

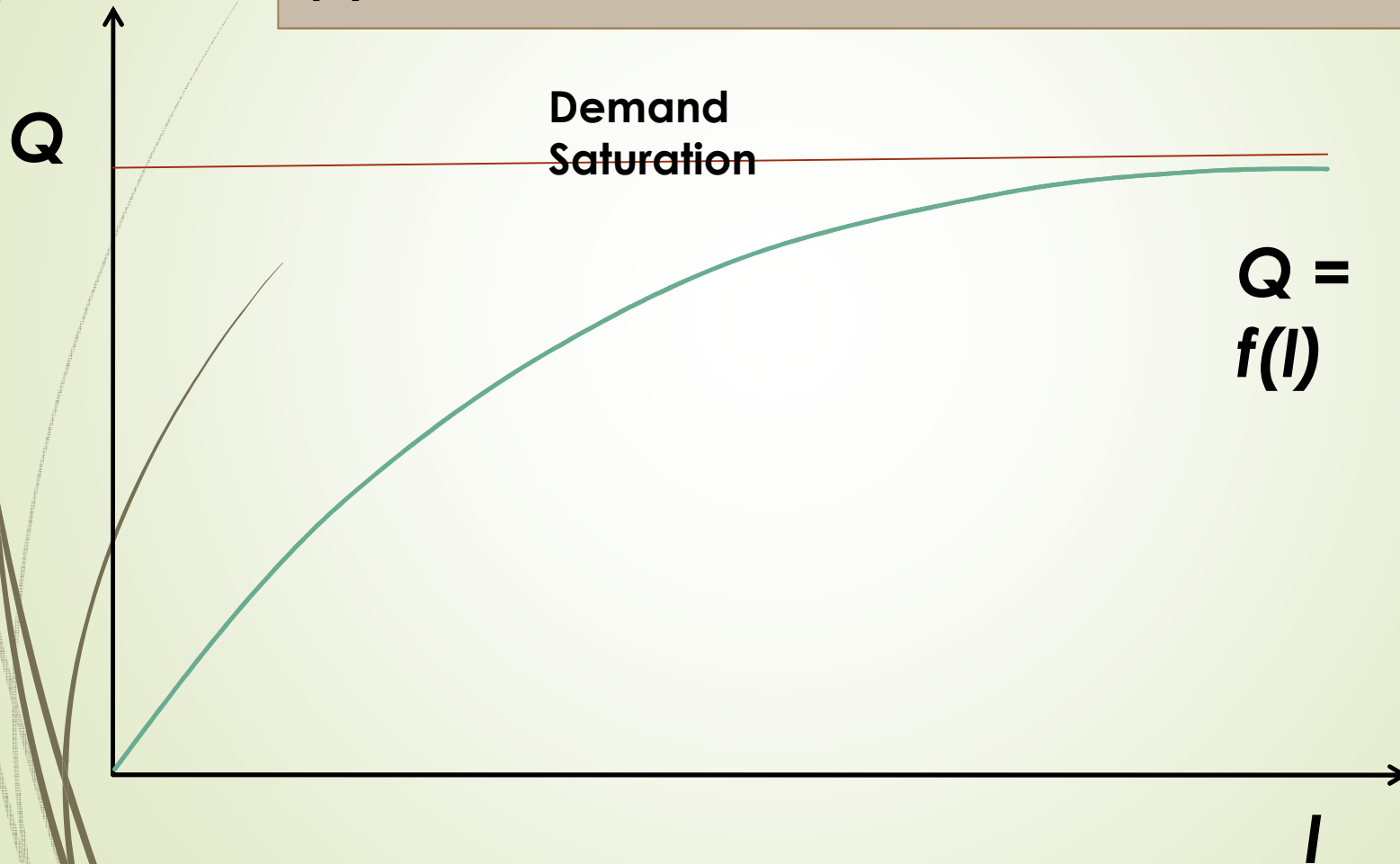
Importance of the policies to induce product differentiation in agricultural product and food markets for the benefits of producers and consumers

