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Soares, F.B.: The Effects on Agriculture of Portugal's Entry into the EEC. In: Von Alvensleben, R., Koester, U., Storck, H.: Agrarwirtschaft und Agrarpolitik in einer erweiterten Gemeinschaft. Schriften der Gesellschaft für Wirtschafts- und Sozialwissenschaften des Landbaues e.V., Band 18, Münster-Hiltrup: Landwirtschaftsverlag (1981), S. 171-188.

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# THE EFFECTS ON AGRICULTURE OF PORTUGAL'S ENTRY INTO THE EEC

von

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## 1 The Portuguese agricultural sector: a brief review of its economic situation

The Portuguese economy has gone through a very critical period in the recent past and still is in deep crisis.

The problems and their causes are not new but the effects became more apparent in the past five years due to a considerable social and political change starting in 1974. An average annual balance of payments deficit of about US\$ 1.8 billion during 1975-1978, a rate of unemployment

around 10 percent and an estimated 25 percent rate of inflation by the end of 1979 are some of the more salient aspects of this crisis.

The contribution of the agricultural sector<sup>1)</sup> to this situation is not at all negligible. Imports of agricultural products made a large contribution to the deficit in the balance of payments. It was also in the agricultural sector that inflationary pressures were strongest.

In the agricultural sector the crisis can be identified with almost complete stagnation over the past two decades. This situation is clearly shown in Tables 1.1 and 1.2 where the sharp contrast between the agricultural and non-agricultural sectors is also evident.

Table 1.1: Gross Agricultural Product (GAP) and Gross Non-Agricultural Product (GNAP) at factor costs and 1963 constant prices

Year	GAP (10 <sup>9</sup> escudos <sup>2)</sup> )	GAP (10 <sup>9</sup> escudos)	GAP/GNAP (%)
1960	15.9	53.0	23
1970	18.5	107.6	15
1971	17.5	116.8	13
1972	17.6	128.6	12
1973	18.5	145.1	11
1974	18.5	148.2	11
1975	18.1	140.6	11

Source: PILAR, J. and M.H. FALCÃO, 10 and INSTITUTO NACIONAL DE ESTATÍSTICA, 3.

For the entire 1960-1975 period GAP grew at an average rate of 1.1 percent, while GNAP registered a growth rate of 6.3 percent.

1) Taken to include crop, forest and livestock production.

2) Escudos is the Portuguese monetary unit which is worth about 0.03 DM.

Table 1.2: GAP and GNAP average growth rates at 1963 constant prices (percent)

Period	GAP	GNAP
1961-65	2.9	7.4
1966-70	0.9	7.3
1971-75	-0.4	5.7
71	-5.4	8.6
72	0.6	10.1
73	5.1	12.8
74	0.0	2.1
75	-2.2	- 5.1

Sources: Computed from PILAR, J. and M.H. FALCÃO, 10 and INSTITUTO NACIONAL DE ESTATISTICA, 3.

A comparative analysis of the two main agricultural sub-sectors - agriculture (crop and livestock production) and forestry - reveals similar symptoms of stagnation. For the same 1960-75 period and still at 1963 prices agriculture grew at 1.0 percent and forestry showed a growth rate of 0.9 percent.

This poor performance has multiple and very often interconnected causes. We start by briefly reviewing some among the more important ones.

### 1.1 Agrarian and market structure

The most recent General Inquiry on Agriculture (I.N.E., 5) was conducted in 1968. Although this inquiry dates back twelve years, there are reasons to believe that, except for limited areas in the southern regions where land reform was enacted in 1975, the results still closely approximate the present situation. The most important aspects related to structure may be summarized as follows:

- (i) Low average size of farms (6.1 hectares)

- (ii) Unequal land distribution (0.6 percent of the total number of farms accounting for 45.3 percent of total area, and 59.3 percent of the farms with less than 5 hectares accounting for only 17.6 percent of the area. In addition, farms with less than 0.5 hectares account for 23 percent of the total amount of farms)
- (iii) Regional concentration of the "latifundios" (In the southern districts of Alentejo and Setúbal farms with more than 1,000 hectares represented 0.05 percent of the number of farms and accounted for 17 percent of the country's agricultural land)
- (iv) High land dispersion in the northern "minifundio" regions (Farms in the class-size 0.5-20 hectares represented 73 percent of the total number of farms and 37 percent of the total land area, and there was an average of 7 separate blocks per farm, with an average block size of 0.4 hectares)

In addition to this very skewed agrarian structure the entrepreneurial structure may also be regarded as a contributing factor in explaining stagnation.

