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Developing Economies with Industrial Policy: Towards a Toolbox for Economic Growth

With Case Studies of Jordan and Egypt

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Abstract

During the past two decades, the “Washington Consensus” has been the dominant recipe for unleashing economic growth in developing countries. In view of the strong criticism mounted against it, it seems to have lost prominence recently. The success of the East Asian newly industrialized economies and recently of China is often seen as an alternative way towards economic development. However, most instruments stipulated in the Washington Consensus can be reconciled with successful measures employed by industrialized or fastly industrializing Asian economies. Most likely, the stability and market orientation of the Washington Consensus as a recommendation for developing countries is not wrong in itself but rather incomplete. In order to give developing countries a perspective for durable and preferably inclusive growth, it must be complemented by a modern and market-oriented industrial policy aimed at upgrading the economy's competitiveness. Such a “newer” industrial policy offers a host of instruments that can enhance economic growth in a generally favorable macroeconomic framework that can be achieved through the Washington Consensus. This article undertakes to integrate industrial policy in a comprehensive toolbox for economic growth and takes Jordan and Egypt as examples for how industrial policy measures are employed in practice.

Keywords: economic growth, industrial policy, regional policy, development policy, Washington Consensus, Jordan, Egypt

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I Introduction¹

The debate about the “best” strategy for the economic development of developing countries follows a cyclical pattern. While in the 1950s and 1960s import substitution and infant industry protection were fashionable, the 1980s saw a growing popularity of liberal, market-oriented policies like those modeled after the “Washington Consensus” (Williamson 1990). During the 1990s, approaches centered on an enabling and facilitating role for government in the process of upgrading the economy's competitiveness emerged. Among these, for example, were the competitiveness and cluster policies introduced by Porter (1990; 1998). The success stories of East Asian newly industrialized economies (e.g. Chang 2001; Hirono 2001; Kang 2001; Wong and Ng 2001) and more recently of China have inspired the search for ways to use a more active government role to spur growth. During the last years, global financial crises have led to widespread criticism against allegedly dysfunctional free markets and to calls for greater direct intervention of governments in the economy. For example, Stiglitz (e.g. 2007) is a long-standing critic against the Washington Consensus and the market liberalism it embodies, or is assumed to embody.

This cyclical path of notions demonstrates the delicate balance between free markets and government intervention in the form of industrial policy. In a market economy, free markets are the rule and government intervention is an exception that needs to be justified. Just how frequent and how far-reaching this exception is (or whether it may factually even become the rule rather than an exception) is subject to continuous debate.

If one assumes that free markets are an ideal rarely encountered in reality and that the various kinds of market failure are rather pervasive, government intervention in a market economy will often be expedient. On the other hand, government intervention is typically connected with the dangers of not getting it right, that is, of inefficient design and implementation of economic policies. If in the 1980s liberal policies have gained acceptance, it is not least because of the meager results that many of the activist policies in former decades have yielded (e.g. in case of the Middle East and North Africa, cf. Nabli, Keller et al. 2006: 20-21).

1 This article draws in part on Benner (2012a; 2012b; 2012d).

Thus, the question probably is not so much *if* government should pursue some kind of industrial policy, but rather *which one* and *how* (Porter 1990; 1998). If there is a strong case for industrial policy in a market economy, its instruments should be designed and implemented in a way that improves the growth potential of the economy instead of hampering it by diminishing the economy's efficiency.

Therefore, modern instruments of industrial policy that avoid the dangers encountered by those traditionally used but that at the same time have the potential to deliver their promise of raising the living standard of the populations of developing countries have to be elaborated. This is what this paper attempts to do.

It starts in the following section with an overview of how industrial policy can be defined. Section 3 examines the relationship between industrial policy and other areas of economic policy. Section 4 presents several instruments of industrial policy. Section 5 analyzes aspects of market conformity of cluster policy. Finally, section 6 attempts to shed light on the role of industrial policy in a wider strategy of economic development that also contains macro and micro-level policies. To illustrate these arguments, the article contains case studies about industrial policies in Jordan and Egypt.

2 Defining industrial policy

There are many different and partly conflicting definitions of industrial policy (e.g. Conrad 1987: 4-5 and 20; von Einem 1991: 13; Krumbein 1991: 41; Eichhorn and Greiling 1995: 18; Brösse 1999: 1 and 12-15; Bruch-Krumbein und Hochmuth 2000: 59-60; Seitz 2000: 32-34; Aiginger 2007: 300-302 and 319-320; Meyer-Stamer 2009: 10-12; Altenburg 2011b: 7, 10-11; Erdle 2011). For example, they differ on whether the term should be confined on manufacturing or the industrial sector or cover the whole economy. The U.S. Literature gives preference to a definition of industrial policy that covers the whole economy and thus includes agriculture and services, too (e.g. Rodrik 2004: 2; Nabli, Keller et al. 2006: 1). This perspective is used in this article.

