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"Efficiency" from the Perspective of *the Social*

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1. Introduction

We now live in a globally competitive economy. The extent to which each nation state can effect income redistribution through policy may well be limited by increasing frictionless global capital and commodity market. We should admit that the instability of the economy has been strengthened. Nevertheless, most of the mainstream economists may believe that competitive markets determine prices that measure the *real* scarcity of commodities and for this reason can allocate resources *efficiently*. It might not be true. Markets fail. Economists in the Keynesian camp used to assert that a suitably democratic society government could efficiently supplant the private provision of commodities where market failure occurs. Unfortunately the government fails. We can easily point out the huge fiscal deficit in such an economy as Japan. Now we have to tackle the following: How can markets be combined with other institutions like governments, community to pursue the objectives of efficiency, equity and fairness?

The aim of this paper is to recast the concept of "efficiency" based on the spirit of PEKEA, which is pursuing 'a planet for humanity and solidarity'. The "Efficiency" plays a central role in the theoretical economics and is usually taken to be Pareto efficiency. In neo-classical economics economic transactions is assumed to constitute solved political problems. Markets are simply a one-dimensional entity, which is an arena of exchange. However, markets should be considered as socially constitutive entity and historically specific entity. Markets can be considered a multi-dimensional (economic, political, cultural, ethical and so on). We have to recast the efficiency category in this perspective. ¹

In fact the use of the term "efficiency" prevails at both micro and macro levels. It is often said that the socialist economic system or a command economy was *in*-efficient compared to a so-called market economy. In many cases the efficiency is the same as Pareto efficiency, but at the same time the meaning of efficiency can be ambiguous. On the other hand in the heterodox tradition of economics such as Marxian, post-Keynesian, Sraffian, the category of efficiency has not been the central point.² The reason is that the focal point consists in the reproduction of a society. Apparently human being cannot survive apart from a *society*, so we must focus on the social reproduction, which concerns directly the reproduction of human being. In sum the efficiency category must be reconsidered from the perspective of *the social*. The alternative to Pareto

¹ See, for example, Hausman and McPherson (1996), who provide a comprehensive survey of this subject.

² Sraffa (1960) considers an economy, which is in equilibrium in a sense. His main concern is to clarify the relationship among the prices, the uniform rate of profit and the wage rate.

efficiency would be proposed: the *social efficiency* in this paper. ³

2. The Concept: Social Efficiency vs. Pareto Efficiency

In general we must specify the measure and an end in order to evaluate the level of efficiency. The minimum 'quantity' of the means can be said as efficient to realize an end. If we denote a means and an end as $x = (x_1, x_2, \dots, x_n)$ and y , respectively, the structure of the problem can be formulated as follows formally.

Means \rightarrow End: $x = (x_1, x_2, \dots, x_n) \rightarrow y$

The point here is to compare a vector (x) with a scalar (y). Needless to say this vector must be transformed to a scalar. When we assume the market transaction, it is evaluated in terms of market prices $p = (p_1, p_2, \dots, p_n)$. That is the means whose value of $p_1x_1 + p_2x_2 + \dots + p_nx_n$ is minimum is judged as efficient. ⁴ Or conversely if we can obtain the maximum y from the same input $x = (x_1, x_2, \dots, x_n)$, this can be called to be efficient.⁵ This criterion is accepted as being normal among economists. Even such political economists as Bowles and Gintis apply this. For example, they say as follows: "There are three reasons to think that the democratic firm will be more *efficient* than the capitalist firm *in the sense that it uses less of at least one input to produce the same output.*" ⁶ (Italics added)

Examining this procedure from the social reproduction point of view, we find there exists a difference between these two criteria. For example, suppose the technical choice. According to the efficiency criterion above, the technique whose production cost based on the current prices is the minimal can be efficient. However, it doesn't usually coincide with the 'labor' criterion. This latter criterion uses the quantity of labor, which is necessary directly and indirectly to produce one unit of product. The measure, which uses smaller labor, is said to be efficient.