For example:

- (i) 72 percent of the farms, representing 30 percent of the total area, were predominantly subsistence farms selling less than 50 percent of their total production
- (ii) 43.3 percent of land was farmed under rental contracts seldom offering the minimum stability required for carrying out land and technical improvements
- (iii) 45 percent of the farmers were aged 55 or over
- (iv) 44 percent of the farmers were illiterate

With this agrarian and entrepreneurial structure it is not surprising that the agricultural sector has not adopted innovations and responded in other ways to an increasing demand for agricultural products. Among the entrepreneurs farming more than 20 hectares, only 8.9 percent answered affirmatively to the 1968 General Inquiry question: "Did you carry on any technical innovation in the last five years?"

## 1.2 Land and labour productivity

Another indicator of almost complete stagnation in the agricultural sector is the evolution of land and labor productivity. From Table 1.3 it can be concluded that agricultural labor productivity not only does not show sustained growth during the period in observation but also stands far below that reached by the non-agricultural sector. As to land productivity growth rates are practically inexistent. This is certainly linked with the absence of improvements over time in the yields of the more important crops in Portuguese agriculture. Besides illustrating this fact Table 1.4 also reveals very low yields if compared (as it will be seen in section 2) with other European countries. But the generally low yields cannot be attributed solely to a deficient agrarian and entrepreneurial structure. The explanation must also recognize the related inadequate production techniques. The use of fertilizers in Portuguese agriculture is well below that of EEC countries (see section 2) and in what concerns

Table 1.3: Land and labor productivity at 1963 constant prices

Year	Land productivity (10 <sup>3</sup> escudos/hectare)	Labor productivity (10 <sup>3</sup> escudos/worker)		
		Agr. sector	Non-agr. sector	Total economy
1960	2.1	12.6	29.1	22.0
1970	2.4	20.6	52.1	42.1
1971	2.3	20.1	56.1	45.0
1972	2.3	20.9	61.3	49.3
1973	2.4	23.2	68.6	55.6
1974	2.4	23.8	70.0	57.2
1975	2.4	23.7	67.4	55.4

Sources: Table 1.1; PEREIRA, M. and F. ESTACIO, 9; PILAR J. and M.H. FALCAO, 10 and INSTITUTO NACIONAL DE ESTATISTICA, 3.

improved seeds, wheat and barley are the only crops for which use can be said to be significant - averaging 48 percent and 55 percent of the total amount of seed planted, respectively, in recent years. For other crops, improved seeds have rarely exceeded 15 percent of total use.

Table 1.4: Yields of important crops

Period	Wheat	Rye	Barley	Oats	Maize	Rice Paddy	Potatoes	Dry beans	Broad beans	Chick- peas
	(100 kilograms/Hectare)									
1961-65	8.0	5.7	4.9	3.1	11.4	45.1	95	1.4	4.6	3.2
1966-70	9.2	6.9	5.6	4.2	12.9	45.7	104	1.4	5.1	3.6
1971	13.1	7.4	8.1	6.7	13.7	41.8	122	1.5	6.6	3.5
1972	11.8	7.3	7.0	5.1	13.3	37.7	102	1.6	6.3	3.7
1973	10.2	6.3	6.4	4.8	15.0	46.5	91	1.6	5.3	3.7
1974	11.6	6.8	8.0	5.8	13.5	39.7	100	1.3	6.6	3.2
1975	13.1	8.5	9.4	7.0	13.3	39.0	84	1.1	6.8	3.8
1976	12.9	7.5	8.2	5.9	10.9	43.6	79	1.2	6.3	3.6
1977	8.7	5.4	5.9	4.1	12.2	29.6	96	1.4	5.4	3.2
1978	7.0	5.8	5.1	3.6	12.2	41.0	94	1.5	5.4	3.7

Source: INSTITUTO NACIONAL DE ESTADÍSTICA, 4.



