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MARKETING COSTS AND MARGINS FOR MAJOR AGRICULTURAL PRODUCTS IN KOREA

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I. Introduction

The food consumption pattern in Korea has been rapidly changed during the last decade. Per capita consumption of food grains decreased from 219.4 kg per annum in 1970 to 195.1 kg in 1980 while per capita consumption of fruits and vegetables, meat and livestock products, and fishery products have substantially increased, as shown in Table 1.

Changes in food consumption pattern seem to be caused by the rapidly growing Korean economy. The economic growth rate reached 11% per annum and per capita GNP was $1,508 in 1980. Income distribution in Korea is more equitable than in comparable developing countries. In 1980 the average farm household income was $4,596 compared with $5,471 for salary and wage earning household in urban area.

Even if the rate of population growth has declined in the recent year, urban population has been rapidly increasing while the ratio of farm

TABLE 1 Economic Background of Markets in Korea, 1970 & 80

	1970	1980
Total Land Area (1,000 ha)	9,848	9,889
Cultivated Land (1,000 ha)	2,298 (23.3%)	2,196 (22.2%)
Total Population (1,000 person)	31,435	38,124
Rural (1,000 person)	15,587 (49.6%)	10,830 (28.4%)
Urban (1,000 person)	15,848 (50.4%)	27,294 (71.6%)
Per Capita GNP (US $)	234	1,508
Household Income (US $)		
Rural	840	4,596
Urban (Salary Wage Earning)	1,253	5,471
Per Capita Comsumption (kg)		
Food Grain	219.4	195.1
Fruits & Vegetables	69.9	136.2
Meat	5.2	11.3
Milk	1.4	10.8
Eggs	3.5	5.9
Fishery Products	24.1	46.0

Source: EPB; *Economic Statistical Yearbook*, 1971, 1981, Korea.
MAF; *Statistical Yearbook of Agriculture and Fishery* 1971, 1981, Korea.

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population has decreased from 50% in 1970 to 28% in 1980 (Table 1).

The increasing demand for highly income elastic foods by ever increasing urban population should be met by increases in food supply, and requires more marketing services which result in higher marketing costs.

Marketable surpluses of food production have been increasing for all products and the relative shares of marketed surpluses were shown to be increased (Table 2). About 60% of total agricultural production was marketed in 1975 and 40% in 1965. The proportions of marketed surpluses of fruits and vegetables which were highly income elastic foods were more than 90% of total productions.

TABLE 2 PROPORTION OF MARKETED SURPLUSES BY AGRICULTURAL PRODUCT GROUPS IN SELECTED YEARS

Unit: percent

	1965	1970	1975
Food Grain	29.3	41.6	42.6
Potatoes	29.9	28.9	62.1
Vegetables	51.8	56.8	71.7
Fruits	98.1	99.7	95.3
Special Crops	93.3	92.6	95.1
Livestock Products	82.1	82.9	91.8
Cocoon	99.7	99.9	99.7
Byproducts	15.2	11.6	11.6
Total Products	39.9	49.7	59.9

Source: Data from the Research Bureau, National Agricultural Cooperatives Federation (NACF), 1976.

The total of agricultural and fishery products amounted to 12.3 billion dollars in 1980 and the value of marketed products amounted to about 7.3 billion dollars in the same year (Table 3).

The consumer expenditure for food minus the value of marketed foods at farm price equals the marketing bill which depends on quantities of commodities marketed, amount of marketing services, their price and marketing efficiency. Improvement in marketing efficiency can offset the ever increasing marketing costs and margins due to industrialization and urbanization.

Specialization of production and modernization of marketing system will have disadvantages for small scale producers and low income groups of consumers to make their selling and buying more difficult compared to large scale producers and high income groups of consumers in urban areas.

Analysis of marketing costs and margins for the various marketing channels compared to their functions will provide guideline to find out inefficient marketing channels and functions to be improved.

TABLE 3 VALUE OF AGRICULTURAL AND FISHERY PRODUCTS, 1980

	Value (Million U.S. $)	Share %
Food Crops	4,869	39.7
Rice	3,718	30.3
Soybean	193	1.6
Fruits	422	3.4
Apple	186	1.5
Vegetables	2,459	20.1
Chinese Cabbage	399	3.3
Livestocks	2,094	17.1
Cattles	628	5.1
Chicken	275	2.2
Egg	268	2.2
Fishery	1,439	11.7
Mackerel	29	0.2
Total Agri. & Fish. Products	12,254	100.0

Source: Ministry of Agriculture and Fisheries, *Statistical Yearbook of Agriculture and Fisheries*, 1981.

II. Scope and Method of the Study

The commodities selected for this study are based on the commodity group, their importance in production and consumption, and the stability of their marketing channels.

One or two commodities are selected from every commodity group such as cereals, fruits, vegetables, livestock and meat, based on their share of total production and consumpiton as shown in Table 3 and 4. This study includes such commodities as rice, soybean, apple, chinese cabbage, beef, chicken, eggs and mackerel, with medium quality.

The origin of the commodity is the major producing area of the selected commodities and shown in the marketing costs and margins table of each commodity from Chapter III, and the destination is Seoul, the capital city.

The marketing channels for agricultural and fishery products in Korea can be categorized into two channels; private channel and cooperative channel. The private channel is the vertical chain of producer—collector in producing area—wholesaler (—middlemen)—retailer—consumer. The cooperative channel is the chain of producer—cooperative in producing area cooperative marketing center (—appointed dealer)—appointed retailer—consumer. The survey of marketing margins and costs was carried out in the main producing month in which the major portion of the marketable surplus was sold by the small farmers.

The limitations of the study are the shortage of the study period

TABLE 4 PERCENTAGE OF MONTHLY AVERAGE EXPENDITURE FOR THE SELECLED COMMODITIES PER URBAN HOUSEHOLD, 1965, 1975, 1980.

