Reflections on Theories of Social Optimization and Their Relevance for Future City Management in Japan

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ABSTRACT. The paradigm of laissez-faire economy presumes that economic agents know efficient loci for input-output combinations and rationally act in the market by following their subjective values. Economy is efficiently organized and given dynamic forces to grow at its own risk. As a result, the greatest happiness for a great number is attained. It is difficult to correctly answer the question, why should we consider city management? Of course, the paradigm will not work in a city due to congestion and agglomeration as well as specificity of location. However, it is not sufficient to consider only subsidiary taxes and subsidy systems like Pigouvian prescriptions that lead the market equilibrium to a Pareto Optimum.

In a mature economy such as the Japanese economy that faces a long depression under pressure of aging and decreasing population, there are few investable targets as long as it is taken for granted that the paradigm should be maintained. Moreover, in a globalized economy, cities must compete against their rivals. This means not only efficiency of activities in the Pareto sense in the city but a higher absolute level of activity must be realized.

In this study, we focused on external costs and benefits that accrue through the activities of economic agents in a city. We argue that activities should be managed and controlled so external benefits are generated to a maximum extent and the activity level of the city is also maximized.

KEYWORDS. ***Theories of social benefits, socially optimum optimorum, city management, urban future Japan***

1. INTRODUCTION

Traditional and modern economics have treated technical externalities, even if they are positive, as nuisance that cause distortion to block the first fundamental theorem of welfare economics. Analysis of externalities has long focused on the correction of distortion and realization of Pareto Efficiency. In this paper we discuss control of positive externalities to a maximum extent and their meaning for future city management in Japan.

In section 2, we generally focus on externalities and theories of social costs and benefits. We argue activities that cause positive externality should be managed so external benefits are generated to a maximum extent. In section 3, we argue it is important to focus on technical external economies such as agglomeration effects when managing activities in a city. In section 4, we show that the Pareto Optimal (Efficient) equilibrium is just a prerequisite for attaining an optimal level of technical externality in Chipman's sense (1970) and improvement in social welfare does not necessarily require Pareto optimality to be maintained even though the optimization of externalities in the social welfare function can be shown as optimum optimorum of Pareto efficient resource allocation as we have shown in the past (Higano, 2000). In section 5, we discuss the meanings of theories on social benefits and social optimization of externality discussed in sections 2, 3 and 4 for future city management in Japan. In section 6, we argue that Japanese economy in the past and future focus on urban economy based on the discussions on externality and social benefits. In Section 7, we conclude this paper with a summary.

2. ANALYSIS OF EXTERNALITY AND THEORIES OF SOCIAL BENEFIT

Analysis of social benefits was developed jointly with analysis of externality as a typical cause for which the first fundamental theorem of welfare economics does not hold. Externality is external economies and defined as the effects or impacts made by individual economic agents as a result of their decision making based on their own behavioral criteria (value judgments) (i) *directly*, (ii) *without markets* or (iii) *technically*. The meanings of (i), (ii) and (iii) are shown to be almost the same through analyses by Pigou (1920), Marshall (1920), Knight (1924), Meade (1952), Chipman (1970), etc. When externality adversely affects economic agents, it is negative externality or external diseconomies. When it is favorable, it is positive externality or external economies (in a narrow sense).

Theories of social benefits focus on characters, (ii), of external economies, especially on the status in which counter values equivalent to positive (negative) externality are not paid to (no compensation) agents that cause externality by (to) beneficiaries (victims). Public investment is a typical example that causes positive externality and its counter value is not fully paid. Using the