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Peruvian agriculture : recent history, present performance and the effects of agricultural and general economic policies

Kiel Working Papers, No. 474

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Suggested citation: Thiele, Rainer (1991) : Peruvian agriculture : recent history, present performance and the effects of agricultural and general economic policies, Kiel Working Papers, No. 474, <http://hdl.handle.net/10419/755>

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Kieler Arbeitspapiere Kiel Working Papers

Working Paper No. 474

Peruvian Agriculture: Recent History, Present
Performance and the Effects of Agricultural
and General Economic Policies*

by

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ISSN 0342 - 0787

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April 1991

AG 2204 / 91
Wahrscheinlich
Kiel

* This study is part of the research project "Discrimination Against Agriculture in Developing Countries? Magnitude, Structure and the Role of Economic Policy" financed under grant number II/64700 by Volkswagen-Foundation. Helpful comments by Ulrich Hiemenz and Manfred Wiebelt are gratefully acknowledged.

The author himself, not the Kiel Institute of World Economics, is solely responsible for the contents and distribution of each Kiel Working Paper.

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1. Introduction

Malaysia, Zimbabwe and Peru are chosen to be analyzed in detail within a Research Project that aims to evaluate how policies - including agricultural pricing policies, trade policies and exchange rate policies - in developing countries affect their agricultural sectors. For each of these countries, the empirical investigation is introduced by a descriptive part containing a survey of the agricultural sector and its policy environment. This paper provides the respective survey for Peru.

Peru can roughly be divided into three distinct geographical zones: The Coast, the Sierra and the Selva. The Coast is a belt of arid land between the foothills of the Andes and the Pacific Ocean. About half of Peru's population of about 20 million people live in this region. Its agriculture mainly consists of large and technically advanced commercial farms, in which two of Peru's most important export crops, sugar and cotton, are produced. Other main agricultural commodities grown at the Coast are rice, potatoes and yellow maize. Coastal agriculture is heavily dependent on irrigation facilities. The Sierra is made up of valleys and the western plateaus of the Andean mountains. It is the home of most of the Peruvian Indians, who are mainly engaged in traditional subsistence agriculture. Among other things, they produce wheat, potatoes, white maize and beans on relatively poor soils. Large livestock haciendas are also located in the Sierra. The Selva is the largest region (comprising 63 per cent of the Peruvian territory), but is only weakly populated. It consists of two subregions: the subtropical high Selva (700-1800 meters) and the tropical low Selva (below 700 meters). Many Selva inhabitants live in agricultural villages near rivers and carry on slash-and-burn agriculture. The Selva has abundant land suitable for cultivation, but the soil is shallow and acid. Major crops of the region are rice, yellow maize and coffee, one of Peru's most important export crops.

Against the background of this geographical setting the present paper deals with the performance of the country's agricultural sector and the effects of agricultural as well as macroeconomic policies during the last 40 years. The presentation is divided into three parts. First, the period 1950-1968, which shows Peru as a fairly outward-oriented economy, is considered in subsection 2.1. Particularly in the 1950s, the country was characterized as a liberal economy with growth mainly led by traditional agricultural exports (Thorn and Bertram [1978]). In the mid-1960s, it started to follow an import substitution strategy. Second, subsection 2.2 deals with the military rule between 1968 and 1979. The militaries intended to reduce Peru's dependence on volatile world markets and foreign capital and extended the state participation in the economy. With respect to agriculture, a profound land reform was the dominating event of that period (Kennedy [1983]). Third, the state of the economy (and in particular the agricultural sector) in the 1980s is analyzed in section 3. The decade began with a liberalization program under President Belaúnde. However, the worldwide recession and adverse climatic conditions complicated the adjustment process and the government returned to more protectionist policies. President García, who came into office in 1986, followed import substitution policies for both, agriculture and industry, at the detriment of the whole export sector (World Bank [1989]).

2. Historical Survey

2.1. Peru: An Open Market Economy (1950-1968)

2.1.1. The Agricultural Sector

In the 1950s, the agricultural export sector was the driving force for Peru's economic development. Namely sugar and cotton were the leading foreign exchange earners, accounting for about 50 per cent of the total value of Peruvian exports (Roemer [1970], p. 44). Both commodities are nearly exclusively produced at the Coast on large estates and under advanced levels of technology (Coutu and King [1969]). Favourable international prices and a critical world supply situation during the Korean War led to a wave of investment for export crops, especially into irrigation projects. The following worldwide output expansion caused excess supply and downward pressure on prices. In the case of sugar, the introduction of the International Sugar Agreement in 1953 prevented a dramatic price decrease, while the US Government kept world cotton markets in equilibrium by buying up surpluses. Thus, markets for Peruvian export crops were consistently favourable during the 1950s and the response was a rapid output expansion, leading to an increase in the value of export crop production of nearly 400 per cent between 1950 and 1960 (Table 1).

By contrast, Peru's non-export food crops performed very poorly. Production figures in Table 1 indicate a stagnating value of production and a per capita drop in food crop output of almost 20 per cent over the decade. These different developments reveal the characteristic dual nature of the Peruvian agricultural sector: On the one hand, irrigated coastal production of industrial and commercial food crops in large and modern estates, on the other hand, highland production of livestock on large farms at a relatively low technological level and of subsistence foodstuffs by small-scale peasant farmers.

