Welfare dynamics based on a new concept of inefficient equilibrium

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Independent Research

18 August 2008

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Abstract

This article has developed a new model of welfare dynamics under imperfect information or imperfect competition by introducing a new concept of 'inefficient welfare equilibrium'. It assumes that an economy can be split into two virtual parts. For one part the fundamental welfare theorems are valid and for the other part welfare is yet to achieve. This model is enhanced to describe market dynamics where market is not uniform but distributed in layers of energy states. The probability of achieving Pareto efficiency decreases down along the market energy states.

Introduction

Development is a progressive process however the benefits of development do not touch many people whose contributions for development are no less than the contributions of the others. Welfare economics defined by the too generalized term 'Pareto efficiency' ignores those people. Theoretically the Pareto efficiency is sufficient condition to describe welfare performance of an economy although it has little empirical relevance. Currently there have been two streams of thoughts about social welfare. In one stream, the economists have focused on the theoretical elegance of the standard welfare theorems and in the other, the economists have worked around the unrealistic set of assumptions behind the theorems. In this article, a new welfare model is defined in section three by assuming that the standard welfare theorems can be applied at best for a part of the population of an economy, namely Pareto Efficient Coalition (PEC). It shows that this part establishes an inefficient equilibrium

with the remaining population, called as Pareto Improvement Space (PIS). A new concept of inefficient equilibrium is developed in the following section and then used to define how the PEC and the PIS co-exist in an economy.

The concept of inefficient equilibrium is also a meeting point of neoclassical economics and institutional economics since within PEC, institutions do not matter but when the PEC and the PIS interacts with each other, institution matters. "Neoclassical economics is concerned with the operation of markets and on the other hand, new institutional economics is concerned with how markets develop (North, 1993)". Ideally a dynamic market is the reflection of well functioning institutions. In view of this model, neoclassical economists may argue that the market has the potential to break the inefficiency barrier. On the other hand, institutional economists may argue that the market needs to be energized and guided by institutions for achieving that. The concept of market dynamics is described in section four.

Apart from the Pareto criterion, the issues concerning social welfare were worked out earlier using the theories of compensation tests by Kaldor (1939) and Hick (1940) but those encountered overwhelming objections (Ng, 1984). Yew-Kwang Ng (1984) defined the term 'quasi-Pareto improvement', 'in which for all levels of income, the average households were made better off but the average households at any given level of income might be worse off'. In this model the concept of inefficient equilibrium may explain why the lump-sum allocation from the government described in the second fundamental welfare theorem do not work beyond a certain range. In real life economy, the term welfare means subsidy, cash benefits, free education or healthcare for the low income people provided by the government, which is quite opposite to the lump-sum allocation criteria described in the second welfare theorem. This article defines that the market is not uniformly distributed in an economy rather it is distributed in layers of energy states. Similarly, the probability of achieving Pareto efficiency decreases with decreasing market energy. The market energy is supposed to bring Pareto efficiency in the economy but it may be impeded by unfavorable institutional structure. If market energy is stuck up within the upper markets, then steady and aggressive 'Unbiased Pareto

Improvement (UPI)' supports for the outer layer markets will provide incentives to the entrepreneurs and the government for going beyond their existing periphery.

A New Inefficient Equilibrium

Much of the debates in economic literatures about welfare economics or general equilibrium theories are concerning their rigid assumption of 'perfect information'. What does the term 'perfect information' mean? Let us begin with an example. X and Y are two individuals and they may choose either 'High' or 'Low' strategy to share information with each other. Let f is the payoff profiles of respective strategies. If X takes 'High' strategy to share information with Y and Y takes conservative ('Low') strategy, then the corresponding payoffs of X and Y will be $f(X_H)$ and $f(Y_L)$ respectively. If we assume they have perfect information about the all possibilities of the game, then each of them will expect that that his opponent will follow the same strategy. The most likely outcome of this game will be two Nash equilibriums (Nash, 1951) where they choose the same combinations of strategies either (high, high) or (low, low) and no unilateral deviation in strategy by X or Y is profitable. In this situation, theoretically the payoffs are the same for X and Y like $f(X_H) = f(Y_H)$ and $f(X_L) = f(Y_L)$. We may apply this outcome to our real world, where X is an employer and Y represents a worker. If the employer and the worker share information equally with each other, the worker will have to be paid equal to his contribution for whatever output he or she produce. If we consider that everyone wants to maximize his or her payoffs, then this game will reach to equilibrium at (high, high). In this way we cannot explain how all the capitalists are created or how they have gathered their capitals from their once zero ownership (technology is not considered). Similarly the "perfect information" concept fails to explain the empirical behaviors of an economy as a whole.

