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Institutions, Management and Economic Growth: Portugal, 1950-1973

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Abstract

After a long period of economic divergence before 1914, the Portuguese economy recovered slightly until 1950, entering thereafter on a path of strong economic convergence. This paper focuses on Portuguese economic growth in the period 1950-1973, in order to show how institutional decisions created an opportunity for integration with the developed economies of Western Europe. Through emigration, trade, tourism and foreign investment, individuals and firms changed their patterns of production and consumption, bringing about a structural transformation. Simultaneously, the increasing complexity of a growing economy raised new technical and organizational challenges, stimulating the formation of modern professional and management teams.

JEL Classification: N0; O4; O5.

Keywords: Economic Growth, Portugal, Institutions, Management

Introduction

Reflecting on the reality of economic growth benefits from combining knowledge from the disciplines of Economics and Management, and the historical knowledge accumulated in the disciplines associated with each one of them, economic history and business history. From this perspective, the growth of the Portuguese economy in the period 1950-73 constitutes a privileged case study. On the one hand, because it represents a turning point in the Portuguese economy towards economic convergence, raising important interdisciplinary problems. On the other hand, because it has been the subject of different studies, more complete in the economic area, more unequal and dispersed in the management area, which seem sufficiently documented to allow an attempt at synthesis.[1]

Section 2 presents the main characteristics of Western European economic growth in the period 1950-73 and how Portugal fit into this context. Section 3 examines the institutional choices of the Portuguese government in the new post-war international framework, and the first repercussions of these choices in Portugal. Section 4 highlights how entrepreneurs from different backgrounds and training opened themselves to new markets and new experiences, translating these challenges into business models and organizational changes, altering the Portuguese business structure. Section 5 demonstrates how, as a result of internal and external evolution, there was an increasing complexity of the economy and society, stimulating the formation of professional teams and the birth of modern management in Portugal. Section 6 concludes with an evaluation of the Portuguese experience during the period under study.

Portugal Within the European Context

The period 1950-73 was characterized by widespread economic prosperity. A few years after the immediate post-war period, of institutional reorganization and economic reconstruction, Western Europe experienced an era of unprecedented economic growth, with virtually no recessionary interruption until the 1973 oil shock. The type of growth and the institutional conditions favored a process of convergence of European economies, involving the economies of Southern Europe, including Portugal.[2]

In the Portuguese case, it is not surprising that a poor, small economy, relatively far from the dynamic centers of the international economy, would have difficulty growing rapidly without a favorable external environment. But external opportunities alone were not enough to guarantee an adequate response from the Portuguese side. As we can see in Table 1, between 1870 and 1913 the Portuguese economy experienced slow growth, losing ground relative to the

advanced economies of Europe. In the period 1913-1950 it managed to reduce the gap, but the physical destruction caused by two world wars, institutional ruptures and the Great Depression make this period less significant from this point of view. It would be in the following period, between 1950 and 1973, that Portugal would register a vigorous approach to the most advanced economies of Europe. Just as the period 1870-1913 deserves special attention because it represents the consolidation of Portuguese backwardness in an international context of industrialization, the period 1950-1973 stands out in the opposite sense, representing the turning point towards convergent growth, in a perspective of openness towards Western Europe.[3]

	1820	1870	1913	1950	1973	2000
United Kingdom	1 706	3 190	4 921	6 939	12 025	19 817
France	1 135	1 876	3 485	5 271	13 114	20 808
Germany	1 077	1 839	3 648	3 881	11 966	18 596
WE12 Average	1 245	2 088	3 688	5 018	12 156	19 806
Portugal	923	975	1 250	2 086	7 063	14 022
Portugal / Average %	74	47	34	42	58	71

Table 1: Evolution of Gross Domestic Product Per Capita in Portugal 1820-2000

Notes: Gross Domestic Product per capita in 1990 international Geary-Khamis dollars. The Western European countries included in the average (WE12) are Germany, Austria, Belgium, Denmark, Finland, France, Netherlands, Italy, Norway, United Kingdom, Sweden, Switzerland. German estimates involve adjustments for border changes, with figures after 1946 relating to current borders.
Source: Angus Maddison, The World Economy: Historical Statistics (Paris: OECD, 2003), table 1c pp. 58-69.

Convergence theory points to economic lag as an opportunity for rapid growth, leveraging the experience of more advanced countries to accelerate technological and organizational changes. However, growth potential requires the right conditions to be recognized and exploited. One need only recall the Portuguese experience of the 19th century to show that nothing is simple or automatic in the convergence process. The contrast between the protectionism of that era and the opening and economic integration of Europe in the second half of the 20th century is well-known and highlights an important difference. But this difference, in turn, raises the question of changing institutional decisions regarding protectionism or integration, and leaves open the question of the incorporation of new technological and organizational processes into the Portuguese economy and society. It becomes essential to identify the social capabilities that allow or limit this incorporation. As Moses Abramovitz states:

"Countries that are technologically backward have a potential for generating growth more rapid than that of more advanced countries, provided their social capabilities are sufficiently developed to allow successful exploitation of technologies already employed by the technological leaders. The pace at which potential for catch-up is actually realized in a particular period depends on factors limiting the diffusion of knowledge, the rate of structural change, the accumulation of capital, and the expansion of demand. The process of catching up tends to be self-limiting, but the strength of the tendency may be weakened or overcome, at least for limited periods, by advantages connected with the convergence of production patterns as followers advance towards leaders or by an endogenous enlargement of social capabilities.[4]"

We will see later how these issues, analyzed from a management perspective, help to understand the Portuguese case. Considering the long period between 1923 and 1989, we can observe in Table 2 the exceptional character of the years between 1950 and 1973, with a growth in GDP per capita at an average annual rate of 3.84 percent, significantly higher than the rates of 2.12 and 2.14 recorded before and after. Using a Levine-Renelt model to account for changes in European growth of output per head, Nicholas Crafts and Gianni Toniolo demonstrate that this growth is essentially explained by a process of technological recovery relative to the United States, and a strong investment in physical and human capital. In the group of sixteen countries considered, the trend is markedly convergent, with the highest rates being recorded in Greece, Spain, and Portugal, precisely the three poorest economies in 1950.[5]

	1923-38	1950-73	1973-89
Constant	2.01	2.01	2.01
Initial GDP/head	- 2.43	- 2.49	- 3.55
Investment/GDP	1.42	2.22	2.06
Secondary enrolment	0.16	0.68	0.79
Primary enrolment	1.90	1.99	1.79
Government/GDP	- 0.62	- 0.87	- 1.27
Forecast	2.44	3.54	1.83
Actual	2.12	3.84	2.14

Table 2: Factors of Economic Growth in Europe

Note: Factors tested by Crafts and Toniolo using a Levine-Renelt model to account for changes in European growth of output per head.
Source: Nicholas Crafts and Gianni Toniolo, "Post-war growth: an overview" in Nicholas Crafts and Gianni Toniolo, eds., Economic Growth in Europe Since 1945 (Cambridge: Cambridge University Press, 1996), table 1.11 p. 18.

The model confirms the importance of investment in primary and secondary education, and the opportunities for convergence based on GDP per capita at the beginning of the period. Regarding the role of the State, some ambiguity is noted: apparently, the level of State spending would have exceeded the optimal level, negatively impacting product growth; conversely, the positive results in primary and secondary education were largely due to the commitment of European states to the development of the education system.

As we can see in Table 3, the model fits the Portuguese case well. Investment, represented by gross fixed capital formation as a percentage of gross domestic product, rose from 12 percent in 1950 to 31 percent in 1973. Regarding human capital, Portugal remained far from the European average but registered a notable progress. The educational lag remains visible across generations and required a sustained effort over time to be overcome. The 1981 census still revealed the existence of a 21 percent illiteracy rate among the resident population over 14 years of age, with a significant difference of 15 percent among men and 25 percent among women. This was mainly due to high illiteracy rates among older generations. A more detailed analysis shows that the age groups born in the 1940s reduced the illiteracy rate to less than 5 percent: while those born in 1936-40 registered 13 percent for men and 24 percent for women, the generation born ten years later had lowered it to 3 and 4 percent respectively.[6] It was the first generation of Portuguese people in which almost everyone went to school, practically without gender distinction.

The data also shows that change was not limited to primary school. Observing the number of students completing the various levels of education, we find that between 1950 and 1973 it rose from 60,000 to 182,000 in primary education, increased very significantly in all cycles of secondary and technical education, and in higher education it went from 1,300 to 4,800 graduates per year.[7] As we shall see later, the technical education component played a special role in the development of companies on a broad basis, while engineering and economics courses had a great impact on the organizational aspects of economic groups and state institutions. In terms of the model, these factors justify the convergence of the Portuguese economy with the advanced economies of Western Europe.

Indicators	1950	1960	1970	1973
Investment/GDP	11.8	21.2	25.2	30.9
Conclusion of degrees:				
Higher education	1.3	2.1	3.6	4.8
Secondary 3rd. cycle	7	7	13	19
Secondary 2nd. cycle	5	8	23	27
Secondary 1st. cycle	9	26	63	89
Primary school	60	172	165	182

Table 3: Factors of Economic Growth in Portugal

Note: Conclusions of educational degrees in thousands.
Sources: Values calculated from the series of gross fixed capital formation and gross domestic product at market prices in Séries Longas para a Economia Portuguesa Pós II Guerra Mundial. Volume I: Séries Estatísticas (Lisbon: Banco de Portugal, 1997); conclusions of educational degrees in Nuno Valério, ed., Estatísticas Históricas Portuguesas (Lisbon: Instituto Nacional de Estatística, 2001), vol. II, table 5M.1 pp. 465-6.

In its clarity and simplicity, the model has great explanatory power, but it leaves out factors of paramount importance in our understanding of economic reality. It incorporates only domestic indicators, excluding the institutional factors that establish the framework for the functioning of the international economy. Similarly, it becomes difficult to integrate factors such as trade, tourism, emigration, and foreign investment, which have been of great importance to Portuguese economic growth.

Regarding the international context, we have an indirect but suggestive element of its importance: the actual growth achieved is lower than predicted by the model in the period 1923-38 and higher in the two subsequent periods. The most likely explanation lies in the alteration of the international order. The system of international trade existing in 1913 was destroyed by the First World War. Globally, and despite the attempts made, it was not truly recovered until the end of the Second World War. It is therefore not surprising that the growth observed in 1923-38 fell short of what would have been expected from the investments made. On the other hand, efficiency gains due to a favorable international environment allowed for better-than-expected results in the second half of the 20th century.

Considering the combined perspectives of economics and management as contributions to explaining Portuguese economic growth, paying special attention to the processes of technological and organizational incorporation, Figure 1 brings together a set of factors in an integrated scheme. We start from Dani Rodrick's interpretation of economic growth — suggestively titled "all of growth economics in one page" — which presents geography as an exogenous factor, trade and institutions as partially exogenous, and factor endowments and productivity as endogenous factors, resulting in income.

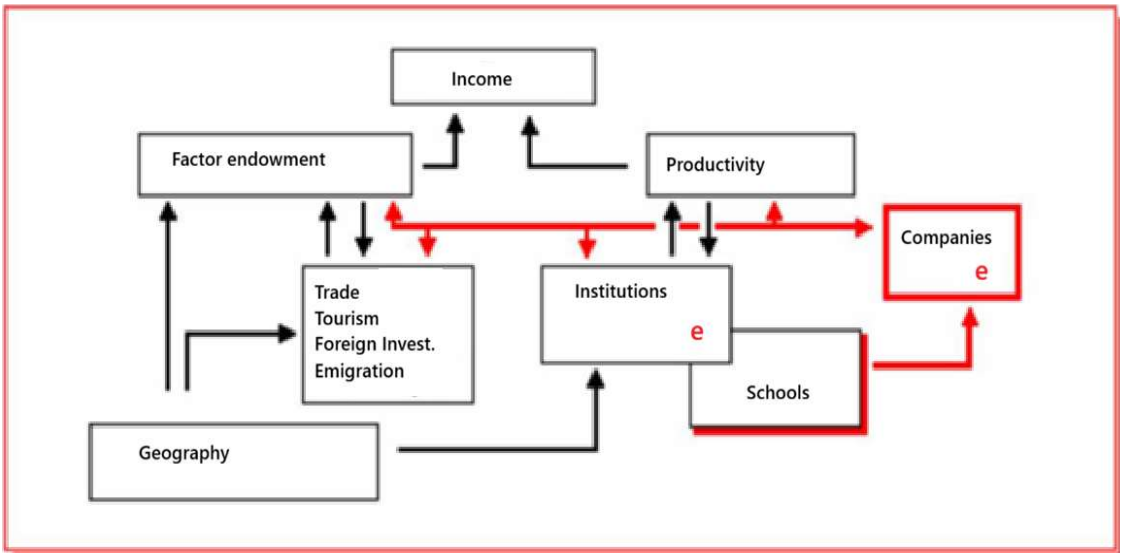

Figure 1: Economic Growth According to Rodrik, Adapted

Adapted from Dani Rodrik, "Introduction: What Do We Learn from Country Narratives?" in Dani Rodrik, ed., In Search of Prosperity: Analytic Narratives on Economic Growth (Princeton: Princeton University Press, 2003), p. 5.

Adapting this to the Portuguese case, we placed tourism, foreign investment, and emigration, along with trade, as relevant factors in the connection to the international economy. We added companies to introduce a management perspective, and highlighted the education system within the set of institutions, whose importance was evidenced by the Levine-Renelt model. Furthermore, considering the reality of a rapidly changing, underdeveloped economy, we propose to emphasize the role, in companies and institutions, of cutting-edge professional teams—designated with the symbol e —capable of transforming graduates from schools with strong theoretical training into experienced managers. In an economy where know-how is a very scarce commodity, the places and agents of best practices deserve special attention.

Let's begin with geography. Permanent geographical data define fundamental characteristics of a country, placing limits on human action. However, geographical factors are susceptible to new interpretations, are subject to changes in intensity and meaning, and do not dispense with the thoughtful and determined action of political and business agents. Post-war Europe made evident the geostrategic changes caused by the war, altering perspectives, limitations, and opportunities. This leads to a link between geography and institutions that helps explain facts that are difficult to understand from a different perspective.

On the map of Europe, Portugal appears as a peripheral country, far from the dynamic centers of scientific creation and economic progress. But if we broaden the perspective to both sides of the Atlantic, Portuguese territory marks a privileged space for connecting continents, in maritime and air routes. In geostrategic terms, this space would guarantee Portugal's entry into the North Atlantic Treaty Organization (NATO), in an evolution that, from the Portuguese side, presented itself as an update of the old Anglo-Portuguese alliance. In economic terms, it gave visibility to Lisbon, its port and airport, and opened up possibilities for development that would be realized in projects such as the Lisnave shipyard for naval repair, and later the Sines oil complex.

	1950	1960	1970	1973
Exports of merchandise	10.67	10.70	12.93	13.27
Imports	15.48	17.94	21.88	22.17
Travel and tourism: credit	0.68	1.05	4.18	5.08
Travel and tourism: debit	0.26	0.50	1.56	1.95
Private transfers: credit	2.91	3.64	7.15	8.29
Private transfers: debit	0.45	0.42	0.26	0.32

Table 4: Foreign Trade, Tourism and Remittances in the Portuguese Economy

Note: Values are expressed as a percentage of GDP.
Source: Values calculated from the series in Séries Longas para a Economia Portuguesa Pós II Guerra Mundial. Volume I: Séries Estatísticas (Lisbon: Banco de Portugal, 1997).

During a period marked by the importance of road and air connections, Portugal became closer to the European core in terms of travel time. In the context of rising incomes, the consolidation of the welfare state, and paid holidays in industrialized countries, new opportunities opened up in the tourism sector, for example, highlighting to the North countries the sun and beaches of the South. But also in agriculture, the difference in soil and climate could be exploited in complementary products, as would happen with exports of tomato concentrate. In other areas with an export tradition, such as wines and cork, the new market conditions allowed for more ambitious projects, such as the reconversion of Corticeira Amorim or the launch of Mateus Rosé. In this context, it is worth underlining the fact that a wine brand transformed the Mediterranean image, with its negative connotation of backwardness, to its advantage, using the image of the Mateus manor house to mark the identity and tradition of Mateus Rosé.[8] The Mediterranean characteristics, not very conducive to creating conditions for autonomous industrialization, could finally be used effectively in a complementary perspective to the economies of northern Europe.