Altogether, the domestic food shortages during the 1950s could be met by large-scale food imports, which were possible without creating balance-of-payment problems because of the abundant inflow of foreign exchange for agricultural exports.

In the 1960s, the situation changed somewhat. The world cotton market again suffered from over-supply, aggravated by the steady inroads made by synthetic textiles into markets previously dominated by cotton. As a result, relative cotton prices decreased

Table 1 - Peruvian Agricultural Production, 1950-1975

	1950	1960	1967	1970	1975
Output (billions of soles at 1963 prices)					
Export/industrial crops	1.48	5.64	5.05	5.06	5.42
Foodcrops	3.82	3.81	5.87	6.31	5.90
Livestock	0.93	1.78	2.25	2.42	4.50
Total	6.72	12.56	13.17	13.78	15.81
	1951-55	1955-60	1961-65	1966-70	1971-75
Output (per capita: 1946-50 = 100)					
Foodcrops	108	87	99	102	97
Livestock	149	168	192	208	262

Source: Fitz Gerald (1979, p. 73).

ed and land was switched to other crops. Between the early sixties and the early seventies the area under cotton was halved and production fell by over one-third. Sugar production profited from the Cuban Revolution in 1959, which led to a reduction of Cuba's sugar quota in the US market, while Peru received a quota large enough to absorb all of the available exportable supply and could sell sugar at the premium prices prevailing in the USA. Coffee, which is grown in the Selva, expanded very fast and became the third significant export crop during the 1960s. Nevertheless, the decline of cotton caused a drop in the overall export crop production from 1960 to 1967 (Table 1). The increase in food crop production over the same period was mainly due to the fact that the land taken out of cotton was devoted to food crop production (Thorp and Bertram [1978]). Despite this reallocation towards the domestic market, per capita food output did not even reach the 1950 level.

The expanding mining sector (copper) and the fishmeal industry, that experienced an enormous boom in the 1960s, substituted the traditional agricultural products cotton and sugar as the key contributors to the expansion of the export economy and delivered most of the foreign exchange necessary to finance the still large food imports (Thorn and Bertram [1978]).

2.1.2. Agricultural and General Economic Policy

Beginning with the administration of General Odría (1948-1956) and continued under Prado (1956-1962), Peru followed deliberate laissez-faire economic policies, at least in the Latin American context. This orientation was also reflected in its dealings with the agricultural sector. Public investment in agriculture as a percentage of central government expenditure averaged approximately 4.2 per cent between 1950 and 1959 (Kennedy [1983]). This little public support was largely concentrated on large-scale, coastal production as can be illustrated by the disbursement of credit by the agricultural development bank (Table 2). Export

Table 2 - Distribution of Agricultural Credit by the Banco Agrario del Peru (BAP)

Percentage Distribution by Crop Destination ^a			
	1950	1962	1968
Export crops (coffee, cotton, sugar)	65.1	63.6	52.8
Food crops (rice, maize, wheat, potatoes)	34.9	36.4	47.2

Percentage Distribution by Individual Commodities ^a			
	1962-63	1965-66	1968-69
<u>Export crops</u>			
Cotton	56.5	45.3	34.9
Sugar	3.2	2.4	5.0
Coffee	3.7	6.0	6.8
<u>Food crops</u>			
Rice	15.3	16.0	28.5
Maize	4.9	9.3	7.1
Potatoes	6.7	6.8	7.1
Wheat	0.9	0.1	0.1

Percentage Distribution by Regions			
	1957-58	1965-66	1967-68
Coast	93.3	81.1	76.5
Sierra	6.0	17.1	20.6
Selva	0.7	1.8	2.9

^aExcludes loans for forestry and livestock.

Source: Kennedy (1983, p. 16).

crop producers received about two-third of the public credits and, even more striking, 93 per cent of the public funds went to the coastal region. The latter figure does not only include credits for sugar and cotton, but also for rice, the non-export food crop that received the most public support. Similar allocation patterns did also apply to fertilizers and technical assistance. Pricing policies (controls and consumer subsidies) were partly removed in the 1950s. Officially, only bread prices remained controlled, but additional unofficial controls governed the sale of rice, meat and other foodstuffs of high demand in the urban markets.

Altogether, the government contributed to the dual structure of Peru's agriculture, although one has to keep in mind that it did only slightly intervene in the economy during the 1950s.

In the following decade, government's involvement in the agricultural sector substantially increased. On average, 28 per cent of public investment were designed for agriculture with emphasis laid on irrigation projects and the colonization of new land, particularly in the Selva (Kennedy [1983]). The distribution of credits between export crop and food crop producers became gradually more equal (Table 2). In 1964, the Belaúnde (1963-1968) administration implemented a limited land reform in response to peasant militancy. However, the reform law contained numerous loopholes and exemptions and thus had little impact on the overall system of land tenure (Thorp and Bertram [1978]).

The rapid growth of Peruvian exports (the average annual growth rate between 1948 and 1968 was 8.3 per cent) was also affected by general economic policies, particularly exchange policy. The Odría government abolished exchange controls and set the sol free to fluctuate in 1950. Depreciation of the sol was tolerated and occasionally even assisted by the Central Bank. In contrast, when the danger of appreciation occurred, the Central Bank intervened to peg the rate in favour of the exporters (Frankman [1974]). The

devaluations of 1953 and 1958-59 both followed declines in the prices of agricultural and mining exports and brought about gains for the export sector at the expense of investment levels and imports of capital goods.

