
The investment development path: the case of Portugal

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This article develops the idea of an investment development path, which relates net foreign direct investment to per capita income, for Portugal. A novel form of relationship between investment and development is proposed, based on empirical evidence for 1943-1996. This is supported by an analysis of Portuguese conditions, which suggest that the investment development path is substantially influenced not only by government policy but also by external political events, such as Portugal's accession to the European Economic Community, European Union integration and the fall of the Berlin wall, the latter bringing Central and Eastern European countries to the fore as locational competitors for inward investment.

Introduction

The idea of an “investment development path” (IDP) was introduced by John H. Dunning (1981a) as a dynamic approach within the paradigm of ownership, locational and internalization advantages (OLI).¹ The IDP hypothesizes an association between a country's level of development (proxied by GDP per capita) and its international

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¹ Dunning (1981a: p.134, footnote 13; 1981b: p.30, footnote) describes the genesis of the investment development cycle as follows: it was first presented in 1975 by him and Peter J. Buckley at a conference of the United Kingdom Chapter of the Academy of International Business, and again in 1978 with Buckley and Robert D. Pearce at a similar conference.

investment position (net foreign direct investment (FDI) stock, i.e. outward minus inward direct investment stocks). The basic assumption of this theorem is that as the country develops, the conditions for domestic and foreign companies change, affecting the flows of inward and outward FDI. However, inward and outward FDI affect the economic structure as well – there is a dynamic interaction between the two. The IDP also acknowledges that governments can influence a country's conditions by creating public goods on which competitiveness can be based (Buckley and Casson, 1998). Consequently, they will influence both FDI flows and domestic firms' ownership advantages (Dunning, 1988). This is a novel concept for the mainstream theory of FDI.

According to the IDP theory, countries evolve through five stages of development (Dunning, 1981a, 1981b, 1986; Tolentino, 1987; Dunning and Narula, 1996a). *Stage 1* is associated with pre-industrialization. Inward and outward FDI flows are almost non-existent because domestic markets are very small, infrastructure is inadequate, the labour force is poorly educated and commercial and legal frameworks are undeveloped.

The development of some location specific advantages (e.g. basic infrastructure, eventually as the result of government policies) will give rise to *stage 2*. This leads to more inward direct investment, mostly targeting the emerging domestic market in consumer goods and infrastructure, but to little outward investment, because domestic firms lack ownership advantages. Consequently, the net stocks of outward investment will become increasingly negative. In this stage, inward FDI stocks rise faster than GDP.

Stage 3 is associated with less spectacular growth rates of inward FDI. This is eventually overtaken by outward direct investment, and the net FDI stock will for the first time start to increase despite remaining negative for some time. Behind this change are the domestic firms' growing ownership advantages, which become also more firm-specific and less country-specific. Stronger domestic firms will be more competitive in the domestic market, while engaging in resource-seeking investment in less developed countries and in market- and

strategic asset-seeking investment in more-developed countries.

The deepening of these trends will eventually turn countries into net outward investors (*stage 4*). Location advantages become almost entirely based on created assets, and the firms' ownership advantages that result from managing and coordinating geographically dispersed assets (O_t advantages) become far more important than those based on the home country's specific characteristics (O_a advantages). Intra-industry production is a consequence of the growing similarity in the advantages of countries at this stage, and it generally follows prior growth in intra-industry trade. In part, it results from an increasing propensity by transnational corporations (TNCs) to internalize trade and production (Dunning and Narula, 1996a, p. 7).

Finally, Dunning (1986, pp. 30-31) and Dunning and Narula (1996a, pp. 7-9) postulate the existence of a *stage 5* in the IDP, corresponding to today's situation in the leading developed countries. With permanently high stocks of both inward and outward FDI, the net outward investment (NOI) position of stage-5 countries will revolve around zero, alternating between positive and negative balances, depending on the short-term evolution of exchange rates and economic cycles. "Beyond a certain point in the IDP, the absolute size of GNP is no longer a reliable guide of a country's competitiveness; neither, indeed, is its NOI position" (Dunning and Narula, 1996a, p. 11).

Dunning and Narula (1996a) suggest, however, that the shape and position of the IDP vary widely across individual countries as a result of specific economic structures (market size, availability of natural resources), the type of FDI undertaken and government policies. This raises the question of whether the concept of an individual country's IDP is of any use. In other words, do individual countries follow a pattern similar to the one suggested in the theory, and which has been extensively supported by cross-section tests (Dunning, 1981a; Tolentino, 1987; Narula, 1996)?

Theory suggests the notion of an IDP for individual countries and even industries inside countries. However, empirical tests of this are rare, a notable exception being those in Dunning and Narula (1996b). The lack of long statistical series of FDI stocks, in particular,

makes this a difficult task. This could probably explain researchers' apparent reluctance to test the hypothesis. Also, the interactions between the large number of variables that affect inward FDI, outward FDI and GDP growth limit the scope for secure conclusions.

