

Shortcomings of current Brazilian transportation policy and planning and the need for an integrated approach with regional development

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SHORTCOMINGS OF CURRENT BRAZILIAN TRANSPORTATION POLICY AND PLANNING AND THE NEED FOR AN INTEGRATED APPROACH WITH REGIONAL DEVELOPMENT

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ABSTRACT

The present paper discusses the limiting conditions which transportation planning is submitted to in Brazil. Especially the political framework of the decision process of transportation investment is analyzed in order to demonstrate that a rational and technocratic planning approach may be disregarded by the superior decision makers, if particular and regional interests are not considered. Another aspect considered is the spatial scale of the policy: uniform and centralized policies that do not take in account regional particularities may not have an efficient outcome since they are not prone to mobilize the regional society, which is critical to their success. A third aspect is funding of transportation investment: albeit the different transportation infrastructure investment projects may have a positive B/C outcome, this outcome does not imply that the project is fiscally sustainable, i.e., that the resulting local and regional economic growth may render sufficient fiscal receipts in order to cover governmental costs. All these considerations lead to the need of a new project approach that is called territorial program, which should integrate infra-structure projects with industrial development project and be designed at local level, involving relevant local stakeholders. By doing this, political feasibility, economic efficiency and fiscal sustainability would be more easily attained. The paper exposes then the concept of territorial program and illustrates it by an practical example.

Keywords: policy and planning, fiscal sustainability, territorial program

1 – INTRODUCTION

The essence and methodology of transport planning has deserved a copious research effort for the last fifty years, still is remains a sphinx. The most different frameworks have been proposed in order to understand this relevant subject of governmental action, which dominates a big lot the life, and

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economy of society. (Banister 2004, Black 2003, Dimitiou and Gackenheimer 2011) The frontiers of transportation as an ontological subject to other phenomena as land use, environment, economic development, culture and many others are so porous, that the focus of the political and scientific issues on transportation may be constantly endangered (Magalhães 2010).

Transportation planners are often accused to be myopic with respect to the negative effects of transportation on the growth of the cities and on regional development, creating an environmentally unsustainable dependence of the life on the transportation system (Banister 2004, Black 2003). In order to adapt the to these and other criticisms, transportation research has become increasingly transdisciplinary.

On the other side, the transport planning and policy practice has not always followed this transdisciplinary dialogue, and the bridges to other resorts of governmental policy are still precarious. Although strategic transportation planning may, by law, preceded by considerations on territorial planning, political and economic interests involved in infrastructure construction and the development of the industry of transportation equipment (especially of private automobile) are too often in struggle with “open-minded” transport planners (Banister 2004, Docherty and Shaw 2008). As the inauguration of substantial public works is still a main showcase for successful public administration, transport planning is systematically pressed to deliver new infrastructure investment proposals, which will be defended as imperative for economic growth (Sactra 1999, Banister and Berechman 2000, Vickerman 2007, Yu 2012).

On the other side, transport policy and investment are too often disturbed by the circumstances of politics and the economic environment. Changes in administration may too often disrupt projects, not only because of paradigmatic changes, but also as result of open political confrontation between leaders and supporting interest groups (Altschuler and Luberoff 2003). As infrastructure investment demands enormous fiscal resources, even when private investment is involved in (Zulhabri and Abdullah 2006, Griffin 1999, GHK Research Training 2001, Spoehr 2002), it may increase unsustainably public debt, and in the case of economic crisis, the fiscal space for further investment and even ordinary expenses is abruptly reduced, leading to a traumatic interruption of the projects (Brumby and Verhoeven 2010).

It is the aim of this paper to discuss these and other aspects of real life transportation planning and to indicate necessary extensions of the respective research and policy. However, the analysis leads to the proposal and description of a new planning and policy framework, where politics, broader social, economic and territorial development and infrastructure investment are mutually integrated, which is called the territorial program.

The subsequent section (2) deals with general aspects of development, the role of the State and of its planning, and is followed by a exposition of conflicts, which the planners are confronted with in real life (Section 3). This section closes with a list of postulates for the planning practice that justifies the territorial program approach, which is dealt with in Section 4. After the description of the territorial program concept and the broad explanation of its methodology, the subsequent Section 5 illustrates its applicability in a (still) hypothetical study case. Section 6 closes the paper with concluding remarks.

2 - ON DEVELOPMENT, THE STATE AND PLANNING

As the paper has not only the purpose of a objective scientific discussion, but also and mainly the proposal of a new integrative approach for the planning and policy practice, the specific transport

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planning issue has to be embedded in a broader comprehension of the aims and context of development and state action. Thus the section starts with general teleological statements on the society's development which shall function as a vision and a guideline to evaluate the common practice and to propose correctives to the problems and deviations that will be exposed in the next Section.

2.1 - The broader aim: national development

Of course, considerations on development must not naively disregard irreconcilable differences between worldviews and paradigms, as well the necessary confrontation between class and group interests. However, the need for any progress and immediate solution of the most acute problems that inflict human society requires the search for a platform of minimal consensus, especially in a era where the two major paradigms that have dominated politics and policies for the last two centuries, the paradigms of liberalism and socialism, have reached a state of depletion as a source of applicable and practical recipes for everyday public policy (Peixoto 1998, Leiss 2009, Bobbio 2004, Bobbio 2005, Mészáros 2002).

In this situation of paradigmatic disorientation, a brief look on the Constitution of each country may be appropriated. This should not be viewed as not a mere sterile legalistic exercise, as these Constitutions have in the rule arisen as a sort of institutionalized consensus with respect to values and rules that should govern the respective national society. In the Brazilian case, the Article 3 of its Constitution declares explicitly as the fundamental objectives of the Federal Republic of Brazil the building up of a society ruled by the values of freedom, social justice and solidarity; the promotion of the national development; the abolition of poverty as well the reduction of the social and regional inequalities; and the promotion of everybody's wellbeing, without prejudice with regard to origin, race, sex, age and other forms of discrimination.

