequality; Bangladesh moved from medium inequality to high inequality; though Nepal, Pakistan and Sri Lanka remained within the medium inequality range, Sri Lanka was at the border of high inequality; India moved from high inequality to very high inequality; and both Bhutan and Maldives moved from very high inequality to medium inequality. In comparison, China moved from low inequality to very high inequality, whereas South Korea moved from medium inequality to very close to low inequality. We also explored the factors affecting inequality in the cross-country and over time contexts. Results from a fixed effect panel regression suggest that while rise in the real GDP per capita tends to have a small negative association with the Gini index, an increase in both life expectancy at birth and net secondary school enrollment are strongly associated with the decline in the Gini index. These suggest that, an increase in per capita real GDP is not a guarantee for the reduction in income inequality, whereas investment in social infrastructure with the aim of raising the life expectancy at birth and a rise in secondary school enrollment can be very instrumental in reducing income inequality.

Reference


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Does employment status matter for the wellbeing of rural households in Bangladesh?

Selim Raihan and Fatima Tuz Zohora

In rural Bangladesh, a great challenge is to tackle the low pay, poor-quality jobs that are unrecognized and unprotected by law, widespread underemployment, the absence of rights at work, inadequate social protection, and the lack of representative voice. There remains a big question whether poverty in rural Bangladesh is concentrated in certain employment categories. Our paper uses the data from the Bangladesh Integrated Household Survey (BIHS) of IFPRI. This data are nationally representative data of rural Bangladesh for the year 2011-2012 where the sample size is 6,500 households in 325 primary sampling units (PSUs). The reason for using the BIHS database for this study is that this is the latest available survey data on rural Bangladesh. Our paper has attempted a systematic analysis in understanding the association between employment status and wellbeing of rural households in Bangladesh.

From the BIHS data, our study has used consumption expenditures as the principal indicator of household economic status or wellbeing, and has used per capita consumption expenditure as the proxy for income. The total consumption expenditure is measured as the sum of total food consumption and total non-food expenses excluding lumpy expenditures. Income (expenditure) deciles have been created by dividing the households into ten groups from the lowest to the highest in terms of households’ total income. Employment statuses have been constructed for those household heads who are able and eligible to participate in the labor market. By definition, the labor force consists of everyone above the age of 15 who is employed (including individuals working without pay) or unemployed but actively seeking employment. Household head, not counted in the labor force, includes individuals working without pay) or unemployed and discouraged workers who are not seeking work.

The distribution of the different employment categories in the labor force is shown in Figure 1. In the x-axis, 10 deciles are organized in ascending order on the basis of monthly consumption expenditure of the rural households. Therefore, first decile is the poorest one and the 10th decile is the richest one. The figure summarizes that, while wage employment is mostly concentrated in the poorer deciles, self-employment is concentrated mostly in the richer deciles. Salaried employees maintain smaller shares among poorer deciles.

Figures 2 and 3 show the educational status of male and female workers by employment categories in the rural areas. Males with no education seem to be highly concentrated in wage employment in both farm and nonfarm sector. They are also densely present in self-employment activities. In the salaried employment category, the dominant share is of males with less than secondary level but higher than primary education. However, males with HSC and beyond HSC account for around 25% of salaried employment. Females with no education also seem to be highly concentrated in wage employment (Figure 3). Females with less than primary education has a dominant share in the case of unemployed (55.56%). In the case of the unpaid family job for female adults, around 28% of them are with less than secondary but higher than primary education.

In order to investigate the factors affecting wellbeing of rural households in Bangladesh we have used the cross section multinomial logistic regression models. The income status of the household is considered as the dependent variable, where per capita consumption expenditure is used as a proxy for households’ income status. For the explanatory variables, we have used different categories of employment of household head e.g. wage labor in the farm and nonfarm sector, self-employed in the farm and nonfarm sector, salaried worker and unpaid worker. All of these variables are dummy variables, where ‘unemployed’ has been considered as the base employment status. Other explanatory variables are age of household head, years of education of the head, number of dependent members per household, per capita landholding and a dummy variable on whether the household receives international remittance or not.