The efficiency category must be reconsidered on these preliminary discussions. ⁷

³ However, Bohm (1987) uses the term social efficiency to describe the efficiency category in Welfare economics. "In this book, the main elements of *welfare economics* are presented in concise form. *Welfare economics* is that part of economics that, among other things, attempts to explain how to identify and arrive at *socially efficient* solutions to the resource allocation problems of the national (or local) economy." (p. ix) (italics original)

⁴ See the recent debate between Wolf (2002, 2003) and Perino (2002) on the category of efficiency.

⁵ This type can be called as *technological* efficiency. However there is a case where it is judged inefficient though the end is realized efficiently in technological sense. The society may produce the output that people don't want, that is, there exist a mismatch between the supply and demand. This requires the appropriate choice of outputs. This type of efficiency is not technological but *allocative*. Cf. Lindblom (2002, p.125).

⁶ Bowles=Gintis (1993, p.27).

⁷ Roemer's comment on Bowles and Gintis' has the similar theoretical interest to ours. That is, "Bowles and Gintis, in their discussion of efficiency, are concerned with the micro-management of physical assets: ... I have been concerned with efficiency of a different kind, that which comes from having socially optimal levels of public goods and bads." He

2.1 Provisional Definition of Social Efficiency

In principle, the mission of the human society is to secure the reproduction of human being with the "golden rule" that one should treat others as one would wish to be treated, human dignity, human security, and animal welfare.⁸ Symbolically speaking, a person has a right to "appear in public without shame" (A. Smith). In this context, *social efficiency* means going as far as possible in the assurance of reproduction of the human being in the society within resource and technological constraints.⁹

So we would like to propose the working definition of social efficiency as follows.

Social efficiency is measured by comparing *Social Minimum Capability* (SMC)¹⁰ with its social cost. Social cost is provisionally represented as value of commodities available in this society. If there are m persons and n commodities in the society, the cost could be presented as

$$\sum_{j=1}^m \sum_{i=1}^n p_i x_i^j.$$

Before we proceed to explore this definition in detail, the Pareto efficiency must be examined critically, which might serve as the reference for our proposal of social efficiency.

2.2 Critique of Pareto Efficiency

The tenet of the mainstream economics can be summarized as the so-called the Fundamental Welfare Theorem, which asserts the optimality of market competitive system. But this is not so robust, which is shown in this section briefly.

2.2.1 Fundamental Welfare Theorems

Usually the theorem is formulated as follows.

First theorem of welfare economics:

proposes to generalize the efficiency concept from "micro-efficiency in the firm" to a somewhat social one. cf. Roemer (1998, p.225 and p.227)

⁸ cf. Sato=Valatin (2004).

⁹ "Economic efficiency embodies the idea that there are no unexploited opportunities for improving welfare through equilibrium trades, given endowments and technology." (Dymski, 2001)

"Social efficiency by contrast embodies an ideal of fairness across individuals, and possibly communities. It is achieved by some combination of equalizing the resources that agents have or by equalizing their opportunities. If all those who want to "take advantages of these opportunities" can do this, then a point of social efficiency will be achieved." (Dymski, 2001)

¹⁰ About SMC, see section 3, especially section 3.3.

“Every competitive equilibrium is Pareto optimal (i.e. there is no way to improve the welfare of one agent without lowering the welfare of some other agent).”

Second theorem of welfare economics:

“Every attainable distribution of welfare among agents can be achieved by a suitable initial distribution of property rights, followed by competitive exchange.”¹¹

The point that we stress here is the Pareto efficiency has serious theoretical problems as the social well-being standards.

2.2.2 Logical Defects

As the premise of *homo economicus* (independent and rational economic agent) is unrealistic, it cannot be accepted as the basis of economics. According to Impossibility theorem proved by Sen, the rational choice of an individual (i.e. *homo economicus*) might not lead to a rational ordering of choices for the whole society under a certain condition.¹² This premise demands for the economic agents a *hyper-rationality* superior to the capacity of super computer. This sort of premise must injure the validity of models.¹³

The Pareto efficiency is basically too *static* and *economic* to estimate the social capacity of assuring the reproduction of human being. Because this concept is principally interested in the individual utility satisfied in the consumption sphere, whereas the reproduction of human “dignity” various non-utility concerns, social justice, environment, future generation and so on. Consequently it is necessary to *dynamize* the concept of efficiency.

