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A guiding star for industry

Books discuss ways to address the deindustrialization of Brazil's economy

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In the mid-1980s, manufacturing—the industry that converts raw materials into products—was responsible for one quarter of Brazil's gross domestic product (GDP). By 2004, that percentage had fallen to 17.9%, and in 2014, it stood at 10.9%, according to figures from the Brazilian Institute of Geography and Statistics (IBGE). The roots of this situation—the deindustrialization that is casting a shadow over several of the world's economies in addition to Brazil's—and the policies that could reverse the trend have been the subject of intense debate within Brazilian academic circles. Three recently published books offer complementary information on the current arguments and disagreements. Published in 2013, *O futuro da indústria no Brasil—Desindustrialização em debate* (The future of industry in Brazil—Deindustrialization under discussion), compiled by economists Edmar Bacha and Monica Baumgarten de Bolle, is critical of the direction taken by Brazilian industrial policy in the recent past. The recurrent theme in the analysis presented in its 17 chapters is that, to make industry more competitive, the economy must be opened further that creation of incentives must benefit all segments of industry, not just selected ones. Necessary measures include the simplification of tax law and the establishment of competitive foreign exchange rates. The book is the result of a pair of seminars sponsored by the Institute of Economic Policy Studies/Casa das Garças, headed by Bacha, held in Rio de Janeiro in April and June 2012.

The 2015 work *Indústria e desenvolvimento produtivo no Brasil* (Industry and productive development in Brazil) contains articles that take a less skeptical and more diverse attitude towards the usefulness of policies that promote industrial activity, although the authors do not by any means reach a consensus about the features of such policies. The book was edited by Nelson Marconi and Maurício Canêdo Pinheiro, Getulio Vargas Foundation professors; Laura

Carvalho of the School of Economics, Business Administration and Accounting at the University de São Paulo (USP); and Nelson Barbosa, the current minister of finance. Lastly, the book *Indústria, crescimento e desenvolvimento* (Industry, growth, and development), edited by Flávio Vilela Vieira, presents the results of a research project that involved professors from the Institute of Economics at the Federal University of Uberlândia in Minas Gerais and focuses on the relationship between the industrial sector and economic development.

If there is a common denominator in all three volumes, it is the idea that the industry's accentuated loss of vigor is harmful to Brazil because of manufacturing's potential for producing innovations, achieving productivity gains, and generating wealth. However, some economists vehemently challenge deeply rooted ideas, such as the suggestion that the rising importance of the services sector is a factor in the fragility of economic development or even that the increase in commodities exports at the expense of manufactured goods is a sign of a backward step into the past.

In one of the chapters of *O futuro da indústria no Brasil*, Sergio Lazzarini, Marcos Jank and Carlos Inoue argue that the commodities boom , which benefited Brazil in the first decade of this century, is a "blessing" rather than, as some experts claim, a curse. In 2001, agricultural commodities, fuels, minerals and metals accounted for less than half of Brazilian exports. Ten years later, that share had risen to 70%. The authors demonstrate that some Brazilian commodities have an economic value added comparable to or even greater than that of industrialized products because they have been experiencing productivity gains due to innovation and because world prices are higher than they were decades ago.

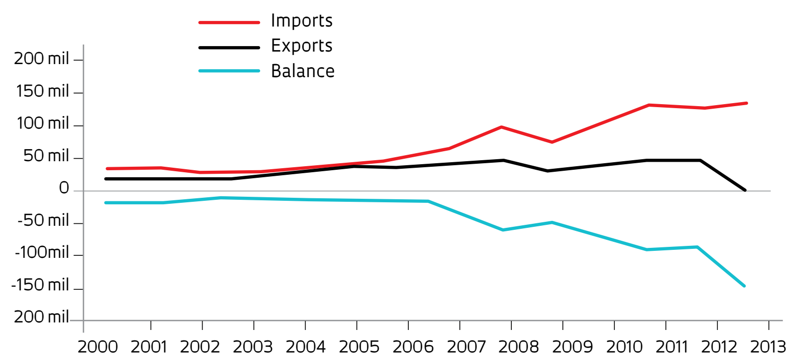
"If a product is the result of locally constructed capabilities and is part of a global production chain, it does not matter whether it is a "commodity" or not. Soy, for example, is only one component in a chain. It requires fertilizer, machinery, and research. Those things have to be developed. You can export soy *in natura* and there will be an entire production chain supporting it," says Lazzarini, who is an organization and strategy professor at the Institute of Education and Research (INSPER). "There is plenty of room for encouraging more technological research connected to commodities chains rather than directing tax credits and incentives to other chains that have less competitive potential," argue the authors, who propose using government revenues, such as petroleum exploration royalties, to invest in funds that would permit the diversification of the economy and would not leave Brazil hostage to fluctuations in the prices of a limited group of commodities. The trio of authors suggests that investing in commodity processing industries is desirable only if that process adds value and productivity to the final product, which is not always the case.