These values and principles may reflect simple (simplistic?) ordinary common sense, but to put them straightforward into practice in a highly conflictive environment would be indeed a titanic challenge. Especially the directives of national development, of the abolition of poverty, as well of the promotion of everybody's wellbeing will require the building up and putting into practice of an economic process that is able to provide the minimally necessary social and material means. If we try to resume broadly the main lessons of Economic Theory and History of the Economic Thought (Barro and Sala-i-Martin 2004, Aghion and Durlauf 2005, Liu and Premus 2000, Alesina and Perotti 1994, Vamvakidis 1998, Klenow and Rodríguez-Clare 1997, Alfaro et al. 2004, Pritchett 2000, Navaretti and Tarr 2000, Wong et al. 2005, Christopoulos and Tsionas 2004, Li and Liu 2005, Loayza et al. 2004, Fatás and Mihov 2005, Easterly and Levine 2001, Romer 1990), following requirements for the building up such a economic process could be listed: a) a consistent mobilization of the economic activity, with the aim to guarantee an accelerated but balanced growth process; b) subsequently, the most full development of human capital, whereby the equality of opportunities shall be granted, the consequent expansive needs be met and self-improvement be incentivated; c) the optimized use of different resources, both natural or produced material and human resources, assuring efficiency and efficacy of the economic process; d) the most pressing issue is environmental sustainability and the cautious use of non renewable resources; e) for each nation, the competitive standing of its economy in the international market of goods and capital is an unavoidable imperative; this implies not only the attractiveness for capital but also the capacity of acquire strategic goods, both in the most possible convenient conditions; as well the building up of competitiveness of the respective exportation; f) with regard to the financial aspect and to macroeconomic management, the most painful lessons of the recent past have taught to the

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Brazilian politicians of any colour the value of fiscal discipline, of the equilibrium in the balance of payments and the effective shielding against international crises; g) all these postulates require to step consequently up the democratic process. These directives shall serve as a framework for the further development of the arguments in this paper.

2.2- The Role of the State

The directives listed in the previous subsection pose a enormous collective organization challenge, which only the State has institutional power and capacity to command, despite the call for less State involvement, which has been in vogue during the recent liberalistic era (Jänicke 1990, Chesterman et al. 2005, Milliken 2003, Rotberg 2004). Especially the present global crisis put in evidence the need for stronger intervention, when the market mechanism fail (Winston 2006, Ritholtz 2009, Kolb 2010). On the other side, this renewed recognition of the constructive and corrective role of the State shall not imply a return to interventionist excesses that have proven dysfunctional in the last Century: both the totalitarian planned economy and non-totalitarian, still comprehensive and fiscally unsustainable provision of public services have led to a standstill of the growth process (Jänicke 1990).

In the search for a intermediate dosage between minimalist and maximalist State intervention, the authors of the paper dare to propose a new paradigm: instead of the comprehensively providing State and the restrictively regulating State one should search for a new concept that would be the orchestrating State. The role of the State accordingly to this new paradigm would be to strongly incentive and coordinate the initiatives by different groups and organizations within society, whereby it should supplement the creative force of the market in the exactly indispensable measure, but also make the best efforts to ensure an environment of consensus and cooperation that would be minimally indispensable. The instruments of this concept of State are already at disposal, which are regulation, incentives, eventual public investment or direct provision; political consensus building and guaranteeing of civility; education and diffusion of collective knowledge. But the innovative dominant axis of State action would not be to substitute the market nor only to supervise it distantly, but to incentive actively and coordinate the initiatives by the most different segments of the society, ensuring the socio-diversity of the provision of the collective needs.

The building up of this new concept for State action will require many efforts with the aim to reinforce its capacity for a) monitor, orientate and readjust the behavior of the agents of the society; b) to put into practice its public policies; c) to ensure the provision of public goods and services (either by direct production or by delegating it to the private sector); d) to manage properly its financial resources and to channel them effectively for the funding of the public activities; e) ensuring the monetary stability. Given the abundance of activity fields involved in, the State has to ensure the minimal organizational conditions for meeting the needs efficiently and effectively, not only in present times, but also in the future. As a corollary, the State will be in need of an effective strategic planning.

2.3 - The governmental Planning

During the recent liberalistic era, even the Governmental planning has been submitted to a demoralization campaign (Boettke 1994, Lachenmeyer 1980, DiMento 1980). In Brazil, the decadence of strategic development planning during the crisis decades (1980-2000) was due not only to these ideological signals ("less planning, more doing") but also to the actual incapacity of

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public investment as a cause of fiscal breakdown (Melo 2011, Rezende 2011). The economic recovery during the first decade of the present century has enabled the come-back of the long-time tradition of governmental planning in Brazil (Cardoso and Gimenez 2011, Rezende 2011).

The conclusions of the foregoing subsections reinforce the need for such a planning as a mean to assure coordination, efficiency and efficacy for the public policies, accordingly to established aims, directives and targets to be attained within a given planning horizon. Of course, planning practice itself is a constant subject of critical analysis, as the “reality to be planned” reveals to be quite disobedient to the premises and forecasted evolution established by the documents. Not mere governmental actions are at stake but also the whole future of society, and especially the major long-term investments, substantial governmental acquisitions as well industry incentives and regulations involve a big lot of private interests.

The conflicts and instabilities of political life, itself eminently unpredictable, requires a more flexible planning approach, although the broad visions for the future are in the rule relatively stable and less vulnerable do political changes (Cardoso Jr and Gimenez 2011, Santos 2011, Cardoso Jr and Mattos 2011). But the search for more effectiveness of the planning practice requires that the concrete operational problems are recognized and dealt with, and that better procedures are developed in order to dissolve the more severe bottlenecks of the governmental action.

