



Cluster Development Programs in Latin America and the Caribbean

**Lessons from the Experience of
the Inter-American
Development Bank**

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Abstract*

National and local governments, international organizations and donors are increasingly using the instrument of cluster development programs (CDP) to promote economic development. This paper builds on the recent experiences of the Inter-American Development Bank (IDB) in financing and executing cluster development programs, explores their conceptual approach and actual practice, and learns some preliminary lessons. This preliminary review remarks that CDP offer remarkable development potential, provided that they are consistent with the whole system of private sector development policy support. They represent an important opportunity to remedy the coordination failures that constantly hinder the process of economic development.

Some specific lessons may be summarized as follows: (i) cluster development programs are often very diverse but usually share one common achievement: they have succeeded in creating public and private “institutional spaces” to negotiate, design and implement projects with shared benefits and externalities; (ii) in all these experiences governments have always taken the leadership to initiate the cluster programs and provide the tools and at least part of the financing; (iii) Cluster programs need to enjoy the highest possible Government priority and the coordination with other Government bodies and with other productive sectors is essential; (iv) Additional essential elements of the programs’ success appear to be the involvement of the community and the private sector with the program since the initial design stages; (v) Institutional intermediaries between governments and actors have often helped manage and correct “apathy” and information gaps; (vi) As a result of the many CDP implemented in several regions in Latin America and the Caribbean, new capabilities to manage complex projects requiring governance, group decision-making, collective actions, complementarities and coordination have been created. Such experiences have helped put in place new public-public and public-private processes relevant to production and competitiveness.

J.E.L codes: L2, O22, O25

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INTRODUCTION

National and local governments, as well as international organizations and donors, are increasingly using the instrument of cluster development programs to promote economic development. This reflects the search for new models and practices to promote Private Sector Development (PSD), the discovery of an approach that was successful in some now-industrialized countries, and the effort to translate these ‘natural’ successful experiences into actual programs and interventions.

In years of a very prudent approach to promote industrial development consistent with the paradigm of the Washington consensus, cluster development programs have in fact often represented the only alternative to carry out active productive development policies, or locally-based industrial policies. This has been accompanied by various developments, like the growing acknowledgement of the key role of the geography, of the local context and its specificities, and of the need for appropriate institutions and public-private interaction and dialogue advocated by different strands of literature (Aghion, 2011, Harrison and Rodriguez-Clare, 2010, Hausmann and Rodrik, 2003, Hausmann et al., 2007, Lin, 2010, Lin and Chang, 2009, Melo and Rodríguez-Clare, 2006, Niosi, 2011, Rodrik, 2004).

The purpose of this paper is to build on the Inter-American Development Bank’s (IDB) experiences in financing and executing a series of cluster development projects, explore their conceptual approach and actual practice, and learn some preliminary lessons that may prove useful for future programs design and implementation.

1. CONCEPTUAL APPROACH TO CLUSTER DEVELOPMENT PROGRAMS

During the last two decades, a new approach towards small-scale industry in developing countries has gained ground, stimulated by the successful performance of the agglomerations of small and medium-sized industrial enterprises (SMEs) in the developed world and particularly in countries like Italy and Germany. The capability of clustered firms to be economically viable and

strongly contribute to the growth process attracted a great deal of interest in development studies¹.

This specialized economic literature has repeatedly stressed that firms, and notably small firms, do not suffer from their smaller size, but rather from isolation (Schmitz and Nadvi, 1999; Schmitz, 1995), and this justifies the attention to the issue of linkages that firms have with other firms and organizations. More specifically, firms relate to each other “horizontally”, i.e. develop linkages with other firms at the same level of the value chain, or “vertically”, i.e. develop linkages with buyers and input providers. In the former case, enterprises interact within clusters, whilst in the latter they may participate in value chains, often led by larger firms or buyers, sometimes operating at a global scale. The flow of knowledge and technology accessible through these linkages is tremendously important for SMEs in developing countries.

The literature on industrial clusters (originally called ‘districts’ in the Italian and German experiences) is huge and the definitions provided by the numerous scholars in various disciplines and regions of the world who have contributed to this debate are numerous.² However, it has been acknowledged that this growing stream of analyses – and later policies and programs – was sparked by Alfred Marshall’s study of the British manufacturing towns during the industrial revolution, and his emphasis on external economies thereby generated (Becattini et al., 2009).