Commodity	1965	1975	1980	
	%	%	%	US $
Cereal	59.6	46.3	33.9	44.87
Rice	49.8	41.8	32.2	42.56
Soybeans	.3	.5	0.4	0.48
Fruits	1.9	3.8	5.4	7.21
Apple	.9	1.3	1.8	2.36
Vegetables	10.8	10.3	10.9	14.36
Chinese Cabbage	3.0	3.2	2.8	3.71
Meat	5.6	7.5	9.8	12.91
Beef	3.7	4.3	5.0	6.66
Chicken	.2	.8	1.4	1.89
Fish	6.9	6.2	7.5	9.95
Mackerel	—	.7	0.4	0.58
Milk & Eggs	1.5	3.0	4.8	6.38
Eggs	1.3	1.9	2.1	2.73
Other Food & Beverage	13.6	22.8	0.4	0.47
Food & Beverage	100 (57.0)	100 (43.6)	100 (36.2)	132.30
Living Expenditure	(100.0)	(100.0)	(100.0)	365.80

Source: Economic Planning Board of Korea, *Annual Report on the Family Income and Expenditure Survey*, 1965–80.

when the survey of marketing costs of some produces can not be covered and the costs and margins are estimated from the previous studies, and limited numbers of commodities surveyed.

The most measurement is tried to convert into international standard such as kilogram, meter and dollar.

III. Marketing Costs and Margins of Rice and Soybean

1. The importance of rice in the food bill

Rice is a staple food for Korean consumers who annually consumed per capita 131 Kg in 1970, 123 Kg in 1975, and 132 Kg in 1980. In 1980 total expenditures for rice were $510 per annum per urban household and $433 per farm household. This is the equivalent of 32% of the total food bill of urban household and 51% for farm households.

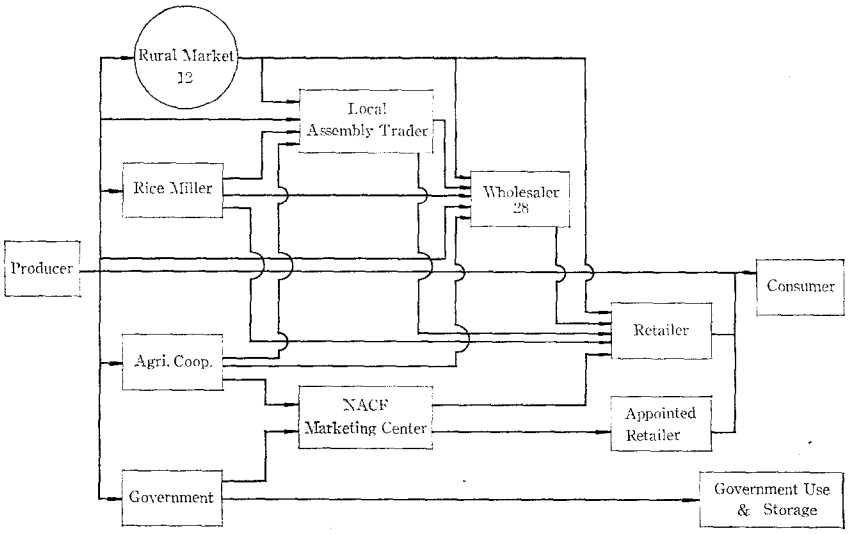
The importance of rice in the food bill of urban households has decreased from 50% in 1965 and 42% in 1975 to 32% in 1980. It is true of farm household (from 55% in 1975 to 51% in 1980).

It is expected that the importance of rice in the food bill of consumers will be declined over time and as income increases. But rice will remain an important food, especially for the low-income group.

2. Marketing channels for paddy and rice

The various marketing channels for rice are shown in Figure 1. The main proportion of rice in Korea is purchased by the government which sells it to consumer through cooperative channels under the rice price stabilization scheme and uses it for government use and storage.

FIGURE 1 MARKETING CHANNEL OF RICE



The other main purchasers of rice from producers are local assembler, rice miller and agricultural cooperatives in producing area.

Only 28% of total marketed rice goes through wholesalers and 45% through the National Agricultural Cooperatives Federation's (NACF) marketing center which releases rice through either a grain retailer or an NACF appointed retailer on behalf of the government. Consumers buy most of their rice from retailers and some from NACF appointed dealer and farm.

Since the government purchases rice under the rice price stabilization scheme and under the price support program, the marketing costs and margins are determined on the political reasons, especially for the release price and operation and management costs.

The main marketing channel can be divided into two categories such as the private channel; producer—rice miller—wholesaler—retailer—consumer, and the cooperative channel; producer—agricultural cooperative in producing area—NACF marketing center—NACF appointed dealer—consumer.

TABLE 5 The Seasonal Share of the Quantity of the Selected Produces Sold by the Farmers, 1975

Unit: %

Commodity	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Rice	5.4	4.4	7.6	6.3	7.1	4.9	3.3	5.9	8.5	5.4	29.0	12.2	100.0
Soybean	9.5	7.2	8.8	7.8	10.1	5.6	4.0	5.1	4.7	7.7	14.2	15.3	100.0
Apple	6.1	4.7	12.7	3.6	1.5	—	—	18.1	18.1	22.6	20.1	10.6	100.0
Chinese Cabbage	0.1	1.1	3.1	0.9	7.6	7.2	1.9	2.5	4.8	32.5	27.8	10.5	100.0
Beef	7.7	11.7	6.5	5.4	7.1	5.7	5.3	7.0	11.5	14.6	7.5	10.0	100.0
Chicken	4.5	12.9	9.3	17.9	7.6	4.1	3.8	19.5	2.9	3.5	7.2	6.8	100.0
Eggs	5.1	7.3	5.9	7.4	9.0	9.8	8.6	9.8	8.9	8.9	12.2	7.1	100.0
Mackerel	6.9	5.9	5.4	5.5	6.5	7.2	7.0	6.8	14.4	8.9	15.4	10.1	100.0

Source: NACF.

3. The seasonal pattern of marketing for rice

The determinants of the seasonal pattern of marketing for agricultural and fishery products are seasonalities of production and consumption and storability.

If some products are seasonally produced and storable a year long, they have a smooth seasonal pattern of marketing by farmers and have a peak season of marketing just after harvest.

If the others are produced year around and storable, the seasonality in the demand such as holidays determines the seasonal pattern of marketing for them.