As before mentioned, Brazil has a long-time planning practice (Cardoso Jr and Gimenez 2011), which is being recovered after a long crisis, as the resumed growth process has created new fiscal space and allowed more daring investment and development dreams. The present time efforts to reconstruct the planning system in a context where rigorous fiscal discipline is a sacrosanct principle, resulting from the lessons learned during the economic crisis, have led to the setup of new methodological paradigms. In first place, the planning practice shall clearly directed towards the ends. Presently, the strategic directive to combine economic growth with stability and social justice is dominant (Rousseff 2012), but it may not always reflect the concrete projects and regulatory reforms, as they arise also as a result from an acid dispute between contrary interests.

Secondly, planning efficiency requires the adoption of the following methodological principles (Melo 2011): a) the planning framework shall be composed of a clear and hierarchical structure of programs and macro projects with respect to the different regions and subregions, industries; b) the planning framework must be flexible enough to resist to different risks and uncertainties that inherent to the development process; c) the planning framework must include a strategy for territorial development, whereby the different sectoral policies are integrated to the concrete potentials and major development objectives of each region; d) the planning framework shall involve society during its setting up and implementation, ensuring that the society is the strongest defendant of a good planning practice; e) the planning framework shall provide spaces for investment opportunities that are already on the agenda; f) the planning framework shall include the funding strategies of the foreseen actions.

In Brazil, the unity of planning, management and funding (“management cycle”) has been regarded as a major methodological principle, whereby the planning framework is structured in programs which are defined accordingly to the identified main problems as well opportunities (Cardoso Jr and Matos 2011). Each program shall be affixed to objectives and indicators, which will enable their evaluation and public scrutiny. Nevertheless, the present planning practice recognizes its clear submission to politics, which is not regarded as evil but a moment of democratic process (Santos 2011). The central piece of the planning framework the Multi-year Investment Plan (PPA) shall reflect the strategic priorities of the elected government.

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With specific respect to the transport planning process, Brazil can show a long time tradition also in this aspect. Since the thirties of the past century, road and railways plans have been established with a perspective to integrate the huge national territory. Especially during the era of stronger State-led development (1950-1980), the construction of the road network has followed such straightforward territorial strategies (GEIPOT 2001). Urban transport planning, however, has a more recent beginning (sixties), whereby the model-led methodology has been adopted, without any integration between transport and land use or urban planning; only Curitiba, which has been for decade an international showcase, has submitted the development of its famous end then innovative bus corridors to a predominant urban development strategy.

However, the economic crisis has turned actually superfluous any effort to plan investment needs accordingly to an ambitious territorial development strategy. Instead of forwardlooking network construction strategy, the planning efforts have given priority to select the links that should at least be maintained, accordingly to their relevance for the exporting sectors. This “export-corridors” strategy has dominated until now the national transport planning (Castro 1995, Couto 2006, Padula 2011), even in the present era, where the easement of the macroeconomic restrictions should allow the resumption of a more emphatic orientation of transport planning towards the full development of the still unequal national territory.

This does not mean that no attempts have been made to resume territorial planning and to submit the major infrastructure investment to a territorial development strategy. However, in the nineties, the territorial strategy still cut off the territory into mainly export oriented corridors (“development axis” strategy; see *Avança Brasil* 2002), whereas in the first decade of the present century, priority has been given to a strategy which is oriented towards the ripening of more evenly distributed regional poles (CGEE 2006). Nevertheless, until now the paradigm of transport planning gives priority to eliminate logistic bottlenecks mainly for the export flows. As shown in Figure 1, the national Transport Ministry has even adopted a strategic territorial subdivision which confronts with the one prescribed by the Planning Ministry (Ministério dos Transportes 2012): its “vector” strategy still heirs the export corridor orientation of the era of economic crisis.

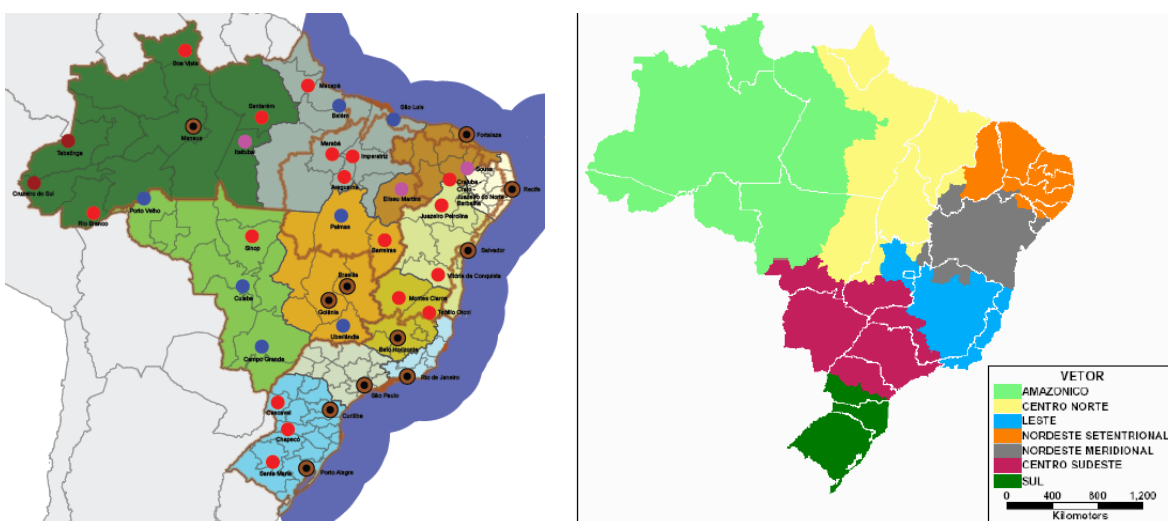


Figure 1 – Confronting differences between the territorial strategies of the Planning and Transport Ministry

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Presently, the National Logistic and Transportation Plan (PNLT), which has given birth to a more recent National Integrated Logistic Plan (PNLI, essentially an investment program), chooses the investment priorities accordingly to the ratio between traffic volume and capacity. But everyday politics, moved by regional interests in more straightforward integration and in the construction of locational advantages of the less developed regions, have forced to concessions by traffic model dependent technocrats of the Ministry, so that “technically” decided projects (on the basis of congestion criteria) are complemented by “politically” decided ones (Ministério dos Transportes and Ministério da Defesa 2009).