Without much thinking, it can be said that if X and Y both are business partners, then the (high, high) outcome will be realistic. Even if X is employer and Y is employee and their objective is to grow from a reference position, this outcome will also be realistic. In our real world, although individuals share information in any combination but from an individual perspective, the outcome of information sharing can be either win-win or win-lose. Neoclassical assumptions are valid for a win-win outcome.

Therefore, we may conclude that although neoclassical assumptions are unrealistic for aggregation of the whole population of an economy, however, it may be valid for a group of individuals when they have win-win relationship to share the outcomes. We may abstract this group of individuals as a coalition. A coalition is an analytical abstraction where methodological individualism is valid and every individual in a coalition are assumed to share the same level of information with each other and hold the same level of rationality within a time-frame. The word 'collective' is valid as long as there is no conflict among the individuals to achieve their utility maximization goals.

The term information asymmetry used in micro-economics that explains a situation of a transaction where one party has superior information compared to another. In our previous example, let us consider that X and Y constitute a coalition **A1** to win higher payoff than any other individual outside their coalition**.** If there another player Z comes to play the game, he will have two options. Either is to merge with coalition **A1** or is to compete with individuals X and Y. The possibility of merging depends on whether the win-win characteristic of coalition **A1** will be undistorted after the merging or not. A merging requires equal sharing of information that eventually results in efficient

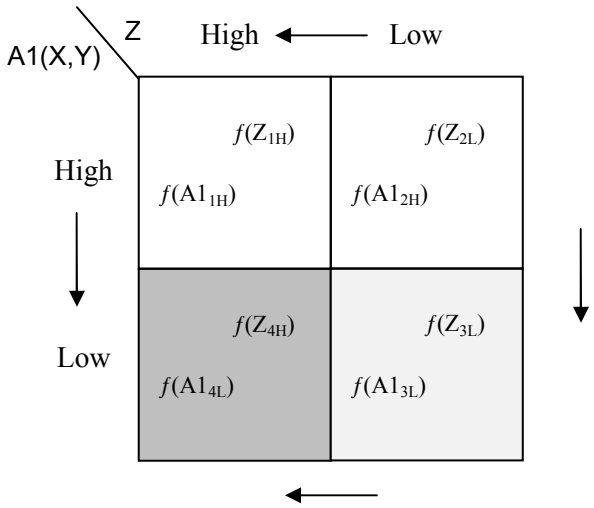

Figure 01: Inefficient Equilibrium

equilibrium. Otherwise, X and Y will try to dominate over Z in a way that they will be tuned up to share always 'Low' information with Z. As a result whatever strategy Z takes (high or low), X or Y will receive higher payoff than that of Z. That is, $f(X_L)$ or $f(Y_L) > f(Z_H)$ and $f(X_L)$ or $f(Y_L) > f$

(Z_L). If the payoff of Z is locally efficient as $f(Z_H)$ is always greater than $f(Z_L)$, this game will reach equilibrium at A1= 'Low' and Z= 'High' position (f (X_L) or f (Y_L) > f (Z_H)). This will be an inefficient equilibrium in general since Z will receive lower payoff than that of X or Y.

The above example has similarity with the example of sharecropping described as principal-agent problem by Greenwald and Stiglitz (1974b, 1986). They showed sharecropping was locally efficient equilibrium and quite different from general equilibrium model. The characteristics of inefficient equilibrium under asymmetric information also have much similarity with principal-agent problem since both are locally efficient but globally inefficient equilibriums. However, in principal agent problem, the agents and the principals are complements to each others. The agents are given incentives and they are motivated for complying with the principals' objectives. On the other hand, in this model of inefficient equilibrium, every individual is substitute to each other. Some of them form a coalition depending on level of information sharing to dominate over the others so that probabilities of achieving better payoffs become certain.