Testing the Portuguese IDP

This test of the Portuguese IDP uses a recently available new data set on inward and outward FDI flows. It examines whether Portugal's FDI is following a path similar to the one described by the IDP theorem. The data available, however, do not permit an analysis desegregated by industry or country of origin/destination. From that perspective, the aim of this article is to provide a first step towards a more integrated evaluation of the Portuguese IDP.

The data

To our knowledge, apart from those based on past flows, no estimations exist of inward or outward stocks of FDI for Portugal. Even the data on flows used to be largely unreliable and figures for different periods could not be easily put together to build a coherent long series (Taveira, 1984). However, as part of a major exercise to review Portugal's long-term macroeconomic data, the Bank of Portugal has published updated figures on FDI flows between 1965 and 1993 (Banco de Portugal, 1997). These data are now consistent and comparable with more recent statistics on FDI produced by the same institution (Banco de Portugal); thus the series can run between 1965 and 1996.²

In our analysis, a further step was to estimate FDI flows before 1965. The Bank of Portugal keeps a record of medium- and long-term capital flows since 1943, but until 1963 only the aggregated

² The authors are grateful to António Agostinho, Department of Statistics and Economic Studies of the Bank of Portugal, for making the data available to them.

values were collected and published (Salgado de Matos, 1973). It was possible, in turn, to obtain estimates for FDI flows between 1943 and 1964 which were both fairly reliable and coherent with the new figures. The comparison was made by computing the ratio between the new values of FDI (as in Banco de Portugal, 1997), on the one hand, and the old values for medium- and long-run capital movements (Salgado de Matos, 1973, p. 111) between 1965 and 1974,³ on the other. This value (20.0 per cent for inward capital movements, and 8.2 per cent for outward capital movements) was then used to estimate the share of FDI in of medium- and long-term capital movements between 1943 and 1965.⁴

With this new series of inward and outward FDI flows, longer and more reliable than any other existing before, new estimates for foreign capital stocks were produced. Narula (1996, pp. 40-42) makes several criticisms of the use of FDI flows to estimate stocks. Apparently, the sum-of-flows method underestimates both inward and outward investment stocks, in particular for industrialized countries. But Narula (1996, p. 41) uses only five-year flows in his comparison with stocks. Our main point in estimating the FDI flows since 1943 was precisely to obtain a workable estimate of FDI stocks from the point from which flows are more reliable (1965). We expect this to improve the quality of our estimates for FDI stocks, even bearing in mind the shortcomings of the sum-of-flows method.

The Banco de Portugal (1997) also has revised GDP and population figures for the same period (1965-1993). For 1994 to 1996, estimations were constructed on the basis of growth rates implicit in nominal GDP (Banco de Portugal, various years a) and other sources' population estimates (Instituto Nacional de Estatística, 1997).⁵ A plot of the values obtained is presented in figure 1.

³ The data available made it possible to use a longer period, but the figures suggest that the changes brought about by the revolution in 1974 considerably modified the proportion of FDI in total capital movements.

⁴ A similar method was used by Salgado de Matos (1973) and Taveira (1984), but with a different data set.

Figure 1. GDP per capita versus net FDI per capita in Portugal, 1965-1996
(Thousand Portuguese escudos)

Source: authors' calculations based on Bank of Portugal and Instituto Nacional de Estatísticas data.

The function

Dunning (1981a, 1981b, 1986), Paz Estrella E. Tolentino (1987, 1993) and Narula (1996) used a quadratic function to describe the IDP curve. The observation of figure 1, however, suggests that it might not be the best fit. We decided to test two alternative models:

Model A:
$$\text{NFIpc} = \alpha + \beta_1 \text{GDPpc} + \beta_2 \text{GDPpc}^2 + \mu$$

Model B:
$$\text{NFIpc} = \alpha + \beta_1 \text{GDPpc}^3 + \beta_2 \text{GDPpc}^5 + \mu$$

⁵ We used estimates based on implicit growth rates instead of the figures published in those sources, because the latter were not consistent with the 1965-1993 series in Banco de Portugal (1997).

Where: $\text{NFIpc} = \text{Net Foreign Investment Stock per capita}$
(Outward FDI per capita - Inward FDI per capita)

$\text{GDPpc} = \text{Gross Domestic Product per capita}$

Although the choice of model B was partially based on the observation of figure 1, there is strong theoretical support for this rather unfriendly expression. Implicit in the quadratic function is the assumption that inward FDI is the engine of growth: NOI per capita decreases sharply in the early stages of the IDP (reflecting high inward FDI and low or nil outward FDI), while GDP per capita has a slow start. But this is not in line with the IDP rationale.