Table 4 shows several indicators that demonstrate the increasing weight of integration factors. Bearing in mind that these indicators represent percentages of a rapidly growing product, when comparing the relative stability prior to 1960 with the rapid subsequent increase, we have a first indication of the dynamic effect of the accession to the European Free Trade Association (EFTA) carried out in that year.[9] Between 1960 and 1973, Portuguese exports of goods and services grew at an average annual rate of 11.2 percent.[10]Regarding merchandise exports, it is important to notice the change in their composition, with the weight of manufactured products rising from 49.8 to 67.3 percent, and an increasingly European orientation to the detriment of the colonies, which fell from 25.6 to 14.8 percent.[11] This evolution represented the exploitation of new market conditions resulting from the opening and industrial reorganization of advanced economies, with a component of offshoring. In Sweden, for example, the textile and footwear sectors lost jobs, while imports of these products increased and Swedish companies invested abroad.[12] Meanwhile, in Portugal, there was a growing number of companies in the textile, clothing and footwear, ceramics or metalworking, paper, wood and cork sectors, developing the capacity to place their products in the most demanding markets of industrial economies.

Tourism took on a new significance in the Portuguese economy. It should be noted that while the Portuguese have increased their spending on travel and tourism abroad, spending by foreign tourists in Portugal contributed to a positive balance of payments. As for private transfers—essentially remittances from emigrants—already evident in 1950, registered a large increase, especially in the 1960s and up until the oil shock of 1973. Together, revenues from merchandise exports, travel and tourism, and private transfers, which represented 14.26 percent in 1950, rose to 26.64 percent of Portugal's gross domestic product in 1973. It is also important to mention foreign direct investment, whose estimates, starting from lower values in the early 1950s, point to approximately 0.6 percent of GDP in 1973.[13] However, the significance of foreign investment was not limited to its financial expression, extending to the transfer of technology, business models, and management practices.[14]

Emigration was an extraordinary driver of change. As we can see sketched in Table 5, the intensity of post-war emigration, especially in the 1960s, reduced the agricultural workforce in absolute numbers. Taking the male agricultural workforce as a benchmark, more reliable when comparing censuses, we find that their number in 1960 was higher than in 1890.

It was in the following decade that, significantly, emigration would first shift the relationship between land and labor in favor of labor. Strictly speaking, Portuguese urban centers also contributed to this change; however, in an economy whose factor endowment was not very favorable to the creation of industrial employment, it was emigration that would cause the disruption of traditional rural/urban relations.

Census	ActAgrM	ActAgrF	NAgrM	NAgrF	EmigM+F
1890	1054	482	555	439	189
1900	1127	380	599	351	269
1911	1108	334	740	363	364
1930	1073	164	751	529	325
1940	1203	221	940	411	109
1950	1285	239	1187	486	90
1960	1293	106	1420	497	363
1970	788	178	1475	620	1000
1981	446	260	2098	1044	514

Table 5: Active Population and Emigration

Notes: Male (M) and female (F) active population in agriculture (ActivAgr) and other activities (NAgr) at the time of respective census; total emigration (EmigM+F) accumulated over the previous ten years, including the census year. Data in thousands.
Sources: Ana Bela Nunes, "A evolução da estrutura, por sexos, da população activa em Portugal – um indicador do crescimento económico (1890-1981)" Análise Social XXVI (1991), annex II-A pp. 720-1; statistics of emigration compiled from Joaquim da Costa Leite, "Portugal and Emigration, 1855-1914" (New York: Ph. D. Dissertation, Columbia University, 1994), tables A.1 and A.2, pp. 6102; José Luís Garcia, ed., Portugal Migrante (Oeiras: Celta Ed., 2000), tables A.6 and A.7, pp. 134-7; António Barreto, ed., A Situação Social em Portugal 1960-1995 (3rd. reed. Lisbon: Instituto de Ciências Sociais, 1997), table 1.22 p. 72.

It is important to note that, unlike previous periods marked by transatlantic emigration, Portuguese emigration was almost exclusively within Europe. Geographical proximity and land access had significant consequences, ranging from unprecedented opportunities for illegal emigration—which even surpassed legal emigration—to emigrants' holiday trips, the cultural repercussions of demographic and political models, and the imitation of consumption patterns in industrial Europe. Never before the 1960s had Portuguese emigrant communities been so close to their native lands, exerting an extraordinary power of demonstration that subverted established hierarchies.

Note that all integration factors — emigration, trade, tourism, and foreign investment — exploited the wage differential in one way or another, with emigration representing the movement of workers from the South to better-paid jobs in the North, while the remaining factors increased the supply of jobs in Southern countries. It is worth remembering this aspect without overestimating it: the wage difference constitutes an element of opportunity, but it requires the combination of other factors—motivation, flexibility, entrepreneurial skills, appropriate technologies, market knowledge—to produce results.

From a historical perspective, we can say that the economies of Southern Europe were, for the first time, effectively close to a major center of economic growth, which functioned in relation to the rest of Western Europe within a system of great openness, creating diverse opportunities across a broad economic front. However, this historical perspective also reminds us that the contradictions inherent in the processes of economic growth can give rise to protectionist reactions, and the opportunities created require appropriate responses to be fully exploited. Institutional choices become essential in pointing the way forward.

Institutional Decisions

In a short-term political analysis, the most surprising institutional decision was Portugal's participation as a founding member of the European Free Trade Association (EFTA). The convention signed in Stockholm on January 4, 1960, associated Portugal with the United Kingdom, Austria, Switzerland, Denmark, Sweden, and Norway. In Portugal, António de Oliveira Salazar had turned 70; he had entered the government as Minister of Finance in 1928, risen to President of the Council of Ministers in 1932, and ruled Portugal as a dictator. How can one understand that a seemingly all-powerful dictator, with a rural background, a defender of a self-sufficient imperial nation, censored and politically controlled, would agree to the integration of the Portuguese metropolitan market into an open space dominated by industrial

economies and democratic societies?

This issue presents the classic problem of modernization and development: finding within the "old house" the agents and points of support to build the "new house." However, the problem becomes especially acute in the Portuguese case, where the continuity of an old dictatorship makes the reality of change particularly paradoxical. In other words, the nature of the political regime and its ideological foundations hinder the understanding of the changes implemented before 1974. To overcome this difficulty, it is necessary to set aside preconceived ideas about political struggle and take essential facts as a reference point.

First of all, it is important to note that power in Portugal rested on an informal coalition of interest groups and ideological groups, which Salazar had worked to unite in a conservative political alliance, and over which he exercised the ultimate arbiter authority. Monarchists and republicans, Catholics and atheists, agrarianists and industrialists, and during the war also Anglophiles and Germanophiles, found themselves side by side in supporting the regime. The regime's harshness towards all those who opposed it is not contradictory to the careful flexibility in arbitrating interests among its supporters. Thus, internal and external events altered the balance of power between various factions, without altering the essence of the regime, maintaining a line of continuity that conveyed security to its supporters. [15]

Secondly, Salazar contrasted order with what he considered the permanent risk of sliding into financial, economic, and social chaos. This obsession with order gave rise to the misconception of attributing to Salazar an intransigent refusal of change. In reality, Salazar's essential concern was to manage change in an orderly, politically controlled manner. For example, on the industrial question, his distrust of market forces and fear of the rural uprooting of the new urban masses translated into industrial conditioning. Industrialization was recognized as necessary—from the beginning there were industrialists supporting Salazar, starting with Alfredo da Silva, the most important of all— but it should be pursued without disrupting the traditional equilibria of Portuguese society.[16] It is not difficult to recognize that this formulation, in addition to corresponding to the rural matrix of Salazar's thought, had the added advantage of reinforcing his arbitral power.

Thirdly, contrary to his own repeated assertions about the sacrifices of governing, Salazar's political trajectory shows an extraordinary attachment to the exercise of power, which he never relinquished. This implied a certain capacity for compromise, for yielding in order to remain. Note that the notion of arbitral power, the will to control change, and the desire to remain in power are consistent with each other, both logically and politically. Only the colonial question revealed Salazar's inflexibility, and it was through this that the regime, incapable of reform, would end in a revolution. In other respects, however, the changes made reached unsuspected dimensions in a regime whose leader declared himself a countryman and had defined the Portuguese political system in opposition to liberalism, parliamentarism, and democracy.

In foreign policy, Salazar recognized the need for an alliance founded on centuries of history. The link with the United Kingdom had originated in the 14th century to guarantee Portugal's independence against the hegemonic ambitions of Castile. Later, the reality of a colonial power unable to secure its territories necessitated an alliance with the maritime power, reinforcing the objectives of the initial alliance. Despite fluctuations and nuances, the Anglo-Portuguese Alliance was never questioned by Salazar, who managed neutrality with an understanding of Portuguese vulnerability in economic and military terms. Meanwhile, the United States entered as a decisive element of the international system, and Salazar incorporated the evidence of American power. The transfer of leadership was already taking shape before the Second World War, becoming clear during the conflict. Let's look at some indicators, simple but objective.

In financial terms, Portugal followed the pound in 1931 when the gold standard was abandoned. But even then, and until 1933, the dollar served as a reference against the possibility of excessive devaluation of the pound, such that if the pound fell below 3.32 dollars, the Portuguese currency—the escudo—would cease to follow the pound and instead follow the dollar. In 1939, the dollar once again became the counterpoint to the pound, until a payments agreement between Great Britain and the United States fixed the exchange rate between the currencies (1 pound = 4 dollars), allowing the exchange rate between the escudo and the pound to be fixed in 1940 (1 pound = 100 escudos), consequently fixing the exchange rate between the escudo and the dollar (1 dollar = 25 escudos).[17]

Strategically, it is worth noting the letter that President Roosevelt wrote to Salazar on July 8, 1941, recognizing Portuguese sovereignty in the Azores and its colonies, which, under the circumstances of the time—the United States still maintained neutrality—implied a manifestation of interest in these territories.[18] This interest was not without tensions, forcing Portugal to pay more attention to American foreign policy, a fact that would gain strength in the following years. The agreement, granting facilities in the port of Horta and at the Lajes base in the Azores, dated August 17, 1943, was concluded with Great Britain under the old alliance, but in practice also benefited the Americans, who were assuming an increasingly important role. For example, on July 24, 1944, the British ambassador conveyed to the Portuguese government his government's recognition for authorizing the establishment of an American squadron at the Lajes base. However, the Americans sought to obtain their own concession at Santa Maria airport, which would be enshrined in an agreement on November 28, 1944, through direct negotiation between the governments of Portugal and the United

States.[19] In terms similar to Portugal's supply of foodstu s, industrial raw materials and fuels, initially discussed with the British, increasingly came to be negotiated with the Americans.[20] The transfer of Atlantic leadership was underway.

The speeches about the international situation in which Salazar acknowledged the growing American influence did not stem from abstract scenarios, they were rather based on the increasing experience of contacts and tough negotiations. This also means that, in addition to the head of the regime, there was an elite of political figures, from public administration to the business worl, knowledgeable about the evolution, involved and attentive to what the future might bring.

Table 6 summarizes Portugal's links to international institutions, forming a coherent whole with diverse components, ranging from multilateral economic opening within the OEEC to NATO's military commitment, trade integration in EFTA, and the external convertibility of the escudo under the terms of the World Bank.[21] In all these steps, the strategic framework and the desire not to leave Portugal isolated always weighed heavily. Furthermore, the regime's capacity to negotiate with democracies was an asset against internal opposition. And the notion that European integration was necessary to promote economic growth and maintain political stability gained traction.[22]

Organization	Observations	Date
British Alliance, evolving	Lajes Air Base: ceded to the British, also used by Americans Santa Maria Air Base: ceded directly to the Americans	Anglo-Portuguese Agreement August 17, 1943. Portuguese-American Agreement Nov. 28, 1944.
OEEC *	Organization of European countries within the framework of the so-called Marshall Plan. Precursor to the OECD (1960).	The Marshall Plan was announced June 5, 1947. OEEC established in 1948.
NATO *	Military pact for security and mutual assistance in the North Atlantic area, led by the United States.	Pact signed in Washington on April 4, 1949
EPU *	Established a multilateral system for settling payments and granting credits among member countries.	Founded September 1950.
UN	First candidacy in 1946 with support from the United States, France, and the United Kingdom. Vetoed by the Soviet Union.	Admitted 14 December 1955.
EFTA *	A customs union, without political commitments, between the United Kingdom, Austria, Switzerland, Denmark, Sweden, Norway and Portugal.	Treaty of Stockholm signed 4 January 1960.
BIRD IMF	External convertibility of the escudo on January 7, 1959, as a guarantee prior to accession.	Accession ratified by Portugal on November 21, 1960
GATT	Association for the liberalization and multilateralization of international trade. Founded on October 30, 1947.	Candidate application in 1960. Approved in 1962.
EEC (Agreement)	The UK's application for membership leads to negotiations of agreements with EFTA countries.	Free trade agreement with Portugal came into effect in 1973.

Table 6: Portuguese Participation in International Organizations

* Portugal, founding member.
Sources: João César das Neves and Francisco Azevedo e Silva, António Manuel Pinto Barbosa: uma biografia económica (Lisbon: Verbo, 1999), pp. 125-6 (BIRD and IMF); Fernando Rosas and J. M. Brandão de Brito, eds., Dicionário de História do Estado Novo (Lisbon: Círculo de Leitores, 1996), s. v. "Acordo Geral sobre Pautas Aduaneiras e o Comércio / GATT"; "Associação Europeia de Comércio Livre / EFTA"; "Comunidade Económica Europeia"; "Organização das Nações Unidas"; "Organização de Cooperação e Desenvolvimento Económicos"; "Organização do Tratado do Atlântico Norte"; "União Europeia de Pagamentos".

Viewed from this perspective, the country's opening to international organizations appears to be the result of a logical chain of decisions, without the paradoxical character apparent in accession to EFTA. These were not natural decisions, insofar as they were generally taken with difficulty, sometimes reluctantly, depending on the situations and the people involved. It is no secret, for example, that Salazar knew and admired the British, while he distrusted the Americans and decidedly disliked them. George Kennan, one of the most brilliant American diplomats, embassy counselor and later chargé d'affaires in Lisbon during the war, even wrote that Salazar feared the Americans almost as much as the communists.[23] Nevertheless, the dictator acknowledged the strength of the Americans and the existence of common

interests in the Atlantic and in Europe. The Cold War would confirm the alliance's interest, but previous events already pointed to a convergence of interests.

All historical experience showed that Portugal would not survive in isolation. The war had added to the feeling of economic and military vulnerability, and after the war the threat of communism in a devastated Europe demanded concerted action. Furthermore, Spain's diplomatic isolation served as a warning. The low profile of the Portuguese dictatorship, which unlike the Spanish one had not required all the blood and clamor of a civil war, in turn facilitated the international acceptance of the Portuguese regime. Thus, faced with each decision, with varying degrees of conviction, the response ended up being affirmative. It wouldn't be natural, but the chain of decisions had the logic of a reality without a credible alternative.[24]

The new institutional framework resulting from these decisions would imply greater complexity and flexibility in the functioning of state institutions, opening up new opportunities with new demands on technical staff and businesses. Furthermore, the decisions affected the various political factions and economic sectors differentffly, gradually altering traditional equilibria and, consequently, the composition of the regime, the economy, and society.

In European history, the Marshall Plan is best known for its financial aid during a period of physical destruction caused by war, with an imminent risk of economic and social collapse. American dollars helped Europe restore a functioning market economy, and American supplies and political will helped stabilize democratic institutions.