The definition used here is that following Benner's (2012a: 76) which in turn based is on von Einem (1991: 13). It defines industrial policy

“as the focused use of measures of different partial policies. It consciously aims at influencing the change of the sectoral structure of the economy in the long term, either explicitly or implicitly, directly or indirectly. It pursues the goal of achieving results that cannot be expected at all, not in the same form, not to the same degree, or not at the same time exclusively under market influences” (Benner 2012b: 5).

Thus, the defining characteristic of industrial policy is its motivation to affect the structure of the economy. The different shapes of this motivation will be discussed later.

3 Industrial policy and structural policy

As in the definition used here the central feature of industrial policy is its motivation to influence the structure of the economy, it forms a part of structural policy. Because of its motivation to influence the *sectoral* structure of the economy, it can also be called sectoral structural policy (e.g. Benner 2012a: 75).

But industrial policy is not the only component of structural policy. The other main part is regional structural policy. Although industrial policy, not least in view of agglomeration tendencies and connected agglomeration economies, always has spatial effects (Altenburg 2011b: 22), it is not the same as regional structural policy because of the two notions' different motivations. While regional structural policy (Peters 1996: 13; Eckey 2005: 934) aims to affect the spatial structure of the economy, industrial policy targets its sectoral structure. There is, however, an intersection of both at which approaches like cluster policy are located (Benner 2012a: 81-84; 2012b)

Table 1 summarizes three elementary fields of economic policy and classifies industrial policy as part of structural policy (Esser, Hillebrand et al. 1996: 2-4 and 28-30; Peters 1996: 25-27; Wagner 2008; Rauch 2009: 187-189; Welfens 2010: 516-518; Benner 2012c).

Table 1: Elementary fields of economic policy

	Market policy	Process policy	Growth policy
Time frame	long-term	short and medium term	long term
Macroeconomic level	Design of macroeconomic aspects of the economic order	Monetary and fiscal policy; exchange rate policy if applicable	Design of the macroeconomic for economic growth (e.g. influencing the capital stock)
Mesoeconomic level	Design of the general framework for single industries (e.g. industries with specific regulation needs)	Interventions in single industries or concerning single regions to counter cyclical crises	Structural policy: industrial policy and regional structural policy
Microeconomic level	Design of microeconomic aspects of the economic order	Design of microeconomic aspects of stabilization policy (e.g. income policy)	Structural policy: industrial and regional structural policy; microeconomic incentives for long-term growth

Source: Benner (2012b: 4); adapted from Benner (2012a: 72).

4 Instruments of industrial policy

Industrial policy in developing countries can employ a vast array of instruments (e.g. Altenburg 2010; 2011b; Erdle 2011), many of which are employed in some way in most developing countries. They can be classified, among others, in the following fields of action:

- *completing or augmenting value chains*: the value chain perspective (Rauch 2009: 193-198) can be used to promote the development of buyer or supplier industries (Porter 1990). To do so, existing localized industries can be used as an anchor. Strictly speaking, this is not an instrument in itself but a perspective in which other instruments can be used (Altenburg 2011b: 72-73);
- *promoting entrepreneurship*: measures to promote new business formation can be, for example, courses or seminars for entrepreneurs, microfinance, or incubators. Entrepreneurship education in schools and universities can be an effective long-term step;
- *export promotion*: exporting businesses will need to live up to quality and efficiency standards demanded by international customers. In participating in the global markets,

they have to compare their performance with state-of-the-art competitors in other countries. This can lead to “learning-by-exporting” effects (Altenburg 2010: 19). Thus an export orientation of localized industries can induce upgrading through competitive pressure, as can openness for imports. In addition, interaction with sophisticated international customers can lead to learning (e.g. Lundvall 1988).

Businesses in developing countries need to be encouraged and assisted in their efforts to enter global markets. Programs for global trade fair participation, delegation visits to initiate contacts with possible customers or suppliers, or targeted export subsidies are examples for supporting measures. Export-import banks can be important agents.

Policy should generally demonstrate a commitment for open markets. Trade liberalization can proceed gradually to give domestic businesses some time to prepare and to adjust (Altenburg 2011b: 29-30), but this should be well communicated before. Policy should resist the pressure of affected businesses lobbying for (continued) protectionism while not concentrating on upgrading their competitiveness. In short, it should withstand the high dangers associated with implementing an infant-industry policy (Nabli, Kellet et al. 2006: 6; Altenburg 2011b: 55). Depending on the political and institutional context, this may be difficult or even impossible. Thus, in a such an environment very strong mechanisms for gradual but still rather quick trade liberalization must be created;

