An Unbiased Pareto Improvement strategy for poverty alleviation

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Abstract

There are historical and institutional reasons behind our economic problems like poverty and environmental damage but it is not acceptable if they persist in years to come. The strategic use of information by individual economic agents establishes a biasing effect on our economy. In case of poverty, economic efforts of poor people are continuously undervalued and therefore, true welfare across an economy cannot be achieved without protecting the poor people for their immediate economic needs and simultaneously counteracting the biasing forces. This article describes an Unbiased Pareto Improvement (UPI) strategy to be implemented across an economy and eventually across the world to solve poverty problems. This strategy describes making business opportunities involving poor people as well as helping government to set up pro-poor economic policies and infrastructures. A new indicator RICR (Real Income to Contribution Ratio) is introduced to measure its performance.

1.0 Introduction

There are lots of enthusiasms about micro-credit and recent 'social business' introduced by Nobel Peace Prize winner Muhammad Yunus to solve the big challenge of poverty alleviation. The limitations of micro-credit concept are briefly discussed here in the context of its thirty five years of operation in Bangladesh. A massive introduction of social business at this point of time is the similar challenge as poverty alleviation itself since it requires fostering 'selflessness' nature of human beings by lining up philanthropist entrepreneurs for doing these businesses (Yunus, 2010). Unfortunately, we have created a virtual bonding among non-poor people based on 'self-interest nature of human beings' in the process of formation of our capitalist world. As stated by another Nobel Prize winner Amartya Sen that "there is a problem of poverty to the extent that it creates problems for those who are not poor and the real tragedy is, the non-poor people try not to allow the poor people to become so poor (Sen, 1981)". The solution of poverty much lies in weakening and opposing formation of this bonding when to allow free flow of goods and services across the globe. What will be the best path to reach there? What will be role of a government throughout the journey to that direction? How can we measure the performance of the progress? This article addresses all these questions and proposes a realistic strategy to solve our poverty problems including a prototype implementation processes at the end.

2.0 The Challenge of Poverty Alleviation

Poverty is an institutional failure not from the part of the poor people. Consider the poverty scenario in Bangladesh. Lack of strong institutional (particularly government) presence to support poor people in their immediate needs, many of them became victims of mohajons (the local loan sharks) and eventually lost their lands. Even nowadays there is none to help the poor people who need money to pay for their immediate needs like medical bills, outstanding rents or dowry for daughters wedding except those mohajons. A typical cost of borrowing is $1 per month for $5 that is 140% per year. A borrower then scrambles for paying the interest for months after months and virtually he becomes a bonded slave to the mohajons. Sometimes this is the only quick source of money to the urban poor people since micro-credit organizations are not lending money to them due to their unsettled life. The mohajons are backed by local political parties and local informal institutions and therefore, their presence in rural, suburb and slum areas in Bangladesh are so deep rooted that they are enough reasons for creating and nurturing poverty.

The micro-credit programs introduced by Muhammad Yunus thirty years back in the early 1980s appeared as comfortable substitute of the mohajons and targeted to rescue the landless people. Grameen Bank the iconic institution for micro-credit founded by Yunus gives loan to rural poor people for cow rearing, paddy husking, rural trading that are organizing production there even in small scale. One of a family member takes loan but due to “high” concern within the family in a rural area, the other members virtually share the liability of the loan. That is why normally a loan is given to a woman (97% of 7.0 million borrowers are woman), particularly to a mother whose concern for the family is the highest so that the combined efforts of the family make her able to pay the monthly installments. Thus the micro-credit organizations are working under capitalist framework and become sustainable as profit making company. The fact is only the family members knows how difficult now in these days cope up with high inflation and then to pay the installments over the time. Many of them are just surviving on waves of borrowings shifting from one lender to another.

Despite many micro-credit programs, huge numbers of landless people are migrating from rural areas to urban areas but to live unsettled and uncertain life. It is true that without these programs the number could be much higher. All of the migrant people are very hard workers but they have to live an uncertain life without having savings, health security, education facility etc. For example, in the garments factories of Bangladesh, the women workers work 12 to 14 hours a day for only $25 per month and no other facilities. Many of them have to work all of the holidays just to get a little bonus on top of their small salaries. It is found, not unusually, that many of them are working with severe illness just because hunger is unendurable. Perhaps slavery is better than this because slaves get food without working during their sick period.

One may ask why there is so much relish about micro-credit. Why we are not emphasizing industrial development to create employments, co-operatives and implement pro-poor policies like land reform, progressive taxations etc? Thus the poor people would get higher incomes and stronger supports in their real immediate needs and eventually become less dependent on borrowings. Nowadays after thirty five years of activities, micro-credit programs are blamed for facilitating deindustrialization and infantilisation of the local economy (Bateman, 2010). The fact is, despite all efforts of poverty alleviation by government, non-government or micro-credit organizations, poverty in Bangladesh has reduced 58.8 percent in 1991/92 to 49.8 percent in 2000[1]. This statistics does not include the population who are vulnerable to poverty because of natural disaster or price hike. The rate of poverty reduction was not always consistent. In last thirty years, the poverty has been alleviated by 10%. One news paper commented that if it can maintain the same pace, it will take about 300 years to end poverty in Bangladesh. We are in fact only these many years behind from Muhammad Yunus's dream-"putting poverty in Museums" (Yunus, 2006).