Among the stylized facts characterizing an industrial cluster, the specialization in related activities and the geographical concentration of SMEs are a rather common phenomenon in developing countries, with a wide range of cases by now documented in the literature.³ Obviously, the existence of a critical mass of specialized and agglomerated activities, in a number of cases even with strong historical roots, does not necessarily imply that these clusters share all the other stylized facts that identify the original Marshallian type of district. Nonetheless, clustering can be considered as a major facilitating factor for a number of reasons (which may or may not occur all the time): division of labor and specialization, the emergence of a wide network of suppliers; the appearance of agents who sell to distant national and international markets; the emergence of specialized producer services; the materialization of a

¹ See for instance Schmitz, 1995, Rabellotti, 1997 and the two special issues of *World Development* edited by Humphrey (1995) and Nadvi and Schmitz (1999).

² Markusen (1996) broadening the definition of industrial district discusses four types of districts. In the “satellite platform” type, consisting of a congregation of branch facilities of externally based multi-plant firms, she acknowledges the importance of external linkages. Guerrieri et al., 2001, further develop this approach and apply it to clusters in Italy and Taiwan.

³ See for example in Africa Oyelaran-Oyeyinka and McCormick, 2007, in India Das, 2005, and Pietrobelli, 2008, in Brazil Cassiolato et al., 2003,, in Asia Yusuf et al., 2008, and Zeng, 2010, and in Latin America Pietrobelli and Rabellotti (2007) and Giuliani et al., 2005.

pool of specialized and skilled workers; the formation of business associations. In addition, the relationships based on mutual trust and shared values increase the social capital of the industry, and this may frequently occur in more advanced and sophisticated clusters.

To capture the positive impacts of these factors on the competitiveness of firms located in clusters, Schmitz (1995) introduced the concept of “*collective efficiency*” defined as the competitive advantage derived from local external economies and joint action. Clustering offers opportunities for powerful externalities that may be appropriated by the SMEs in the cluster, and fosters the development of joint actions among local actors.

The concept of *external economies* was first introduced by Alfred Marshall in his *Principles of Economics* (1920) when he wrote about economies external to the firm but internal to the district.⁴ In industrial clusters the most common external economies are:

- a. The creation of a market for specialized skilled labor;
- b. The creation of a market for inputs, machinery and specialized inputs (increased availability, competition on price, quality and service) allowing a fine division of labor;
- c. Improved market access;
- d. Easy access to specialized knowledge on technologies and market and rapid dissemination of information.

However, together with the incidental, occasional external economies that enhance the competitiveness of industrial clusters, another deliberate force is also at work, namely *consciously pursued joint action* (Schmitz, 1999b). Such joint action can be of three different types (Nadvi, 1999):

- Joint action within vertical linkages: including backward ties with suppliers and subcontractors and forward ties with traders and buyers;
- Joint action within bilateral horizontal linkages between two or more local producers. This can include joint marketing of products, joint purchase of input, order sharing, common use of specialized equipment, joint product development and exchange of know-how and market information;

⁴ External economies can be defined as positive or negative unpaid, out of the market rules, side-effects of the activity of one economic agent on other agents.

- Joint action within multilateral horizontal linkages among a large number of local producers, particularly through cluster-wide institutions. This includes co-operation in business associations and business development service centers.

The combination of incidental external economies and of the effects of active co-operation defines the degree of collective efficiency of a cluster.

No. of Firms	Horizontal	Vertical
Many	Territorial Agreements/projects Cooperation in business associations, Joint participation to trade fairs, collective provision of business development services	Sectoral Agreements or projects backward with providers, and forward with traders and customers
Few	Horizontal Networks Joint purchase of inputs, sale with a common brand	Vertical Networks (sometimes within value chains)

Source: Adapted from Nadvi, 1995

From what it has been said so far it is clear that the analysis of industrial clusters is centred on the role of intra-cluster vertical and horizontal relationships generating collective efficiency. Therefore, the analysis of clusters focuses on the resources locally available, and on the interactions among firms and with local institutions. However, clusters do not prevent from exploiting also the opportunities for upgrading and competitiveness offered by the relationships with external actors. The recent changes in production systems, distribution channels and financial markets, accelerated by the globalization of product markets and the spread of information technologies, suggest that global value chains (GVCs) also matter for cluster and enterprise development.⁵ Thus, it has been observed that operating in clusters and networks may importantly enhance small firms' potential to benefit from interacting with global value chains (Pietrobelli and Rabellotti, 2007).