2.2.3 Ethical Defects

The Pareto efficiency ranks the situation of a society to judge well-being of a society, based *only on the utility of individuals* (ignoring information other than the utility). We call this character of the Pareto efficiency as “Welfarism”. As a result, it is *consequentialist* in terms of over-emphasizing only result, namely utility. However as long as the necessary information to judge social welfare is limited to the *consequentialist* preference ordering of individuals, it is likely to provoke various *moral* problems¹⁴. Here two problems must be mentioned.

¹¹ Gintis(2002,p.43).

¹² Sen (1970b), Arrow (1951).

¹³ About the inadequacy of *homo economicus* to set up economic models, see Shimizu (2004). If we suppose the individual who resembles to us, i.e. individual incapable of making “complete” preference ordering, it is generally proved that it cannot lead to a rational ordering of choices for the society. See Sen (1970a) and Suzumura.(1983)

¹⁴ This is based on the ideas discussed in Sen (1979), (1985) and (1997).

- (a) The various incentives of individual action are ignored if decisions are based on "Welfarism". For example, according to "Welfarism", if you compare a poor in hunger with a rich fasting, they both have the same (low) utility because they are both "hungry", and no difference is seen between the two. There is lack of consideration to the physical assumption conditions of the rich and the poor, and to the "incentive" why each chose to take such action.
- (b) "Welfarism" is also insensitive about the irrelevance of the utility information. For example, if an individual is seen to be under a miserable condition from an objective point of view, but is accepting the situation from giving up (or if s/he is a drug addict enjoying being on drugs), the only thing that "Welfarism" can say is that "if the individual is happy (satisfied), there is no problem"¹⁵.

2.2.4 Value of Choice

To achieve the Pareto efficiency, we must have the "perfect information" about the world. In the perfectly informed world, "choice" cannot have any importance, because the result of "choice" is to be predictable. But the "choice" or "choosing an opportunity from various ones" *can play a crucial role* in determining what we can object to. Scanlon argues on the "Value of Choice" as follows: ¹⁶

For example, in societies in which arranged marriages are not the norm, people have reason to want to choose their own mates rather than have their own parents do it for them, not only because they think this will lead to more satisfactory choice (instrumental value), or because they want their choice to be an expression of their own taste and affections (representative value), but also because having their parents make the choice would be "demeaning"- that is to say, would suggest that they are not competent, independent adults (symbolic value). In a different society, in which arranged marriage was common, reasons of this last sort would be much weaker.

3. How to Measure the Social Efficiency

Our definition of the social efficiency is basically based on Sen's capability approach. We generalize this approach by introducing the *Social Minimum Capability*. So in this section, first

¹⁵ Sen calls these situations "formulation of adjusted preference" in the sense that a person is satisfied because of an atrophy of normal activeness. So he considers this kind of irrelevance the dimension essential to look into when evaluating social welfare.

the capability approach will be reviewed briefly, focusing on its merits to wealth approach and the so-called Welfarism and then the new category of social minimum capability will be explored.

3.1 Capability Approach

According to Sen (1985b), the capability is defined as follows.

3.1.1. A simplified concept of "capability"

x_i : the vector for commodities possessed by person i

X_i : the set of x_i

$c(\cdot)$: the function converting a commodity vector into a vector of characteristics of x_i

$f_i(\cdot)$: a personal "utilization function" of i reflecting one pattern of use of commodities that i can actually make

$F_i(\cdot)$: the set of $f_i(\cdot)$, any one of which person i can in fact choose.

If we denote the achieved functioning as b_i , the "functioning" vectors $P_i(x_i)$, which is feasible for the person i , is defined as:

$$P_i(x_i) = \{b_i | b_i = f_i(x_i) \text{ for some } f_i(\cdot) \in F_i\}$$

If the person i 's choice is restricted to set X_i , the person i 's feasible functioning vector (i.e. the capabilities (capability set)) is defined as:

$$Q_i(x_i) = \{b_i | b_i = f_i(x_i) \text{ for some } f_i(\cdot) \in F_i \text{ and for some } x_i \in X_i\}$$

- "Capability": ability to do something and to become certain situation by using goods and services. "Capability (set)" consists of various "functionings".¹⁷
- "Functionings" are human being's *autonomous* acts of "being" or "doing" by using goods and services, and our lives are structured based on the various combinations of these "functionings."¹⁸ If an individual can increase his "functionings", he can also ameliorate his *autonomy*.

