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Development and insularity in São Tomé and Príncipe

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Abstract
The aim of the study is to analyze the functioning of the economic system of São Tomé and Príncipe. The country's economy is framed and characterized and we study the attitudes and perspectives of the Santomean. We conclude that the State prefers to promote infrastructure building with external support and to keep a policy of self-supplying. Foreign investors choose to use the productive potential: tourism, cocoa, fishing, oil, and logistics. Development will arise when the State creates conditions for channeling domestic savings into sustainable investments in tourism, cocoa, fishing, oil, and logistics.

1. Introduction
Our goal is to analyze and diagnose the functioning of the economic system of São Tomé and Príncipe (STP), having as reference other peripheral developing island countries; to identify and assess the extent to which factors associated with insularity affect the functioning of the economic system; to examine the attitudes and perspectives of the Santomean regarding the development of their country; and to propose measures to act on the correctable insularity factors. For that end, we propose indicators that integrate the scale and access costs and we compares the economic performance of various African countries (section 2); we estimate a base model for mixed economies (section 3); we analyze the Santomean perspectives for the development of their country using the Q method (section 4); and we suggest actions to promote development (section 5).

2. Insularity and development
The costs associated to the lack of dimension and access can be assessed through the losses of Total Economic Value (Figure 1). From this perspective, the way of overcoming the limitations of insularity is by increasing accessibility by mobilizing external demands, and by obtaining scale economies by specializing in competitive exports. Therefore, small countries and islands are open systems whose economies are strongly influenced by exports, by external aid, and by foreign remmitances (Read, 2001; Taglioni, 2009).

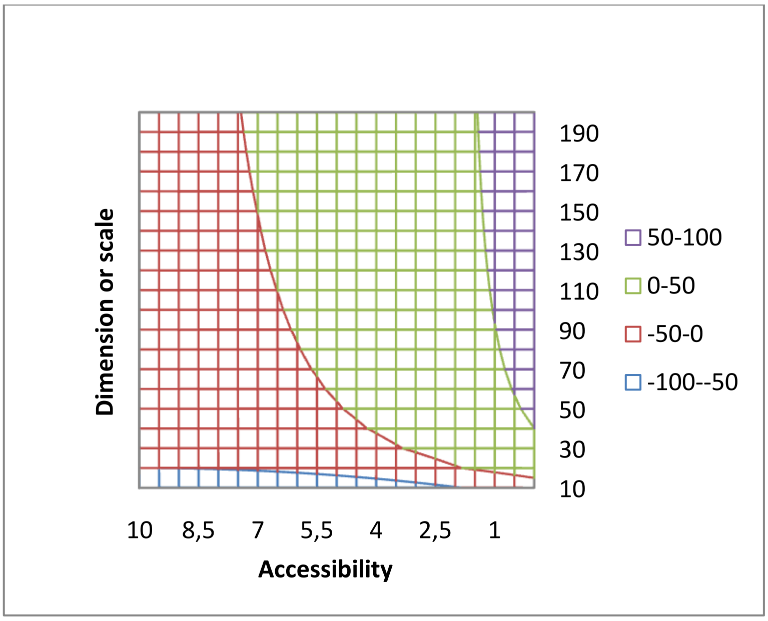

Figure 1. Total Economic Value, scale and accessibility

Based on a gravitational model, we looked for the relationship between international trade flows and the scale and access factors. The strong correlation between GDP *per capita* (GDPpc) and Potential

Product Demand *per capita* (PPDpc) is an expected result in economic theory, which associates the product to market size (Figure 2).