Trade policy was not very important during the 1950s. At the end of the decade, Peru had by far the lowest tariff level of all Latin American countries with an average rate of 34 per cent, while this rate was 138 and 112 per cent for Chile and Columbia, respectively (Macario [1964]).

The Industrial Promotion Law, which finally passed Congress in 1959, marked a turning point of Peruvian economic policy-making, indicating a movement towards import-substitution strategies. It provided incentives for investment by means of exemptions from import duties on equipment and intermediate goods and provision for tax-free reinvestment of profits. The law benefited industry in general, not only selected industries as in other Latin American countries. Tariff policy was modified to promote manufactured goods; higher duties on final goods combined with exemptions under the Industrial Promotion Law led to massive increases in effective protection for import-substituting industries. Pharmaceutical products, for example, had 18 per cent effective protection in 1963 and 164 per cent in 1965 (Thorp and Bertram [1978]). This meant a severe discrimination of the primary sector. Agricultural and mining exports were additionally affected by the fixing of the nominal exchange rate between 1959 and 1967.

In the mid-1960s, a slowdown of export growth and increasing imports of capital goods worsened the current account deficit, which was financed by increases in government foreign borrowing, thus raising debt service payments. Additionally, the Belaúnde government increased public investment as compared to its predecessors. All these facts contributed to a balance-of-payments crisis. In August 1967, the sol was depreciated by 42 per cent, import controls were imposed and deflationary measures taken. As

a result, the current account improved, but the economy experienced a recession (Thorn and Bertram [1978]). This opened the way for a military coup by General Velasco in October 1968, whose period of office is the subject of the next chapter.

2.2. The Peruvian Experiment (1968-1979)

One of the first actions of the military government under General Velasco was the introduction of an agrarian reform program, which was going to be the focus of agricultural policy throughout the 1970s. Major objectives of the land reform were to redistribute land resources in order to create jobs and increase rural incomes as well as to increase productivity through more intensive land utilization (Kennedy [1983]). Over and above that it contained an important political component. By means of the land reform the military regime intended to crush the power of the landlord oligarchy and to gain the support of the rural labor force.

The Peruvian land reform was and has remained the most comprehensive and radical one in Latin America. All landholdings above a certain size (150 hectares at the Coast and 15 to 55 hectares in the Sierra) were expropriated without exception (Lastaria-Cornhiel [1989]). Most of the expropriated land was redistributed to newly formed production cooperatives. The so-called 'cooperativas agrarias de produccion' (CAPS) substituted crop-producing estates (mainly located at the Coast) and the permanent workers of these estates became cooperative members. The 'sociedades agricolas de interés social' (SAIS) replaced the former large livestock haciendas (mainly in the Sierra) and were to include former hacienda workers as well as members of the surrounding peasant communities. The remainder of the land (about 30 per cent) was distributed among existing peasant cooperatives and individual peasant farms (Minkner [1979]).

Although the agrarian reform was quite far-reaching, there remained a significant number of middle-sized commercial farms as

Table 3 - Land Distribution Before and After the Agrarian Reform

	Before Reform	After Reform
% Land Owned in:		
Units > 100 ha	45.0	1.5
Units < 100 ha but > 20 ha	9.2	8.3
minifundistas (average 2.5 ha)	10.6 ^a	12.9
CAPS	0.0	43.5
Indigenous communities/ other (including SAIS and reform peasant com- munities)	35.2	33.8
number of landless peasant families	381200	224000
^a Although only a small percentage of the land, this represented approximately 92 per cent of all farm units.		

Source: Melmed (1987, p. 21).

well as minifundistas and landless peasants (Table 3). The real beneficiaries of the land redistribution were the former permanent estate workers.

In spite of the change in land tenure, agricultural production followed the same trends which had become evident during the 1960s. The export crop production was almost stagnant in the 1970s. In addition, the two traditional export commodities, sugar and cotton, faced an increasing internal consumption, which further diminished their role as foreign exchange earners. At the end of the decade, coffee had become the leading export crop. Food production again recorded a dismal performance after the

slight recovery in the late 1960s, when coastal land was shifted from cotton and to food crops. Production figures in per capita terms declined and were significantly below the 1950 level in 1975 (Table 1). Within the group of food crops there appeared to be differences between commodities mainly produced for urban consumers (e.g. coastal rice), which performed rather well, and commodities for the rural market, which showed negative growth rates. Agricultural production as a whole grew at an average rate of only 0.1 per cent between 1970 and 1980 (World Bank [1989]).

The heterogeneous performance of individual foodstuffs originated from the government's philosophy. It followed an import substitution strategy and intended to assure sufficient food for the growing urban labor force. Consequently, production incentives had to be created. Particularly coastal rice farmers profited from irrigation projects and credit facilities. The state also took over the milling and marketing of rice in order to guarantee the provision of this staple for urban markets. In contrast, the subsistence farmers in the Sierra did not receive significant governmental support. Nearly all funds were offered to the large cooperatives including the export crop producers. The latter were promoted (with little success) in order to gain foreign exchange, which was needed for industrial development. With this policy the military regime - contrary to its announcements to reduce inequality - preserved the dualism between modern coastal and primitive highland agriculture.