The above example also shows that the problem of information asymmetry has evolved from the time dimension that economists often forget to consider. We have assumed that X and Y have superior information compared to Z since Z appears late to play this game. The individuals who are already in a coalition and those who are not are probabilistically apart from time perspective. If Z had come earlier than Y, then Z would have very high probability of taking the position of Y and vice versa. In this article, we will follow Arrow (1964) and Debreu (1959) and many other neoclassical economists to make micro-like macro-economics[1]. Macro economics has evolved from the basic problem of scarce resource. Information about scarcity deals with the problems of scarce resource. The inefficient equilibrium under information asymmetry can also be extended to model our macro economic problems based on scarce resources. For example, information about scarcity explains the situation why employed workers receive high wages while identical individuals are unemployed[2]. We may conclude that the employed workers establish an inefficient equilibrium with the unemployed individuals since the economy has certain capacity of employment under certain conditions. When the

[1] 'This appeared as point of debate whether we want to make micro-like macro or a macro-like micro' (Stiglitz, 1991).

conditions will change, the employment capacity of the economy will also change. This concept of inefficient equilibrium can be applied to develop a more realistic model of social welfare.

A New Welfare Model

The Fundamental Theorems of Welfare Economics lies with neoclassical economics on which the mainstream economists are divided into two groups. One group of the economists is stick with restrictive assumptions of neoclassical economics, particularly of general equilibrium theory. The other group is skeptical about the neoclassical approach for its normative bias and unrealistic set of assumptions. I would like to call the first group as the optimists and the second group as the pessimists. The optimistic assumptions are used as foundation of general equilibrium theory like perfect information, complete set of markets, no enforcement problem and perfect competition. The optimists are induced by Adam Smith's invisible hand proposition and perhaps they believe in 'survival of the fittest' and 'the market is always right' principles. On the other hand, the pessimistic assumptions are just negating the optimistic assumptions like imperfect information, incomplete set of markets, imperfect competition and so on. The pessimists believe that the invisible hand is palsied or simply is not there (Stiglitz, 1991). However, they can not tell how we can measure the extent of imperfections or the extent upto which the imperfections affect the general equilibrium or the Pareto efficiency.

The two Fundamental Theorems of Welfare Economics summarizes the performance of market mechanisms (Tedenuma & Xu, 2001). Feldman (1987) combined the two theorems together that the market mechanism had great virtue: competitive equilibrium and Pareto optimality were firmly bound. The first welfare theorem states that 'under certain conditions (optimistic) any competitive equilibrium is Pareto efficient'. The important assumptions include here complete market and price-taking behavior of market. 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

[2] Stiglitz (2000) cited this example to explain information about scarcity.

(Pareto) efficient outcomes is a far different manner". Feldman (1987) raised that the First Theorem ignored the basic distributional questions: How should unfair distributions of goods be made fair? On the other hand, Greenwald-Stiglitz (1986) showed that there would be (constrained) Pareto inefficiency of market economics with imperfect information and incomplete market. The underlying price assumption of the welfare theorems persuades the economists to become very much concerned about the efficiency properties of market. However, as Wicksell (1958) mentioned "Pareto efficiency and social optimum (welfare) need not be the same". The economic literatures on welfare still have both the views, optimistic and pessimistic; they revolve around the validity of Pareto efficiency with respect to standard set of the Arrow-Debreu assumptions although empirical linkage of Pareto efficiency is matter of interpretation and judgment. They could not add much value toward solutions of our core economic problems like unemployment, inequality or poverty.

