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In China's Mirror*

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PRELIMINARY THOUGHTS ON THE CURRENT SHIFT IN THE CENTER OF GRAVITY OF GLOBAL GROWTH

Today, few question the idea that the center of gravity in global economic growth is shifting towards Asia and specifically towards China. The Chinese economy, with its GDP expressed in purchasing power parity (PPP), already equals nearly 50 percent of the United States' GDP, and its growth from 2002 to 2006 accounted for 29 percent of the growth in the world economy. If China and the United States maintain their respective growth rates of the past ten years—an optimistic hypothesis in both cases—these two countries will have similar sized economies in just one decade.

This is not the first time that the center of gravity of world economic growth has shifted. It is well known that during the early twentieth century there was a shift in the center of capitalism from England to the United States. Historians would add that between the seventeenth and eighteenth centuries a similar change transferred the leadership of early capitalism from Holland to England.

According to Raúl Prebisch, the rise of the United States economy radically changed Latin America's—and particularly his own country, Argentina's—opportunities by disrupting the classic international division of labor between a center that provides manufactured products and a periphery that offers foodstuffs and raw materials. This striking development points to one of the issues addressed in this study: shifts of this type, which are rare in history, have far-reaching implications. For example, Argentina, like Australia and New Zealand, had benefitted when the international division of labor was centered in England. The relative decline of England forced these nations to seek out new solutions in order to restore growth. On the other hand, the rise of the United States unequivocally benefitted Canada, but did not appear to increase the opportunities available to Spain and Portugal.

Over the past several years, some countries have seen their opportunities more than multiply as a result of China's rise. African nations have been among those that have most clearly

benefitted. In other cases, however, China may have brought more problems than opportunities. This is particularly true of some Central American economies and, possibly, Mexico.

Even in Europe, the consequences of China's rise seem to be both significant and varied. For example, the Italian economy (and very particularly Italian industry) appears to have fallen behind and lost its way, while Spain (which, in theory, could follow the same path as Italy) seems to be developing new and broad-based opportunities for business through a combination of public policies and creativity. The brief mention of these two economies points to two lessons. First, the result of these shifts is not predetermined, and the choices made by policymakers and businesses (including nonreaction and paralysis) may be decisive. Moreover, the benefits a particular economy stands to derive from the type of systemic change examined here may not be directly and immediately clear. It tends, in fact, to depend on that economy's capacity to develop new opportunities, which may be directly affected by the shift in the center of gravity of global growth. Specifically, Spain is exploring opportunities for investment in Latin American infrastructure that are expanding as a result of demand pressures proceeding directly or indirectly from China.

The redistribution of opportunities and checks on growth both depend on the dominant characteristics of the ascending center, especially to the extent to which they show themselves to be original or unprecedented. Below we shall briefly describe some of the characteristics of the Chinese economy that are destined to be markers for decisions made outside that nation. The emphasis on specifics is not only due to China's exceptionalism, it is also a decisive result of our coming face-to-face with history, a field in which differences play a decisive role. In the end, as has previously been elegantly stated, "history has a sample size of one."¹

1) With a Gross Capital Formation of over 40 percent of its GDP, the Chinese economy is devouring materials and inputs used in capital investments. This has contributed decisively to an explosion in demand for machinery, metals, and energy, which is at the root of imbalances in

1. Pant, P. N. and Starbuck, W.H. "Review of Forecasting and Research Methods," *Journal of Management*, June 1990, vol.16,no. 2 pg. 435.

the respective markets. We will not offer numbers here on commodity price level changes due to this phenomenon, although these are readily available. It suffices to note that this represents a critical shift that interrupts a trend (that of the decline in commodity prices), dating back to at least the aftermath of the Korean War. Nor is it necessary to emphasize that this turnaround is the main cause of the rapid growth of many economies that have ultimately become members of the Sinocentric world.² It is important to note that if an economy is endowed with unexploited natural resources, the less developed—or more destroyed—it is prior to its insertion in the Sinocentric world, the faster it will grow: whether due to obvious base effects (starting from very little) or because it does not have to promote the reconversion/adaptation of prior major activities. The case of Angola, an economy that is growing at an annual rate of 20 percent, is a tragic illustration of this. In short, the mere fact that these nations have raw materials is not only more important than the creation of solid fundamentals, but, in an unusual inversion of the normal order, it also allows the latter to be rapidly generated using the proceeds from the commodities boom.