Rice is produced once a year and storable a year long or more. Therefore, the farmers are selling rice around year. Rice marketing by farmers has the lowest seasonality on July just before the harvest and the peak seasonality in November just after the harvest (Table 5). The peak season of rice marketing in November and December is aggravated by the government purchase of rice in those months.

4. Marketing costs and margins of rice by marketing channels

The marketing costs and margins of paddy and rice from Kimje to Seoul (320 Km distance) are estimated for the private channel and the agricultural cooperative channel, as shown in Table 6 and 7.

TABLE 6 MARKETING COSTS AND MARGINS OF PADDY AND RICE, PRIVATE CHANNEL, MEDIUM QUALITY, 1980

	Unit[2]	Share (%)
Farm Gate Price at Village (Paddy)	1.39 Kg	82.6
+ Packing		.9
+ Transport		.2
Farmer's Selling Price to Assembly Trade (Paddy)	1.39 Kg	83.8
+ Milling Cost		3.3
+ Loading Charges		.2
+ Transport (320 km)[1]		.9
+ Commission Rate at Wholesale Market		.7
+ Tax		.4
+ Net Margin of Assembler		1.3
Assembly Trader's Price to Retailer (Milled)	1 Kg	90.7
+ Measurement & Loading		.2
+ Transport		.4
+ Physical Losses		.6
+ Net Margin of Retailer		8.2
Retailer's Price to Consumer (Milled)[3]	1 Kg	100.0

Note: 1) from Kimje to Seoul (320 Km).
2) Local Unit of Trade: A bag made of straw
(1 bag = 80 kg for Milled Rice
= 54 kg for Paddy)
3) Retailer's Price, US $ 1,048/ton.

TABLE 7 MARKETING COSTS AND MARGINS OF PADDY AND RICE, COOPERATIVE CHANNEL, MEDIUM QUALITY, 1980

	Unit[2]	Share (%)
Farm Gate Price at Village (Paddy)	1.39 Kg	89.3
+ Packing		.9
+ Transport		.2
Farmer's Selling Price to Ag. Coop. in Producing Area (Paddy)	1.39 Kg	90.4
+ Milling Cost		3.5
+ Loading Charges		.2
+ Transport (320 Km)[1]		.9
+ Commission Rate at NACF Marketing Center		.6
+ Net Margin		.4
Ag. Coop.'s Price to Appointed Retailer (Milled)	1 Kg	96.2
+ Measurement & Loading		.2
+ Transport		.5
+ Physical Losses		.6
+ Net Margin of Retailer		2.7
Appointed Retailer's Price to Consumer (Milled)[3]	1 Kg	100.0

Note: Same as Table 7.

* NACF: National Agricultural Cooperative Federation.

Total margin rates are 17.4% of consumer's price for the private channel and 10.7% for the cooperative channel. But the direct comparison of margins between two channels may mislead to indicate scope for marketing improvement. Cost for physical marketing functions such as packing, transportation, milling, loading and unloading, and physical losses are the same for both channels. The two channels have different profit margin, commission rate and taxes. The cooperative channel has no tax and a lower commission rate which is regulated to be lower than that of the private channel. The profit margins of the private channel include own labor income of the wholesaler and retailer and the profit itself. But the NACF regulates the profit margins and instead gives the rice dealer some indirect incentives including a continuous flow of rice, less supervision on unfair dealing and so forth. The cooperative marketing channel plays a role to compete with the private channel with a lower commission rate, resulting in lower marketing margins.

The market share of the cooperative marketing channel is small relative to that of the private marketing channel. This fact implies that unpolite transaction practices or extra social costs are likely to take place.

5. Marketing costs and margins of soybeans

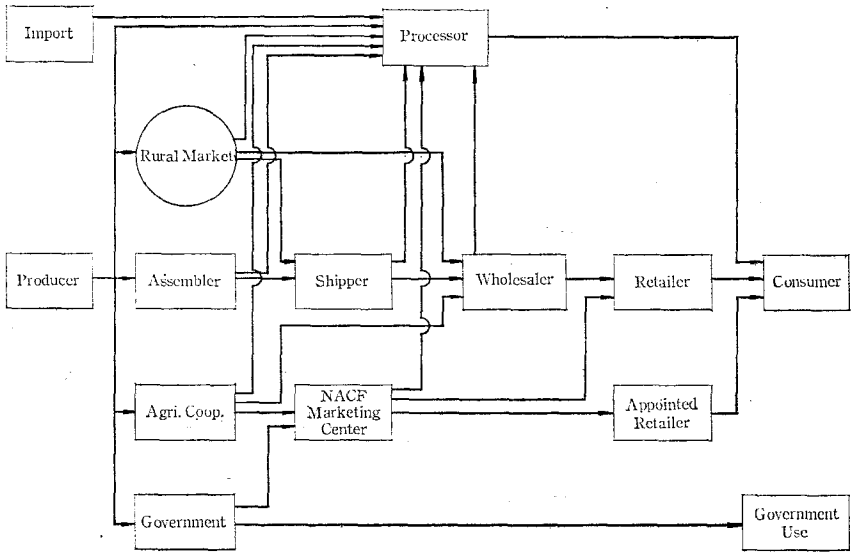
The proportion of expenditure for soybeans in the food bill is less than 1%, and remains unchanged over time and by income group (Table 4). But the soybean has been an important source of vegetable protein and fat

for Koreans.

The marketing channels of soybean are almost the same as that of rice except that import demand for soybean has recently increased and the soybean is processed into several different products such as soybean cake, soybean oil, soysauce, soybean paste and soybean sprouts.

The various marketing channels of soybeans are shown in Figure 2. A large portion of soybeans are imported and/or processed into different forms. Estimation of processing costs and margins seems to be beyond the scope of this study.

FIGURE 2 MARKETING CHANNELS OF SOYBEANS



The marketing of soybeans by the farmers has no big seasonal fluctuation due to storability and free market operation, but the peak marketing season is December just after harvest (Table 5).

The marketing costs and margins of soybeans through the private and cooperative channels are snown in Tables 8 and 9. Total marketing margins are 17% of retail price for the private channel and 7% for the cooperative channel. The explanation of this fact refer to that of rice marketing margins and costs.