¹⁶ Scanlon (1998:p.253).

¹⁷ As it can be assumed, the problem of definition and decision of the necessary capability set for a society is not solved practically or theoretically. Discussions are going on not only in political philosophy and ethics, but also in cognitive science. It cannot be acknowledged for economics to ignore normative issues in the name of 'positive science'. One of the works in the 'development' area, which deals with this *aporia* is Glover and Nussbaum (1995).

¹⁸ "A person's achievement in this respect can be seen as the vector of his or her functionings. The relevant functionings can vary from such elementary things as being adequately nourished, being in good health, avoiding escapable morbidity and premature mortality, etc., to more complex achievements such as being happy, having self-respect, taking part in the life of the community, and so on. The claim is that functionings are constitutive of a person's being, and an evaluation of well-being has to take the form of an assessment of these constituent elements." (Sen, 1992, p.39).

3.1.2. Implication of Capability Approach

Capability is an indicator of “freedom”. An individual chooses a combination of “functionings” from the “capability”, which includes the possible combination of “functionings”. This means that each individual evaluates “becoming a certain situation”, and selects “doing something” through goods and services that one can utilize, which illustrate the degree of “freedom” which can be realized. This freedom is called “Well-being freedom”. How can we say that “well-being” of an individual in the *society* is satisfied at the minimum level? It is when the “social minimum capability” – a set of the necessary “functionings” of people’s - of an individual is secured in the very *society*.

3.2 Merits of Capability Approach to Estimate the Well-being of the Society

Through the evaluation of the “well-being”, this capability evades the defects of “Welfarism” and “wealth approach” as following.

3.2.1 Consideration of Individual Multiplicity

The capability approach enables non-utility information, such as the individual’s “incentives”, to be included in the welfare decision. As previously argued, “Welfarism” would not differentiate between the rich fasting and the poor in hunger. However, according to the “capability approach”, the rich fasting chose the “functioning” of fasting from his “capabilities” and realized it. On the other hand, the poor in hunger having poor “capabilities” had no choice without freedom. The welfare difference between the two is apparent from the difference of their “capabilities”.

3.2.2 Reject of Irrelevant Utility Information

From the previous example, “Welfarism” was not able to criticize the euphoriant drug addict. On the other hand, the “functioning” of “being on drugs” cannot be accepted as a functioning to construct a well-being from an ethical perspective of a social member. Furthermore, the capability approach can also criticize an “adjusted preference”. This is because it is possible for certain societies not to acknowledge “preference” based on resignation and inertia as necessary “functionings.”¹⁹

¹⁹ To criticize this ‘adjusted preference’, the social members have to make a decision not on the basis of their ‘subjective preferences’ but ‘ethical preferences’. The former “must express what he actually prefers, whether on the basis of his personal interests or any other basis”, but the later expressed “what this individual prefers (or, rather would prefer), on the basis of impersonal social considerations alone” (Harsanyi (1955, p.315)). In other words, when the individual makes his preferences, he has to take into account the others’.

3.2.3 Escape from the Fetishism of Wealth Approach

The “freedom to move”, for example, is one of the components of an individual’s “well-being”. In the “wealth approach”, a welfare situation of an individual is judged based on the supply of necessary goods, for example a bicycle. It is true that if the individual was a healthy person, the equation “bicycle = freedom to move” stands, but if it was a handicapped person, this equation does not stand. According to the capability approach, which captures the “freedom to move” as a “functioning”, people’s welfare is judged not based on the supply of a bicycle but based on the fact if these “functionings” are able to be realized or not. Therefore, the “capability approach” recognizes the possible welfare differences among people supplied with the same good.

3.2.4 Dynamic Character

While Pareto efficiency is principally static, “Capability” may be dynamic. Assuring the following “Social Minimum Capability” could lead to diminish people’s incertitude in the future, decrease the risk of “fallacy of composition”, reproduce the high quality labor force, and so stabilize the future economic growth.

3.3 Social Minimum Capability

3.3.1 Definition

The *Social Minimum Capability* (SMC) can be defined as follows.

Social Minimum Capability consists of minimum and necessary “functionings” with which people can live as human being with dignity²⁰.