In sum, we may highlight several advantages to apply a cluster development program in Latin America and the Caribbean. More specifically, in the new trend that is more favorable to carefully designed and implemented policies to promote the productive sector through a useful

⁵ Markusen (1996) broadening the definition of industrial district discusses four types of districts. In the "satellite platform" type, consisting of a congregation of branch facilities of externally based multi-plant firms, she acknowledges the importance of external linkages. Guerrieri et al., 2001, further develop this approach and apply it to clusters in Italy and Taiwan.

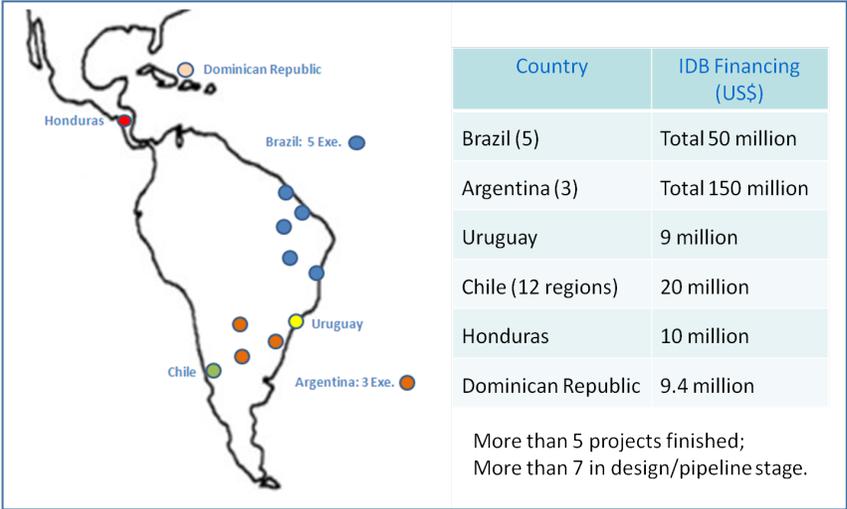
public-private interaction rather than top-down Government initiatives designed and managed by the Public Administration, cluster programs represent powerful opportunities for better coordination of inter-firm and inter-institution programs and actions (Pietrobelli, 2012). In addition, cluster programs are good vehicles to strengthen dialogue and develop institutional capacity at the local level, and provide a straightforward mechanism to combine short-term policy goals with a long-term vision of participatory and sustainable development.

2. THE IDB EXPERIENCE

2.1. GENERAL EXPERIENCE OF THE BANK IN THE REGION

The Inter-American Development Bank has a rich experience implementing cluster development projects in Latin American and the Caribbean covering several countries and subnational regions and provinces, exceeding US\$300 worth of investments in the last decade (Table 1). In what follows, we try to describe the main features and draw the main lessons learned from the Bank’s experience in the region.

Figure 1. Locations of Cluster Development Programs



Source: Authors’ elaboration

In terms of operational implications, the IDB has often used a case by case approach to define clusters, adapting Porter’s original definition of cluster as "a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities." (Porter, 2008). This reflects the fact that in some

countries the term cluster and value chain are used interchangeably whereas in others there is an important distinction between the two. Thus, to the aim of defining and implementing cluster development programs, the IDB defines “Cluster” as productive agglomerations aiming at exploiting local linkages to generate and strengthen competitive advantages.

The Bank’s activity in the area of clusters in the region comprises a set of widely different countries in terms of geographical size and diversity, size of the economy and level of decentralization, ranging from the largest countries in the Southern cone with high institutional capacity at both the national and sub national levels, to the smaller countries in Central America and the Caribbean with less versed institutions. Table 2 shows the main programs that the Bank has been implementing up to date. Every individual program was crafted to respond to the particular requirements of the country or region, and therefore reflects these differences and idiosyncrasies, although the objective of promoting competitiveness through enterprise clusters remains the common thread in all programs.