- *investment promotion*: as with export promotion, attracting foreign direct investment (FDI) can lead to intense competition and hence set incentives for upgrading (e.e. Altenburg 2010: 25). It can be a way to complete or augment localized value chains by attracting buyers and suppliers. Thus it can lead to the transfer of knowledge into a developing country's economy. Portfolio investment (e.g. by sovereign wealth funds) might be a way to fulfill domestic companies' capital needs;
- *financial incentives for investment*: Tax incentives and other subsidies can be a way to attract FDI (e.g. Altenburg 2010: 27; Erdle 2011: 23-24). Whether this makes sense in the long term is an open question. In the short term it can be a rather quick measure to kick-start the industrialization process and to provide employment, which is especially

important in developing countries with high unemployment and/or high youth unemployment (e.g. Morocco, Tunisia). In such a case, achieving quick results in attracting FDI can be a political necessity. In the long term, however, investment decisions taken purely on cost (including tax) deliberations can easily be undone. Industries locating in a particular developing country for cost and tax considerations can and probably will move on once other countries offer relatively more favorable cost or tax conditions. This process can be observed, for example, in the garment industry (Benner 2010; 2011b). If a country manages to upgrade its competitive advantages, e.g. by offering a better qualified workforce, it can attract other industries. This “flying geese” pattern (Chaponnière et al. 2008; Widodo 2008; Benner 2010; 2011b) can indeed be beneficial. But for it to succeed, upgrading is critical. It has to be propelled both in the public sector (e.g. in the education system) and the private sector, that is, through private businesses strengthening their competitiveness. In the latter case, FDI can contribute to upgrading if induces knowledge transfer. This can be promoted with a strategic policy towards FDI. Singapore can serve as an example (Wong 2001; Dahlman 2007; Benner 2010).

Providing general tax incentives is not sufficient for attracting FDI strategically. Targeted tax incentives for research and development, for example, might be more conducive to promoting knowledge transfer. Thus, there needs to be a shift from general incentives for FDI to specifically targeted, strategic ones at a certain point in time if general incentives are to be offered at all (to attract cost-sensitive industries, e.g. the garment industry, low labor costs might be more important than tax incentives, but both can be combined if necessary).

Still, endogenous potentials should not be neglected for three reasons: first, growth of indigenous businesses can create employment, too, and this without the danger of quick relocation abroad because their headquarter or “home base” functions which cannot be relocated easily (Porter 1998: 261) are located at home; second, their growth can lead to upgrading the economy, too; and third, they are supposed to be the receivers of knowledge transferred by foreign companies as a result of a strategic FDI policy. Offering widespread and generous tax incentives for all kinds of FDI puts indigenous companies at a disadvantage, at the very least so in the sense that there might not be enough resources left to promote their

development (e.g. through assistance for new business formation or the provision of necessary infrastructure outside export processing zones). This calls for a more balanced approach in which general tax incentives should be used only after careful consideration;

- *(de)regulation*: although (de)regulation policy belongs to market policy, it can have effects on industrial policy, too. Depending on the markets and possible network effects at work in them, some degree of regulation might be necessary to let competition unfold. Generally, deregulation is critical if existing bureaucratic obstacles hamper entrepreneurship. Legitimate needs for regulation need to be balanced with economic freedom. According to Porter (1990), some regulation might prove beneficial in the long term if it is in line with secular market trends (e.g. environmental regulation or customer protection). In contrast, unnecessary bureaucratic hurdles that unduly constrain growth should be abolished (Altenburg 2011b: 29);
- *privatization*: privatizing state-owned enterprises can lead to more intense competition and dynamic (possibly also even static) efficiency because it offers a chance to set appropriate incentives for the pursuit of efficiency-enhancing business strategies;
- *public investment and procurement*: according to Porter (1990), government can act as a sophisticated buyer and set incentives for upgrading and intense competition. Yet, this should not be confused with Keynesian growth stimulation through public consumption. In the sense meant here, government should not spend more but in a more sophisticated way. In addition, the perspective pursued by industrial policy is a structural, long-term one that does not correspond with the one of Keynesian stabilization policy that centers on mitigating short-term business cycles;
- *tourism policy*: as the cases of Egypt and Jordan demonstrate, tourism is a highly promising industry if employment gains are dominant goals of industrial policy. This will be the case in virtually all developing countries. Consequently, for countries with natural or cultural assets attractive for tourists, promoting it will often be a special priority. For example, international tourism marketing or the designation of tourist zones can be measures to support it. Considering the public-good character of tourism

(Benner 2012b: 19), a more direct role for public agents will be necessary, especially on the local level (Benner forthcoming b);

- *institutional set-up*: building effective institutions for private sector development including business membership organizations (e.g. Altenburg 2010: 21, 26; 2011b: 49-50) like trade associations or chambers of commerce is a highly important prerequisite for the use of many instruments (Benner 2011b);
- *education and science policy*: while these fields of policy are not part of industrial policy in a narrow sense, they are still very important in this context. This is because upgrading competitiveness in the long run requires skilled labor and human capital. A country's education and science policy and its structures and programs of technical and vocational education and training (TVET) should therefore be in line with the country's stage and course of economic development;
- *business climate*: a good business climate conducive to entrepreneurship and investment constitutes an important framework condition for industrial policy. It includes, for example, a fairly simple tax system with adequate rates as well as a sufficient availability of infrastructure. Physical infrastructure is often used with a structural-policy motivation. It is often built in the hope to help industries or regions develop. While a basic endowment of physical infrastructure is important for the economy in general, its role should not be overestimated. Physical infrastructure exhibits diminishing marginal returns which will, from a certain point, be exceeded by marginal cost. At the margin, instruments that enable learning and whose returns to scale may even increase will often be a better choice to promote economic growth. Even if (e.g. in a developing country with a very poor state of physical infrastructure) investments in physical infrastructure are necessary and are expected to exhibit high marginal returns, it should not be regarded as a sufficient condition for long-term growth (Altenburg 2011b: 29).
- *special economic zones*: they can be a way to promote investment or export (e.g. in export processing zones) and to induce or accelerate economic growth in their regions. In

addition to their function as growth engines, they might be used as a laboratory for economic reform and specifically for the use of industrial policy instruments;