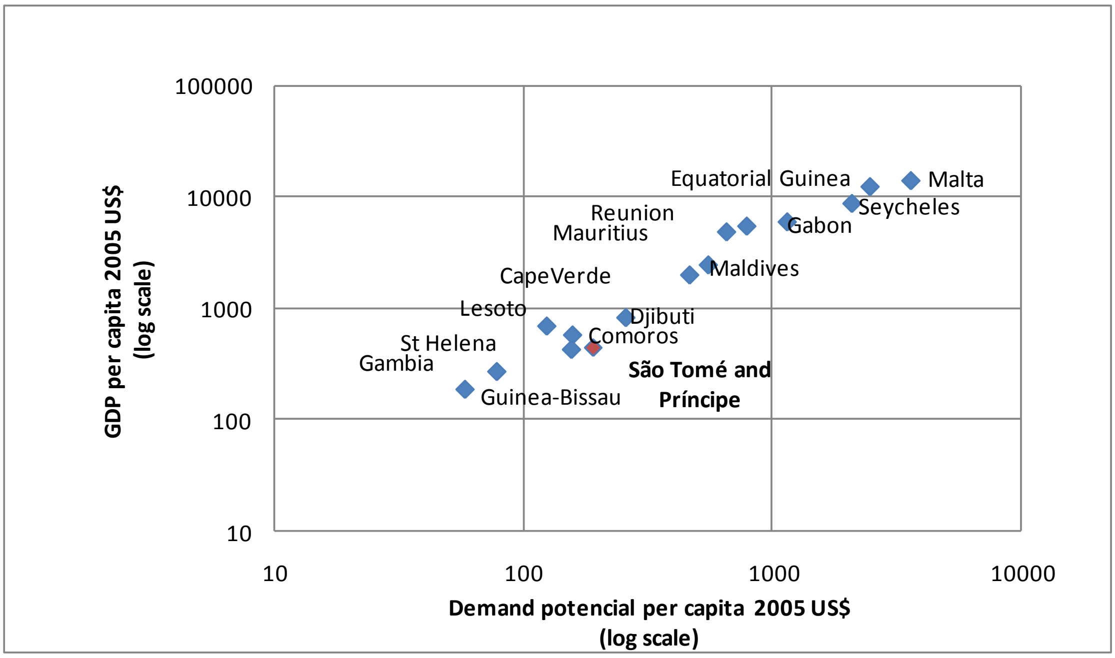

Figure 2. Relation between Demand Potential and GDP *per capita*

We also observe that: i) the improvement of accessibility has a positive impact on the Demand Potential *per capita* and on GDP *per capita*; ii) the increase in external performance influences the internal performance in open economies; iii) the increase of the internal market of small savings has a neglectable impact on GDP *per capita*. It is confirmed that small island economies dependend on scale limitations, which can be overcome by concentrating exports in competitive sectors, and are held by the lack of accessibility to external markets, which can be obtained with better connections to the exterior of two structural factors (Célimene and Salmon, 1995; Miras, 1997).

3. Insularity in São Tomé and Príncipe

The economic base model, emanating from the Keynesian model of actual demand, is an operational model suitable for analyzing the economies of small countries. The multiplier effect of income depends on the inverse of the participation rate [r = Pt/Et], where Pt = population and Et = employment; and on the service tax [s = NBE/Pt], where NBE = nonbasic employment; and on the total population, and, of course, basic employment Eb, associated with exports and foreign transfers:

$$Et = [1/(1-rs)]\ Eb; \qquad (1)$$

In an partially open economy, such as STP's, the economic system performance depends not only on basic employment (Eb) but also on the population living in the self-sufficient system {Pa = Pt - [r/(1-rs)] Eb} (Amaral e Dentinho, 2006).

$$Et = [1/(1-rs)]\ Eb + [s/(1-rs)]\ Pa \qquad (2)$$

From the projections of the Banco de Portugal (2005), assuming an activity rate of 40% and a potential level of openness to the exterior of 43% (estimated with the model from section 2), we can calculate the economic base of STP for the years 2006 to 2009 (Table 1).

We found that the activities stimulated by the economic base – targeted to or funded by the exterior – represent only 50% of the economy, being the rest of the economic activity justified by subsistence. External support to the State justifies 20% of the economy, exports 30% and self-supplying 50%. In the economic base of STP, tourism represents 30%, cocoa 16%, other exports varie around 25%, other services 11% , and private transfers 13%.

