

Promotion Strategy and Financial Policy -The Wine Industry in Hokkaido Japan -

Natsuki Watanabe,
Graduate Student,
Graduate School of Economics
Sapporo University,

ABSTRACT

The promotion policy of the wine industry is analyzed in Hokkaido Japan, an area with the same GDP as the Czech Republic, Portugal, and New Zealand.

An economic ripple effect simulation was carried out using a Hokkaido Input-Output Table in 33 Sections.

- (1) Assume that the existing quantity of wine production increases to the level of the red wine consumption boom in Japan (2000); Hokkaido GDP will increase by about 0.01% (-1.9%¹ in 2009).
- (2) Assume that the production of high-value-added wine is increased; Hokkaido GDP will be raised more efficiently than in case (1).

We need increased wine production and an increase in high-value-added wine production and provided with food and wine in the winery restaurant in-house production. A regional improvement policy is important for building a useful infrastructure. That is, an improved infrastructure for physical distribution and finance, and an expansion in industries related to the wine industry. In addition, it was the sale by the **bottle unit**, which changes part to **glass selling**. A result, bigger economic effects were provided.

Key words: *ripple effects, input-output, regional economy*

JEL Classification: E44: Macroeconomics and Monetary Economics, Money and Interest Rates, Financial Markets and the Macro-economy, E47: Forecasting and Simulation, G18: Financial Economics, General Financial Markets, and R15: Econometric and Input-Output Models; Other Methods.

I. INTRODUCTION

The wine drunk in Japan is mainly imported. The quantity in the 2008 fiscal year was 163,000 kl. Many wines are from Europe, the United States, Australia, New Zealand, Chile, Argentina, South Africa, etc. However, wine is also manufactured in Japan. Japan's wine manufacture in the 2008 fiscal year was 97,639kl; ranked by prefecture that was Yamanashi Prefecture 22,979kl, Kanagawa 2,2691kl, Tochigi 10,228kl, Okayama 4,736kl, Nagano 3,443kl, and Hokkaido 2,356kl (figures for fiscal year 2009.)

Koshu wine from Yamanashi Prefecture near Tokyo, where the wine industry is 88 years old, is of the top quality and produced in the largest quantity.

Hakodate Wine (Hakodate Wine Company) is 38 years old and it is the oldest in Hokkaido. The quality of most Hokkaido wine is table wine with a short aging period, except for that from two or three wineries accepted in the world wine market. The present industry has few excellent wines excellent which can become valuable vintages of added value when aged for a sufficient period. Much was expected of Hokkaido as a winery location because of its soil and climate, which are relatively suitable for the production of grapes, and the few companies operating 20

*For useful constructive comments and suggestions, I am grateful to Takao Iida (Sapporo University), Kanae Musha (Sapporo University), Akira Kato (Hokkaido University of Education), and all errors remain me. Research results of the Research Grants-in-Aid 2012 for Japan Academy of Personal Finance.

¹ <http://www.pref.hokkaido.lg.jp/ss/ksk/tgs/keisan3.ht>

years ago have increased to 17 companies in recent years.

The present state of the industry is such that the quantity of production and volume of sales are largely in table wine, with a cheap unit price typically around \$10 (1US\$=100).

At first, we have to consider a suitable financial structure for the wine manufacturing companies to produce a high added value product line. Moreover, we are taking into consideration the deviation of the ripple effect by the industrial structure of the area, where multipliers are 0.57 of agricultural output, 0.52 of the food section, 0.89 of the engineering works, construction and the financial service section, and 1.02 of public service, etc. This industry becomes 0.57 with low influencing magnification. It is necessary to consider the measures which can contribute to the regional economy.

The simulation of an economic ripple effect and the employment effect was carried out for the six following policies using a Hokkaido Input-Output Table in 33 Sections. Next, various inherent problems are specified, and an efficient policy and conditions are proposed.

II. POLICIES

We consider the following eight policies². Policy1-6 is analysis of Watanabe (2012). This article added (Policy 7) and (Policy 8) newly and analyze it.

