



DEVELOPMENT STRATEGIES FOR LATIN AMERICA AND CARIBBEAN DUE TO THE SHIFT OF THE ENERGY-ENVIRONMENTAL PARADIGMS

ABSTRACT

Nowadays, the configuration of the world economy faces a deep productive-technological reorganization, which main feature is the appearance on the scene of the emerging economies of the semi-periphery (Brazil, Russia, India, China, among others). The rise of these economies should result in the medium and long term in a reset level of the International Division of Labor and the relationship "core central body - semi-periphery - periphery", with profound impacts on the geopolitical hierarchy of the world economy. This change will tend to be more intense due to the paradigm shift now lived in simultaneous and interactive, integrated energy and environmental (energy-environmental paradigms), in which it is moving from a paradigm of Fossil Fuels for the Paradigm of Source renewable energy, which both generate and insert a new perspective in relation to end use of energy, the use of the natural resource base and the development model itself. This is the context in which today is part of Latin America and the Caribbean, that is simultaneously confronted by two surroundings, namely the new environment-hierarchical and hegemonic geopolitical for characterizing the world economy and the new surroundings to be represented by the transition-energy the environment. These are the two realities that will condition the development strategies in Latin America and the Caribbean.

KEYWORDS: World Economy; Development Strategy; Public Policy; Latin America; Caribbean.

ESTRATÉGIAS DE DESENVOLVIMENTO DA AMÉRICA LATINA E DO CARIBE FACE À TRANSIÇÃO DE PARADIGMAS ENERGÉTICO-AMBIENTAIS

RESUMO

A configuração da economia mundial passa, nos dias que correm, por uma profunda reorganização produtivo-tecnológica, cuja principal característica é a entrada em cena das economias emergentes da semi-periferia (Brasil, Rússia, Índia, China, dentre outras). A ascensão dessas economias deverá acarretar, a médio e longo prazo, uma redefinição em nível da Divisão Internacional do Trabalho e do relacionamento «núcleo orgânico central – semi-periferia - periferia», com impactos profundos quanto à hierarquização geopolítica da economia mundial. Esta mudança tenderá a ser mais intensa em razão da transição paradigmática ora vivida, em termos simultâneos e interativos, a nível energético e meio ambiental (paradigmas energético-ambientais), na qual se está a transitar do paradigma dos combustíveis fósseis para o paradigma das fontes renováveis de energia, que, simultaneamente, engendra e se insere numa nova perspectiva face ao uso final da energia, à utilização da base de recursos naturais e ao próprio modelo de desenvolvimento. É este o contexto no qual se insere hoje a América Latina e o Caribe, ou seja, simultaneamente confrontados por duas envolvências, a saber: o novo entorno hierárquico-hegemônico-geopolítico a caracterizar a economia mundial e a nova envolvência a ser representada pela transição energético-ambiental. Estas serão as duas realidades que passarão a condicionar as estratégias de desenvolvimento da América Latina e do Caribe.

PALAVRAS-CHAVE: Economia Mundial; Estratégia de Desenvolvimento; Políticas Públicas; América Latina; Caribe.

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INTRODUCTION

Nowadays, the world economy faces a deep productive-industrial-technological reorganization, which main feature is the appearance on the scene of the emerging economies of the semi-periphery (Brazil, Russia, India, China, among others), bringing intense impacts at the Latin American and Caribbean economies level, of their respective insertion in the world economy level, their reorganization in international geostrategic and geopolitical terms, their related positions, their possible rolls in terms of the international political and economic affairs and the possible configuration of one new type of affairs with the USA.

All these aspects, highlighting the rising of the emerging economies of the semi-periphery might bring, within a medium/long-term horizon time, a significant redefinition in terms of the International Division of Labor (IDL) and of the proper configuration «core central body - semi-periphery - periphery», resulting in deep consequences due to the current form of the structure/geopolitical hierarchy of the world economic order.

On the other hand, nowadays the world lives a paradigmatic shift in energetic-environmental terms, that is, of fossil fuels paradigm inherited from the Industrial Revolution (IRP) to the renewable sources of energy paradigm, that, simultaneously, engender and insert a new perspective due to the final energetic use, at a relative less intense stress over a natural resources basin and the proper model of development.

The oil shocks of the 70th decade in the 20th century sign that the oil paradigm starts to give exhaustion signals. So, the major awareness on problems related to ecology conducts to the increasing growing of awareness training about the environmental subjects.

The present configuration is that the environmental matter cannot be treated separately from the energetic issue. Therefore, it can be considered that today there is a passage from the fossil fuels paradigm (no-renewable) to the renewable energies. This is not immediate and it will take yet some decades. However, the alternative energetic sources, along this period, will have their energetic-productive base participation level growing, able to resort to determining no-renewable energetic sources, likely the natural gas, less pollute than the oil and its derivate and improver of processes and technologies.