2) Secondly, it seems appropriate to point out the following: one of the main characteristics of the current candidate for the central position in the global economy is the unprecedented rate at which it transforms itself, which is not surprising given the momentous speed at which its Gross Capital Formation is advancing. The intensity of these changes has allowed China to move quickly from exporting small, low-value, and low-technology manufactured products to electronics (initially only assembled in China) and a recent attempt at import substitution³ accompanied by a consolidation of value chains. In fact, the Chinese authorities themselves seemingly admit that their economy has ceased to be competitive—relative to Vietnam and Bangladesh—in certain manufactured products of low per unit value, given its current level of development. On the other hand, and leaping to the opposite pole, countries with greater

2. Castro, Antonio Barros, "From semi-stagnation to growth in a Sinocentric market," *Revista de Economía Política*, January-March 2008.

3. Cui, Li & Hussain, Syed, "Is China Changing Its Stripes? The Shifting Structure of China's Foreign Trade and Its Implications." International Monetary Fund, April 2007.

industrial sophistication than China have to recognize that their advantages may only last for a little while longer. We will briefly discuss the machinery and equipment sector in order to illustrate the speed with which the changes are taking place and the difficulties that stem from them.

In various markets, the standard Chinese equipment that began to arrive in Brazil in 2004 and 2005 had unbeatable prices. However, the lack of post-sale technical support often made it less competitive. Yet, in some cases, China offered a quick and possibly decisive response: it began to market products that were supposed to be disposable, thus practically eliminating the issue of technical support!

This second characteristic means that businesses and economies that try to reposition themselves following China's bursting onto the scene must understand from the beginning that opportunities and threats will frequently be redefined and that they will therefore have to shoot at moving targets. Alternatively, of course, they can try to develop areas of specialization that will not be easily stopped by China's advance. We shall return to this topic later, but for now we will merely emphasize that both business dynamics and the nature of public policies used until now to support businesses must be seriously reconsidered in light of the change that is taking place in the economic environment.

3) Some of the solutions that have been developed in China, as some of the American solutions in the past, seem destined to have many repercussions. An example seems suitable here. As is well-known, the Model T Ford and the \$5.00 a day salary associated with it formed the basis of the revolution in mass consumption that occurred first in the United States and later in Europe and other regions following World War II. There is an analogous phenomenon in the current Chinese experience: we are witnessing a new and dramatic wave of price reductions for electronic consumer goods, whose emblematic case is the evolution from the VCR to the DVD.

When these products began to be assembled in China, they were too expensive for Chinese workers. In what may be the first great modern Chinese contribution in terms of cost-reducing innovation, the price of these products fell rapidly (to about US\$30.00 per unit). As a result,

Chinese brands' share of the local market jumped from 34 percent to 93 percent between 1994 and 1999.⁴ It should be noted that low Chinese wages contributed to the initial reduction of costs and prices, but that does not explain the drastic reduction seen in this important experience.

Undoubtedly, an interesting analogy can be drawn to the Model T Ford. In the case of China, the purchasing power of wages rose sharply as a result of the fall in price of the final product. Recall that the Ford solution strongly influenced other businesses and industries. Something similar has happened in China through the multiplication of products (electronic consumer products, two-wheeled transport equipment, and certain machines), which have been appearing on the market at prices referred to as “Chinese.” Inevitably, this has multiple consequences (advantages, loss of market share for traditional products, etc.). For example, Chinese motorcycles, which are being sold at a quarter of the prices that had been common until recently, are rapidly being disseminated in Southeast Asia, revolutionizing the region's transportation sector.⁵

Similar repercussions can certainly be observed in Latin America and form an integral part of the revolution in mass consumption that is taking place in Brazil. There is no lack of evidence that this change is spreading—including by the marked presence of India⁶ in the group of countries that is promoting the drastic drop in costs and prices of certain types of manufactured products.