Each “functioning” b_i^s , which is component of Social Minimum Capability, is formulated as:

$$b_i^s = f_i(x_i) \times SVF \text{ for some } f_i \in F_i^s, x_i \in X_i^s$$

The SMC is the set of b_i^s :

$$SMC = \{b_i^s\}$$

If we denote the commodity of which the value of SVF is unity for the person j as $(x_i^s)^j$, the social efficiency can be calculated based on the following:

²⁰ SMC is based on the same idea as Sen’s “minimum capability (MC)”, but SMC differs from MC about two points: SMC includes explicitly social valuation function; SMC accept criteria of “value of choice”. On the concept of Sen’s “minimum capability, see Sen (1985d).

$$\sum_{j=1}^m \sum_{i=1}^n (p_i x_i^j)$$

X_i^s : the set of the vector for commodities possessed, any one of which person in the *Society* can in fact use.

F_i^s : the set of “utilization functions”, any one of which person in the *Society* can in fact choose.

SVF (Social Valuation Function): its value is either unit or zero.. Here zero means a social judgment to reject some “functioning” (those which are technically impossible or meaningless in an ordinary sense or ethically unacceptable), the unit means to accept some “functionings”.²¹

If we decide that “freedom to move” is a “functioning-1” contained in the SMC, this “functioning - 1” = $F_{s1}(X_{s1}) \times$ the value of Social Valuation Function.

[Fig. Social Minimum Capability]

3.3.2 The Characteristics of SMC

How can we characterize the SMC? We think it has three fundamental characteristics, which will be explained briefly below.

(a) Absolute Characters of SMC

SMC is *absolute*. It is absolute because the minimum and necessary “functionings” for the people to live as human being with dignity should not differ essentially from one society to another.

(b) Relative Character of Each Element of Practical “Functioning”²²

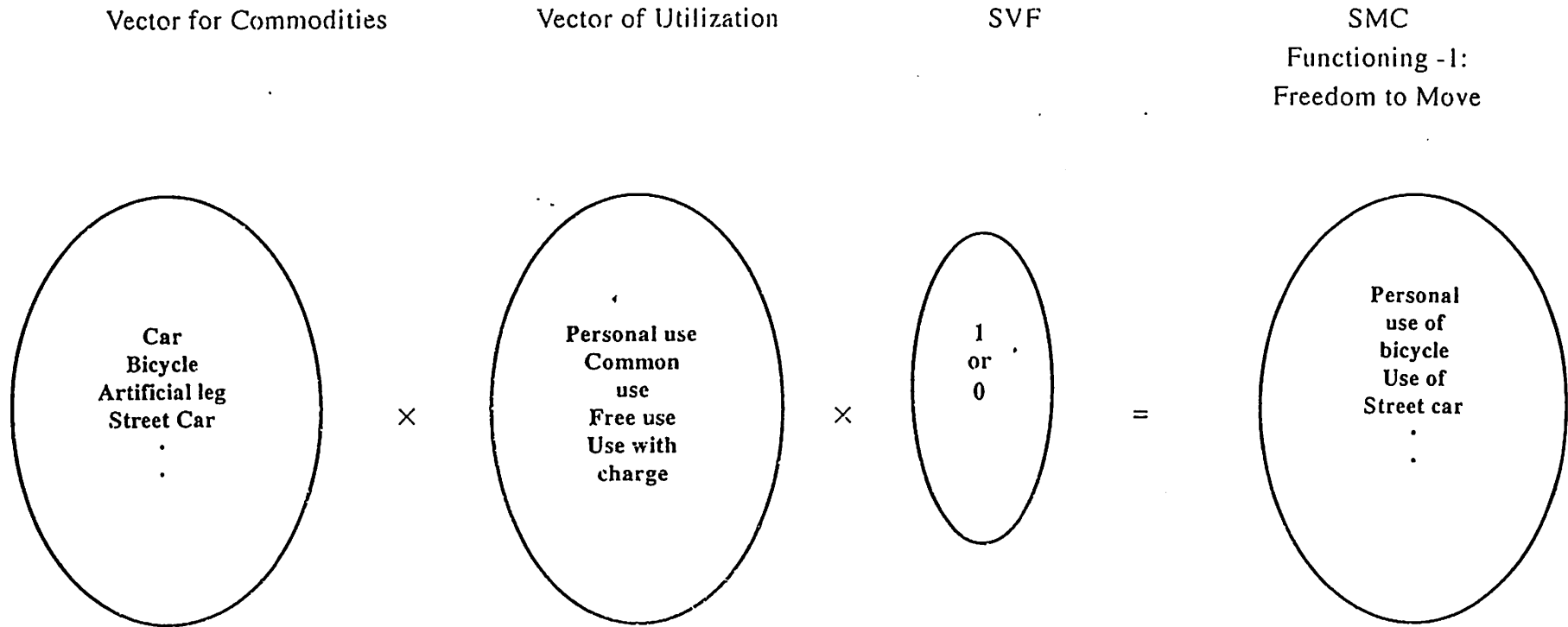
While SMC is absolute, the component of each “functioning” is relative. It is *relative* because the set of the vector for commodities (X_s) and the set of “utilization functions” (F_s) must be different from one society to another and the judgment on how to use which commodities (Social Valuation Function) different too.