REVISION

Paradigms Transition

The paradigm transition will be highlighted by the introduction of the energetic sources, through their living and interaction with the traditional energetic sources and one increasing mix of energetic sources. With this, from the strategic and growing interaction between the energetic policy and the environmental policy, the transition of the energetic-environmental paradigm will be

shaped. This should be incorporated by the «system Asia - system Asia Pacific», that must orientate from one mere economic-industrial character growing to one effectively sustainable development.

This paradigmatic transition, in terms of energetic-environmental, occurs under globalization, introducing greater complexities in insertion level under pressure of Latin America and Caribbean within the global economy, intensifying the instabilities to shake the Latin American and Caribbean economies and demanding new challenges to guide the social economic development agenda of the countries of this planet region.

Globalization adds new points for the Latin America and Caribbean countries which in many cases do not seem favorable for a relative improvement of these economies in IDL level and, consequently, in terms of the «core central body - semi-periphery - periphery». This last from *arriguiana* routes, in its turn, as conceptually very close to reality arising from decades of 60/70, than the traditional scheme «center - periphery» inherited from the Latin American structuralist analyses (especially the *prebischiana* based).

Accordingly to this new concept, determined countries from the solely named as capitalism periphery, due to internal reasons (trade potential, raw materials availability, natural resources base, national-industrial projects with a relative success, etc.), become interesting and important points for the reversal of economies surplus belonging to the central organic core of capitalism (external order reasons), leading to one new *upgrade* process of these economies in the context of the IDL and the hierarchic-organic composition of capitalism.

Indeed, the acceleration process of globalization shows one two-way pointedly character, that is, showing simultaneously, strong uncertainties and the possibility of the opening of better status in world economic level for certain countries, represented by IDL and, in one more structured way, by the «core central body - semi-periphery - periphery»). This occurs, for example, in the case of the emerging countries of the semi-periphery, where one of them takes part of the political-geographical space of the Latin America and Caribbean (namely Brazil).

The appearance on scene of the emerging countries of the semi-periphery, in the world economy context, including the geopolitical level, represented, probably, the most important transformation, in hierarchic-structural level, occurred since the ending of the Cold War. This can bring uncountable benefits, in terms of integration and development, for the Latin American and Caribbean economies. To do so, it is to be defined the complementary points between the several economies of Latin America and Caribbean.

On the other hand, Wallerstein (1988, p.18) points out that capitalism is essentially one social historical system and that configures within one economy-world capitalist, that is the capitalist economy has always had a world dimension. The fact is that due to controversies and several views and approaches about the globalization concept, as also the real significance that this word means, considering Adda's point of view (2004, p.102-103), according to it the multinational enterprises, investments promoters, operate in regional poles (even relatively much

wider), likely the case of the union «Japan - new industrialized countries of Asia - ASEAN¹» for the major part of the investments made by the Japanese enterprises, that, by the way, dominates the flow of foreign direct investments in this area.

Therefore, at the international economic field structuration level, though without discharging the aspirations for broader regional blocks seeking, it is suitable to register that the national instance keeps occupying one essential place in the contemporary world economy, not only due to the bonds forged by culture and history, but also the national State action. Many times certainly this is found limited by release and regulation (which appear as globalization sub products in their turn).

Thus, the State begins to act in the sense of promoting the valorization of the human resources and the logistical environment of the enterprises, enabling the favorable ambience for the investment and employment generation. So, the globalization cannot be thought as one status, but previously as a process, that can be limited in Triad level, but also can transcend it covering other areas of the world economy.

Models of Industrialization

The economies of The Latin America and Caribbean (including Brazil) are not as booming as the economies of the Asian Southern (Japan, South Korea, Taiwan, Singapore, Malaysia and the great dragon: China), having latest productive, industrial and technological bases and excellent educational systems features. Therefore, in terms of complementarity of their own economies, or due to their productive, industrial, technological and educational know how, it would be strategic to outline joint platform plans and projects between Latin American and Caribbean and the Asia-Pacific system.

If Brazil has iron ore and agribusiness, China has technologies and web for telecommunications sector, while South Korea has surplus technology to clean up the Brazilian rivers, highlighting the urban rivers (more specifically Tietê River and Pinheiros River, which cross the big São Paulo metropolis).

On the other hand, the Brazilian experience related to the petrochemical industry implantation, during Geisel's government, took place with the limited participation of the Japanese financial resources, in a process presenting one significant grade of success. Conversely, though the existing differences between the two realities, the Latin America and Caribbean economies can immensely learn with the structuration models of the industrial groups, notoriously Japan (*keiretsu*) and South Korea (*chaebol*), as also with the virtuous interaction between the enterprises groups and the State.

Therefore, it would be interesting one comparative analysis of the adopted models of industrialization, their level of success, their depth ranks and the achieved level of technological

¹ Association of the Southeast Asian Nations.

capacitation. Indeed, Latin America and Caribbean has enough to gain with one major interaction with Asia-Pacific and not only in commercial terms.

