

CLUSTERS, INDUSTRIAL POLICY AND ENTREPRENEURSHIP: A CRITICAL VIEW

Bogdan Glăvan*

Market failure and cluster theory

In the last decades, more and more economists have advanced the idea that significant obstacles impeding economic growth (especially in less developed regions) consist in different market failures, which prevent entrepreneurs from taking the necessary actions to exploit profit opportunities.

Recently, a number of economists have pointed out an interesting market failure that may jeopardize development: coordination failure of different entrepreneurs to act upon perceived profit opportunities.¹ Economists like Rodrik (2004) and Rodriguez-Clare (2005) have used this particular market failure argument as justification for a “new industrial policy”, the goal of which is to induce entrepreneurs to invest in those projects with the highest social return.

As the coordination externality argument goes, exploiting new business opportunities has considerable positive externalities for other entrepreneurs, who can learn about the profitability of certain ventures and can act accordingly. Firms can improve their performance if entrepreneurs realize that their individual success is dependent on the actions of other market participants. They can, for example, get organized to identify common challenges, for example that all companies would profit from a specific training program at the local university, from an investment in improving transport facilities, or from a joint effort to upgrade the local power or water supply. For an individual company it would not make sense to address such issues but for the group as a whole they become hugely beneficial efforts. Put it differently, the social rate of return on investments in key projects is higher than the pure private return. This means that coordination will be under-supplied and that government should correct market failure, providing proper incentives in order to reach the optimal level of coordination.

These writers’ argument can be associated with Porter’s idea that clusters, that is, regionally coordinated industries, are critical for overall economic growth.² Clusters develop when coordination failures are overcome. “As the cluster develops it becomes a mutually reinforcing system where benefits flow backwards and forwards throughout the industries in the cluster.” (LeVeen, 1998) Cluster-based policy aims at removing imperfections of the free market by facilitating the coordination of economic agents.

At the present, the opinion that clusters can play an important role in fostering industrial development is widely held among development economists.³ In Porter’s view,

* Bogdan Glăvan is Associate Professor of Economics at the Romanian American University in Bucharest.

¹ Ferris and Gawande (1998) attempt to provide evidence for this argument, referring to the case of developing countries.

² As Rodrik (2004, p. 13) put it, “the cluster approach to development represents a narrower version of the same idea.” See also Rodriguez-Clare (2005).

³ See, for example, Nadvi and Barrientos (2004).

“clusters should represent an important component of state and local economic policy.” (Porter 2000, p. 29.) This new ground for industrial policy has found an increasing number of supporters among policymakers throughout the world. “Many areas around the developed world are adopting the clusters approach to regional economic regeneration, with the United Kingdom-wide government Department of Trade and Industry suggesting that this could be a key element in re-establishing the competitiveness of national businesses in the future.” (Danson and Whittam)

This paper intends to provide a refutation of the idea that coordination failures as manifested in the inability of clusters to emerge can serve as a ground for government intervention. Porter’s theory of clusters is shown to be irrelevant and inconsistent on its own terms.

Definitional problems

According to Porter (1998, p. 226), “a cluster is a form of network that occurs within a geographical location, in which the proximity of firms and institutions ensures certain forms of commonality and increases the frequency and impact of interactions”. From the very beginning, it is important to note the vagueness of this definition. As Martin and Sunley (2003, p. 10) emphasize, “the obvious problem raised by these cluster definitions is the lack of clear boundaries, both industrial and geographical. At what level of industrial aggregation should a cluster be defined, and what range of related or associated industries and activities should be included? How strong do the linkages between firms have to be? How economically specialized does a local concentration of firms have to be to constitute a cluster? [...] At what spatial scale, and over what geographical range, do clustering processes (inter-firm linkages, knowledge spillovers, rivalry, business and social networks, and so on) operate? What spatial density of such firms and their interactions defines a cluster?”