- *cluster policy*: at the intersection of industrial policy and regional structural policy, promoting clusters can be an option to use local or regional growth dynamics (e.g. Altenburg 2010: 23). Cluster policy uses many of the instruments of industrial policy suggested here but focuses them not only on sectoral, but also on spatial strengths of the economy (Benner 2012a; 2012b);
- *networking*: offering opportunities for businesses to interact with each other might initiate input-output linkages and stimulate creativity by interactive learning. This is an element of cluster policy but it can also be used across the whole country, i.e. without a spatial focus, either generally, sector or technology-specific or for defined issues relevant for businesses across the board. Social media tools may be used to support some aspects of networking;
- *knowledge transfer*: the diffusion of localized knowledge into industry can be promoted by instruments that foster collaboration between businesses on the one hand and universities and research institutions on the other hand, e.g. innovation vouchers or networking measures like conferences (Altenburg 2011b: 32; Benner 2012a; 2012b).
- *knowledge pipelines*: international knowledge transfer is important for upgrading because domestic businesses need access to the global state of knowledge to catch up. Giving entrepreneurs, executives, or R&D staff the opportunity to spend some time in a global knowledge center is one way to do so (e.g. German Silicon Valley Accelerator Inc. n.d.). Another way is to give nationals the chance to study or work abroad and providing incentives for them to return after some time. Attracting branches of foreign universities is a further option, as is the targeted use of sovereign wealth funds to invest in foreign companies that possess specialized knowledge and to encourage them to cooperate with domestic partners or to locate R&D facilities in the fund's home country (Benner 2011a; 2011b). The goal is to have the countries' companies tap into global knowledge pipelines (Bathelt, Malmberg and Maskell 2004).

Of course many other instruments are possible. These are just some non-exclusive examples of some fields of action that industrial policy could focus on. Furthermore, it should be noted that services provided as a part of an industrial policy do not necessarily need to be performed by government itself. Private service providers can be given incentives or even be fully paid by government to do so instead of public agents. This enables competition and might even lead to more efficient service provision (Altenburg 2010: 20; 2011b: 33).

Case Study: Jordan's Industrial Policy

In the 1990s, Jordan implemented reforms in trade and industrial policy combined with macroeconomic stabilization aimed at fiscal consolidation. These measures were assisted by the World Bank and the IMF. It contained various measures of trade and investment liberalization, exchange rate liberalization, and the lift of price controls (World Bank 2012).

Today, Jordan has a per capita GDP of USD 6,000, somewhat lower than Egypt's and considerably lower than Tunisia's but still higher than Morocco's (Central Intelligence Agency 2012a). Youth unemployment is a major concern, considering that at the beginning of the new millennium, “almost 60% of jobseekers, both male and female, are below the age of 25” (European Training Foundation 2005: 28). Demonstrations during the “Arab Spring” in Jordan have highlighted the need for growth that leads to better employment perspectives especially for the younger parts of the population. Defined in a broad sense, Jordan's industrial policy today includes, for example, the “National Industrial Policy” and a “Jordan Export Promotion Strategy”. The country's efforts to develop its tourism industry complement these initiatives. Goals of Jordan's industrial policy are “to create an industry-friendly environment, to protect sensitive and vulnerable industries in both private and public sectors and to encourage foreign and local investment partnership initiatives” (European Commission and High Representative of the European Union for Foreign Affairs and Security Policy 2011: 10).

In a more narrow sense of industrial policy, Jordan followed a “National Industrial Policy” initially meant to cover a period between 2009 and 2011. It focused on growth of the industrial sector, exports, employment, and investment. The explicit “National Industrial Policy” aimed

at horizontal measures but did not cover agriculture or services (and thus not tourism). One of its goals was diversification within the industrial sector. Upgrading product quality was another objective. Targeted industries were exporting ones, labor-intensive ones and “high added-value industries” (Mahasneh 2008). Examples for these kinds of industries are pharmaceuticals, olive oil, garments, textiles, food production, and information technology (Mahasneh 2008).

Types of instruments used by the “National Industrial Policy” were, for example, “indirect financial and technical support” (Mahasneh 2008), export and investment promotion, standard setting and metrology, and public-private partnerships. The establishment of special economic zones is another measure of the broader Jordanian industrial policy. It also implemented the Euro-Mediterranean Charter for Enterprise (Mahasneh 2008; European Commission and High Representative of the European Union for Foreign Affairs and Security Policy 2011: 10).