It is difficult to overstate the importance of this phenomenon, which was originally perceived in the modern Chinese growth pattern. Interestingly, while in the United States the spread of modern consumer gadgets among workers is associated with the country's notorious wealth, the Chinese model involves a significant effort to disseminate a modern consumption kit to a population whose wages remain among the lowest in the world. The Chinese version of the

4. Feng, Lu and Ling, Mu, “Learning by Innovating—Lessons from the Development of the Chinese Digital Video Player,” quoted in Zonenschein, Claudia Nessi, *O Caso Chinês na Perspectiva do “Catch Up” e das Instituições Substitutas*. Doctoral Thesis, Universidade Federal Rural do Rio de Janeiro, 2006.

5. Fuller, Thomas, “Produtos Baratos da China Facilitam a Vida de Vizinhos,” *O Estado de São Paulo*, 30 December 2007.

6. Prahalad, C.K., *A Riqueza na Base da Pirâmide*, Bookman, 2006.

mass consumer revolution is therefore profoundly different. However, this is precisely why it can reach the world's poor, becoming more influential than the American version of the revolution in mass consumption.

While until recently China's voracity in terms of consumption of metals and energy supplies had as its prime cause the country's high rate of investment, an increasing contribution is being made by the population's former poor, who are also consuming electricity, aluminum, and copper. Note that although the Chinese version of modern manufacturing (or even, possibly, the Indian version) consumes much less energy and metals per unit than traditional U.S. products (and even though the consumption of metals and energy per unit of GDP is likewise smaller), pressure on the earth's natural resources tends to increase due to the spectacular expansion of the contingent of "modern" consumers.

Given all of this, it should not surprise us that what might be termed a repositioning race is silently and sometimes unconsciously taking place around the world. This race, which began in China's neighboring economies, necessarily refers to the strong trends derived from the Chinese rise, as well as to other economies' responses to that process.⁷ Though certainly their results do not mature rapidly, their consequences can already be conceived, discussed, and turned into inputs for the strategies of both corporations and states.

Demands for innovation and solutions of every type tend to multiply in reaction to the new trends. In turn, the resulting tensions influence relations between the state and the market. After all, there must be more room for public policies in a world subject to a pressing need for solutions, which has been demonstrated during the world wars of the last century. Moreover, the technological convergence that exists today suggests that the solutions that we need to seek require increased cooperation among businesses as well as between them and governments, research institutes, and universities. The rising value of industrial and technological policies centered on innovation thus emerges as a corollary to all of this.

7. Such tendencies were briefly noted in "From semi-stagnation to growth in a Sinocentric market," *op. cit.*, and are tentatively identified in a study produced in conjunction with Francisco Eduardo Pires de Souza.

PUBLIC POLICIES AND STRATEGIES FOR DEALING WITH A SIGNIFICANT AND LASTING SHIFT IN THREATS AND OPPORTUNITIES

The following section presents a series of comments about public policies and strategies that seem to be appropriate in view of the wide-ranging redistribution of opportunities and threats that is emerging as a result of the shift in the center of gravity of world growth.

This article deals only with the set of economies that are complex but not mature. The first restriction eliminates economies that had already accepted a strong reduction in their degree of diversification/complexity prior to China's emergence. The second refers to the fact that the economies in question are not yet performing at what has been referred to as the endless frontier of knowledge. This does not mean, however, that they do not have specific skills that would allow them to reach beyond the level of mature economies in certain fields.

In order to facilitate understanding, we shall imagine a scenario in which there are three types of public policies: "protection" of activities under threat; "support for repositioning," which aims for greater harmony vis-à-vis the changes perceived in the economic environment; and "pursuit of the future," that is, support for the development/exploration of opportunities that had previously only been envisaged.