Dunning and Narula (1996a, p. 2) suggest that, in the first stage of the IDP, both inward and outward FDI will be very low. It is argued that governments must intervene “providing basic infrastructure and the upgrading of human capital via education and training” (p. 3). In other words, before a country can attract significant inward FDI, it must develop its location-advantages, including an increase in GDP per capita.⁶ Consequently, what is to be expected in the first stage is a more rapid increase in GDP per capita than in NOI per capita. Only in the second stage should the growth rate of the NOI per capita be expected to be higher than that of the GDP per capita (Dunning and Narula, 1996a, p. 4).

This evolution can be fully appropriated by model B. Having an inflection point to the left of the turning point (a minimum in our case), it represents a function where the dependent variable grows very slowly in the early stages. Only in a second stage does it grow faster than the independent variable. Nevertheless, it soon slows down and eventually reaches a minimum - the U-turn that corresponds to the transition between stages 2 and 3, when the country becomes a net outward investor.

⁶ Even if not a policy target in itself, GDP growth will inevitably be a consequence of such policies.

Estimation

The statistical software SPSS (version 7.0) was used for an ordinary least square estimation of the models described above. The results are presented in table 1.

Table 1. Estimation of the Portuguese IDP

Model A		Dependent variable: net FDI per capita				
R	R square	Adjusted R square	F	F (sig.)	DW	
0.993556	0.987147	0.986261	1113.675	0.000	0.641	
		Unstandardized coefficients		Standardized coefficients		
		β	Std. Error	beta	t	Sig.
(Constant)	0.98873555	2.155410737			0.45872	0.64985
GDPpc	-0.015531435	0.01098474	-0.12047		-1.41391	0.16803
GDPpc ²	-7.95595E-05	7.73498E-06	-0.87637		-10.28567	0.00000
Model B		Dependent variable: net FDI per capita				
R	R square	Adjusted R square	F	F (sig.)	DW	
0.999205	0.998411	0.998301	9108.059	0.000	1.670	
		Unstandardized coefficients		Standardized coefficients		
		β	Std. Error	beta	t	Sig.
(Constant)	-1.622025855	0.575861318			-2.81670	0.00864
GDPpc ³	-1.37645E-07	2.48157E-09	-2.151163		-55.46699	0.00000
GDPpc ⁵	3.67821E-14	1.18787E-15	1.20115		30.96463	0.00000

Source: authors' calculations.

Both estimates seem to give quite a good fit, although the quadratic function in model A has the wrong curvature. If the trend of the last two years continues, the goodness of the fit will erode, which suggests that model A is not a good description for the Portuguese IDP.

Model B, on the other hand, performs better by any standard and, as expected, provides very strong results: all the parameters estimated are highly significant (very strong t-tests), as seems to happen with the overall model (F-test significant at 1 per cent), and

the Durbin-Watson statistic does not seem to be a major problem. Fitted and real values can be compared in figure 2.

Figure 2. Estimation of the IDP of Portugal (model B)
(Thousand Portuguese escudos)

Source: Authors' calculations.

Comments

The regression provided above seems to support the claims that international investment follows a more or less predictable path, accompanying and influencing economic growth. It suggests that Portugal entered stage 2 of the IDP in the early 1980s, when GDP per capita reached 150,000-200,000 escudos (approximately \$3,000 at the time). The positive net increases in the country's outward FDI stock in 1995 and 1996 (despite still being largely negative) suggest that Portugal is now in stage 3.

This aggregate analysis must be treated with care, however. Despite what has been said, the classification of Portugal as a stage 1 country during the second half of the 1960s and the 1970s is difficult to support. Between 1965 and 1980, inward FDI averaged 0.5 per cent of GDP, and NOI averaged minus 0.4 per cent. Despite not being an outstanding value, it is by no means negligible. Also, it explains

why it seemed that Portugal was already approaching stage 3 both in 1975 and in 1988 (Narula, 1996, pp. 47-48).

In fact, it must be accepted that the transition from stage 1 to stage 2 happened years ago, in the early 1960s, after Portugal joined the European Free Trade Area (EFTA) as a founding member. EFTA membership, and not the level of GDP per capita or other economic characteristics of the country, seems to have been the element that triggered inflows of FDI (Salgado de Matos, 1973). The dictatorial regime that lasted until 1974 and the political and economic instability that followed probably deterred larger inflows of foreign investment. Between 1965 and 1975, they remained rather stable at around 0.4/0.5 per cent of GDP, dropping to 0.3 per cent between 1976 and 1979. Outward FDI flows, on the other hand, remained very low throughout this period, averaging just 0.1 per cent of GDP between 1965 and 1980.

Figure 3. FDI flows in Portugal, 1965-1996
(Per cent GDP and Portuguese escudos)

Source: Authors' calculations.