[1] Household Income and Expenditure Surveys (HIES) of the Bangladesh Bureau of Statistics

3.0 Why is Unbiased Pareto Improvement?

The concept of welfare in capitalist economy is called Pareto improvement when a new allocation makes at least one individual better off without making any other individual worse off[2]. The fundamental welfare theorems tell that social gain can be achieved in line with personal gain. The first welfare theorem states that 'under certain conditions any competitive equilibrium is Pareto efficient[3]'. This theorem is considered as analytical confirmation of Adam Smith's invisible hand hypothesis. However, Stiglitz (1991) argued "Smith was undoubtedly right that individuals' pursuit of their private interest lead to social consequences ….but whether it leads to (Pareto) efficient outcomes is a far different manner". However, Yunus's recent realization is that personal and social gains are to be separately achieved to complement capitalist economy (Yunus, 2007). The question is not about whether Yunus is right or wrong but the fact that his proposed social business is a completely separate effort in our capitalist world.

We need to discuss what is good about capitalist economy and how it may go wrong. It connects self interests of individual economic agents for free flow of goods and services across the world. The concept of welfare in capitalist economy is called Pareto improvement. The assumptions of the fundamental welfare theorems (FWT) like perfect information and complete market were never in existence in real world nor possible to exist in future but may be considered as expected characteristics of a market. If we had achieved Pareto efficiency for an economy as per FWT, then everyone would be bettered off at the same time. In one of my previous articles on "welfare dynamics" I pointed out that in real world, the probability of achieving Pareto efficiency for a subset of population was much higher than that for the whole population of a country (Zaman, 2009). This subset was named as Pareto Efficient Coalition (PEC) and the remaining part of population was named as Pareto Improvement Space (PIS). In that model, the poor people of an economy were part of PIS and they were separated by an inefficient equilibrium barrier (IEB) from non-poor people. The concept of IEB was a meeting point of neoclassical economics and institutional economics since methodological individualism could be better applied within the PEC and institutions did matter when the PEC interacted with the PIS.

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[2] http://en.wikipedia.org/wiki/Pareto_efficiency

[3] An allocation is defined as "Pareto efficient" when no further Pareto improvements can be made

This model was further enhanced to describe a “differential market model (DMM)” that our market was not uniform but distributed in layers of energy states. The probability of achieving Pareto efficiency decreased down along the market energy states. A “money market dynamics (MMD)” worked on top of DMM that described how our global economy achieved prosperity over time. As an example, when someone paid for a television he not only bought that but also shared the cost of a new vaccine for a deadly disease or a new technology for building any future infrastructure or services. If MMD was not balanced on its upward (agglomeration property of capital) and downward (distribution property of capital) directions it might create a “Market Loop (ML)” (Zaman, 2009). Inflation of an economy is the reflection of ML but not the complete representation. Financial market of an economy is based on the market loop and a ballooning ML may potentially create a financial crisis.

Stiglitz (1991) described that imperfect information and incomplete markets altered the standard micro-economic results in fundamental ways. However, the extents of imperfections have differential existences in different markets in different time frames. In my book “Economics of Information Biasing (EIB) and Its Application for Poverty Alleviation” it was described that information was much more a strategic tool rather than a given parameter of economic system. In the process of creating capitalist economy unfortunately we could not integrate ‘multidimensional nature of human being (Yunus, 2007)’ but had integrated self interest nature of individual economic agents. It was shown that a social or economic problem could be subjectively modeled as an information biasing chain where individuals were positioned in different abstract coalitions along the chain according to interdependence of their payoff functions. The upper level coalitions of the biasing chain virtually controlled the institutions and they had greater influences on our economy (Zaman, 2010). As Yunus (2007) mentioned if people were given the chance, they would prefer ‘to live in a world without poverty, disease, ignorance, and needless suffering’. To do any better for the poor people in large scale as expected in the social business model, we will have to bring changes in the ‘values framework (Zaman, 2010)’ represented by a biasing chain model through a ‘vertical learning process’.

Development is a progressive process but benefits of development not necessarily touch many people whose contributions for development are not less than others. The outermost layer, where the poor people were placed in my ‘welfare dynmacs” model (Zaman, 2009) was the true PIS separated from the rest of the economy by the toughest IEB. If developed is trapped in a ML, the ultimate victims will be the individuals on the lower or outermost market energy states of the DMM, where IEB will be strengthened. Their situation is further worsened by any financial crisis, recession or natural disaster and eventually more and more individuals fall down to the outermost layer. In such an economy, a huge amount of idle money circulates within limited number of individuals and apparently the country gives birth of money grabbers and suffocating bureaucracy and consequently experience high inflation and corruption. As a result the market loop is reinforced and economic efforts of poor people of a country are undervalued and they again fall in need of money.