2.2.TYPOLOGY OF PROGRAMS

Cluster programs are executed by the Bank either at the national level or directly at the local (i.e. sub-national, regional, state, provincial) level – depending on the different institutional setting). In larger countries, such as Argentina and Brazil , the Bank designs and implements operations directly with the sub-national authority. In smaller countries, such as Ecuador or Central American countries, the counterpart is the national government that subsequently directs and implements the program in a selected region.

In addition, only few programs are so-called “hard” programs that involve large investments in supporting infrastructure such as roads and logistics for the cluster, while most programs are mainly “soft” programs targeting the institutional strengthening of the cluster and of its key stakeholders. In “hard” interventions the clusters selected in the program help direct and prioritize investments.

Most programs include both “horizontal” and “vertical” actions. Horizontal actions are directed at the provision of collective public goods that will benefit the region as a whole, such as infrastructure, provision of basic services, human capital formation, and regulatory reforms among others. Vertical actions are directed at the provision of collective goods and services for the strengthening of the selected clusters and their firms through technical assistance.

In an effort to categorize the IDB cluster initiatives listed in table 2, we may group programs sharing the following features. Thus, some programs mainly include the strengthening of selected clusters to explicitly address market failures faced by enterprises and better coordinate policies and (public and private) institutions (e.g. most programs in Brazil). Some programs aim at better coordination and decentralization of private sector development policies, enhancing public-private dialogue through cluster programs (e.g. *Agencias de Desarrollo Productivo*, ADRs in Chile)

Table 2. Cluster Development Programs at IDB

Country	Project Name	Approval Date	Amount (US\$ million)		% Disbursed At Aug.2011	
			Total	IDB		
1	Uruguay	Competitividad de Conglomerados y Cadenas Productivas	2006	9.0	9.0	54.40
2	Haiti	Competitividad de Negocios y Apoyo a Clusters	2008	0.3	0.3	-
3	Ecuador	Desarrollo de un Programa de Mejoramiento de la Competitividad	2003	0.3	0.3	99.00
4	Guyana	PEF:GY-L1006 Support for Competitiveness Program	2005	0.8	0.8	92.00
5	Brazil	Competitividad Sistemas Productivos Locales São Paulo	2007	20.0	10.0	3.00
6	Brazil	Apoyo a la Competitividad de APLs del Estado de Minas Gerais	2009	16.7	10.0	10.00
7	Brazil	Producción y Difusión de Innovaciones Competitividad Clusters Estado Pernambuco	2009	16.7	10.0	-
8	Brazil	Programa de Fortalecimiento de la Actividad Empresarial del Estado de Bahía	2006	16.7	10.0	31.00
9	Paraguay	PROCOLE II (Competitividad del Sector Lechero del Paraguay)	2010	2.93	1.52	-
10	Guatemala	Programa de Apoyo a Inversiones Estratégicas y Transformación Productiva	2006	29.0	29.0	-
11	Argentina	Modernización Productiva de la Provincia de Río Negro	2003	86,5	51,9	31,00
12	Argentina	Programa de Competitividad del Norte Grande	2008	20,0	16,0	13,00
13	Argentina	Programa de Crédito Desarrollo Producción y Empleo Provincia San Juan	2006	53,0	32,6	59,00
14	Chile	Programa de Agencias Regionales de Desarrollo Productivo	2006	40,0	20,0	60,50
15	Dominican Republic	Programa de Desarrollo de Ventajas Competitivas	2003	13,5	9,4	100,00
16	Honduras	Programa para el Fomento de la Competitividad Empresarial y Gestión de Comercio Exterior	2003	11.2	10.0	97.2
17	Panama	Programa para el Fomento de la Competitividad	2002	10.0	7.0	95.1
Total				363.330	237.820	

Source: Authors' elaboration

Other IDB cluster promotion programs focus primarily on the enhancement of public-private dialogue for PSD, and are often embedded in “policy-based loans”, within a larger package of policies and programs where the financing is contingent upon the Government’s

fulfillment of several pre-defined conditions (e.g. Panama, Guyana). In these cases, specific cluster programs often represent 10 to 20 percent of total resources lent.