The major findings from multinomial logistic regressions can be summarized as follows. First, wage employment in the farm sector has statistically significant association with all income deciles between 6 and 10. However, such employment status doesn’t have any statistically significant association with income deciles between 2 and 5. For a wage worker in the farm sector, relative probabilities to be in deciles 6, 7, 8, 9 and 10 are respectively 39 percent, 44 percent, 75 percent, 85 percent and 90 percent lower than to be in decile 1. The result depicts the fact that wage employment in the farm sector are more concentrated among the poorer households and doesn’t play any pivotal role in shifting up the status of a household. The result is quite analogous for the wage-employed in the nonfarm sector too: if the household head is employed in nonfarm activities, the relative probability to be in the deciles 9 and 10 are 62 percent and 78 percent lower (respectively) than to be in decile 1. Second, in case of self-employment, if the household head is engaged in the farm sector, the relative probability to be in decile 10 is 44 percent lower than to be in the base decile 1. This association is insignificant for all other deciles meaning that, self-employment in the farm sector does not necessarily improve the income status. On the contrary, if the household head is self-employed in the nonfarm sector, the relative probabilities to be in deciles 3, 4, 5, 6, 7, and 8 compared to the base category are higher by 90 percent, 86 percent, 124 percent, 84 percent and 72 percent respectively. It shows that, self-employment in nonfarm sector has a strong transitory power to improve household wellbeing.

Third, when considering salaried employment, the study finds a significant influence of salaried employment over shifting the well-being status from income decile 1 to higher income deciles. On the other hand, if the household head is employed as an unpaid worker the relative probability to be in deciles 8, 9 or 10 is more than 80 percent lower than to be in the decile 1.

Finally, among other variables, household characteristics like age of the head, dependent member per household, per capita land holding and remittance status hold significant impact on the nature of economic status of the household. If the age of the household head increases by one additional year, the relative probability to be in the top four deciles compared to the decile 1 increases by around 1.2 percentage points. It is also seen that, with the rise in number of dependents in a family the relative probability of the household to be in a higher decile compared to decile 1 becomes lower. The regression results also suggest that, education and international remittances play a role of pull factor in case of shifting household status from the lowest decile to upper deciles. An increase in the years of education of the household head by one additional year increases the relative probability to be in decile 2 compared to decile 1 by 10 percentage points; whereas, for the same increment, the relative probability to be in decile 10 compared to decile 1 increases by 35 percentage points. In case of remittances, households that receive remittance have more than 3 fold relative probability to be in decile 4 or above. For the remittance receiving households, the relative probability to be in decile 10 compared to decile 1 is more than 25 times higher than a household that does not receive remittances. Along with these, per capita land holding appeared as an important household characteristics that can help a household to be on the higher deciles.

The findings of this paper provide a significant indication that rural nonfarm sector has a crucial role in reducing poverty and increasing the wellbeing of the rural household in Bangladesh. The study also specifies the importance of addressing the concern in the national policy making that poverty in rural Bangladesh is highly linked with certain employment categories.

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"... A growth can be poverty reducing and at the same time inequality increasing—which is the case of Bangladesh..."

Dr. Binayak Sen is a Research Director of the Bangladesh Institute of Development Studies (BIDS). He has served as a Senior Economist in the South Asia Region of the World Bank as a regular staff member, and a Visiting Research Fellow at the Research Administration Department of the World Bank. He has also served as a consultant for the Asian Development Bank, UN-ESCAP, UNDP and the WHO. Dr. Sen has played an active role in various high-level national committees and commissions for the government of Bangladesh. SANEM discusses with Dr. Sen regarding inclusive growth, poverty and inequality from the perspective of Bangladesh.

SANEM: Why is inequality a concern?