The scope of Pareto improvement in the PIS can be defined in two ways. If Pareto improvement is made as an effect of existing biasing, it may be called as Biased Pareto Improvement (BPI). On the other hand, the absolute Pareto improvement that is made independent of any biasing can be called as Unbiased Pareto Improvement (UPI). An important criterion of BPI is that it is measured in price dimension. Here the assumption is that price always conveys relevant information of a market about its products and services. However, in presence of Market Loop, price only convey inflated information not the actual value. Every Pareto improvement has a price dependent and a price independent components. For simplicity, if a target group is bettered off at lower than market price, then it can also be treated as UPI. Any institutional effort has both BPI and UPI components but their combination differs. The first one focuses on better off in monetary values whereas the other focuses on better off in real human value. From income perspective, BPI will be achieved if dollar income increases but in case of UPI, real income has to be increased. The people, who are positioned on the outermost market energy states of a DMM in existing market environment are the poorest and ultimate sufferers of inflation or any financial and environmental crisses. If existing biased institutional structure does not work for them, then we will have to apply UPI to protect and care them. For example, Obama’s health reform proposal accepts the fact that the people who can not cope up with the market biased economic structure need protection for their health care needs. Welfare economics is also an example of UPI but it sees welfare as building human capital that is it treates people as means rather than as ends (Sen, 1997).

The extent of poverty we have now is created by the biasing effects of our capitalist economy and therefore, we will have to go for aggressive UPI for the poor people in a way that protect their immediate economic needs and simultaneously counteract the biasing forces. Charity and donations discretely serves immediate needs in small scale. On the other hand, it is useless to advice a government of a poor country to follow welfare economics not only because it will put huge burden on state funding but also there is very high probability that the money will again be trapped in the pre-existing market loop. At this given level of complexity, I think a better option is to create incentives for our entrepreneurs to extend their existing domain toward poor people apart from BPI. An UPI strategy is proposed in section 5 to be implemented across an economy and eventually across the world to solve poverty problems. The good thing about BPI is that it is market driven and therefore, it has inherent mechanism to scale-up and spread itself. We will have to add more UPI components in it over the time. A new indicator, RICR (Real Income to Contribution Ratio) is introduced in section 4 to measure this performance of an economy.

4.0 Real Income to Contribution Ratio

In neoclassical 'utopia', income and contribution are not distinguished since it inherently considers them as the same things. The price taking behavior of income from a perfectly competitive market, essentially tells that a worker is always paid as per his or her contribution. Therefore, the income to contribution ratio in neoclassical economics can be considered as 1 at any time as shown in the following figure 4.1.

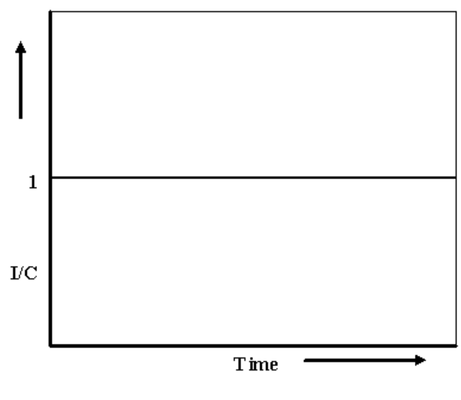

Figure 4.1: Relationship between Income and Contribution in Neoclassical Economics

In case we deal with poverty, the relationship between income and contribution may play a significant role in defining economic performance. The concept of inefficient equilibrium (Zaman, 2009) tells that a capitalist economy streamline flow of capital by underpaying people at the bottom of a biasing chain less than their contributions. Simply speaking, a capitalist economy works in combination of people having income to contribution ratio less than 1 (I/C < 1) and greater than 1 (I/C >1). It does not mean all the people who are paid less than their contribution are poor at least from Pareto improvement perspective but the poor people are subset of this population (I/C < 1).

The concept of capitalism tells that any new capital created in an economy should be distributed in accordance to the ownership of existing capital. Zaman (2008) defined the concept Market Loop (ML) when agglomeration property and distribution property of capital are not balanced. Every economy has certain degree of ML. However, in case of higher degree ML, where almost all benefits of economic development are trapped within certain upper layer market energy states, poverty is a likely phenomenon. In such a situation, even in a growing economy if contributions of the poor people increase over time for whatever reasons like new technologies, new investments or new business opportunities etc, eventually the major part of the money will go to non-poor people and then it will get trapped there. As a result the market prices of all basic goods and services like food, accomodation, education, health care

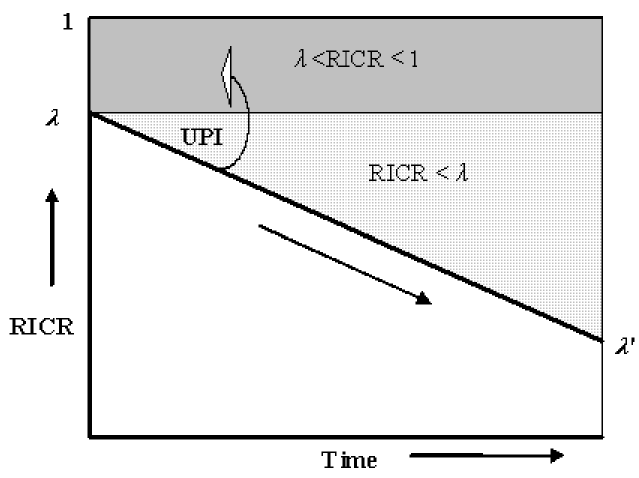

Figure 4.2: Real income to contribution ratio (RICO) in poverty situation

etc., will also increase and consequently, real incomes of the poor people will decrease. To capture this situation in this model, let us consider the term 'income' as real income based on absolute purchasing power of the poor people. Now the ratio discussed here can be called as as '**Real Income to Contribution Ratio (RICR)**'. In this paper, the part of the economy we are concerned about is RICR <1 as shown in Figure 4.2. Let us define a poverty line by using the concept of RICR. The people who have RICR below a certain level, say below **λ**, may be considered as poor people.

