Type of submission; *'Contributed'*

Proper Evaluation of Value Added in Service industries
-Comparison between Hedonic Method and Contingent Valuation Method-

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Abstract;

1. The state of the low productivity in service industries

The Japanese economy has remained stuck in a state of stagnation since the collapse of the asset-inflated bubble economy in the 1990s. It is against such a background that service industries are currently attracting keen attention in Japan. Especially the soft power sector like the Japan Animation is called as "Japanese cool" in the world, and is large position in Japanese industries. The content industry, which forms the core of the soft power sector, boasts a market scale of 14.1 trillion yen (2.8% of nominal GDP in 2008), which makes it comparable to the steel industry (18 trillion yen) and the electronic parts/device industry (19 trillion yen), both leading sectors of Japanese industry. The economic spillover effects of the content industry on non-content industries are estimated at 10.5 trillion yen, based on the input-output table, bringing the overall economic impact of the content industry to a whopping 24.5 trillion yen or as much as about 5% of GDP.

But, how efficient is the soft power sector as an industry? Evidently, Japan's productivity (labor productivity) has remained low compared with that of the United States. Given the standard of 100 for that country, Japan's productivity was only 39 for the information service industry on the 1995-2005 average, far lower than 132 for the automobile industry. However, this trend is witnessed not only in soft power industries, but also in service industries as a whole. In recent years, moreover, the growth of productivity has slowed down, with a decline of about 6 percentage points in 2004 compared with 2000, attesting to the deterioration of the industrial structure.

Nonetheless, the low productivity does not necessarily indicate the inefficiency of Japan's service industries, especially soft power sector. Labor productivity indicates the ratio of real output value to the number of workers and means the per capita value added of workers. However, is the value added of soft power industries (especially regarding product quality) evaluated properly? Although this applies to service

industries as a whole, I think that the evaluation of created value added – namely, the determination of product/service prices – is not proper more often than not. This is considered ascribable to the impact of the pyramid-type industrial structure.

In many cases, product/service prices of soft power-related industries are limited to low levels (also spelling the low levels of workers' wages). The reason is considered to be that evaluation standards have yet to be established regarding service quality. For instance, when viewed from an angle of the entire economy per se, production activities in the service sector also have the implications of devoted service to society and entertainment of guests. It is thus suspected that such activities are regarded as something that need not be taken up as value added. In particular, it appears, the recipients of services tend to have such expectations.

The value of service is proportional to the amount of the customer's opportunity cost (how much of the time and expense that would have been required of the customer in the absence of the service in question has been eliminated by the service received). But the value of service is mostly evaluated in terms of prices based on the actual man-days and cost of production. This makes it impossible to earn enough profit to match the value added and undertake corporate management in such a way as to improve the earnings environment. It is thus considered that the created value of soft power industries is not sufficiently evaluated, which leads to the underestimation of the real output value. As a result, the productivity of service industries and soft power industries is calculated to be at a low level.

2. The measurement of quality in service industries

In this study, we examine the possibility of measure for quality of service industries using Hedonic Method and Contingent Valuation Method in Japanese soft power industries tentatively. While the hedonic price model has been used to evaluate willingness to pay in a variety of markets, in this study we compare the price estimated by Hedonic Method and Contingent Valuation Method.

The hedonic method is a regression technique used to estimate the prices of qualities or models that are not available on the market in particular periods. It is based on the hypothesis that the prices of different models on sale on the market at the same time are functions of certain measurable characteristics. We use a financial report of the Animation sector and the information about the intangible asset; the system for the development of an animator’s ability, frequency of training, catalog of animation and percentage pay. We find that the value added of Animation sector increase about 10-15% against the value in the actual cost based measure. But we have different value

when we estimate it using different combination of factors. It is difficult to get rid of arbitrariness in selection of estimation valuables.

On the other hand, the contingent valuation method is based on asking people questions, as opposed to observing their actual behavior, is the source of enormous controversy. The conceptual, empirical, and practical problems associated with developing estimates of economic value on the basis of how people respond to hypothetical questions about hypothetical market situations are debated constantly in the economics literature. We collect the "Willingness to Pay" data for the service using some question styles; dichotomous choice, open-ended question and payment card. We find the value added of Animation sector increase against the actual cost based measure. But whatever we use question measure, we have different answer. It is difficult to get rid of bias in selection of estimation valuables.

It is difficult to select the method because of the structure of theory and the statistical significance. But when we estimate the quality of service industries, it is not proper that we use only the actual cost based measure (cost-oriented price) as usual. We also use value-oriented price.

Key Words: quality of service, value-oriented price, cost-oriented price Hedonic Method, Contingent Valuation Method
JEL Classification: C81, E01, L82

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