BS: Inequality can be a concern for several reasons. First, if initially there is a very high level of inequality it will most likely depress subsequent economic growth. However, the level at which initial inequality becomes a binding constraint, is a matter of debate. In some opinions, if initial inequality crosses Gini ratio 0.57, which was historically observed in Brazil, then that would dampen economic growth. Therefore, we should not let inequality go out of hand and cross a threshold level. Second, even a moderate increase in inequality will dampen the rate of poverty reduction. You can statistically decompose the change in poverty into the change in growth component and change in redistribution component. If there is an increase in inequality, it will most certainly reduce the pace of poverty reduction. If we want to achieve ‘SDG goal 1’ regarding zero poverty, then even a moderate increase of inequality from the present high level could be a concern. Third, inequality destabilizes a society, reduces social cohesion and social capital. Thus, through this channel, it also reduces economic growth rate. Lastly, neither ‘income inequality’ nor ‘consumption inequality’ are big concerns per se. The main reason why development economics is so concerned about inequality is ‘asset inequality’. If there is a persistent asset inequality (say) in the distribution of human capital, or inequality in accessing the credit market, then it will dampen the possibility of intergenerational mobility and cause intergenerational inequality. But unfortunately, there are no active measures for estimating asset inequality in countries like us. It may be mentioned that the implementation of some of the recently in vogue measures of income inequality also suffer from severe statistical problems. For instance, the Palma ratio compares the richest 10% of the population’s share of income to the poorest 40%’s share. However, in Bangladesh the richest 10%’s income is much under-reported (no sample was taken from Gulshan, Banani and Baridhara—the three richest areas of Dhaka city in 2010 HIES).

SANEM: Is growth in Bangladesh inclusive?

BS: There is no consensus in literature to define inclusive growth. At one point of time poverty reducing growth was being termed as pro-poor growth. And that was the standard World Bank approach to measure inclusive growth. ADB had a different approach where they termed a growth as inclusive if it reduced Gini coefficient or any acceptable index of inequality. On the contrary, in one of my papers I reviewed that equal weight should be given to both ‘equality of outcomes’ and ‘equality of opportunities’. In one strand of literature, inequality of outcomes is not given any due weight; it is inequality of opportunities that is given the maximum weight. In my view, both should be given equal weight. Now, a growth can be poverty reducing and at the same time inequality increasing—which is the case of Bangladesh. However, we should be trying to minimize the inequality’s negative effect on poverty reduction.

SANEM: Why is inequality on the rise in Bangladesh?

BS: In my view, corruption is the main driver of rising inequality. This is because corruption means unearned income. Distribution of unearned income is much more skewed than the distribution of earned income based on skill differences. When governance deteriorates in a country the unearned income poses a larger share in the overall income portfolio. That is what is happening in Bangladesh. This misgovernment didn’t matter as much for growth acceleration but it mattered a great deal for income deterioration. Therefore, I think the trend of income deterioration is largely fueled by misgovernment. In addition to that, not everybody in our society has equal access to opportunities such as education or skill formation. Therefore, these types of marketable skill differences and/or human capital differences will have an effect on future occupational choice and future productivity difference between the rich and the poor. Unequal access to the financial capital has also played a role in this connection. Some people have much wealth and easy access to capital while poor people are not getting any sort of financial access and hence they are probably getting stuck into sub-optimal production activities or occupations. This is especially true for those who are coming from the marginalized class of society. Another stimulating factor is the division of education system into English, Bengali and Madrasa medium. The returns to education from these mediums greatly vary and have intergenerational impact on heightening inequality.

SANEM: What measures are needed to reduce differences in returns to education in Bangladesh?