Economy of a poor country is likely to be labour intensive. It can be assumed that its growth compulsion requires its poor people to produce at increasing rate over time. In reality, an economy, which already has an strong inefficient equilibrium barrier (Zaman, 2008) between poor and non-poor like the poor countries in Africa, Latin America and South East Asia, most of the additional money gets trapped in its pre-existing 'market loop'. As a result real incomes of the poor people reduce over time, which is refelected by the downward RICR line **λλ'** in time dimension in Figure 4.2. As an example, if productivity of an average individual worker in garments sector of Bangladesh increase by 10% but her salary is increased by 2%, the remaining 8% goes to the owner and his peers. Accumulating the sum from millions of workers is a huge money gets trapped in the market loop, which certainly impacts the prices of all basic goods and services that the workers need and in turn the real income of the workers sharply drops over time.

Precesely speaking, our poverty alleviation strategy should focus on the triangular area above line **λλ''** where RICR < **λ** as shown in Figure 4.2. We will have to increase productivity of our workers and at the same time we will have to increase real income of our workers. At this point of time how can we measure contribution of the workers of an economy if it is not equal of their salaries? Let us simplify our math here. According to the pattern of RICR curve (line) **λλ' ,** we may assume that in some –T time in the past, average RICR of our workers were 1 and in some +T time in future it will be so small that close to zero (when the our workers will be considered as mere "means" of production not a human being at all). In this way since we are now just in the middle between -T and +T and therefore RICR will be 0.5. This value can be used as a reference when we will begin to implement our strategy. The existing market price of some selected basic goods and services can be taken as reference for calculating the real income. Therefore, reference contribution can be assumed as just 0.5 times of average salary of the workers. Alternatively a reference may also be set based on first hand information available in the market. For example, a recent pay scheme in Bangladesh increased minimum salary of the garments workers from $25 per month to $45 per month after four years whereas demad from the workers was to set at $75 since the living costs increased at least three times. Using this figures, RICR can be benchmarked as 0.6 instead. The future contribution can be calculated based on growth of certain labour intensive sectors. The objective will be to improve RICR from the reference value 0.5 or 0.6. For example, a worker's existing salary is equivalent to 10 units of food or 20 doctor visits or 2 months of rents. His sector grow at 20% but employ only 10% additional workforce, that means contribution of existing employees increase at about 9%. In this case, RICR of the economy will increase if their salary is equivalent to 11 units of food or 22 doctor visits or 2.2 months rent etc. It not necessarily mean that this target can be achieved by monetary increase of salary by 9% but can be achieved by making those services available at the cost they can afford. A strategy to improve RICR from existing reference is discussed in the next section.

5.0 The Strategy

"The point of explicitly discussing development strategies is to promote discipline in our thinking about ends and means. We could do worse."-Amartya Sen (1997)

5.1 The Objectives

We may begin with a primary objective that is to improve RICR of the poor people of a country who are directly or indirectly employed or who have continuous earning. This will include factory workers, farmers, rickshaw pullers, housekeepers, day laborers etc. The second objective will be to create new jobs for the poor people and improve their operational holdings over the time.

The existing conditions of the poor people particularly like their average income, average real income and average productivity as well as different other parameters of the sectors they work have to be benchmarked at the beginning. If the factories and the sectors grow or the people they serve improve their lives, then they should get a numerical score in their contribution. To improve RICR, the real income of the poor people should rise at a better rate than their contribution. According to definition of Unbiased Pareto Improvement (UPI), if the poor people are able to buy more values using their unit money than they supposed to be in a biased market, then their real income will increase. There are many ways to achieve that. As an example, the recent health reform bill by president Obama offered narrowly for low income people who can not otherwise afford the cost. Alternatively, private insurance companies might also offer differential lower prices for lower income people. The following strategy especially designed for poverty alleviation for a large number of poor people in a poor country like Bangladesh or India involving private entrepreneurs and government.