The second fundamental welfare theorem says that 'under more stringent conditions (optimistic) every Pareto-optimal allocation can be sustainable by a competitive equilibrium after a suitable redistribution of initial endowments'. It necessitates involvement of government to vitalize competitive equilibrium by means of lump-sum taxes and subsidies. It says that we can separate out issues about efficiencies from the issues of equity although in real life we can not (Stiglitz, 1991). It also says that instead of focusing lots of externalities and factors, only limited government intervention can restore market failure and uphold market power. It ignores the history of market formation and institutional involvement where 'invisible hand' was crippled. For example, we see few individuals already have accumulated too much wealth and control of the market. They have the power even to influence the government to protect and uphold their interest. The government can only impose tax on them for a current year's earning. In fact, this theorem has no empirical relevance other than prohibiting government from owning public goods or providing services that have price impacts on market but eventually let the wealthy people monopolize the market. In this context, the pessimists are right that 'laissez-faire result in common bad rather than common good produces an intolerable degree of inequality' (Feldman, 1987). Or we can support Stiglitz (1991) as he mentioned 'the welfare theorems are just that: theorems, the conclusions of which follow inevitably from assumptions'.

Apart from these debates, I would like to take position between the pessimists and the optimists by assuming that the assumptions of welfare economics are valid for some limited cases but not are valid in general. The assumptions concerning information have very important links with the other key assumptions in the mainstream economic theories. Arrow (1964), Debreu (1959) and many other nineteenth and 20th century economists were aware about information problems but they never put information at centre (Stiglitz, 2000). Rather than defining inefficient or imperfection in general terms, we may use the concept of the inefficient equilibrium developed based on imperfect information in the previous section to define the real world economy. It will be more realistic to assume that although the assumptions of the fundamental welfare theorems or general equilibrium theory are not valid for the whole economy but for a part of the population. That is, there exist perfect information sharing, perfect competition, complete set of markets and no enforcement problem within this part. I would like to name this part as a Pareto efficient coalition (PEC). The PEC is an analytical abstraction where the concept of methodological individualism is valid and every individual share the benefits of development with each other in a defined manner without any further institutional intervention. By complying with neoclassical economics for this part, we may also assume that institutions do not matter within the PEC or the institutions work very well for the individuals belong to the PEC. For the remaining population, we may assume that the fundamental welfare theorems are not valid. I would like to name this part as a Pareto Improvement Space (PIS). As Feldman (1987) commented, "Some people are endowed with resources that make them rich, while others, through no fault of their own, are without". By applying the concept of inefficient equilibrium described in the previous section, we may say that the PEC establishes an inefficient equilibrium with the remaining population, the PIS. The term 'inefficient equilibrium' when applied in welfare economics can be called as Inefficient Welfare Equilibrium (IWE). According to the definition of the IWE, institutions do matter outside the coalition when the PEC interacts with the PIS. The inefficiency is supposed to be reduced by institutional intervention, for example, re-distribution of resources, property right, policies, norms, law and orders, anything else that is covered by the definition of institutions. However, in the real world, there is no guarantee that the institutions are well functional rather there are equal chances that the institutions may reinforce the inefficiency. This model also defines that the individuals of the PEC has

active involvement to create, run and control the institutions while the individuals of the PIS have passive involvement mostly.

The Welfare Dynamics

It can be concluded from above discussion that the PEC is separated from the PIS by means of an abstract boundary that may be called as the Inefficient Equilibrium Barrier (IEB). The IEB may also be interpreted from the view of institutional economics as IEB imposes transaction cost to the individuals in the PIS. If an individual in the PIS wants to enter the PEC by crossing the boundary, he or she will have to pay a transaction cost. A market is a place to produce commodities and also to provide wages to the producers to buy the commodities. This capacity of the market with respect to time for an average individual can be defined as 'market energy'. 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. Stiglitz (1991) described that imperfect information and incomplete markets alter the standard micro-economic results in fundamental ways. However, the extents of imperfections have differential existences in different markets in different time frames. Neoclassical economists believe in market power and ignore the role of institutions perhaps because they assume that the market has potential to override the institutions. On the other hand, the institutional economists believe in institutional dominance. The polity that defines and enforces property right is more important and effective to shape economic performance of an economy than competitive equilibrium (North, 1991). It can be said that the institutions are there to energize, facilitate and guide the market. Combining both the economics, we may define that the IEB is the result of institutional failure to empower the market and market failure to bring the Pareto efficiency. If there were no IEB in an economy then the whole economy would become Pareto efficient.