BS: This is an important issue. The lowest return is exhibited by female madrasa students, then the male madrasa students, then the Bengali medium students. The highest returns to education is exhibited by the English medium students. To what extent these differences are due to the branding effect and to what extent it is genuinely attributable to the skill differences is a subject matter of further research. Although we have successfully achieved some of the elementary deprivations captured by MDG indicators enormous challenges lie ahead. For instance, we mostly focused on enrolment rate. However, we have not been successful to that extent on the completion rate. Therefore, from the perspective of access to primary and secondary education, there is still a big gap between the rich and the poor or the poorest. This gap is further encouraged by the upbeat trends in wages. Due to tightening of the labor market since 2007 and 2008 agricultural wages for male workers have gone up tremendously in rural Bangladesh. As a response to that, many male students from poorer community are leaving schools to get the immediate benefits of higher wages. It could be one of the contributing factors for improved gender parity in secondary education. It also points out the need for second chance education. Our education system should be more accessible: it should provide second chance schooling of acceptable quality. Lastly, if we cannot do anything about equalizing madrasa and non-madrasa education standards, we can at least connect madrasa education with technical and vocational education.

SANEM: Does international remittance increase inequality in rural Bangladesh?

BS: International migration has a sure impact on rise in inequality. Prof. Osmani and I have estimated that about 70% increase in rural inequality in the decade of 2000s is contributed by unequal opportunity of international remittances. The households who have at least one member abroad are actually far better off than the households without such access. It takes a lot of resources to send a person abroad with work permit. Poorer households do not have access to that kind of initial capital to self-finance migration or access borrowing for migration financing to take advantage of the international labor market. Therefore, from that perspective I find that a broad based migration financing is very important policy option which will specifically target the poorest regions and poorer families. Government has started something in this sector in terms of distributing migration opportunities for lagging districts but I don’t think this is adequate to the problem we are discussing. In case of domestic migration, some recent studies have tried to explore whether giving financial support to migrate to cities is a better option for reducing poverty compared to giving finance for self-employment in rural areas. They found migration finance to be a better option. This intuitively sounds to be true because migration will allow prospective workers to be employed in the fast growing urban economies where the wage is far better and more secure.

SANEM: How can we tackle the rise in inequality in a market economy? Is it an inherent problem of capitalism?

BS: If we want to tackle inequality one instrument could be the tax instrument. We all know that our tax-GDP ratio is miserably low at 10-11%. As a result, our public expenditure-GDP ratio is also very low at 15-16%. In all developed capitalist countries, public expenditure as proportion of GDP is very high—in the range of 40%-55 %. That means, they spend a quite significant share of their resources for the welfare of their citizens such as public education and public health care. In Bangladesh these types of spending demands lots of subsidies and those subsidies are paid by redistributive taxes. In those economies direct tax constitutes over 80% of the total tax revenue. In addition, in countries like USA and UK they have other redistributive tax instruments such as wealth tax, inheritance tax, etc. In Bangladesh, we have something similar—the instrument of ‘surcharge on..."
income tax’ conditional on the value of assets exceeding 20 million Taka. However, this tax instrument is not at all effective—value of assets is grossly underpriced and only a tiny fraction of tax payers has been covered by this route (only 11,500 pay some surcharge on their income taxes). Even within the capitalist framework the expectation of last 50 years has been mixed in this respect. Some countries have performed very well in terms of redistributive taxation. At some point, the Gini ratio of Sweden was 0.21—very similar to the Gini ratio of income in the former Soviet Union. Hence, both conventional state-socialism and Scandinavian capitalism had more or less similar effects on income inequality. Therefore, it is wrong to claim that nothing can be done about inequality under capitalism. Policies and the role of government can make considerable difference. And that’s why most of the opinions now argue that the ‘Kuznets process’ (first inevitable sharp rise and then gradual fall in inequality) is not inevitable.

SANEM: What to do to reduce inequality in Bangladesh?