Pricing policies were heavily discriminating against domestic farmers for all import-competing foodstuffs (including rice). The internal prices of wheat and rice, for example, were only about half the international price in 1975 (Figueroa [1981]). The main government objective was to provide cheap food especially for the urban population. Moreover, imports of agricultural products were subsidized. Together with the stagnation of exports this led to a US\$ 135 million deficit in the trade balance for agricultural

products starting from a US\$ 118 million surplus in 1970 (World Bank [1989]).

Altogether, the agricultural policy measures taken by the Velasco government (including the land reform) caused no fundamental change in agricultural output and productivity compared to the 1960s. The investment level in agriculture did not increase. The state became more and more involved in the agricultural sector (as well as in the whole economy), but at the expense of private activities. The commercialization of nearly all foodcrops was centralized. For this purpose two marketing boards were founded: ECASA (rice marketing) and ENCI (marketing of inputs and other agricultural products).

In 1975, a combination of stagnant exports, a decline in export prices, heavy dependence on food imports and industrial intermediate goods, and a rapid increase in the burden of foreign debt caused a balance-of-payments crisis. General Velasco was removed in August that year and General Morales Bermúdez became the new president. From 1976 to 1978 the Peruvian economy experienced a recession. Agricultural production stagnated in 1977 and declined by 3 per cent in 1978. By mid-1978 the government embarked on a stabilization program, which was supported by an IMF stand-by agreement, a loan from the World Bank and considerable debt relief (Bogdanowicz-Bindert [1983]). The program led to a slight economic recovery and a rapid improvement of the balance-of-payments. The agricultural sector continued to perform weakly, mainly because pricing policies continued to discriminate against domestic farmers and technical services still worked very poorly (World Bank [1981]).

3. The 1980s

3.1. General Economic Trends

When Fernando Belaúnde Terry became President for the second time in 1980, he profited from the successful stabilization program implemented by the preceding government, which had brought about an economic recovery and a favorable balance-of-payments position. Nevertheless, he inherited a country with strong social problems that had just experienced a severe economic crisis. GDP per capita was still below the 1974 level (Table 4). President Belaúnde continued the import liberalization program, that had been initiated by his predecessor and started to transfer state companies to private ownership. On the other hand, public investment was increased, especially for infrastructural projects (Mann and Pastor [1989]).

In 1980 and 1981, the Peruvian GDP grew by 4.7 and 5.5 per cent, respectively (Table 5). Declining terms of trade, the worldwide recession, an overvalued exchange rate and limited access to external funds as a result of the Peruvian debt overhang led to an economic stagnation in 1982. In the following year, the situation was further aggravated by the 'El Niño' stream that caused floods in the North and droughts in the South of Peru (World Bank [1989]). Consequently, GDP declined by 12.3 per cent in 1983. In addition, inflation rose steadily. The government reacted with a reversal of the import liberalization process and took measures to stabilize the economy (especially exchange rate depreciation and reduction of public expenditures). It achieved a recovery of the current account through a sharp decline in imports (Table 6), but could not overcome inflationary pressures and had to accept low economic growth (1.5 per cent in 1985).

In August 1985, the social democrat Alan García won the presidential election. The new government adopted a heterodox policy mix to stabilize the economy (Corsepius [1989]). Its strategy contained at least three major elements. First, the exchange rate was devalued and then fixed, prices were frozen, interest rates

Table 4 - Population, Real GDP and Per Capita Real GDP, 1960-1988

Year	Population (Million)	Real GDP (Billion 1985 Intis)	Per Capita Real GDP (1985 Intis)
1960	10.02	75.4	7524
1961	10.32	82.0	7945
1962	10.63	90.4	8504
1963	10.96	94.7	8640
1964	11.30	101.3	8964
1965	11.65	106.4	9133
1966	12.01	114.0	9492
1967	12.31	117.9	9578
1968	12.67	117.9	9305
1969	13.05	122.8	9410
1970	13.45	131.8	9799
1971	13.59	138.5	10191
1972	13.95	146.6	10509
1973	14.35	155.7	10802
1974	14.75	166.4	11281
1975	15.16	170.4	11240
1976	15.57	176.0	11303
1977	15.99	175.6	10982
1978	16.41	172.5	10512
1979	16.85	179.9	10677
1980	17.30	188.4	10890
1981	17.75	198.7	11194
1982	18.23	198.8	10905
1983	18.71	174.4	9321
1984	19.21	183.3	9542
1985	19.70	186.1	9447
1986	20.21	204.8	10134
1987	20.73	220.7	10646
1988	21.27	201.9	9492

Source: IMF, International Financial Statistics, Yearbook 1990.

Table 5 - Real GDP and Per Capita Real GDP, Growth Rates, 1961-1988

Year	Real GDP	Per Capita Real GDP
1961-1968 ^a	5.8	2.8
1969-1975 ^a	5.2	2.5
1976-1979 ^a	1.3	-1.5
1980	4.7	2.0
1981	5.5	2.8
1982	0.0	-2.6
1983	-12.3	-14.5
1984	5.1	2.4
1985	1.5	-1.0
1986	10.0	7.3
1987	7.8	5.1
1988	-8.5	-10.9

^aFigures are unweighted averages.

