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DISCUSSION PAPER NO. 102

ARGENTINE ECONOMY AND THE WORLD FOOD MARKET, ESPECIALLY THE ASIAN MARKET TEN YEAR'S PERSPECTIVES

by

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October, 1978

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1. Agrentine in the World

Table 1 shows the relative position of Central and South America in the world. The Latin American world occupies about 7 % of World Population and 3 % of Global Production. The per capita GNP is about 1,000$.

Table 1. Population, GNP, GNP per capita, 1974

	Population (mill.)	GNP (US bill.$)	GNP per capita (US $)
North America	234	1,553	6,630
USA	212	1,413	6,670
Oceania	21	88	4,110
Europe, ex. USSR	511	1,829	3,580
USSR	252	599	2,380
Middle East	79	116	1,480
Central America	102	98	960
South America	208	198	950
Africa	403	148	370
Asia, ex. Japan	1,971	461	230

Source : World Bank, Atlas, 1976

Table 2 shows the variation among South American countries. Argentina has a high standard of living next to Venezuela and may be characterized by the slow rate of increase in population and steady rate of growth in GNP up to 1973. The slowing pace of development after 1974 is very noticable. The following figures show the remarkable stagnation of the economy in the recent five years.

Table 2. Pop. GNP Growth Rates in South America

	Pop. (mill.)	GNP (USbill.$)	GNP p.c.	Growth Rates Pop. 60-74	65-74	GNP p.c. 60-74	65-74
1. Brazil	103.9	95.9	920	2.9	2.9	4.0	6.3
2. Argentina**	24.6	37.4	1,520	1.5	1.5	2.8	2.9
3. Colombia	23.1	11.6	500	2.9	2.8	2.6	3.4
4. Peru	14.9	11.1	740	2.9	2.9	2.0	1.8
5. Venezuela	11.6	22.8	1,960	3.3	3.3	2.4	2.2
6. Chile	10.4	8.7	830	2.2	1.9	1.7	1.3
7. Ecuador	6.9	3.3	480	3.4	3.4	2.4	2.9
8. Bilivia	5.4	1.6	280	2.6	2.6	2.5	2.2
9. Uruguay	2.7	3.3	1,190	0.5	0.4	0.5	0.8
10. Paraguay	2.4	1.3	510	2.6	2.6	2.0	2.5
Others*	1.2	.9	750				

* Guyana, Surinas & French Guiana,

** Argentine in 1975 : Pop. 25.0; GNP 39.8; GNP p.c., 1,590

Source : World Bank, Atlas, 1976

Argentine Gross Domestic Product at Factor Cost (mill. 1960 Pesos)

1973	16,189	
1974	17,244 (+6.5)	
1975	17,017 (-1.4)	
1976	16,521 (-3.0)	
1977	17,298 (+4.7)	1st Q. 4015
1978		1st Q. 3726 (-7.2%)

Table 3 gives the similar picture for East and South East Asian countries whose demand for Argentine products are to be investigated in this paper. Due to unusually rapid growth of the national economies some countries like South Korea, Taiwan are now approaching the level of 1,500$ per capita GNP, so that Argentina can be compared in its scale of economy with South Korea or may be regarded as slightly larger than Malaysia or Taiwan.
In this comparison stands out the very fact that the land acrage of Argentina is far superior or density of population is very scarce. Here remains still the great frontier for Argentine, Live-Stock Farming and Agro-Industry.