But the Marshall Plan contained a diverse and complex aid program that represented an opportunity for modernization for a country like Portugal. The program placed high demands on technical and bureaucratic qualifications, while also offering a set of organizational, technical, and human resources that could be used in areas such as material equipment and technological cooperation. It is also worth noting that the American financing required the recipient country to deposit equivalent amounts into a fund that could then be used for development projects. Some of these programs would remain in operation even after the Marshall Plan itself had ended.[25]

Portugal participated from the beginning in the negotiations of the American aid program for European reconstruction, within the Organization of European Economic Cooperation (OEEC), but initially opted out of using US dollars. When the deterioration of the balance of payments forced the government to rethink its initial position in the summer of 1948, the secretary of the embassy in Paris, Rui Teixeira Guerra, Portugal's representative to the OEEC, conveyed to the government the need to "adapt national structures to derive the greatest possible benefit from the Plan, responding to the demands for information and behavior that were being asked of us."[26] In October of that year, he again warned from Paris of the importance of the long-term program and the annual program being presented in a timely manner, "well organized and sufficiently explained," without which the chances of success would be considerably diminished; he also stressed the need for technical qualification and the willingness to defend the proposed programs, referring to the "intense questioning" to which the representatives of Denmark and England, as well as the other OEEC countries, had been subjected.[27] Consequently, in Portugal the Comissão Técnica de Cooperação Económica Europeia (CTCEE) or Technical Commission for European Economic Cooperation was created in August 1948, operating alongside the National Institute of Statistics; in March 1949, the Fundo de Fomento Nacional (FFN) or National Development Fund, was established.[28]

A simple episode, recalled by Jacinto Nunes, illustrates one of the lesser-known consequences of the Marshall Plan. In 1949, Jacinto Nunes, a young assistant recently graduated from the Instituto Superior de Ciências Económicas e Financeiras (ISCEF), integrated the mission charged with presenting the plan for the Portuguese economy to the OEEC in Paris, within the framework of Marshall Aid. [29] The plan had been drawn up under the guidance of Araújo Correia and was presented by the head of mission, Fernando Emygdio da Silva. At the end of the session, he wanted to know the meaning of the expression "net product" used by one of the participants, observing: "When I return to Portugal I will speak to Dr. Salazar and tell him that we have to learn to speak the language of these people, otherwise there is no point in coming here." At the time, Jacinto Nunes was one of the few people qualified to answer that specific question, adding that in Portugal there were already people who spoke of such things.[30]

Indeed, the curricular reform of ISCEF courses, as set out in the regulations published on October 17, 1949, incorporated the new macroeconomic concepts.[31] Jacinto Nunes himself would speak about national income in a lecture at the ISCEF Academic Association on May 12, 1950, which would be published that year in a 15-page pamphlet. [32]

Also in that year, Law No. 2045 established the continuation of the work of the National Institute of Statistics to determine the estimate of national income. The first official estimate would be published in the Journal of Sessions of the Corporative Chamber dated December 6, 1951; classified as provisional, it consisted of the modest alignment, in a single statistical table, of ten figures for the years 1938 and 1947-50.[33] The estimate would be immediately commented on by Armando Castro in an article in the Revista de Economia.[34]

Without intending to establish priorities in this matter—there were certainly precursors in the conceptual discussion—it

is important to note not only the broadening of their knowledge to a greater number of students and professionals, but above all the fact that the demands of the Marshall Plan were oriented towards applied knowledge, duly supported by statistical data. Theoretical concepts gained meaning in practical application.[35] It is worth recalling here the notion of "social capabilities" to note that the success of taking advantage of the Marshall Plan depended to a large extent on the people, institutions, and companies that already existed and were prepared to embrace the opportunities offered. Once the minimum level of initial preparation was reached, these people, institutions, and companies could receive a remarkable boost, because the program was structured with financial aid, organizational capacity, and political will. These were significant factors in Portugal in the mid-20th century.

The experience gained within the OEEC had repercussions on economic planning in Portugal. There was some prior experience, for example, in the investment program under the Economic Reconstruction Law. But Ezequiel de Campos complained, in an opinion dated December 3, 1951, that he had been urging for years, without result, for the implementation of a five-year development plan. Marshall Aid made it necessary to confront the problem of investment programming head-on from a medium-term perspective. The plan presented in Paris at the aforementioned 1949 meeting, and the previous long-term plan, had been drawn up by the engineer Araújo Correia, a graduate of Imperial College, London; since 1929 he had been an administrator of Caixa Geral de Depósitos, a banking institution that had been used by the government as an instrument of its economic policy.[36] Despite the shortcomings of the time, particularly with regard to statistical information, the planning demands of the OEEC placed the issue on the political agenda, thus forcing new developments. In the subsequent publication of the outlines of the long-term plan in book form, the author took the opportunity to discuss the issue, stating that it was a mistake to imagine that economic planning was exclusive to socialist or socializing regimes: "This idea forgets the very essence of modern economics."[37]

"He considers it easy to make a list of investments, but economic planning was much more than that: Economic programs are serious problems. They require a vast amount of data to be studied and considered, both in the physical realm, analyzing resources susceptible to material development, and in the human realm, considering excesses or deficiencies in the consumption of the populations concerned. They also presuppose knowledge of the conditions of external markets likely to consume exportable products and supply those whose production is not permitted by internal circumstances.[38]"

In other words, planning required a better understanding of the country and its international partners. The difference between Ezequiel de Campos's old ambition and Araújo Correia's new recommendation was that, finally, the country possessed a minimum of material and human resources, enhanced by considerable political pressure, to translate ideas into results. There is no exclusive causal relationship between the Marshall Plan and Portuguese development plans, but there is a clear link in experiences, organizational capacities, and political will converging in time and place.

The new demands opened up opportunities for advancement for young graduates from the most prestigious higher education institutions. Graduates from the law faculties of Coimbra and Lisbon were joined in these circumstances by engineers from the Instituto Superior Técnico (IST), and gradually also by economists from the Instituto Superior de Ciências Económicas e Financeiras (ISCEF). Engineers had structured careers and social prestige, which gave them access to the highest positions in companies and public administration. The creation of the Order of Engineers in 1936 and the prominence of political figures such as Duarte Pacheco and Ferreira Dias gave expression to the weight of engineers in Portuguese life.[39]

Economists began a process of professional affirmation sometime later, marked by the aforementioned ISCEF curricular reform; the first graduates completed the course in 1954. Meanwhile, the Faculty of Economics of the University of Porto (FEP) had been created in 1953, fulfilling a long-standing demand of the city but also representing the recognition of the new disciplinary concept and the new demands of the Portuguese economy. With the significant change in their training and professional performance, economists themselves had difficulty finding a suitable designation, initially being called commercialists, then technical economists, and only later identifying themselves as economists. The social perception of the change was slow, so the National Union of Commercialists tried in vain to obtain recognition from the Ministry of Corporations as the Order of Economists.[40]

However, there were clear signs of progress, both in individual careers and in terms of professional identity. Pinto Barbosa, a full professor at ISCEF and the main protagonist of the 1949 reform, was called to the government, first as Undersecretary of State for the Treasury on August 5, 1950, and then as Minister of Finance on July 8, 1955.[41] Economists gained confidence and status, advancing in public institutions and private companies.[42] By the end of the decade it was possible to speak of a professional identity conferred by specific university training, with a differentiated intervention relative to lawyers and engineers.[43]

The Portuguese economy was becoming more complex, requiring the diversification of technical and professional skills.

Developed Markets and Business Change

The work Quem é Alguém (Who's Who), published in 1947, portrays a provincial Portuguese elite with little direct knowledge of foreign countries, for whom a simple trip to Spain was a significant event in their biography.[44] It is true that

some Portuguese traveled, there was some experience of participating in international events and professional contacts, but there seemed to be little connection between this experience and the regular business activity. Participation in international events, for example, often seemed primarily aimed at marking a presence, more for diplomatic reasons than for a desire stemming from commercial or industrial strategies. The situation would change significantly in the following decades.

Let's take the example of Corticeira Amorim. In the 1930s, Amorim & Irmão Lda. exported cork to several countries, without the owners of the business traveling to contact their foreign clients. Correspondence with agents seemed sufficient, but under these circumstances, knowledge of the markets was necessarily limited, filtered by intermediaries, keeping the company within a narrow production perspective. The contrast becomes evident with the situation in the 1950s, when Américo Amorim, in charge of the foreign sector, began traveling the world promoting sales, accompanying clients, creating commercial relationships strengthened by ties of friendship, and gaining from his travels not only a better understanding of the sector but also learning about contextual relationships that allowed him to be more flexible and leverage business opportunities.[45] In the words of Américo Amorim:

"Studying is a precious asset, but contact with the world, with the diversity of continents, the analysis of countries, of the cultures of peoples, the experience of their values and customs, is an enrichment for any entrepreneur. No university can substitute for it.[46]"

Later, when Corticeira Amorim began to implement a vertical integration plan conceived in 1962, it worked towards internationalization, based on direct access to foreign markets, in the area of contacts and distribution networks. Production capacity was enhanced by the market knowledge acquired by Américo Amorim.[47]

For Portuguese economic agents, it was becoming increasingly easy to learn through direct contact with advanced companies and economies. Travel, and its incorporation into business activities, marks the biographies of entrepreneurs and company monographs. It is worth giving a few more examples to illustrate, on the one hand, the diversity of learning methods, and on the other, the expansion of international contacts to various industrial levels, from economic groups to small and medium-sized enterprises.

Jorge de Mello, future leader of the CUF industrial group, in his youth traveled on the ships of the Sociedade Geral — one of the family's companies — at his father's behest to enjoy his vacation time.[48] The biography of António Champalimaud, Jorge de Mello's brother-in-law and business rival, also points to frequent travel as a formative element of his knowledge and ambition.[49] In a more modest industrial context, we may recall the case of Aníbal Henriques Abrantes, partner in the firm Aires Roque & Irmão, a manufacturer of glass moulds, who made several trips a year from the time of the Second World War and throughout the 1950s; traveling by car, he visited the large department stores in European cities, and the novelties he brought back were at the origin of the plastic mould industry in Portugal. In the 1960s, the commercial agent Tony Jongenelen, a Dutch Jew linked to Aníbal Abrantes by an exclusive export contract, agreed to facilitate his commercial contacts in the United States for Henrique Neto, a young designer at Aníbal Abrantes' company; In the seventies, Henrique Neto, along with Joaquim Menezes, would found Iberomoldes.[50] In the footwear industry, visits to French and Italian factories in 1962 convinced José Francisco Leite to radically alter production methods, building a new factory. Other industrialists would have learned similar lessons from the same trip, organized by the employers' association, which would later promote participation in international trade fairs.[51]

The reorganization of sectors, or technological renewal, was increasingly done with reference to cutting-edge foreign models. In an early example, the engineer. António Marques da Paixão and Victor Manuel Amaro dos Santos Gallo, from the Commission for the Study of the Reorganization of the Glass Industry, undertook a working trip to France, Belgium, Holland, and Switzerland in 1948.[52] In the beer industry, the Companhia União Fabril Portuguesa sent technical staff for internships in breweries in the 1960s prior to the renovation of production processes.[53] At Metalurgia Casal, the production of engines and motorized vehicles, and the pioneering initiative of an apprentice school, directly benefited from the travels of João Francisco do Casal, starting in 1953.[54] In wood agglomerates, the reconversion of Novopan in 1971 involved, among other aspects, the internship of engineer Fernando Carvalho in foreign companies.[55] As for large projects such as the steel industry and Lisnave, they did not dispense with foreign consultants, partnerships with companies, and internships to prepare staff and specialized personnel. In the case of the steel industry, for example, a group of trainees was sent to Germany for about two years, from 1958 to 1960, as part of a general plan to launch the new venture.[56]

While the examples are not surprising in the case of large companies, for which we assume the existence of vast resources, we should note, nevertheless, the demonstration of will and know-how. But the examples also include many small and medium-sized enterprises, both in exporting and import substitution, where the capacity to learn from more advanced companies and to establish international contacts would not be at all evident. The example of footwear also recalls the role of employers' associations and state bodies such as the Export Promotion Fund, which contributed to extending the experience of travel to sectors and entrepreneurs where the modest resources would hardly allow for individual initiative. Similarly, it is important to highlight the trend towards the institutionalization of procedures of contact through regular participation in international trade fairs, and later the organization of fairs in Portugal.[57]

Taking advantage of opportunities identified abroad or through contacts with foreigners in Portugal required a great effort to adapt to new standards of demand. This effort had to be exercised on a broad front, from the modernization of work processes in the production sector, to meeting delivery deadlines, to the regularity of correspondence and accounting, not forgetting the ability to maintain contacts in foreign languages. In a simple example, a footwear manufacturer heard an English client tell him that his product "died because of the packaging," and this comment, never heard from Portuguese clients, forced him to seek a solution that was not available on the Portuguese market.[58] As long as the Portuguese did not value product presentation, suppliers of cardboard, wood, glass, and plastic packaging would have no incentive to develop higher-quality products. Significantly, the Export Promotion Fund organized the first Portuguese packaging exhibition in 1961.[59]

In the example of footwear, the issue raised by packaging could be extended to other aspects such as raw materials, lasts and heels, accessories like buckles and buttons, or the renewal of models for seasonal collections, which initially were acquired in Spain and Italy before being produced in Portugal with the required quality. From this, one can understand the demonstration effect that the export sector exerted on complementary industries, in what would later be known as the formation of "clusters" in the footwear, furniture, and other sectors, including services such as tourism.

Contact with more demanding customers, higher turnover, and the faster pace of production and marketing processes created greater complexity, leading to a demand for management solutions. This was evident in export sectors, where close contact with customers in a highly competitive environment required constant attention and adaptability. But it was also increasingly evident in sectors geared towards the domestic market: in some cases, such as the production of light motorcycles, import substitution required the incorporation of processes established abroad; in other cases, urbanization and the increased purchasing power of the Portuguese population altered consumption patterns and provided new opportunities, as in detergents and beverages.

In this context, it is important to highlight the availability of a growing number of secondary school students, and especially those in vocational training, graduated from a wide network of schools. Their practical orientation allowed them to respond to new demands, implementing organizational changes both in the factory floor and in the office of companies. But it should not be forgotten that the proximity of a commercial or industrial school was important not only for the students, but also for the access to teachers that was thus facilitated.

When Metalurgia Casal tried to develop a complete project for the manufacture of a scooter with an engine entirely manufactured by Casal, starting in 1966, the company secured the hiring of a technical team initially composed of German engineers supervised by Eng. Robert Erich Zipprich, former director of BMW and Zündapp, who assumed the Technical Direction. Of the 1805 workers hired between 1964 and 1974, 3.4 percent were illiterate; 64.5 percent had completed the third or fourth year of primary school; 6.1 percent had completed preparatory school; 21.7 percent had completed technical degrees and high school; and 2.4 percent had completed intermediate courses or higher education. The importance of the positions held by secondary school students is easily understood, particularly those trained, as in the example of Casal, at the Aveiro Industrial and Commercial School. It was at this same school that João Francisco do Casal, owner of Metalurgia Casal, recruited masters for the apprentice school created in 1965 to ensure the professional training of his workers—some of whom would later leave for other companies—according to the German model he had learned about during his travels.[60]

In the office, I recall a simple example of how the application of a timely invoicing process allowed for an increase in capital resources available for investment, collecting money scattered among clients.[61] This is an area that awaits further research, and studies on the history of accounting, for example, focus primarily on the theoretical and legal framework aspects of the profession, making it difficult to assess the organizational and management consequences for companies. However, if we remember the artisanal origins of many companies, primitively organized around a production objective, we have an idea of the efficiency gains that would result from the introduction of the simplest office procedures, from the regularity of correspondence and accounting records to contact with banks, the use of special credits, subsidies, and tax exemptions. Note that business courses provided training in typing, accounting, business correspondence in French and English, in addition to introductory notions in new areas such as advertising. Meanwhile, the number of typewriters, calculators, and telephones available to these graduates increased, making their work methods more efficient and profitable.

The suggested changes were within reach of small and medium-sized enterprises, following from the evolution of business. However, in the case of medium and large-sized companies, the changes could be accelerated by new legal frameworks. For example, the Tax Code of 1963 allowed taxation to be based on the actual profits documented in organized accounting, instead of the "normal profits" assumed by tax collectors.[62] This constituted a huge incentive for the hiring of accountants—among whom were many economists—and for the standardization of accounting processes, with gradual repercussions in other areas such as financial planning and feasibility studies of investment projects. Given the evidence of results, managers incorporated the accounting and financial component into their business models.