Another point is that clusters do not necessarily increase the competitiveness of member firms – a fact acknowledged by Porter himself. When a cluster shares a uniform approach to competing, a sort of groupthink often reinforces old behaviors, suppresses new ideas, and creates rigidities that prevent adoption of improvements. Clusters also might not support truly *radical innovation*, which *tends to invalidate the existing pools of talent, information, suppliers, and infrastructure*. In these circumstances, a cluster participant...might suffer from greater barriers to perceiving the need to change.... (Porter 2000, p. 24, emphasis added.)¹

The lack of conceptual precision has been referred to by various analysts as part of the intentional style of Porter, who seeks to provide policymakers with an argument for exercising interventionism. Porter’s idea serves as basis for a redefinition of interventionist policy, following the obvious intellectual bankruptcy of the old (rude keynesian) macroeconomic policy and price interventionism. It provides the ground for a more refined, intellectual-appealing interventionism.² The definitional elasticity of the

¹ See Industrial Districts, www.rrl.wvu.edu/WebBook/Norton/nortonupdate/neoflows1.htm

² As Martin and Sunley (2003, p. 12) observe, the notion of cluster can be used in a variety of situations, “depending on what the aim of the exercise is, or the client or policymaker for whom the analysis is intended.”

cluster concept undermines the operability of the theory while simultaneously making it an ideal tool for politicians. In the words of Porter (1998, p. 102), “drawing cluster boundaries is often a matter of degree, and involves a creative process informed by understanding the most important linkages and complementarities across industries and institutions to competition.” This can only mean that the exact shape of clusters is related to the discretionary choice of policymakers. Any attempt to circumscribe a group of related companies based upon a certain criterion runs the danger of overlooking important clusters; at the same time, too many firms might be selected and clusters can be loosely defined.

Coordination and the development of clusters

According to Porter (1998), “being part of a cluster allows companies to operate more productively in sourcing inputs; accessing information, technology, and needed institutions; coordinating with related companies; and measuring and motivating improvement.” This characterization is supported by Rodriguez-Clare (2005, p. 3), who argued that government should promote the development of clusters by inducing entrepreneurs to invest in those projects that offer high clustering opportunities. However, this characterization, as well as the policy recommendation based on it, should be considered carefully.

It is essential to note that the formation of clusters enhances the productivity of individuals only if it springs naturally from the voluntary actions of the producers. To say that a higher agglomeration of firms (at the extreme, a single cluster) encourages unconditionally the deepening of specialization, development of trade, promotes innovation and supports an increasing of economic growth, is to treat mechanistically human actions. It is true that cluster formation decreases some economic costs, because businessmen do not have to incur the same expenditures with transportation and search costs. But following similar reasoning, an extension of the number of producers on the market – that is, a deepening of the division of labor – increases search costs. Yet, as it is absurd to consider that agglomeration promotes society’s welfare just because, by decreasing transportation and search costs, it simplifies trade and production, it is no more reasonable to assume that industrial clusters bring an increasing of welfare. Individuals do not wish unconditionally to avoid transaction costs by eliminating the distance among them. Beyond a certain level, increased agglomeration does not result in net positive external benefits, but in negative externalities. An important question for the entrepreneur deciding the location of its venture is whether agglomeration benefits are higher than congestion costs. The issue cannot be settled by an independent observer, because respective benefits and costs cannot be determined objectively.

It is difficult to prove empirically that clustering is by necessity beneficial. Rather, as history illustrates, people prefer to spread even if, as a consequence of their choice, the transportation expenses increase. On a free market, entrepreneurs will try to respond properly to the demands of their customers, providing goods in the locations preferred by the public. Therefore, only on a free market would it be possible to discover what is the optimal size of a firm or cluster. Since political action is not a substitute for voluntary cooperation, a discretionary intervention on the organization of production cannot bring any benefits to the community.