3 - THE PLANNERS´ HEADACHES

3.1 – The main conflicts in the everyday planning and management practice

Although governmental planning is recovering its legitimacy and role, its actual implementation goes through a via crucis of conflicts, which Cardoso and Matos (2011) point out for the Brazilian case: a) the democratic institutions and the agencies of the State, especially those which are involved in strategic planning and decisions, are constantly subject to pressure and capture by powerful interest groups; b) the implementation of the enacted plans are vulnerable to political instability and uncertainty; c) financial bottlenecks may still impair the smooth implementation of the plans; although the recent resumption of economic growth has alleviated this restriction, the international crisis requires added prudence in the fiscal and macroeconomic management; d) as a “cursed heritage” of the long Brazilian crisis and of the liberalistic delegitimation of the State as an active driver of the economy, many governmental agencies have still not been recovered from the subsequent disruption; presently, the intellectual capital in Government is concentrated in the central agencies, whereas the executing agencies are relatively depleted of technical expertise; e) the functional and operational integration between agencies are poor, leading to a duplication of responsibilities and competition for decision power in some politically key sectors; f) the proliferation of controlling agencies and procedures suffocates the implementation of the plans, programs and projects by the agencies; g) although there has been a progress in the evaluation procedures with respect to the control of expenses and to the efficiency of the public administration, several agencies still do not have finalistic indicators which are required by an end-oriented planning framework; h) the full application of the management cycle paradigm (plan-budget-execute) is still impaired in the practice, since the Federal Revenue Office is not integrated into the management routine of the agencies; i) for its part, the planning agency does not involve itself in the execution of the plans, programs and projects and does not take any responsibility for the results.

In turn, Santos (2011) adds other practical issues: a) how to implement policies of the central government: should they be implemented by agencies of the central government or delegated to regional and local governments? How to ensure then the effective collaboration between the centralized and decentralized agencies? b) how to ensure effective citizens´ participation? How to overcome the limits of councils and public hearings? c) how to insert in the design and execution of public policies the creative and financial potential of the private sector and of non-governmental organizations? d) how to insert into the strategic plan the continuous and emergencies actions and services? e) how to integrate and harmonize functionally public policies and actions of different natures (provision of services, production of goods and values; regulation and control; subventions)? f) how to integrate the different financial resources of the Government (no reimbursable budget resources, share in equities, public and mixed loans, and the like)? g) how to coordinate strategically the actions and results with different time horizons? h) how to design the projects and actions on the basis of a consistent territorial strategy?

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In principle, a big lot of the difficulties are tied to a political struggle for spaces of power, although some operational and technical difficulties in the implementation of the management cycle framework may be pointed out. The particular interests of powerful regional and sectoral stakeholders may lead to turn the policies, plans and programs disconnected and fragmented. Another key aspect is the lack of technical skills caused by the mentioned disruption of the agencies (Ministério do Planejamento, Orçamento e Gestão and Secretaria de Gestão 2002).

All these aspects should be taken in account by the researchers on government planning, who cannot anymore rely on simplistic rationalist frameworks. Flexibility and adaptability and, above all, the capacity of the planners to deal with the different stakeholders are key qualities that are increasingly required for an effective framework (Santos 2011, Rezende 2011, Melo 2011)

3.2 - The stakeholders

Conflicts within Public Administration pervade the different levels of decision making, from the strategic until the operational ones. Internal and external vested interests are in constant struggle, and the imposition of a clear leadership is not straightforward. Even superordinated agencies as a Planning Ministry are constantly challenged by sectoral or territorial agencies with stronger industrial constituencies, reducing the role of the first one to collect data, to organize preparatory studies and to establish vague directives and targets.

This may be due to the fact that the agencies with more executing character deal more directly with the concrete projects and the corresponding resources that are hotly disputed by the stakeholders, whereas the ones responsible for the strategic planning work at a relatively abstract level that does not concern their immediate investment interests (Melo 2011). However, this hierarchical reversal of power may reinforce a dysfunctional fragmentation of the public policy.

Hence, the capacity of the central planning agencies to negotiate effectively with other agencies is a critical success factor for the strategic management, which cannot be put into practice solely by coercive orders. This is especially true in a political system where the president or governor comes to power by means of a coalition of several parties and where the ministerial offices are used as a political compensation for the support by the allied parties (Melo 2011).

In general, many of the government programs and projects are not decided on the basis of a strategic "logical framework" alone, but moreover as a result of concrete imposition by supportive and politically strong stakeholders. Therefore, the participation of these and other interest groups in the design and execution of the plans, programs and projects is at least unavoidable, and the governmental officials have to learn work in a network of stakeholders and to share with them the reflection on the needs of the society.

3.3 - The territorial issue

The governmental policies require a deep concern for the construction of the national, regional and local territory in view of the spatial disparities and inequalities. And it is in the interest of the competitiveness of a national economy to foster the local potentials of the different parts of the territory, which are latent and inactive, or submitted to exploitation by economic forces of external origins, which allow at best a limited and distorted development. This territorial concern means for the design and execution of the governmental plans, programs and projects that they should adopt

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an appropriated territorial scale, what implies that some territorial differentiation should be considered, as blind uniformity of the measures could reinforce the already dominant spatial concentration and inequalities. For example, a nationwide policy or regulation that shall foster a particular industry will favor the regions where they are already concentrated, and less the regions with other industrial profile.

This territorial “eye” of the strategic planning will also foster the coordination between the initiatives of the different sectoral resorts (infrastructure, environment, housing, education and health, and the like), which may result inefficient, if each resort adopts different spatial strategies for the respective actions and investments. In Brazil, the systematic territorial planning is in its beginning, although there have been several initiatives to develop the major “hinterlands” of the national territory (GEIPOT 2001). The most recent attempts to coordinate governmental investments and actions accordingly to a more proactive territorial strategy have been the National Development Axis, during the Cardoso Administration; and more recently (2008), the Studies for the Territorial Dimension of the Multi-year Investment Plan (CGEE 2006). In practice, however, most of the governmental policies still are “territorially” blind, and this may be observed when different resorts adopt different territorial cuttings (see above).

