

Universidade de Aveiro
Departamento de Economia, Gestão e Engenharia Industrial

Documentos de Trabalho em Economia
Working Papers in Economics

Área Científica de Economia

E/ nº 7 / 2003

**Portugal and the International Economy:
Emigration and Protectionism, 1890-1910**

Joaquim da Costa Leite

Para submissão de artigos para publicação: Universidade de Aveiro, DEGEI, Economia, Campus
Universitário de Santiago, 3810-193 Aveiro, Portugal.
(Prof. Dr. Celeste Amorim, camorim@egi.ua.pt)

Portugal and the International Economy: Emigration and Protectionism, 1890-1911

Joaquim da Costa Leite*

Abstract

In the late nineteenth century the development of a global economy created new problems and opportunities. As a backward country, Portugal reacted defensively in terms of trade, while the Portuguese emigrated in increasing numbers. When analyzed together, the two aspects reveal the influence of an old agrarian contrast: in Northern Portugal, characterized by the predominant cultivation of maize in the Northwest and rye in the Northeast, emigration curbed the potential growth of the active agrarian population; in Southern Portugal, the absence of emigration and wheat protection combined to keep more population on the land. Thus, even the limited economic adjustment initiated in the North was countered by agricultural protectionism based in the wheat lands of the South. While the price of wheat declined markedly in the more developed European economies, in Portugal it increased significantly, contributing to the erosion of the purchasing power of industrial wages.

* Universidade de Aveiro. Campus Universitário de Santiago, 3810-193 Aveiro, Portugal.
E-mail: cleite@egi.ua.pt.

Historical descriptions usually include emigration alongside trade and capital flows as part and parcel of the international economy. Yet, emigration is so embedded in culture and politics, and so distinct in its sources and research techniques, that it does not readily come to mind as a factor in the internationalization of an economy on a par with trade and investment.

The separateness of emigration is perhaps more accentuated in Portugal than in most European countries, given the traditional emphasis on the poverty and illiteracy of emigrants that dissociates it from the active choices involved in the idea of internationalization. Once this barrier is overcome, however, it becomes possible to argue that Portugal presents an extraordinary case study: isn't there something contradictory in the notion of a small economy apparently open in migratory terms and relatively closed in its foreign trade?

Emigration deserves to be considered in this context, not only because, together with foreign trade, it affects employment and wage levels. Emigration in general, and Portuguese emigration in particular, also affects the balance of payments, savings and consumption habits.¹ The present essay represents just a first, preliminary attempt to bring emigration into the picture, in connection with foreign trade, as a response to the challenges and opportunities of the international economy: agricultural

¹ Despite considerable research done on Portuguese emigration, there are still many unexplored issues; for a brief reference, see Joaquim da Costa Leite, "O Brasil e a emigração portuguesa (1855-1914)" in Boris Fausto, ed. *Fazer a América: A Imigração em Massa para a América Latina* (São Paulo: Ed. Universidade de São Paulo, 1999), pp. 177-200. See also Joaquim da Costa Leite, "Portugal and Emigration, 1855-1914" (Ph. D. Dissertation, Columbia University, 1994); Jorge Fernandes Alves, *Os Brasileiros: Emigração e Retorno no Porto Oitocentista* (Oporto, 1994).

employment provides the nexus between two aspects usually examined in separate compartments.²

I will discuss Portuguese emigration and protectionism as regionally differentiated responses to the international economy of the late nineteenth and early twentieth centuries. Starting with a simple European comparison to evaluate the degree of openness in trade and emigration, I will then proceed to outline the consequences of protectionism in connection with agricultural employment to conclude that, in a poor economy with a limited growth potential, emigration was a major force for change.