(c) Value of Choice Criteria

²¹ It is evident that SMC should weight each “functioning”, however, we assume here the weight is the same for all the functionings to simplify the argument.

²² It means practical components of each “functioning”, that is to say, element of $F_s(X_s) \times$ Social Valuation Function.

Fig. 1 Social Minimum Capability



If we compare a social situation A which has more “choices” than a social situation B, we judge that a social situation A *is at least as good as* B, from the point of “Value of Choice”. This is because the number of “choices” may represent the degree of individual freedom to choose. “Choices” are defined as $F_s(X_s) \times$ the value of Social Valuation Function.

4. Social Decision Process

It is necessary not only to specify the functionings in SMC, but also to construct the Social Valuation Function at the same time in order to the Social Minimum Capability to be operational. Needless to say, they cannot be decided *a priori*, but must be formed through *open and public deliberation*. However it is also evident that we should face up to different type of difficulties from those that Burgson=Samuelson’s social welfare function ought to get over.²³ It inevitably concerns “norms”, because we need to discuss about normative principles like “justice”, “fairness”, and “equality”, to realize the mission above. Much still remain to be done, but we try to present some key arguments about it.

4.1 Necessary Attitude of Social Members to Participate in this *Open and Public Deliberation*: Rawls’ *Original Position* Argument

The “original position” is a hypothetical situation in which rational calculators, acting as agents or trustees for the interests of concrete individuals, are described as choosing those principles of social relations under which their principals would do best. The rational calculators do not know facts about their principals, which would be morally irrelevant to the choice of principles of justice. This restriction on their reasoning is embodied, picturesquely, in Rawls’ so-called “veil of ignorance”, which hides information, for instance, about principals’ age, sex, religious beliefs, etc. Once this information about principals is unavailable to their agents, the plurality of interested parties disappears, and the problem of choice is rendered determinate, because each individual’s trustee has the same information and motivation as every other individual’s trustee, the original position is a situation of *choice*, not of “negotiation” between a *plurality* of distinct individuals.

²³ In the “Appendix A” of Sen (1985), he can present only six terms to estimate the achievement of “functionings” in five countries (India, China, Sri Lanka, Brazil and Mexico). These terms are (1) GNP per head, (2) Life expectancy, (3) Infant mortality, (4) Child death rate, (5) Adult literacy rate, and (6) Higher education ratio. These indicators are obviously insufficient to estimate the nation’s well-being situation. Sen says, “Given the limitations of reliable data, it is not easy to make extensive comparisons of the achievements of different countries in the field of extending capabilities and enhancing functionings. One reason why the data tend to be relatively scarce in this area compared with, say, data underlying GNP and GDP estimates, is the lack of demand for such data” Sen (1985:p. 46).

4.2 Rule to Choose One SMC in the Others: Suppes' Grating Principles of Justice

When the social members have to choose one situation of SMC, the point is to compare the situation A with the situation B in terms of "external sympathy". According to Suppes' rule, individual *i* judge that A is more *just* rather than B, if (i) she prefers to be herself at A rather than at B, and also prefers to be other individual at A rather than at B, *or* (ii) she prefers to be herself at A rather the other individual at B, and prefers to be other individual at A rather than herself at B.²⁴

4.3 Rule to Remove Inequalities in the SMC: Rawls' Maxi-Min Principle

Once the SMC is formulated, it is normal that all of the members cannot enjoy the same well-being, so inequalities remain. We estimate that such inequalities are unjust and try to remove them, if removing them would not worsen the situations of the worst-off members of society.