3. MAIN CHARACTERISTICS OF A CLUSTER PROGRAM

The goal of a cluster development program is to improve competitiveness and local businesses performance in a region, and foster access to local and regional markets with a strategic approach that involves cooperation between firms. The main underlying theme in a cluster competitiveness program is that firms, particularly small firms with limited access to resources, will be able to thrive in the global environment through cooperation and joint actions, achieving results as a group in a way that would be impossible to achieve through individual actions. Other objectives typically considered include poverty reduction and increased employment, with an emphasis on high quality and sustainable employment in industries that do not hinder the quality of life or the environment (Nadvi and Barrientos, 2004). Cluster programs usually target small firms, but large firms are also involved in their possible role of catalysts of change and cooperation. In many cases, large firms are indeed key actors for providing productive linkages to SMEs.

The approach, however, raises many questions on how to improve productivity for a certain type of sectors, how to deal with the market risk, how to select more mature sectors vs. new sectors with a high potential, but low track record and higher risks. The issues of informality and the best participation of microenterprises and vulnerable groups (such as gender, minorities, etc) and of the distinction between rural and urban clusters, also need to be tackled while designing an intervention. In addition, the balance between the interventions aimed at selected clusters vs. actions that benefit the region and adopt a local economic development focus is often a critical issue. Finally, there may be the case of cluster fostering all businesses as a whole or rather discriminating (favoring to a different extent) some firms within the cluster due to the structural change that the intervention induces. This is another delicate issue that needs to be carefully addressed before and during the project.

3.1 STAGES OF A TYPICAL IDB CLUSTER PROGRAM

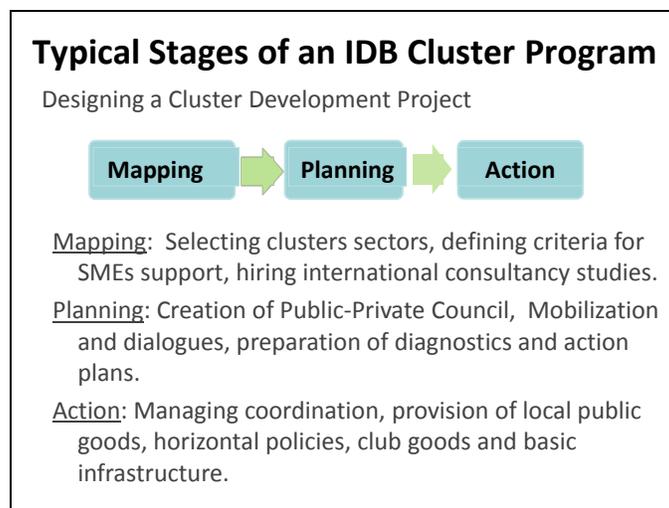
One of the main aspects that define a cluster project is the intense research, analysis and consultations that take place during the design phase. The issues of the selection of clusters, and the identification of key stakeholders, including key actors of the private sector, such as

visionary entrepreneurs and local leaders, civil society and committed public officials at either the national or local level or both, are essential in this phase. Once the selection of the strategic clusters has taken place, a process of workshops and consultation starts. The workshops are done at various levels, usually at the regional level to discuss the clusters and sectors to be addressed, and then in each cluster to discuss the priorities and the strategic actions for each cluster. During the diagnostics stage analytical work and validation with stakeholders is carried out to identify the main bottlenecks for the industry's competitiveness and for the individual firms.

A careful identification and selection of visionary business leaders is often one of the issues that will guarantee the success in the implementation of the program, as well as extensive participation of the community in creating a common vision for the region. In addition, an external perspective of the global trends in the industry offered by international experts will bring additional knowledge and awareness to help shape the long term vision of the cluster.

The second step is to define the governance of the program, creating institutional space for public – private dialogue both at the program level and at the level of each cluster. In this regard, the institutional capacity of the public institutions for promoting this type of programs, both at the local and at the national level, the coordination and support mechanisms between local and national levels, the degree of active participation and coordination with the private sector, and the structure and technical capacities of the local industries are all crucial conditions for success.