In some companies with large turnover volumes or high calculation requirements, computers began to be introduced. The early sixties seem to have been a turning point in this evolution. We have information about an IBM 650 computer

acquired in 1960 for the Calculus Center of the Cávado Hydroelectric Plant.[63] Banco Pinto de Magalhães acquired an NCR Elliott 803 B in 1961, which the National Cash Register Company of Portugal announced as "the first installation of an electronic computer, with magnetic tape, in the Iberian Peninsula and in the banking industry".[64] Banco Espírito Santo acquired a Univac 1004 computer.[65] In insurance, manual processing was replaced by typewriter centers, examples of which existed in 1961, with a first reference to a computer at the Douro company in 1963, and a new Gamma 10 computer under contract with Bull-General Electric in 1965.[66] The CUF Data Processing Center was also created in the early sixties with two NCR 315 electronic computers, initially serving the group's companies, evolving a few years later to became the company Norma–Teledata.[67]

Naturally, there were changes that did not wait for the introduction of computers.[68] In the case of Siderurgia Nacional, for example, successive calculations for the various financing possibilities were carried out in 1956 by António Alves Caetano, an economist who had graduated from ISCEF the previous year; but the work was done outside of working hours, starting after dinner and continuing into the night, so as not to suffer any disturbance, such was the concentration required by working with a Monroe electric calculator.[69] This example illustrates how the new computers not only allowed calculations to be done more quickly, but also altered working conditions, allowing savings in time and money, and bringing new perspectives. It was possible to experiment in a timely manner with different alternatives and compare results. In the study for the construction of the Alto Rabagão dam, the solution adopted resulted from the twenty-second iteration; without the computer, the time consumed in the calculations would probably have led to the adoption of the third or fourth iteration; regardless of the advantage in the safety of the calculations performed with the computer, the solution adopted allowed a saving of concrete, which, although less than 10 percent, would by itself pay for the computer and all the costs of the calculation center for a long time.[70]

Employment statistics in January 1969 show that there were 85 companies in Portugal with more than a thousand workers, 64 of which were in industrial sectors.[71] We can take this data as a starting point to highlight two aspects related to the problem of the size of Portuguese companies: on the one hand, it implied the recognition by capitalists and entrepreneurs of the need to reach a size that would allow for economies of scale, based on modern technological processes; and on the other hand, the recognition by the government of the economic and technological advantages of large companies. Even though it was conducted under a dictatorship, this dual process could not be presented as a natural evolution. Established interests, traditional mentalities, and concerns about political equilibria caused various forms of resistance. It suffices to recall Ferreira Dias' appeal in 1944 in the proposed law for industrial development and reorganization, aimed at "concentrating, modernizing, and providing a scientific basis for industry."[72] And to recall, from a business perspective, where the scenario of European integration was already being taken into account, the positions taken in 1958 by António Champalimaud and the representative of the CUF group in the *Parecer* (expert opinion) of the Corporative Chamber on the Second Development Plan.[73]

The issue had been raised by Ferreira Dias in relation to the qualifications of Portuguese professionals, with an emphasis on engineers. In a 1944 article published in the magazine Técnica of the Student Association of the Instituto Superior Técnico, he referred to recent proposals for industrial development and electrification and their impact on the structure and functioning of companies:

"In the field of electricity, the 1942 statistics on Electrical Installations registers 57 engineers working for energy producing and distributing entities; it is not hard to believe that within 8 years this number will reach one hundred. By that time, the power of our power plants will have tripled, several thousand kilometers of highvoltage lines will have been built, there will be several hundred more transformer stations and their respective networks; and many of the amateurs who today manage, without much understanding of what they are doing, most of the existing small and medium-sized installations, will have been replaced by professionals: engineers, conductors, electricians.[74] "

Ferreira Dias expected that the situation across the industry would evolve in the same direction, "perhaps with greater intensity." The data on the business structure from the following decades corroborate Ferreira Dias's expectations, as shown in Table 7. There is no complete compatibility between the various sources and the presentation of the data, starting with the fact that figures for 1957-59 refer to the Mainland alone. The difficulties in collecting information are compounded by the volatile nature of the creation and closure of companies—particularly reflected in the lower segment— but the significant reduction in industrial companies with ten or fewer employees and the increase in companies above that threshold become evident. Industrial companies with more than a thousand employees rose from 40 in 1959 to 79 in 1971.

Size	1957-59 *	1969	1971
1 - 5	56045	27503	36015
6 - 10	7216	5658	5382
11 - 20	3774	3904	5276
21 - 100	3475	4193	5371
101 - 1000	977	1109	1529
1000 +	40	64	79
Total	71527	42431	53652

Table 7: Structure of Industrial Companies According to the Number of Workers

* Mainland
Note: The table includes companies from the extractive industries, manufacturing, construction, electricity and gas.
Sources: Instituto Nacional de Estatística, O Inquérito Industrial de 1957-1959: Volume Geral (Lisbon, 1962); Maria Helena Pessoa Lopes, Estrutura Empresarial Portuguesa (Lisbon: Gabinete de Planeamento do Ministério das Corporações e Previdência Social, 1971); Instituto Nacional de Estatística, Recenseamento Industrial 1972 (Lisbon, 1977)

The prospect of technological modernization suggested by the high rate of gross fixed capital formation, mentioned earlier, finds qualitative and quantitative confirmation in development plans and sectoral studies, as well as in the large increase in the average value of capital of industrial companies.[75] With regard to employment, industrial surveys record an increase in jobs on the mainland, rising from 696,000 in 1957-59 to 902,000 in 1971. However, the increase occurred exclusively in companies with six or more employees, with an additional 247,000 jobs, while there was a decrease of about 41,000 in smaller companies; consequently, these saw their share of employment decrease from 16 to 8 percent. Thus, we have an increase in the average size of companies both in terms of employment and capital, and in most industrial sectors, invested capital increased very rapidly, resulting in a significant increase in capital per worker.

Looking beyond industry, the 1969 statistical data allow us to identify other sectors with well-sized companies. Considering only companies with more than a thousand employees, it recorded one in the fishing sector, five in commerce, four in the banking sector, eight in transport, one in communications, another in services, and one company with unspecified activity. Practically all of these large companies from the various sectors, and many other smaller ones, had in the meantime been integrated into diversified economic groups, generally well-structured, and with a strategic perspective.

The new economic groups—developed from older business groups—represented new realities in which the banking system played a fundamental role in terms of financing and organization. Given the scarcity of capital and the practical ineffectiveness of the stock exchange for financing industrial projects, companies grew primarily by reinvesting their own profits. This factor would continue to be important, but the post-war period brought a new element: banks captured most of the extraordinary increase in Portuguese savings, both inside and outside Portugal—considering remittances from emigrants—thus creating an increased investment opportunity.[76] This connection, however, required the removal of legal and organizational barriers, disrupted existing equilibria, and challenged traditional business concepts. It was not an easy task, but the opportunities were too evident to be ignored.

An example illustrates the change in. Banco Espírito Santo routinely stated in its annual reports the assistance provided to the Portuguese economy, particularly in foreign trade, while maintaining a classic commercial banking stance. For example, the report for 1947 clarified: "…our Bank continued, during the past year, to extend the broadest possible support to all operations presented to it, provided that, being of interest to the national economy, they were characteristically commercial."[77] This attitude conveyed an image of discernment and safety inherent in the concept of banking, anchored in legal restrictions. Although the Espírito Santo family had investments in other areas, particularly in industrial projects, these investments were kept separate, outside the bank's securities portfolio.

A decade later, the perspective had changed. The 1958 report pointed to the "greater economic enrichment of the country with the consequent rise in the population's standard of living…" It highlighted the "extensive collaboration" provided by the bank "in various forms" to the implementation of the First Development Plan (1953-58) and promised a commitment to the implementation of the Second Development Plan (195964).[78] The following year's report registered the change:

"In the past financial year, we provided even greater support to economic activities, not only through the distribution of credit, as the balance sheet figures show, but also by participating in the issuance of shares and bonds carried out in accordance with the Development Plan."

"Thus, the Bank provided dedicated collaboration for the continuation of economic development, helping to create new sources of wealth and expand existing ones, thereby improving the country's adaptation to its position as a member of

the European Free Trade Association and to the prevailing economic climate in the Europe of tomorrow."

"In the plan drawn up by the Government, the Banco Nacional de Fomento (National Development Bank) was foreseen and was founded this year, with the objective of facilitating, in the Metropolis and Overseas territories, new investments of private initiative, namely through the granting of medium- and long-term credit, in operations which, due to their duration and nature, fall outside the scope of the normal activity of commercial banks. We gladly participated in its formation as founding shareholders.[79]"

The report also underlined the strengthening of the State's securities portfolio and the publication of Decree-Law No. 42,641, which facilitated, among other aspects, the involvement of banks in financing beyond the short term.[80] In this change of conception and business orientation, the State had the strategic role of planning investments, regulating economic activities, and arbitrating conflicts between groups. It should also be noted that the State had significant financial capacity due to its own resources plus social security funds; it also held the power of initiative in the creation of public or mixed companies, and the mechanisms of industrial conditioning.

Group	Companies	Banking	Insurance
CUF	112	10.60% Banco Totta e Açores	22% grupo ISU
Espírito Santo	20	15.10% B. Espírito Santo & Com. Lisboa	11.40% Tranquilidade
Champalimaud	14	14.40% Banco Pinto & Sotto Mayor	12.90% Mundial-Confiança
BPA	70	13.20% Banco Português do Atlântico	1.80% Ourique
Borges	40	4% Banco Borges & Irmão	1.50% Atlas
BNU	22	11.80% Banco Nacional Ultramarino	3.70% Fidelidade
Burnay	22	5% Banco Fonsecas & Burnay	1.60% Seg. Industrial
Total	300	74.10 %	54.90 %

Table 8: Portuguese Economic Groups ca. 1974

Notes: Main Portuguese economic groups, indicating the number of companies, banks and insurance companies, and their respective share of the market; table without date, the text refers to April 1974.
Source: Américo Ramos dos Santos, "Abertura e bloqueamento da economia portuguesa" in António Reis, ed., Portugal Contemporâneo, vol. V (Lisbon: Publicações Alfa, 1990), p. 119.

Naturally, the changes that facilitated the participation of banks in industrial projects also made banks more attractive to industrial groups seeking expansion. In 1958, during the discussion in the Corporative Chamber of the proposal for the Second Development Plan, António Champalimaud advocated Portugal's accession to "a free trade zone" and outlined several problems, including the issue of financing. It was clear to him that the projected National Development Bank would not have sufficient investment capacity and its funds would be channeled into the "politically supported, basic industries".[81] Regardless of the support he could obtain from the State, António Champalimaud was attentive to the financing needs and the volume of business that the group's companies channeled to banks and insurance companies. Thus, after insisting for years with José Espírito Santo to buy the insurance company União, he turned to the company A Confiança, eventually acquiring, in an unexpected turn of events in 1960, the Banco Pinto & Sotto Mayor, and through the bank, the insurance company.[82]

The convergence of banks and industrial companies created diversified economic groups with complex organizations and a new, broader, more ambitious, and cosmopolitan perspective. In a conservative assessment, the seven groups represented in Table 8 comprised 300 companies, held more than 70 percent of the commercial portfolio of Portuguese banks, and a share of more than 50 percent of the insurance market. These economic groups grew vigorously within the strategic framework of development plans, closely related to the development of the domestic market and colonial opportunities, but increasingly open to international business and partnerships.[83] Among them all, the CUF group stood out, which one estimate places among the 150 largest economic groups worldwide, the largest in the Iberian Peninsula.[84]

Complexity and Management

In 1960, when inaugurating the First Cycle of Conferences on Productivity in Lisbon, Louis Salleron emphasized that the

century of organization had begun, using the English expression "managerial revolution" to underline the meaning of the change.[85] In 1953, the decree creating the Faculty of Economics of the University of Porto (FEP) pointed to the same trend, assigning to the new faculty the task of training "not only competent technicians, but also an elite of economists capable of occupying, through their scientific preparation, the positions of highest responsibility in vast and complex organizations."[86] In reality, the changes observed in the Portuguese economy demanded management solutions, and the period under study recorded significant progress.

Portuguese capitalists and entrepreneurs had some organizational experience dating back at least to the late 19th century. There were some large companies in the form of public limited companies, there were known experiences of separating ownership and management, and companies with factories in different locations.[87] It seems, however, that these were limited experiences, based mainly on the technical direction of production, and on the control of accounting and correspondence by a minimally organized office.[88] The statutes of the companies corroborate this perspective by assigning directors essentially day-to-day management functions.[89] There was room for some pioneering cases, but the management demands would not go much beyond the established framework, even in the restricted universe of the largest companies.[90]

After the Second World War, and especially from 1960 onwards, the opening up of external markets and the maturation of the domestic market created new situations and new demands. In the mid-sixties, business management seemed to be, like many other aspects of Portuguese life, in a phase of transition. In 1965, about half of the industrial elite had an authoritarian conception of their role—"giving orders" (32 percent) and "inspecting company activities" (19 percent) were tasks prioritized by 51 percent of respondents—while the other half gave greater importance to tasks such as "studying projects and budgets and making long-term plans" (15 percent); "establishing standards and guidelines" (17 percent); obtaining internal and external information (8 percent); "confirming or correcting decisions made by others" (8 percent); and "solving personnel problems" (1 percent). In conclusion, about half of the managers had a modern attitude in managing their companies.[91] It was no coincidence that 48 percent of this elite had higher education.[92]

Beyond management attitudes, concrete situations increasingly demanded greater openness and technical expertise. We have already seen how commercial and production functions have become more complex, resulting in significant organizational advances in factory and office operations, across a wide range of small and medium sized enterprises linked to the external market or in more dynamic sectors of the domestic market. In general, we can highlight a trend for management, initially focused on production, to become increasingly market-oriented, with a closer connection to customers.

Advertising appears as a privileged element in this connection, in turn stimulating the development of the advertising sector. Starting with the use of posters, print media, and radio, advertising gained a new medium in television from 1957 onwards. The expansion of the market, new products, and more advertisers brought prosperity to the sector, which developed new concepts. There were examples, at least since the 1920s, of advertisements targeting specific consumer groups—the so-called target audience segmentation—but the advertisements were generally conceived as isolated pieces, lacking creativity. In the post-war period, advertisements began to be conceived as integral parts of a campaign, promoting airline services or launching products such as milk powders, razor blades, soaps, margarines …[93]

Multinational companies played a fundamental role in this evolution, both as advertisers and advertising professionals, introducing products and concepts from more developed markets to the Portuguese market. Unilever stands out with its soaps, detergents, and margarines—considering its collaboration with Jerónimo Martins—and with the advertising agency J. Thibaud et Compagnie, later Lintas, which in practice functioned as a sort of school for Portuguese advertisers. The most innovative companies used the opportunities offered by the sector's maturation not only to make their products known and assert their market presence, but also to establish new consumption patterns and new consumer attitudes. Companies learned to pay attention to consumers, and advertising became a management tool of strategic importance.

Increased purchasing power made washing machines, televisions, and automobiles accessible to more people. Furthermore, the modernization of production, distribution, and consumption circuits incorporated traditionally local supply chains into modern sectors, from baking bread to acquiring household linens, or practices such as shaving and washing clothes. Some of these habits remained within the domestic sphere, but they began to use products from the modern sector of the economy, such as household appliances, detergents, and razor blades. In terms of food, the Portuguese reached an acceptable level of satisfaction of caloric needs, stabilizing consumption of basic foods such as cereals and potatoes, and increasing their consumption of sugar, meat, and beer.[94] In this aspect, the stimulus given to modern sectors of the food industry is also noticeable, namely in the raising of poultry, sugar refining, the brewing sector, and margarine production, sectors also characterized by greater use of advertising and greater development of management.