IV. Marketing Costs and Margins of Fruits and Vegetables

1. The importance of fruits and vegetables in the food bill

Per capita consumption of fruits and vegetables was 70 Kg per annum

TABLE 8 MARKETING COSTS AND MARGINS OF SOYBEANS, PRIVATE CHANNEL, MEDIUM QUALITY, Nov. 1977

	Unit[2]	U.S. $[3]	Share (%)
Farmer's Selling Price to Local Assembler	1 Kg	.711	82.6
+ Packing		.007	.8
+ Transport		.009	1.0
+ Other Expenses		.001	.1
+ Net Margin		.006	.7
Assembler's Selling Price to Shipper	1 Kg	.734	85.2
+ Sorting		.0003	.03
+ Loading & Unloading		.002	.2
+ Transport (180 Km)[1]		.100	1.2
+ Net Margin		.009	1.0
Shipper's Price to Wholesaler	1 Kg	.755	87.7
+ Net Margin		.014	1.6
Wholesaler's Price to Retailer	1 Kg	.769	89.3
+ Transport		.005	.6
+ Physical Losses		.008	.9
+ Net Margin		.079	9.2
Retailer's Price to Consumer	1 Kg	.861	100.0

Note: 1) Pyungchang to Seoul (180 Km).
2) Local Unit of Trade: A bag made of straw. (1 bag = 72 Kg)
3) $1 = ₩485

TABLE 9 MARKETING COSTS AND MARGINS OF SOYBEANS, COOPERATIVE CHANNEL, MEDIUM QUALITY, Nov. 1977

	Unit[2]	U.S. $[3]	Share (%)
Farmer's Selling Price to Ag. Coop. in Producing Area	1 Kg	.731	92.6
+ Packing		.007	.9
+ Transport (180 Km)[1]		.011	1.4
+ Loading & Unloading		.002	.3
+ Commission Rate		.009	1.1
Ag. Coop.'s Selling Price to Appointed Dealer of the NACF Marketing Center	1 Kg	.-61	96.4
+ Net Margin		.013	1.6
Dealer's Selling Price to Appointed Retailer	1 Kg	.773	98.0
+ Transport		.003	.4
+ Loading & Unloading		.001	.1
+ Net Margin		.012	1.5
Appointed Retailer's Price to Consumer	1 Kg	.789	100.0

Note: Same as Table 9.

in 1970 and 136 Kg in 1980 (Table 1), including 16 Kg of fruits and 120 Kg of vegetables in 1980.

The importance of fruits in the food bill of the urban household in Korea has increased over time and as income increases. An urban household

spent an average of 2.0% of total food expenditure for fruits in 1965, 3.8% in 1975, and 5.4% in 1980 which is equivalent to $7.2 per month per household (Table 4). Proportion of monthly expenditure for fruits by high income households is three times that of low income ones. An urban household in the income group of less than average of $119 per month spent only 3.8 % of food expenditure for furits while the high income household which earns more than $1,109 per month spent 6.8% for fruits in 1980 (Table 10).

TABLE 10 PERCENTAGE OF MONTHLY EXPENDITURE PER HOUSEHOLD BY INCOME GROUPS IN CITIES, 1980

Income	Expenditure for Food & Beverage	Percentage to Expenditure for Food & Beverage.					
		Cereals	Meat & Fish	Milk & Eggs	Vege-tables & Seaweed	Fruits	Others
U.S. $	U.S. $	%	%	%	%	%	%
less than 119	65.1	43.2	13.2	4.1	13.1	3.8	0.3
119–154	75.3	42.3	13.5	4.1	12.9	4.0	0.3
154–222	88.5	40.7	14.1	4.3	13.3	4.3	0.3
222–290	100.6	38.1	15.1	4.6	13.3	4.4	0.3
290–358	116.6	36.0	16.3	4.7	13.1	5.0	0.3
358–427	130.2	34.9	16.7	4.9	12.8	5.1	0.4
427–512	144.2	33.5	17.2	5.0	12.5	5.3	0.4
512–597	158.2	32.3	17.8	5.2	12.3	5.8	0.4
597–683	172.4	31.0	18.6	5.3	12.2	5.6	0.4
683–768	180.9	29.9	19.0	5.5	12.4	5.7	0.4
768–853	193.6	30.1	18.2	5.5	11.5	6.0	0.4
853–939	207.4	27.5	19.0	5.2	11.7	6.3	0.4
939–1024	198.5	28.5	18.6	5.8	11.7	6.3	0.4
1024–1109	221.5	29.2	19.0	5.4	10.9	6.1	0.4
more than 1109	260.7	26.1	20.4	5.1	10.5	6.8	0.4

Source: EPB, *Annual Report on the Family Income and Expenditure Survey*, 1980.

Among fruits, the apple is the most important produce. The importance of the apple in the food bill of urban households has increased over time and as income increases (Table 4).

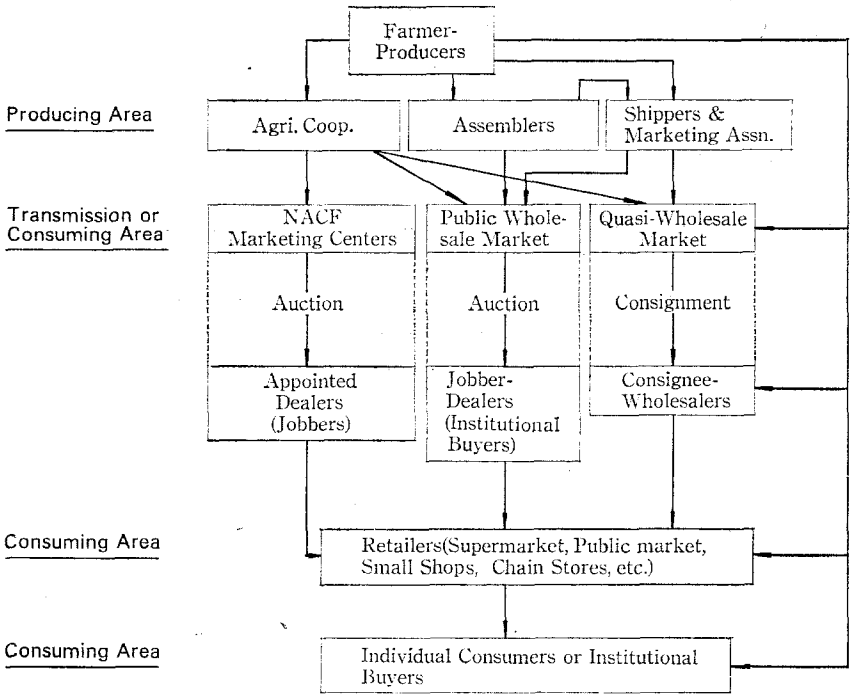
The relative importance of vegetables is shown to be stable over time and by income group. The proportion of monthly expenditure for vegetables by urban households remained at about the 10% level during 1965–80. This proportion is almost same for household by income group (Tables 4 and 10).