The Asian experience on Science and Technology Parks (STP) and first, second, and third generation Technology Parks (TPk) level can be example for the similar structures in the Latin American and Caribbean countries. By the way, many enterprises, research institutions and organization-managerial structures from Asian countries could integrate these Asian Parks, in many cases, through partnerships or joint ventures with local enterprises, whether private or state ones.

Based on the analysis developed by ABDI-ANPROTEC (2007, p.19-10), First Generation Parks (FGPk) were created naturally, to promote the support to the creation of Technology-Based Enterprises (TBE) and to the interaction with strong and dynamic universities. In this kind of park is possible clearly to identify the favorable conditions to innovation and enterprise development like: regional vocation, human resources and financial availability, qualified infrastructure, etc.

Generally, they received support and/or significant state investment and reached a higher grade of strategic relevance for the country and or region. The Pioneering Parks initiatives, also called of first generation, allowed for countries/regions assume one privileged competitive position in world technological development level. One classic case is the Stanford Research Park, from which it was originated the known innovative region Silicon Valley, in California. On the other side, the second-generation parks (Follower Parks) already were formally and structurally planned, to 'follow' the steps of one 'success tendency' established from the Pioneering Parks.

In general terms, as is pointed by ABDI-ANPROTEC (2007, p.20-21), the results from second-generation technological parks are modest, restricted to local and regional impacts. This type of TPk constitute one true 'boom' that spread itself through universities and technological poles of developed countries of North America and Europe, along the decades of 70 to 90. On the other hand, the third-generation parks (Structural Parks) constituted one type which accumulated the experiences from the first and second generation ones and is strongly associated to the process of economic and technological development of emerging countries.

Created as fruit of one regional/national policy and orientated to promote one social economic development process extremely impacting, the Structural Parks received support and great state investment and are extremely orientated for the globalized trade (or for the system-world) economy. Generally, they integrate to other strategies of urban, regional and environmental development. This type of park is influenced by contemporaneous factors, like:

The Asian experience, in TSP and TPk, beginning with Japan case, according by ABDI-ANPROTEC (2007, p.20), is based on the national-state intervention, by which the governmental priority initiative created the bases for the local development. The State implemented rules for the S&T development through regional development agencies. On the other hand, this could not be different, because according what is registered by ABDI-ANPROTEC (2007, p.20), the implantation

of STP and TPk must be based on one enabling model strongly founded on planned, significant and continuous public investments.

In fact, practically all the innovative and relevant projects of TPk implanted around the world since the mid-1990's were supported with by government investments as part of 'country' strategy. Indeed, according it is alerted by ABDI-ANPROTEC (2007, p.38), the enterprises intense in terms of technology constitute the base for the new 'knowledge society' and act as real additives and catalysts of the other economy sectors.

We observe, according to the visualization in ABDI-ANPROTEC (2007, p.34), that in the first generation parks, Japan gave priority to the establishment of one unit of competitive entities facing the Western, creating one industrial base on solid manufacturing. A big unit of enterprises from this period constitute today world known enterprises which were originated with the science parks and cities.

On the other hand, the study of the international scenery shows that the existing relationship between the public policies, the struggles for support/incentive to the TPk and the national and regional development programs, what is clear in the case of the Competitiveness Poles Program, where is extremely explicitly the world tendency of public policies integration, aiming the resources use optimization as also the maximization of results.

This is one transnational dimension movement. However, the Asian countries are not behind in the process and present excellent experiences like Japan (Knowledge Cluster Initiative), South Korea, China and India, which constitute high important examples on how treating Technological Parks like strategic instruments or mechanisms within the context of one wider Public Policy which presents a regional and national character. From then, the TPk are seen through one interactive-systemic form with the National and Regional Development.

Global economic power

One of the most important aspects of the last three decades in the 20th century and beginning of the 21st one has to do with the emergence of the Asian countries (especially from Asian Southeast) within the world economy context. First of all there is to mention the denominated Asian Tigers or the Four Asian Dragons, as called by Bustelo (1994, p.18-21), who uses the denomination New Industrialized Countries of Asia (NICA), to refer to the cases of South Korea, Taiwan, Hong Kong² and Singapore, which economies became leadership of economical growing, with expansion rates that overtook the Japan ones.

Indeed, as well observed by Berzosa (1994, p.5-7), since the endings of the 60th decade of the 20th century the NICA are showing one extraordinary economical growing, fruit of one sustained struggle to increase the investment, what, as its turns, it is founded up from the

² Definitely already integrated to China.

registered in the central countries. It is suitable to observe that this investment was paid with internal resources, being stimulated by one growing opening to the international trade and also by all one order of changings of funds (taxation, financial an institutional). Therefore, though the strong promotion to exportations and clear incentive to private initiative, the NICA never followed any model which was guided by the economic liberalism.