The first welfare theorem says that competitive equilibrium leads to an efficient allocation of resources. This can be interpreted in this model as the competition enhances market energy such that it weakens the IEB and eventually leads to Pareto optimality. As North (1993) described "Efficient markets are created in the real word when competition is strong enough via arbitrage". That is, a

competitive market can be attained through favorable institutional process and it may counteract the unfavorable institutions (unfavorable agreements and enforcement practice) and instigate them to change. In the extreme case, if there is perfect competition in an economy, the IEB will disappear and the economy will become Pareto efficient. This is how the concept of inefficient welfare equilibrium (IWE) modifies the first fundamental welfare theorem. In the real world, institutions changes through learning processes and therefore, they are quite slow to change. As a result, IEB will continue to exist even if competition increases in an economy.

Amartya Sen (1993) described that the market mechanism promotes two aspects of individual freedom, namely 'the opportunity aspect' and the 'process aspect'. The fundamental welfare theorems define only 'allocation Pareto optimality'. Tadenuma & Xu (2002) extended the fundamental welfare theorems for two more optimality conditions, 'opportunity Pareto optimality' and 'overall Pareto optimality'. The opportunity-Pareto optimality 'reflects the situation in which it is impossible to improve one agent's opportunities without reducing any other agent's opportunities'. Every economy started from a reference position and the position of IEB has moved to existing position through economic activities and political over time. Interestingly the individuals of the PIS can be made better off without making the individuals of the PEC worse off but the IEB is preventing that to happen. Therefore, we may say that the PEC has an optimum size under certain conditions such as certain technological state, motivational state or availability of natural resources. The individuals in the PIS and the individuals in the PEC are substitutes and therefore, for example, if there is technical advancement, the capacity of the PEC will increase, in other words, there will be more opportunities and some individuals from the PIS will move to the PEC and the economy will reach to another inefficient equilibrium. This is how the position of the IEB is supposed to move further into the PIS because of technological advancement by creating new opportunities for an economy.

In real world, the individuals who have better opportunities to acquire better skill, better employment opportunities also have more capacity to fulfill their demands than the others. We may imagine a compatible market corresponding to each side of the IEB. The market on the PEC side is more powerful than the market on the PIS side. In the context of the whole economy, it can be said that the overall market is biased toward PEC. In other words, when a market is biased, the market is

failed. However, when we will use the term 'biasing', we can ask about the extent of the biasing whereas when we will use the term 'failure' it will not give any more information. The extent of biasing can be measured by comparing the market energy on PEC side with the market energy on PIS side. If both are equal, then there will be no biasing at all. The biasing is high in a poor economy and low in a rich economy. If biasing becomes high, the IEB will be strengthened and if the biasing becomes low the IEB will be weakened. In a market based economy it is supposed that price convey the relevant information (Hayek, 1945). I would disagree and therefore, I like to point out that price only convey biased information, not the actual information. Can we conclude that the top ranked box office movies are really the best movies? Or the life in big cities is more worthy than the life in rural areas? If an economy is heavily biased toward the PEC, the PIS will be affected by the biasing for whatever opportunities are created. This kind of opportunities can be called as 'pseudo-opportunity'. Examples of pseudo-opportunities are the employments in the booming readymade garments sectors and in similar labour intensive manufacturing industries in Bangladesh where the workers are low paid and it is said that they are living no better than medieval slaves.

The concept of inefficient equilibrium and the second welfare theorem both take the same approach, called the market failure approach. The second fundamental theorem tells that Pareto efficiency can be restored by limited government intervention like lump-sum redistribution to the market and then the market will take over the rest of the responsibilities. On the other hand, the concept of inefficient equilibrium tells that market failure is inherent in every economy since market can not change the institutions as a whole because of their slow responses. Therefore, the lump-sum allocation is not a panacea for solving poor economic performance. The inefficient equilibrium barrier is the demarcation where both the market and the institutions fail. Therefore I agree with Ng (1984) that instead of 'Pareto social improvement' we should say 'quasi-Pareto social improvement' where 'for all levels of income, the average household was made better off but the average household at any given level of income might be worse off'.