1

Table 1 shows overseas emigration rates and foreign trade indicators in eleven European countries in the early twentieth century. Without taking the figures as unquestionable, their orders of magnitude provide a simple but solid comparative reference. Portugal ranks third in emigration, but is only ninth and tenth concerning exports and imports respectively, holding the prize for economic protectionism together with Spain. If we choose to compare the Portuguese figures with the maximum in each category, the results are less contrasted but emigration still obtains the largest score (53 percent), followed by exports (47 percent) and imports (25 percent or, if the Belgian figure is rejected as a statistical outlier, 41 percent of the Danish figure).

² The analysis of the migratory factor is very preliminary, reduced to essentials; for a notion of the complexity of issues dealing with trade and protectionism, see Jaime Reis, “A ‘Lei da Fome’: As origens do proteccionismo cerealífero (1889-1914)” id., *O Atraso Económico Português em Perspectiva Histórica: Estudos Sobre a Economia Portuguesa na Segunda Metade do Século XIX, 1850-1930* (Lisbon: Imprensa Nacional, 1993),; Pedro Lains, *A Economia Portuguesa no Século XIX* (Lisbon: Imprensa Nacional, 1995).

TABLE 1 -- Overseas Emigration and Foreign Trade in Europe (ca. 1910)

	Emig.	Exp.	Imp.	Protect.	GDP
Italy	10.8	9	14	27	62 395
Norway	8.3	30	28	12	3 849
Portugal	5.7	14	13	56	3 994
Spain	5.7	12	10	56	31 474
United Kingdom	* 5.5	23	29	..	126 551
Finland	5.5	25	31	..	3 920
Sweden	4.2	22	17	23	10 073
Denmark	2.8	30	32	18	6 363
Belgium	0.6	30	51	13	18 298
Germany	0.5	20	22	25	127 727
France	0.1	16	19	34	76 915

* England and Wales.

Average annual emigration rates per thousand inhabitants (1901-10).

Exports and Imports relative to GDP (%).

Protection is indicated by import duties (%).

Gross Domestic Product estimates in thousands of 1980 international dollars.

Sources: Dudley Baines, *Emigration from Europe, 1815-1930* (London: Macmillan, 1993), table 3, p. 10; Pedro Lains, *A Economia Portuguesa no Século XIX* (Lisbon: Imprensa Nacional, 1995), table 2.12, p. 69.

To summarize a complex issue, it seems warranted to conclude that, although Portuguese emigration rates were by no means record-breaking, Portugal was more open in terms of emigration than in foreign trade. This conclusion is strengthened when economic size is taken into account: Portugal would need higher trade figures to compensate for the small size of its economy.³ It is revealing to observe that Norway, with an economy of similar size, registered a higher emigration

³ Low income per capita would contribute to the low trade figures, but in a dynamic perspective the latter might also influence the former; for a detailed discussion, see Pedro Lains, *A Economia Portuguesa no Século XIX*.

rate and just over double the Portuguese trade indicators; while Spain, close to Portugal in migratory and trade figures, had an economy almost eight times the size of the Portuguese economy.

2

The new technologies of production, information and transportation derived from the Industrial Revolution permitted the circulation of an increasing volume of news, people and goods. New risks and opportunities elicited diverse responses from individuals, groups and nations. In the half-century before the First World War, the opportunities to learn more productive technologies or borrow capital abroad, to export agricultural and industrial goods or alleviate demographic pressure through emigration, were probably greater than at any other time. Simultaneously, the pressure on traditional or less productive sectors increased as they were brought within the marketing range of low-cost products from modern factories, and cheaper foodstuffs from the plains of Eastern Europe and the Americas.

In Portugal the pressure was felt in industrial and agricultural terms, and the response was in both cases defensive. Even in industry there were enough vested interests to claim protection, and in both sectors they were powerful enough to influence economic policy, favored by the budgetary need for tariff duties. Nationalism provided the ideological cement to different protectionist groups, and a popular cover for their vested interests. Of course, Portugal was not alone in the choice of a protectionist response, but it was one of the countries where the level of protectionism was highest.

It might be argued that the more backward the country, the higher the level of protection required to redress some sort of balance. This immediate reasoning

would account for the Portuguese reaction, but it contains an implicit defense of the *status quo*. On the contrary, if priority is given to change instead of inertia, it is possible to argue that the more backward the country, the greater the need for an external shock to compensate for internal deficiencies and to upset conservative forces.