### 1.3 Inflationary pressures and balance of trade

The above very brief, and necessarily incomplete, analysis of the economic situation of the Portuguese agricultural sector is, nevertheless, sufficient to understand why the sector has not been successful either in supplying the domestic demand for agricultural products or in competing in the international market. Consequently, and as Table 1.5 clearly shows, the inflationary pressures that since 1970 have become more apparent for the entire economy were specially strong in the agricultural sector. The impact of the poor performance of the agricultural sector in

Table 1.5: Agricultural and non-agricultural price indexes (1963 = 100)

Year	Agricultural	Non-agricultural
1970	149	123
1971	163	129
1972	181	138
1973	212	149
1974	245	178
1975	248	211
1976	341	239

Sources: INSTITUTO NACIONAL DE ESTATÍSTICA, 3 and 4.

the international trade balance was also increasingly negative. While during the sixties agricultural exports represented in the average 85 percent of agricultural imports, from 1970 onwards the agricultural trade balance rapidly deteriorates, as it emerges from Table 1.6.

## 2 Portuguese agriculture versus European agriculture: selected comparisons

Before trying the evaluation of the impact on Portuguese agriculture from membership in the EEC it is instructive to perform some selected compari-

Table 1.6: Agricultural imports and exports (current prices)

Year	Imports	Exports	Balance
	(10 <sup>9</sup> escudos)		
1970	9.3	8.0	- 1.3
1971	10.6	8.3	- 2.3
1972	12.8	8.5	- 4.3
1973	17.1	10.7	- 6.4
1974	26.8	15.7	-11.1
1975	25.5	12.4	-13.3
1976	29.6	13.3	-16.3
1977	43.3	16.8	-26.5
1978	45.0	20.4	-24.6

Source: INSTITUTO NACIONAL DE ESTATÍSTICA, 4.

sons between the potential new member and both the entire Community and those countries within it for which Portuguese agricultural production could be seen as a competitor, namely France and Italy. In addition, and since I am addressing the German Conference of Agricultural Economists I think that the inclusion of the German agricultural sector in these comparisons will help the audience in assessing the comparative situation of Portuguese agriculture.

If, in absolute terms, the reality described in section 1 was sufficiently informative about the backwardness of Portuguese agriculture, I am afraid that I have to anticipate that a comparative analysis with European agriculture makes the picture even darker. To start with the agrarian structure, Table 2.1 reveals that, while in the Community as a whole the majority of farms and area farmed corresponds to the three intermediate class-size groups ranging from 5 to 50 hectares, in Portugal the

Table 2.1: Number and area of farms with 1 or more hectares  
(in percent of total number and total area)

	Germany		France		Italy		EUR 9		Portugal	
	Number	Area	Number	Area	Number	Area	Number	Area	Number	Area
1 - < 5	34.5	6.4	20.5	2.3	68.2	21.4	41.9	6.2	63.6 <sup>3)</sup>	12.7 <sup>3)</sup>
5 - < 10	19.8	10.4	15.3	4.6	17.5	15.9	17.4	7.3		
10 - < 20	23.4	24.7	22.7	13.5	8.4	14.9	17.6	14.7	30.9 <sup>3)</sup>	24.4 <sup>3)</sup>
20 - < 50	19.5	41.7	29.9	38.1	4.1	15.7	16.8	29.9	3.6	10.4
> 50	2.9	16.7	11.6	41.5	1.8	32.0	6.3	41.9	1.9	52.5

3) the percentages refer to the class-size 1-4 ha and 4-20 ha

Sources: EUROPEAN COMMUNITY COMMISSION, 1 and INSTITUTO NACIONAL DE ESTATÍSTICA, 5.