Last but not least, the policies that are designed more consistently with the regional potential and interests of the respective relevant stakeholders may obtain stronger support and mobilization by the local/regional agents, and therefore obtain better results than policies which are imposed from the Central Governmental “malls”, even with the best intentions. It shall not be forgotten, too, that the allied politicians that share the cabinet and parliamentary basis of the government have their territorial constituencies, which they have to account for.

3.4 - The funding issue

As shown before in Brazilian planning history, the availability of funds is an indispensable condition for planning, since without resources, planning actions and investment is an exercise without sense. In the rule, infrastructure investments are mainly fiscally financed, and therefore fiscal limits are a strong condition for investment space. On the other side, the applicability of the often hailed alternative of private funding by means of concession and public-private partnerships has shown to be restricted by many economic, financial, political and legal barriers: the difficult conditions for the financial feasibility of the infrastructure investments, the unpredictability of the market revenues, the political resistance against the introduction of fare, toll or other payments for using infrastructure and services that had been before delivered for free, the lack of an appropriated legal framework that would maintain the different economic and governmental risks under control, all these and other risky features of a PPP contract have implied that only a small part of the infrastructure investment opportunities have been effectively subject of private investment (Borges 2007).

Therefore, even if private investment should be regarded as an important supplement for infrastructure investment, the public funding remains the main solution, whereby the issue of fiscal limits continues to delimit severely the space for investment. In fact, the increasing demands for infrastructure investments of a modern economy burdens heavily the public finances, as expenses with their maintenance and operation and the with the debt service will also grow exponentially. In not few countries, the excessive financial liabilities imposed by infrastructure investments have produced a severe fiscal vulnerability that has been transformed into a general fiscal and economic crisis when the conditions of the world economy have worsened (Easterly et al. 2007, Budina et al. 2007, Lora 2007, Easterly and Servén 2003).

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Partly, the fiscal restrictions for infrastructure investment result from a distorted view of the actual public funding process, whereby the attention is turned towards immediate fiscal or loan credits and not to the ultimate sources of wealth generation in the society – the economic growth process – which would produce the fiscal resources for the investments and debt service. A definitive solution of the investment bottleneck would be then to link more strongly infrastructure projects to substantial and measurable revenue returns that could ensure their fiscal sustainability.

In fact, different international studies have shown a positive relationship between infrastructure investment and economic growth (Aschauer 1989, The World Bank 1994, Lu 1996, Banister and Berechman 2000, OCDE 2003, Estache and Fay 2007). However, this relationship refers to aggregated values of the investments and gross economic growth, and not to the results of isolated programs or projects. Descending to the more specific level of the programs and projects, a whole set of studies on the economic and fiscal impacts of infrastructure investment have demonstrated that only in exceptional cases a determined project may produce sufficient direct, indirect and induced effects on the local economy so that the resulting fiscal cash flow would be non-negative (Leistriz 1998, Prognos 2009, Haisch 2008, Pfähler et al. 1997, Heuer et al. 2005, Löhr and Fehres 2005, Reidenbach 2007, Reidenbach et al. 2007, Janssen-Timmen et al. 2002, Burchell et al. 1985, Cooke et al. 1996, Holtzheimer 1998, Siegel et al. 2000, Tischler and Tischler & Associates, Inc. 1989 and 1994, Investissement Québec 2001). In practice, the substantial part of the economic growth is ensured by the catalytic effects, which are the attraction of voluntary industrial investments due to the improvement of the locational advantages created by the improved infrastructure. But these are non-controllable effects and should not be considered in a rigorous feasibility study of infrastructure projects.

Moreover, in several cases the relationship between infrastructure investment and local growth may result negatively: they may stay idle due to wrong location or overdimension (white elephant); they may contribute to the loss of competitiveness of peripheral regions and to overconcentration in already competitive poles, especially when the infrastructure is blindly dimensioned accordingly to the results of demand prediction models, which may reflect an undesirable unequal territorial pattern of the economy and of the material flows, which would be additionally reinforced by the investment (Banister and Berechman 2000).

Strangely, the relationship between public investment, growth effect and revenue development is in the rule not considered in the so-called feasibility studies of these investments. The traditional studies oppose the concrete governmental costs risen by the projects to merely hypothetical monetary and non-monetary “benefits” for different social groups (users, beneficiaries, “society” in general). Once the project has “passed through the test” (or forced to pass through by political pressure), it is approved without any regard to the fiscal impact. The brake against over-indebtedness caused by a plenty of “feasible” projects come from the Treasury, which in moments of economic downturn simply turn off the money tap, independently from the positive and economic (and fiscal) impacts some cut projects still may deliver.

The tapping of the purse of some categories of beneficiaries of infrastructure investment (real estate owners and investors, car owners or drivers, employers, and the like) has led to interesting but very limited solutions, since the investment benefits are in the rule diffuse: even a spatial delimited infrastructure may affect positively industries and persons outside the immediate influence area because of the multiplying effects on the whole national economy.

3.5 - Some consequences for the planning strategy

All these comments on the shortcomings of the actual planning framework lead to the following set of theses: a) the public funding of infrastructure investment has to be based upon studies of the future economic and fiscal impact of the investment; b) in the measure that a infrastructure investment project is not able to deliver per se (including the direct, indirect and induced effects; see Leistritz 1998, Reidenbach et al. 2007) the sufficient value addition to the economy and the necessary fiscal return, it should be ensured that catalytic effects could supplement the necessary fiscal returns; c) this means, that the public infrastructure investment should be involved in a more comprehensive public and private investment program that would embrace direct industrial investment, whose direct, indirect and induced effects on the economy of the program area should supplement sufficiently the respective effects of the infrastructure project; d) on its turn, the infrastructure investment should ensure efficiency gains of the industrial plants and along the respective chains; e) both industrial and infrastructure investments should be supplemented by other public policies (housing, education, health, environmental protection etc.), in the measure that they contribute substantially to the value addition process.

