Extended Abstract
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Paper/Poster Title	Analysis of income elasticity regarding the consumption of cut flowers in Japan

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Abstract	200 words max

The Japanese flower market continues to shrink. Because the culture of using flowers is declining. For Japanese cut flowers, we calculate and compare the ideal income elasticity (theoretical value of maximizing utility) and the actual income elasticity. There are cases where the superior goods as theoretical values are the lower goods as actual values. They are gerbera, eustoma and chrysanthemum. We discuss what we should do to make them the superior goods rather than the lower goods. The original of this paper is the following three points. The first is to build a model for calculating ideal income elasticity. The second is that the gap between the ideal elasticity and the actual income elasticity was regarded as a problem. Third, we analyzed carnations, roses, eustoma, gerbera, and chrysanthemum at the same time. By the above method, we will expand the flower market, by proposing to protect Japanese traditional culture, and to increase plants and reduce CO_2.

Keywords	Japanese cut flower, the gap between the ideal elasticity and the actual income elasticity
JEL Code	D Microeconomics

Introduction

100 – 250 words

In the past, our research on "flower consumption" focused on pots in Japan. Here, we focus on cut flowers, which are the mainstream of consumption. The main cut flowers are carnations, roses, eustoma, gerbera and chrysanthemum. In Japan we will analyze these based on consumption theory.

The feature of this paper is to calculate the income elasticity of these flowers. We calculated the difference between the income elasticity that maximizes the utility (ideal income elasticity) and the actual income elasticity. If the divergence is large, it means that the flower is not consumed well. I would like to consider what measures should be taken to approach the ideal income elasticity.

Until now, the index of income elasticity has only been an index showing the nature of goods as a result of consumption. In this paper, we have positioned income elasticity as an indicator that brings actual consumption closer to the ideal form of consumption of goods. The results of this paper are suggestions for correcting the distorted consumption of flowers in Japan.Discuss this with carnations, roses, eustoma, gerberas, and chrysanthemums.

Methodology	100 – 250 words

The model used for the analysis is a model developed by the author based on the consumption theory of H. Theil's system-wide approach. In the system-wide approach, the demand equations for each good are arranged in the form of simultaneous equations. By combining the generalized residual model developed by the author with the system-wide approach, it is possible to calculate the income elasticity (theoretical income elasticity) when the profit is maximized. On the other hand, the actual value of income elasticity can be calculated from the data based on the definition of income elasticity. If the difference between the theoretical income elasticity and the actual income elasticity is large, each good is not ideally consumed. If the difference is small, the consumption of each good is ideal. In Japan, we calculate the theoretical income elasticity and the actual income elasticity of carnation, rose, Turkish gikyo, gerbera, and chrysanthemum, and calculate the difference between the two elasticity. It can be determined whether or not each flower is ideally consumed.

Results	100 – 250 words

The theoretical income elasticity was calculated for the five species of flowers using the model described above. The income elasticity of each flower was 0 or more, and it was a senior good. Next, the actual income elasticity was calculated. The income elasticities of carnations and roses were greater than 0, and the income elasticitties of gerbera, eustoma and chrysanthemum were less than 0. In other words, carnations and roses are senior goods, and gerbera, eustoma, and chrysanthemum are inferior goods. Looking at the theoretical elasticity, gerbera, eustoma, and chrysanthemum are also superior goods, so in reality, ideal consumption is not being carried out for these. Therefore, in order to form a market in which consumers are fully satisfied, it is necessary to devise ways to make gerbera, eustoma, and chrysanthemum the senior goods.

Discussion and Conclusion	100 – 250 words

The situation in which consumption does not go to flowers, which are theoretically regarded as superior goods, even if income increases, has shrunk the market for flowers as a whole. Increasing income is not creating demand for flowers. In Japan, flowers are often used for events such as weddings, funerals, and birthday parties etc. Even with rising incomes, people are currently not trying to make these events more large. Culture in Japan is declining. If these events are revived and more flowers are used, the entire flower market will expand. The relationship of superior goods, in which the demand for each flower increases as the income increases, is established. In order to increase the income elasticity of each flower, it is important to revive and expand the scale of Japan's original event culture.