Table 2.2: Yields for cereals (100 kg/ha)

Country	Wheat			Barley			Oats			Maize			Rice		
	1976	1977	1978	1976	1977	1978	1976	1977	1978	1976	1977	1978	1976	1977	1978
W.Germany	41.1	44.9	49.2	37.4	42.2	43.8	29.8	34.6	41.0	46.8	54.0	50.4	-	-	-
France	38.2	43.8	47.1	30.2	35.4	38.2	21.8	30.0	30.5	40.6	53.0	:	32.2	28.3	33.3
Italy	32.6	28.9	30.4	26.5	23.0	26.9	17.3	15.4	19.1	58.6	65.7	:	38.8	31.3	44.2
EUR 9	38.1	41.5	44.9	33.6	40.1	41.5	26.3	31.8	35.2	47.8	57.4	:	38.5	30.5	43.6
Portugal	12.9	8.7	7.0	8.2	5.9	5.1	5.9	4.1	3.6	10.9	12.2	12.2	43.6	29.6	41.0

Sources: EUROPEAN COMMUNITY COMMISSION, 1 and INSTITUTO NACIONAL DE ESTATÍSTICA, 4.

situation is exactly the opposite. Both Germany and France follow the Community pattern and only Italy is closer to the Portuguese situation without, however, showing such an unequal land distribution. To have agricultural production based upon very small or very large farms turns out to be one main reason for the very poor performance of Portuguese agriculture. In the first case the economic dimension prevents the farmer from adopting the modernized technology required for a more productive land use. Very small farmers do not have the financial capacity to use the appropriate inputs like fertilizers, improved seeds and modern equipment, thus carrying on only what could be better called "subsistence farming". In the second case, very large farms tend to follow extensive patterns of production that lead to low land productivity levels. The end result is perfectly illustrated in Tables 2.2 and 2.3. Yields for cereals, wine and potatoes are far below European levels and don't even stand the comparison with Italy, a country with very similar ecological

Table 2.3: Yields for wine and potatoes

	Wine (hl/ha)			Potatoes (100kg/ha)		
	75/76	76/77	77/78	75/76	76/77	77/78
W.Germany	107.2	103.6	128.6	236	284	296
France	63.9	61.2	45.4	154	262	271
Italy	63.3	59.0	57.4	170	166	162
EUR 9	60.9	61.7	54.2	210	271	292
Portugal	24.4	17.3	16.8	79	96	94

Sources: EUROPEAN COMMUNITY COMMISSION, 1 and INSTITUTO NACIONAL DE ESTATÍSTICA, 4.

conditions. Rice is the only exception with a straightforward explanation: the bulk of Portuguese rice production takes place in well-dimensioned farms using modernized techniques.

For bovine and swine production the comparison is less unfavorable to Portugal judging from figures in Table 2.4. This result is certainly influenced by the fact that swine production in Portugal has recently evolved towards an increasingly industrial activity thus following the general European pattern.

As already mentioned in Section 1 fertilizer use in Portuguese agriculture stands far below that observed in the Community. A look at Table 2.5 not only confirms that statement but also shows how dramatically lower is fertilizer's use in Portuguese agriculture. If in addition we realize that in Portugal arable land accounts for 75 percent of total agricultural land while this percentage is 57, 53, 52 and 50, respectively, in West Germany, France, Italy and in the EEC as a whole, we have a better

Table 2.4: Average weight for bovine and sine slaughtered (kg/carcass)

	Bovine			Swine		
	1976	1977	1978	1976	1977	1978
W.Germany	284	289	293	88	85	85
France	308	313	317	88	88	88
Italy	255	257	259	97	99	100
EUR 9	274	278	282	82	81	82
Portugal	218	227	211	65	68	66

Sources: EUROPEAN COMMUNITY COMMISSION, 1 and INSTITUTO NACIONAL DE ESTATÍSTICA, 4.

Table 2.5: Fertilizers use (kg/ha of agricultural land)

	Nitrogen(N)			Phosphorus(P <sub>2</sub> O <sub>5</sub> )			Potassium(K <sub>2</sub> O)		
	1974	1975	1976	1974	1975	1976	1974	1975	1976
W.Germany	83	90	93	69	66	59	87	88	83
France	57	48	53	67	53	51	56	43	41
Italy	39	38	41	27	21	28	16	13	16
EUR 9	60	58	63	50	41	41	48	40	38
Portugal	26	23	31	14	13	17	6	5	7

Source: LOBÃO, 7.

insight on the second main reason for the low productivity observed for the Portuguese agricultural sector. It is not only a matter of unsuited agrarian structure or obsolete production techniques. Portugal is devoting to annual crops, land which certainly has capacity only for forest production or, at most, for permanent pasture.