A major conclusion arises from these theses, namely that the focus of the public (infrastructure) investment project has to be modified, moving from infrastructure to a more comprehensive program which will embrace coherently different industries and policies and ensure a stronger cooperation between public and private projects. This kind of comprehensive program is called here territorial program and constitutes the core of the proposal by the authors, which will be exposed and detailed in the next section. As it will be shown, this proposal does not concern solely the funding issue, but also the other exposed issues on the difficulties experienced by strategic planning of the government.

4 - THE INTEGRATED APPROACH: THE TERRITORIAL PROGRAM

4.1 – The concept of territorial program

The territorial program proposed by the authors should be composed of a coherent set of public and private investment projects on a determined (program) territory which could be classified into the following four categories:

- a) Locomotory productive projects: this category refers to industrial projects that are mainly responsible to add value to the territorial economy and to ensure fiscal sustainability as a result of the strong economic direct and indirect impacts they produce;
- b) Complementary productive projects: this category refers to industrial projects which are related with the locomotory projects, belonging to their productive chains;
- c) Integrative projects: this category refers to project not belonging to the productive chains of the former two project categories, but have a relevant catalytic effect on their value addition and on the general growth process; in the rule, they will comprise actions fostering entrepreneurship, education, training, health, housing, culture life, public safety and social promotion;
- d) Infrastructure project: these comprise not only transportation and logistics, but also other technical infrastructures as power, sewage, communication and the like;

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All these former project categories are inserted into a embracing landscape project, which will deliver a spatial arrangement that will explore spatial economies but also comply with the settled environmental, social and political requirements and other strategic aims. The aim of this project structure is to ensure a synergetic growth effect that should be sufficient to fund public investment and expenses within the time horizon of the program. This coherency will also help to turn feasible the private investment projects which will benefit of the public investments and expenses.

The territorial program shall mobilize the society, producing not only economic gains but also empowering the civil society, as the program will mainly develop the human potentials of the territory. More than a mere technocratic planning effort, the program will constitute a process of construction of space and of the society, whereby the conception and execution of the program will go through a complex political negotiation at national, regional and local level between the different involved stakeholders.

4.2 – Setting up territorial programs

The setting up of territorial programs as proposed here shall go along the following steps:

- a) Recognition of relevant stakeholders of the society and a building up of a coalition, stimulated by the Government;
- b) Definition of a set of public and private initiatives and of their location;
- c) Definition of the aims and requirements of the program (logical framework), which will in part reflect the already effective strategic and sectoral plans of the government, but also the concrete projects that have been decided by government, by the private sector and by NGOs;
- d) Setup of the analytical and design tools;
- e) Design, detailment and preliminary evaluation of the program and of the spatial design (landscape project);
- f) Final definition of the program and its execution, including the setup of a management framework, the financial closing and the political and legal management.

The program shall be coordinated and fostered by a promoting entity, which shall fulfil the following tasks:

- a) To recognize and to organize the private and public stakeholders and to ensure that their proposals for the program territorial are harmonized within the program;
- b) To organize the collection of data and information which are necessary for the design and execution of the program;
- c) To design the program and ensure the effective participation of the stakeholders, after having establishing the logical framework and requisites of the program;
- d) To provide the necessary analytical tools;
- e) To organize the legally mandatory studies, analyses and permits;
- f) To manage the execution of the program;
- g) To evaluate permanently the program with respect to the compliance of the settled requirements, with especial regard to the fiscal sustainability;

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- h) To assist the stakeholders and participant investors at the setup and closing of contracts and at eventual legal reforms;
- i) To manage the production, the storage, treatment and distribution of information which is indispensable for the design and execution of the program.

The promoting entity shall benefit from a broad operational autonomy and have at its disposal a team of skilled analysts and negotiators, whereby specialized studies may be subcontracted. On key aspect of the territorial program is its innovative funding strategy. As suggested by the Figure 2 below, the setup procedure starts from a given set of projects belonging to the categories listed above, which shall produce a new economic system (or landscape). On its turn, the income effects but also the negative and positive impacts on public finances of this new economic landscape are to be tested by different steps: if the different component projects may be supported by private finance, letting with the governmental only the investments and actions which are within its constitutional duties, the program may be considered fiscally sustainable if the flow of governmental expenses, investments and receipts comply with the fiscal sustainability rules which will be described further.

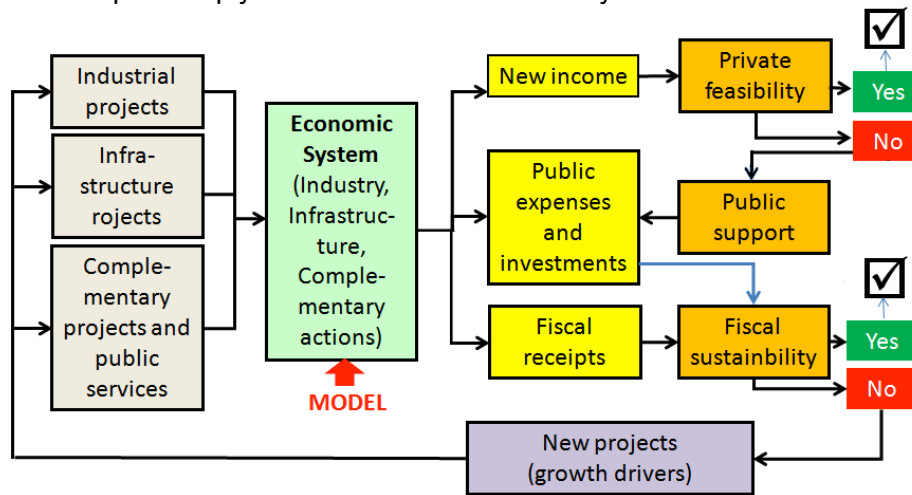


Figure 2 – The general funding strategy for territorial programs

But when major private investments are foreseen, its funding solely by ordinary private finance may turn out unfeasible, and the government may be involved with its support by different means (investment participation, subsidy, guarantees, and the like). In this case, additional expenses are to be included in the governmental cash flow. Once again, if the now increased flow of governmental expenses, investments and receipts comply with the fiscal sustainability rules, the program may be considered fiscally sustainable. In the case that the rules are not complied with, which means that the tested program is still not fiscally sustainable, the program should be enriched with additional “growth-driving” projects, which may be originated from the growth strategy of the territorial program. This done, the new set of project shall be once again submitted to the test procedure, until the fiscal sustainability requirements are satisfied.

