

論文の内容と要旨

論文題目 An Empirical Study of Health-related Consumption and Subjective Health Status  
(健康関連消費と主観的健康感についての実証研究)

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In Japan, the length of life of Japanese people has been increasing because of the improvement of public health, technological progress in medical care, and so on. At the same time, the large length of life has increased medical care cost. Especially, the large scales of medical care cost for the elderly is one of important policy issues. And the strong correlation between medical care cost and the life style has been known. Many findings demonstrate that an individual's future health and/or mental condition depends on what kind of life style relating to health and/or mental condition he or she currently selects. Japanese government emphasizes countermeasures for health risk in daily life. For example, The Ministry of Health, Labour and Welfare (MHLW) demonstrates the importance of them in "Annual Report on Health, Labour and Welfare 2003-2004 Health Risk Surrounding Modern Life: Attaining Safety and Peace of Mind with Information and Collaboration" as a special issue.

The aim of this doctoral dissertation is to provide empirical evidences for policies relating to the nation's health. The analysis of this dissertation paper deals with smoking activity as a risk factor for health in Chapter 2, the quality of long-term care (LTC) provided and the effect of it on customers' health condition in Chapter 3, daily eating habit and subjective health status in Chapter 4, and the impact of subjective health status on household decision-making activity and intrahousehold resource allocation in Chapter 5.

In Chapter 2, I performed the estimation of policy effect focusing on the smoke-free work place policies. Based on the analysis of the original Japanese household survey data of 2001, this chapter concludes that a smoke-free policy, particularly total smoking prohibition, in a workplace is effective. The use of a two-part model for all workers during the survey period reveals that total smoking prohibition marginally reduces the prevalence of smoking by 10 percentage points and the daily tobacco consumption by 4 cigarettes per smoker. The probit model and DID estimations are used to isolate the effect of the policy on those who were smokers at workplaces that had not introduced the smoke-free policy at the time of hiring. The results suggest that total smoking prohibition or total separation of smoking areas causes the smokers to quit smoking by approximately 10 percentage points and reduces their daily consumption by approximately 2 to 3 cigarettes.

The future direction of this chapter involves the evaluation of whether the introduction of a smoke-free workplace policy is determined endogenously. In addition, it is important to perform strict, natural experiments taking into account the economic factors and to conduct surveys that include the factors that determine the introduction of a smoke-free workplace policy.

Second, I analyzed Japanese LTC market, particularly Japanese group homes for the elderly with dementia in Chapter 3. The Japanese group homes provide assistance with bathing, voiding, feeding, other daily living care, and rehabilitation training to the elderly with dementia who are in a stable condition. Elderly customers with dementia rent private rooms in group homes. The aim of group home services is to create homey atmosphere. The expenditure for group home customers comprises individual payments for LTC services covered by the LTC insurance system and other expenses such as room rent, haircut, shopping and so on.

Japanese LTC insurance system was introduced in April 2000 with some key objects by the MHLW. One of them is that the system was designed to integrate the respective systems of health, medical, and welfare services that had been vertically-divided independently in the past, in order to help customers receive comprehensive services from them.

The improvement of institutions on the LTC market in order to realize the key object promoted the entry of for-profit providers into the LTC market. The Japanese government changed the mechanism on the supply of LTC services. Before the LTC insurance system, municipalities delegated the supply of LTC services for object persons to service providers. The LTC insurance system allowed that

those people who wanted to use the LTC services directly signed a contract with the service providers. This change motivated providers, especially for-profit providers to enter into the LTC market.

Though the LTC insurance system promoted the increase of for-profit providers in the LTC market, the system has regulations that do not permit the entry of for-profit providers into some kinds of LTC market. The for-profit providers are not permitted to supply some LTC services. The providers with the ownership types of medical corporations and social welfare corporations that satisfy some requirements provide the LTC services. Besides, for-profit providers are not allowed to supply medical services in the Medical Care Law, though the LTC services are also expected to provide the synergy with the collaboration of the medical services. It is also a hot issue whether for-profit providers will be allowed to enter into the market of medical services.

If the providers with the ownership types of medical corporations or social welfare corporations enjoy the benefit of synergy effect between the services such as facility services ("welfare facilities for the elderly requiring care," "health service facilities for the elderly requiring care," "sanatorium type medical care facilities for the elderly requiring care," and "sanatorium type wards covered by medical insurance") and other services, those providers and for-profit providers are not on equal footing in the market competition of other services.