5.2 Greenhouse Care Economics

There are historical and institutional reasons behind poverty but it is not acceptable if they persist in years to come. Many economic, social and ecological problems that are created within existing institutional and market structure require steady and aggressive 'unbiased Pareto improvement (UPI)' efforts to counteract the institutional biasing. The concept of 'inefficient equilibrium barrier (IEB)' between poor people and non-poor people of a country narrowly defines where the government should work to bring welfare for them. No other institution can be a better alternative to a government because of not only its policy making capacity but also workforce and infrastructural capacity to improve the RICR. As an example, $1.8 billion agriculture loan was distributed by Bangladesh government in just one year in 2010. Otherwise, the farmers would have to go to the mohajons for this sum at an extremely high interest cost. The most weakness of a government of a poor country is that it is very inefficient in service delivery, which means it needs help in this part. The poorest people have lowest level of economic freedom are vulnerable part of the economy and ultimate suffers of any economic or environmental crisis. If economic growth gives birth of opportunist people, then it will reinforce the market loop and boost up the cost of all products and services increasingly unreachable by the poor people. They need more attention within a protected economic environment for their economic needs so that they can share and hold the reflection of their own efforts. At the same time, if they are exposed to market as a collective body, their collective presence will not only provide an incentive for the existing market to be stretched toward them but also insist government to provide pro-poor policy supports. The economics of protecting and grooming the poor people as collective body was named as Greenhouse Care economics (GhCE) (Zaman, 2001 and 2005). GhCE can counteract and prevent the causes of poverty and ecological damage and provide incentives for the markets, societies and the institutions to change to right direction. The concept of GhCE was aimed to shift generalized focus of economic theories to specific target groups. When an economy requires a change, GhCE asks for what and for whom is the change. Then it suggest how is to achieve the change from existing context. Once the change starts for a target group, it will bring change for all other in the country.

5.3 Greenhouse Care Economics Framework

The objectives defined in section 5.1 can be achieved if a number of institutions either dedicated or undedicated to the poor people collaborate under some defined guidelines. The institutional framework to support GhCE was named as Greenhouse Care Economics Framework (GhCEF) (Zaman, 2010). A realistic model of GhCEF should comply with the market based economy but based on the fact of differential market in pricing and services. The poor people in some ways or other are the major work force of a country's major industrial and agricultural sector but they are deprived of accessing the two basic needs, good health care for their family and good education for their children. To achieve the first objective in section 5.1, GhCEF should translate the real income of the poor people in terms of access to affordable but good quality education and health care. Although these two sectors will require massive restructuring and reform for good services but much of the improvements can be achieved directly through GhCEF.

The politics in India and in Bangladesh are too complicated to make any revolutionary decisions like pro-poor land reform or welfare reform. If a huge number of poor people are steadily and aggressively taken under the GhCEF, the biasing forces and therefore, institutions against them will begin to change through 'vertical learning process (Zaman, 2010)'. That means this framework will work in two ways. Firstly, it will provide comfort level for the poor people and secondly, it will align them together and give signal about their bargaining power to government and other institutions for making and implementing pro-poor economic policies and strategies. This may lead to human development, improvement of health care services, housing facilities and amenities for the poor people and eventually revolutionary outcomes like land-reform.

The concept of GhCE tells that much of the problems the poor people face locally can be attended locally rather than waiting for policy level change. Let us imagine that an economy is composed of many quanta of economics. A geographical region may be considered as a quantum economy. The key of GhCEF will be proper market modeling of an economic challenge based on the concept of 'differential market model (DMM)'. To implement GhCE massively throughout a country, we will need to translate the high level model to further low level based on the real needs and opportunities of each quantum economy. At startup, it will be required to conduct a very comprehensive study to define the criteria of the target people and to narrow down the local needs and opportunities for a particular area. At the beginning we may establish some research and development centers of GhCE in some areas where the primary target people mostly live. The focus of the research and development centers will be to identify local common needs and formulate a framework to integrate them through locally significant programs. For example, by applying self selection (Rothschild and Stiglitz, 1976) method the poor people may be motivated to voluntarily enroll in a database through participation in some prudently designed UPI programs. The database will represent them as an organized segment of an economy so that they can be cared, educated and entertained in an organized way. The next step will be to design the best suitable plan for that quantum economy based on the study result. Once the small sized local projects are locally successful, this framework can be extended to more primary target people through prudently designed local and national level programs. Small scale implementation of GhCEF will be learning for large scale implementation.

An ideal government must ensure education and health care for the poor people. In a under developed country, these two sectors are full of inefficiency and corruption. On the other hand, they are also two flourishing private sectors. In this reality, let's assume that poor people deserve health and education care at the cost they can afford. Thus we can make health and education sector more accountable to the poor people.

This is where we may introduce insurance service for the poor people. A certain percentage of one participant's monthly tiny deposit may be assumed as a premium of his insurance policy. The question may be asked which hospital or school will provide the welfare services to the poor people at a lower cost? A company must provide some welfare to its workers. There is no reason for not choosing existing government subsidized hospitals or schools to provide the health care and education services respectively in GhCEF at the first place. The subsidized welfare services should be continued under GhCEF by introducing different prices for rich and poor people since they are already classified by the framework. Eventually service delivery of the government hospitals and schools will improve. This is how a poor man's unit money can buy more values in terms of welfare. To offset the costs and distribute risks, the insurance service shall also be extended for non-poor people with differentiated premiums and services by setting up another interface.