Interestingly the “National Industrial Policy” also aimed to “encourage merger of industrial establishments” (Mahasneh 2008) which reminds of a policy of building “national champions” that is typical for more traditional forms of industrial policy. The horizontal orientation of Jordan's industrial policy though resembles “newer” industrial policy.

The range of targeted industries suggests a clear orientation on export-led growth and labor-intensive industries which is a logical consequence of Jordan's youth unemployment problem. It seems as if Jordan wants to emulate the classical “flying geese” pattern known from East Asian newly industrialized economies (Chaponnière et al. 2008; Widodo 2008). Entering industrialization through labor-intensive industries like garments and textiles as well as tourism and upgrading the industrial structure by moving gradually into more technology-intensive sectors is the general thrust of such a strategy that Jordan apparently tries to pursue (Benner 2010; 2011b).

Network forms of policy formulation and implementation with a participatory perspective that puts private agents on par with public ones can be a promising way to enable government to use bottom-up energy and know-how and to ensure ownership and empowerment, which turns government agents into “initiators, coordinators and facilitators” (Altenburg 2011b: 19, 31). It could be termed community-based industrial policy or, more broadly and also covers regional

structural policy, community-based structural policy. One advantage of a (at least partly) bottom-up policy involving local agents is that existing structures, institutions, and strengths (including latent or potential sources of competitiveness) may show that were not known to the central government before (e.g. Kiese 2008b: 26). This can attenuate the danger of government failure in the formulation and implementation of an industrial policy. Instruments like cluster policy offer various opportunities to involve local agents (Benner 2012c; forthcoming a).

Case Study: Industrial Policy in Egypt

Egypt is another interesting example for the use of industrial policy in developing countries. Its economic situation is similar to Jordan's but its political upheavals are far more fundamental. It remains to be seen how the new government will shape Egypt's industrial policy but there are some general base lines of the former regime's industrial policy that will probably not be altered fundamentally.

One of these base lines is the opening of Egypt's economy since the Sadat era in the 1970s and especially since Mubarak's accession to power in 1981. This opening succeeded policies of nationalization, central planning, and protectionism during the 1960s and 1970s. The “infithah” policy (انفتاح) consisted of measures such as the end of central planning, the establishment of free zones, price and interest rate liberalization, or tax reform (Loewe 2009).

Prior to the 2011 revolution, Egypt's industrial policy focused, for example, on free zones and one-stop shops, technology transfer promotion, the availability of credit and venture capital, export promotion, quality infrastructure, and SME promotion through business development services and the provision of incubators (Loewe 2009).

Another base line of Egypt's industrial policy in a broader sense is the high significance of tourism. The sector accounted for 2.8 million employees in 2008. Government promotes tourism through the Egyptian Tourism Authority and the Tourism Development Authority. Through these agencies, it contributes to marketing the country's brand and assists tourism businesses. Egypt's “National Sustainable Tourism Strategy 2020” sets the target of 25 million international arrivals compared with 12.8 million in 2008. Until 2020, Egypt wants to develop

tourist destinations at its Mediterranean and Red Sea coasts, strengthen urban hotel capacities and attract residential investment and thus augment the share of total tourism employment of total employment in the whole economy from 13,9 to 14,8 percent, which corresponds to almost 1.2 million new jobs (GTAI 2012: 37-38). Thus, it aims at considerable growth in the tourism sector. To achieve this growth, investment in tourism operations and regulations for purchases of holiday residences were liberalised and airport facilities improved. Another measure was the development of training programs for tourism employees (OECD 2010: 294-298).

Considering its high labor intensity, promoting tourism is a useful pathway for a developing country with a young and rapidly growing population and high unemployment. The median age in Egypt is only 24.6 years, its fertility rate is at 2.94 children per woman (Central Intelligence Agency 2012b). With these strong population dynamics, a high number of young people exiting schools or universities continuously need to be integrated into the labor market.

A growing tourism sector can be a suitable answer to this quandary. Together with other pillars of industrial policy such as trade liberalization, privatization and reinforced regulation, e.g. for competition or consumer protection (El-Megharbel 2009), and its noteworthy focus on innovation, it constitutes a multi-faceted industrial policy. Innovation-oriented measures might give impulses for growth and competitiveness and thus induce upgrading of the economy. But they are unlikely to lead to high and fast employment growth. Employment perspectives in innovative industries will most likely be restricted to skilled workers and to specifically university graduates. In addition, employment gains in innovative industries will probably not spread out to rural regions. Tourism can complement this “competitiveness pillar” as a kind of “employment pillar” that may engender effects in rural regions and for non-academically trained staff, too. It might, however, not be sufficient to create enough employment to integrate the high possible growing numbers of young jobseekers into the labor market. In the new political environment after the revolution, an even stronger focus on labor-intensive industries including tourism but also encompassing other sectors is likely.