(Policy 1) Most wine from Hokkaido is dessert wine with short maturing periods, and the unit price is in the order of \$10, and its selling price is also low. Then, the home sales of the wine matured for one year are priced at \$25; this makes up 10% of the present quantity of wine production.

(Policy 2) There was also a red wine consumption boom and the quantity of wine production in Hokkaido was set at 4,965 kl in fiscal year 2000. This boom was temporary and production levels have not reached that level since 2000. The wine maker who produced wine in those days is still continuing production. Then, the case of (Policy 1) when the quantity of production is raised to the level of fiscal year 2000 is estimated.

(Policy3) The production increase portion in (Policy 2) is considered to be as follows. The example of the Koshu wine, which was the most successful in Japan, is imitated, and the manufacture percentage of a price range carries out a production increase plan similarly.

(Policy4) It is assumed that a wine manufacturing company turns 30% of its material cost and 30% of its personnel expenses to soil improvement expenses independently on the assumption in (Policy 3). This should improve the soil and should produce a quality grape suitable for wine. Thus, Policy 4 is preparing conditions so that good wine can be manufactured.

(Policy 5) In (Policy 3), the government assists through financial institutions by making 30% of material costs into soil improvement expenses. The financial institution examines whether a wine company and a winery can receive a subsidy and contracts the enforcement supervisor in a subsidiary enterprise. It can receive 30% of the amount of the subsidy from the government as a commission. The consultancy firm specified by the financial institution takes over the enforcement supervisor's business, and 10% of the sales of the financial institution serve as an acceptance commission.

(Policy 6) In (Policy 3), the government performs a low-interest loan backed by the government and credit guarantee corporations to anticipate sales proceeds through the financial institution, so that a wine maker may build and serve a hotel and a restaurant. Loan conditions will be a 4% interest rate for a payment period of 20 years through the interest grace period for five years after the loan. The government makes an interest subsidy of 4% of the rate of interest. Moreover, the amount financed when it defaults is secured. The consultancy firm specified by the financial institution performs the supervisor about enforcement. Consultancy fees pay 30% of amounts financed from an amount financed.

(Policy 7) In (Policy 3), Organic wine increases to 30% of the amount of wine production.

• ² See Watanabe (2012) about (Policy1)—(Policy6). This article added (Policy7) and (Policy8) newly.

(Policy 8) We do not produce organic wine. Convert 25% of amount of sale of wine offered in (Policy 6) from Hokkaido at a rate of wine provided at a normal restaurant. In other words, suppose it to be twice the sales price and simulate it again. Self sells 50% of remainder via the liquor wholesale dealer to 50% in all amount of production of the Hokkaido wine. It manages 25% of direct management sale and sells it (a self store or online sale), and sell 25% of remainder at restaurant their winery. Even bottle sale or glass of wine sale has the price in the range of 3 times from double. That is usually sell wine in the restaurants at a price two times as large as a price.

III. METHOD OF FIXING AMOUNT OF THE FINAL DEMAND

The analysis tool here is the "Hokkaido input-output table in 2005 fiscal year" of the Hokkaido Development Bureau. The amount of the final demand is derived by using the numerical value of (1) the data the public institution has released mainly; (2) the questionnaire survey of two major companies, Hokkaido Wine and Hakodate Wine, and (3) the framework from Iida (2010) was applied.

The quantity of wine production in Hokkaido in the 2009 fiscal year is 2,356 kl. When the average unit price is assumed to be \$10 per 750 ml, the gross-sales estimation value is $3,141,333 \times \$10 = \$31,413,330$.

The breakdown of the cost of the wine took a survey result of the Hokkaido wine Co., Ltd. into account. Breakdown of per wines: 30% of raw materials, 50% Personnel expenses, 15% of Profit margin, 5% of distribution (transportation).

In this report, pay attention to only economic effect of the wine. In (policy 7) and (policy 8), the total sales of influence and the restaurant of the price of menu *did not* consider it.

