Book Review

Industrial Policy and Development: The Political Economy of Capabilities Accumulation


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Introduction

This book, with contributions from more than 20 well known experts, is timely and extremely important. The latter because it goes to the heart of one of the most important questions in economics: why some countries have grown rich while others remain poor? Should developing countries today use the package of policy instruments that allowed Western Europe, North America and Japan, and more recently others, to get out of the poverty trap? What are the main factors behind the high sustained growth, high performance countries of East Asia versus the mediocre, volatile growth of a majority of others? What has been the role of policy, in particular trade and industrial policy, and the role of the state, behind these different results? In this debate this book brings a wealth of evidence, comparative case studies, and a number of important principles for policy design.

Industrial policy, and the factors behind the accumulation of capabilities, is one of the most misunderstood areas of economic and development policy. Even though many of the critics of industrial policy by now recognize that it was widely used with success by the developmental states of East Asian countries, and that many developed and developing countries have practiced it pro-actively even if by other names (competitiveness, innovation, economic diversification, or more recently, policies to promote clusters), mainstream economics continues to be highly skeptical of it.

Value added of the book

A major value added of this book is that it integrates the insights from a variety of economic traditions: economic history, political science, institutional and evolutionary economics, and the economics of technology. While highly critical of the orthodox economics view that justifies the role of the state only to rectifying “market failures”, the book develops a framework for productive transformation policies which gives space for arguments developed in mainstream economics, as well as those in heterodox approaches.

This framework includes a taxonomy of the variables and processes on which institutions and policies act upon, which is widely used throughout the different chapters. This classification, as presented in table 2.1. (Cimoli, Dosi, Nelson, Stiglitz, p.27) includes: opportunities of scientific and technological innovation; socially distributed learning and technological capabilities; targeted industrial support
measures; the capabilities of economic agents (in the first instance business firms); the economic signals and incentives; selection mechanisms; and patterns of distribution of information and of interaction between different types of agents (customers, suppliers, banks, managers, workers).

This integrated framework represents an important value added of the book because it helps to escape the trap of the traditional debates of industrial policies which are caught in an abstract “market failure” versus “government failure” dichotomy, or catchy centuries-old metaphors about visible or invisible hands, rather than on a pragmatic look at the institutions, mechanisms, incentives, linkages and actors involved in accelerating processes of growth and productive transformation. And this is precisely what the authors of this book do, with particular emphasis in comparisons between the East Asian experience and the Latin American one.

In doing so the book provides new perspectives on themes and debates such as economic development, institutional change, evolutionary processes of path-dependency, technological catching-up of late starters and the role of the state and industrial policy. By looking through the lenses of evolutionary economics, the understanding of processes of learning and accumulation of local capabilities are highlighted as the essence of development. This thinking emphasizes that while much learning can be obtained from the world economy via trade and investment, by emulating international best practice in technology and productive organization, sustainable growth and development processes require the development of local capabilities: of the labor force, domestic enterprises, schools, universities and R&D systems (e.g. di Maio; Mazzoleni and Nelson; Amsden ).

A common thread running through the book is the idea of technological catching-up which is more based on the principle of emulation and deliberate search and promotion of upgrading than on the principle of comparative advantage. As Reinert argues, the world of the high-performing, sustained-growth economies is not a world of equilibrium and static comparative advantage, but one of increasing returns, fast learning, synergies, innovation and rapid diversification, all of which leads to “productivity explosions”. The high performing economies are those that have found a way to deliberately move their productive structure in the hierarchy away from “low quality activities” (diminishing returns, flat learning, low productivity, low wages, etc) and into “high quality activities” (economies of scale, steep learning curves, high growth of output, rapid technological progress, high productivity growth, high wages, etc). Reinert concludes that only when a catching-up country has entered the leading technological paradigm, will it be in its interest to specialize according to its comparative advantage within this paradigm.

Policy makers whose decisions are guided by the principles of static equilibrium and comparative advantages, embedded in traditional trade theories such as the Ricardo model, will hardly be able to trigger and sustain dynamic catching up and development processes. Rather, following these principles would allow a Stone-Age economy trading with an ICT economy to continue specialized in the production of stone-intensive products forever, and see this “equilibrium” as the best of all possible worlds!
The book adds significant value to the catching up debate by providing insights from evolutionary economics about the so-called co-evolutionary dynamics of the growth processes: the interaction between the institutional development of technological capabilities, organizational competencies and incentive structures. The focus is not only on growth seen as an accumulation of technology, physical and human capital, as in mainstream growth theory, but on the structural transformation, diversification of economic activities and the cumulative and path-dependent nature of growth and catching up processes. Learning is a complex process and is not passive (learning by buying, learning by doing), it requires explicit investments by all agents (individuals, enterprises, governments), and the investments in learning today determine the capabilities of tomorrow. Lack of capabilities is a major bottleneck or binding constraint for development.