The brewing sector offers a good example. With its trademark registered in 1927 by the Companhia União Fabril Portuense, Super Bock only appeared in its first advertisements in 1967, immediately beginning a systematic advertising campaign. Initially presented as a beer for connoisseurs, it was positioned above the competition two years later with the slogan: "It costs more, but tastes better." The situations depicted in the advertisements identified Super Bock

with people from a higher social segment. The campaign sought to gain customers in a well-defined sector and was accompanied by the design of new packaging and the expansion of the distribution network. In a country marked by the production and consumption of wine, with a traditional, cautious attitude towards spending, Super Bock challenged consumers, boldly targetting people "for whom cost doesn't matter."[95]

The banking sector offers another example. Banco Espírito Santo, which initially based its communication policy on the principle that "the best advertising was not advertising at all," radically changed its approach following a trip by José Maria Espírito Santo to the United States in 1965. It then began advertising to promote its institutional image, launch new products, and broaden its range of potential customers.[96] A 1967 advertising campaign leaflet showed a smartly-dressed woman, who "in today's world… occupies an increasingly important position. … She knows the problems of life. She knows how to dress as she knows how to live. She knows how to choose as she knows how to win."[97] This type of advertising entered the realm of attitudes and behavior, from a perspective of social change.

Traveler's checks and personal credit were also characteristic of the new times, adapted to a period of increased consumer expectations and travels abroad. The 1965 promotional leaflet for personal credit showed a smiling family laden with packages at the end of their shopping trip. The success of the campaign forced an increase in the ceiling of 80,000 contos [conto=thousand escudos] set aside for these operations in November 1965 to 200,000 contos six months later.[98] These and other campaigns, such as that of Super Bock, were statements of distinction and purchasing power, which clashed with the traditional customs of a poor country, where discretion was a habitual form of behavior to avoid the envy of peers. But the impact exerted on consumers was reflected in the internal organization of companies, where attention dedicated to customers reinforced the commercial component and modernized management perspectives.

Within the more restricted context of large companies and economic groups, we notice a clear trend towards the professionalization of management, the creation of teams of managers as informal schools of leadership, and the learning of strategic planning. These changes can be illustrated by Jorge de Mello's arrival in a position of responsibility at CUF in the 1940s.[99] Aware of the new opportunities in post-war Europe, one of his first actions was the renewal of the technical cadres:

;;Up to this point, the most responsible positions had been filled by my grandfather, based on relationships of trust stemming from his personal experience and his talent for selecting high-quality, dedicated individuals. I didn't have enough time to follow the same path, nor was CUF the company my grandfather had developed over many years; it was now a complex company, covering various sectors and requiring professional management. Therefore, both my brother and I realized that it would be necessary to select new personnel based on merit, on the ability they had demonstrated in their training processes. It was in the universities, especially in the schools of engineering and economics, that we would find the technical personnel for the renewal. This was probably the most appealing responsibility I assumed in those postwar years, and it lasted until the end of the 1960s.[100]"

In Jorge de Mello's assessment, this selection of "competent and capable individuals" stimulated the group's growth—the ambition of the young technicians translated into launching new projects in which they could excel and gain positions—and allowed for the training of professionals capable of working with international consultants.

"Both my brother and I always maintained the objective of promoting the participation of those who stood out most in specialization courses abroad, especially in management courses in the United States and France. This yielded an indirect benefit that was also important. These highly trained professionals became quality interlocutors for international consultants, whom it was pointless to hire if our companies didn't have people who could work with them. In this respect, CUF was also innovative, as it not only regularly used international consultants, but also had people within its companies capable of understanding and using the recommendations of these international experts, who helped us make comparisons with what the best companies worldwide were doing.[101]"

Indeed, the CUF group, which had already reached a large size and complexity in its universe of companies under the leadership of Alfredo da Silva, seems to have continued to lead organizational evolution. From the point of view of this summary, I point out the association with large foreign companies; the elaboration in 1962 of an investment plan including, in addition to self-financing, medium and long-term loans in the financial markets of France, Germany and the United States; the use of the consulting firm McKinsey, which began working, from its London office, on the restructuring of the group in 1966; the practice of sending executives abroad, many of whom attended postgraduate courses at top schools, including London Business School, INSEAD and Harvard Business School.[102]

We find similar examples in other economic groups. The collaboration of international consulting firms in Portugal had been stimulated within the framework of programs included in the Marshall Plan.[103] Contacts with foreign companies became frequent, and the new economic groups learned to develop businesses in partnership with multinationals. Regarding postgraduate learning abroad, we find individual references, such as those of the CUF executives mentioned above, or Belmiro de Azevedo, who attended the Program for Management Development at Harvard Business School for 14 weeks in 1973.[104] These were not isolated cases: American statistics record the presence, in small numbers but continuously, of Portuguese students — apparently in postgraduate courses — in American business schools since the

1950s.[105]

All managers of large companies, and politicians in government positions, needed qualified technical support. The Portuguese economy and society had become more complex, and Portuguese universities were producing a growing number of graduates with a modern orientation. At this point, it is important to stress the role of the new professional teams. Business leaders know, and economists acknowledge, that university graduates don't leave the university ready to immediately apply their knowledge. Practical activities depend on tacit knowledge acquired through experience. In Classical Greece, Aristotle explained that everything we have to learn to do, we learn by doing.[106] Along the same lines, Robert Lucas elaborates in modern terms:

" Most productivity-related ideas are far from high science and are transmitted among practitioners, with little or nothing published. Civil engineers learn basic facts and principles in school, but the only way to learn how a modern skyscraper or an interstate highway is built is to work for a construction company and learn from those who are doing it.[107]"

The first managers faced with unfamiliar demands could improvise and experiment, but the nature of organizations required regular processes and continuity over time. Increasingly, problems arose in public institutions and companies that demanded an organized—even if not formalized—procedure for transferring experience and incorporating new, highly trained personnel.

Thus, it is not surprising that there are increasing references to services, offices, or departments in companies and public institutions where, initially, qualified individuals worked who then pursued careers in various organizations. Some of those offices, and certain companies within an economic group, gained prestige, and their teams deserve to be distinguished as informal training grounds for professionals and future leaders. Depending on the areas of activity, such teams would involve individuals with different backgrounds.[108] Those who performed well saw their merit recognized, becoming part of a network of personal contacts that could bear fruit throughout their professional lives. From an individual point of view, admission to those teams represented the opportunity to learn best practices and be ranked among the best.[109] From the organizations' point of view, the teams trained personnel capable of better managing existing units and expanding the organization itself.

Within the CUF group, in addition to the aforementioned general policy of hiring young graduates, the formative role of Empresa Geral de Fomento, the group's holding and strategic planning company, stood out.[110] For António Champalimaud, it was also essential to have qualified personnel to manage his businesses and prepare business projects; when the opportunity to acquire Banco Pinto & Sotto Mayor unexpectedly arose, Champalimaud hesitated because he did not know any experienced banker to whom he could entrust its management.[111] His authoritarian leadership style was perhaps more impulsive and less systematic than other leaders of the time; he liked to work in small teams, but he had great executives in his companies, and he would proudly state: "My cement and steel companies were true schools for executives. In the steel industry, we had the most spectacular group of technicians the country had ever known."[112]

A somewhat later but very illustrative example is that of Novopan, a wood panel manufacturer, which had fallen into the hands of Banco Pinto de Magalhães when its owner handed over 50 percent of its capital to the bank as payment. From the perspective of Belmiro de Azevedo, then managing director of Sonae appointed by Pinto de Magalhães, Novopan was a pile of scrap and lacked management, but it had synergies with Sonae and was worth restructuring. In 1971, Sonae acquired the remaining 50 percent of the capital, and Novopan underwent a restructuring and development program, which included the entry into Novopan of Manuel de Azevedo—Belmiro's brother and a technical executive at Efacec —together with the collaboration of executives who already worked with Belmiro de Azevedo, and the internship of engineer Fernando Carvalho in foreign companies.

Thus, a management team was created, bringing to the company what it lacked — technological and organizational modernization—yielding results far beyond the restructuring of Novopan. In the words of engineer Fernando Carvalho:

"Novopan became a school. All the subsequent relevant executives of Sonae- Indústria started at Novopan. After me came Jaime Teixeira, Alberto Teixeira, Carlos Bianchi de Aguiar, and Maria Manuel Bianchi de Aguiar. A spirit of contact with world leaders, or at least European leaders, was created there. It gave us the opportunity to learn and then, try to do the same back home. Those companies where I did my internships are now ours.[113]"

In the public sector, there were also informal schools for the professional integration of young graduates. The Instituto Nacional de Investigação Industrial (INII), National Institute for Industrial Research, deserves mention, particularly for its connection to business issues. INII was born from the Marshall Plan and has carried out various dissemination, training and research activities, including pioneering studies on the productivity of various industrial sectors.[114] It employed engineers and economists, and appears to have formed veritable teams through which passed executives who would later pursue careers in private companies and the public sector, including government positions.[115] Decades later, the co-authorship of a book on productivity would bring together five engineers— from different specialties, all graduates of the Instituto Superior Técnico— who had worked in the INII Productivity Service in the late fifties and early sixties, a time when they attended postgraduate courses in management at foreign schools: Carlos Corrêa Gago and José Torres

Campos at Woolwich Polytechnic, University of London; Eduardo Gomes Cardoso at IESTO—Institut d'Études Supérieurs des Techniques d'Organisation, Paris; Luiz Moura Vicente at the Institute for Management Research, Delft University; and Mário Cardoso dos Santos at INSEAD — Institut Européen d'Administration des Affaire, in Fontainebleau, France.[116]

The country had become more complex, and the modern discipline of management was increasingly necessary not only to manage the complexity of the State and businesses, but also to identify opportunities and strategically plan the process of sustained growth. What Peter Drucker had identified as an essential characteristic of a modern economy was beginning to be applied in Portugal:

"Management explains why, for the first time in human history, we can employ large numbers of knowledgeable, skilled people in productive work. No earlier society could do this. Indeed, no earlier society could support more than a handful of such people. Until quite recently, no one knew how to put people with different skills and knowledge together to achieve common goals.[117]"

Conclusion

In the early seventies, many scholars and commentators pointed to Portugal's social and economic backwardness. The country's relative modernization had the seemingly paradoxical effect of increasing awareness of this backwardness: there were more people with the knowledge to compare international indicators, and with the ambition to want more. But a difficult path had been traversed with extraordinary results, all the more remarkable as they were achieved in the unlikely context of a dictatorship whose leader proclaimed as a reference his rural origins, his desire to govern habitually, and his conviction that "a people, a country that has the courage to be poor, is invincible."[118]

As one might expect, the major changes of the period between 1950 and 1973 involved many and diverse factors, ranging from the institutional framework to how companies operate, from professional careers to consumer attitudes. Is it possible to summarize and organize this diversity of factors into a conclusive assessment?

It is important to remember the essential notion that economic growth and social modernization are complex processes, with solutions that differ depending on time and place. In other words, it is necessary to highlight the capacity for adaptation to the opportunities characteristic of each historical period and the specific circumstances of each country, as a precaution against simplistic ideas and easy solutions. For example, Portugal's position in the context of the post-war economic integration of Western Europe—a poor economy in a club of rich countries—is not comparable to its current position in an enlarged Europe within a context of globalization. Without losing sight of these references, it is possible to distinguish some essential aspects.

First and foremost, the economic growth of Western Europe stands out within a stable and open institutional framework. Everything that was most dynamic in Portugal during that period had a European connection, from emigration to trade, from tourism to foreign investment, from technological modernization to consumption habits.

The connection to the United States had a specific importance that should not be forgotten, but part of that influence was exerted through Europe, and in relation to Europe: the Marshall Plan, NATO, investments by American companies, arrived in Portugal within a European context without which they cannot be understood

It should also be noted that the type of economic growth during that period was particularly favorable to a Portuguese response, not only because of its stability and openness, but also because of its technological, consumption, and employment characteristics; this observation helps to explain the export success of Portuguese companies and the adaptability of emigrants, without detracting from the merit and effort that should be recognized.

Secondly, the institutional decisions of the Portuguese government in the face of the international context, particularly regarding the Marshall Plan, NATO, and European integration. The economic growth of Western Europe did not depend on Portugal; but precisely because this growth occurred within an open institutional framework, the Portuguese had the opportunity to participate, and it was up to the government to make the initial decisions. Despite some hesitations, the decisions corresponded to the Euro-American opening, defining a framework favorable to growth and modernization.

Thirdly, the response of Portuguese economic agents should be noted. The aforementioned factors defined a context of opportunities that companies and individuals were able to seize, despite the well-known limitations of physical and human capital, seeking products, technologies, and jobs suited to their training and skills both within and outside Portugal. As mentioned, the type of economic growth in Western Europe favored the interaction of needs and opportunities, but it is necessary to acknowledge the willingness, the search for, and the capacity to adapt to more demanding markets in Europe and the United States.

In most cases, this required new learning, the creation of new contacts and new business models, in situations that made previous experience irrelevant. In exporting, for example, companies like Corticeira Amorim had to build closer relationships with their clients in order to develop better products and expand their businesses, while sectors such as furniture or footwear started their foreign client portfolios practically from scratch. Emigration saw a radical shift towards

European destinations, requiring a whole new network of contacts, with new expectations and new work habits.

We can therefore say that the first two factors established a framework for action, while the third showed the willingness of economic agents to seek opportunities within this more promising, but also more demanding, framework. Taken together, these factors constitute a certain economic and institutional logic, which in turn helps to frame and explain other drivers of change, such as geographic and occupational mobility, the education system, the formation of economic groups, and new management practices.

The importance of emigration has already been mentioned in its various implications, but it is worth stressing its significance as part of the broader process of geographical and occupational mobility. The 1950s represented the limited return of migratory opportunities that had been closed off by the Great Depression and the Second World War, only to manifest themselves strongly in the 1960s: in the Portuguese countryside, the number of male agricultural workers in 1960 exceeded that of 1930 by 220,000, before decreasing by 505,000 between 1960 and 1970; if we consider that in the same decade the number of male workers in non-agricultural activities only increased by 55,000, we get a first idea of the impact of emigration. Emigration, which involved men and women of all ages in the 1960s, likely included around one million Portuguese people, allowed for the departure of workers with very low productivity in agricultural and craft activities, stimulating a redistribution of labor on a scale that would have been completely impossible to achieve within the limited scope of the Portuguese economy.

In this context, it is necessary to remember the forced military recruitment for the colonial war that began in 1961. For about a decade, virtually all young men were torn from their families and homelands, reporting to the barracks or fleeing abroad. Regardless of the political problem raised by the issue, there is no similar experience in Portuguese history of the widespread uprooting of an entire generation of Portuguese people. The connection of this phenomenon to geographical and occupational mobility is yet to be determined beyond general ideas, but it would not be absurd to admit that traditional Portugal disappeared with this movement, even before acquiring visible expression in the statistics of the rural population.

Regarding the education system, it is important to remember the virtually complete primary schooling from the 1950s onwards, the development of secondary education with a strong technical component, and the expansion of university education—tasks that, in Portuguese society, depended almost entirely on the State. The issue of technical education, which, due to social discrimination, was controversial even among supporters of the regime, had the economic advantage of offering training suited to the employment conditions of the time, as suggested by the various examples previously examined.

Finally, from the business perspective, we can point out structural modernization, the formation of new economic groups, and new management practices. The access of Portuguese companies to European markets and the entry of multinationals into Portugal had a dynamic effect on expectations and production and consumption habits. Companies have grown in size, modernized equipment and production methods, and improved factory and office organization. Significantly, advertising has revealed not only an important part of the modernization of consumption, but also a set of companies that freed themselves from a narrow production perspective, paying attention to new market trends. The examples of the brewing and banking sectors are illustrative in this regard. Globally considered, the different organizational aspects help to explain the increase in total factor productivity from 1960 onwards, in contrast to the previous period.[119]

This evolution highlights the new management capabilities, especially evident in companies integrated into economic groups, which began to be managed as part of a whole, with a strategic sense. Considering in their investment projects the guidelines provided by development plans, the economic groups achieved high investment rates, increasing the complexity of their operations. Given the scarcity of human resources, the economic groups and some public departments formed teams that functioned as informal schools for young talents with a university education; some members of these teams had the opportunity to undertake internships or postgraduate courses in foreign companies and universities, becoming qualified interlocutors for consulting firms and top companies in their areas of activity.