4.3 - What should be expected from the territorial programs?

Once the concept of territorial program exposed, it is worth to return to the issues on public policies and planning which have been discussed in Section 2 and 3, and to show how the territorial programs could contribute to the solution of the explained problems. In fact, the territorial programs may firstly promote the overall economic development of the territories, as its design and execution shall mobilize the different stakeholders that relevant for regional growth. The financial and real economy are thereby articulated by projects which are strategically coherent and financially feasible

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and able to attract investors from inside and outside of the program territory. Also it is within the aims of the program to develop the human capital by means of program which foster entrepreneurship, education and training.

The territorial program approach shall then also contribute to turning more effective the government action and planning. As exposed above, the approach starts from a new vision of the duties of the State, focussing more its orchestrating rather than merely the providing and regulatory functions, whereby the Government shall submit its intervention instrument to a superior aim, which is to articulate and support the civil society in its search for solutions and initiatives. Within this context, the territorial programs will serve as an innovative but flexible planning instrument, which will mobilize the society, foster economic growth, ensure financial feasibility of the private sector projects and fiscal sustainability of the public ones; as well optimize spatial structures.

The introduction of a promoting entity shall ensure participative and politically realistic design of the programs and of the overall strategic planning as well their competent management. One main management aspect shall be precisely the management of conflicts between stakeholders. It should be stressed that the setup and execution of territorial program shall not be understood as a purely technocratic undertaking but a prominently political process. Above all, differently than other strategic territorial planning and project approaches which are already current in practice and in the literature (Albrechts 2006, Monclús 2003, Altschuler and Luberoff 2003, Pinson 2002, Levine 1987), the territorial programs shall have as a major aim to ensure that ambitious infrastructure investments and different direct and indirect support actions in favour the private sector which are involved in the program do not impair the fiscal equilibrium, but instead promote directly economic growth and generate substantial flow of private investment. By doing this, the programs shall augment substantially fiscal space.

5 - CASE PROPOSAL

The description of a (still hypothetical) study case may help to understand the scope of the proposed approach. One exercise has been already tried by a group of regional academics and regional entrepreneurs of the surrounding area of the Federal District in Brazil. The idea was to promote the economy of this surrounding area (precisely called Surrounding Region for Economic Integration – RIDE), since the central and regional government functions of the Federal District, including their multiplying effects, would any more be sufficient to employing all the workforce which is still being attracted to the national capital city.

Since the Midwest Region, in which the Capital is located, has been developed for decades as an important agro-industrial pole, the initial idea was to foster the production of different sort of meat for exportation; hereby, it should be given priority to poultry and bovine meat production and their respective production and trade chains. Focussing initially the poultry chain, it includes a) the raw material for food stuff (corn and soja bean) and covering the floor of the breeding and rising stations (rice husk and wood chips); b) different pharmaceuticals and nourishing inputs; c) the production of final rations; d) the creation of lineage of chicks; e) the operation of breeding and rising stations; f) the slaughterhouse, coldstore and meat industry; g) the respective manufacturing of machines, equipments, buildings and other infrastructures; and finally h) the trading, training, R&D, funding and advice services.

On the basis of the already spatial structure of the region, the different chain elements were distributed among the existing poles. Thereby, the aviary stations for breeding and rising of the

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animals should be grouped around a manufacturing unit composed of slaughterhouse, coldstore and meat production, which would also advice, determine the technological and managerial rules for the aviary stations, which should be in the hands of small family companies. As shown in the figure 3 below, these “production basins” (bright blue circles) should be complemented by manufacturing and supplying poles (equipment, construction materials, pharmaceuticals, rations, and the like; red and green circles, respectively) as well training and research centers (dark blue circles) within the region.

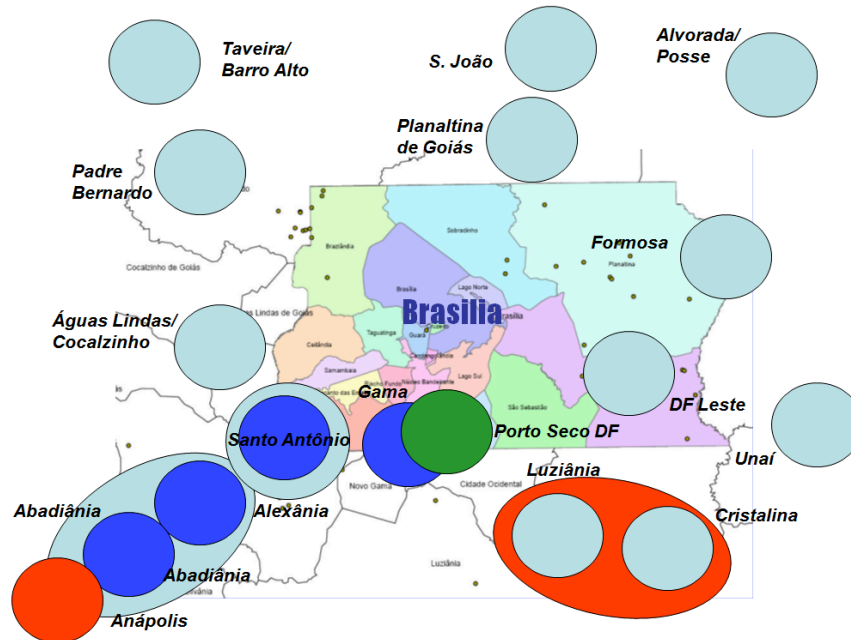


Figure 3 – The territorial structure of the Protein Belt Program

With respect to the infrastructure, the economic growth and fiscal effects of the program (to which the initiators gave the name “Protein Belt”) should give opportunity to a major investment program, which will include the overall modernization/complementation of the trunk and local roads and the development of the rail network of the program territory as well of the urban infrastructure (streets, sewage, power, school, hospital, etc.) of the activity poles (see Figure 4).