Indeed, the model of Western economies growth is being questioned, increasingly, since the 70th decade of the 20th century, epoch which points out the emergence of neoliberalism. Such questioning, partly, it was due to the proper model limitation an partly to the intensification of the world concurrence, which, as in its turn, proves the fact that Pacific Asia is one of the higher dynamism and growth capacity poles during the three or four last decades.

For Bustelo (1994, p.15), the named Pacific Belt (Asian Southeast, Australia, New Zealand and the Western coast of the Americas) can become the new world economy center, signing also that since the 60th decade of the 20th century the main economical pole position was displaced first for Japan and then to the Asian East and Asian Southeast.

According observed by Bustelo (1994, p.56), the high accelerated economic growth registered by the NICA contributed, in one extreme significant way, for the promotion of the gravitational center displacement from the world economy, showing an increasing competitiveness, what would strongly impact the inter-industrial concurrence in the world level.

However, from the endings of 80's and beginning of the 90's of the 20th century, the NICA start to register the smoothing growth rhythm in their economies, notoriously in the cases of South Korea and Taiwan, countries that not only reached much significant levels of their economies performance, but also built one solid industrial base, equipped themselves with one technological strong content and built up one high excellent educational system.

Indeed, the experience of the Asian East countries, according to Masiero (2007, p.336-339), on human resources capacitation and management, as also on lack of great disparities, in the terms of budgets among the extreme hierarchic-professional levels (as it seems to be in Japan), in education and learning (mainly in the technological areas), in technologies assimilation and innovation, as also capacitation, show that these countries are forming one great army of capacitated and qualified professionals to act in the international market, to attend to the great organization's needs, as also the small and medium enterprises.

This is very noticeable in the case of South Korea, but also China's, that between 1999 and 2005, had their graduation enrolled students number increased more than the triple, being added almost 10 million of students. Indeed, these countries are forming one highly qualified labor force for the big corporations to operate in the world trade, whether transnational or local, that due to the growing internationalization of the P&D activities demands one high qualification. On the other hand, the South-Korean enterprises embraced the USA capacitated and local labor force.

Talking about China, this was opened to the transnational corporations, though assuring the technology transference and the latest technologies local development for part of these

enterprises, beyond the Chinese ones' internationalization. Within this context the denominated Asian Corridor is formed, fruit of China and India expansion and the Northeastern Asia countries link with these two economies and to the Southern of Asia, with the establishment of agreements which overtake the Asian frontiers (like Mexico, for example), composing one big community of East Asia producing enterprises.

Effectively, the new Asian producers and consumers will seek for more efficient manners and methodologies in production organization level, like just-in-time, or its control itself by using total quality programs, defining one trajectory towards the continuous enhance of negotiations, the management methods, the organizational and institutional configurations, as also the several cooperation agreements in different activity segments.

Clear Energy

The FIR had as basic energetic the coal and this is consolidated, grows and transits for the Second Industrial Revolution (SIR) with the appearance on scene of the oil, which due to a series of favorable aspects (liquid fuel of relatively easy handling and reduced trade price) would be converted into the energetic leader of the SIR, bearing one growth consuming model. The Third Industrial Revolution (TIR) that begins in the 70's, coinciding (and accelerating) with the Welfare State crisis (probably its *débâcle*) and with the hegemony of the neoliberal thesis is characterized by the introduction of one immense source of scientific-technological innovations.

In fact, according to Chiavenato (1993, p.20-21), all this process would be marked by the appearance of the newly technologies and not only by the simple existing technologies unfolding, with the growing acceleration of the transformation of the technology into product/service ready disposable for consume.

The SIR also signs the establishment of the thermonuclear energy. In the ending of the SIR and the beginning of the TIR, under this work opinion, more adequately of the named Third Industrial and Technological Revolution (TITR), due to be the more technological one, where the interaction between the scientific-technic component and the industrial base reaches one level never seen before, the natural gas appears. This, also one fossil fuel, no-renewable and polluting (even less than oil and coal) begins to constitute one innovative and sophisticated energetic chain at levels of processes, equipment and final uses, with noticeable consequences in terms of technological advance.

However, yet in the ending of the SIR and beginning of the TIR-TITR, the use of the energetic-technic-productive renewable sources starts to be spread. The hydroelectricity was already much applied, failed the restrictions and conditions imposed to it, mainly in the case of the countries of the periphery and semi-periphery, from the 80's, doing Brazil, for example, to take advantage of few more than 1/5 of the hydric potential.

The source of strong energy renewable sources begins to be presented, whether at studies and researches level, or in terms of effective use. The alternative energetic options are diverse (solar, from wind, tidal, biomass, recycling, waste utilization, etc.), start to show themselves competitive due to the fossil fuels and appears as an energetic-technological base of one new energetic-environmental paradigm, namely the Renewable Energies Paradigm.