It is true of Chinese cabbage, as shown in Table 4.

2. Marketing channels for fruits and vegetables

The marketing channels of fruits and vegetables are very complex, especially for vegetables, as shown in Figure 3.

FIGURES 3 MARKETING SYSTEM FOR FRUITS AND VEGETABLES



Market share of the 5-day markets amounts to 23% and the cooperative units to 21%. The rest are shipped to urban centers by assembler-shippers or through informal marketing associations. The assembling function at the producing areas is mainly in the hands of private merchants, namely, assemblers and shippers. It is at this stage that the cooperative marketing network appears to be most vulnerable.

Small-scale peddlers and collectors buy fresh produce from farmers. Shippers usually buy from these merchants or directly purchase fruits and vegetables in the field. Large-scale farmers often ship their produce to consignee-dealers in urban wholesale markets, usually tied to credit advanced from the dealers prior to the 3–5 months of production. In the areas of commercially-grown fruits and high value vegetables, farmers organize themselves into either a purely civil marketing association or the government-sponsored horticultural cooperative unit for the organized orderly marketing of perishables. Grading and packing are very poor at this marketing level. In general, the majority of Korean farmers whose dominant products are still grains are not well organized in preparing their marketing activities systematically.

Wholesale marketing for fresh produce is being carried out in Korea by three types of wholesalers. There are 88 cooperative marketing centers,

60 public wholesale markets and 79 traditional quasi-wholesale markets. The market shares of these markets are estimated as 14%, 24% and 62% respectively. Cooperative marketing centers receive produce primarily from farmers and local cooperatives, while wholesale companies operating public wholesale markets on behalf of municipal governments receive produce from all related parties including assemblers and shipping merchants. Cooperative centers and wholesale companies put fresh produce received on auction where appointed jobber-dealers with shops located in the market bid for them. Institutional buyers can join the auction when they are registered to the market authority as the same as jobberdealers, but there find practically no registered institutional buyers, implying a closed auction system for outsiders. Individual and institutional buyers buy produce through jobber-dealers on payment of a 4% commission to them or on a transaction basis. In both cases, credit sales are not uncommon. In turn, jobber-dealers usually clear their payments to the market authority in 3–15 days. There is little daily carry-over of produce on the auction floor and storage requirements are minimal. It is noteworthy to mention that 4 out of 60 public wholesale markets were physically full established by the respective municipal governments but all the 60 mar kets' operation has been entrusted to the private wholesale companies on a single company basis for each market.

Quasi-wholesale markets are unauthorized wholesale markets where traditional consignment dealers (wholesalers) receive produce from farmer-shippers and sell them to other wholesalers or retailers (and even to consumers) on a consignment basis charging 8–9% of commission to shippers. Since they can easily avoid value-added tax on wholesaling and have no duties to report to the tax office on their transaction status including the name list of their shippers and buyers.

Retailing sales of perishable farm products are performed by street stalls, peddlers, individual shops, public markets, specialty shops, supermarkets and chain stores, but traditional retailing agencies are still prevalent. There are about 474 daily markets either public or private in Korea, where fruits and vegetables are partly being sold. Cooperative retail marketing network except one in Seoul Shinchon handles exclusively foodgrains and meat products in urban centers. Recently a growing number of privately-owned chain stores and supermarkets partly deal with farm fresh produce.

3. The seasonal patterns of marketing for apples and Chinese cabbage

Fresh produces like fruits and vegetables have big seasonalities in production and consumption due to high perishability. Therefore, seasonality of marketing by the farmers for fruits and vegetables is remarkable, as shown in Table 5. Apple producers sold about 51% of their total production during the three months of October-December in 1975 while nothing

was sold from June to August in the same year (Table 5). Apples are produced once a year in Korea.

About 71% of the total production of Chinese cabbage was sold by the farmers during the last three months of 1975. Chinese cabbage is produced year round over the nation and marketed through out the year (Table 5).

4. Marketing costs and margins of apple and Chinese cabbage by different marketing channels

The marketing costs and margin of apple from Youngcheon, a major producing area, to Seoul (360 Km distance) are estimated for the private and cooperative channels and shown in Tables 11 and 12.

Total margin rates are 36% of consumer price of apple for the private channel and 32% for the cooperative one. The costs related to physical marketing functions such as transportation, and loading and unloading are the same for the two channels. There also is no big difference in other charges such as commission rate, profit margins and packing costs between two channels. The similarity of the marketing costs and margins of apple between the two channels may come from the stability of the producers, relatively easy control of quality and grades, high storability, and strong organization of producer cooperatives or associations.

The retailer margins between retailer and consumer prices of apple counts the largest portion of total marketing margins. This fact implies that the retailers carry out many marketing functions such as distribution, risk taking and other services for consumers, and also that improvement of retailing activities can reduce the marketing margins. It is true of vegetable retailing.