The case of wheat provides a simplified but instructive example of different national reactions to the challenge posed by the lower prices of American and Russian grain. While in some European countries a liberal regime allowed for the importation of foreign wheat, thus contributing to lower the cost of living of the urban population, in other countries priority was given to protection of agricultural producers. Within protectionist countries, however, different natural and economic conditions resulted in different levels of agricultural productivity, and the final price paid by urban consumers showed a remarkable divergence. Table 2 gives some indication of the possible consequences, comparing the evolution of prices and wages from 1880-4 to 1900-4 in Portugal and four other European countries.

In Great Britain, economic liberalism ensured that lower international prices were reflected domestically: in the early 1900s wheat was almost 40 percent cheaper than in 1880. Other countries could be described as protectionist, but the concrete consequences seem not to have been very pronounced in Germany, where competition within a large and dynamic internal market may have compensated for the loss of efficiency caused by the protectionist screen, resulting in significantly lower prices there as well.

TABLE 2 -- The Evolution of Prices and Wages in Portugal and Other European Countries, 1880-1900

	G. B.	Germany	Italy	Spain	Portugal
Wheat Prices *	62	75	76	90	112
Wheat Prices	63	82	94	92	113
Wholesale Prices	78	102	94	109	119
Wages in Industry	116	136	118	..	117

Note: Indices of prices and wages in 1900-4 relative to 1880-4 (=100). For comparison, the first row (*) shows wheat prices in 1900-4 relative to 1880 (=100)

Sources: Portuguese prices and urban wages in David Justino, *Preços e Salários em Portugal (1850-1912)* (Lisbon: Banco de Portugal, 1990), p. 21; for other countries see Jordi Palafox Gamir, "Atraso Agrario e Modernización Económica, 1874-1931," in J. L. Garcia Delgado, ed., *España Entre Dos Siglos (1875-1931): Continuidad y Cambio* (Madrid: Siglo XXI, 1991), table 3, p. 171; and B. R. Mitchell, *European Historical Statistics, 1750-1970*, abridged edition (New York: Columbia University Press, 1978), tables B3 and H1, pp. 72, 389-91.

In Italy wheat prices fell immediately after 1880, and consequently the price index in 1900-4 registered an important decrease relative to 1880, but not relative to 1880-4, which was already a period with a low average price. On the whole, the Italian case seems to have been closer to the German than to the Spanish example.⁴ In Spain, wheat was only marginally cheaper in the early twentieth century, and in Portugal it was actually more expensive.⁵

Wholesale prices and urban/industrial wages are less comparable than wheat prices, but they add to a better evaluation of the consequences. Thus, it is

⁴ In the Italian case, the choice of a base period affects the conclusions; for details, see Jordi Palafox Gamir, "Atraso Agrario e Modernización Económica, 1874-1931," in J. L. Garcia Delgado, ed., *España Entre Dos Siglos (1875-1931): Continuidad y Cambio* (Madrid: Siglo XXI, 1991), pp. 169-172.

⁵ Apart from market factors, differences were also influenced by natural resources and land/labor ratios; see Patrick O'Brien and Leandro Prados de la Escosura, "Agricultural Productivity and European Industrialization, 1890-1980," *Economic History Review* 45 (Aug. 1992), pp. 514-536.

possible to observe that in Great Britain wheat prices made a positive contribution to bring down wholesale prices, falling more markedly than the general index. At different levels, this was also the case in Germany. In Portugal, however, not only did wheat prices rise, they rose almost as much as other prices, eroding purchasing power.⁶ While wages registered almost the same nominal increase in Britain, Italy and Portugal, the different behavior of wholesale prices produced different results: there were substantial gains in Britain and some improvement in Italy, but in Portugal the nominal increase seems to have been entirely cancelled out by the general increase in prices.⁷

This brief reference touches only the surface of a more complex problem, and it is intended simply to illustrate the point that, as a small and poor country, Portugal may have lost in economic efficiency and potential for change more than other protectionist countries in Europe. This is especially relevant in connection with the Portuguese migratory experience.