A final comparison relating to volume of Portuguese agricultural production with total production in the EEC, illustrates the more than modest increment that Portuguese production would represent in an enlarged Community. Table 2.6 clearly indicates that unlike Spain, Portugal's membership will not significantly increase the Community's total agricultural production. Only tomatoes for processing, wine and maybe olive-oil could cause some problems. On the other hand, Portuguese rice production would not cause an excess supply due to the fact that the Community has a deficit for this commodity.

After this short comparative analysis with European agriculture it is time to assess the impact on Portuguese agriculture resultant from membership in the EEC.

Table 2.6: Portuguese production in percentage of EEC total production (1974 - 1976)

Commodity	Production (%)	
Wheat	1.6 to	1.7
Oats	1.3 "	1.6
Maize	3.2 "	3.5
Rice	11.3 "	15.7
Beef	1.2 "	1.6
Pork	0.8 "	1.2
Lamb	8.3 "	9.0
Poultry	3.2 "	3.3
Eggs	1.2 "	1.3
Cow milk	0.7 "	0.9
Potatoes	2.7 "	3.0
Apples	2.0 "	2.2
Pears	2.6 "	2.7
Peaches	4.1 "	5.2
Citrus	5.2 "	5.7
Olive oil	8.2 "	11.4
Wine	5.5 "	8.1
Tomatoes for processing	24.4 "	40.9
Sugar	0.0	
Tobacco	0.0	

Source: LOBÃO, 7.

### 3 Prospective consequences from Portuguese integration into the EEC

To the best of my knowledge there are very few published studies dealing with this problem.

The most complete one is that of LOBÃO,<sup>7</sup> and even though it has the strong limitation of being a partial analysis on a commodity by commodity basis. The analysis that follows does necessarily reflect this shortage of available studies.

#### 3.1 Price policy and market organizations

The present Portuguese agricultural price policy and market organizations are in many and significant ways different from those emerging from the Common Agricultural Policy (CAP). While for some products the competitive market model prevails, for others, price is not the result of market forces and is rather exogenously predetermined by central authorities. This is for instance the case of the wheat market where there is a marketing board that establishes a fixed price and is the only buyer in the market. This type of monopsony market is also the case for cow milk in those regions where cooperatives do exist. There, cooperatives or their federations are also the only allowed buyer for milk production.

On the international trade side, imports of food products constitute a monopoly of the marketing boards that were designed to regulate each product market.

Another important difference regards production subsidies. Fertilizers and diesel-fuel are at present heavily subsidized in Portugal, while as it is well-known, they are strictly forbidden in the Treaty of Rome.

But the gap between market organizations in Portugal and in the EEC is wider. The lack of a farm accounting network system<sup>3)</sup> prevents accurate knowledge of production costs necessary to anticipate any consistent price policy or evaluate supply response both at national and regional levels. The rather limited availability of cold storage, slaughter house and other storage facilities is an important bottleneck for market re-

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3) The first steps to implement a RICA type system in Portugal were taken only a few months ago.

gulation and price stability. Limited application of normalization and quality control rules is another problem calling for rapid solution.

From the above considerations it is not difficult to conclude that sound reformulation of the present Portuguese institutional framework is needed before it will be able to implement the CAP. Existing marketing boards may constitute a starting point for basing market intervention actions but their organization and goals have to be substantially modified. The reforms involved cannot be achieved overnight but rather need, in my opinion, a non-negligible transitional period before Portugal is able to assume full membership in the EEC.

### 3.2 What if the CAP were immediately applied to Portugal?

Until now, and very likely in the near future despite the growing calls for its reformulation, the CAP has been predominantly a price policy. So being a first approach to the impact that integration into the EEC would have on Portuguese agriculture can be obtained by comparing Portugal and EEC producer and institutional prices. This is done in Table 3.1 where the price ratios for the more important commodities are shown.