A huge number of poor people in a country may also be considered as an opportunity for the investors to get the benefits of 'economic of scale' of a big segment of unreached market. On the other hand, when the poor people will go for selling their products and services the GhCE will virtually empower them with collective bargaining power. Eventually, the poor people like share crop workers, small farmers, craftsmen or day workers will be benefited. In developing countries, the welfare expenses and foreign aid programs by the government and non-government organizations are not efficiently managed because of their weak service delivery systems. The dedicated institutions under GhCEF may keep track of the individuals who truly need welfare supports and it may act like a watchdog to supports the low cost insurance service and to improve services and efficiencies of the existing welfare services like health care or education. They can also act as a platform to influence and motivate the existing businesses, corporates or employers to build and support welfare infrastructures beside government.

This framework should accommodate any business opportunity involving poor people as well as social business concept proposed by Muhammad Yunus (Yunus, 2007). It may take more radical step by introducing workers share in their respective manufacturing companies to create dynamics and eradicate poverty. If the low paid workers (whose wage is below a certain level) of an industry share little ownership of the company, a worker's concern to the others will develop a family attitude in a wage employment sector. Therefore, it will not only make them beneficial but also make all other investors of the company beneficial. By course of time a unit industry will have a growth and each of the workers will have more capital to work with. His wage rate will rise along with the rise of his marginal productivity. There will be more income for the workers and ideally, they will not intend to withdraw their capital as long as it will provide higher wages and other benefits. The workers' share must be protected by a legal and policy framework. That must accommodate existing legal and policy framework of corporate business and of course, also accommodate the workers' right to realize commercial value of their share any time on demand by keeping total investment of a production unit intact.

Let us consider a manufacturing company where its workers are lowly paid and however, they are holding a portion of the company's stocks purchased with their tiny savings. If the company's profit is not good, it will not be attractive investments for them. In this situation, let us be a bit imaginative that government decides to give incentives like tax refund equivalent to their proportionate share to their respective accounts in the authorized bank from the corporate income tax. Eventually, the workers collective share will be accumulated more rapidly than that of the original owner. Someday in the period of perpetuity the workers collectively will intend to dominate over the other owners of the company. We may call this tendency as internal dynamics of the company. As shareholders, to get more value of their shares, the workers will prefer machines than men to support the future growth of the industry. Therefore, internal dynamics will promote mechanization and automation in that industry.

The portfolio nature of investment tells that entrepreneurs do not put all of his eggs in one basket. He must withdraw a part of his profit (say, in terms of dividends) from the mother industry for otherwise investments. His investment portfolio will be triggered by the internal dynamics for diversified investments but will create new job opportunities and will absorb new workers. This tendency may be named as external dynamics of an industry. Nevertheless the workers share option will give the workers the opportunity to participate in decision making for more health care, education and other welfare support from their companies. By contributing more on welfare the owner can delay the pressure of workers dominance in the mother industry. The external dynamics will act as a potential source of industrial development and welfare of an economy.

5.4 Greenhouse Care Economics Institute

An aggressive implementation of Greenhouse Care Economics (GhCE) requires standardization of GhCEF. An organization was proposed named Greenhouse Care Economics Institute (GhCEI) for standardization and accreditation of businesses and organizations and processes for large scale implementation and replication of GhCEF (Zaman, 2009). The standards can be set for pricing, compensation, worker's share, welfare contribution, health care, education, employee hygiene, quality of life, legal and property rights and so on. The GhCEI may also be responsible for research & development on GhCE and also for setting up and monitoring standards for businesses and organizations that will follow the concept of 'differential market model (DMM)' and focus poor people as beneficiary. It may also define specifications for government to support that.

The initial proposal for setting up standards for poverty alleviation may come from research and field study by the initial deployment of GhCEF. The GhCEI may define the strict criteria for the target people and specify how is to use and maintain their database. If target people are rightly classified, then it will be lot easier for a government to provide tax credits and welfare support to the right people more efficiently. Similarly it will be lot easier for a business or a service organization to extend its products and services toward them. Therefore, GhCEI compliance may become a "market requirement" irrespective of government enforcement of those standards. In summary, GhCEI will oversee institutions and businesses related to GhCEF whether they are following its defined standards or not. According to the discussion in section 5.3, the organizations related to GhCEF may be categorized in the following areas.

1. Research and Development
2. Financial and Accounting Services
3. Health, Education and Entertainment
4. Workers Share for Industrial Workers

5. Social Business
6. Small Business Support.
7. Consumer products and services

The organizations of areas 1, 4, 5 and 6 refer to dedicated institutes or businesses that will offer products and services for poor people, whereas the organizations of areas 2, 3 and 7 refer to undedicated institutions or businesses that will offer service for poor people by initiating a second interface (section 5.3). GhCEI will oversee the development standards for services, processes, systems for implementation of GhCE by the dedicated and undedicated institutions or businesses under GhCEF. It will also accredit organizations that carry out services or offer products for the poor people in accordance with requirements defined by GhCEF standards. These standards will ensure that the best GhCEF is replicated in all markets. GhCEI will communicate and lobby with policy making organizations like respective government, international organizations like United Nations and associated organizations.