The motivation of this chapter is to examine the difference of suppliers' behavior between non-profit and for-profit providers. In order to show the evidence for discussing the deregulation on the facility services, this study deals with the non-profit providers that supply facility services and/or medical services.

The chapter focuses on the nonprofit providers that manage facility services and/or medical services as well as group homes and for-profit providers. The analysis considers what kinds of customers' characteristics affect the select of providers between nonprofit and for-profit and the determinant factors of the change of "levels of long-term care need (requiring care levels 1-5)." In the estimation results from the individual data, the difference of service quality between nonprofit and for-profit providers is not observed in terms of "levels of long-term care need." However, in the results from the group home data, nonprofit providers emphasize compliance with law and seasonal event in the supply of group home service. Since the customers transferred from facility services tend to use the group homes managed by the nonprofit providers that also supply facility services and/or medical services, it can be interpreted that the nonprofit group home providers with facility services respond to the preference of the customers who have already experienced the LTC services.

In future research, it will be needed to consider the following two factors. First, the evaluation of group home data obtained by third-party evaluation is better than that of the data obtained by self-evaluation, as obtained in this paper, because third-party evaluation is expected to have less difference in terms of the attributes of judgment (strict and lenient judgment) among respondents than self-evaluation. In the group home market, the MHLW made it mandatory in 2004 for all group homes to implement both self-evaluations and third-party evaluations. The data of these evaluations have to be accumulated. Second, studies on group home will have to consider terminal care provided by group homes in the future. The Institute for Health Economics and Policy reports that approximately 45% of surveyed group homes are willing to provide terminal care in the future. If the number of group homes supplying terminal care increases, analyses that consider the efforts of group homes for terminal care will be required.

Third, I examined healthy eating habits and the consumption of supplements and tonic drink among Japanese people related to subjective health status in Chapter 4. In a previous literature, tonic drinks are defined as "drug medicine that is composed of vitamin and herbal medicine and is original in Japan." This chapter focuses on how the endowment of individual health status affects healthy eating habits and the consumption of supplements and/or tonic drinks in Japan. This study estimates eating activity (based on supplement and/or tonic drink as well as eating habits) and subjective health status by bivariate probit model using some variables representing the endowment of health status as explanatory variables. The estimation concludes that the individuals with good health endowment have healthy eating habits. In addition, it is also shown that the individuals with bad health endowment tend to consume supplements and/or tonic drinks without healthful eating habit.

The remained work for this chapter is to specify the relationship between supplement and healthy eating habits. Though this study partially finds the complementarity between them, the more evidences will be needed to conclude the relationship strictly.

Fourth, I analyzed the test of unitary model in Chapter 5. In the test, the analysis also finds the impact of family members' health condition in the selection of decision-making activity. This study tests whether or not the unitary model is consistent with real household behavior using the data pertaining to two-earner couples from the JGSS (Japanese General Social Survey). The analysis focuses on the unitary models assuming that all family members have the same preference. This study investigates the difference in a husband's and a wife's labor supply between the household that determines the wife to be the principal decision-maker and that which selects a different decision-making system under the control of individual and household characteristics. In order to consider that labor supply and decision-making system are endogenously determined and that the selectivity bias is caused by unmeasured characteristics, this chapter estimates the treatment effects model. The estimation uses subjective health status representing health condition. The result concludes that the unitary models are rejected in Japanese household labor supply. In addition, the household decision-making power can be interpreted as a kind of bargaining power in a household because family members' health status relating to the threat point of Nash bargaining model are observed to be a determinant factor of the household decision-making system.

Three directions for future research of this chapter could be pursued. First, it would be interesting to test intrahousehold resource allocations other than labor supply (individual consumption, public consumption, individual leisure hours, and so on). Specification of the kinds of intrahousehold resource allocation that are affected by differences in individual preferences could provide useful information for social policy. Second, the amount of personal spending money of the household members could be examined to refine the estimation results. This study uses the dummy variable that represents whether or not a household permits the wife to manage all money except the husband's personal spending money. The more personal spending money a husband has, the less decision-making power the wife has in allocating intrahousehold resources. How strictly the dummy variable reflects the level of the wife's bargaining power based on the decision-making activity depends on how much personal spending money the husband has. Controlling for the amount of the husband's personal spending money in the estimation would improve the quality of the analysis. Third, it is better to analyze the survey that is rich in the question items on the household decision-making system. The JGSS has a single question on the household decision-making system, allowing for six possible responses. If a household uses different decision-making systems under different situations (daily shopping, saving/investment, real-estate purchases, and so on), the decision-making activity depending on the situations may affect the estimation results.