Table 3. An Overall Picture of East & Southeast Asia

Population (million)	mid-74	60-74	65-74	mid-75	GNP (75)	GNP per capita (74)	GNP per capita (75)	60-74	65-74
China	809.3	1.6	1.7	822.8	286.0	(300)	350	5.2	4.6
Indonesia	128.4	2.1	2.3	131.6	24.2*	(170)	180	2.4	4.1
Japan	109.7	1.1	1.2	111.0	495.2	(4,070)	4,460	8.8	8.5
Vietnam	44.2	3.0	3.0	45.3	7.1	(150)	160	0.3	-0.8
Philippines	41.4	3.0	3.0	42.5	15.7	(330)	370	2.4	2.7
Thailand	40.8	3.1	3.1	41.9	14.5	(310)	350	4.6	4.3
Korea, S.	33.5	2.1	1.8	34.1	18.7	(480)	550	7.3	8.7
Burma	29.5	2.2	2.2	30.2	3.3	(100)	110	0.7	0.8
Taiwan	15.7	2.9	2.7	16.0	14.2	(810)	890	6.5	6.9
Korea, N.	15.4	2.8	2.8	13.6	6.8	(390)	430	4.4	3.5
Malaysia	11.7	2.6	2.6	12.0	8.7	(680)	720	3.9	3.8
Cambodia	7.7	2.5	2.7	8.0	**(.57) n.a.	(70)	n.a.	-2.7	-6.2
Hong Kong	4.3	2.2	1.9	4.4	7.5	(1,610)	1,720	6.6	5.4
Laos	3.3	2.4	2.4	3.3	**(.22) n.a.	(70)	n.a.	5.3	5.8
Singapore	2.2	2.1	1.8	2.3	5.6	(2,240)	2,510	7.6	10.0

Source : World Bank Atlas & Nat. Statistics

* official but preliminary estimate = 30.5 which gives GNP per capita 230

** figures for 74, World Bank Atlas

2. Argentine Pattern of Grwoth and Exports

The pattern of industrial composition in Argentine growth in the 60's and 70's can be seen in the following tables:

Table 4. Argentine Industrial Composition

	1960	1965	1970	1973	1976	60-73	65-73
Agriculture	16.6	15.8	13.2	12.3	12.7	13.3	13.0
Mining	1.1	1.5	1.6	1.6	1.5	1.6	1.6
Manufacturing	31.1	33.9	29.9	38.3	36.7	34.0	34.2
Construction	4.0	3.6	5.4	3.6	3.4	4.4	4.4
Elec. Gas, Water	1.2	1.9	2.1	2.2	2.9	2.2	2.2
Transp. & Comm.	7.9	7.9	10.1	7.6	7.1	8.4	8.5
Trade	22.9	19.0	19.1	19.5	17.5	19.8	19.8
Other Branches	15.1	16.5	18.6	14.9	18.2	16.3	16.3
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : World Bank; World Tables, 1976; Carmen Llorens de Azar, Argentina evolucion economica, 1915-1976, Fundacion

(1) Table 4 shows that Agriculture kept its importance, but a slow process of industrialization progressed with ups and downs. Industrial composition did not change very much.

(2) Table 5 indicates that the relative importance of foreign trade was declining. Saving did not increase. Perhaps there was some outflow of capital. All point to a certain sign of danger.

Table 5. % of Resources and Expenditure to GDP

	50-60	60-73	65-73
GNP	99.6	98.9	98.8
Net Income from abroad	-0.4	-1.1	-1.2
GDP	100.0	100.0	100.0
Imports	10.2	7.4	7.2
Exports	9.5	8.5	8.5
Total Resources	100.8	98.9	98.8
Private Consumption	72.6	69.4	69.3
Gov. Consumption	9.1	9.8	9.9
Gross Dom. Investment	19.1	19.6	19.6
(Implicit GDP-deflator, % change)		24.4	25.5

Source : World Bank, World Tables, 1976

(3) Inflation has become extremely serious after 1974. In terms of consumers' price index,

	CPI(%)	Whole Sale PI(%)
1974	26.9	20
1975	182.0	192
1976	443.0	499
1977	214.0	149

In 1978, whole-sale price index shows : January 139 %, February 135 %, March 147 %, April 154 %. Thanks to the tight monetary policy, inflation is slightly slowing down. No doubt in Argentina inflation is No. One economic problem. Some people including good economists and bankers in Argentina do not realize the distortion and difficulties imposed on the national economy by inflation. The discrepancies of relative prices between Argentina and other leading economies seem to be rather serious. Inflation makes the long-term investment plan very difficult, so that it will hamper the long-term, if not the short-term, development of national economy. The rate of price increase should be at least below 20 %.