The characteristics of a cluster are the outcome of speculative actions. Consequently, not all clusters spur the competitiveness of their members. There are examples of cluster failures.¹ Territorial industrial agglomerations spring from entrepreneurs' actions. Businesses cluster together because it is more efficient. "Clusters dissolve when costs become too high for industries to remain competitive."²

Clusters represent a form of industrial organization. It results from the incessant attempt of entrepreneurs to arrange the structure of production so as to fulfill to the best extent possible the consumers' demands. Therefore, clusters are specific consequences of entrepreneurial ventures.³ Government meddling with clusters is tantamount to interference in the entrepreneurial process by which resources are directed toward the fulfillment of the market participants' most urgent needs. It introduces artificial incentives that weaken the inherent coordinative quality of market incentives.⁴

Instead of reasoning in terms of "externalities" and "market failure", it is time for the mainstream economists to realize that government is the only source of entrepreneurial discoordination. Through its trade policy – imposing different regulations and technical specifications, customs duties, quotas, voluntary export adjustments – immigration laws, regulations concerning capital movement etc., the state is the only source of barriers for trade and economic (inter-regional) integration. In addition, the localization process is also indirectly influenced by the government policy. State intervention is the object of individuals' anticipations, and it consequently changes the behavior of economic agents. If market participants expect a change in government policy, they will act in order to capture all the benefits and minimize the losses arising from that policy. For example, apparent lack of delocalization to improve the coordination of production is due to the expected shift of industrial policy. Therefore, far from being an exogenous variable, the disparities in the production structure should be considered as dependent on the political institutions governing the market process.

Coordination and government intervention

How is government supposed to improve the coordination of market participants? As Rodriguez-Clare (2005, p. 30) argues "One interesting approach would be for the government to create a mechanism whereby business associations representing different clusters would submit proposals that identifying areas for collective action and public support. The different proposals would be reviewed by a "panel of experts," who would

¹ The reluctance to accept this perspective has serious practical consequences. As Bresnahan, Gambardella and Saxenian (2001, p. 7) note, "Many governments have made the analytical error of focusing far too much on the second aspect of external effects, and have viewed clusters of innovative activity as no more than a ticket to producer rents. This has provided the intellectual foundation for largely failed policies that attempt to jump-start growth in clusters by directive policy."

² See Buss (1999, p. 368).

³ "Clustering is the result of entrepreneurial activity and is driven by the production of valued goods to seize profits. Governments cannot therefore supersede the market in the creation of clusters." (Desrocher and Sautet 2004, p. 238-239).

⁴ Besides this, Barkley and Henry (1997) discusses several shortcomings of cluster development strategies.

rank them according to the estimated social return for the public investment. Finally, the best projects would be selected for support.” Since the author is optimistic about the quality of such an institutional invention, the natural question that arises is, why not extend the “mechanism” to all businesses and investment projects? The government could tax away individuals’ income and then redistribute it according to the authoritative views of the “panel of experts”. Rodriguez-Clare seems not to notice how much his argument can prove.

The proponents of the new industrial policy are aware that past interventionism has failed miserably to promote growth and prosperity all over the world, and they are very cautious to differentiate their opinions about market failure from the older view of government’s superiority.¹ As Rodriguez-Clare (2005, p. 29-30) maintains, “if one wanted to call the current proposal a sort of industrial policy, it would be a “soft” industrial policy, rather than the “hard” industrial policy implemented in previous decades, which entailed distorting prices so as to reallocate resources to certain sectors as a way to generate a new pattern of comparative advantage [...] This is important because soft policies are likely to be more transparent and less costly.” Porter (2000, p. 27) holds a similar opinion, arguing that “a role for government cluster development and upgrading should not be confused with the notion of industrial policy” and that “the intellectual foundations of cluster theory and industrial policy are fundamentally different, as are their implications for government policy.”

But why is transparency so important about government policy? Freezing commodities’ prices or wages is a very transparent political measure. Yet at the present, it is far from being advocated by policymakers, because its harmful effects have become widely understood.² This example shows that transparency is not a proper criterion to evaluate policy initiatives.