The abstraction of the IEB is absolutely subjective that depends on the discretion of the analyst. One interesting criterion of this abstraction is that the more individuals will be included in the PEC, the stronger will be the IEB. That means the strength of the IEB will be more in case of placing

individuals having high income and mid income on the PEC side than in the case of putting individuals having high income only on the PEC side. Similarly the fewer individuals will be in the PEC, the more will be the market energy. By assuming compatible market energy in each case, we may imagine that the whole economy is distributed in layers of market energy states. The rich people are on the upper energy states and the poor people are on the lower energy states. The market energy is the highest at the centre and it gradually decreases away from the centre. Similarly the probability of Pareto efficiency is the highest at the centre and it becomes increasingly difficult to bring the Pareto efficiency away from the centre. This model can be described as "The Market Model".

On the other hand, our institutional framework defines our property rights that cause accumulation of wealth toward a centre from where the market is supposed to gain potential (for

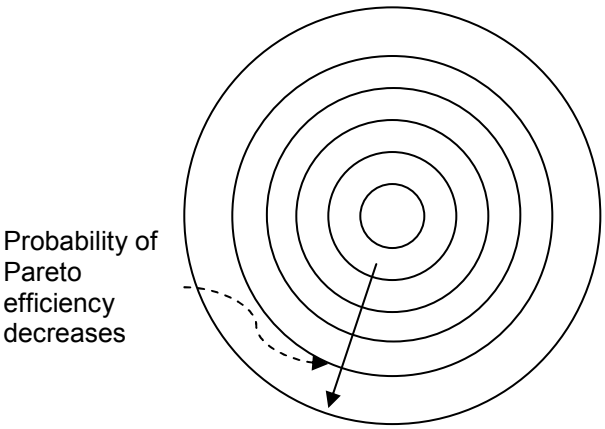

Figure 02: Market Model

example, technological advancements) to spread out all over the economy. In cases where this dynamics do not work well throughout an economy, the individuals on the outer layers become more vulnerable and they may fall into further lower energy state, in deep poverty whereas the individuals on the upper layer of markets ride over benefits of economic growth. There are chances that the individuals on the outer layers may lose their freedom to share the benefits and gradually fall down to the outermost layer. Eventually the market energy of the outermost layer becomes very weak. The

outermost layer is the true Pareto improvement space (PIS) separated from the rest of the economy by the toughest inefficient equilibrium barrier (IEB). A country is poor because it has got a very robust IEB for its outermost layer market that has developed gradually through many years of economic and political activities. If market energy on the PIS side is very weak compared to the market energy on the PEC side, we may say that the market energy is trapped in the PEC. As a result, huge idle money will circulate within the limited number of individuals in the PEC and apparently the country will experience high inflation and corruption. There the government, in fact, will be part of the PEC and therefore, its lump-sum redistribution will not work beyond the PEC boundary. A corrupted government official normally does not take bribe directly from a poor individual but takes from a rich contractor or businessman. In a corrupted economy, a huge amount of free money circulates on the upper layers, which again gives birth of money grabbers. Whatever is the way to gather money on the upper layer, the money mostly circulates among the pockets of the grabbers. There are fierce contentions among them to dominate over each other to grab and control of the institutions so that they can establish monopolistic decision making process to dictate the economy as per their interest and wish. Moreover, the individuals who are not corrupted but are supportive to this structure also get indirect raise of their salaries. Consequently, the net result is that the rich individuals become richer and costs of property ownership become high, increasingly unreachable to outermost layer individuals.

Unbiased Pareto improvement

This article has an intention to focus on those people for whom the standard welfare theorems do not work well. The second fundamental welfare theorem tells that the government plays an essential role to keep alive the ‘invisible hand’. Unfortunately the ‘lump-sum distribution’ does not work beyond a certain range. In reality, a government is not an independent body. In a weakly organized government, the decision makers inside the government are part of the PEC and eventually the government reinforces the IEB. Most of the efforts for improving the lives of the individuals in PIS whether by government or by non-government are centrally biased as described in the above discussion. Therefore, they are pretty stereotyped at functional level-the same work force, the same mindsets, the

same processes but only paper works are different. However, every effort has a biased and an unbiased component. They can be named as Biased Pareto Improvement (BPI) and Unbiased Pareto Improvement (UPI) respectively. For example, Grameen Bank's micro-credit program for poor people is criticized for imposing very high interest rate but it is doing many good things that otherwise would not be possible. The part of interest that is perfectly converted into their human value out off the market process is the UPI for the economy. The remaining part is the BPI. The success of microcredit program is very much dependent on its unbiased component.