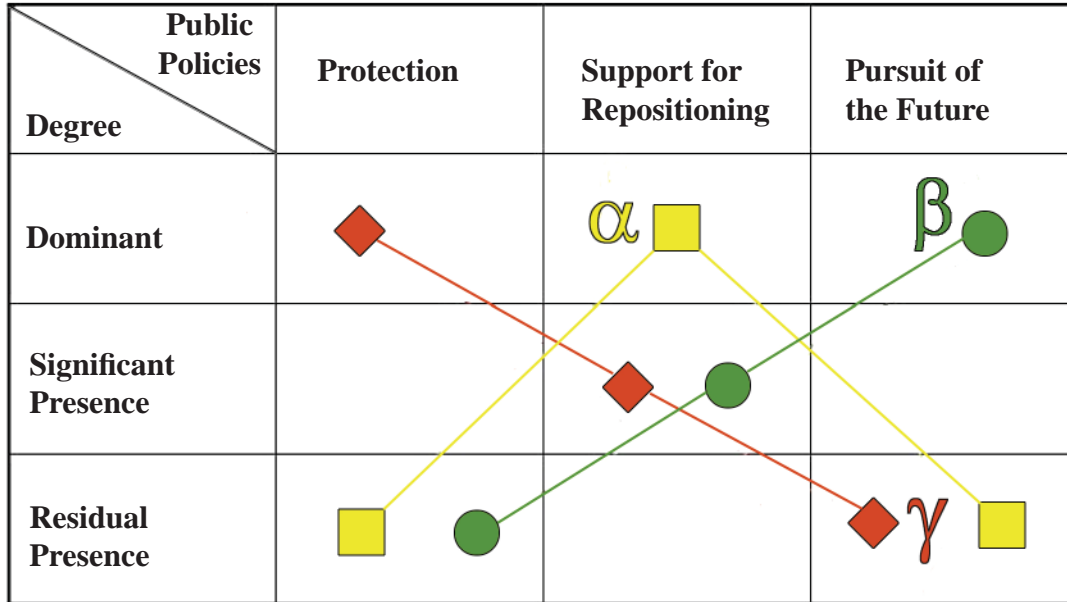
Note that the same policies are present in the three outlined strategies. The difference is a matter of degree: "dominant," with a "significant presence," or merely "residual."

Finally, as for the strategies themselves (which encompass, in different degrees, the three types of public policies), we will consider three types: Entrenchment (γ); Adaptive Strategy (β), and Transformative Strategy (α).

In the following section, we shall offer a brief commentary on each of the strategies.

The γ strategy of entrenchment seeks to protect industry in its current state in response to emerging changes that damage or threaten it. Note that there is a contrast between this type of protection and infant industry protection. In the latter case, businesses (often new) try to acquire and use capabilities that are rarely available in the country but that are traditional in other

Public Policies in Response to a Significant Shift in Threats and Opportunities



economies. These businesses are driven by their own interests, but also have an historic mission to incorporate new skills into those already present in the country. In the case discussed here, however, protection (possibly demanded by the businesses themselves) seeks, if anything, to preserve skills that are not only widely used but also may already be on the way to becoming outdated.

Yet, there are still some serious risks. For example, asset owners may (justifiably, perhaps, since there is a large informational asymmetry here) consider their position to be under serious threat or even hopeless. In such cases, the protection requested will bring only momentary relief—the private assets of owners will have benefitted, while public authorities will have functioned as clerks attending to complaints. Furthermore, in the sectors under threat, creative businesses may already be developing innovative solutions that might be discouraged by the protection offered to the “entrenchment.”

Protection can nonetheless be advantageous—for the firm and the country—if it is combined with effective changes that reposition businesses. In order for that to occur, they must make a strong commitment to change instead of protecting the past: businesses, as well as public

policies must actively support repositioning. In these cases, however, we would be engaging in the next strategy, which prioritizes solutions that involve, at the very least, adaptation.

It is important to note that protection or ad hoc measures taken in such a direction may arise as the type of response that tends to emerge spontaneously or in the short run. This is because the depth of the change to come has not been perceived, with difficulties attributed to temporary circumstances or errors in policy. This predisposition is bolstered by the fact that the system of representation of traditional activities is already in place, and it is normally not difficult to mobilize workers and local authorities in defense of positions under threat. In contrast, creative responses to the new framework require public policies that often have not yet been envisioned or approved and that might require changing existing norms and habits and learning new practices.

All of this does not mean, of course, that defense has no merit. However, it must strictly be the exception to the rule. In fact, as shown in Table 1, protection is residually present in the other two strategies, although it arises alongside other initiatives, which, in contrast with entrenchment, aim to combine defense with progress. Indeed, in the other two strategies protection does not imply refusal to play the (new) game. Recall that in the heroic times of industrialization, protection was given precisely so that one could play the game!