However, in opposition to the extremely optimist/volunteering expectations related to the ecological-fundamentalist approach, the time the paradigmatic transition will be fulfilled in energetic-environmental terms and the dominating paradigm, the renewable energy sources, will be consolidated is far.

The paradigmatic transition period will be slow (long-term time horizon), with the unit of the fossil fuels and renewable energetic use, with their complementation and the interaction/interpenetration of these two modalities energetic-technological-environmental. The paradigmatic transition phases in terms of energetic-environmental has already as one basic element of characterization, the energetic matrix strategic management, not only to reduce the participation of the oil derivate, but also the relative increase of the renewable energetics and the diminution of the dependence of the external flows of water supply.

The long period of the paradigmatic transition in terms of energetic-environmental will be marked by one intense and dynamic action of the binomial «energy - technology», with the scientific-technic advances and the technological innovations creating and enabling the use of non-conventional energy sources. So, the changing occurs in energetic-environmental paradigm level. Therefore, this is the right context for the energy-planning sphere as instrument for studies, analysis and society's preparation and awareness, especially of the generations that will live this process in one more intense and present way.

In fact, according to Singer (1998, p.173-174), the occurrence of TIR/TITR coincides with the appearance on scene of the neoliberal project implementation (or neoliberal counter-revolution). In another words, the TIR-TITR begins to take the first steps in the mid-1970's decade of the 20th century. This is the epoch when the microcomputer is improved, becoming cheaper and more accessible for negotiations and the major part of the consumers. From then, there was one expansion and accelerated spreading of the digital technology for every type of industrial work, in the services and agricultural activities, what would cause the obtaining of high and increasing gains of working productivity.

Automation, through robots enhancing (robotics), gave higher leaps, enabling the substitution of human labor force even for elementary intelligence level tasks. Therefore, it would be expected that the TIR-TIRT, while infrastructural revolution, leded to the acceleration of the world capitalist economy growth.

However, that would not be perceived, once the growth deceleration, by the central capitalist economies of the beginning of the 60's and mid-1990's of the 20th century, was something truly impressing. In fact, in the first mid-1990's of the 20th century, the annual growth o

the central capitalist economies represented about 1/5 of the value registered in the 60's decade (Table 01).

Table 01: Growth rates of the central capitalist economies (%).

PERIODS	GROWTH RATES (%)
1960/1970	5,1
1970/1980	3,2
1981/1990	2,9
1991/1995	1,5

Source: Singer (1998).

Therefore, Singer (1998, p.174-175) observes that there is a clear unbalance between the technological process acceleration and the economic growth deceleration, once this last one will depend much more on effective demand evolution than the technology advance. Indeed, what occurs is that the in different moments the economic activities make use of several birth stages technologies, while only one determined fraction of production appears as result of the new brand technologies use, fruits of innovation process.

What occurs is that the coexistence of different technological stages implies different productivities and production costs and this can be explained by diverse factors. First of all, there should be consider that the trade products are not perfect and the same product can be exposed for sale by distinct trades, for different prices, with one level of accessibility, for example, influencing the level of prices.

Indeed, according to signed by Singer (1998, p.174-175), what is observed is that TIR-TIRT, in the case of the central capitalist economies, do not succeed in reversing the existing recessive status, which could means that the productivity potential earnings enabled by them would have been less used within a context of less dynamism and semi-stagnation of the central economies. In fact, the accelerating exportation of capitals for periphery and semi-periphery must be registered, notoriously for the Asian economies, which present much dynamism and state-planner leading systems.

On the other side, it is suitable to sign that the multi-enterprises adopt the new technologies (notoriously in automation level) with certain grade of speed. However, it is probable that many enterprises have had their productivity levels grown based on older technologies and lower salaries, what would have happened not only in central countries, but also in the periphery and semi-periphery economies. In this situation it can even risk that considering the cases of the dynamic areas of periphery and semi-periphery (supported by strategic-planner systems), could have had one combination of technological innovations (typical of the TIR-TITR) with relative lower salaries levels, which would lead to high leaps in productivity level.

In this context, it would not be exaggerated to raise the hypothesis that the potential transformer of TIR-TITR would be being realized in the periphery and semi-periphery economies in Asia, which dynamism could be partly justified by the state-leadership, configured by the existence of one effective strategic planning.

The transition between the fossil fuels paradigm and the renewable energy sources paradigm, beyond to assume a clear character of long term (large horizon process), starts to occur in the SIR throes and goes on its way in the midst of the TIR-TITR, having as corollary the Well Being State crisis, the advent of neoliberalism, the technological process acceleration and the redefinition of the world economic/geopolitical order, signed by the rising of the emerging countries of the periphery (Brazil, China, India, Russia, etc.), which will guide to a new staging at « core central body - semi-periphery - periphery » level system, where the productive base, the technological scope and the energetic mortar will be crucial elements and latest facts in this rolls redefinitions.

