a) indicates the amount of vegetables demanded by family households. They are defined as "either domestically produced or imported raw ingredients distributed from the production point to the end consumer with no modification en route", thus, the definition excludes frozen vegetables and precut vegetables though it includes home produced vegetables.

b) indicates the amount of imported processed items, which are not for further processing or for business and service purposes but purchased by households. It should be noted that only frozen vegetables are accounted for in the estimation, thus, it is underestimated.

c) indicates the amount of vegetables required for food manufacturing. The estimation of the amount used in 2000 was made by applying the amount acquired from a past survey on fruit and vegetable processing factories plus the amount of precut vegetables purchased, which was estimated based on the previously mentioned "Annual Report on the Family Income and Expenditure Survey".

d) indicates the amount of vegetables demanded for business and service purposes and the figure was calculated by subtracting a) ~ c) from e) (gross food) ; (d)=e)−a)−b)−c)−waste).

Consequently, the proportional representation of the above estimations of vegetable demands by intended purposes in terms of gross food is 44% for household consumption, 15% for food manufacturing and 41% for business and services.

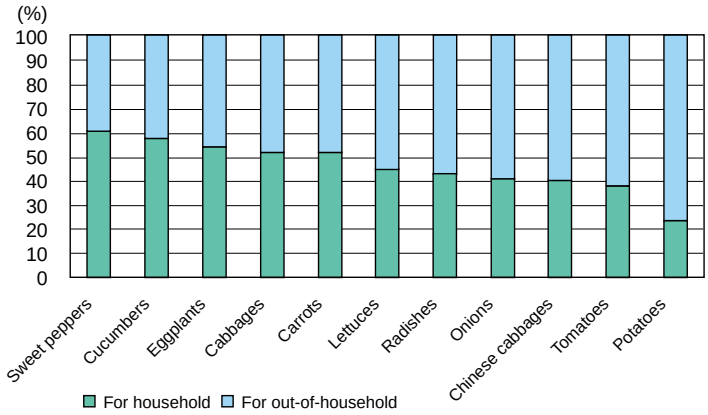

Fig.2. Share of Demand for Major Vegetables by Household (2000)

(2) In addition, the rate of the vegetable demand of major items for household consumption was calculated in comparison with the overall demand for the other purposes (Fig.2). This estimation was also made by the application of existing statistics. The focus of future research will be further clarification of movements in vegetable demands of certain types of items and their intended purposes by means of dividing the overall vegetable demands for all purposes, except for household consumption, into two groups of food manufacturing purposes, and business and service purposes, based on the findings acquired from the separately implemented questionnaire.

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The Price formation of Voluntarily Marketed Rice and its competition with non-Orderly Marketed Rice

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The competitiveness of Voluntarily Marketed Rice (VMR) with non-Orderly Marketed Rice (non-OMR) after 1995 when the Food Control Law gave way to the Food Law has been analyzed, with attention given to the price formation system of VMR.

The distribution price of VMR in Japan is decided by a tender system between shippers (unions of farmers cooperatives) as sellers, and wholesalers as buyers. Up until 1997, the price had been, in most cases, decided in accordance with a floor price, set under the "limited price range system" of tender. However, since this system was abolished in 1998, the price formation has been changed to become more flexible, reflecting supply/demand factors more sensitively.

While the "price requesting system" of tender was newly introduced after the abolishment, this has weakened VMR's competitiveness with non-OMR, due to higher prices requested by VMR shippers, irrespective of the real market situation.

Demand for VMR from wholesalers becomes more sensitive to its own price after 1998 (Table 1). Moreover, the sales of VMR are being strongly influenced by the price of non-OMR and are confronting strong competition, with its rapid increase in distribution.

In a calculation, based on a model reflecting a situation whereby the non-OMR price is connected to VMR price, demand for VMR from wholesalers increases 0.82% in the case of 1% fall in VMR price (Table 2). The producer price falls 0.28%, but it is a considerably smaller drop than compared to the case whereby an increase in demand is not taken into consideration (1.1% down) (Table 3).

Under the current pricing system, concern about the negative impact on producer prices of VMR induces shippers to request higher prices that do not reflect real market situations. Focusing on farmyards, the anticipated reduction in distribution prices of VMR may result in reducing the prices received by farmers and therefore promoting them to sell more non-OMR rather than VMR. On the other hand, the reduction in market prices of VMR may increase the demand from rice distributing companies.