Observations regarding technical education and management teams adapting to the scarcity of qualified human resources at different levels could perhaps be extended to the economy as a whole. In general, the impression remains that, through the actions and decisions of the State, businesses, and individuals, it was possible to achieve much with limited resources, partly because low productivity at the starting point allowed for significant progress, but also because the flexibility of the workforce helped compensate for training gaps. High savings and investment rates confirm, from another perspective, the willingness to take full advantage of the opportunities offered by a dynamic economy. Clearly, some of the factors mentioned are characteristic of a transitional economy and are not reproducible in other situations, but the events of that period represent a historical experience that we should not forget.

Up to this point, the essential objective of this synthesis has been to explain how, starting from unpromising initial conditions, the Portuguese economy managed to accelerate convergence with the advanced economies of Europe precisely during the period when those economies were growing most rapidly. We based this explanation on institutional

choices, with emphasis on Western openness—American and European—and in this context, we sought to reveal the economic and management processes that, at the level of individuals, companies, and public institutions, allowed the incorporation of new attitudes and new methods in contact with the most advanced countries. The aim was to explain how the country managed to secure the social capabilities mentioned by Abramovitz, to seize opportunities and shorten the distance to the advanced economies.

This orientation may, however, have the unintended consequence of creating the feeling that everything was done well, and on time. Thus, with convergence explained, a problem of another order remains, which is to ask whether it would have been possible to do more, faster and better. It would suffice to note the higher growth rates of Spain and Greece during this period to admit that the question deserves to be addressed in a separate study.[120] Within the scope of this synthesis, it is not possible to do more than raise the issue and suggest three brief considerations.

First, it is worth recalling Salazar's distrust of modernization in general, and of the United States in particular. We have seen that such distrust did not prevent a cold analysis of the geopolitical realities that dictated accession to international institutions such as the OEEC and NATO, but we may ask to what extent political regimes, like people, do not perform worse, and later, the tasks undertaken with less conviction. If choices resulted from a deliberate modernization program, wouldn't there be, for example, more scholarship recipients abroad, more cooperation programs? Could not the opening to foreign direct investment, realized in 1965, have been implemented in 1950? Regarding the aspect of lack of conviction, quite apart from speculation, there are a few examples such as the fact that distrust of the Americans delayed the country's effective participation in Marshall aid programs by a year.[121]

Secondly, industrial conditioning. Studies have shown that the heavy bureaucratic burden of licensing processes and political oversight acted as real brakes on initiative; excluded entrepreneurs—including some of the most successful entrepreneurs after 1974 —have not spared criticism of the system; the participating groups themselves present examples of projects that were blocked or redistributed through political apportionment.[122]

And yet, before closing the matter, it is worth considering, without any ideological bias, the possibility that something might weigh on the other side of the scale: would there be, in the guarantees granted to approved projects, an element of rationalizing investment in an economy with little capital and reduced entrepreneurial spirit? The disincentive shown by the departure of workers trained at the Casal Metallurgy apprentice school to other companies recalls the problem of innovation costs in situations where private gains from investment in new activities are much lower than the gains for society, potentially acting as a restriction on entrepreneurship.[123]

Finally, a comparison with Spain in sectors such as tourism, advertising, and even more clearly in management training. Having initially been isolated due to the international repercussions of the civil war, Spain managed to recover ground after the Madrid Agreements with the United States in 1953, and its accession to the OECD and the United Nations in 1955. Subsequent successes in foreign investment and management education were certainly facilitated by the larger size of the Spanish market, but there was also in Spain a political will and organizational capacity that were not matched in Portugal.[124]

International collaboration—especially American—was taken advantage of in the development of management schools such as the Instituto de Estudios Superiores de la Empresa (IESE), inaugurated in Barcelona in 1958; the Escuela Superior de Administración de Empresas (ESADE), founded in the same year, also in Barcelona; and the Instituto Catolico de Administración y Dirección de Empresas (ICADE) in Madrid, 1960.[125] In this matter, it is possible that the existence in Spain of some prior experience, specifically at the Universidade Comercial de Deusto, founded in 1916, created the social capacity to acknowledge the external opportunity. In Portugal, on the contrary, there is information that in 1965 the U. S. Embassy in Lisbon tried to generate interest in the creation of a higher education institution in the field of management, without any consequence.[126]

And yet, despite the contradictions inherent in an economic growth process initiated from a backward economy, in a conservative society subjected to a political dictatorship, we must register an extraordinary change that ultimately rendered as obsolete the authoritarian regime that got it started.

Table 9 shows that the transition to a more complex society and economy was evident in different areas and indicators.

Indicators	1950	1960	1970	1973
Resident population	8,510,240	8,889,392	8,663,252	8,629,600
GDP per capita	2,086	2,956	5,473	7,063
Agriculture % active pop.	48	42	32	
Life exp. (M)	55.5	60.7	64.2	
Life exp. (F)	60.5	66.4	70.8	
Infant mort. rate	94.1	77.5	55.5	
Births in health inst. %		18.4	37.5	* 61.1
Piped water % housing		28.9	47.4	
Electricity % housing		40.5	63.8	
Telephones **	114	301	542	675
TV sets **		46	388	609
Automobiles **	92	221	674	948

Table 9: Social and Economic Indicators

* 1975 ** Thousands

Sources: António Barreto, ed., A Situação Social em Portugal 1960-1995 (3rd. reed. Lisbon: Instituto de Ciências Sociais, 1997) table 1.6 p. 67 (resident population); table 2.8, p. 79 (births delivered in health institutions); table 6.19 p. 130 (housing characteristics); table 8.7 p. 146 (television sets). Ana Bela Nunes, "A evolução da estrutura, por sexos, da população activa em Portugal – um indicador do crescimento económico (1890-1981)" Análise Social XXVI (1991), annex I-A p. 716 (agriculture as a percentage of the active population). Angus Maddison, The World Economy: Historical Statistics (Paris: OECD, 2003), table 1c pp. 58-69 (GDP per capita in 1990 international Geary-Khamis dollars). Robert Rowland (1999), "Le Portugal au XXe siècle: transition et modernité" in J.P. Bardet and J. Dupâquier (eds.), Histoire des Populations de l'Europe, vol.III – Les temps incertains, 1914-1998 (Paris: Fayard), table 122 p. 512 (infant mortality rate). Maria João Valente Rosa and Cláudia Vieira, A População Portuguesa no Século XX (Lisbon: Instituto de Ciências Sociais, 2003), figure 5 p. 39 (life expectancy at birth for men and women)). Nuno Valério, ed., Estatísticas Históricas Portuguesas (Lisbon: Instituto Nacional de Estatística, 2001), vol. I table 5IA.2 pp. 367-8 (automobiles); table 5IB.2 pp. 406-7 (telephones).

The Portuguese continued to live in old and uncomfortable houses; the housing stock was part of a set of facilities and infrastructure that would require a long time to be modernized as a whole. In 1970, about 63 percent of occupied dwellings had been built before 1946; practically all dwellings—94 percent—had their own kitchen, 58 percent had sanitary facilities and sewage systems, 47 percent had running water, but only 29 percent had built-in shower or bath installations.[127]

Electricity, installed in 64 percent of dwellings, was the most prevalent element after the kitchen. Electricity was initially used for lighting, but the availability of the grid facilitated the purchase of radios, televisions, and household appliances. Houses remained old, but were subject to improvements and witnessed the introduction of new equipment.

Between 1960 and 1973, the number of television sets increased from 46,000 to 609,000. An unknown portion of these televisions were installed in cafes and other establishments open to the public, but family evenings were increasingly influenced by television, while household chores incorporated new stoves, irons, washing machines, and vacuum cleaners. The number of automobiles increased from 92,000 in 1950 to 948,000 in 1973. As with televisions, we don't know what proportion of these total numbers are privately owned passenger cars, but the privately owned automobile was no longer a rarity.

Even more significant were the indicators of structural change. While in 1950 almost half of the Portuguese population worked in agriculture, by 1970 less than a third continued with this way of life; as a percentage of the gross domestic product, agriculture fell from 32 to 13 percent.[128] Portuguese society was increasingly less marked by agriculture and the values of the rural world, becoming more and more oriented towards the industry and services of urban centers, in connection with foreign countries. The metropolitan areas of Lisbon and Porto increased their share of the population from 24 percent in 1950 to 32 percent in 1970.[129] Couples voluntarily reduced the number of children, and births increasingly took place in health facilities, with great benefits for the health of mothers and the survival of babies. The infant mortality rate fell significantly, and life expectancy at birth increased by about ten years for both men and women. The same economic and demographic indicators that in 1950 placed Portugal close to the levels corresponding to those of advanced countries in 1870, in 1973 they pointed to the European levels of the fifties or sixties.[130] With all due caution to these observations, we could say that Portugal had shortened the distance from about eighty to about twenty years.

There was a new rhythm in Portuguese life.

Most Portuguese people had learned to earn, save, and spend money differentially, far from their birthplaces. The very continuity of families was projected onto their children in a different way. However important the change in the economy may be, there is a qualitative shift that cannot be consolidated without a change in cultural order, expectations, and behavior. Robert Lucas eloquently shows the importance of the nature of society for sustained economic growth:

"Growth in the stock of useful knowledge does not generate sustained improvement in living standards unless it raises the return to investing in human capital in most families. This condition is a statement about the nature of the stock of knowledge that is required, about the kind of knowledge that is "useful." But more centrally, it is a statement about the nature of the society. For income growth to occur in a society, a large fraction of people must experience changes in the possible lives they imagine for themselves and their children, and these new visions of possible futures must have enough force to lead them to change the way they behave, the number of children they have, and the hopes they invest in these children: the way they allocate their time.[131]"

Economics provides reliable indicators of this change, such as the sectoral distribution of the active population, income levels, and consumption patterns. However, management adds to this set of indicators the perspective of individuals, the diverse experiences of public institutions and companies, and organizing complexity in management teams. As poverty lost ground in the material living conditions of the Portuguese, resignation as an ideal of life was being swept away from their attitudes and expectations. More and more Portuguese saw the future as an open path.

Foot Notes

[1]For a general overview of authors and themes, see Pedro Lains and Álvaro Ferreira da Silva, eds., *História Económica de Portugal. 1700–2000* (Lisbon: Imprensa de Ciências Sociais, 2005), vol. III; Joaquim da Costa Leite, Manuel Ferreira Rodrigues, António Ferreira Gomes, eds., *Empresas e Instituições em Perspectiva Histórica. Actas do XXII Encontro da Associação Portuguesa de História Económica e Social. Aveiro, 15-16 de Novembro de 2002* (CD-ROM Edition, University of Aveiro, 2002); *Estudos do Século XX 4* (2004), special issue, "Empresas e Empresários" (Companies and Entrepreneurs).

[2]See N. F R. Crafts, "The golden age of economic growth in Western Europe, 1950-1973" *Economic History Review*, XLVIII, 3 (1995), pp. 429-447; Gabriel Tortella, "Patterns of economic retardation and recovery in south-western Europe in the nineteenth and twentieth centuries" *Economic History Review* XLVII (1994), pp. 1-21.

[3]Concerning the importance of these periods in Portuguese economic history, see Jaime Reis, "O atraso económico português em perspectiva histórica, 1860-1913" in Jaime Reis, *O atraso económico português em perspectiva histórica: Estudos sobre a economia portuguesa na segunda metade do século XIX, 1850-1930* (Lisbon: INCM, 1993), pp. 9-32; Jaime Reis, "The historical roots of the modern portuguese economy: The first century of growth, 1850s to 1950s" in R. Herr, ed., *The New Portugal: Democracy and Europe* (Berkeley, 1992), pp. 126-148; Pedro Lains and Álvaro Ferreira da Silva, eds, História Económica de Portugal. 1700–2000 (Lisbon: Imprensa de Ciências Sociais, 2005), vols. II and III.

[4]Moses Abramovitz, "Catching up, forging ahead and *falling behind" in Thinking About Growth* (Cambridge: Cambridge University Press, 1990), p. 225.

[5]See Nicholas Crafts and Gianni Toniolo, "Post-war growth: an overview" in Nicholas Crafts and Gianni Toniolo, eds., *Economic Growth in Europe Since 1945* (Cambridge: Cambridge University Press, 1996), table 1.4, p. 6. The European economies considered are, in descending order of per capita income in 1950: Switzerland, United Kingdom, Sweden, Denmark, Netherlands, Belgium, France, Norway, West Germany, Finland, Austria, Ireland, Italy, Spain, Portugal, and Greece.

[6]See table A.3 in appendix.

[7]Education is one of the factors analyzed by Luciano Amaral, "How a Country Catches Up: Explaining Economic Growth in Portugal in the Post-War Period (1950s to 1973)" (Florence, European University Institute: Doctoral Dissertation, 2002).

[8]Superbrands Portugal: Tributo a 50 Grandes Marcas em Portugal (London: Superbrands, 2004), pp. 46-47. Jacques Lendrevie, Denis Lindon, Pedro Dionísio and Vicente Rodrigues, *Novo Mercator: Teoria e Prática do Marketing* (6th. edition. Lisbon: Publicações Dom Quixote, 1996) pp. 30-31.

[9]Several indicators coincide in differentiating between the fifties and the subsequent period; the issue is discussed by Luciano Amaral, "How a Country Catches Up: Explaining Economic Growth in Portugal in the Post-War Period (1950s to1973)" (Florence, European University Institute: Doctoral Dissertation, 2002).

[10]José da Silva Lopes, *A Economia Portuguesa desde 1960* (7th. edition: Lisbon, Ed. Gradiva, 2004), table 4.2 p. 151.

[11]Ibid. Table 4.4 p. 160; table 4.6 p. 164.

[12]Bo Sodersten, ed., *Svensk Economi* (Stockholm: Rabén & Sjogren, 1974), pp. 66-69, 464, 476480.

[13]Álvaro Ferreira da Silva, "Investimento estrangeiro e multinacionais em Portugal: um esboço de síntese" (http://www.egi.ua.pt/xxiiaphes; consulted March 2, 2005) table 3; see also Abel Mateus, *A Economia Portuguesa* (2nd. edition: Lisbon, Ed. Verbo, 2001), pp. 98-99.

[14]An analysis of this issue is beyond the scope of this text; for an example from the advertising sector, see section 5 below; for the hotel industry, see João Mendes Leal, *A Minha Vida no Turismo* (Carnaxide: Edeline, 2004), pp. 170-5.

[15]Salazar had a clear understanding, from early on, of the diversity of supporters of the regime, and where the dividing line lay between supporters and opponents; see speech of November 23, 1932, "As diferentes forças políticas em face

da Revolução Nacional" in Oliveira Salazar, *Discursos. Volume Primeiro, 1928-1934* (5th. revised edition. Coimbra: Coimbra Editora, n/d) pp. 161-184. For a lively perspective of the different groups within the regime, see Marcello Caetano, *Minhas Memórias de Salazar* (4th. edition. Lisbon: Verbo, 2000).

[16]Note Salazar's care in justifying industrialization when presenting the Development Plan; see speech of May 28, 1953, "O Plano de Fomento: Princípios e Pressupostos" in Oliveira Salazar, Discursos e Notas Políticas. Volume Quinto, 1951-1958 (Coimbra: Coimbra Editora, n/d) pp. 91-126.

[17]Nuno Valério, *O Escudo: A unidade monetária portuguesa, 1911-2001* (Lisbon: Banco de Portugal, n/d), pp. 144-8, 176.

[18]Joaquim da Costa Leite, "Neutrality by Agreement: Portugal and the British Alliance in World War II", *American University International Law Review* vol. 14 nº 1 (1998), pp. 185-197.

[19]See documents in *Dez Anos de Política Externa,* vol. XII (Lisbon, 1985) pp. 275-315; vol. XIII (Lisbon, 1986) pp. 80-1, 191-4. For a detailed history of the strategic importance of the Azores and the intersection of Portuguese, English, and American interests, see António José Telo, *Os Açores e o Controlo do Atlântico* (1898-1948) (Porto: Ed. Asa, 1993).

[20]Fernando Rosas, Portugal Entre a Paz e a Guerra, 1939-1945 (Lisbon: Ed. Estampa, 1995), pp. 94153; António José Telo, *A Neutralidade Portuguesa e o Ouro Nazi* (Lisbon: Quetzal, 2000), pp. 97-98.