In some of these countries mature experiences under alternative-energetic and energetic-renewable view already exist, especially about the biomass, like, for example, in Brazil case (alcohol and biodiesel). The adoption of the sustainable ways, under the energetic-technological-productive support view of its powerful and dynamic economies, consolidate itself in Brazil and gain space in India and China. Therefore, the new drawing of the international economic order, marked by geographic-industrial productive-local and rising-technological redefinitions, will solidify the transition of the fossil fuels paradigm to the renewable energy sources paradigm.

Indeed, according to Costa and Rodrigues (2010, p.10-11), the oil shocks of the 70th decade in the 20th century sign that the oil paradigm starts to give exhaustion signals. So, the major awareness on problems related to ecology conducts (many times in one wrong and even fundamentalist) to the increasing growing of awareness training about the environmental subjects.

The present configuration is that the environmental issue cannot be treated separately from the energetic issue. Therefore, it can be considered that today there is a passage from the fossil fuels paradigm (no-renewable) to the renewable energies. This is not immediate and it will take yet some decades. However, the alternative energetic sources, along this period, will have their energetic-productive base participation level growing, able to resort to determining no-renewable energetic sources, like the natural gas case, less pollute than the oil and its derivate and improver of processes and technologies.

So, the paradigm transition (from fossil fuels to renewable energy sources) will be highlighted by the introduction of the energetic sources, through their living and interaction with the traditional energetic sources (growing diversification of the energetic matrix) and one increasing mix of energetic sources (strategic management of the energetic matrix).

The change of the energetic-environmental paradigm, according to Costa and Rodrigues (2010, p.10-12), taking yet some or even several decades to be effectuated, will represent the appearance on the scene of all one immense source of technologies of final use and process. With this, several and interesting technological-productive arrangements can be implemented. Therefore, considering the Brazilian example, the transition of the fossil fuels paradigms (oil) to the renewable energy sources paradigm (highlighting the biomass) will be intermediated by the natural gas and the combination of the both presented paradigms fuels.

Consequently, one space is opened within the context of the countries of the periphery and semi-periphery, for one significant source of energetic alternatives which overtake, for example the possibilities enabled by certain options (solar and wind, for example) which are based mainly on biomass.

On the other side, this is the most ranking in the case of the great metropolis and megalopolis of the periphery and semi-periphery (São Paulo, Mumbai, Calcutá, Mexico City, etc.), the new energetic-environmental paradigm passes through the economical-conservationist (re)use of the urban solid waste from the recycling process and also the waters/sewers treatment, that besides opposing the consume-waster logic and the environmental degradation hue of the previous paradigm, contribute significantly for the energetic-alternative production (notoriously the methane gas), collaborating so much for the establishment of auto sustainable cities and metropolis (one of the pillars of the new energetic-environmental paradigm).

In the energetic-environmental transition level, the matter of conservation and energy reasonable use gains special concern. The energy conservation must be considered as one energetic resource, inclusively, within the ambience of the new energetic-environmental paradigm likely the stage of the inter-paradigmatic transition. The energy conservation and rationalization must be seen under two basic prisms, namely energetic sources and consume segments (COSTA, 1990, p.367).

The energy conservation and rationalization articulate among other aspects with the consume habits changing, one of the basic points of the new energetic-environmental paradigm, able to enable the overtaking of the energy intense model. In fact, in the countries of periphery and semi-periphery countries in general and of the Latin America/Caribbean in particular, one perverse combination is configured, formatting one scenery marked by one strong instability, fruit of the referred paradigmatic transition, from the occurrence of the TIP-TITR, the neo-liberal canons hegemony and the new world economy order configuration. This unit of elements conditions strongly the roll of the Latin American and Caribbean States policies, their methodologies and their potential as interactive-multiplier element of actions face to the paradigmatic transition and the coming energetic-environmental paradigm.

However, the paradigmatic changing at the energetic-environmental level makes extremely volatile, instable and changeable the boundaries where the national States are inserted in. In fact, there is one context of transition, redefinition and instability, which demand incorporation of one strategic, systemic and prospective view, partly by the State and the state techno-bureaucracy. Therefore, the initiatives related to the paradigmatic transition management only mean if inserted not only in the environment policy or energetic policy, but also in all the spheres of the public policy (economical, industrial, scientific, technological, educational, health, etc.).

In other terms, it is in the ambience of the Public Policy that the dealing and the confrontation of the paradigmatic transition in terms of energetic-environmental, gets sense, real significance and legitimacy. Therefore, it only makes sense to deal and consider the referred

paradigmatic transition and probable ramifications in one systemic-integrated, dynamic-interactive and global-interacting form with the other components of the public policy. In fact, the proper public policy must be seen as one interactive system, dynamically constituted of interacting components. So, the Integrated System of Public Policies is characterized by the dynamic-integrated interaction of the several political-management-governmental spheres.