A more detailed analysis of each cluster is carried out, identifying main gaps, benchmarking with other sector and industries in comparable countries and defining the main actions to be carried out. During the implementation of the program, the main actions identified for each cluster are supported, with the caveat that these are actions that collectively benefit the group and not only the individuals firms. The underlying idea is to correct the failures that emerge in specific markets and in the coordination of private and public actions. In order to maximize the impact of the joint action a series of horizontal activities to improve the business climate are usually addressed as well. These may range from solving regulatory bottlenecks to start and manage a firm, to investing in key infrastructures to reduce the market access costs, or to implementing a training program that improves the workforce capacity to serve the local industry. The typical stages are shown in Figure 2.



Source: Authors' elaboration

3.2. COMPONENTS OF A CLUSTER PROGRAM

The components of the various cluster development programs vary according to the specific programs' objectives, which, in addition to aiming to improve the competitiveness of a selection of clusters and productive chains, may have broader objectives such as improving the competitiveness of the region, promoting economic development and enhancing the climate for business activities (Table 3).

Component	Description
Clusters/value chains analysis and selection	<ul style="list-style-type: none"> ○ Analysis of the economic activities and potential of the regions ○ Identification of clusters and value chains to be supported ○ Development of Competitiveness Enhancements Plans
Institutional Strengthening of agencies in charge of promoting cluster development and competitiveness	<ul style="list-style-type: none"> ○ Analysis of Institutional framework at the national/regional level ○ Identification of agencies with the potential to promote and implement the program. ○ Institutional strengthening activities, i.e. training, methods, manuals
Strengthening Clusters/value chains Promote business cooperation and integration	<ul style="list-style-type: none"> ○ Implementation of Competitiveness Enhancement Plans for each program ○ Workshops to promote a culture of cooperation
Enhancing Business Climate	<ul style="list-style-type: none"> ○ Identification of main bottlenecks ○ Reduction in time and cost of doing business by addressing "red tape" at the local or national level ○ Costing and prioritizing the initiatives. ○ Training and capacity building activities at the local or national level ○ Reduce cost and time to obtain permits and licenses.
Enhancing micro and medium enterprise access to resources	<ul style="list-style-type: none"> ○ Identification of main bottlenecks for access to finance ○ Implementing programs to promote access to finance.

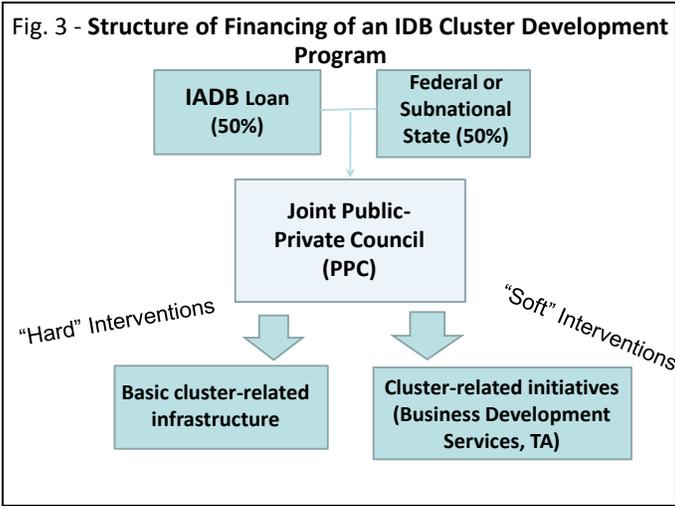
Source: Authors' elaboration

Usually, the main components of a cluster include the selection of the cluster and/or value chain, and the implementation of the action plans identified for each cluster. In addition, the

programs may have components of institutional strengthening, promotion of overall business cooperation and integration, reforms to enhance the business climate. In addition, since one of the main bottlenecks for effective implementation is often access to resources, some programs include a component of access to finance.

3.3. STRUCTURE OF FINANCING OF A CLUSTER PROGRAM

The structure of financing of a typical cluster program varies according to the needs of the country (region), but it usually has a strong component of local counterpart to finance cluster activities. This counterpart is usually provided by the private participants, and offers an important indirect advantage. In fact, this indeed enhances the probability of success of a program since private agents, which are usually small and do not have many available resources, face clear opportunity costs, and need to see the clear benefits of co-investing with the government in a joint venture.