Source: Own calculations based on data from Table 4.

Table 6 - Balance of Payments (Million US\$), 1975, 1980-1988

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
Merchandise Exports fob	1291	3916	3249	3293	3015	3147	2978	2531	2661	2694
Merchandise Imports fob	2389	3090	3802	3721	2722	2140	1806	2596	3182	2750
Trade Balance ^a	-1099	826	-553	-428	293	1007	1172	-65	-521	-56
Current Account ^a	-1541	-101	-1733	-1612	-875	-223	135	-1077	-1481	-1138
Change in Reserves ^b	499	-609	632	65	-2	-297	-124	411	855	-63

^aMinus sign indicates debit. - ^bMinus sign indicates increase.

Source: IMF, International Financial Statistics, Yearbook 1990.

were reduced (to lower working capital costs) and dollar deposits were frozen ('de-dollarization'). These measures were supposed to break inflationary expectations. Second, real wages and agricultural incomes were raised and public works programs were initiated in order to achieve demand led growth. The strategy was based on the belief that there were large unutilized capacities that would make possible reactivation without inflation. In addition, a wide range of imports were banned to encourage the use the slack capacities in local industry. Third, García announced a limit for debt service payments (10 per cent of export revenues), because he needed the funds for his development plan.

At the beginning, the heterodox stabilization package appeared to be very successful. Real GDP grew by 10 per cent in 1986 and 7.8 per cent in 1987 and the inflation rate was declined from 158.3 per cent in 1985 to 62.9 per cent in 1986 (World Bank [1989]). On the negative side, two major drawbacks of the strategy became apparent (Mann and Pastor [1989]). In the first place, the fiscal deficit could not be controlled, which forced the inflation rate to increase again in 1987. Second, the exchange rate freeze led to a real appreciation of the Inti in 1986. Imports expanded (also because of the rise in domestic absorption) and exports declined. Consequently, the trade balance and the current account deteriorated (Table 6) and international reserves became scarce as a result of very low fresh capital inflows, which could not offset the current account deficit.

By the end of 1987, the Peruvian economy experienced severe capacity constraints and thus the demand led growth model did not work any longer. The economy fell back into a recession (GDP declined by 8.5 per cent in 1988), inflation accelerated and real wages declined. With annual inflation rates of 1722 per cent in 1988 and 2775 per cent in 1989 the country moved into a period of hyperinflation (Blomeier [1990]).

Altogether, the 1980s were characterized by strong economic fluctuations. The overall economic performance was dissatisfactory as

can for example be illustrated by the GDP per capita figure in 1988, which merely equalled the 1966 level (Table 4).

3.2. The Agricultural Sector

Agriculture still plays an important (although declining) role in the Peruvian economy. Presently, it employs nearly 40 per cent of the labor force and contributes about 11 per cent to GDP. After a decade of stagnation the sector experienced moderate growth in the 1980s. Between 1980 and 1987 agricultural GDP grew at an average rate of 3.3 per cent. Growth rates were somewhat higher during the García office (3.8 per cent in 1986, 6.1 per cent in 1987 and 5.5 per cent in 1988 in spite of the general economic crisis) than under President Belaúnde. This can be explained by the favorable agricultural pricing policies of the García government (see subsection 3.3) and by certain peculiarities, which impaired the agricultural performance in the early 1980s. First, the coastal cooperatives, which were founded during the agrarian reform, began to be decollectivized by means of giving small parcels (usually 4-6 hectares) to former CAP members (Carter and Alvarez [1989]). The chaotic course of this parcellation brought agriculture into an organizational crisis. Second, the 'El Niño' stream caused a 9.6 per cent decline of the sectoral GDP in 1983.

Production figures for Peru's major individual agricultural commodities are presented in Table 7. Among the export crops, sugar cane production was lower and coffee production higher in the 1980s as compared to the previous decade, while cotton showed no clear trend. Food production for the domestic market was more or less stagnant over the whole period. Only rice experienced an upward trend since 1981 with record harvests in 1984 and 1987. For all commodities except cotton one can observe a steep fall of production in 1980 (the year of transition from the military regime to a new civilian administration) and all commodities except rice suffered from the 'El Niño' stream in 1983.

Table 7 - Production of Main Agricultural Commodities, 1970-1988^a

Commodity Year	Sugar Cane	Cotton	Coffee	Pota- toes	Rice	Wheat	Maize
1970	8050	248	65	1929	587	125	615
1971	8758	233	71	1968	615	122	616
1972	8612	225	70	1713	482	120	628
1973	8772	236	70	1713	484	123	600
1974	9184	257	70	1722	494	127	606
1975	8958	227	65	1639	537	126	635
1976	8792	165	65	1667	570	128	726
1977	8816	173	65	1615	587	115	734
1978	7970	199	88	1695	468	104	590
1979	7034	244	106	1695	560	102	631
1980	5598	256	95	1380	420	77	453
1981	5129	286	95	1705	712	119	587
1982	6509	256	90	1799	776	101	631
1983	6381	105	91	1200	798	76	585
1984	6988	203	91	1463	1156	84	776
1985	7329	291	91	1557	878	92	702
1986	5273	304	96	1658	726	121	876
1987	6099	202	98	1709	1169	133	914
1988	5948	275	99	2108	1129	153	908

^aAll figures are measured in metric tons.