[21]After guaranteeing the external convertibility of the escudo on January 7, 1959, the Portuguese government submitted its application to the International Bank for Reconstruction and Development (IBRD) and the International Monetary Fund (IMF); once accepted, the application was ratified in Portugal on November 21, 1960. See João César das Neves and Francisco Azevedo e Silva, *António Manuel Pinto Barbosa: uma biografia económica* (Lisbon: Verbo, 1999), pp. 125-6.

[22]Concerning the relative weight of these factors in the process of joining EFTA, see Nicolau Andresen-Leitão, "The Unexpected Guest: Portugal and European Integration (1956-1963)" (Florence, European University Institute: Doctoral Dissertation, 2003).

[23]George Kennan to US State Departament, telegram, 20 October 1943, quoted by António José Telo, *Os Açores e o Controlo do Atlântico (1898-1948)* (Porto: Ed. Asa, 1993), p. 414.

[24]Despite the propaganda, it was evident to the government that the colonies did not constitute an alternative to European integration; see Nicolau Andresen-Leitão, "The Unexpected Guest: Portugal and European Integration (1956-1963)" (Florence, European University Institute: Doctoral Dissertation, 2003).

[25]An exemple in Maria Fernanda Rollo, "O Programa de Assistência Técnica: o interesse americano nas colónias portuguesas" *Ler História 47* (2004), pp. 81-123.

[26]Ruy Teixeira Guerra quoted by Fernanda Rollo, *Portugal e o Plano Marshall* (Lisbon: Ed. Estampa, 1994), p. 254.

[27]Ibid. p. 265.

[28]CTCEE was created by decree of the Council of Ministers of August 25, 1948, published in the Diário do Governo, 1st series, of September 1, 1948; FFN was created by Decree-Law No. 37354, published in the Diário do Governo, 1st series, of March 26, 1949. See Fernanda Rollo, *Portugal e o Plano Marshall* (Lisbon: Ed. Estampa, 1994), p. 254-5.

[29]This should refer to the specific program for 1949-1950, which was more technical and quantified than the long-term program previously presented. See Maria Fernanda Rollo, "Plano Marshall" in Fernando Rosas and J. M. Brandão de Brito, eds., *Dicionário de História do Estado Novo* (Lisbon: Círculo de Leitores, 1996), vol. II p. 738.

[30]M. Jacinto Nunes, "Algumas notas sobre a introdução do Keynesianismo em Portugal" in José Luís Cardoso and Eduardo de Sousa Ferreira, eds., *Cinquentenário da Publicação da Teoria Geral de Keynes* (Lisbon: Instituto Superior de Economia, 1986), pp. 55-56.

[31]João César das Neves and Francisco Azevedo e Silva, *António Manuel Pinto Barbosa: uma biografia económica* (Lisbon: Verbo, 1999), pp. 49-58. The concept of national income appears in Pinto Barbosa's 1948 lecture notes of Political Economy, id. p. 43.

[32]M. Jacinto Nunes, *Rendimento na*cional (Lisbon: Ed. Império, 1950). Net national product is discussed on page 9.

[33]The estimates compiled figures for the following sectors: 1) Agriculture and forestry; 2) Fishing; 3) Extractive and manufacturing industries; 4) Services, with the total value subdivided into (a) Government and (b) Other; 5) Income from abroad; 6) Domestic income at factor cost; 7) Indirect taxes; 8) National income at market prices. See "Estimativa provisória do rendimento nacional português efectuada em cumprimento do artigo 9º da Lei nº 2045" (Provisional estimate of Portuguese national income carried out in compliance with Article 9 of Law No. 2045), table No. 18 annexed to expert opinion No. 22/V of the Câmara Corporativa (Corporate Chamber) on draft law No. 513/155 in Diário das Sessões, 3rd Supplement to No. 109 of December 6, 1951.

[34]Armando Castro, "Contribuição para a análise da primeira estimativa oficial do rendimento nacional português" *Revista de Economia* vol. IV (1951) pp. 185-215.

[35]Regarding the overall picture of this evolution, see Carlos Bastien and José Luís Cardoso "The reception of the *General Theory* in Portugal: the first 20 years" *Economia* vol. XII (Jan.-May-October 1998), pp. 69-93; Carlos Bastien, "The advent of modern economics in Portugal" in A. W. Bob Coats, ed., *The Development of Economics in Western Europe since 1945* (Londres: Routledge, 1999), pp. 168-190.

[36]Carlos Bastien, "José Dias de Araújo Correia" in José Luís Cardoso, ed., *Dicionário Histórico de Economistas Portugueses* (Lisbon: Temas e Debates, 2001), pp. 96-99; Jaime Reis, "A Caixa Geral de Depósitos como instrumento de política económica: o período entre as duas guerras" *Análise Social* vol. XXXII nº 141 (1997), pp. 255-277.

[37]Araújo Correia, *Estudos de Economia Aplicada: O Problema Económico Nacional* (2ª edição: Lisbon, Imprensa Nacional, 1950), p. xxviii.

[38]Ibid. p. xxvii.
[39]See Maria de Lurdes Rodrigues, *Os Engenheiros em Portugal: Profissionalização e Protagonismo* (Oeiras: Celta, 1999).
40 See Carlos Manuel da Silva Gonçalves, "Emergência e Consolidação dos Economistas em Portugal" (Porto. Doctoral dissertation, Faculdade de Letras da Universidade do Porto, 1998), p. 275. On the origins of the profession, see António Almodovar and José Luís Cardoso, "From learned societies to professional associations: The establishment of the economist profession in Portugal" in Massimo M. Augello and Marco E. L. Guidi, eds., *The Spread of Political Economy and the Professionalisation of Economists: Economic Societies in Europe, America and Japan in the Nineteenth Century* (London: Routledge, 2001), pp. 126-137.
[41]Concerning Pinto Barbosa's governmental career, see João César das Neves and Francisco Azevedo e Silva, *António Manuel Pinto Barbosa: uma biografia económica* (Lisbon: Verbo, 1999), esp. summary in appendix, pp. 245-51.
[42]On the careers of economists in companies, see António Alves Caetano, "A formação de quadros empresariais pelo ISCEF depois de 1949: subsídios históricos" in Joaquim da Costa Leite, Manuel Ferreira Rodrigues, António Ferreira Gomes, eds. *Empresas e Instituições em Perspectiva Histórica. Actas do XXII Encontro da Associação Portuguesa de História Económica e Social. Aveiro, 15-16 de Novembro de 2002* (CD-ROM Edition, University of Aveiro, 2002); António Almodôvar, Maria de Fátima Brandão and Joaquim da Costa Leite, "Os economistas da FEP: estudo introdutório de percursos profissionais" ibid.
[43]Carlos Manuel da Silva Gonçalves, op. cit. pp. 741-2.
[44]*Quem é Alguém: Dicionário biográfico das personalidades em destaque do nosso tempo: ano de 1947* (Lisbon: Portugália, 1947); see commments by António José Telo, introduction to José Caré Júnior, *Ericeira: 50 Anos Depois… Os refugiados estrangeiros da 2ª Guerra Mundial* (S/l. Mar de Letras, 1995), pp. 7-8.
[45]Carlos Oliveira Santos, *Amorim: história de uma família* (1870-1997) (Mozelos: Grupo Amorim, 1997), esp. vol. I p. 51; vol. II p. 31; Hélder Carita, *Américo Amorim: 50 anos de trabalho* (Portugal: Sociedade Agrícola de Cortiças Flocor, 2002), pp. 33-43.
[46]Carlos Oliveira Santos, op. cit. vol. II, p. 31.
[47]Ibid. p. 59.
[48]Jorge de Mello recalls: "My father considered the holiday period to be wasted time; he preferred that I travel." Quoted by Jorge Fernandes Alves, *Jorge de Mello "Um Homem": Percursos de um Empresário* (Lisbon: Edições Inapa, 2004), p. 49.
[49]José Freire Antunes, *Champalimaud* (Lisbon: Círculo de Leitores, 1997), p. 83.
[50]Eduardo Beira, Cristina Crespo, Nuno Gomes and Joaquim Menezes, "Dos moldes à engenharia do produto, a trajectória de um cluster" (mimeo).
[51]José Francisco Leite, interviewed by the author, September 16, 2003.
[52]José Maria Amado Mendes and Manuel Ferreira Rodrigues, *Ricardo Gallo: um século de tradição e inovação no vidro* (Marinha Grande: Gallo, 1999), p. 158.
[53]Manuel Ferreira de Oliveira, CEO of Unicer, referring to the role of engineer João Talone, at a conference in the University of Aveiro, January 13, 2005.
[54]Manuel Ferreira Rodrigues, *A Metalurgia Casal, 1964-1974: Elementos Para Uma Cultura de Empresa* (Aveiro: Câmara Municipal de Aveiro, 1996), pp. 11, 40.
[55]Magalhães Pinto, Belmiro: *História de Uma Vida* (Lisbon: Círculo de Leitores, 2001), p. 152.
[56]João Martins Pereira, then a young engineer recently graduated from the Instituto Superior Técnico, was part of this group; see interview with Maria João Seixas, Conversas com Vista para … (Lisbon: Gótica, 2002), p. 225. See also Paulo Guimarães (DH/CIDEHUS — UE), "Contribuição para a história da Siderurgia Nacional" in Joaquim da Costa Leite, Manuel Ferreira Rodrigues, António Ferreira Gomes, eds. *Empresas e Instituições em Perspectiva Histórica. Actas do XXII Encontro da Associação Portuguesa de História Económica e Social. Aveiro, 15-16 de Novembro de 2002* (CDROM Edition, University of Aveiro, 2002); Miguel Figueira de Faria, ed., *Lisnave: Contributos Para a História da Indústria Naval em Portugal* (Lisbon: Edições Inapa, 2001).
[57]Since the early 1950s, the Fundo de Fomento de Exportação (Export Promotion Fund) subsidized participation in trade fairs abroad and the organization of fairs in Portugal; see *Fundo de Fomento de Exportação: Contas de Gerência. Anos de 1949 a 1970.* (Lisbon: Fundo de Fomento de Exportação, 1972); The Feira Internacional de Lisboa (FIL) held an annual fair from 1960, and from 1967 began to organize monographic events; see www.fil.pt section "history" (accessed February 28, 2005).
[58]José Francisco Leite, interview, September 16, 2003.
[59]See *I Exposição Portuguesa de Embalagem. 12 a 26 de Março 1961.* Catálogo. (Lisbon: Fundo de Fomento de Exportação, 1961).
[60]Manuel Ferreira Rodrigues, A Metalurgia Casal, 1964-1974: *Elementos Para Uma Cultura de Empresa* (Aveiro: Câmara Municipal de Aveiro, 1996), esp. pp. 33, 36, 39-44.
[61]José Francisco Leite, interview, September 16, 2003.
[62]Lúcia Lima Rodrigues, Delfina Gomes and Russel Craig, "Corporativismo, liberalismo e a profissão contabilística em Portugal desde 1755" TOC 46 (January 2004), reproduced in Joaquim Cunha Guimarães, *História da Contabilidade em Portugal: Reflexões e Homenagens* (Lisbon: Áreas Editora, 2005), pp. 183-4.
[63]Eduardo Beira and Manuel Heitor, eds., *Memória das Tecnologias e dos Sistemas de Informação em Portugal* (Braga: Associação Industrial do Minho, 2004), p. 27.
[64]See Boletim de Aplicações *Electrónicas. The National Cash Register Company of Portugal. Número Especial,*

available http://www.memtsi.dsi.uminho.pt (accessed November 22, 2004).
[65]Carlos Alberto Damas and Augusto de Ataíde, O *Banco Espírito Santo: Uma dinastia financeira portuguesa. I Volume, 1869-1973* (Lisbon: Banco Espírito Santo, 2004), p. 261.
[66]Joaquim Romero Magalhães, *Tranquilidade: História de uma Companhia de Seguros* (Lisbon, 1997), p. 145.
[67]Eduardo Beira and Manuel Heitor, eds., op. cit. pp. 257-8.
[68]There was some prior experience, for example, in the use of mechanographic systems. IBM, established in Portugal in 1938, installed the first card factory in Lisbon in 1948; see IBM: 50 Anos em Portugal (Lisbon: Companhia IBM Portuguesa, 1988).
[69]António Alves Caetano, mail message to the author, February 9, 2005.
[70]Eduardo Beira and Manuel Heitor, eds., op. cit. pp. 29-30.
[71]Maria Helena Pessoa Lopes, *Estrutura Empresarial Portuguesa* (Lisbon: Gabinete de Planeamento do Ministério das Corporações e Previdência Social, 1971), table 1.2 p. 16. See table 7 below.
[72]J. N. Ferreira Dias Jr., *Linha de Rumo I e II e Outros Escritos Económicos (1926- 1962). Introdução e Direcção de Edição de José Maria Brandão de Brito* (Lisbon: Banco de Portugal, Colecção de Obras Clássicas do Pensamento Económico Português, 1998), cited by Brandão de Brito, volume I, p. xvi; for some illustrative excerpts from the debate on large companies and monopolies, see volume III, pp. 69-70, 102-4, 144-5, 201-3.
[73]José Félix Ribeiro, Lino Gomes Fernandes and Maria Manuel Carreira Ramos, "Grande indústria, banca e grupos financeiros (1953-73)" *Análise Social* vol. XXIII nº 99 (1987), pp. 964-5.
[74]J. N. Ferreira Dias Jr., op. cit. Tomo III, pp. 69-70. The article entitled "Electricidade e Indústria" was originally published in the magazine *Técnica* II Série, Ano XIX, nº 149, July 1944, pp. 975-978.
[75]Manuel Lisboa, *A Indústria Portuguesa e os seus Dirigentes* (Lisbon: Educa, 2002), figure nº 4.2 p. 250.
[76]Aníbal A. Cavaco Silva, *O Mercado Financeiro Português em 1966* (Lisbon: Centro de Economia e Finanças, 1968); Rui Cartaxo and Emanuel Augusto dos Santos, "Estimativas anuais da riqueza financeira das famílias para o período 1958-1981" (Banco de Portugal, documento de trabalho nº 8, Abril de 1984); for a perspective of change in the early seventies, see Mercado Financeiro. 1972 (Porto and Lisbon: Banco Borges & Irmão, 1972).
[77] *Relatório e Contas do Banco Espírito Santo e Comercial de Lisboa. 31 de Dezembro de 1947 (Lisbon, 1948); see also Banco Espírito Santo e Comercial de Lisboa. Relatório e Contas. Ano de 1938* (Lisbon, 1939).
[78] *Relatório e Contas do Banco Espírito Santo e Comercial de Lisboa. 31 de Dezembro de 1958* (Lisbon, 1959).
[79] *Relatório e Contas do Banco Espírito Santo e Comercial de Lisboa. 31 de Dezembro de 1959* (Lisbon, 1960).
[80] Carlos Alberto Damas and Augusto de Ataíde, *O Banco Espírito Santo: Uma dinastia financeira portuguesa. I Volume, 1869-1973* (Lisbon: Banco Espírito Santo, 2004), pp. 212-214.
[81] José Félix Ribeiro, Lino Gomes Fernandes and Maria Manuel Carreira Ramos, "Grande indústria, banca e grupos financeiros (1953-73)" *Análise Social* vol. XXIII nº 99 (1987), pp. 963.
[82] José Freire Antunes, *Champalimaud* (Lisbon: Círculo de Leitores, 1997), pp. 132-5.
[83] Depending on the criteria, the count varies; regarding the business universe of economic groups, see Maria Belmira Martins, *Sociedades e Grupos em Portugal* (Lisbon: Ed. Estampa, 1973), which contains a list of 677 companies with diverse connections.
[84] Abel Mateus, *A Economia Portuguesa* (2nd. edition: Lisbon, Ed. Verbo, 2001), pp. 218-9; in 1975 the CUF group consisted of 187 companies, also holding stakes in another 254 companies; of the total 441 companies, 48 were foreign companies.
[85] Louis Salleron was an honorary professor at the Faculté Libre de Droit de Paris, and Director of Studies and Teaching at the Centre d'Études et d'Organisation (CEO - Versailles); he delivered the opening lecture "L'évolution de l'organisation dans ses rapports avec l'évolution économique". *See Primeiro Ciclo de Conferências sobre Produtividade. Janeiro-Março 1960* (Lisbon: Instituto Nacional de Investigação Industrial, 1960), pp. 9-37.
[86] Decree-Law No. 39226 of May 28, 1953. The Decree No. 37584 of October 17, 1949, which established the curricular reform of ISCEF, referred to a new economic-political system, the transformations brought about by the war, and a new economic structure, without, however, mentioning the complexity of organizations.
[87] Pedro Neves, "Propriedade e gestão das grandes empresas num pequeno país: Portugal, 1850- 1914" in Joaquim da Costa Leite, Manuel Ferreira Rodrigues, António Ferreira Gomes, eds. *Empresas e Instituições em Perspectiva Histórica. Actas do XXII Encontro da Associação Portuguesa de História Económica e Social. Aveiro, 15-16 de Novembro de 2002* (CD-ROM Edition, University of Aveiro, 2002).
[88] The standing of the office in the organizational charts of Montepio Geral in the 19th century is a good example, and in 1882 the bookkeeper appears prominently listed just below the management; see Ana Bela Nunes, Carlos Bastien, Nuno Valério, *Caixa Económica Montepio Geral: 150 Anos de História, 1844-1994* (Lisbon: Caixa Económica Montepio Geral, 1994), pp. 101-3. See also Jaime Reis, *O Banco de Portugal das Origens a 1914.* I Volume (Lisbon: Banco de Portugal, 1996) p. 250; António Alves Caetano, *A Companhia Fidelidade e os Seguros na Lisboa Oitocentista* (1835-1907) 2 vols. (Lisbon 2000-2002) pp. 93, 261, 271, 642, 647.
[89] Pedro Neves, "Propriedade e gestão das grandes empresas num pequeno país: Portugal, 1850-1914", p. 13, summarizes: "The main tasks of the administrators were: to represent the company, to guarantee its normal factory and commercial operation, to promote its improvement, to keep the accounts up to date and to report to the shareholders, to hire personnel and set their remuneration, and to guarantee the security of the company's assets."