Source: Authors' elaboration

The Multilateral Investment Fund (MIF), which is also part of the IDB Group, has also been active for many years in cluster development programs in Latin America. Differently from the IDB cluster development described here, the MIF programs are financed with grants and focus on one or two specific clusters, with the initiatives managed by a private sector counterpart, typically a chamber of commerce or a producers' association.

3.4. GOVERNANCE STRUCTURE AND TYPOLOGY OF IMPLEMENTATION ARRANGEMENTS

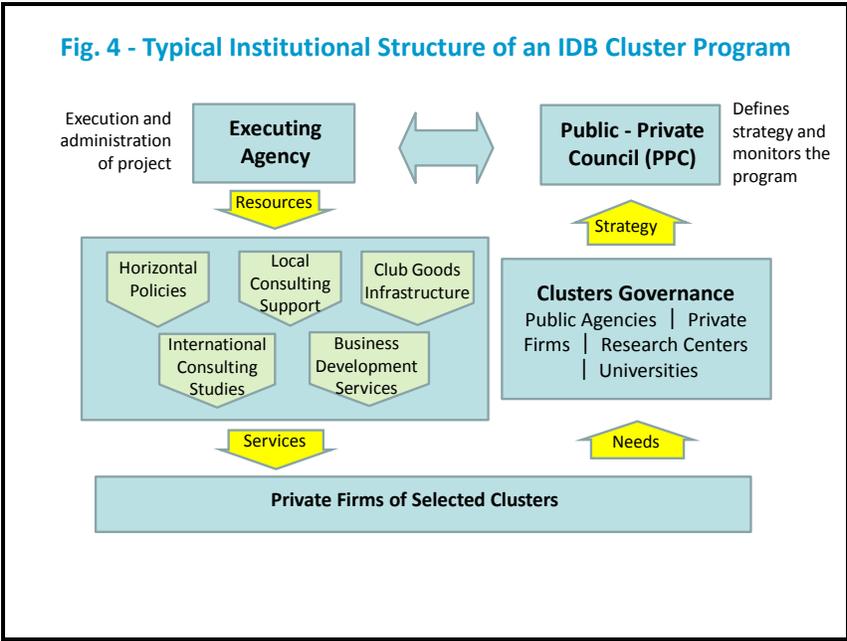
One of the most challenging aspects of cluster development programs is the complexity of implementation arrangements. Usually a national or local public institution administers the program through an executing Agency. This can be a governmental agency in charge of promotion of private sector development and competitiveness at the national or local levels, or a unit created in the Ministry in charge. In addition, the executing agency is usually in charge also of the coordination between the different public entities both at the national and sub-national levels.

The strategic guidelines, the strategy of the interventions and the monitoring of the program results is typically carried out by a Public-Private strategic council. The selection and number of participants and the legal nature of the Council are defined on a case by case basis. However, usually strategic actors from both the public and the private sector are part of the Council. In some cases, each cluster will have its own governance structure that feeds the Council with demands and ideas. The strategic council will in turn reflect the governance structure underlying the interests of local actors. Thus, in different instances it may happen that different entities offer the better locus of governance, like a University, or an Association or Government Agency.

The entrepreneurs and businessmen participate as beneficiaries of the Program, and may have access to the resources of the cluster program according to a pre-defined set of criteria. These resources are used to finance projects that are selected to support the Strategic Objectives of the *Plan for Enhancing Competitiveness* of the Cluster. These projects are to be presented in association among various participants in the cluster, and need to be sustainable, both in financial and environmental and social terms, and to be innovative and benefit the cluster as a whole, generating externalities and local public goods.