(4) Argentine exports are concentrated in a few agricultural products like wheat, corn (maize), meat, hides & skins and wood. But their shares have declined very sharply in the 70's.

Table 6. Export Items : (%)

Exports	1970	1976
meat	24.9	12.9
corn	14.8	9.4
wheat	7.0	8.7
hides & skins	5.4	4.0
wool	4.8	2.9
	56.9	37.9

(5) For example, Argentine trade with Japan used to occupy 1.12 % of Japanese imports in 1960 but decreased to 0.59 % in 1977, despite the fact that Japanese imports of foodstuff occupied 12.1 % of total imports in 1960 and increased to 14.3 % in 1977.

(6) Nevertheless, Argentine exports to Japan has increased very much and now occupies nearly 10 % of its total exports. However, due to the rapid growth of Japanese economy, Argentine exports could have increased much more rapidly.

(7) Export Items consist mainly of foodstuff (animal feeds).

Table 7. Argentine Exports to Japan, 1977
(mill.$)

Total Exports:	418.8	(%)
Foodstuff	312.3	74.6
Meat	21.1	5.0
Fish	5.9	1.4
Maize	21.9	5.2
Kaoliang	215.6	51.5
Textile Materials	60.5	14.4
Other Materials	11.3	2.7
Machinery	16.5	3.9
Others	3.1	0.7

(8) These items are very competitive in the international market. The following table of country shares in Japanese imports shows with which country Argentine is competing:

Table 8. Argentine's share in Japanese Imports with other countries, 1977

(mill.$)	Meat	Fish	Maize	Kaoliang
Argentine	21.1	5.9	21.9	215.6
Brazile	26.5	13.2	-	-
Australia	260.3	82.6	1.7	51.6
New Zealand	72.4	10.8	1.5	-
Mexico	10.4	36.3	-	-
U.S.A.	200.7	224.7	706.2	246.4
Canada	117.2	164.5	-	-
U.S.S.R.	34.2	16.7	-	-
Spain	1.1	72.2	-	-
Sweden	16.2	-	-	-
Thailand	7.7	84.4	52.4	.3
Taiwan	59.8	248.9	-	-
China	14.9	68.4	3.5	-
Korea	21.2	437.0	-	-
Chile		7.1	-	-
Pakistan		24.3	-	-
India		131.1	-	-
Indonesia		176.5	-	-
Philippines		24.4	-	-

(9) From the view-point of economic security the Japanese economy requires a diversification of trading partners in importing foodstuff, so that she is very willing to import more from Argentine only if the prices are more competitive and the quality of the products are satisfactory.

3. Asian Agriculture and Its Supply and Demand for Food-Stuff

In the world the major importers and exporters of foodstuff are limited in number. Importers are: Japan, U.K., West Germany, Italy, China, India, USSR, Indonesia, whereas exporters are: USA, Canada, France, Australia and Argentina. The share of Argentina is, however, decreasing in recent years.

In order to consider the Asian market for Agro-Industry of Argentina, one needs to know a few fundamentals of Asian agriculture.

(1) Asia is the area where the shortage of land is very serious.

Table 9. The Arable and Cultivated Land per capita

	ha.	cultivated %
North America	2.10	51
West Europe	0.37	88
USSR	1.50	64
South America	2.30	11
Asia	0.34	83
Africa	2.10	22

(2) The cultivable land is almost all cultivated in Asia by now.
The above estimate was made in 1967.

(3) The land is used to grow mainly rice but also some other crops like wheat, maize etc.. It is the area where rice is grown much more productively.

Table 10. Yields of Rice and Wheat in Different Continents

	Rice (kg/ha)		Wheat (kg/ha)	
	61-65	72-74	61-65	72-74
Africa	1722	1702	834	1007
South America	1731	1807	1361	1319
Asia	2049	2354	902	1211
North America	3192	3803	1592	1950
Europe	4661	4578	2077	3124
Oceania	4568	5579	1245	1184
USSR	2461	3853	964	1537

(4) Rice can be grown on the same land repeatedly over hundreds of years, whereas wheat can be done so only at a very low level of yields. Rice is a necessity for Asian population for this reason of production as well as from their point of view in taste. If, therefore, rice can be grown in Argentine, it can be exported.