In view of this dilemma, much effort should have been made by shippers, paying attention to both producers and distributing companies, to reduce shipment cost and request reasonable prices reflecting the real market situation, in order to increase the sales amount of VMR and the producers' revenue.

(Note) VMR (Voluntarily Marketed Rice) is the rice distributed through registered rice shippers, in accordance with Voluntary Marketing Plans authorized by the Minister. GMR (Government-Marketed Rice) is the rice purchased and sold by the government. OMR (Orderly Marketed Rice) consists of VMR and GMR. Another distribution channel is allowed under the Food Law, which is referred to here as non-OMR.

Table 1. Factors Influencing Demand for VMR from Wholesalers

Variable	1995~2000 Coefficient	Std. Reg. Coefficients	t-Statistic		1995~1997 Coefficient	Std. Reg. Coefficients	t-Statistic		1998~2000 Coefficient	Std. Reg. Coefficients	t-Statistic	
VMR price (log)	−3.5687	−1.1888	2.9426	**	−4.5964	−1.2897	1.2225		−5.2032	−1.1004	3.0128	**
Non-OMR price (log)	2.6807	0.9517	2.3591	*	2.4137	0.7606	0.7009		2.8488	0.6595	2.2642	*
Stock of rice by wholesalers (end of previous month) (log)	−0.5084	−0.4098	3.2686	**	−0.6043	−0.3265	1.7813		−0.5565	−0.4886	2.6889	*
Dec.-Feb. (dummy)	0.2199	0.3651	2.7556	**	0.1538	0.2559	1.2343		0.2160	0.3578	1.8553	
Mar.-May (dummy)	0.3734	0.6199	4.8878	**	0.2872	0.4779	2.1023	*	0.3320	0.5500	3.0287	**
Jun.-Aug.(dummy)	0.2393	0.3818	3.2964	**	0.1928	0.3207	1.7156		0.2606	0.3957	2.4266	*
Stock of OMR (National) at the end of Oct. (log)	−0.3479	−0.3687	3.2738	**	−0.6166	−0.7756	2.8481	**	−0.5760	−0.4513	2.0270	
Rice-crop index (log)	−2.9113	−0.2295	1.8681		2.0388	0.1071	0.6490		−8.8305	−0.7926	2.2274	*
Constant	33.190		3.5513	**	25.7224		1.8278		76.8808		2.5423	*
N of observations	69				35				34			
Adjusted R-squared	0.4152				0.2999				0.4974			
D-W stat.	2.0774				2.3256				2.0728			

Dependent Variable: Demand for VMR from wholesalers (log)
**: 1% significant
*: 5% significant

Table 2. Change in Demand for VMR from Wholesaler

(%)

		Fall in VMR price (%) 0	1	5	10
Fall in distribution cost (%)	0	0.00	0.82	4.10	8.06
	1	0.26	1.08	4.35	8.29
	5	1.31	2.13	5.35	9.21
	10	2.60	3.40	6.57	10.30

Table 3. Change in Producer Price

(%)

		Fall in VMR price (%) 0	1	5	10
Fall in distribution cost (%)	0	0.00	−0.28	−1.61	−3.79
	1	0.46	0.17	−1.18	−3.39
	5	2.30	1.99	0.57	−1.76
	10	4.60	4.28	2.75	0.24

Estimating Own and Cross Brand Price Elasticities, and Price-Cost Margin Ratios using Store-Level Daily Scanner Data

Junko KINOSHITA

This article addresses three issues related to Japanese dairy demand analysis. First, an econometric fluid milk demand model is estimated using store-level daily scanner data to determine whether the own-price elasticities are significantly different from previous estimates based on aggregate market-level data. This is important because of the current debate among Japanese dairy industry leaders concerning whether fluid milk is price inelastic or elastic. Own-price elasticity differences between fresh and reconstituted milk products are also examined. Second, milk product cross-price elasticities are estimated to measure the degree, if any, of substitutability between fresh milk and reconstituted milk products. Because most previous studies have relied upon aggregate market-level data, there are no previous estimates of cross-price elasticities for fresh milk and reconstituted milk products. Finally, price-cost margin ratios are estimated for each commodity using a method that does not require cost data, but rather relies on assumptions regarding the degree of competition to derive the price-cost margin ratio. [Econlit alphanumeric subject codes: Q110, Q130]

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