National Development Project

The national project and the national development strategy are reflected and applied in the national development policy, which executions and realizations are effectuated due to the national strategic planning, defined and applied by the strategic planning integrated system, with dynamic, interactive and no-centralized, beyond interacting with the civil society or, at least, with the its segment more directly evolved in this or that strategic-interactive initiative, avoiding the juxtaposition and the no-integration of sector programs.

The categories of the strategic-planner character have relations with the denominated public policy integrated system, that is, the presence integrated/interactive of all public policy segments, being comprehended that drawing one action of active insertion of the Latin America and the Caribbean in the context of the world economy and seeking to soften the threatens which hover over the region, only it is sensible within an integrated-systemic-planning context turned to the promotion of national development.

It is also suitable to highlight that to constitute one big foundation for the national-planner and political-systemic *constructo* turned to the promotion and construction of the national development, which is sustainable development (national), before anything else, there is the national project. Nations, especially the periphery and semi-periphery ones, must structure their respective national projects, that are not more than strategic conceptions of long term over the ways to be taken along the countries in one long-term time horizon.

Based on the national project, the national development strategy is conceived, on which through the definition of its weaknesses and strengthens (internal strategic analysis) and identifying the threatens and opportunities it is introduced to (external strategic analysis), configures the future journey in productive, industrial, technological, scientific, educational, terms, etc. So, the national-planner strategy develops itself, reflected in the national strategic plan, analytical-reflexive and technical-political document which consolidates the strategic-planning aims and objectives

The inter-paradigmatic transition (from the fossil fuels paradigm to the renewable sources of energy paradigm) will need on strategist State, in the wide sense of the term, especially at the level of the governing-planning function, according to what occurs, in different dimensions and conceptions, in many Asian economies. Therefore, the inter-paradigmatic transition management

and administration will need one effectively strategist State which acts like a real Asian national-strategic-planning State.

The modern state and governmental planning (systemic, integrated and strategic) represents the new State planning (modern, flexible and dynamic), drawn by one new technical-bureaucracy (the new Weberian bureaucratic), technical-political-bureaucratic content of one advanced and efficient conception of State (the strategist or leader and strategist State), interacting with the enterprises segments and several sectors of the civil society.

The strategist State is simultaneously regulator, coordinator and planner (like, for example, Japan and South Korea), but also can be intervener, if this is strategically needed (like, for example, in the cases of Singapore, Malaysia and China).

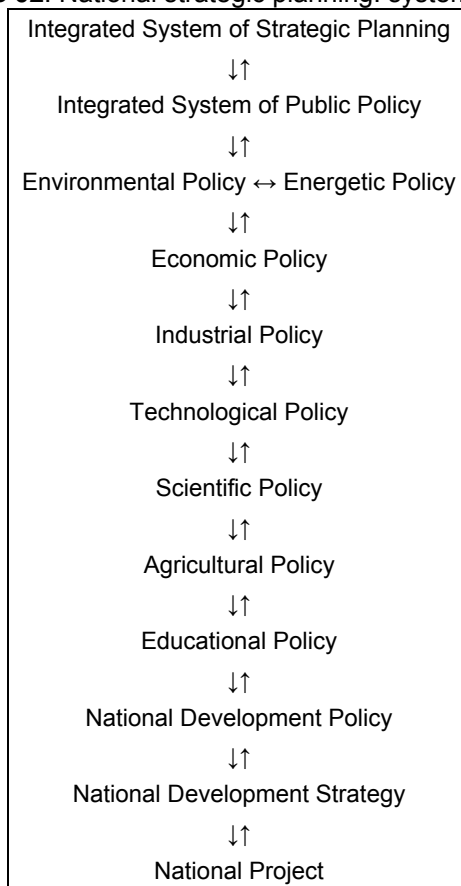
The several components variants of the strategist State reflect the different contexts in which are inserted the public policies, the governmental management, the grade of importance assumed by the private enterprise sphere, the level of participation of different segments of the civil society and the technical-bureaucratic-planner function.

The strategic planning is constituted, indeed, in configuring element of the strategist State, a basic factor in the development and technological-productive insertion of the national economy (in the context of the world economy) and in one point of sustainability and facilitation of the national development strategy (sustainable development). In this point, the countries of Latin America and Caribbean will be able to study and analysis the existing planning model from Asia (strategic, integrated and interactive), that was decisive for the successful performance of the Asian economies.

In fact, from all the advantageous aspects that Latin America and Caribbean can obtain resulted from wider relations with the Asia-Pacific, in terms of cooperation and partnership, represented by the systemic-integrated, dynamic-interactive and synergic-interacting interactions in all diverse levels (industrial, energetic, environmental, scientific, technological, commercial, etc.), the most relevant, surely, will be the learning of the Asian planning process, configured and executed by one strategist State, which acts independently of exercising or not any kind of control over the social capital of the enterprises in their respective countries.