(Policy 1)

Wine is aged for one year and sold for \$25. If it is aged one year, costs will go up by \$10. The composition of the cost per wine bottle is assumed to be 5% distribution margin, 30% raw material costs, 50% labor expenses, and 15% profit margin. Therefore, the \$10 wine per bottle has a raw material cost of \$3, labor expenses of \$5, a profit margin of \$1.5, and a distribution margin of \$0.5. The increment of the gross sales is assumed by putting 10% of the gross sales to age for one year. Therefore, $314,133 \text{ wine bottles} \times \$15 = \$47.12 \text{ million sales increase}$. We estimate this by supplying the following numerical values. The proportional division of increased final demand consists of a raw material cost of $\$4.712 \text{ million} \times 0.3 = \1.4136 million in crop farming sector, a labor cost $\times 0.5 = \$2.356 \text{ million}$ in the other food section, a profit margin $\times 0.15 = \$0.7068 \text{ million}$ in the business sector, and a distribution margin $\times 0.05 = \$0.2356 \text{ million}$ in the transportation section.

Economic Effects (amount of gross-value-added induced) is \$2.76million, Multiplier (the influencing magnification) is 0.59, and Employment Effects (created new jobs) is 20 persons.

(Policy 2)

In the red wine consumption boom in the 2000 fiscal year, the quantity of wine production in Hokkaido was set to 4,965 kl; about twice that of the 2009 fiscal year. This boom was temporary and the industry has not reached these levels of production since then. It is assumed that 10% of the wine produced in the 2000 fiscal year was \$25 wine. The wine maker who produced wine in those days is still continuing production.

Economic Effects (amount of gross-value-added induced) is \$21.39 million, Multiplier (the influencing magnification) is 0.59, and Employment Effects (created new jobs) is 155 persons.

(Policy 3)

The production increase portion in (Policy 2) is considered as follows. The example of Koshu wine, which was the most successful in Japan, is imitated, and the manufacture percentage of the price range carries out a production increase plan in a similar way. Concretely, \$10' is 71.0%, \$20' is 14.3% and from \$30' to \$40' is 10.2%, above \$50' is 4.5%.

Therefore, we assume as follows.

\$10 is 71.0%, \$20 is 14.3% and from \$30 to \$40 is 10.2%, above \$50 is 4.5%. 71.0%, in \$20, 14.3%, \$40 assumes that it is 10.2%, and \$50 assumes the wine unit price and percentage of a production increase portion to be 4.5%.

Economic Effects (amount of gross-value-added induced) are \$33.18 million, Multiplier (the influencing magnification) is 0.59, and Employment Effects (created new jobs) are 241 persons.

(Policy 4)

It is assumed that a wine manufacturing company turns 30% of the material cost and 30% of personnel expenses to soil improvement expenses independently on the assumption in (Policy 3). This should improve soil and should harvest a quality grape suitable for wine brewing. Thus, it is preparing conditions so that good wine can be manufactured.

Economic Effects (amount of gross-value-added induced) are \$37.99 million, Multiplier (the influencing magnification) is 0.67, and Employment Effects (created new jobs) is 293 persons.

(Policy 5)

In (Policy 3), the government assists through a financial institution by making 30% of material costs into soil improvement expenses. The financial institution examines whether a wine company and a winery can receive a subsidy and contracts the enforcement supervisor of a subsidiary enterprise. It can receive 30% of the amount of the subsidy from the government as a commission. The consultancy firm specified by the financial institution takes over the enforcement supervisor's business, and 10% of the sales of the financial institution serve as an acceptance commission.

Economic Effects (amount of gross-value-added induced) are \$46.77 million, Multiplier (the influencing magnification) is 0.65, and Employment Effects (created new jobs) are 353 persons.

(Policy 6)

In (Policy 3), the government performs a low-interest loan backed by government and credit guarantee corporations to anticipate sale proceeds through a financial institution, in order that a wine maker may build and serve a hotel and a restaurant. Loan conditions will be 4% interest rates for a payment period of 20 years through the interest grace period for five years after the loan. The government does the interest subsidy of 4% of the rate of interest. Moreover, the amount financed when it defaults is secured. The consultancy firm specified by the financial institution performs the supervisor enforcement role. Consultancy fees are 30% of the amounts financed.