It makes sense to design instruments in ways that foster search processes among entrepreneurs. There should be incentives for businesses to look for and experiment with new business models. Another aspect in the design of industrial policy instruments is that they should seek to

overcome industrial fragmentation between different types of businesses to create an arena for linkages and spillovers (e.g. between large and small firms, domestic and foreign ones, state-owned and private ones) and to enable pro-poor growth to unfold (Altenburg 2011b: 73-76).

5 Industrial policy versus market policy

According to the definition of industrial policy presented in section 2, the salient characteristic of industrial policy is its motivation to influence the economy's structure. This can take various directions. The term industrial policy is often understood as describing a policy trying to conserve old economic structures (e.g. in agriculture, mining, or heavy industries threatened by relocation),² often with the use of generous subsidies or protectionist measures. Such a policy is understood here as a “traditional” industrial policy. Another kind of industrial policy is one aimed at upgrading industries' competitiveness. This is similar to the reasoning of Erdle (2011: 4) who defines “long-term growth in total factor productivity” as the primary goal of industrial policy. Such an approach constitutes a “newer” form of industrial policy according to what Eichhorn and Greiling (1995: 18) described. This policy it is not about restraining structural change. Rather, it is supposed to promote and maybe even accelerate it. This is what several East Asian newly industrialized economies did with many of the instruments they employed to foster economic growth during their catch-up process that lasted several decades (e.g. Chang 2001; Hirono 2001; Kang 2001; Wong and Ng 2001). It comes close to the policies examined and drafted by Porter (1990). He set them in contrast to more traditional policies which he criticizes and terms “industrial policy” (1998: 248-249). A modern industrial policy aims at upgrading the economy and, in contrast the zero-sum view of competition held by more traditional forms, demonstrates an optimistic “positive sum underlying view of competition, in which productivity improvements and trade expand the market and many locations prosper if they can become more productive and innovative” (Porter 1998: 249). As Altenburg (2011b: 56) puts it, such a policy “encourages search processes”. It is meant to leave them enough freedom for the development of their own strategies to upgrade their competitiveness and set incentives accordingly.

2 For a description of measures of “traditional” industrial policy cf. European Commission, OECD and European Training Foundation (2008: 15-16).

Newer industrial policy fits much better into a market system. It has the potential to enhance the economy's efficiency of the economy which cannot be said of many measures employed by traditional industrial policy (e.g. subsidies focused on structural conservation and protectionism) and generally not of its general motivation to restrain structural change. As traditional industrial policy contravenes market forces which would lead to structural change, it cannot be market-compliant (Peters 1996: 188). Generally, in a market economy industrial policy can be justified only in very specific circumstances (if at all), especially when some form of market failure occurs. However, market failure may well be rather the rule than the exception in practice (e.g. von Einem 1991: 21-24; Enright 2000: 324-325; 2003: 120-121; Nabli, Keller et al. 2006: 5-10; Altenburg 2011b: 13-14, 57).

Cases of market failure are difficult to verify in reality (Altenburg 2011b: 14) and will often require pragmatic rules-of-thumb (Benner 2012a). Using pragmatic and possibly imprecise heuristics to establish market failure as a case for industrial policy (and to examine whether instruments of market policy can correct it at all and whether the potential benefits of their use outweigh the costs) still leads to an industrial policy that conforms much more to a market system than one guided by arbitrary political decisions (like “picking winners”, e.g. Altenburg 2011b: 15) not grounded in economic theory and analysis. This leads to a continuum of industrial policy whereby the question is not primarily whether industrial policy is justified at all but which policy mix is (Altenburg 2011b: 15), i.e. which ones of its measures are justified, to what degree, in which cases, and in which particular design. The possibility of government failure, i.e. factors leading to the inability of government to correctly diagnose market failure and to effectively correct it both in strategy formulation and in implementation (which can be an even more realistic danger in developing countries than in industrialized ones, as government institutions might not have sufficient resources and efficiency to fulfill basic tasks of economic policy), need also be taken into account. Another looming risk lies in limitations to the willingness of public agents to pursue efficiency-enhancing policies due to their rationalities according to public-choice theory (Seitz 2000: 171-220; Rodrik 2004: 16; Nabli, Keller et al. 2006: 7-9; Berg, Cassel and Hartwig 2007: 281-282; Kiese 2008a; Welfens 2010: 578; Altenburg 2011b: 17, 32, 57-58).³

3 Elements of “industrial policy management capability” that might help prevent some problems in conducting industrial policy in developing countries are listed by Altenburg (2011b: 21-22).

Another aspect concerning the market compliance of industrial policy is that of its horizontal or vertical orientation (Nabli, Keller et al. 2006: 4-10; European Commission, OECD and European Training Foundation 2008: 15-16; Altenburg 2011b: 12-13; Chahoud 2011: 1). A policy modeled after a horizontal approach “does not exclude measures aimed at promoting development in priority sectors, provided they are not market distorting” (European Commission, OECD and European Training Foundation 2008: 16). Thus, e.g. contrary to Aiginger (2007), horizontal industrial policy is not generally a contradiction to a sectoral focus concerning industries, technologies, or size classes of businesses (Peters 1996: 14), as such a focus is to a certain extent a central element of industrial policy. After all, structural change is always about sectors and industries and therefore industrial policy's goal to affect it presupposes measures targeted on sectors that are drivers of structural change. A horizontal industrial policy perceived in this sense comes close to what is understood here as “newer” industrial policy.