Source: BCR, Memoria, various issues.

Peru's traditional agricultural export commodities have lost their special importance meaning for the economy. Presently, sugar, coffee and cotton together contribute less than 10 per cent to the total merchandise exports. Since 1976, coffee has been the most important export crop (Table 8). On the other hand, Peru became a net importer of sugar in 1983 (Bolling [1989]). Since then, sugar exports were only made in order to take advantage of the premium prices offered within the US sugar quota.

Imports of the main Peruvian staples (wheat, rice and maize) were subject to considerable fluctuations. In the case of rice, Peru was self-sufficient in most years of the 1970s, but has again become dependent on imports since 1979.

While Peru had considerable surpluses in the agricultural trade account especially in the 1950s and 1960s, import expenditures exceeded export revenues by far throughout the 1980s. Thus, agriculture has lost its role as a net foreign exchange earner.

3.3. Effects of Agricultural Policies

Out of several instruments of direct agricultural support which are available, price policy and credit policy are discussed in the following.

Agricultural price policies are usually directed at two different target groups, namely consumers and producers. Since the former want low food prices and the latter as high revenues as possible, it is difficult for an intervening government to satisfy both groups.

The Velasco regime gave priority to the provision of cheap food for the urban population at the detriment of the farmers, who obtained prices, which were substantially below world market equivalents. The newly founded parastatal organisations ECASA

Table 8 - Trade with Main Agricultural Products, 1970-1988^a

Year	Exports			Imports		
	Sugar	Cotton	Coffee	Wheat	Rice	Maize
1970	65	52	45	38	0	0.3
1971	70	45	35	52	0	0
1972	77	47	49	54	0	9
1973	87	62	64	96	0	21
1974	154	94	35	136	0	41
1975	296	60	49	136	31	54
1976	92	76	106	119	19	37
1977	83	47	198	97	0	21
1978	47	38	168	103	0	17
1979	34	49	245	145	48	17
1980	13	72	141	142	101	69
1981	0	64	106	170	50	50
1982	20	85	113	155	17	56
1983	35	44	117	152	40	61
1984	49	23	126	143	11	16
1985	23	51	151	99	0	28
1986	22	39	275	118	31	33
1987	15	19	143	102	36	36
1988	19	31	130	115	5	55

^aAll figures are million US\$.

Source: Export values are taken from BCR (various issues) and imports values from Bolling (1989).

(for rice) and ENCI (for other grains) were responsible for the marketing of the foodstuffs.

General Bermudez and later on President Belaúnde took efforts to liberalize agricultural prices. Price controls on meat and vegetables, for example, were removed in 1980 and farm wheat prices were decontrolled in 1983 (Bolling [1989]). ENCI lost its monopoly trade power for all agricultural products, while ECASA kept it for rice. In 1984, inflationary pressure forced the government to interrupt its liberalization program and to keep a lot of prices under control. As a result, pricing policies still tended to discriminate against domestic producers. This - together with relatively low tariffs for agricultural commodities and an overvalued exchange rate (see subsection 3.4) - is reflected in negative Effective Protection Rates for all major crops except wheat and barley by mid-1984 (Table 9). Rice and yellow maize in the Selva received higher protection than at the Coast because of a transport subsidy granted to the Selva producers within a program to develop agriculture in remote areas.

As president García came into office, the objectives of agricultural pricing policies changed fundamentally. Whereas consumers were still to be subsidized, the new government intended to follow an import substitution strategy not only for industrial, but also for agricultural commodities. Consequently, production incentives were given by means of higher guaranteed prices for food crops. In addition, ENCI offered agricultural inputs (particularly fertilizers) at low prices. Producers of export crops, by contrast, did not receive guaranteed prices (Herrmann [1989]). The resulting incentive structure is revealed by the Effective Protection Rates for 1987. It clearly hurts the export crops cotton and coffee, while the import-competing agricultural products are treated favorably.

Table 9 - Effective Protection Rates for Selected Crops (Per cent), 1984 and 1987

Year	Yellow Maize	Beans	Wheat	Barley	Pota- toes	Rice	Cotton	Coffee
1984 ^a	-45 ^c	-27	36	135	-24	-44 ^c	-30	n.a.
1987 ^b	3412	104	55	136	28	-2	84 ^d	-74 ^d

^aExchange rates are adjusted by assuming a 40 per cent overvaluation of the Sol vis-à-vis the US-dollar. - ^bThe exchange rate used for the computation is the purchasing power parity rate. - ^cThe reported figures refer to production at the Coast. The respective protection rates for the Selva are 25 per cent for maize and -34 per cent for rice. - ^dThe reported figures refer to the internal market. The respective protection rates for the foreign market are -18 per cent for cotton and -34 per cent for coffee.

Source: 1984 rates are taken from World Bank (1985, p. 32) and 1987 rates from World Bank (1989, p. 91).