According to what is observed by Costa and Rodrigues (2009, p.110), the national strategic planning (Table 02) can provide one regional and local, no-predatory, integrated and sustainable development model, which is manifested at the level of the environmental planning and the territory administration, in the ambience of the national economy, collaborating, direct and indirectly, for the active interaction in the country in the context of the world economic system, seeking for compensating (strategic action) the unequal geographic distribution of technology and natural resources.

Table 02: National strategic planning: systemic vie.



Therefore, in the ambience of one economy of the periphery and semi-periphery, the national strategic planning appears as one important instrument for one planning and territorial and one territorial management effectively strategic, enabling the active interaction of the regional/local sphere at national level and simultaneously, dynamically, interactive and systemic, of the regional and local component and the national aspect of the context of the geo-economical and geopolitical world system.

In this way, the environmental planning and the territory management, even when are manifested more frequently at regional and local level, are seen as effective elements in the promotion of the development systemic process, it is worthy to say, sustainable development in the synergic context of the national strategic planning, dynamic and cohesive instrument of the public policies.

In fact, this systemic-integrated, political-governmental and strategic-planner view relates itself with the seeking and the promotion of the national development in one wider sense of the term, under the aegis of the Sustainable Development model. Therefore, this is the right way to understand how is the dealing with the inter-paradigmatic transition (as part of the public policy energy-environmental component), that is, like active and interactive element of the sustainable development, that appears as the target of the strategic-planner framework which coordinates the several spheres of the public policy.

The sustainable development tries to conciliate the social aims reaching with the economical aims realization and has as one great challenge the promotion of change of the values system which will condition the global economy to reach one system compatible with the human dignity demands. The sustainable development question the present growth model, which births strong unbalancing, proposing, as one alternative, the conciliation between the economic development, the environmental preservation and the poverty eradication.

The planning here proposed is not only strategic, but also integrated-systemic, that is, implies in one technic-planning approach which analyses the parts as one whole members (reality object of the technic-planning), and elements that do not face themselves juxtaposed and much less closed. The components of one system are interacting (systemic-dynamic interaction) and the result is superior to the simple parts addition (synergy). From then, the concept of strategic planning which here is defended, much based on the Asian strategic-planning model, making use of one integrated-systemic view and one systemic-planning object.

FINAL CONSIDERATIONS

The Latin America and Caribbean countries are already facing more gradually high and intense levels of instability and volatility. First of all, the economic-financial crisis, secondly, the recent environment lived by the Arabian countries of North Africa and Middle East, bringing the perspective of difficulties of the commercial contacts with those regions and impacts at the oil supply level.

The rising of the Asia Pacific if open important opportunities for Latin America and Caribbean also introduce major complicating factors, notoriously in the case of China, country which has one strong industrial base, that make use of the currency being devalued, and one enormous concurrency competitiveness, mainly in existing sectors of Latin American and Caribbean economies, as the case of the Brazilian industry seems to be.

Differently, the rising of the emerging countries of the semi-periphery, which bring opportunities, but can mean threatens, beyond one bigger level of instability and volatility in terms of world economy. However, the occurrence and development of the TIR-TITR stress the grades of unbalance which characterize the evolving ambience in which the Latin America and Caribbean economies act.

However, maybe the biggest challenge of Latin America and Caribbean be the transition between the fossil fuels paradigm and the renewable energies one, with profound alterations in energetic, environmental, technological, productive, industrial terms, etc. This process is not immediate and might last for even more some decades, demanding the adoption of the energetic mix, the coexistence and interaction between conventional energetics and the alternative ones, the strategic management of the energetic matrix, diversification of the energetic base, the introduction, in one gradual way, of the renewable sources in the context of the strategic matrix

and the consideration of the environment as a crucial factor of development (the sustainable development).

These paradigms are not only energetic or only environmental, but previously energetic-environmental. The fact is that the paradigmatic transition here mentioned will make the levels of instability and volatility in which are inserted and move the Latin-American and Caribbean countries much significantly increase.

The intense changings caused by the TIR-TITR resulted in one more uncertain environment where are inserted and act the economies in general and in particular the economies of Latin America and Caribbean, that, so, need new management forms which have as base the amplified concept of strategic planning.

This, in its turn, means to incorporate the theory and operational contributions of specific key areas (strategy, prospective, environmental analysis and systemic analysis) to the planning traditional concept. In this sense, there has been the concept of strategic planning, because is constituted from the base of the proper process of the public-state management. It is suitable to register that the TIR-TITR, more than only configure a model, draws, in fact, a new paradigm (energetic, environmental, technological, productive and organizational), due to the deep innovations from its midst and that give it support.

The TIR-TITR overtake the proposals linked to the industrial society, drawing one new industrialization type, which is based on more sophisticated activities under technological view, with all the implications resulting for the economies of the periphery and semi-periphery (Latin America and Caribbean included), especially concerned to the magnitude and speed of the changings.

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