In short, the protection of positions under threat generates immediate benefits and is thus politically very attractive. However, as a major solution to large-scale change, and viewed from the perspective of a country, entrenchment carries a serious error of diagnosis. This is not a response appropriate to the challenge, and most importantly, it does not create a future. Indeed, the γ proposal should not even be referred to as a strategy, because strategic behavior must include a vision of the future, which requires that one consider the conduct, goals, and new actions of the agents coming onto the scene.

Two comments must be made before we move on to the second and third strategies. First, public policy agendas are moving in the direction of proactive stances to a degree that was unthinkable during the late twentieth century. This is not the place to try to explain this very

important shift, which could certainly be approached from different points of view. Here we will simply mention it and, from the perspective of this study, suggest that one of the important reasons for its existence is a return to questions of resource allocation—or generically of supply—which were practically banished from the public policy agenda (especially in Latin America) during the last decades of the twentieth century.⁸

It is clear that this important change has been reinforced by the prestige of the Asian nations' experiences, which featured proactive policies as a leading characteristic. Currently, energy insecurity has led the United States to an ostensible interventionism in that field. It is just as obvious that the spaces of action for proactive public policies are expanding and being reinforced by our awareness of environmental problems. This caused a magnifying glass to be dramatically placed over certain physical limits of the economic world, so that questions of supply are no longer being treated (or rather, ignored) in accordance with the economic approach typical of the end of the last century. Finally, the very shift in the center of gravity of growth towards China, by attracting and/or pushing economies in multiple directions—whether or not it is desired by the respective societies and governments—has also contributed to the reestablishment of matters of allocation as a government task.⁹

Businesses can be seen as resource portfolios that include capabilities. Under normal conditions, changes can be made to this pool through learning and, in a certain sense, evolution. However, the emergence of China and the transformations it induced have produced a genuine break in normality and the emergence of new tendencies. In other words, we are witnessing a phenomenon that is intrinsically historic and unique.

Faced with a break of this type, businesses have to reconsider their opportunities in the new context, laying the groundwork for the development of a strategy of the second type, the

8. In the introduction to his last book, Dani Rodrik sharply notes that, "The hallmark of development is structural change—the process of pulling the economy's resources from traditional low-productivity activities to modern, high-productivity activities." See *One Economics, Many Recipes*, Princeton UP, 2007, p. 7.01.

9. On the question of the United States' strengthening of proactive policies, see the article "State Activism in an Age of Globalization: Bringing Development Strategy Back In" by Linda Weiss, which was presented at the Ford Foundation Seminar "The Role of the State in a Global Era," São Paulo, November 2007.

so-called adaptive one. In this case, they should begin by reevaluating their resources in order to define their position in accordance with the new circumstances. This process is by no means a simple one.

They must necessarily begin with an effort to navigate the tangle of facts and identify what can be understood as the new “weighty trends,” that is, the trends that will survive in the long-term. They must then adopt a different analytical perspective in order to strike a delicate balance between what can be dealt with using existing capabilities and the areas in which they must develop new skills. Finally, there is an issue of timing: how to distribute their efforts between short-term opportunities (and threats) and goals attainable only in the medium to long-run?

The alternative responses to these questions have certainly been multiplied by information technologies, which open up new possibilities of adaptive repositioning. However, the greater flexibility acquired in this manner may also introduce elements of an identity crisis in businesses. This in turn impacts policy makers, who have to decide how far they should go in terms of preferentially encouraging a certain type of repositioning and trying to affect the economy in terms of a new productive and technological profile. But in this case we would already be on the threshold of the third strategy.

Returning to the second strategy, it seems plausible to argue that the changes required by the adaptive strategy need some time to mature, as well as the support of third parties. As far as time goes, an important factor that differentiates the adaptive strategy from that of entrenchment is a certain speed in the recognition that some changes are here to stay and have to be effectively faced. As far as the support of third parties goes, we are mainly referring to the decisive importance of collaboration, partnerships, and access to the institutions that form part of the National System for Innovation for a considerable repositioning of businesses. This implies that the adoption of an adaptive strategy requires the existence of a National System for Innovation, at least in an embryonic state.