Economist Mansueto de Almeida, author of a chapter titled "Padrões de política industrial: A velha, a nova e a brasileira" (Patterns of industrial policy: The old, the new, and the Brazilian), criticizes the sectoral incentive policies adopted by the Brazilian government in the early 2000s. According to Almeida, these policies were based on the model adopted by South Korea in the 1960s and 1970s. "But, instead of promoting diversification of production, the model granted subsidized credit to big companies that operated in sectors where Brazil already had obvious competitive advantages, like foods, petroleum, and mining," he says. In his opinion, investing in selected sectors would have made sense at a time when the production chains were domestic. "They are no longer local. Each part of the process happens in some other country or some other part of the world," he says. He advocates a production development policy that makes the economy as a whole function better, improves infrastructure, simplifies bureaucratic rules, and reduces the tax burden horizontally. On a parallel plane, the role of

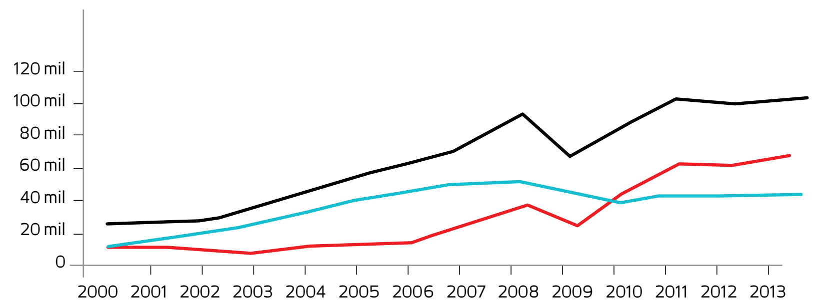
Trend in foreign trade

Evolution of exports and imports of industrial products by sectors of differing technological intensity—US$ millions FOB

HIGH- AND MEDIUM-HIGH-INTENSITY SECTORS



LOW- AND MEDIUM-LOW-INTENSITY SECTORS



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PANEL BY DIEGO RIVERA REPRODUCTION BY THOMAS HAWK **BOOK** REPRODUCTIONS BY LÉO RAMOS CHAVES

the government should be to promote an aggressive policy in support of innovation, something that Almeida maintains is much less onerous than sectoral policies.

Mariano Laplane, a professor at the Institute of Economics at the University of Campinas (Unicamp), says some of the criticism of the stimulus given by the government to large Brazilian companies is exaggerated because it is important that Brazil's conglomerates expand their business to other countries and become global. "The public interest is served when an industry is encouraged to globalize and become more innovative. That is a kind of contemporary industrial policy that many countries, such as China and South Korea, are following," says Laplane. "We were living in a dichotomous world where on the one side there were those who argued that we had to close the economy and replace imports, while others saw any kind of industrial policy as a crime. We won out and were able to implement a sophisticated industrial policy that is neither from the 1950s nor the laissez-faire of the 1990s," says the researcher, who is president of the Center for Strategic Studies and Management in Science, Technology and Innovation (CGEE), an institution affiliated with the Ministry of Science, Technology, and Innovation.

Laplane points out what he believes is a flaw in the debate about reindustrialization strategies: "There is some confusion regarding the difference between industrial policy and anti-crisis policies. Industrial policy relates to encouraging innovation and making companies more competitive. It has to do with changing the industrial structure to prepare it for an increase in innovation, dynamism, and productivity. It should not be confused with policies intended to combat the recession, such as reducing burdensome payroll levies or raising taxes on vehicle imports," he says. "We have made progress in the sophistication of instruments for innovation policy and we have improved the legal framework. We are taking the first steps in that direction. A good number of our companies, both Brazilian and foreign, agreed on that strategy not long ago." He believes that to advance more rapidly, Brazil must increase investment in research and development (R&D) in companies, universities, and research institutions. "Some of that effort must be made with public funds, but right now, money is short. It is essential to win the support of public opinion so that innovation be seen as a priority," says Laplane, who wrote a chapter on innovation and competitiveness in *Indústria e desenvolvimento produtivo no Brasil*.

Laplane and the book's other authors contributed to a seminar held in São Paulo, in May 2014, by the Brazilian Institute of Economics (IBRE) and the São Paulo School of Economics, both associated with the Getulio Vargas Foundation (FGV), and were invited to write about the topics of their presentations. "The purpose of the seminar was to spur discussion in order to produce the book, but not all of the invited participants were available to write chapters. This meant there was a slightly higher concentration of those authors who are more sympathetic to industrial policies," says Maurício Canêdo Pinheiro, an IBRE researcher who edited the FGV book and also contributed with a chapter for the Casa das Garças book. "These are two books that dialogue with each other and are useful for understanding and discussing the subject." One of the outcomes of the FGV seminar was the formation of a group of studies about reindustrialization in the context of the Brazilian Association of Machinery and Equipment Manufacturers (ABIMAQ). Another seminar will probably be held in 2016 in partnership with the Federation of Industries of the State of São Paulo (Fiesp) and may result in a new book devoted to policy proposals.