3

If emigration is seen as a response to opportunities offered by the world economy, a factor of international integration, is it not contradictory with the refusal or attenuation of integration represented by economic protectionism?

This simple question has many ramifications, but in the Portuguese case it may be schematically answered with reference to a regionally contrasted experience:

⁶ For more details on Portuguese wholesale prices, see David Justino, *A Formação do Espaço Económico Nacional: Portugal 1810-1913*, vol. 2 (Lisbon: Ed. Vega, n.d.), pp. 21-23.

⁷ This is a simplification: wholesale prices do not necessarily reflect consumer prices; for an informed discussion of the economic intermediation between wheat prices paid to farmers and bread prices paid by urban consumers, see Jaime Reis, “A ‘Lei da Fome’: As origens do proteccionismo cerealífero (1889-1914)”.

the migratory response originating in the North, and the protection of wheat production essentially concerning Southern agriculture.

The political power of Alentejo landowners may have contributed to discourage emigration, both because they tried to keep emigration agents away, and because they were able to obtain protection for wheat cultivation.⁸ This contrasts with the poor rye lands of the Northern hinterland, where the shock of outside economic change caused emigration to rise abruptly in the late nineteenth century, with a large share of family emigration suggesting that many emigrants did not intend to return. These references point to a relevant connection between agrarian systems and the regionally differentiated experience of emigration. Although by no means exclusive, the connection is relevant and deserves attention.⁹

Taking into account the grain production on a *distrito* basis, it is possible to divide the Portuguese Mainland into three major areas, according to the predominant grain crop: maize, rye, and wheat.¹⁰ As shown in table 3, the maize region was the most densely settled area of the Mainland, with approximately a quarter of the territory inhabited by half the population. Land units were more fragmented there, with *distrito* averages from 0.3 to 0.9 hectares, producing about three-quarters of maize and a quarter of the rye harvested in the Mainland. The region of rye was much less densely settled, though on the whole not significantly less

⁸ On the limited emigration from Alentejo, see Joaquim da Costa Leite, "Portugal and Emigration, 1855-1914," pp. 557-67; on agricultural protectionism and its regional basis, see Jaime Reis, "A 'Lei da Fome': As origens do proteccionismo cerealífero," pp. 33-85.

⁹ The Islands are very important in migratory terms, but because of their specificity the analysis will be confined to the Mainland.

¹⁰ There is an obvious connection between grain crops, types of climate, and agrarian systems; see comment by Sertório do Monte Pereira, in *Notas Sobre Portugal*, quoted by David Justino, *A Formação do Espaço Económico Nacional*, vol. 1 (Lisbon: Ed. Vega, n.d.), p. 38. See also Orlando Ribeiro, *Portugal, o Mediterrâneo e o Atlântico* (Coimbra, 1945); Joaquim da Costa Leite, "A Portuguese contrast: agrarian system and common lands in two *freguesias*", *Economia*, vol. VII, no. 1 (Jan. 1983), pp. 1-50.

fragmented. The wheat region comprised just over a third of the Mainland, covering the less densely settled lands of the South where seventy percent of wheat was grown. It is easy to observe that tariff barriers against cheap foreign wheat were essential to Southern farmers, but had a negligible impact on the agrarian systems of the North.

TABLE 3 -- Grain Regions: Some Characteristics

	Area	Pop.	Land Units	Maize	Rye	Wheat
Grain Regions:						
Maize	25	50	0.3 -- 0.9	77	25	6
Rye	19	14	0.4 -- 1.0	11	56	8
Wheat	35	22	2.1 -- 11.3	6	7	71

Notes: Area, population and grain production of three regions in percentage of the Mainland total. Average land units in hectares, taking the smallest and largest *distrito* averages in the respective region. The maize region comprises the *distritos* of Aveiro, Braga, Coimbra, Leiria, Oporto, Viana do Castelo and Viseu; the rye region Bragança, Guarda, Vila Real; the wheat region Beja, Évora, Lisbon, Portalegre. (Castelo Branco, Faro and Santarém are excluded.)