**Industrial policy and the role of the state**

The book deals with industrial policy at the theoretical and at the policy level. In terms of theory, it is grounded on the taxonomy explained above and on very broad but useful definition of industrial policy that includes the following domains: Innovation and technology policies, education and skill formation policies, trade policies, targeted industrial support measures, sectoral competitiveness policies and competition and regulation policies.

At the policy level, a major section of the book deals with national and regional experiences and contains 12 rich chapters mostly focused on Latin America and Asian cases and their comparison. The East Asian Tigers’ industrial policy models, although with variations, are generally characterized as based on: Strict selectivity and time limitation of government interventions, the use of public enterprises to enter risky sectors, massive investment in skill creation and technological and physical infrastructure, the centralization of strategic industrial decisions in competent authorities, a highly selective use of FDI, and continuous dialogue with the private sector and a strong state capable of withdrawing incentives and discipline the private sector.

In contrast, the Latin America policy model is characterized by: too high levels of protection maintained for too long, that damaged competition in domestic markets and induced inefficiency; the lack of clear performance criteria to evaluate the policies implemented; the inexperience and inability of civil servants to implement policies; a lower expenditure in education and science and technology (S&T) as a share of GDP; despite important investments in S&T the national innovation systems and institutions that started to take form during the period of Import Substitution Industrialization never became a good engine of growth, and never built strong cooperative links with the private sector; frequent capture by the state by financial interests and the landed class. (Khan and Blankenburg).

This book contributes to our understanding of the “developmental state”: the analysis of the use of state power to provide directional thrust to the process of growth and development via market mechanisms. Within the evolutionary catching up framework of this book, the State is considered as the facilitator of dynamic learning processes, aiming at speeding up the catching up process by creating an environment that nurtures infant industries.
With this perspective, the debate on industrial policies is re-opened and it is hoped that the arguments and evidence of this book will be widely recognized by different economic schools of thought. A long tradition of development economists have documented the institutions for “governing the market”, including through industrial policies that have always accompanied the growth process of successful catching-up countries. However, the neoclassical economics and Washington Consensus attitude of disdain and even hostility to industrial policies paralyzed the debate on industrial policies during the past decades. By using the perfectly competitive market norm, and by applying models that assume those capacities that industrial policies are intended to support, there was no role for industrial policies and the State. The paralysis has been damaging to many developing countries, because it has kept what should be a central theme for growth and development at the margins of mainstream economics and mainstream policy-making (Peres).

Economists should agree once and for all, as Rodrik has argued, that a lot of time and effort has been wasted in discussing whether to have industrial policy rather than how to do it. What is now needed is to recognize the potential practical problems in the conduct of industrial policies and focus on the institutional and incentive design features to solve them.

Indeed, the main policy message of this book, as captured in its final chapter (Cimoli, Dosi, Stiglitz), is that the future of industrial policies is to advance towards a “knowledge-centered development agenda” aimed at speeding up the catching-up process. For this purpose, policy makers are challenged to develop a comprehensive “learning strategy”. Successful interventions to promote these learning processes need to provide carrots as well as sticks (e.g. di Maio; Khan and Blankenburg, Dahlman). Learning-promoting policies need to provide incentives to invest in skills, in new technologies, in the discovery of new economic activities and in competitive advantages. Institutions need to develop the capacity of the public education system, enterprises, new industries, and the vocational training system to provide learning opportunities. Sticks and disciplinary measures are also important, such as monitoring and application of strict standards, automatic sunset clauses, time-limited incentives. Sticks create the compulsion to learn while limiting rent-seeking. Possas and Borges discuss competition policy as a “…a permanent Schumpeterian stick discouraging sheer rent-seeking behaviors”.

The chapter by Amsden argues that in perfect markets, the ownership of investment and enterprises is irrelevant. Ownership, however, matters in monopolistic markets which characterise most higher technology sectors. Based on her research in Asian catching up countries, Amsden concludes that local enterprises are more risk-taking, invest more in R&D, and in more sophisticated research when compared to foreign firms. Governments therefore should not only be concerned with attracting FDI, but equally important, need to target industrial policy also towards domestic enterprises. Hobday and Perini support this argument and suggest policies to develop latecomer entrepreneurship. In another important contribution Cimoli, Coriat and Primi argue that governments in developing countries are well advised to include intellectual property management into their industrial policy.
**Trade policy**

Trade and industrial policy are closely related. In fact the former is a major component of the latter in the approach of this book. A very important chapter by Castaldi, Cimoli, Correa and Dosi, reviews the evidence on the idea that globalization has induced global convergence of incomes and finds a more complex story. While some countries have indeed converged, a majority have diverged, and many have been marginalized from the “convergence club”, with widening productivity gaps between countries vis-à-vis the leaders. The deeper point is that “globalization is by itself no recipe for some sort of natural catch-up in technological capabilities and for easy convergence in incomes. On the contrary, “more interdependent economies are likely to require more and more sophisticated measures of policy intervention by the weaker countries.” (p 542).