The welfare programs in a developed country, for instance, in health and education sectors, also focus on the benefits of the low income people that are quire opposite to lump-sum allocation. If we consider the government as a player in the market not an independent body, we will see that the apparently equal access to health and education services are not equal in the sense that the net benefit goes to the low income people since they pay lower tax. A bright idea by Quadir (2003) called "bottom-up economics" proposed to nurture and promote entrepreneurship at the level of the poor people in developing countries like village phone program in Bangladesh or Stirling engine in Africa. Unfortunately those were small scale discrete efforts and failed to integrate with the existing markets since the existing market did not have enough incentives for that. To find a more realistic way for UPI, we may go back to the previous example in section 2. If another individual joins with Z and make a coalition **A2**, then they will gain more bargaining power to deal with coalition **A1**. As a result the inefficient equilibrium will be counteracted and IEB will be weakened. We may apply this concept for the outermost layer individuals of the 'market model' to make them a collective body so that their every on-ward economic activities will have cumulative impact on the IEB to weaken its strength. Although it depends on abstraction and discretion of an analyst but the fact is that the PIS is the 'Bottom of a Pyramid (BOP)' with immense need (Prahalad, 2002). Therefore, the UPI can be designed in a way that it will not only meet up those needs but also put incentives for the upper layer markets to stretch out their energies down toward the outer layers of the 'market model'. Among many ways to provide the UPI, Zaman (2001) described a UPI model where property ownership can be started from as little as tiny savings. If a lot of poor people are motivated to make tiny savings, then their collective savings will become a shield against the causes of poverty. The poor people on the

outer layers, particularly on the outermost layer need to become an organized segment of an economy so that they can be cared, educated and entertained in an organized way.

An ideal UPI should not be discrete rather it should integrate every possibilities and opportunities in effective and focused way. For example, Zaman's (2001) Greenhouse Care model covered basic needs like health care and education, introduced insurance services. The model was extended from crop fields to manufacturing industries wherever the poor are mostly living. He described internal and external dynamics in industrial sectors by means of workers share of their respective industries. Eventually at certain stage of the UPI, the government would find incentive to formulate macro-economic policies in a way that the workers would intend to dominate in the mother industry and on the other hand, the original owner's share would spawn a number of different or similar industries or businesses. The main objective of workers share was not to provide higher income of the workers but to give them opportunity to participate in decision making and make the companies share and support part of their health care expenses, education and other welfare along with the government. By contributing more on welfare the original owner could shift the pressure of workers dominance. It is worthy to mention that defining the target people (the PIS) is based on problem areas and those problem areas are to be set with some local quantitative or qualitative bench marks. The UPI measures can directly improve the local bench marks and that will eventually improve macro economic or global bench marks.

Conclusion

Development has a human aspect. If the fundamental welfare theorems are valid for a certain range, competition may not take care of human value. For example, competition is good but we need to evaluate whether the competition is for transforming all of our milks into candy or for keeping the milk as much as possible for our kids. The concept of inefficient equilibrium provides an analytical framework beyond standard welfare model. This framework can not only be used for poverty alleviation in developing countries as focused on the whole article but also can be applied for many other issues concerning developed nations like unemployment or cultural deterioration. There is also

an inefficient equilibrium between those who are employed and those who are not. The concept of inefficient equilibrium also takes care of the role of institutions on an economy. The concept of coalition (PEC) is a meeting point of methodological individualism and institutions as also outlined in this article. Counteracting the inefficient equilibrium by means of the UPI is in other words systematically reforming our existing institutions. On the other hand, BPI reinforces existing institutions. Nevertheless poverty is the biggest challenge and this is the reason for formation of welfare economics. Prahald (2002) shown that there will be two possible scenarios for the evolution of global market in coming 15 years: the 1 Billion Market and the 4 Billion Market. The standard welfare theorems may be valid for the 1 Billion. This article is intended for the later.

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