Sources: (a) Area and population figures compiled from 1890 population censuses. (b) Average land units in 1890 in Lima Basto, *Inquérito Económico-Agrícola*, quoted by A. H. de Oliveira Marques, *História da 1a. República Portuguesa: As Estruturas de Base* (Lisbon: Iniciativas Editoriais, 1978), p. 87. (c) Grain production in Miriam Halpern Pereira, *Livre Câmbio e Desenvolvimento Económico: Portugal na Segunda Metade do Século XIX* (Lisbon: Cosmos, 1971), statistical appendices, tables VIII, IX, XII.

Until the 1870s more than ninety percent of the emigrants came from the maize region. By the time of the 1890 census, over seventy percent were still coming from that region, but the rye lands had increased their small early share to more than twenty percent. Two decades later, in the period 1910-13 of record emigration, the rye lands accounted for approximately a quarter of male emigrants, and almost half of

female emigrants.¹¹ Only a small share of the migratory flow originated in the Southern wheat lands.¹²

It should be made clear that these figures are not intended to suggest a simple causal relationship between grain crops and emigration. (The complex interplay of information networks, transportation, agrarian systems and demographic pressure should be kept in mind.)¹³ The issue here concerns not the causes of emigration, but the regional contrast between emigration areas relatively open to outside pressure as well as opportunities on the one hand, and a relatively isolated South on the other. The more or less open response is explained by the situation in each region and may appear logical in its own context. Seen from a national perspective, however, the regional contrast reveals differences in organization and political influence; and, when emigration and agricultural protectionism are brought together, they expose an incoherent response to the challenges of the international economy.

In a country poorly endowed with capital and natural resources, where the best agricultural land had long since been occupied, demographic growth was in practice equivalent to increased pressure on available land. If contemporary estimates are to be believed, the effort to bring more land into cultivation resulted in a modest increase from under 6.2 to just over 6.3 million hectares in the period 1867-1902. In the meantime, in spite of some industrialization and emigration, the agricultural population is estimated to have increased from 2.6 to 3.2 million people.¹⁴ Even if

¹¹ The precise figures were 26 and 48 percent.

¹² Just 2 percent of male, 3 percent of female emigrants.

¹³ See Joaquim da Costa Leite, "Portugal and Emigration".

¹⁴ The agricultural population was estimated applying Van Zanden's method to 1864 and 1900 census data; see J. L. Van Zanden, "The First Green Revolution," Research memorandum 1988-42, Vrije Universiteit, Amsterdam.

these figures are rather tentative, it is not surprising to find that agricultural productivity was low, exerting a downward pressure on rural incomes and wages, and through the high price of foodstuffs weighing heavily on the whole economy.¹⁵

In such conditions, given the slow pace of industrialization and the limited capacity of the urban centers to absorb population, emigration to high-wage areas overseas was a rational response, while a protectionist regime tending to keep the population on the land promised to make a bad situation worse.

It deserves to be noticed that, for all contemporary complaints about the ravages caused by emigration, table 4 shows that the number of males active in agriculture increased from 968 thousand in 1890 to 1,035 thousand in 1900. It was only in the following decade that the number of males active in the agricultural sector registered a first, though small, absolute decrease to 1,022 thousand in the 1911 census. Nevertheless, the change was not uniform throughout the country, and in the non-migratory lands of the protected, wheat-growing South, the active agricultural population continued to increase.