The sectoral focus should, however, not be too narrow, and should not lead to a static vision. “Windows of opportunity often open up in quite unexpected areas” (Altenburg 2010: 30). If and when measures of industrial policy are used with a sectoral focus, the focus should be broad enough to allow for future developments in markets and technology, including possible convergence. Sectoral industrial policy should therefore be combined with a broad policy towards economic growth. Although most of the instruments suggested above can be used with or without a sectoral focus, it will often be necessary to concentrate them on industries or technologies (or size classes of companies) that seem most promising in accordance with observable market trends and growth signals (but not by simple political designation). For example, due to resource constraints, the most intensive support (e.g. the most intensive form to use an instrument) will have to be targeted to these sectors. But a basic offer of support will have to be accessible to all companies and might be complemented with sector-unspecific measures of regional policy or with industry or technology-unspecific measures of structural policy aimed at SMEs. In particular, there will have to be open offers of entrepreneurship promotion to all prospective entrepreneurs. In addition, fostering a learning environment will be necessary in order to encourage entrepreneurs to experiment and to develop new trajectories in their markets and technologies (Altenburg 2010: 30; Benner 2012a: 220-222).

As promoting growth in developing countries presupposes economic efficiency, newer industrial policy is the approach of industrial policy that should be used here instead of the traditional one. It should be noted that all instruments are possible in both directions. In order to pursue the newer thrust of industrial policy, they should be used in a way that fosters upgrading. This includes the need to prevent rent-seeking⁴ and to overcome principal-agent difficulties (Rodrik 2004: 17; Nabli, Keller et al. 2006: 8-9; Altenburg 2010: 15; 2011b: 19-20). Finally, market compliance will often call for an exit strategy and a commitment to temporary assistance, i.e. measures with a clearly communicated limited time horizon (Altenburg 2011a: 12; 2011b: 32). Industrial policy should give preference to market forces if and when they are sufficient to achieve the aim of newer industrial policy, e.g. upgrading competitiveness and creating new and durable growth potentials.

Still, it should always be remembered that private agents and especially businesses and entrepreneurs are the drivers of economic growth and structural change (Altenburg 2011b: 7). Government, and hence industrial policy, does not “create” growth. Thus, its relevance for economic development should not be overestimated. It is by far not a panacea. Applied efficiently it can still have a positive impact on growth and structural change by facilitating the private sector's growth, thus “creating an enabling environment” (Altenburg 2011b: 17). It can assist companies in enhancing their competitiveness (Altenburg 2011b: 11), building on the dynamic effects of competition instead of hampering it. In addition, industrial policy interventions

“should challenge entrepreneurs and encourage learning and innovation rather than creating a protected environment that suffocates entrepreneurial dynamism and technological learning” (Altenburg 2011b: 29).

Industrial policy should focus on “systemic competitiveness” (Esser, Hillebrand et al. 1996; Rauch 2009: 186-193; Altenburg 2011b: 11-12) instead of targeting individual companies in single-case decision that disregard effects on other levels of the economy. Some interventions may still benefit single businesses (or industries), but in designing them it is important to judge them by the systemic effects they can achieve.

⁴ For example, if subsidies are handed out to individual companies, doing so in a competition procedure may offer a transparent way that, if designed well, is less conducive to rent-seeking (Altenburg 2011b: 32).

Therefore, the role of industrial policy is indirect but can nevertheless be powerful. Due to this indirect nature, measures of industrial policy will not always yield the expected results. Applying industrial policy should be guided by a strategic vision and an understanding of the market processes shaping structural change and the policy instruments to affect them. Still, it will often be a trial-and-error process that presupposed monitoring and evaluation (Altenburg 2011b: 9-10, 32-33).

6 Industrial policy as part of a comprehensive economic policy

There can be no uniform industrial policy but always a specific combination and design of instruments from the menu industrial policy offers which is adapted to the particular context of the respective country and its economy (Altenburg 2011b).

For example, the institutional setting in developing countries can pose severe limitations for the efficiency of industrial policy. Following Altenburg (2011a; 2011b: 46-47), in political systems that can be characterized as neopatrimonial and exhibit political clientelism and patronage as well as strong rent-seeking activities not constrained by effective mechanisms of checks and balances, measures of industrial policy can easily be employed for special interests or serve as a pretext for pork barrel politics, as “politicians and bureaucrats who want to employ industrial policy for patronage and clientelism can easily find technical justifications to mask their political objectives” (Altenburg 2011a: 8). This leads to the sad conclusion that in such a political context, in the interest of economic efficiency it could be the best choice not to employ an activist industrial policy at all and to forgo its possible benefits. It is not only that in the absence of effective structures of government and administration industrial policy can not expected to unfold its desired effects; in some institutional contexts industrial policy is likely to be misused and then may even do more harm than good. However, it is possible that using some single elements from the menu of industrial policy might be feasible. It needs to be assessed in every single national (and maybe even regional) context which measures feature only weak dangers of being politically captured. In examining their cost-benefit ratio, the danger of misuse in a particular political context needs to be considered. Thus, the scope and content of the selection of industrial policy measures to be used in a developing country should not only