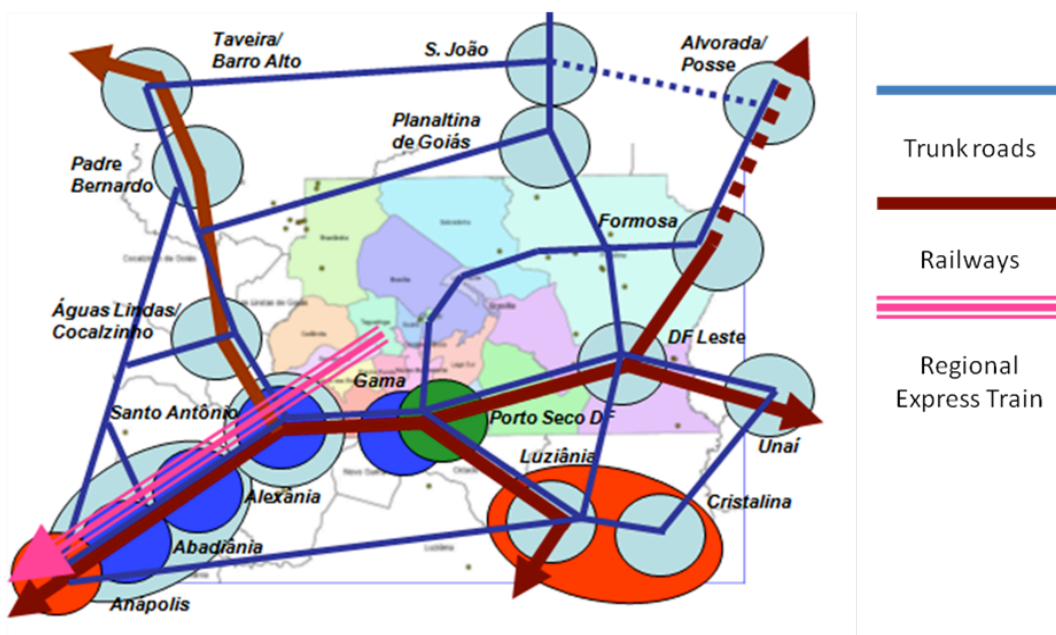


Figure 4 - The Logistic network of the Protein Belt Program

6 - CONCLUDING REMARKS

The discussion of the shortcomings of the planning practice has led to a proposal of a new program approach for infrastructure policies, which has been called territorial program. By this approach, infrastructure investment should be linked together with private industrial investment and other governmental policies in order to create new economic landscapes which would foster economic growth and ensure fiscal sustainability of the governmental investments and expenses. Another aspect discussed with respect to this approach has been the specific setup methodology, whereby the program should be constructed in an extensively participative manner, and less in a traditional technocratic way. The state should be seen as an “orchestrator”, trying the best possible to give chance to the different forces of society to forward solutions for recognized problems. Hereby, politics is not regarded as an hindrance to good projects and programs but the actual soil where substantial decisions are made. The recognition of the openly political character of the program construction process is then a key aspect of the proposed approach.

Other aspects would be the focus in fiscal sustainability of the government investments and expenses within the program, which should be ensured by a controlled growth process as result of the synergic effects of private and public projects. This effect would be consequently set up by coordinating private and public projects in production, infrastructure and other catalytic actions in a manner where the private projects would be feasible (with governmental help or not), and the governmental actions fiscally sustainable. The process model to this constructive approach has been exposed. The synergetic effect of this coordination would also be fostered by the exploitation of special economies within a landscape project. After a short list of expected benefits of this approach, a hypothetical case has been exposed with the aim to illustrate the approach.

It should be added that there is a growth model subjacent to the approach, which has not been detailed in this paper and should be the subject of papers to come: it is postulated that the project per se is the ultimate source of growth, be this a governmental, a private commercial, a private non-commercial or even a personal project. Thus, an effective growth policy should enhance the capacity and the actual political and legal spaces for the different organizations of society (the government, the enterprises, the ONG's and, last but not least, the families) to setup and to implement public, commercial and existential projects. In this growth model, a special analysis of the role of the family as producer of producers and cradle of projects and enterprises is included, and it is postulated that there is no strong economy without strong families. The growth model tries to understand the different phases of the spiral-shaped accumulation process of wealth and capital, and to extract from each phase ideas for growth driving projects.

Of course, the full development of the presented territorial program approach will still require substantial research efforts. A resumed list of the main and acute research needs would include:

- a) The construction of a composed model that will reunite land use (or locational decision), transport and logistic flows, production and revenues, as well financial and fiscal analysis; a preliminary model structure is available and presented in another paper for this conference;

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- b) The design of territorial programs and the respective landscape projects;
- c) The management of the construction and implementation process of territorial programs;
- d) The recognition of relevant stakeholders for territorial programs and the construction of an effective advocacy and of political alliances in benefit of territorial programs;
- e) Financial innovations with respect to private and fiscal funding of projects within territorial programs;
- f) Contract design and innovative institutions for territorial programs;
- g) Knowledge management for territorial programs.

The different points of this research agenda are already being attacked. Nevertheless, the effective development of these and other themes will require the test of the approach by a set of pilot projects, which are already under negotiation.

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