While the strategy of entrenchment tends to tie businesses to the past, the adaptive strategy aims to open up possibilities already present but not yet effectively utilized by companies. It is thus extremely important to know to what degree the state of the economy in recent years has encouraged the exploration of business potential. If the economy is emerging from a long and unstable period in which businesses were often capable of spotting opportunities but were limited by the context, one can assume that there is a lot to be done from an “adaptive” perspective. In other words, there are presumably several solutions “in the drawer.”

Moreover, the adaptive strategy should take into account the fact that some skills have been devalued while others—including skills that had been utilized quite little—may acquire great importance as a consequence of the emergence of China. It is quite plausible that the effective repositioning (a main feature of this strategy) may also require new rules and stakeholders. In short, public policies ranging from stimulating technological effort to changes in regulations are becoming necessary, usually acting as catalysts for private decisions. Yet, despite actively supporting the evolution of business activity, the adaptive strategy only takes transformations in the economy into account residually. As mentioned above, that kind of change is a prerogative of the third strategy, which we comment on below.

In addition to providing a minimum level of protection, trajectories β and α both involve active support for businesses to reposition, to a degree that ranges between dominant and significant. The big difference between them lies therefore in the quest for a different future. As we have seen, this is the dominant goal in α (hence the name transformation strategy), and it is absent in β . Once again, the tone of the third strategy is not set by efforts to gradually adapt to new circumstances, and one does not expect the future to be created spontaneously by decisions made one at a time by businesses with or without public policy support. In reality, a strategy of transformation makes a difference to the extent that it glimpses opportunities that can only be reached through cooperative and concentrated efforts in the quest for a lucid vision of the future.

Note that in the case of economies that are continuing to face conditions equal, or at least similar, to those faced in the recent past (and which can hence be seen as forging ahead on a given track), there are strong arguments in favor of the thesis that decisions defined in a fragmentary manner are capable of generating satisfactory results for the economy as a whole. After all, in the absence of structural changes and breaks in trends, it is quite reasonable to assume that the agents have at their disposal accumulated experience about what may be expected from the (modest) changes that they are facing. Ultimately, it is about readjusting quantities produced and prices—both of which move within reasonable intervals and tend to repeat known reactions. To the extent that trends are broken or questioned, however, there is a bankruptcy or emptying of knowledge, resulting in a need for coordination. In other words, agents can no longer be guided by the collection of know-how that was previously responsible for coordinating their decisions. The new framework is, in reality, qualitatively different, lacking in references, which leads agents to feel as though they belong to a system that no longer exists. Faced with this lack of references, strategies of transformation make all the difference.

Adaptations should occur in the context of a strategy of transformation, having the future as an important reference. The hardening of certain positions may also be welcomed in exceptional cases. But if we are truly facing a great shift (as in, for example, the redefinition of the center of gravity of the growth of the world economy), transformations should set the tone. In order for this to happen, strong trends should not be taken as deep and lasting transformations of market conditions. They should be viewed and dealt with as changes containing several possibilities that have not yet been fully revealed. Once they are perceived, chosen as priorities, and supported along the way, these possibilities can bring about creative responses, the development of new solutions, the redesign of the economic geography, and even the reshaping of the economic and social fabric.

In order to choose which transformations should be prioritized, one must develop visions for the future. Though they may be open to corrections and improvements, as long as they are

accompanied by consistent and persuasive proposals privileged by efficient policies and shored up by revisions in regulations, such visions tend to coordinate, empower, and give direction to change.

We must emphasize that once the frontier of known solutions is reached and even breached, the interplay of public and private efforts becomes highly important, given the complexity and growing convergence of contemporary technologies. But this also suggests that it is impracticable (and undesirable) to try to develop a single strategy for the economy as a whole. It makes sense to design “strategic fronts” that bring together groups of coordinated proposals wherever great possibilities are perceived. This approach could begin with two or three cases in which a valuable learning process would take place with respect to the strategic treatment of blocs of issues. In our final commentaries, which follow below, brief reference will be made to three possible strategic fronts for the Brazilian economy today.