Usually, these programs involve more than one cluster depending on the size of the region and its economic characteristics. The selection of the cluster will also correspond to a series of criteria defined by the counterpart governments, that for example may prefer to support mature clusters with unemployment problems or facing the challenge of an unfavorable business cycle or of a structural change in the nature of the business, its technology and demand, or rather new clusters with potential for growth and innovation and structural change to diversify and specialize in non-traditional sectors

Figure 4 portrays a typical institutional structure of a cluster development program. The Executing Agency interacts with a public-private Council that sets the strategic objectives and monitors the program. Resources are allocated by the executing agency to carry out various activities instrumental to promoting the competitiveness and development of the cluster, like for example the provision of business development services, the investment in club goods infrastructure, or the offer of specialized consulting services. Private firms participate in the program, and collaborate to create and maintain the governance of the cluster, in collaboration with other relevant organizations such as government agencies, research centers and universities.



Source: Authors' elaboration

4. QUESTIONS, LESSONS AND CHALLENGES

The debate on the evaluation of the impact of cluster programs is still open, as well as on the most appropriate forms of implementation and governance to ensure the highest probability of success in achieving the desired objectives.

The recent experience of the IDB in promoting clusters in several countries in Latin America offers useful lessons and poses relevant questions that will need to be addressed in future applied research. Some of these experiences have been analyzed by ECLAC (Ferraro,

2010) with evidence on Argentina, Brazil, Chile, and El Salvador, that proposes the following insights and interpretations.

Programs are often very diverse: they have different origins, follow different evolutionary paths and sometimes benefit from the feed-back from earlier experiences. However, although programs often respond to the different objectives of public policies, they usually share one common achievement: they succeeded in creating public and private “spaces”, more or less institutionalized, to negotiate, design and implement projects with shared benefits and externalities.

In all these experiences governments have always taken the leadership to initiate the cluster programs and provide the tools and at least part of the financing. Cluster programs need to enjoy the highest possible Government priority and the coordination with other Government bodies and with other productive sectors is essential. However, after this Government initiative, the actual implementation of programs and instruments has been clearly guided by the demand of firms and regions. In other words, the public sector sets the “menu” of options, whilst the private sector chooses and puts it into motion.

Institutional intermediaries between governments and actors have often helped manage and correct “apathy” and information gaps. In several instances, research organizations and universities have started offering new services relevant to the productive sector, with infrastructures and knowledge previously unexploited. At the same time, Governments have fostered the creation and technical training of professionals and technical experts that now represent an asset in several clusters.

Most importantly, as a result of the many cluster development programs implemented in several regions in Latin America and the Caribbean, new capabilities to manage complex projects requiring governance, group decision-making, collective actions, complementarities and coordination have been created. Such experiences have helped put in place new public-public and public-private processes relevant to production and competitiveness.

In terms of the actual management and implementation of cluster development programs, some useful lessons have also been learnt. Thus, essential elements of the programs’ success appear to be the involvement of the community and the private sector with the program since the initial design stages, as well as the establishment of open channels of communication between the public officials that manage the program, the public and private members of the strategic

council and with the private sector and the civil society. However, the cluster governance does not necessarily need to encompass and engage all firms in all activities, but primarily the set of the business sector that is most committed.

Moreover, an important condition for success of the program is a well defined vision for the short, medium and long term position of the cluster, often carried out with the support of an international expert that will provide benchmarks of the industry and the state of the art of both the technology and market demands in the global context. Local knowledge and experience always needs to complement foreign ones, in order to reduce the risk of capture of most benefits of the program by a minority of participants, minimize the danger of path dependence and passive attachment to suboptimal habits, and exploit the opportunities offered by the links with GVCs.

The clear definition of criteria for the selection of the initiatives and of the local public goods to be financed by the program, including business plans showing the long term sustainability of the proposed activity, also remarkably help.

In sum, cluster programs offer remarkable development potential, provided that they are consistent with the whole system of PSD policy support. They represent an important opportunity to remedy the coordination failures that constantly hinder the process of economic development.

A widespread evidence for a large number of projects reveals that there is no single recipe for a cluster development program to be successful everywhere and all the time. However, continuous learning from experience and improvements from feed-backs of such learning into the design and implementation of future programs allow improving the effectiveness and impact of cluster programs. New methods are being developed at the IDB to improve this capability to learn from operations and to assess the impact of these programs. This includes a variety of techniques ranging from applied econometrics to social network analyses and case-studies (Giuliani and Pietrobelli, 2011), and these techniques are being employed and tested with empirical evidence and with the support of practitioners and program managers.

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