[90] For an example of pioneering economic calculation, see Abel Mateus, *A Economia Portuguesa* (2nd. edition: Lisbon, Ed. Verbo, 2001), p. 209 note 1.
[91] Harry Makler, *A Elite Industrial Portuguesa* (Lisbon: Fundação Calouste Gulbenkian, 1969), p. 251; The study was based on a sample of managers from industrial and service companies with 50 to 999 employees, interviews conducted from February to July 1965. See also Mauro F. Guillén, *Models of Management: Work, Authority and Organization in a Comparative Perspective* (Chicago: The University of Chicago Press, 1994).
[92] Ibid., table 6.1 "Níveis de instrução da elite industrial " p. 142.
[93] Nuno Cardal and Rita Fragoso de Almeida, eds., *Grupo McCann Portugal: 65 anos de publicidade* (Lisbon: Texto, 1994); António da Silva Gomes, Publicidade sem espinhas (Lisbon: Oficina do Livro, 2003); Rui Estrela, *A Publicidade no Estado Novo. Volume I (1932-1959)* (Lisbon: Simplesmente Comunicando, 2004).
[94] See table A.2 in appendix.
[95] *Dois dedos de espuma: Uma história com sabor autêntico* (Sintra: Impala Editores e Unicer, 2002), pp. 88-89.
[96] Carlos Alberto Damas and Augusto de Ataíde, *O Banco Espírito Santo: Uma dinastia financeira portuguesa. I Volume, 1869-1973* (Lisbon: Banco Espírito Santo, 2004), p. 263.
[97] Id. p. 264, advertising leaflet.
[98] Id. p. 262. In the image, the father figure was still wearing a hat, but it was a modern family consisting of husband and wife, a son, and a daughter.
[99] Formally, upon the death of Alfredo da Silva in 1942, leadership passed to his son-in-law Manuel de Mello until his death in 1966, when he was succeeded by Jorge de Mello; in practice, Manuel de Mello's health problems led early on to a great involvement of his sons Jorge and José Manuel de Mello; see Jorge Fernandes Alves, Jorge de Mello *"Um Homem": Percursos de um Empresário* (Lisbon: Edições Inapa, 2004), pp. 22, 66, 86.
[100] Jorge de Mello, testimony in Jorge Fernandes Alves, op. cit. pp. 86-87.
[101] Id. p. 87.
[102] Abel Mateus, *A Economia Portuguesa* (2nd edition: Lisbon, Ed. Verbo, 2001), pp. 214-221; António Alves Caetano, mail message to the author, March 30, 2005.
[103] For a sector perspective, without specific reference to the Marshall Plan, see Celeste Amorim and Matthias Kipping, "Selling Consultancy Services: The Portuguese Case in Historical and Comparative Perspective" *Business and Economic History* 28 (1999), pp. 45-57.
[104] Magalhães Pinto, *Belmiro: História de Uma Vida* (Lisbon: Círculo de Leitores, 2001), pp. 156-7.
[105] Jacqueline McGlade, "The big push: the export of American business education to Western Europe after the Second World War" in Lars Engwall and Vera Zamagni, eds., *Management Education in Historical Perspective* (Manchester: Manchester University Press, 1998), table 4.1 p. 60.
[106] Aristotle, *Ethics* (London: The Folio Society, 2003) p. 25: "Anything that we have to learn to do we learn by the actual doing of it: people become builders by building and instrumentalists by playing instruments".
[107] Robert E. Lucas, Jr., *Lectures on Economic Growth* (Cambridge, Mass.: Harvard University Press, 2002) p. 13.
[108] The availability of highly trained personnel allowed for the implementation of innovative experiments in the most diverse areas; for example, in social assistance, multidisciplinary teams made up of economists, social workers, doctors, etc., put into practice community development projects with a logic radically different from the traditional "welfare to marginalized groups"; see Maria Manuela Coutinho, *A Assistência Social em Portugal.1965/1971: Um período charneira* (Lisbon: Associação Portuguesa de Segurança Social, 1999), esp. pp. 66-7.
[109] For a few examples, see "Onde eles se fizeram gestores" (Where they became managers) *Exame* (June 1994), pp. 42-52.
[110] Abel Mateus, *A Economia Portuguesa* (2nd. edition: Lisbon, Ed. Verbo, 2001), p. 220.
[111] José Freire Antunes, *Champalimaud* (Lisbon: Círculo de Leitores, 1997), pp. 134-5.
[112] Ibid. pp. 83-84.
[113] Magalhães Pinto, *Belmiro: História de Uma Vida* (Lisbon: Círculo de Leitores, 2001), p. 153.
[114] Between 1963 and 1972, the INII Productivity Service published thirty-five studies on productivity measures and other aspects of management. See the list of publications in Carlos Corrêa Gago et al., *Produtividade em Portugal: Medir para Gerir e Melhorar* (2003), pp. 200-1
[115] Regarding the participation of engineers, see below; on economists, see António Alves Caetano, "A formação de quadros empresariais pelo ISCEF depois de 1949: subsídios históricos" in Joaquim da Costa Leite, Manuel Ferreira Rodrigues, António Ferreira Gomes, eds. *Empresas e Instituições em Perspectiva Histórica. Actas do XXII Encontro da Associação Portuguesa de História Económica e Social. Aveiro, 15-16 de Novembro de 2002* (CD-ROM Edition, University of Aveiro, 2002).
[116] See curriculum vitae notes in Carlos Corrêa Gago et al., *Produtividade em Portugal: Medir para Gerir e Melhorar* (2003), pp. 205-6.
[117] Peter F. Drucker, *The Essential Drucker* (Oxford: Butterworth-Heinemann, 2001), p.4. Originally published in *The New Realities* (1988).
[118] Salazar quoted by Franco Nogueira, August 25, 1962; see Franco Nogueira, *Um politico confessa-se (Diário: 1960-1968)* (Porto: Livraria Civilização, 1986), p. 36.
[119] See the discussion on total factor productivity in Luciano Amaral, "How a Country Catches Up: Explaining Economic Growth in Portugal in the Post-War Period (1950s to 1973)" (Florence, European University Institute: Doctoral Dissertation, 2002), chapter VII.
[120] Nicholas Crafts and Gianni Toniolo, "Post-war growth: an overview" in Nicholas Crafts e Gianni Toniolo, eds., *Economic Growth in Europe Since 1945* (Cambridge: Cambridge University Press, 1996), table 1.4 p. 6.

[121] In practice, Portugal began receiving Marshall Aid about two years after other countries; see Fernanda Rollo, *Portugal e o Plano Marshall* (Lisbon: Ed. Estampa, 1994), pp. 127-148, 279-280. Other aspects could be brought into debate, namely the priorities of economic policy; see, for example, the criticism of the secondary place attributed to mass tourism, in the opinion of the transport and tourism section in the discussion of the II Development Plan, in *Pareceres da Câmara Corporativa. VIII Legislatura. Ano de 1964. Volume II* (Lisbon: Câmara Corporativa, 1965), Anexo III, p. 587.
[122] José Maria Brandão de Brito, *A Industrialização Portuguesa no Pós-Guerra (1948-1965): O Condicionamento Industrial* (Lisbon: Dom Quixote, 1989); João Confraria, Condicionamento Industrial: Uma Análise Económica (Lisbon: Direcção-Geral da Indústria, 1992); on the opinions of employers, afterwards, see Maria Filomena Mónica, *Os grandes patrões da indústria portuguesa* (Lisbon: Dom Quixote, 1990).
[123] The issue is discussed by Dani Rodrik and Ricardo Hausmann, "Economic Development as Self-Discovery" *Journal of Development Economics*, vol. 72 (2003) pp. 603-633.
[124] Carmelo Pellejero, ed., *Historia de la Economia del Turismo en España* (Madrid: Civitas, 1999); Esther M. Sánchez, "Turismo, Desarrollo e Integración Internacional de la España Franquista", paper presented to the 8th. Conference of the European Business History Association, Barcelona, Universitat Pompeu Fabra, 17-18 September 2004, available online: http://www.econ.upf.es/ebha2004 (accessed 17 January 2005); Núria Puig, "The Education of a Foreign Market: J. Walter Thompson in 20th Century Spain" paper presented to the same Conference, ibid.; Miguel Ángel Pérez Ruiz, *La Transición de la Publicidad Española: Anunciantes, Agencias, Centrales y Medios. 1950-1980* (Madrid: Editorial Fragua, 2003); Celeste Amorim, "Bridging the Gap: The Evolution of the Management Consultancies in Portugal and Spain" *The European Yearbook of Business History* vol. 2 (1999), pp. 179-211.
[125] Enrique Fuentes Quintana, ed., Economía y Economistas Españoles. 7: *La consolidación académica de la economia* (Barcelona: Fundación para las Cajas de Ahorro Confederadas, 2002), pp. 906-927. Núria Puig, "Educating Spanish Managers: The United States, Modernising Networks, and Business Schools in Spain, 1950-1975" in Rolv Petter Amdam, Ragnhild Kvalshaugen, and Eirinn Larsen, eds., *Inside the Business Schools: The Content of European Business Education* (Oslo:Abstrakt, Liber, Copenhagen Business School Press, 2003), pp. 58-86.
[126] Harry Makler, *A Elite Industrial Portuguesa* (Lisbon: Fundação Calouste Gulbenkian, 1969), p.145. This is one of the areas in which Spain has placed itself at the forefront; the ranking of the 100 best fulltime MBA programs globally published by the *Financial Times* on January 24, 2005, does not include any Portuguese school, instead highlighting three Spanish schools: IESE (12th); Instituto de Empresa (19th); ESADE (35th). Regarding the situation in Portugal, see "A globalização dos MBA" *Exame* (May 2005) pp. 36-42.
[127] António Barreto, ed., *A Situação Social em Portugal, 1960-1995* (3rd. reed. Lisbon: Instituto de Ciências Sociais, 1997), p.124 table 6.4; p.130 table 6.19.
128 Pedro Lains, *Os Progressos do Atraso: Uma Nova História Económica de Portugal, 1842-1992* (Lisbon: Instituto de Ciências Sociais, 2003), tables A.5 e A.6 pp. 260-261.
[129] Maria João Valente Rosa and Cláudia Vieira, *A População Portuguesa no Século XX* (Lisbon: Instituto de Ciências Sociais, 2003), table 10 p. 85.
[130] In 1973, Portugal's GDP per capita was 7063 Geary-Khamis dollars, placing it between the European average values of 1958 (6886 dollars) and 1959 (7184 dollars); for sources and other indicators see Table 1 above and Table A1 in the appendix.
[131] Robert E. Lucas, Jr., *Lectures on Economic Growth* (Cambridge, Mass.: Harvard University Press, 2002), p. 17.

Appendix

	1870	1910	1950	1980
Germany *				
Agric. Pop. %	50.0	37.0	19.0	6.0
Birht rate	38.5	29.8	16.2	10.0
Mortality rate	27.4	16.2	10.5	11.6
NGR	11.1	13.6	5.7	-1.6
France				
Agric. Pop. %	49.0	44.0	27.0	9.0
Birht rate	25.9	19.6	20.5	14.9
Mortality rate	28.4	17.8	12.7	10.2
NGR	-2.5	1.8	7.8	4.7
Portugal				
Agric. Pop. %		57.0	48.0	18.0
Birht rate		31.7	24.4	16.2
Mortality rate		19.2	12.2	9.7
NGR		12.5	12.2	6.5

Table A1: Indicators of Progress in Germany, France and Portugal

* Federal Republic of Germany in 1950 and 1980
Notes: Agricultural population as a percentage of the active population; birth and death rates per thousand inhabitants, with the difference being the natural growth rate (NGR).
Sources: Jean-Claude Chesnais, La Transition Démographique (Paris: Presses Universitaires de France, 1986), annexes 2.1; 2.3; 4.1; 4.3; Massimo Livi Bacci and George Tapinos, "Économie et Population" in Jean-Pierre Bardet and Jacques Dupâquier, eds., Histoire des Populations de l'Europe (Paris: Ed. Fayard, 1997-1999), vol. III p. 106; Ana Bela Nunes, "A evolução da estrutura, por sexos, da população activa em Portugal – um indicador do crescimento económico (1890-1981)" Análise Social 112-113 (1991), annex, table 1 p. 716.

	1963	1970	1974		1963	1970	1974
Wheat	67.9	75.2	75.2	Rice	14.5	14.8	37.8
Corn	36.3	31.0	25.2	Sugar	19.1	25.6	30.0
Rye	13.8	12.2	14.1	Pork	6.0	7.5	9.4
Potatoes	102.3	121.7	110.9	Poultry	1.4	7.1	11.9
Dried beans	5.6	5.6	4.2	Beef	6.8	11.2	14.3
Fresh fish	24.5	30.0	25.5	Milk	30.8	51.8	57.3
Codfish	6.8	10.1	6.8	Margarine	1.2	2.9	4.0
Eggs	3.7	4.4	4.5	Wine	91.3	79.4	131.0
Cheese	2.5	3.0	3.3	Beer	4.4	14.8	32.6
Olive oil	6.7	6.9	5.3	Crustaceans and mollusks	0.8	1.0	1.9
Butter	0.6	0.7	0.8				

Table A2: Annual Per Capita Food Consumption in Kilograms

Source: António Barreto, ed., A Situação Social em Portugal, 1960-1995 (3rd. reed. Lisbon: Instituto de Ciências Sociais, 1997) table 2.19 vol. I p. 84.

Age groups	Males	Females	M+F	Birth
85 +	46	64	59	1891-95
80-84	47	63	57	1896-00
75-79	46	61	55	1901-05
70-74	46	62	55	1906-10
65-69	40	58	50	1911-15
60-64	32	50	42	1916-20
55-59	26	43	35	1921-25
50-54	23	37	30	1926-30
45-49	18	31	25	1931-35
40-44	13	24	19	1936-40
35-39	5	8	6	1941-45
30-34	3	4	3	1946-50
25-29	3	3	3	1951-55
20-24	2	2	2	1956-60
15-19	2	2	2	1961-65
10-14	2	1	2	1966-70
0-9	65	64	65	1971-81
Total	23	30	26	

Table A3: Illiteracy Rates by Sex and Age Groups, 1981

Note: Percentage of individuals who cannot read or write in the respective group.
Source: Rates calculated from the populattion census of March 16, 1981.