(5) Table 3 shows that Asian countries are steadily growing in population and production, so that per capita GDP is increasing. This will increase the demand for food stuff according to the income elasticity. A tentative table of such elasticities is given by FAO: Agricultural Commodity Projections: 1970-1980, Rome 1971. Only a small part relevant to Argentine exports will be reproduced here.

Table 11. Regional Income Elasticities for Foods

	South Asia	East & SE Asia	Japan	Comm. Asia
Wheat	0.47	0.66	0.10	0.46
Rice	0.34	0.24	-0.10	0.39
Corn	-0.11	0.11	-	0.17
Beef	1.17	0.78	0.70	1.22
Fish	1.31	0.73	0.30	1.00
Cheese	0.54	0.16	1.00	0.91

(6) World Conference of UN offered some projection of food demand and production in Rome, 1974 fo the year of 1985, on these bases and projected population.

Table 12. World Food Demand and Production

	Population	Food			
	Growth %	Growth Rates		Quantity Index in 85 (69-71 = 100.0)	
		Demand	Prod.	Demand	Prod.
Developed	0.9	1.5	2.8	126	151
Market Eco.	0.9	1.4	2.4	124	143
Planned Eco.	0.9	1.7	3.5	130	168
Developing	2.4	3.6	2.6	170	146
Africa	2.9	3.8	2.5	176	145
East Asia	2.6	3.4	2.4	166	143
Latin America	3.1	3.6	2.9	170	152
Middle East	2.9	4.0	3.1	180	157
Asia	1.6	3.1	2.6	158	146
Planned Eco.	2.7	3.4	2.6	166	146
World	2.0	2.4	2.7	144	150

This table shows a significant gap in East Asia and Africa. One important country in Asia is undoubtedly Japan. There are two giants, India and China, in addition Indonesia & Bangladesh are going to be the importers of rice and wheat.

(7) As for India, there are many studies. National Council For Applied Economic Research, Projections of Demand and Supply of Agricultural Commodities, New Delhi, India, 1970; ECAFE/FAO, A case Study on the Scope for Production of Foodgrains and requirements of Agricultural Input in South Asia, 1970-1980, Bangkok, 1971; H. Ohuchi, "India's Demand and Supply of Food," 1975 (in Japanese) are main contributions. On the basis of these studies Dr. B. Ogura gave the following projection:

	1975~76	1980/81
Production :	114~120 mill. ton	126~137
Demand :	110~125 mill. ton	120~140

Hence India may need to import a few million to 10 million ton of grains in bad crop years but be able to export particularly wheat in good cropping years. Green revolution for wheat was very successful. The same can be said for Pakistan.

(8) As for China, there are also many studies. One recent work in English may be quoted: A. Eckstein, "Economic Growth and Change in China: A Twenty Year Perspective," China Quarterly No.54, April-June, 1973. It seems that most expert agrees to estimate the amount of grains consumed per capita in China is about 200-250 kg. China has imported about 10 mill. ton of grains from the US Argentine and other countries. China will keep on importing about 5-6 million ton of wheat for a decade to come. It may even increase.

(9) USSR also is a big importer. In 1973 imported more than 20 mill. ton of grains. B. Johnson in the US and experts in Japan predict the annual import of 10 mill. ton over a decade. East European bloc also will need to import a few mill. ton of grains in late 70's and early 80's.

(10) Thus one can conclude the following. The rough estimate of the annual import of food in terms of converted grains from major Asian countries is:

Japan	15.0 ~ 20.0 (mill. ton)
China	10.0 ~ 15.0
India	5.0 ~ 15.0
Southeast Asia	3.0 ~ 5.0
USSR	10.0 ~ 12.0
	43.0 ~ 67.0

(11) Recently Second Agricultural Survey of Asian Development Bank gave some forecast of Similar figures for major Asian countries. They are of great interest to the theme of this paper, so that they are reproduced here.