ON THE BRAZILIAN ECONOMY'S IDENTITY CRISIS

The identity crisis to which we refer is not at all unusual. Hong Kong and Taiwan faced it about two decades ago, and other experiences of accommodation followed, presenting varying degrees of success. In this sense, Brazil is merely entering a process of transformation that other countries have already experienced.

Opinions about the new directions that the Brazilian economy should supposedly take are already circulating in the press. Many people, particularly those living abroad, believe that Brazil is fated to assume the condition of a country highly blessed with natural resources. In this fashion it would complement a new, different, and wealthy world with China as its industrial axis. In this scenario, India would serve as the primary source of services and Brazil as the great provider of foodstuffs.¹⁰

The radical simplicity of this formula—that seems to echo the reference in the national anthem to the “giant by its own nature”—has all the ingredients to provoke the angriest reactions

10. Cohen, Jorge. “Futuro presidente precisa olhar para o sul.” *O Estado de São Paulo*, 7 January 2008.

in Brazil. Nonetheless, it has an element of truth that could be felt in the future or, rather, that is already being felt, and that may become increasingly important. In order to understand this, one has to remember two very weighty facts.

First, planet Earth has become too small to meet the needs of modern consumers, whose numbers are rapidly rising in Asia, Latin America, and Africa. It is easy to confirm this fact, which combined with commercially used technologies and the natural resources effectively available to economies could not generate anything but a large change in relative prices in favor of increasingly scarce commodities.

The second great fact is that even though, on the one hand, this situation brings with it the technological stress mentioned above, on the other hand, and especially in the short run, there only seems to be one solution: the expansion of the map of exploitable natural resources. This is where Brazil emerges with a truly advantageous position. Leaving Amazonia and the Pantanal aside, Brazil has approximately 80 million farmable hectares. In addition, it uses 200 million hectares as pastureland. If necessary, the cattle/hectare ratio could be progressively reduced in order to free up enormous quantities of land for a combination of livestock and agricultural purposes.

Adding due qualifications and any other justified observations to these two facts, we are still certainly left with plenty of space (literally) in which to seriously consider the international division of labor noted above. Of course Brazil is not the only country with natural resources that could be used to satisfy the industrial world's voracious demands and the hunger of populations that are emerging from mere subsistence. Africa, and in particular Angola, also has 88 million hectares of suitable land, of which only 3.6 million are currently in use.¹¹ But this is a large exception, and other countries in general do not even get close to these figures, as far as the availability of arable land is concerned.

11. "Biofuels—Superpower, Angola Soon to be Self-sufficient in Food Production", FAO, BIOpact web block, January 2007.

The above would suggest that from the point of view of available land, Brazil actually could play the role of “the world’s farm,” playing off China, “the world’s factory,” (97 percent of Chinese exports are industrial products). However, this proposal makes no sense for several reasons. Let us look at some of them.

A large proportion of the country’s agricultural activity is highly and increasingly sophisticated, characterized by technical know-how and a discerning use of the conditions of production. Its efficiency is driven by inputs, machines, and equipment often conceived and developed for the country’s peculiar conditions. In short, the land itself is just a bolster for production, and agriculture (especially agro-business) is tied to industry in multiple ways from beginning to end.¹² Seen from this perspective, one understands that Brazil, to the extent that it accentuates its condition as an agricultural power, must likewise be considered a candidate for a major position within the set of industrial activities (and services), which accompany agricultural production, given the level of sophistication at which agriculture is being practiced in the country. We shall briefly return to this matter later, but it is important to note that the farm vs. factory opposition set out in the previous proposal makes no sense in today’s world and particularly in the case of Brazil.

Returning to the question at hand now from the point of view of manufacturing, one must recognize that the Brazilian economy has an industrial system whose diversity is only paralleled in the developing world by China and India. To a large extent, this system was already in place long before the emergence of China. From an industrial standpoint, this was followed by a long and dark winter that kept the industrial structure practically frozen but did not prevent businesses from renewing themselves intensely and from different perspectives. In several fields this allowed at least the largest and best companies to reach the international state of the art. Moreover, large, medium, and small enterprises—those that survived, of course—have shown

12. Mendonça de Barros, José Roberto and Mendonça de Barros, Alexandre Lajóz, “A revolução do agronegócio com base na economia do conhecimento,” in Velloso, João Paulo dos Reis (Org.), *A desafio da China e da Índia e a resposta do Brasil*. José Olympio, 2005.

great flexibility, which bears witness to the rich heritage of skills at the disposal of the country in the field of manufacturing.