Table 1. Economic base of São Tomé and Príncipe for the years 2006 to 2009

	Million USD (2009 prices)	2006	2007	2008	2009
1	Cocoa exports	3	4	3	4
2	Other exports	6	4	10	5
3	Tourism	9	6	9	9
4	Services exports	4	2	2	2
5	Private transfers	2	2	3	4
6	External funding for public servants	9	8	8	12
7	External funding of public investments	7	4	2	20
8	Economic base of São Tomé and Príncipe (1+2+3+4+5+6)	40	30	37	56
9	Open economy GDP	92	72	86	130
10	Self supply GDP	78	108	105	71
11	GDP (9+10)	170	180	191	201
12	Weight of self supply in GDP	46%	60%	55%	35%
13	Dependence of the economic base on external support	40%	40%	27%	57%

Source: Banco de Portugal (2005) and own calculations

The specialization in the export sectors (tourism and cocoa) would cause a significant increase in GDP associated with an economy autonomous from external public support. An interesting scenario would be increase threefold the exports of cocoa and fivefold the tourism sector. The number of jobs would increase from 3800 (1100 in cocoa and 2700 in tourism) to 17600 (3300 in cocoa and 14700 in tourism); GDPpc would increase by 17% and the economy would be completely open.

Focusing on self-supplying and on depeding on foreign support does not bring great benefits to the country's development. In fact, substituting cocoa exports and tourism for external support would lead to a GDPpc reduction of 70% of the present level, increasing poverty and urban and rural environmental degradation.

4. Perspectives for the development of São Tomé and Príncipe

The purpose of this section is to analyze the attitudes and values of Santomean stakeholders and agents by using a methodology that gathers statements from the government programme, from the press, and from two dozen interviews with politicians, technicians, farmers, teachers, and businessmen. The statements were synthesed into 25 sentences, which were then presented to 16 Santomean citizens or other residents for sorting and ranking. Data were analyzed with PQMethod 2.11 software, resulting into three perspectives:

- Perspective A, associated maily with people working in foreign NGOs, gives high importance to unemployment and to the negative effect of family relations in the sphere of public decision;
- Perspective B is connected with people studying abroad. They think that it is difficult to secure qualified human resources and the political class contributes both directly and indirectly to poor governance, political instability and the poor use of resources and projects;
- Perspective C is linked with agents living in the country. Similarly to the students, they mention the problems of political instability and energy issues, and like the NGOs, they emphasize the need for skilled human resources and food security. However, unlike these, they downplay the issues of hunger, productivity and connectivity of the country, and the poor quality of the political class.

There is consensus that insularity is ambiguous in terms of advantages and disadvantages, that equal prices for goods and services should be ensured in São Tomé and in Príncipe, that the country must have a university, that development needs of vision, and that there is famine in city, but these issues had intermediate ranking. Finally, there is no agreement between perspectives on the country’s ability to trade oil, on the existence of unemployment, or on the existence of political decisions with personal background.

5. Conclusions

After the analysis of economic and societal data, the alternative strategies are obvious to the authors:

- The improvement of infrastructures funded by foreign aid and the implementing of a strategy for self-supplying and food safety, which has also been proposed by the reports of foreign aid institutions (BAD, 2004; UN, 2004; FAO, 2005; EU, 2006; Monge-Roffarello *et al.*, 2004; Scopa *et al.*, 2009) and which is somehow conveyed by the residents;

- The investment in tradable goods and services, giving priority to tourism (UNCTAD, 2001), cocoa, and fishing within a model of productive specialization geared towards the exterior. In this case, it is necessary to improve the airport and the port (RDSTP, 2006; Crouzier *et al.*, 2009), to attach the Dobra to a stronger currency, to invest in information technologies (Kirkman, 2002), and to attract foreign investment, especially in tourism and ecotourism (Baldacchino, 2004) or in specialized services (Azzopardi, 2004). First sale markets for fish should encourage exports, and cocoa producers should seek niche markets to increase the national share of value added of the respective value chain.

The best bet is to invest in both strategies: on one hand, a state that sponsors infrastructures with the support of public foreign transfers and keeps a policy of self-supplying to avoid any shortages, and on the other hand, having foreign investors who engage in the exploitation of available resources in the archipelago, especially in the direct operation of tourism and cocoa and also (by licensing agreements with little impact on local employment) the creation of more or less fixed fisheries platforms taking advantage of the central logistics of the Gulf of Guinea (Shipping Consultants Ocean, 2008), and oil.

Development will arise when there is more internalising of the value added of tourism, fisheries, logistics, cocoa, and oil, and when food security issues are addressed based on customs policies, and when there are conditions for channeling domestic savings into well-remunerated investments.

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