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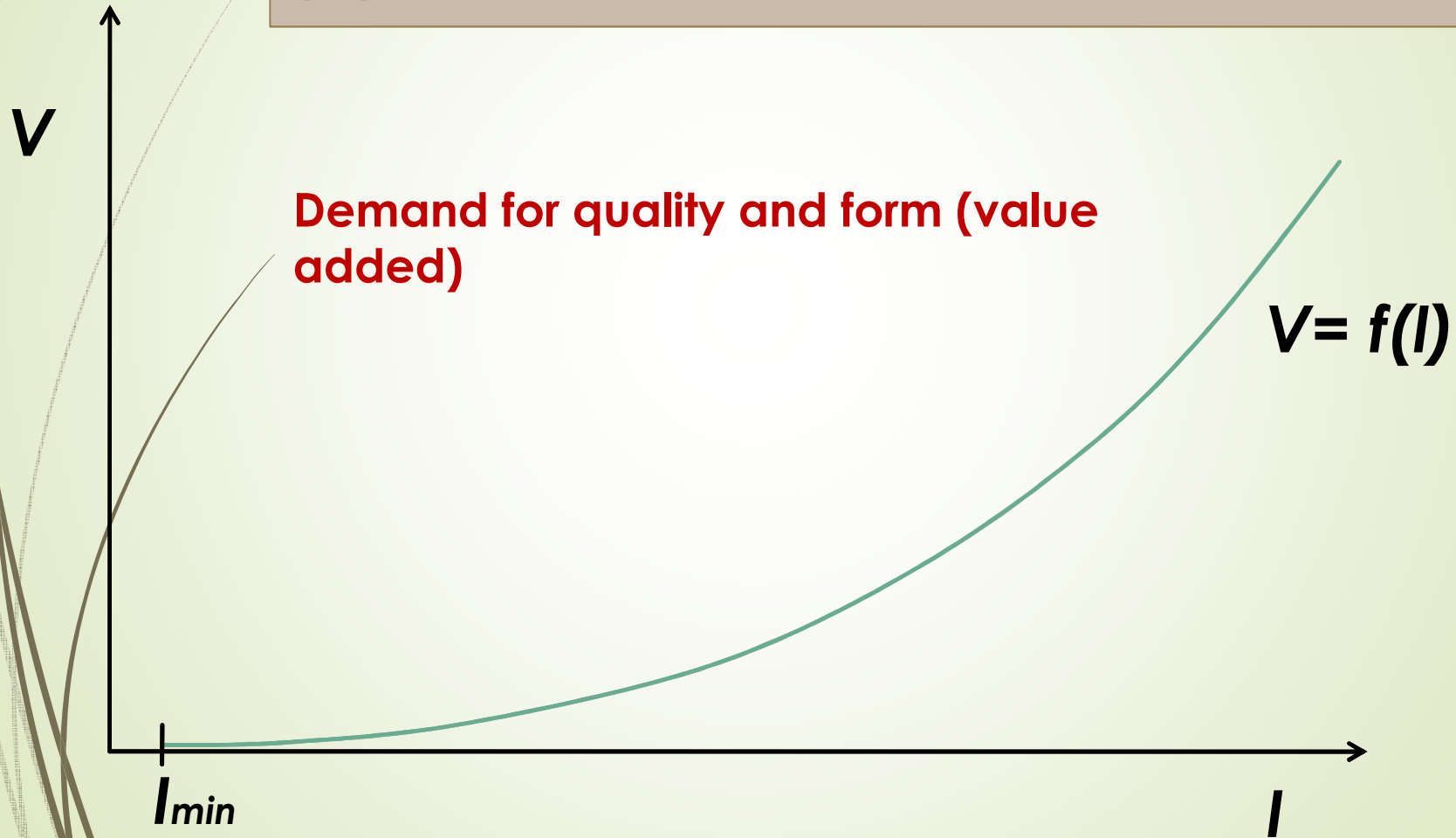
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Income and food demand (I)



Income and food demand (II)