We assume that the contribution is 20% for the construction costs of the hotel and the restaurant, 20% personnel expenses, 50% service industry, 6% finance, and 3% unknown classification (consultancy), and 1% in profits.

Economic Effects (amount of gross-value-added induced) are \$109.79 million, Multiplier (the influencing magnification) is 0.73, and Employment Effects (created new jobs) are 1,086 persons.

(Policy7)

Economic Effects (amount of gross-value-added induced) are \$119.03 million, Multiplier (the influencing magnification) is 0.72, and Employment Effects (created new jobs) are 1,184 persons.

(Policy8)

Economic Effects (amount of gross-value-added induced) are \$136.71 million, Multiplier (the influencing magnification) is 0.76, and Employment Effects (created new jobs) are 1,321 persons.

2009 FY Base	Gross Added Value(¥ 100 billion)	New Jobs	Multipliers	Contribution GDP Growth Rate(%)
Policy 1	2.76	20	0.59	—
Policy 2	21.39	155	0.59	0.011
Policy 3	33.18	241	0.59	0.018
Policy 4	37.99	293	0.67	0.021
Policy 5	46.77	353	0.65	0.026
Policy 6	109.79	1086	0.73	0.061
Policy 7	119.03	1184	0.72	0.066
Policy 8	136.71	1321	0.76	0.076

VI. CONCLUDINGREMARKS

We need increased wine production and an increase in high-value-added wine. Restaurant Price sold as twice the retail price of a glass of wine by providing wine at the restaurant. A regional improvement policy is important for building a useful infrastructure. This leads to an increase in sales of wine by the ingenuity of sales method. That is,

an improved infrastructure for physical distribution and finance, and an expansion in industries related to the wine industry.

- (1) (Policy 1 - Policy 4). A simple wine production increase measure does not have efficient influencing magnification. The reason is the industrial structure peculiar to Hokkaido, which consists of low multipliers of the agricultural cultivation section 0.57.
- (2) (Policy 5). Although the training measure of the sixth industry is important, even if each wine company and a winery put a restaurant and a hotel side by side, influencing magnification does not become so high.
- (3) (Policy 6 – Policy 8). A more effective result is obtained when both the government sector and the private sector finance the new plan.
- (4) (3) is more likely when funds go via the public business, public service, and banking sector which is industrial structure with high influencing magnification peculiar to Hokkaido. The reason is the high multipliers of above sectors.
- (5) It is very important that the measure to which industrial structure is changed so that influencing magnifications, such as an agricultural sector and a food-processing sector, may increase.
- (6) The Hokkaido area need to the **Six industry** (Primary industry × Secondary manufacturing × Tertiary industry)
- (8) In the management of the restaurant with (policy 7) and (policy 8), it became effective when their restaurant changed a sales system of the wine.

REFERENCES

- Eiji Doi, Chikanori Nakano and Asari Ichiro “Introduction to the Regional Inter-Industry Relations Table – from introduction to practice by Lotus1-2-3,” (Nippon Hyoron-sha Co., Ltd. 1996).
- Takao Iida “The nominal GDP growth rate after the revised Money Lending Business Control and Regulation Law is minus 0.98%,” *Monthly Credit Age*, Vol.367, July 2010, pp.10-11.
- Hokkaido Regional Development Bureau “Hokkaido Inter-Industry Relations Table 2000 – Hokkaido Inter-Industry Relations and Coefficient Tables in 33 Sections,” 2004.
[renkanhyo/h12_table/33bumon.xls/](#)
- Development and Planning Section, Development Administration Department, Hokkaido Regional Development Bureau “About the Hokkaido Inter-Industry Relations Table 2000,” 2004.
[.go.jp/topics/toukei/renkanhyo/h12_table/renkan.pdf/](#)
- Statistic data on moneylenders provided by the Financial Services Agency, 2008, 2009, 2010.
<http://www.fsa.go.jp/status/kasikin/index.html/>
- Natsuki Watanabe, Kanae Musha, Takao Iida and Kato Akira “The Promotion Policy of the Wine Industry in Hokkaido Japan,” *Global Business & Economic Anthology*, Vol.1, March 2012, pp.307-310.