This rich patrimony of skills will allow the country to face the conditions being created by the current tectonic shift in the geography of the world economy. The challenge is a great one: overnight we are ceasing to be comparatively an economy of low wages that has a broad and varied range of industrial activities. This complex question is combined, from the perspective of resource allocation, with an infrastructure that is, at best, adequate. China, which invests 11.5 percent of its GDP in infrastructure, is in a much better position, while India is unquestionably worse off.

Nonetheless, we are generically and comparatively well-positioned as far as our stock of capabilities is concerned. And we are lucky in that the invasion of Chinese imports is arriving in Brazil at a point when we are finally overcoming the macroeconomic fragility that, for a quarter of a century, prevented businesses from going beyond mere reaction to the conditions immediately perceived in the marketplace, with the government providing continual support to growth. The fact that the information revolution is already widespread in the country also helps. Under such circumstances it becomes possible, given the speed and efficiency granted by these capabilities and computerization, to make plans for the future—a minimum condition for consciously seeking a new identity.

There is evidence that an intense process of repositioning has already taken place in the business sector. Between the second quarter of 2006 and the third quarter of 2007, Brazil's Gross Capital Formation grew at an annual rate of 14.9 percent. In our view, several policy measures favoring industry and the resumption of credit are contributing to this performance. Furthermore, the Plan for Growth Acceleration (including sector-specific growth plans) is clearly changing the government culture—which now pays a great deal of attention to resource allocation—by focusing public policies on investment and introducing a taxonomy of goals, along with monitoring. The evaluation of the prospects of growth for this economy is not,

however, the subject of this study. We will simply note that when the question is seen from the perspective adopted here, the possible delay in many investments is regrettable; but it is also not very relevant. After all, what is at stake here, as in many other countries, is the redefinition of the economy vis-à-vis the new global context.

In another study, we intend to discuss the content of the “strategic fronts” that should, in our opinion, privilege a strategy of transformation (α , as per the typology presented above). By way of conclusion, we shall return to the reasons why it makes no sense for the Brazilian economy to follow a policy of mere complementarity with regions hungry for raw materials and foodstuffs.

Brazil has been referred to as one of the members of the BRIC group, not only because of its immense endowment of valuable natural resources but also because it has the fifth-largest population in the world. The former brings us closer to Russia, while our population gives us almost an Asian touch. While the latter characteristic might have been cast in a negative light in the past, it is acquiring a different meaning today. In the world we are entering, both geography and demography count.

Effectively, something that began to be evident in China for the first time over ten years ago appears to be emerging more and more: the world's leading industrial enterprises have realized that establishing themselves in that country was no longer a choice but a necessity. Given the enormity, dynamism, and idiosyncrasy of the Chinese market (due to the country's population and prices), companies' futures could be defined by the advantages acquired there. This brought about a new kind of self-fulfilling prophesy. A large population leads to the expectation of great growth potential, which causes a race to take up positions that confirms and accentuates the attractiveness of the economy.

Generalizing this reasoning, at the limit this means that industrial growth has become a prerogative of nations with large populations. Obviously, “Chinese” prices play a critical role here as they set off the chain of events discussed above. Something similar may be beginning to happen in Brazil, where the low prices of manufactured goods coming from China that initially

(around 2005) threatened to demolish and cannibalize Brazilian industry, combined with the credit revolution and the government's social policies to contribute to a broadening of scale in markets of mass consumption. More concretely, they are contributing to the incorporation of the C and D classes and are thus awakening the appetite for capital investment from abroad and from within.

Given the set of powerful motives listed here, the Brazilian economy is not outside the industrial game in this new context. This does not mean that it will not have to specialize. It simply means that specialization should not take place using the same strategy that is being used by economies that have been driven to the basic export model or by the traditional way in which mature economies specialize: by products. In our view, "strategic fronts" should define broad fields of specialization close to the frontier of techniques—one good example of this would be biofuels and their deliberately broadened chain of production.

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