The co-existence of consumer subsidies, which were mainly concentrated on rice and wheat, and supported producer prices led to large deficits in the trading accounts of the parastatals ENCI and ECASA. Consumer subsidies appeared to be extremely expensive, because they were granted to the whole population regardless of the individual need. A more selective distribution of subsidies among the poorest population groups (e.g. the campesinos in the Sierra) would have relieved the governmental budget substantially.

Public agricultural credits are disbursed by the development bank 'Banco Agrario del Peru' (BAP). Since 1970, BAP almost continuously charged negative real interest rates. The subsequent losses were covered by the government.

Soon after its inauguration, the García government introduced a preferential credit line (with low nominal interest rates) for farmers through Banco Agrario and interest rates were scaled down

in several steps (Table 10). As a result, real interest rates for agricultural credits became even more negative and the governmental subsidy for BAP further increased.

The effects of charging negative real interest rates are twofold: On the one hand, cheap credits lower the production costs of farmers and make agriculture more profitable. On the other hand, negative interest rates have also unwelcome effects. First, high credit subsidies lead to an excess demand for credits (credit demand decreases and the availability of real financial savings declines), which makes necessary a credit rationing system. In Peru, less than 10 per cent of the farmers had access to public credits, most of them being cotton and rice producers. Since this

Table 10 - Bank Interest Rates, 1985-1988^a

	Borrowing Rates		Lending Rates		Inflation ^c
	Savings	Fixed Term (one year)	Commercial (less than one year)	Agricultural Promotion ^b	
February 1, 1985	95	107	101	-	267
August 5, 1985	58	76	110	203	250
August 26, 1985	35	51	75	21	250
October 1, 1985	21	33	45	14	157
February 16, 1986	21	33	40	8	52
July 17, 1987	25	33	32	4	95
March 11, 1988	36	44	55	6	270
June 15, 1988	72	82	120	10	505

^aMaximum annual effective rates. - ^bInterest rate on credit line of Banco Agrario. - ^cConsumer price inflation of previous quarter in annual terms.

farmers in general belonged to higher-income groups, the credit subsidy was regressive in terms of income distribution among the rural population. Moreover, exactly the same farmers, who obtained subsidized credits, were also favored by public investment, which was still mainly directed to irrigation projects. Second, negative interest rates discourage private banks from providing funds to agriculture.

3.4. Effects of General Economic Policies

Since the early 1960s, Peru has followed import substitution strategies. High protection for industry relative to other sectors started during the first Belaúnde office. The inward-looking philosophy was even more pronounced under General Velasco, who intended to reduce Peru's dependence on volatile world markets and foreign capital. Between 1978 and 1982 the economy experienced a liberalization period, which brought about a considerable reduction of import restrictions. The average tariff rate (including surcharges) decreased from 66 per cent in 1978 to 32 per cent in 1981 (World Bank [1989]). Balance of payments problems caused a return to more protectionist policies in 1984. This trend was continued by the García administration. As a consequence, the average legal tariff rate had risen back to the 1978 level in 1987.

Table 11 shows a tariff pattern, that is typical for a country following an import substitution strategy. Manufactured goods receive the highest tariff protection and, within the manufacturing sector, consumer goods with low value added shares are protected most, at the expense of the agricultural and the mining sector.

Industrial protection has an indirect effect on agriculture via changes in relative prices. Imposing a tariff on imported industrial goods raises the relative price between import-competing (protected) industrial goods and nontradables (e.g. food crops)

as well as the relative price between nontradables and exportables (e.g. export crops). Thus, increasing protection levels for manufactured goods are partly shifted to the agricultural sector as an implicit tax, which is higher for export crops than for food crops. Herrmann et al. (1990) estimated that in the period 1980-1985 around 13 per cent and 9 per cent of total taxes for Peruvian coffee and cotton were due to indirect discrimination via industrial protection.

Table 11 - The Legal Tariff Structure, December 1987

	unweighted average (per cent) ^a
The whole economy	67.0
Agriculture	46.2
Mining	36.5
Manufacturing	68.6
Consumer goods	85.2
Intermediate goods	59.6
Capital goods	67.7

^aIncluding surcharges.

Source: World Bank (1989, p. 71).

Since import substitution in industry leads to a real appreciation (i.e. the relative price between tradables and nontradables declines), the whole export sector is discriminated. To overcome this anti-export-bias, the García government established several export incentives, among which the most important were: (i) a temporary admission system, which granted exemptions from tariffs and sales taxes on imported raw materials and intermediate products, if they were used for export production; (ii) a direct export subsidy (CERTEX); and (iii) subsidized export credits (FENT) (Hanel [1987]). Since all these incentives were only destined to non-traditional exports, traditional agricultural exports were again discriminated.

An important instrument of Peru's macroeconomic policy is the exchange rate. Between 1978 (when the IMF stabilization program was implemented) and 1985 the Sol was gradually devalued under a crawling peg system. However, real appreciations and the subsequent overvaluation of the currency could not be avoided.

At the beginning of the García administration the commercial and the higher financial rate were devalued by 18 per cent and held fixed after that. In August 1985, multiple exchange rates were introduced, which allowed transactions either at the financial or at the official rate or at an ad hoc weighted average of both. The original intention of the multiple exchange rate system was to promote non-traditional exports by granting favorable rates (Table 12). One year later, the system was extended to imports. Since September 1986, so called 'priority' imports, which included the staples maize and wheat, could be traded at the overvalued official exchange rate. This meant an import subsidy for food, which sharply contradicted the government's announcement to substitute food from abroad by import-competing crops. In the following, the system became more and more complicated, culminating in a total number of nine different exchange rates. In view of dramatic real appreciations the government returned to a crawling peg system for the two benchmark rates (official and financial) in December 1986 and carried out several discretionary devaluations later on.