Nevertheless the accreditation by GhCEI will be a big promotion for a business in the market. The GhCEI may not only encourage investors to establish new businesses to offer products and services as listed above targeting the outermost layer but also provide specifications for the existing businesses or companies to formulate new strategies to address the outermost layer. For example, a two layer DMM model the inner layer may represent inner market and the outer layer may represent outer market. In the outermost market, the businesses may be benefited from "economics of scale" to reach huge number of new customers. Therefore, the prices of the same or similar services or products of the outer market will fall and it will always be lower than that of the inner market. In other words, an individual on the outer layer will be able to buy more values by his or her unit money than that of an individual of the inner layer. The lower price in the outer market will be offset by the higher price and enhancement of quality of services or products on the inner market. Thus GhCEI may create a competitive business environment for both quantity and quality, which may result in stronger local market, especially in the developing countries like India or Bangladesh comprising mass population.

6.0 A Prototype Implementation

In my first article about Greenhouse Care Economics (Zaman, 2001), a prototype implementation in Bangladesh was proposed in the following three phases. They are modified in view of the GhCEF discussed in section 5.3.

6.1 Inception Phase

The initial set up of GhCEF should be a dedicated Research and Development (R&D) Center in a certain area. The R&D centre may be converted into a financial institution and motivate the poor people for making tiny savings. The account opening and savings process can be made as simple as collecting stamps so that illiteracy will not be a problem and will not require deployment of lots of field workers. There may be another dedicated institution that will motivate the target people to voluntarily participate in some UPI programs, open an account with designated financial institution and at the same time to register in a database. This is how a comprehensive database of the target people can be made without much cost or effort.

A financial institute or bank authorized by GhCEI may introduce a new interface to provide banking and accounting services for the poor people and eventually can be extended to provide insurance service for them. The GhCEF may pre-define deposit of a participant inclusive of his monthly savings, insurance premium, fees (say, for training) and service charges. Where will the poor people get extra money for making deposits? Initially this will be a challenge. But later, when the poor people from every corner will be registered with this program, a collective bargaining power will be established which will increase their wages or incomes. A portion of their additional income will be saved and on the other hand, their greater propensity of consumption by the rest amount will reinforce investment multiplier. A student of economics can try the concept of demand and supply to find out how then the economy will reach at another equilibrium point and no one will be affected by the increased wage rate.

6.2 Development Phase

Once the inception phase is successfully implemented, the GhCEF can be aggressively extended in urban and rural areas. The objective of this phase will be to introduce new service sectors dedicated to the poor people and simultaneously introducing differential prices for different income segments of the people of the economy. The GhCEI authorized financial and insurance services described in inception phase may also be extended to industrial low paid workers. The services need to be deployed close to the workers grip. In another interface, industry affiliation will open more business opportunities for the banks to provide regular banking services for the company. That is at this phase, we should assume two separate competitive markets, one for the poor people and another for the non-poor people. A number of co-workers can be employed as part-time field agents. This bank may also facilitate to introduce workers share described in maturity phase.

An agrarian economy itself has a limit since the products produced in the rural areas are always undervalued by its semi-subsistence market structure. The agricultural products are sold at few times higher prices in city areas than that the selling price of the farmers. This is because of involvements of many middlemen or intermediary traders in between farmers and the retailers. The GhCEF may engage rural poor people to tunnel the agricultural products to the highly demandable urban market through a comprehensive marketing network beside existing agro-marketing network. This network will serve in two ways. Firstly, this will generate income for the poor farmers and their families in rural areas. Here the objective will not to create competition but to inherit the market price and provide the share of profit to the farmers and to their urban fellows directly or by means of welfare. This is similar to social business concept proposed by Muhammad Yunus (Yunus, 2007). Secondly, the network may become a supply chain for low cost food for the urban poor people to be sold in separate interfaces as like discount stores in developed countries. The GhCEI should set appropriate standards so that both the objectives can be fulfilled.

As discussed in GhCEF that if the poor people are provided quality education and health care, their real income will rise. The service delivery of existing government subsidized hospitals or schools should be upgraded to comply with minimum level of GhCEI standards. Only improving management efficiency of the government hospitals, the medical services can be made far better than existing private clinics since they already have better doctors, technicians and equipments. The contribution of the insurance policies will not be significant from monetary perspective but they must ensure the intended services by means of better co-ordination, surveillance and monitoring of the service delivery.

6.3 Maturity Phase

The economic policies and strategies set by the government of a country define the playground of economic players and dynamicity of the economic game. However the policies do not always work as it was supposed to be. As an example, in Bangladesh, in late 1970s to the beginning of the 1980s, there was a short-lived investment boom with growth at nearly 15 percent annually in real terms by adopting a privatization strategy and lavish dispersal of credit (Mahmud 2001). Eventually that money spread corruption throughout the country and eventually gave birth of “sick” industries and large scale default of bank loans and the money trapped in a “market loop”. Those industries established on that time in different locations are now scrap-heaped around the country. Later on when market-oriented development strategies were adopted, investment in readymade garments industries boomed by using those money but many core industries like jute and textile collapsed. Afterwards investors became more interested in merchandising than in manufacturing. The labour intensive garments factories are making their owners rich very fast but keeping the garments workers in spiral of hardships.