The biggest marketing margins and costs in Korea are estimated for the vegetable marketing system. Freshness is the important factor to influence

TABLE 11 MARKETING COSTS AND MARGINS OF APPLE, PRIVATE CHANNEL, MEDIUM QUALITY OF HONGOK, FEB. 1980

	Share (%)
Farmer's Selling Price to Local Assembler	63.8
+ Packing	6.0
+ Transport (360 Km)*	2.6
+ Loading & Unloading	.5
+ Commission Rate	6.3
Assembler's Price to Consignee-Wholesaler	79.3
+ Unloading	.9
+ Net Margin	5.1
Consignee-Wholesaler's Price to Retailer	85.3
+ Transport	.9
+ Net Margin	13.8
Retailer's Price to Consumer	100.0

* Youngcheon to Seoul.

the price premium of Chinese cabbage. There are no objective criteria to determine the rate of physical losses and quality damage. As a result, difficulty in a priority calculation of costs related to physical losses and quality damage results in the small portion of cabbage marketed through the

TABLE 12 MARKETING COSTS AND MARGINS OF APPLE, COOPERATIVE CHANNEL, MEDIUM QUALITY OF HONGOK, FEB. 1980

	Share (%)
Farm Gate Price at Village	67.9
+ Packing	3.2
+ Transport (20 Km)[1]	.3
+ Jobber's Fee at Youngcheon Ag. Coop.	1.7
+ Inspection Charges	.2
+ Loading & Unloading	.3
+ Transport (360 Km)[2]	2.6
+ Commission Rate at NACF Marketing Center	4.8
Dealer of Ag. Coop.'s Selling Price to the Appointed Dealer of NACF Marketing Center (Auction Price)	80.9
+ Unloading & Other Costs	.9
+ Net Margin	3.5
NACF Appointed Dealer's Price to Retailer	85.3
+ Transport	.9
+ Net Margin	13.8
Retailer's Price to Consumer	100.0

Note: 1) Farm to Youngcheon Ag. Coop.
2) Youngcheon to Seoul.

TABLE 13 MARKETING COSTS AND MARGINS OF CHINESE CABBAGE, PRIVATE CHANNEL, MEDIUM QUALITY, AUG. 1980

	Share (%)
Farmer's Selling Price to Local Assembler	45.2
+ Harvest and Loading Charges	2.6
+ Transport (180 Km)*	4.6
+ Other Costs	1.1
+ Commission Rate at Wholesale Market	4.1
+ Net Margin	2.6
Assembler's Price to Consignee-Wholesaler	60.0
+ Unloading Charges	.4
+ Cleaning Fee	.2
+ Physical Losses	6.1
+ Net Margin	6.8
Consignee-Wholesaler's Price to Retailer	73.6
+ Loading Charges	.7
+ Transport	3.3
+ Postal Service	.2
+ Physical Losses	2.8
+ Net Margins	19.4
Retailer's Price to Consumer	100.0

Note: * Pyungchang to Seoul (180 Km).

cooperative channel. The marketing costs and margins of Chinese cabbage are estimated for the private marketing channel, as shown in Table 13. Total marketing margins amounts to 55% of the consumer price of Chinese cabbage. Costs of physical losses are calculated as 9% of consumer price through whole marketing channel, and costs of transportation, and loading and unloading, count 12% of the consumer price. Profit margins including dealers own labor charges are 29% of the consumer price.

Reduction of physical losses and improvement of retailer activities are the only room for a reduction of marketing margins and costs.

V. Marketing Costs and Margins of Livestock and Meat

1. The importance of meat in the food bill

The Korean consumer consumed annually 5.2 Kg of meat in 1970 and 113. Kg in 1980 (Table 1), of which beef was 1.1 Kg and 2.6 Kg in 1970 and 1980 respectively. Per capita consumptions of pork and chicken were 6.3 Kg and 2.4 Kg respectively in 1980.

The percentage of average expenditure for meat by an urban household has increased from 5.6% in 1965 to 7.5% in 1976 and 9.8% in 1980. Those of beef and chicken were 5.0% and 1.4% respectively in 1980 (Table 4). The monthly average expenditure for beef and chicken by an urban household increased as income increases.

It is expected that consumption expenditure for meat and/or beef and their importance in the food bill will increased in the future because of high income elasticities of demand for them and expected increase in the consumer income.

2. Marketing channels for cattle and beef

The marketing system of livestock (cattle) and meat (beef) in Korea is free marketing system in principle except that the Government can set the upper limit of retail price for red meat and imported beef to stabilize the wholesale price of meat.

Livestock markets are generally formed in producing areas. These markets play roles in the transaction of livestock animals for breeding and collection and transmission of livestock to be slaughtered for consumption. The livestock market for breeding has not much to do with the price formation of meat.

The collection and transmission of livestock for slaughtering are carried out by private merchants such as collectors and shippers, and agricultural cooperatives in the producing area. Livestock producers and meat retailers often ship the animals directly to the slaughtering house on a commission basis.

There were 609 authorized slaughtering houses in the nation in 1975. The law for livestock regulates that livestock should be inspected by the authorized veterinarian before slaughtering and to be slaughtered only in the authorized slaughtering house. It also prohibits the slaughtering of such livestock as breeding stock, pregnant cows and animals under the regulated age and weight. The public wholesale markets which are established by "the Law of Marketing and Price Stabilization of Farm and Marine Products" are scattered in the major cities throughout the country, and they have their own slaughtering facilities. They also provide auction room for middlemen who buy the carcass on retailers' risk, and cold storage transporation facilities for meat retailers. In addition to public wholesale markets, NACF marketing centers have a livestock section, the function of which is the same as that of the public wholesale markets (Figure 4). It is prohibited to bring carcasses into the authorized wholesale markets because of sanitary reasons and, therefore, only cattles are to be moved from producing areas to the major cities. But some retailers do such illegal activities as buying carcasses in the producing area and transporting them secretly with the common cars which have no cold stroage facilities.

Retailing activities of beef are carried out by private meat shops, agricultural cooperative retailer stores, and super markets. Among them private meat shops and NACF meat retailer stores are specialized in meat retailing activities.