depend on its economic structure and the structural problems to be solved, but also on its institutional and political context. In general, protecting industrial policy from being captured by political interests is important in industrialized countries, too. It may even be more relevant in many developing countries. After all, the stories of East Asian newly industrialized economies suggest that with fairly efficient systems of governance and administration, industrial policy can indeed be used in a (on balance) beneficial way for long-term economic development (e.g. Chang 2001; Hirono 2001; Kang 2001; Wong and Ng 2001).

Even short of these spectacularly successful cases, a careful use of industrial policy can still lead to good results in a somewhat less propitious but still (as far as industrial policy-making is concerned) “not too bad” institutional environment (e.g. Altenburg 2010; Erdle 2011). Consequently, it is important to assess the individual institutional context of a nation as to whether is it “too bad” or not. This assessment should be carried out with regard to every feasible industrial policy instrument to select those that can still be applied without causing harm. If upon such individual assessments some instruments turn out to be applicable, the scope of application of at least “some” industrial policy might in the end still be greater than the limitations discussed suggest at first sight.

In addition, capacity building for public agents will often be necessary. This is especially true in low and lower-middle income countries. Government agencies will not always dispose of the knowledge or resources necessary to successfully design and implement an industrial policy (Altenburg 2011b: 35-36, 60).

Industrial policy is sometimes perceived as an alternative to liberal market policies like those embodied by the Washington Consensus (BMZ 2004; Rodrik 2005). Indeed it addresses different issues as the Washington Consensus. But this should not be understood as a rejection of policies directed at solid macro and microeconomic conditions. While traditional forms of industrial policy do not go well with liberal policies directed at free markets, the modern current of “newer” industrial policy presupposes a considerable degree of macro and microeconomic stability to unfold its full potential. For example, competitiveness-enhancing export promotion instruments require trade liberalization, at least to a certain degree. A solid government budget is necessary to avoid the crowding-out of investments and to reduce the danger of

macroeconomic disruptions, as can be seen in the current public-debt induced crisis in southern European countries. And a good mix of deregulation and reregulation as well as prudent privatization of state-owned companies apart from the core areas of government activity will often be important steps to unleash new waves of innovation and competitiveness. Thus, a “newer” form of industrial policy that aims at upgrading businesses' competitiveness and policies directed at safeguarding functioning markets need to be combined. Market policy needs to include the set-up of effective institutions, as markets do not appear from nowhere but require social and institutional preconditions, as well as sufficiently efficient and effective government activity in its core areas. As far as market policies like the Washington Consensus are understood to be basic requirements that need to be complemented with appropriate measures of institution building⁵ as well as policies that facilitate and enable upgrading (that is, “newer” industrial policies), the pursuit of such industrial policies will most likely be necessary in most developing countries. If used alone – or even without adaptation to the specific characteristics of the particular country in question – they are much less likely to achieve their full potential in unfolding economic growth. Thus, liberal market policies (e.g. the Washington Consensus) and “newer” industrial policies belong together in a carefully adjusted policy mix (Benner 2010: 20-22).

The case for the use of industrial policy is rather strong, but all depends on good ways to design and implement its instruments:

“It is now widely accepted that the countries that managed to catch up with the old industrialised and high-income countries are the ones whose governments proactively promoted structural change, encouraging the search for new business models and markets, and channelling resources into promising and socially desirable new activities. Evidence of failed industrial policy experiments, however, is also abundant. Hence, while market failure justifies public intervention in principle, inappropriate policies may have worse results than non-intervention” (Altenburg 2011b: 83).

Therefore, a general market orientation such as the one offered by the Washington Consensus appears as a good basis for economic development that can be complemented by well-designed and well-implemented measures of industrial policy. Industrial policy interventions that can not

5 As Williamson (2003: 11) concedes, the original Washington Consensus needs to be complemented by other policies, e.g. in concerning income distribution.

(yet) carried out in a sufficiently effective and efficient manner should be deferred or refrained from at all. Alternatively, they might be attempted in a way that does not hold the potential of harming the economy too much and of unduly distorting markets if they fail. Still, there is a very strong argument to continuously improve the institutional and governance-related framework for the conduct of industrial policy. Thus, for low-income countries, building and strengthening institutions will often be the primary step in industrial policy. A comprehensive strategy of industrial policy might then evolve in a gradual process.

In sum, industrial policy can conform to a market system. If designed and carried out in an efficient way, it can indeed contribute to an economy's development. But it should not be viewed as an alternative to macroeconomic stability and to a solid microeconomic framework. It can complement such policies as those embodied by the Washington Consensus as a meso level component. Taken together and carefully adapted to the specifics of each individual country where they are used, these elements can form a potentially powerful development strategy.

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