And yet the policy space for these measures has been closing with the new trade rules. In this regard the book is optimistic as regards WTO rules: it concludes that while it is true that a number of measures in the traditional industrial policy toolkit have been banned, at least for non-least-developed countries, policy making continues to have a lot of unexploited degrees of freedom. The book argues that if developing countries could display the same amount of pragmatism practiced by developed countries, many degrees of freedom could be regained even under current rules. WTO-plus bilateral trade agreements are a different story and the authors recommend that they “should be avoided at all costs”, as they are much stricter (the jacket is too tight) on tariffs, intellectual property, subsidies and other issues. The authors also point out the “profoundly anti-developmental bias of agricultural trade policies in all developed countries” (p 558).

On tariff negotiations, the chapter by Akyüz warns of the dangers of current proposals by developed countries in the Doha Round that bind all tariffs and set these bindings on a line-by-line basis. This, it is argued, would lead to a considerable reduction in the scope to use trade policy for industrialization. Instead, a proposal is made to switch to a regime in which the object of the agreement are the average industrial tariffs, without line-by-line commitments. This would reconcile multilateral discipline with much needed policy flexibility to provide space for learning strategies and industrial nurturing in catching-up countries.

**Some critiques**

For all the positive contributions in this book, it has, in the judgment of these reviewers, four weaknesses.

First, the book would have benefited from developing more a positive agenda about what we could call institutional and incentive engineering, in other words, how to make industrial policy work? How to specifically answer the traditional criticism about government failure? What are the institutional and incentive design rules that the comparative lessons from Asia and Latin America suggest? If one of the lessons of Asian countries is that they managed to achieve “a clever and pragmatic mixture of market incentives and state direction”, can this experience travel to other countries in the form of good institutional design? While the book concludes with some important general principles and guidelines
for industrial policies, it does not enter into the micro-economics of the institutional and incentive
design rules for successful industrial policy interventions. Peres gives some ideas and suggests that
Governments improve their capacities in a process of experimentation, trial and error, monitoring and
evaluating the impact of policies, and gaining legitimacy by demonstrating their impact. But how to build
good procedures and good governance for learning? Hausmann and Rodrik\(^1\) argue that institutions need
to be built that can set in place a process of self-discovery based on collaboration between public
institutions and the private sector that can accelerate the accumulation of capabilities while providing
feedback to correct mistakes and minimize the costs of mistakes and have provided some concrete
guidance for institutional design.

Second, while the experiences in Latin America and Asian catching-up countries were widely analyzed,
Africa is largely ignored, presumably because it does not provide many success stories. One can hardly
blame an already long book comparing the experiences of Asia and Latin America for not including
Africa, but one wonders what recommendations on trade and industrial policy derive from the approach
of the book for the African continent.

Third, the book focuses on productive transformation, income growth, capabilities accumulation and
catching-up but does not pay sufficient explicit attention to employment patterns. Economic
transformation and growth needs to come with employment growth, changing employment patterns
and improving working conditions in order to achieve sustainability, and more inclusive and job-rich
growth. In the context of technological upgrading and increasing labor productivity, employment
strategies, and industrial and trade policy-making should combine technological catching up with
diversification into non-traditional activities to create demand for labor and employment growth. In
fact, without making explicit reference to employment, this book proposes exactly such a strategy.

Fourth, despite the centrality of the concept of capabilities for its argument, the book fails to provide a
good conceptual framework for capabilities. The concept of capabilities remains vague and implicit. Such
a concept needs to define the unit of analysis if one wants to identify, measure and monitor capabilities
at the level of individuals, organizations and economies. In addition it needs to elaborate and identify
the properties of distinct forms of knowledge that underpin capabilities, so that policies can most
effectively shape and speed up their development, and to support the “micro learning dynamics,
economy-wide accumulation of technological capabilities, and industrial development” (Cimoli, Dosi and
Stiglitz, Chapter 20). Furthermore, one could argue that not only individuals and enterprises, but also
the Government needs to build up the capabilities and capacities to be able to guide and shape
productive transformation, diversification or emulation policies. This is at the core of an effective
“developmental state”. The lack of an analytical framework may be seen as an important constraint for

the development of a positive agenda of policy design and implementation. The ILO is currently undertaking research in this area with the objective to develop a diagnostic tool to identify binding constraints to sustainable catching up, and to develop comprehensive learning strategies.

**Conclusion**

In conclusion, this book contains a rich collection of policy analyses by leading scholars offering a fresh look at the policies and institutions fostering technological and organizational learning, industrialization and catching up. It is essential reading for policy makers, social partners, and anyone interested in development policy and building more socially just societies and a fairer globalization process.

José M. Salazar-Xirinachs, Executive Director, Employment Sector, ILO

Irmgard Nübler, Senior Economist, Employment Sector, ILO