FIGURE 4 MARKETING CHANNEL OF LIVESTOCK AND BEEF

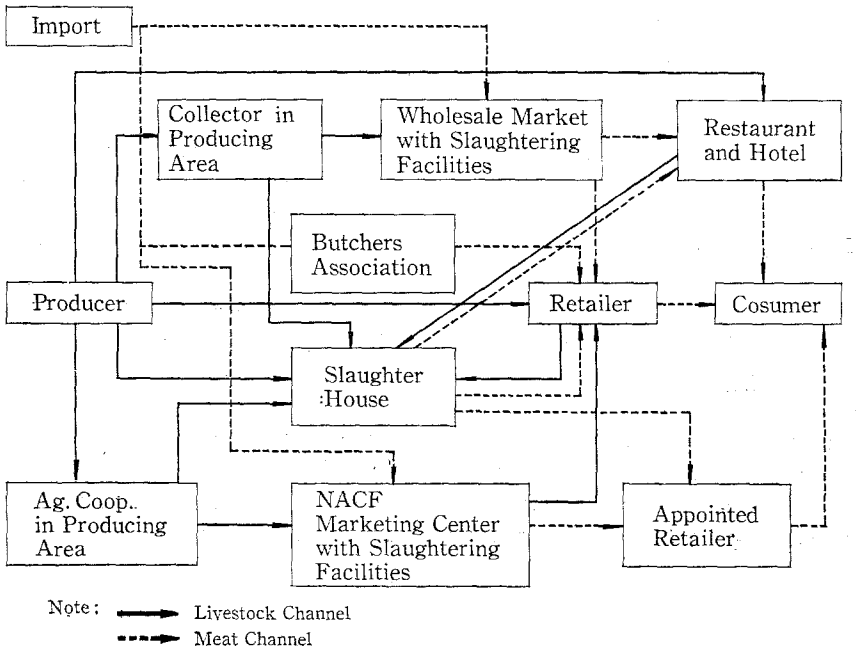
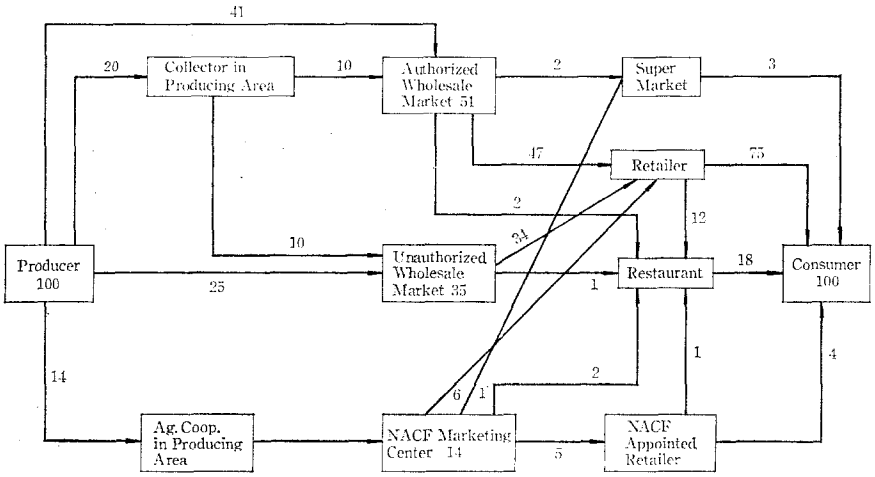


FIGURE 5 EOMESTIC BEEF MARKET FLOW IN SEOUL



Note: The number indicate percentage of meat flow through each channel.

The importance of each marketing channel is estimated for domestically produced beef market flow in Seoul, as shown in Figure 5. Fifty one percent of cattle and carcasses are distributed through the authorized private wholesale markets, 35% of those through unregulated market channels and 14% through the NACF marketing center. Consumers, in turn, purchased 75% of beef from retailers, 18% from restaurants, 4% from from NACF appointed dealers and 3% from supper chains in 1978.

3. Marketing costs and margins of beef

Meat including beef, pork, and chicken is produced all year around but demand for meat has seasonality due to holidays such as the New Year Day, solar and lunar, and Thanksgiving Day (Chuseok). The seasonal pattern of meat sold by producers is similar to the seasonality in demand for meat (Table 5).

The marketing costs and margins of cattle and beef from Ansung to Seoul (100 Km in distance) are estimated and shown in Table 14. Total marketing margins of beef consumed in Seoul in 1980 was 19.2% of the retail price for a cattle from Ansung which was slaughtered in Seoul. Costs of physical losses during transportation of live animal amounted to 2.0% and transportation costs of live animals were 0.7% of consumer price.

Costs related to transportation of live animals can be reduced by the rearrangement of the slaughtering system in marketing.

TABLE 14 MARKETING COSTS AND MARGINS OF BEEF / CATLE, PRIVATE CHANNEL, 1980, KOREA

(in US $ per 100kg Carcass)

	US $	Share (%)
Farm gate price at village	531.00	80.8
+ Transport	1.66	0.3
+ Market fee[1]	4.00	0.6
Farmer's selling price to assembly trader at local market	536.66	81.7
+ Feed	0.88	0.1
+ Transport (100 Km)[2]	2.50	0.4
+ Losses in weight	13.41	2.0
+ Commission rate at wholesale market	15.68	2.4
+ Slaughtering cost	4.50	0.7
+ Net margin of trader	6.97	1.1
Assembly trader's selling price to retailer Auction price)[3]	580.62	88.3
+ Jobber's fee	5.03	0.7
+ Fee & taxes	14.65	2.2
+ Transport	2.50	0.4
+ Losses in weight	8.33	1.3
+ Retailer's net margin	45.94	6.9
Retailor's price to consumer	657.10	100.0

Note: 1) Admission charge + Jobber's fee.
2) From Anseong to Seoul.
3) Including value of by-products of which offals, $46.2 and hides, $ 20.4 per head.
$1 = 600 won

VI. Possible Reduction of Marketing Costs and Margins

1. Rice

Under the price stabilization program of rice, the government is releasing the rice at a lower price than the purchasing price plus operation and management costs.

There are many differences in the quality of rice since high yielding new varieties of rice were introduced, which allowed attainment of self-sufficiency in rice production in Korea.

Quality difference and resulting price difference may provide freedom of choice by consumers. However, there is a lack of formal grading and quality differentiation and no formal price differentials.

There are also variations in weight and measures among regions and throughout marketing channels. Consumers want to buy rice in different measure from what the producer is going to sell in.

The formal gradings in the standard measures should be introduced for practical convenience for the producer, consumer and marketing parti-

cipants, reflecting quality difference and consumer preference. Improvement in the market information system based on the determined grades is necessary for price formation the different qualities of rice in the market.