This picture changed dramatically after 1980, at least for inward FDI. As expected (Dunning, 1988; Dunning and Narula, 1996a), government policies played a significant role. During that period, not only did the Government mount a major effort to stabilize the economy and to upgrade Portugal's infrastructure and other domestic assets, but also, and in particular, it sought to attract inward FDI (Taveira, 1984, p. 192). Economic integration again played a substantial role. By the beginning of the 1980s, it was already clear that Portugal would soon join the European Economic Community. It did so in 1986, and this was followed by a dramatic increase in the stock of inward FDI. As in the 1960s, however, the new international conditions were accompanied by substantial changes in domestic macroeconomic and industrial policies, which makes it difficult, if not impossible, to distinguish between the two.

On the other hand, outward flows, which averaged less than 0.1 per cent during the 1980s (even lower than in the previous two decades), registered a sudden increase in the 1990s.⁷ It is very likely that this corresponds to the effect described by Dunning and Narula (1996a, p. 15): as a medium-income and reasonably fast growing industrializing nation, Portugal is expected to engage in strategic asset seeking investment. The European Union's Internal Market Programme can only increase this pressure. This hypothesis receives clear support from the fact that most of that outward FDI was directed towards other European Union countries, in particular the most developed ones (Banco de Portugal, various years b).

However, there is also growing evidence that several Portuguese firms are investing abroad to exploit their specific advantages. In particular, those investing in Central and Eastern Europe are expected to take advantage of the acquired knowledge of how to do business in fast-growing markets in the European semi-periphery, and probably also of technologies and firm structures well adapted to low-/medium-income countries strongly and increasingly integrated with the European Union. Again, this exploitation of

⁷ In 1993 and 1994, Portugal registered serious slowdowns in outward FDI flows, but this probably simply reflects the difficult economic conditions at home - GDP real growth rates of 0.2 per cent and 0.5 per cent, respectively.

ownership advantages by firms from middle-income countries in less developed markets is totally consistent with the IDP theory.

A last but not insignificant specificity of the Portuguese IDP is a major drop in inward FDI in the 1990s. After reaching 4.1 per cent of GDP in 1990, it plunged to a mere 0.6 per cent in 1996. In addition to the increase in outward FDI, this reduction was a key element responsible for the U-turn in the Portuguese IDP curve. There is no straightforward explanation for this fall, although it is believed that the political changes in Central and Eastern Europe may have played a role, for suddenly Portugal was no longer the lowest labour-cost location among the European democracies.

In any event, in 1995 and 1996, inward FDI flows were lower than outward flows for the first time in the country's recent history. The consequent increase in net outward stocks in those years - the last in our analysis - clearly influences our estimations. However, from the information available on the Portuguese economy and individual industries it is not certain whether the upturn shown in figure 2 will be sustained in the future.

Conclusion

The present analysis seems to give some support to the IDP paradigm. However, our findings for Portugal suggest that the IDP does not follow the previously assumed quadratic function. More important, the transformations that took place in the Portuguese economy can be reasonably well explained by the interaction between three factors. These are government policies that create public goods which firms in Portugal can internalize, indigenous resources and the evolution of inward and outward FDI stocks.

But this study of the Portuguese IDP also highlights some of the weaknesses of the paradigm. First of all, it is quite clear that the IDP cannot be used as a prediction mechanism. Data for 1975 and 1988 both suggested that Portugal was approaching stage 3 of the IDP (Narula, 1996), but it is now clear that this was not the case in either of these years, the former in particular. The unpredictability of

economic and non-economic variables is probably the reason for this limitation. Second, the IDP curve taken straightforwardly can be misleading. We have shown that it seemed that Portugal entered stage 2 only in the early 1980s, which was proved to be a miscalculation of some 20 years. A more careful analysis of the individual elements behind the IDP is obviously necessary. Finally, non-economic factors - EFTA and EEC membership, the 1974 revolution, and the political changes in Central and Eastern Europe - can be more important for the evolution of inward and outward FDI than the economic determinants usually discussed in the IDP theory. Despite the relevance of interaction between domestic economic variables and FDI flows and stocks, politics will always play a substantial role. It can be argued, as in Dunning and Narula (1996a), that this “politics” is simply one of the elements that will make each individual IDP idiosyncratic, like the possession of natural resources, but it must be admitted that this undermines the relevance of the paradigm.

Despite these shortcomings, it must be acknowledged that, as a dynamic analysis, the IDP is a major contribution to the theory of international investment. It can largely explain the role of the Government of Portugal in the evolution of the competitiveness of Portuguese enterprises and of Portugal as a production location. It also predicts fairly well the direction of Portuguese outward FDI. Also, it highlights the relevance of the two-way relationship between inward flows and the upgrading of the country’s location advantages, on the one hand, and with the development of domestic firms’ ownership advantages on the other hand. Undoubtedly, further research on the lines presented here is needed in order to fully address the potential of the theory. ■

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