BS: There can be a variety of policies to reduce asset type inequality. Some actions would be promotive type while others would be protective type. Promotive type of actions may include promotion of quality human capital for all segments of population. There should be options for second chance schooling for the drop outs. There should be a greater integration with technical and vocational education system. We should be a member of PISA (Program for International Student Assessment) so that we can compare our education standard with other countries. The other block for reducing inequality would be to increase access to the broad based financial capital for the poor and the lower middle class. There should be separate credit window for the small and medium producers other than the microcredit route. Protective type of actions include social protection, but also shielding the poor from the encroachment of the rich and the wealthy. The government has to salvage the banking system from the encroachment of large defaulters. Mobile banking and other technological innovations can be used for retailing loans (as well as cash transfers earmarked for social protection) to the poor and the poorest. We have to stop corruption (especially corruption due to illegal and privileged access to public assets) with strong political will. There should be some investment for the housing of poorest segment of the population as well. This should be backed up by public investment in the development of transport infrastructure so that the poor can commute to cities on a daily basis while residing in the peri-urban and rural areas. My last word is that, without inclusive citizenship you cannot have an inclusive society, inclusive development and inclusive growth where the problem of inequality is effectively tackled.

SANEM: Thank you very much.

BS: You are welcome.

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**Call for Applications for the 9th South Asian Training Program on CGE Modeling**

Cox’s Bazar, Bangladesh, 12–16 November 2016

We invite applications for the “Ninth South Asian Training Program on CGE Modeling” from 12-16 November 2016 in Cox’s Bazar, Bangladesh. The program will be organised by South Asian Network on Economic Modeling (SANEM), Dhaka, South Asia Watch on Trade, Economics and Environment (SAWTEE), Kathmandu and the Centre for WTO Studies (CWS), New Delhi. The objectives of this training program are to impart basic knowledge of theory and applications of CGE models to researchers in South Asia, enhance policy research capacity using CGE models on issues related to the interlinkages between trade, climate change and food security, and expand the network of South Asian researchers.

**ELIGIBILITY:** Applicants should have preferably a Masters degree in Economics or a related subject and a good knowledge of applied micro and macro-economics. While no previous knowledge of modeling is assumed, applicants must have research experience in trade, climate and development issues. Preference will be given to candidates who have experience in using quantitative research tools. As this training program is tailored for early career researchers, participants aged 40 years and older are discouraged to apply. Applicants from South Asia and outside of South Asia are eligible to apply.

**APPLICATION PROCESS:** Interested candidates are requested to submit Completed application form, Recent CV/resume (not exceeding four pages), Letter of expression of interest to sanem.conference@gmail.com by 15 September 2016.

**COURSE FEE AND EXPENSES:** The standard course fee is US$500 per person.

**FUNDING:** The deadline of application is 15 September, 2016, and different funding options are available for deserving candidates.

**SELECTION RESULTS:** The selection results will be announced by 30 September 2016.

**INSTRUCTOR:** Dr. Selim Raihan, Professor, Department of Economics, University of Dhaka and the Executive Director, South Asian Network on Economic Modeling (SANEM).

**SANEM Conference**

Bangladesh?

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**National Consultation for the Royal Kingdom of Bhutan**

Dr. Selim Raihan, Executive Director, SANEM and Professor, Department of Economics, University of Dhaka participated in the national consultation for the Royal Kingdom of Bhutan held on 12 August, 2016 at Thimpu, Bhutan. The Secretariat of the South Asia Sub-regional Economic Cooperation (SASEC) Program based on ADB coordinated with the six SASEC country members to conduct national diagnostic studies on sanitary / phytosanitary (SPS) and technical barriers to trade (TBT) measures, currently in place in South Asia. These diagnostics fall under Pillar 2 of the SASEC Trade Facilitation Strategic Framework 2014-2018, that seeks to address constraints and challenges in standards and conformity throughout the SASEC region.

**Introduction to Gravity Model for Trade Policy Analysis Workshop held in Mongolia**

The capacity Building Workshop on “Introduction to Gravity Model for Trade Policy Analysis Workshop” which is the first among the series of workshops on “The Gravity Model as a Tool for Trade-Policy Analysis” was held during August 22-26, 2016, in Ulaanbaatar, Mongolia. The workshop was jointly organized by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and financed by the Federal Ministry for Economic Cooperation and Development (BMZ) along with the kind cooperation of ESCAP Bangkok. Dr. Selim Raihan, Executive Director, SANEM and Professor, Department of Economics, University of Dhaka was the facilitator of the workshop.