Transactions can take place on sample lot which is specified with certain grade and quality differentials. Transactions on sample lot or paper transaction may reduce buying and selling costs, unnecessary loading and unloading costs, costs related to possible double transportation, and inspection costs. The price differential reflecting difference in grade and quality may avoid the black market for high quality rice and provide freedom of choice for low-income consumers. The price differentials in the market affect the production of different qualities or varieties and requires no price ceiling imposition.

Before the price formation of rice solely in the free market system, we should form a strong background to do so, such as the long-term self sufficiency in rice production in any situation, elimination of any monopolistic and monoposonic power and cornering of the market to have realistic perfect competition, improvement of market information system and practical grading and quality differentials.

2. Fruits and Vegetables

A major possibility of reducing marketing costs and margins of fruits and vegetables is to maintain the freshness of the produces for long a time period as possible as. The costs of maintaining the freshness and avoiding damage should be less than the value of physical and quality losses to reduce marketing costs. Even if the costs and benefits break even, benefit to a society from maintainance of freshness will be an increase in products in marketing system.

Many actions can be taken to keep the freshness and to avoid physical damage of fruits and vegetables. They include improvement of road conditions and transportation facilities, the set-up of practical weighing, packing and grading standard on the consensus of all parties related, the speed-up of transfer of produces, improvement of storage system, development of processing technology and so forth. Other weaknesses in the marketing system of fruits and vegetables to be improved are discussed below. The system of locating jobber's stores in the wholesale market building impedes the flow of produce from the auction floor, but this is a custom that can only slowly be changed, especially since alternative space at reasonable rentals is not readily available.

Market inspection and supervision of measuring, grading, unfair transaction and sanitary dealing, which is the responsibility of local government, is non-existent, except for export and government purchases.

Wholesale markets in Seoul city as well as other big cities are too small to achieve the economies which would ensure through the auction system the best prices to both the producers and consumers. In addition.

they are generally inefficiently operated. Furthermore, by virtue of time and city growth many are now located on congested but valuable city sites where rents are fixed in accordance with general market rates. Relocation of major wholesale markets should be planned, including an efficient management and operation scheme and economic scale of markets.

3. Livestock and meat

Improvement and full utilization of local slaughtering facilities can reduce the marketing costs of meat related to transportation of live animals, such as transportation space waste, loss in physical weight and transfer of non-edible wastes. For this action, air-conditioned transfer facilities are required and justified for introduction for the following reasons.

i) Transportation charges are higher for cold storage trucks than for trucks without air-conditioner by 50%. But the shipping space of a carcass by air-conditioned trucks is twice as much as that of shipping live cattle by common trucks. A common 8–ton truck can ship 10 heads of live cattle, which weighs 4 tons, but an air-conditioned 8–ton truck can bring 40 head of cattle carcasses, which weidghs 8–tons.

ii) Losses due to price differences between regions can be offset by savings from waste disposals and weight losses during transportation of live animals. The waste amounts 100 Kg per head of cattle and 5 Kg per head of hogs. A survey shows that the weight losses due to transportation amounts to 20 Kg per head of cattle and 7 Kg for hog.

iii) The possibility of one way shipment for air-conditioned truck could be eliminated by shipping imported meat and other frozen food which are expected to increase rapidly in the future.

iv) Increasing meat demand in local areas would shorten the distance of moving carcass. Regulation of meat price especially in Seoul causes a demand increase for imported meat, which in turn, reduces carcass transportation from the producing areas to Seoul and increases carcass shipment from importing points to consuming area.

v) Farm produce retailers tend to handle vegetables, fruits, fishery products and meat together. Therefore, it is desirable for a market complex to house marketing facilities for these products together in order to save on the purchasing cost of retailers.

Introduction of cut-meat to be sold at general food retail stores equipped with cold storage facilities will be another possibility of reducing the marketing costs of meat.

The action increases competitive power in the meat market and be ensured by regulartory revision.

VII. Conclusion

Reduction of total marketing costs and margins of food commodities is

not the only measure to improve the market systems. The reduction of marketing costs should be taken considering the marketing functions and services that consumers are willing to pay for. This means that some components of marketing costs can be reduced and other components will be increased by measures and activities to improve the whole marketing system.

The costs related to transportation, physical losses, quality deterioration, transaction, and profit margins are possibly reduced while costs of information, grading, packing and delivery to consumers could be increased by a marketing improvement program.

The marketing system in Korea is moving toward efficiency. Market infrastructures have been developed. Express highways are running through the nation to connect the producing areas of all food commodities to consuming regions within several hours. Feeder roads and entries to every village have been built to pick up the produces by truck.

Electrification of all households in rural areas and accompanying introduction of mass media such as TV and radio make market information and news available to farmers and consumers. Rural telecommunication systems have been developed to, at present, connect every administrative village together so that market information is quickly and easily available to all participants in the marketing of food.

Consumers and producers are so highly educated and economically oriented that their decision making on the selling and buying of food become rational. Government and public organizations have made an effort to eliminate monopolistic and monoponistic power in the markets. Merchants are trying to perform their functions with efficient techniques and less cost devices. Super markets and chains are developing to bring good quality food commodities to the consumer with small costs.

Reduction of the marketing costs and margins of food has limitations in the stage of present technology given, and improvement of marketing of food has to be considered on an equity basis as well as efficiency. Therefore, price stabilization of food becomes the main consensus of all parties concerned. As the economy grows, marketing has a dynamic aspect to be improved and to be more efficient.

Several proposals can be made toward the more efficient market. First, the thorough survey of structure, functions and performance of the market provides guidelines for adequate measures for improvement of the rural market according to its size, regional characteristics, management and operational situations. Second, public and private investments to improve physical marketing facilities including transportation, storage, loading and unloading facilities, reduce marketing costs. Third, exact and timely market information services should be provided by the government to enhance marketing efficiency. Fourth, standardization of measures and weighing, grading and packing should be facilitated to speed up marketing time,

to simplify transactions and to reduce marketing costs. Fifth, integration and chain-stores might reduce costs by improving technical efficiency but may bring monopolistic power into the market to exploit both buyers and sellers. Sixth, government supporting and facilitating functions will be needed to provide a favorable environment for merchants with the incentive of market improvement, and to check unfair transactions and collusion. It is also necessary to carry out the effective management and operation by the authorities concerned related to the market.

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