In the chapter that he wrote for the FGV book, Pinheiro discusses recent Brazilian industrial policy for the oil and gas

Industry is running out of steam

In percentages, the role of manufacturing in Brazilian GDP

SOURCE: IBGE ESTIMATES (SHADED AREA) GRAPH DEVELOPED BY DECOMTEC/FIESP

sector. He found that the requirement that services and goods be purchased from Brazilian companies, the so-called local content rule, did not help ensure the insertion of those Brazilian companies into chains of international suppliers. "Industrial policy based on some type of protection only works satisfactorily if there is a sunset date, if it serves to expose companies to competition," he says. "The oil and gas companies that produce in Brazil are competing with companies in other places that buy their inputs wherever they choose. How can we compete with them?" In Pinheiro's opinion, it only makes sense to assist specific sectors if those industries have a chance to develop competitiveness within a reasonable time frame. "Moreover, these certainly should not be labor-intensive industries, because there are plenty of countries that have very cheap labor, unless we agree to work according to their rules by paying extremely low wages," he says.

Another editor of the book, Nelson Marconi, a professor at the São Paulo School of Economics at the FGV, argues that designing an industrial policy without first bringing certain macroeconomic indicators into alignment is a waste of money. "You need an exchange rate that makes companies competitive, and you must ensure sufficient profit margins to encourage businessmen to invest," he says. "It is also necessary for average wages in industry to rise along with increases in productivity and that public tariffs be aligned so that companies do not experience any unexpected losses of revenue." One prerequisite for industrial policy, according to this economist, is to establish targets and enforce them so that the recipient companies become more competitive—goals such as volume of exports, employee training, and investment in R&D. "It is vital that the investment produces a return for the country."

Marconi is cautious about granting privileges to certain sectors. "Perhaps the results would be better if we had a policy for encouraging innovation and R&D that reaches all segments," he says. However, if one sector must be selected, he explains, two features must be taken into consideration: first, that it generates innovation, and second, that the innovation can be used by other sectors, promoting what he calls "relevant production

O futuro da indústria no Brasil—Desindustrialização em debate
Edmar Bacha and Monica Baumgarten de Bolle (eds.)
Published by Civilização Brasileira, 420 pp., R$55.00

Indústria, crescimento e desenvolvimento
Flávio Vilela Vieira (ed.)
Published by Alínea, 282 pp., R$58.00

Indústria e desenvolvimento produtivo no Brasil
Nelson Barbosa, Nelson Marconi, Maurício Canêdo Pinheiro and Laura Carvalho (eds.)
Published by Elsevier/FGV, 678 pp., R$89.90

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Detail of the mural by Mexican artist Diego Rivera at the Arts Institute in Detroit, Michigan, USA

chains." Marconi cites the health care sector as a possible target. "The Brazilian population is aging, and a program of innovation oriented toward the health care sector could even help us develop neighboring sectors, especially ones in which we have fallen behind, such as electronics, as well as the machinery and equipment industry and some services sectors."

Creating jobs should also be a goal, but the relationship need not be direct. "Generating innovation and employment at the same time is not easy, because innovation often leads to job loss. However, it is reasonable to assist sectors that create new occupations around them, especially jobs in the services sector," says Marconi. One example, he observes, is the textile industry, in which growth can spur employment in areas associated with fashion, design, logistics, marketing, and others. "It is essential to incorporate innovations into the production process in order to differentiate your product. You can't think about developing a policy for competing directly with Vietnam or Ethiopia, because labor costs are very low in those countries."

Comparisons with the strategies adopted by China, which grew at rates of 10% a year for more than two decades, and South Korea, which developed a state-assisted technology industry starting in the 1970s, are examples that are frequently cited in discussions about Brazil's ability to reindustrialize. In the case of China, certain lessons can be learned, observes Flávio Vilela Vieira, editor of *Indústria, crescimento e desenvolvimento*. "It is important to adopt policies that can stimulate competitiveness in the exports sector and that maintain a dynamic and competitive industrial sector. It is also important that there be high rates of investment in the economy and structural policies that improve the institutional environment," wrote Vieira, who calls attention to the fact that economic development in both China and India is still low when measured in terms of per capita income. "This enables those economies, by adopting necessary policies and reforms, to achieve high economic growth rates that cannot be achieved, with the same magnitude, by other economies that have already experienced the stage of economic development during which their per capita income levels rose."

We have a sophisticated and complicated structure, and it must serve as our foundation for progress, says Laplane

In the case of South Korea, articulation between industrial and scientific policies helped certain privileged sectors of industry to achieve a high degree of technological intensity. "The state proved to be extremely competent in its economic actions, using incentive mechanisms and disciplining private capital," wrote Thais Guimarães Alves, a professor at the Federal University of Uberlândia. International experiences are important references, but as Mariano Laplane from Unicamp observes, they are always limited. "The strategies employed by South Korea or Israel may be inspiring, but they were implemented under conditions that are very different from ours. We have a sophisticated and complicated structure. And that is the one which must serve as our foundation for progress," he says. ■