5. Social Efficiency and the Market

As discussed in section 2, the concept of efficiency itself commands for us to minimize the inputs in order to achieve a given output. It is assumed that it would be useful to eliminate the 'waste'. However this assumption only imply a value as means. The point is what must be pursued *efficiently*. So to speak we must specify the inherent value of the efficiency. We think provisionally it exists in the *reproduction of human being with dignity*. And we introduce the *Social Minimum Capability* (SMC) to measure the efficiency in this sense. As Sen (1985c) mentioned, "Indeed, without access to markets most of us would perish." We can say that most of the economists agree on the need for the market.

What roles the market can play in the social efficiency issue? In our definition its efficiency is measured by using the social cost. If we evaluate the value of commodities by market price, there exists a channel to markets here. The market is the site where the supply and the demands are 'equated'. *On the one hand*, the allocative efficiency may be achieved through the working of markets. *On the other hand*, market can be characterized as a mechanism to reduce the importance of private information, and/or the mechanism to utilize and diffuse the private and dispersed information socially.²⁵ Indeed the market mechanism works as the resource allocation mechanism where all the people can pursue to improve their own economic status through their

²⁴ cf. Sen's "position dependent objectivity", Nagel's "the view point from nowhere".

²⁵ In centralized non-market systems consumers, for example, have incentives to overstate their needs. Such representing must be costly for consumer in market economy. Because the high demand for goods make the prices high, which they have to pay. So consumers try to declare their true needs (private information) in public. See Bowles and Gintis (1998:23-24).

voluntary exchange. It can be said that such people as has *the same initial endowment* can enjoy the free to choose equally in the competitive market arena (“procedural fairness”)²⁶. But apparently the outcome depends upon the people’s initial endowment. In addition, in a real world the assumption of completeness and costless contract in neo-classical economics cannot be satisfied. In such a situation voluntary exchange entails power relations as Bowles and Gintis demonstrated.

Social minimum capability (SMC) itself is *absolute* in character and is *independent* from the working of market. *So the point is to design the resource allocation mechanism, which guarantees the SMC for all the people in the society, after consideration on this political aspect of markets*. For instance, if people evaluate that some goods are not inadequate for the commodity vector of SMC, they can choose not to buy them as consumer, namely they can “exit” from the market²⁷. In this case, the market could work as diffusion system of people’s opinion.

As easily anticipated, the valuation based on the market prices should be open to question. Some commodities necessary for the reproduction of human being with dignity should not be for sale. Traditionally goods and services are classified into private and public according to the criterion of rivalry and excludability. However, these are technical in character. *The point here is that there are some goods its commodification of which should be incorrect from the ethical point of view*²⁸. The boundary of market (private/public) has been socially constituted. In this paper we tentatively assume that all the goods are evaluated in terms of market price, though, which must be explored so further.

6. Concluding Remarks: The Research Agenda

We must admit that the discussion here is only fragmentary, however, it may well be the starting point to bridge a gap between the social choice theory *a la* Sen and the market theory. Generally speaking, besides the problems précised in the section 5, the research agenda, which we have to tackle with collectively, can be stated as follows:

How can markets be combined with other institutions (government, community and so on) to pursue the objectives of social efficiency, equality and fairness?

²⁶ Suzumura (1998)

²⁷ Hirschman(1970).

²⁸ From the perspective of relation between market and SMC, one of the crucial problem concerns the commodification of human labor. If the salary can not satisfy the “minimum” level in a sense, people has difficulty in “exiting” from the market, so the market can not function as the diffusion system of opinion.

Economists have thought for a long time that markets and states are seen as competing. Recently the development of principle-agent modeling, for example, can make us to analyze market failure and government failure in a common framework. Markets and states are now seen not as competing but ,in a sense, as complementary institutions.

We are now in the new stage of theoretical development; however, we have to say we are on the halfway. There are many problems to be resolved. Escaping equality and efficiency trade-off demands many theoretical efforts.

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