Abstract

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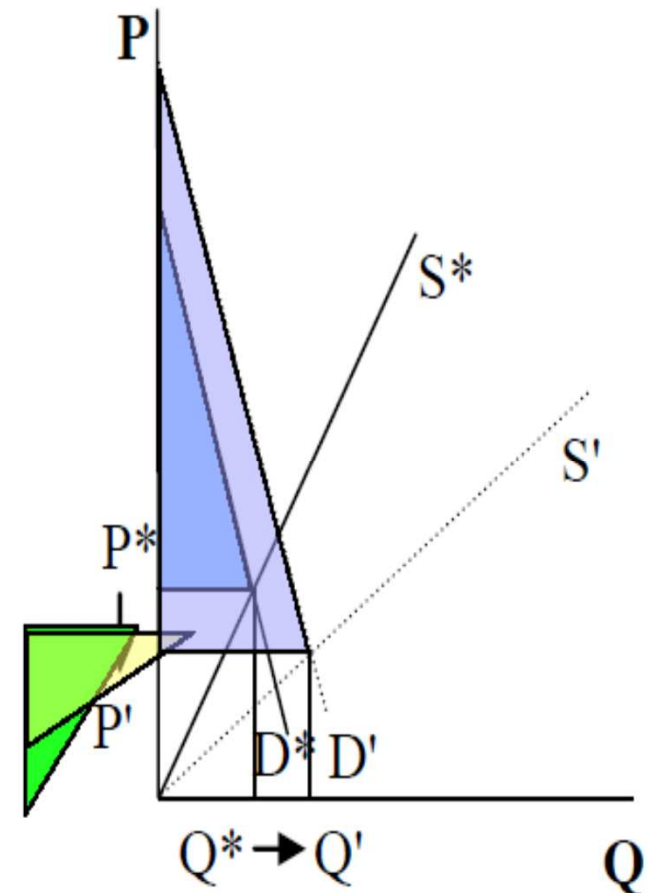
Agricultural and trade policies in industrialized economies which have been observed in Europe and East Asia have a significant orientation for safeguarding producer welfare with the name of food security and multi-functionality of agriculture. Agricultural productivity has not been improving in some industrialized countries with the introduction of decoupled income support policy approach.

We would argue that we are not meeting the needs of consumers in our agricultural policies for regional food security. Policies to reflect consumer preferences are needed in Europe as well as in East Asia. The welfare of competitive producers can be also procured.

We will show the existence of consumer preferences on private and public attributes in agricultural and food products. Using the random n-th price sealed auction method, which is incentive compatible, willingness to pay (WTP) measures have been examined on particular attributes on agricultural and food products. The existence of the difference in WTP has been statistically examined between groups in Japan and Poland. Economic values of policies and institutions to differentiate particular agricultural and food products from others have been identified.

5 If demand is inelastic, typically the case for agricultural and food products in industrialized economies, the shift in supply, created by productivity growth, will decrease producer surplus and increase consumer surplus. Most benefits of productivity growth go to the hands of consumers. For social welfare, the sum of producer surplus and consumer surplus, we observe a gain. Productivity growth does not necessarily increase farm income without market interventions. The interventions will not boost productivity improvement, either.

The story will be different if we can promote agricultural and food products with elastic demand. Policies to differentiate products, such as geographical indication (GI) certification programs and promotional policies for organic production, can induce larger gains to producers when productivity growth takes place. Encouraging the production of agricultural and food products with public and private goods attributes is also an option.



Objective: We examined the economic value of information on public goods attributes beside private goods attributes for agricultural and food products prepared and supplied by social firms in the Japanese market. This is to show that agricultural products with public goods attributes can be preferred by consumers. Promotion of agricultural products with public attributes is a policy option.

Methodology to show the existence of public good attributes in agricultural and food products: Using the random n-th price sealed auction method, which is incentive compatible, willingness to pay (WTP) measures have been examined. The existence of the difference in WTPs has been statistically examined for different kinds of information.

Scope: The economic values of the information on a social firm produced organic olive oil were examined along with a regular organic olive oil and a normal non-organic olive oil.

Significance of the study: The economic values of strategies to differentiate agricultural and food products with public goods attributes from others can be understood. This is important to find solutions for agricultural adjustment problems in developed economies.

Value of information on public goods attributes: agricultural products prepared by social firms

The objectives of the study were to value the information on the public attributes of agricultural and food products and to derive policy implications on the strategies to maximize profits for social firms. Under the non-hypothetical conditions, the expressed preferences in the willingness to pay measures were quantified for a set of different product information, which includes public goods attributes. A statistical analysis generated the economic values of information on the organic olive oil produced by a social firm.

A random n-th experimental auction method was used to examine the economic values of the information on public goods attributes and organic products. 115 participants in 9 groups gathered in a laboratory at separate times to taste three different types of olive oils and joined the 5 rounds of auctions for these three products. The bidding prices were assumed to represent the true preferences of the respondents. Additional information was given in each round. The change in the bidding prices was considered as the economic value of the added information.

Social firms

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Social firms operate as profit seeking enterprises, providing equal working opportunities for mentally and physically handicapped persons, and minimizing receiving subsidies from the governments. At least 30 % of workers are handicapped persons. The revenue from production activities exceed 50% of the total revenue. The supports from the government should be less than 50% of the total revenue.