(A) Annual Growth Rates of Basic Indicators 1972-85

	GDP	Agricultural output (constant prices)	Population
Bangladesh	3.1	2.3	3.0
India	3.7	2.8	2.3
Pakistan	3.5	2.9	3.4
Sri Lanka	2.8	2.4	2.3
Burma	4.0	2.7	2.1
Indonesia	4.4	2.5	2.9
Malaysia (West)	5.9	4.0	2.8
Philippines	5.5	3.1	2.9
Thailand	5.5	3.4	3.3
S. Korea	7.8	2.3	1.9

(B) Foodgrain Deficit, 1985

	Rice, wheat, maize ('000 tons)				% growth rates of cereal import requirement	
	Projected demand	Projected supply	Balance 1985	Balance 1972	1963-72	1972-85
Bangladesh	27,562	21,675	- 5,888	-2,037	3.7	9.5
India	139,714	127,229	-12,484	-2,913	-5.6	10.1
Pakistan	18,073	15,490	- 2,582	- 93	-2.0	10.3
Sri Lanka	3,787	2,028	- 1,759	-1,136	-0.2	3.4
Total	-	-	-22,713	-6,179	-	-
Burma	10,219	11,175	955	694	3.0	-4.5
Indonesia	44,395	31,764	-12,630	-1,990	5.7	13.6
Malaysia (West)	3,756	1,994	- 1,762	- 781	-0.1	6.0
Philippines	13,002	10,829	- 2,172	-1,072	0.8	5.5
Thailand	18,831	20,246	1,415	3,702	4.6	3.8
Total	-	-	-14,194	553	-	-
S. Korea	16,484	7,566	- 8,918	-2,267	8.9	10.5
TOTAL (all countries)	-	-	-45,825	-7,893	-	-

(C) Agricultural Export/Import Ratios, 1970-85

	Value of agricultural exports divided by value of cereal imports	
	1970-74	1985
Bangladesh	0.95	0.17
India	1.08	0.30
Pakistan	3.69	1.14
Sri Lanka	2.27	1.47
Burma	52.37	110.91
Indonesia	2.15	0.50
Malaysia (West)	9.79	7.29
Philippines	5.57	1.62
Thailand	77.55	47.20

Source : Second Asian Agricultural Survey, ADB,
Rural Asia: Challenge and Opportunity

4. Agro-Industries and Development Strategies

In order to develop the national economy step by step, development strategies must be changed at each stage of development. The following table illustrates the need of such strategies:

Table 13. Development Stages and Foreign Trade Policies

		Domestic Market	Export	Import	Import Restrictions
1. Primary	Industry	I	II	VII	
2. Light	Industry	III	IV	II	III
3. Heavy	Industry	V	VI	III	V
4. Knowledge	Industry	VII	VIII	V	VII

Stage I : pure autanchic agrarian economy

Stage II : begins to export agricultural products and import consumption goods

Stage III : begins to develop "light industry" by importing machinery and restricting the imports of the same products — import-substitution stage

Stage IV : Light Industry is led to export its products and becomes a successful leading industry. It is crutial whether this stage can be reached by private enterprise. International competition is keen; life-cycle of the commodity should be kept in mind; and the economy of scale of production is important in many cases.

Stage V : As some industries are successfully established, development strategies should be shifted to technologically more advanced industries.

Agro-Industry defined, for example, as a food-processing industry may be one of "light industry." Its success in the international market will require the control of inflation, efficient private enterprise, cooperation of trade unions, steady but considerate support of government intelligence and services and, above all, "entrepreneurship." It seems to me that the Argentine economy is suffering from the difficulties in Stage IV. This is the stage in which per capita GDP is about 500$ to 2,000$. In that stage many political scientists proved that economic growth may bring along the political instability due to the necessary social change or social mobilization, as Carl Deutsch named it. This is particularly so when growth takes a zig-zag course. Argentine economy and exports seem to have shown such a fluctuation (index of export fluctuation-export growth rate = 3.1, similar to many politically unstable countries in Africa). What appears political may be a reflection of underlying economic problems.

(Sept. 18, 1978)

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