In case of worker’s share, one’s ‘ownership entitlement (Sen, 1981)’ becomes a part of his operational holding that increases with the rise of his marginal productivity. If workers’ share option is introduced under GhCEF, the focus of the economy will change from merchandizing to income-elastic local market. By keeping the share may not provide him high yield but will open up doors for the government initiate pro-worker policies. As described in section 5.3, if the government refunds back the equivalent amount of corporate tax to the poor workers to their respective bank accounts, then a worker’s share will grow more rapidly than that of the original owner. This should be applicable for the primary clients (registered workers) of the bank if they retain their primary shares. The bank will act as an accountant of the workers and keep track of all of their money or dividends. For example, if a company earns 12% after tax profit, then a worker will receive 20% return at 40% corporate tax rate, which will be 8% higher than that of the other common shareholders. In this way, the workers would collectively dominate in the industry as shown in Figure 6.1 and create an "internal dynamics" and promote automation and mechanization in the industry as described in section 5.3.

Nevertheless once the government will start to support the workers with proper policies, the work environment will become supportive for big investments for both local and external market. As explained in section 5.3 that the portfolio nature of investment, the investors will go for investment diversification that is, they will establish new industries based on better technologies and better workforce and in turn will create new employments for new workers. This is how industrial sector in Bangladesh may experience dynamic growth.

Let us continue the exercise and see a simulation result where each of 200 workers in the industry contributes 7,000 units of money for buying part of their company's share. Say, the original owners' total capital is 100 million units money. Then the total capital in the company is 101.4 million units money. If the industry makes 15% after tax profit (not unlikely in a developing country) at 40% tax rate, then considering government tax refund, the workers capital will be accumulated at 25% rate. If the original owner shifts 50% of their profit for external investments, it will take 29 years to achieve workers' collective dominance in the company as shown in figure 6.1. By that time the original owner's capital will give birth of 18 equivalent industries (assuming 4% inflation rate).

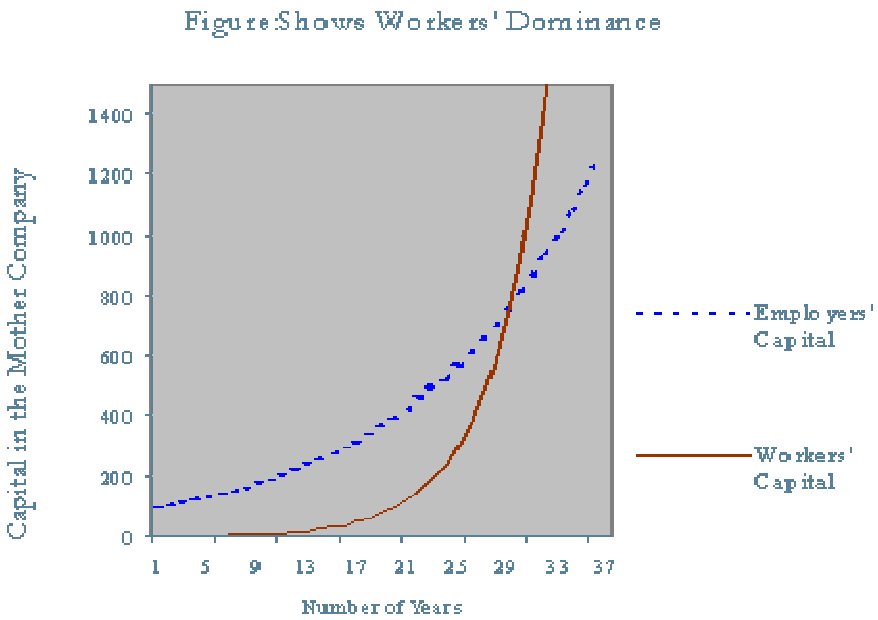

Figure 6.1: workers' dominance

What will be the value if the poor people become shareholder of a loss making business? As a shareholder a worker must have right to take his dividend. However, the main objective of workers share is not only to provide higher income of the workers but also to provide better access to health care, education and housing services etc. As shareholders they can easily decide to translate their incomes in terms of services under GhCEF. Eventually at maturity the economy will create more services to enhance quality of their lives by the money the industrial dynamics will produce. Eventually when lots of people will come under coverage of GhCEF, services will get more importance than monetary incomes.

7.0 Conclusion

Poor people neither own any significant capital nor any human capital that they can exchange in the market to generate income to be treated as non-poor. The little welfare they receive from government is merely by treating them as 'means' not as 'ends' (Sen, 1997). On the other hand, it was shown in this article that their hard works eventually go against them by lowering down their real incomes. The concept of RICR will set a minimum level of welfare they should get by using their own contribution at each year in a progressive manner. The strategy also shows how can an economy build welfare framework and bring more people under this framework through creating more jobs.

A strategy of development and a strategy of poverty alleviation are two different things. We may compare the rate of development between two countries at the same time frame. However, it is much worthy to measure the performance of poverty alleviation of a certain country or a certain industry in time dimension. It is not advisable to make a strategy of development relate only to enhancement of real income (Sen, 1997). However, enhancement of real income of the poor people of a country has big significance. We are looking forward for the day when qualitative indicators will get more importance than traditional quantitative indicators. A well designed strategy may not only unlock market potential of an economy but also make the market more meaningful to mankind.

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