Table 1 WTPs for the information on social firms and organic production

Rounds and information provided	Mean value in WTPs (yen/50ml)	Coefficient of variation
A1 (Price range in the retail market was provided)	36.32	1.14
A2 (Health effects of olive oil were told)	38.51	1.09
A3 (A was produced by a social firm. A and B are organic products. No detail explanation on social firms)	54.44	0.97
A4S (Detail explanation on social firms)	63.36	0.78
A4O (Detail explanation on organic production)	60.30	1.01
A5O (Detail explanation on organic production)	69.12	0.75
A5S (Detail explanation on social firms)	76.23	0.92
B1 (Price range in the retail market was provided)	28.49	1.24
B2 (Health effects of olive oil were told)	27.83	1.29
B3 (A was produced by a social firm. A and B are organic products. No detail explanation on social firms)	35.36	1.24
B4S (Detail explanation on social firms)	39.42	0.86
B4O (Detail explanation on organic production)	37.58	1.05
B5O (Detail explanation on organic production)	41.36	0.85
B5S (Detail explanation on social firms)	38.78	1.08
C1 (Price range in the retail market was provided)	32.74	1.23
C2 (Health effects of olive oil were told)	28.79	1.23
C3 (A was produced by a social firm. A and B are organic products. No detail explanation on social firms)	20.75	1.24
C4S (Detail explanation on social firms)	15.26	1.12
C4O (Detail explanation on organic production)	17.35	1.48
C5O (Detail explanation on organic production)	13.26	1.30
C5S (Detail explanation on social firms)	21.74	1.92

Table 2 Economic values of information

	Differences in mean values	Standard deviation	t-value	Statistical significance
(1) No information VS. No information				
H ₀ : WTP_1A=WTP_1C	3.58	8.05	0.78	
H ₀ : WTP_1B=WTP_1C	-4.25	7.82	1.30	*
H ₀ : WTP_1A=WTP_1B	7.83	8.05	2.11	**
(2) Detail information VS. Detail information				
H ₀ : WTP_5A=WTP_5C	55.09	0.40	7.08	***
H ₀ : WTP_5B=WTP_5C	21.85	0.39	5.11	***
H ₀ : WTP_5A=WTP_5B	33.23	0.43	7.08	***
(3) Detail information VS. No information				
H ₀ : WTP_5A=WTP_1A	36.82	10.46	8.26	***
H ₀ : WTP_5B=WTP_1B	11.42	8.27	3.51	***
H ₀ : WTP_5C=WTP_1C	-14.69	7.13	3.62	***
(4) General health information VS. No information				
H ₀ : WTP_2A=WTP_1A	1.90	8.63	0.95	
H ₀ : WTP_2B=WTP_1B	-0.66	7.50	0.47	
H ₀ : WTP_2C=WTP_1C	-3.95	7.84	1.98	**
(5) Basic information VS. General health information				
H ₀ : WTP_3A=WTP_2A	16.23	9.63	6.13	***
H ₀ : WTP_3B=WTP_2B	7.53	7.95	3.27	***
H ₀ : WTP_3C=WTP_2C	-8.04	7.04	4.50	***

Conclusions

- 1. The information on public goods attributes like social contributions of social firms creates the difference in WTPs by consumers for agricultural and food products. The value of detail information on social firms was higher than the value of the detail information on organic production.**
- 2. The information on organic production and its benefits to consumers and producers creates a difference in WTPs for agricultural and food products.**
- 3. The value of information on organic production is higher for the group of consumers who are more conscious of food safety.**
- 4. The value of information on social firms is not necessarily higher for the group of consumers who are more conscious of social welfare.**

Implications for future agricultural and food policies

- **Agricultural products can be differentiated in the markets by offering public goods attributes such as production by social firms as well as private goods attributes such as organic production. Consumers are willing to pay for premium prices for these public as well as private goods attributes.**
- **Offering the agricultural and food products with these attributes can benefit the producers.**
- **Promotion of the production of agricultural and food products with public as well as private goods attributes can benefit both producers and consumers. There exist roles for promotional policies for the production of agricultural and food products with public as well as private goods attributes. Current agricultural and trade policies might not be enough to fully enjoy the benefits of public as well as private goods attributes in agricultural and food products.**

Limitations of the current study

- **There exists needs to find whether current findings are general observations which we can witness widely among agricultural and food products in Japan and other countries. We already have conducted a study to examine the economic values of brand names for butter milk in Poland.**
- **Similar studies using other agricultural and food products need to be conducted to derive more general conclusions.**
- **Olive trees are known for their strength in extensive cultivation. Yields would not go down even with a lower level of labor use. Leaves can be also harvested and processed for health food products. Finding the attributes which maximize consumers WTPs would be useful for different olive products.**