Table 4 shows the different evolution of the male agricultural labor force in the major grain areas. It can be seen that, from 1890 to 1900, all regions registered an increase. The small decline observed in the Mainland between 1900 and 1911 is entirely attributed to the Northern maize and rye areas, while in the South the labor force continued to increase.¹⁶ The different evolution was especially evident in the contrast between the rye and wheat lands: while in 1890 they were almost equivalent

¹⁵ For agricultural productivity, see Pedro Lains, *A Economia Portuguesa no Século XIX* (Lisbon: Imprensa Nacional, 1995), tables 2.5 and 2.6.

¹⁶ It would be interesting to study the differential impact on labor productivity; apparently, the reduced male active population in the North was not incompatible with increased maize production, and even rye was practically stable; see production estimates by Pedro Lains, *A Evolução da Agricultura e da Indústria em Portugal (1850-1913): Uma Interpretação Quantitativa* (Lisbon: Banco de Portugal, 1990), table 4, p. 13.

in terms of the male labor force, two decades later the rye area represented only 81 percent of the wheat area. It should be noticed, however, that while the changes were clear, they were not deep enough to bring about a significant redistribution of the agricultural population, and even in the migratory North they did not last long enough to consolidate a downward trend.¹⁷

TABLE 4 -- Active Males in Agriculture

	1890	1900	1911
Grain Regions:			
Maize	457	482	467
Rye	173	179	165
Wheat	176	198	203
Mixed	162	176	186
Total	968	1,035	1,022

Figures in thousands. Grain regions as in table 3 (the *distritos* of Castelo Branco, Faro and Santarém constitute the mixed region).

Sources: Occupational data calculated from population censuses.

In 1890 the two Northern regions occupied 65 percent of the male agricultural labor force, a share reduced to 62 in 1911. A perceptible decrease, no more. Concerning the absolute size of the labor force, only the rye area had in 1911 a smaller number of agricultural workers than in 1890. Elsewhere, the decrease of the

¹⁷ Studies on international wage convergence point also to the limited impact of emigration, showing that, contrary to the experience in Italy, for example, Portuguese wages failed to converge in the period before 1914; see Timothy J Hatton and Jeffrey G. Williamson, *The Age of Mass Migration: Causes and Economic Impact* (Oxford: Oxford University Press), table 3.2, p. 35.

early twentieth century was not enough to cancel the increase of the late nineteenth century.

Quite apart from the economic improvement that the emigrants might experiment abroad, their savings helped raise the level of consumption at home, making also significant contributions to investment. As economic theory would predict, in a country with scarce capital and abundant labor, emigration contributed to increase investment and reduce the pressure on the land resulting from demographic growth. On the other hand, if not enough employment was available outside agriculture, demographic pressure would result in open or disguised unemployment, lower productivity per worker, and lower wages.¹⁸

There were land-saving techniques—the use of fertilizers provides one example—adapted to the unfavorable West European land/labor ratios, but they required capital and might in any case be discouraged by excessive manpower.¹⁹ As long as the labor force available to work a more or less fixed amount of land continued to increase, it was difficult to promote agricultural change.²⁰

Taking the occupational distribution of the 1890 and 1911 censuses, it is possible to estimate the contribution of different factors to changes in the size of the

¹⁸ Low wages could also be a disincentive to the mechanization of agricultural tasks; see Jaime Reis, “Latifúndio e progresso técnico: A difusão da debulha mecânica no Alentejo, 1860-1930” id., *O Atraso Económico Português, 1850-1930* (Lisbon: Imprensa Nacional, 1993), pp. 87-155.

¹⁹ J. L. Van Zanden, “The First Green Revolution: The Growth of Production and Productivity in European Agriculture, 1870-1914,” *Economic History Review* vol. 44, n. 2 (1991), pp. 215-39.

²⁰ F. Dovring, *Land and Labour in Europe in the Twentieth Century* (The Hague, 1965).

agricultural labor force in the *distritos* of the Mainland. (The analysis is confined to the male population, because the data seem more reliable and consistent across regions and between censuses.) Basically, the tested hypotheses is the following: the size of the agricultural labor force in 1911 would depend primarily on the 1890 labor force; it would also be positively related to the size of the dependent population—unoccupied males under fourteen years of age in agricultural households in 1890, who would be looking for employment in the following decades—and negatively influenced by emigration in the intervening period. Additionally, assuming that specific agrarian systems had different levels of labor absorption, as already suggested by the observed impact on emigration, the major grain crops were added to the model as proxy variables. The results are shown in table 5.