According to the proponents of the new industrial policy, the government should shift the attention from individual firms and industries to clusters. Rodriguez-Clare (2005, p. 28) points out that unlike the old strategy, which attempted to pick winners (that is, individual companies), “policy should pick clusters”, and Porter complements this arguing that instead of targeting specific clusters, all existing and emerging clusters deserve attention.

Despite these authors’ efforts to differentiate their proposal from the older industrial policy, the distinctions they introduce are nothing more than rhetorical innovations. As a number of writers have aptly noted, the new sort of interventionism amounts to nothing more than picking winners. In a sense, this new political activism can incur even higher costs on society than previous attempts to engineer development. Since picking clusters means that policymakers should target groups of companies or industries, rather than specific businesses, the magnitude of potential failures increases considerably. If

¹ As Rodriguez-Clare (2005, p. 29) mentions, “there is no need for the Government to distort prices so as to reallocate resources towards certain sectors.”

² One could argue that government is always tempted to choose the least transparent measures available at the moment.

government's privileges fail to promote growth, than the outcome will be not punctual bankruptcies as in the past, but the occurrence of clusters of losses.¹

According to Rodrik, the policy of correcting coordination failures need not consist in subsidization. As he explains, "it is the logic of coordination failures that once the simultaneous investments are made all of them end up profitable. Therefore none of the investors needs to be subsidized *ex post*, unless there is an additional reason (i.e., a non-pecuniary externality) that such subsidization is required." What is needed in order to induce entrepreneurs to start complementary investments is an "ex-ante subsidy", consisting for example in a implicit bail-out or an investment guarantee. Put it this way, the "new" industrial policy seems to be apparently immune against much of the virus of corruption, rent seeking and malinvestment usually associated with government activity.

In spite of its new clothes, government interventionism has no more solid foundation that it ever had. The problem with industrial policy is deeper than most of its critics admit. Promises to bail-out entrepreneurs in case they fail to operate profitably amount in a *de facto* socialization of private investments. The experience of former communist economies and the "crony capitalism" developed in some East Asian countries illustrates the failure of such political schemes.

The advocates of industrial policy thinks government can act as private business do, using profit and loss criterion to decide between different investment projects. Rodriguez-Clare (2005, p. 28) thinks that, "at least in principle, one could calculate a social return for such an investment. With limited resources, the obvious approach would be to invest in the proposals that entail the highest social returns. The problem, of course, is that calculating such social returns is very difficult. One (perhaps limited) way to interpret prospective studies is as a way to facilitate this calculation." Here, the author (to his own merit) touches the real problem of industrial policy. The state is not an entrepreneur, so it is not in position to "interpret" prospective studies the same way private individuals do. As Buss (1999b, p. 367) says, "there are only individual or group interests that use public authority to their benefit, often at the expense of others."

Conclusion

In this paper I have tried to prove that the coordination failure argument does not provide a solid ground for a reshaping of the industrial policy both because of its lack of sound theoretical foundation, and because of its empirical irrelevance. We have seen that the vagueness of the notion of cluster makes the case for industrial policy appealing. There is no recipe for clusters. The "new" industrial policy should therefore be eliminated from the field of development economics.

Why are cluster-based targeting, so widely practiced? Not because of their scientific merit, but for political reasons. Impressive analytics can be drummed up on demand to

¹ Desrochers (2004, p. 239) notes that it is not clear whether cluster-based regional development policy is beneficial for the future of these regions, given that "diversified local economies are more stable than highly specialized regions that are more prone to abrupt decline if their main line of business is supplanted by competitors located elsewhere or if new and better substitute products are manufactured elsewhere."

justify inherently political proposals. And why, when so many targeted industry strategies have failed, do states and localities continue to rely on them? Partly because they have the appearance of scientific backing, but mainly because of a herd effect. Once some states and localities develop targeting strategies, others feel compelled to follow suit.

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