Up to 74/75 Portuguese producer's prices were, in many cases, greater or equal to EEC institutional prices. But from 75/76 on there is a trend for Portuguese prices to fall below EEC prices. This is simply because in the more recent period Portuguese currency went through a devaluation process at a higher pace than the growth of producer's prices. One would be tempted to jump to the conclusion that the implementation of the EEC price system would be favorable for Portuguese producers. Personally, however, I don't think this would be possible in the short run. Significant increments in producer's prices would speed up the already high Portuguese rate of inflation with dramatic effects on consumer's welfare. What Portugal will necessarily do to avoid this problem is to adopt "green taxes" and "monetary compensatory amounts" if the devaluation of the "escudo" is not reduced in the next few years.



Table 3.1: Portugal/EEC price ratios for important commodities

$$I = \frac{\text{Portuguese producer's price}}{\text{EEC insitutional price}}$$

Commodity	72/73	73/74	74/75	75/76	76/77	77/78
Soft wheat	1.10	1.04	1.04	1.00	0.72	0.76
Hard wheat	0.98	0.89	0.59	0.63	0.45	0.57
Barley	0.82	0.95	0.99	0.84	0.67	1.09
Maize	0.91	0.92	1.19	1.19	0.91	0.90
Rice	0.88	0.77	0.90	-	0.71	0.69
Cow milk	1.16	1.10	1.10	1.23	0.99	1.05
Beef	1.14	1.05	0.99	0.92	0.86	1.02
Pork	1.06	1.16	1.07	1.35	1.08	-
Red wine	1.32	1.22	0.80	0.94	0.92	0.93
White wine	1.39	1.25	0.74	0.94	0.92	0.94
Olive oil	0.63	0.74	1.03	0.83	0.72	0.73

Source: LOBÃO, 7.

In his work LOBÃO, 7, went a bit further and tried to evaluate the impact that the adoption of the Common price policy would have on some macroeconomic aggregates, namely domestic supply and demand of agricultural products, agricultural imports, balance of payments deficit, and producer's and consumer's welfare. To do so he used a demand-supply model for each product following the known methodology proposed by JOSLING, 6, to analyse the welfare effects of price changes. Because the estimated quantitative effects are still provisional the author reports only the direction the different economic aggregates would follow as a result of Portuguese integration into the EEC. Table 3.2 shows the results of the analysis which lead to the following main conclusions:

- (i) domestic supply would not be significantly modified due to the generally low short-run supply elasticities of the commodities included in the analysis;
- (ii) domestic demand, on the contrary, would suffer a reduction, not only due to higher prices but also to the elimination of consumption subsidies that are at present particularly high, for instance for beef and cow milk;

Table 3.2: Change in some economic aggregates due to  
the adoption of EEC institutional prices  
(study period: 77 and 78)

+ : increase      - : decrease      n : no change

	Domestic supply	Domestic demand	Imports	Balance of payments deficit	Producer's surplus	Consumer's surplus
Soft wheat	n	-	-	-	+	-
Hard wheat	+	-	-	-	+	-
Maize	+	-	-	+	+	-
Rye	+	-	-	-	+	-
Barley	n	-	-	n	n	-
Rice	+	-	-	-	+	-
Beef	n	-	-	+	+	-
Pork	n	+	+	+	-	+
Cow milk	-	-	-	-	-	-
Olive oil	n	+	+	-	+	+

Source: LOBÃO, 7.

- (iii) the reduction in consumption would consequently translate into a reduction in agricultural imports;
- (iv) this reduction in imports would not fully translate into a reduction in the balance of payments deficit either because Portugal would have to import from the EEC at higher prices than in the international market or pay the FEOGA the correspondent levies for international market imports;
- (v) producers would experience an increase in their surplus while consumers would be the big losers due to sizeable reduction in their surplus.

These conclusions enable us to anticipate that even if the institutional framework were available to take over EEC market organizations, Portuguese agriculture problems could not be solved by adopting the common agricultural price policy, simply because they are above all structural problems. In this regard one cannot rely upon the use of FEOGA funds in the sense that, as LOBAO, 7, estimated in the same study, these would cancel out with Portuguese contributions in terms of import levies.

The only way out for Portugal to integrate into the EEC without serious disruption in its agriculture and economy as a whole seems to be, together with an extended transitional period, the creation of a special help fund in the line of a recent decision of the EEC Council of Ministers.

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