TABLE 5 -- Factors in the Size of the Male Agricultural Labor Force, 1890-1911

$\text{Ag1911} = -0.157 + 0.824 \text{ Ag1890} + 0.216 \text{ Dep1890} - 0.034 \text{ Em90-09}$	
7.368 2.076 2.465	
$+0.025 \text{ Maize} - 0.028 \text{ Rye} + 0.031 \text{ Wheat}$	R ² =0.991
3.374 3.702 2.825	

Ag1890 and Ag1911 = Males occupied in agriculture in 1890 and 1911 respectively.
 Dep1890 = Dependent males under fourteen in agricultural households, 1890.
 Maize, Rye and Wheat = Production of respective grain (tons) in 1903.
 All variables in natural logarithms. T-values under respective variables. N = 17 *distritos* of the Mainland.

Sources: Figures compiled from (a) Population censuses. (b) Emigration statistics in *Movimento da População* and *Emigração Portuguesa* (Lisbon: Imprensa Nacional, several years). (c) Grain production in Miriam Halpern Pereira, *Livre Câmbio e Desenvolvimento Económico: Portugal na Segunda Metade do Século XIX* (Lisbon: Cosmos, 1971), statistical appendices, tables VIII, IX, XII.

All variables are statistically significant, and the model provides an almost complete explanation to the observed variance in the size of the agricultural labor

force.²¹ Concerning the role of the agrarian systems, maize and wheat retained manpower, while rye had an opposite effect.

The exposure of the poor rye lands of the hinterland to a wider market was reflected in high emigration rates, and is thus further confirmed by the tendency to lose agricultural workers. Concerning maize and wheat, the capacity of both areas to absorb labor had different reasons. In the case of maize, predominantly cultivated in the Northwest, the diffusion of property and the availability of complementary, non-agricultural employment, tended to retain population, *ceteris paribus*. (In this region, the share of family emigration was low, and emigrants often intended to return). By contrast, in the wheat lands of the South there was even some reference to de-industrialization; the growth of the agricultural labor force was explained by agricultural protectionism and the absence of emigration.

5

It has already been noticed that in the period 1850-1914 there was a clear process of industrialization, but the growth of production was slow, lacking a vigorous industrial spurt. This interpretation finds confirmation in the figures for agricultural employment: Given a weak industrialization drive, and a limited capacity to create jobs in the urban-industrial sectors, demographic growth would naturally result in increased pressure on the land, and emigration was the primary force countering the tendency of the agricultural population to grow.

²¹ The limited capacity of the non-agricultural sectors to attract labor away from agriculture is demonstrated by the fact that, while emigration is found to be relevant, the active non-agricultural population is not. As a matter of fact, the sign of the beta coefficient for the active male non-agricultural population in an alternative equation was positive; in practical terms it would mean that, in a situation of limited economic change, an increase in non-agricultural employment would contribute to keep more people on the land. This is not surprising, given the complementary role of wages in the two sectors.

The importance of emigration in this context meant that only in the early twentieth century, when Portuguese emigration reached a high level, was there an influence strong enough to result in a moderate reduction of the absolute number of the active agricultural population. However, this reduction was confined to the Northern migratory regions, while in the South agricultural employment continued to rise, thus countering the pressure for agricultural change. While the price of wheat declined markedly in the more developed European countries, in Portugal it increased significantly, contributing to the erosion of the purchasing power of industrial wages.

It also meant that even the modest downward trend in the North was reversed when emigration practically stopped during World War I and, after a brief recovery, was interrupted again by the Great Depression and World War II. The structural transformation of the Portuguese economy would have to wait for the golden years of European economic growth in the third quarter of the twentieth century.