With respect to agriculture, multiple exchange rates in Peru caused a further discrimination of the traditional export crops and counteracted the endeavors to reduce import dependence on food. Moreover, they have negative implications for the economy as a whole. First, multiple exchange rates contain implicit subsidies and taxes and thus lead to efficiency losses. Second, they interact with tariffs and trade taxes. The resulting complexity of incentives opens the way for inconsistencies. Finally, granting low rates for imports and high rates for exports is a source of exchange losses.

Table 12 - Exchange Rate Structure for Trade Transactions, 1985-1988

Type of Transactions	Exchange Rate (Intis per US\$)						
	Dec. 1985	Dec. 1986	July 1987	Dec. 1987	May 1988	July 1988	Aug. 1988
<u>Imports</u>							
1. Wheat, maize, medicines, dairy, edible oil	13.9	13.9	15.9	15.9	15.9	33.0	33.0
2. Fertilizers and seeds	13.9	13.9	15.9	20.0	20.0	33.0	33.0
3. Low grade beef and life- stock	13.9	17.5	19.0	25.0	25.0	33.0	33.0
4. Raw material	13.9	17.5	19.0	33.0	33.0	33.0	33.0
5. Paper and tractors	13.9	17.5	19.0	33.0	33.0	33.0	75.0
6. High grade beef	13.9	17.5	19.0	35.0	35.0	125.0	125.0
7. Priority capital goods	13.9	17.5	29.0	45.0	45.0	125.0	125.0
8. Consumer goods, non- essential imports and capital goods	13.9	17.5	29.0	54.9	74.3	125.0	125.0
9. Imports of petroleum companies	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	131.0
10. Automobile spare parts	13.9	17.5	29.0	54.9	74.3	125.0	209.0
<u>Exports</u>							
11. Petroleum	13.9	13.9	18.7	40.0	77.0	100.1	131.0
12. Mining	14.1	15.9	22.4	40.0	77.0	100.1	131.0
13. Cotton	14.1	15.9	21.0	40.0	77.0	100.1	131.0
14. Coffee, sugar and fishmeal	14.1	15.9	20.0	40.0	77.0	100.1	131.0
15. Other traditional	14.1	15.9	19.1	40.0	77.0	100.1	131.0
16. Non-traditional (except certain textiles)	14.6	19.2	26.8	42.0	77.0	100.1	131.0
17. Alpaca, cotton and wool textiles	14.6	19.2	29.0	42.0	97.9	127.3	166.7
Total number of rates	3	5	9	9	9	4	6

Source: World Bank (1989, p. 61).

4. Summary and Conclusions

It was the objective of this paper to describe the performance of the Peruvian agricultural sector in the last 40 years and to discuss the effects of agricultural and general economic policies. The following major findings can be summarized:

1. Peru's export crop production performed very well during the 1950s. Traditional agricultural exports were the main source of economic growth in that period. The boom was encouraged by laissez-faire economic policies and a flexible exchange rate regime. In addition, public investment was almost exclusively directed to irrigation projects for the coastal export crops cotton and sugar. In the 1960s, the situation of export agriculture deteriorated due to two main reasons: first, relative cotton prices decreased and land was taken out of cotton and switched to other crops. Second, the government began to follow an import substitution strategy. The subsequent over-valuation of the Peruvian currency caused a general anti-export-bias, which remained prevalent in the following decades. In the 1970s, when import substitution policies became even more pronounced, the agricultural export sector lost its leading role for the economy. A short liberalization period between 1978 and 1982 could not reverse this trend. Since 1985, Peru's export crops have faced a twofold discrimination: they have been taxed by pricing policies and have received an unfavorable rate within the multiple exchange rate system, which was introduced in August 1985.
2. Peru's non-export food crops showed a poor performance nearly throughout the period under consideration. The situation was characterized by declining per capita output figures and large scale food imports. Among other things, this can be explained by price disincentives for producers (cheap price policies) and by the missing access to credits and technical support especially for small farmers. A short recovery of food crop production was observable in the mid 1960s, when former cotton

land was dedicated to food crops. Under the military regime certain agricultural commodities (particularly rice), which were important for the nutrition of the urban labor force, were promoted as a part of the import substitution strategy. The García government extended import substitution to food crops by giving price incentives to farmers, who cultivated import-competing agricultural commodities. However, this measure was counteracted by a preferential exchange rate granted for food imports, which in turn increased the import dependence.

The overall negative development of Peru's agricultural sector since 1950 has several reasons, of which the most important are:

- Limited arable land for a growing population;
- adverse natural conditions (e.g. the 'El Niño' stream in 1983);
- highly regulated prices (cheap food policies at the detriment of the farmers);
- inefficient credit policies (discouraging private investment by charging negative real interest rates);
- policy inconsistencies (e.g. export crops receive most of the available credit but are heavily discriminated by other policy instruments);
- an industrial import substitution strategy.

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