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CLUSTER INITIATIVES IN DEVELOPING AND TRANSITION ECONOMIES



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Stockholm, May 2006

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EXECUTIVE SUMMARY

The ambition for this report is to provide a basis for improving the quality of cluster initiatives to make them a better tool for economic development. Based on a systematic analysis of the best data available, we want to provide a benchmark of current practices based on the collective experience of the field in key areas related to the operation and organizational structure of cluster initiatives. This is an ambitious goal but it also stays clear from the even broader question of whether cluster initiatives are the right tool for economic development.

Cluster-based competitiveness projects, or cluster initiatives (CI), have become an increasingly widespread tool for economic development. At first cluster initiatives were primarily associated with advanced economies, with cluster based development projects becoming popular in advanced economies as early as the mid-1990s. However, CIs were not adopted in developing and transition economies on a larger scale until after year 2000 and since then several hundred CIs have been implemented in these economies as well. Also, international donor organizations have to a large extent become involved in CIs, resulting in numerous donor-initiated CIs. As a result, CIs in developing and transition economies are considerably younger than in advanced economies.

Transition economies, switching from a planned economy to a market economy, are defined as those within the scope of the European Bank for Reconstruction and Development (EBRD). Developing economies have a GNI per capita value below \$9,386.

SURVEY DATA

This report is based on a survey of 1 400 cluster initiatives, including comprehensive data from 450 CIs that completed the Global Cluster Initiative Survey (GCIS) 2005. An earlier study based on

GCIS 2003 was reported in “The Cluster Initiative Greenbook” (available at www.cluster-research.org).

POLITICAL CONTEXT

In developing and transition economies economic policy is typically centralized to the national level, and there is usually little policy support relating to competitiveness and clusters. Donor-initiated CIs take place where the national policy support for such effort is the lowest.

The profile of national economic policy and of the role of clusters differ significantly. In developing and transition economies, economic policy is typically centralized at the national level, and there is usually little policy support relating to competitiveness and clusters. This might reflect a more macro-oriented focus in these countries, such as interest rate and currency stability and general deregulation programs. Whether this is the case or not, CIs are likely to face a policy environment where there is less enthusiasm for government intervention to enhance the competitiveness of selected industry clusters. In developing economies, the nature of the policy debate around competitiveness and clusters resembles more the situation in advanced economies. This is a first indication that the model for cluster initiatives does depend strongly on the overall economic conditions in which they operate. CIs in developing countries face very different challenges and often have different types of specific objectives compared to those in transition economies, and there is no simple linear relationship from developing to transition to advanced economies.

Donor-initiated CIs typically take place in settings where there is less government attention to competitiveness and clusters. This is a pattern that continues to manifest itself throughout the data: donor-initiated CIs take place in the most challenging settings, even relative to CIs in developing and transition economies.

SOCIAL CONTEXT

In developing and transition economies, there is usually less trust among companies and between companies and government than in advanced economies. Donor-initiated CIs take place where the level of trust among participants in the economy is the lowest.

OBJECTIVES

While advanced economies tend to focus more on innovation and business environment improvement, developing and transition economy CIs usually place more emphasis on increasing value-added and exports. For example, in developing economies, donor-initiated CIs focus primarily on supply chain development, followed by export promotion. Increasing value-added and improving the business environment are also frequent objectives. In transition economies, donor-initiated CIs have a more narrow range of objectives, focusing mostly on export promotion and increasing value-added. This could indicate a more narrow perspective on cluster development, especially one drawing less on support from government. In both situations, donor-initiated CIs report significantly different objective structures than company- or government-initiated CIs.

ACTIVITIES

Activities of CIs can be divided into seven groups: Joint production, Joint sales, Human resource upgrading, Intelligence, Business environment, Firm formation, and Joint R&D.

Lobbying for changes in the business environment, such as regulations and policy, is more popular in transition than in developing economies. Upgrading human resources is a field that is much more prominent in developing than in transition economies. Management training is particularly popular in transition economies. Supply chain development and joint logistics are particular to developing economies. Supply chain development is also popular in transition economies. Firm formation, on the other hand, is a type of activity that is more prominent in advanced than in developing or transition economies. What typically separates advanced from the other is the high importance that joint R&D has there.

MEMBERSHIP AND RESOURCES

CIs in transition economies have fewer companies participating. Only 40% of CIs there have more

than 20 company participants, and the median is 18. In developing economies CIs are larger - 51% have more than 20 firms participating and a median of 25.

Many CIs rely on various resources and infrastructures to conduct their operations. Most CI have an office: 71% in developing, 62% in transition, and 75% in advanced economies. Websites are more concentrated to advanced economies. Only 37% in developing and 41% in transition economies have a website, compared to 79% in advanced economies.

The CI staff is somewhat bigger in developing economies, with a median of 3 persons, compared to 2 for transition and advanced.

CLUSTER FOCUS

In developing countries CIs often focus on “basic” industries. In transition economies there is more of a mix between industry types, but donors emphasize “basic” industries more than other initiators.

In advanced economies, there is sometimes a tendency to favor “high-tech” industries that are considered attractive, using CIs to “build clusters” rather than enhancing the competitiveness of existing ones. In developing and transition economies, in contrast, neither government nor donors seem overly focused on such industries. For donors the tendency might actually be the opposite: sticking to agriculture and basic industries, while possibly neglecting opportunities in capital intensive manufacturing.

In all economies, CIs target clusters that are relatively strong and the main difference across levels of economic development is that the competitive position is stronger and the innovative capacity is higher in advanced economies. In developing and transition economies, donors target clusters which are less developed than those targeted by other initiators.

ROLE OF GOVERNMENT AND FINANCING

In developing economies, CIs often have an international initiator (international donor organizations or international consultants). Government initiatives are also frequent, while CIs initiated by the business sector are less common. Other types of initiators include academic institutions and institutions for collaboration.

In developing economies international funding (through donors and their implementing partners) is usually the main source of income, while in transition economies the largest share usually comes from the business sector. Presumably, in transition economies, some of the international funding comes from EU, not only from international donor agencies. In advanced economies, most of the financing is provided by government. This pattern is similar to the initiator pattern, and the initiator clearly has a great influence on finance.

A dominating role of government that leaves businesses on the sidelines of CIs is a major concern in advanced economies. In developing and transition economies the challenge is different. While business tends to be involved, government often lacks the capacity to do its part. Donors step in where government is unable to act, but donors seem to have no strategy to involve government over time.

In developing and transition economies, government influence decreases over time while business becomes more important.

PERFORMANCE

In developing economies, donor-initiated CIs measure much fewer indicators than in transition economies, on average 4 compared to 9. We recognize this pattern from quantified targets: donor-initiated CIs are less likely to have quantified targets in developing than in transition economies.

Developing economies score best in acquiring funds and improving the business environment, with export promotion being the third best area. CIs in transition economies report their best results in acquiring funds from government and international organizations, improving business environment, and increasing innovativeness. Advanced economy CIs perform best in increasing innovation.

In all fields, transition CIs report better performance than developing and advanced.

Increased cooperation among firms in the cluster is, not surprisingly, the strongest impact on the cluster reported in all economies – this effect lies more or less in the nature of a CI. Beyond that, developing economies report their best results in increasing the economic importance of the cluster, promoting growth and increasing the market reach of products and services produced by the cluster. Transition economies also report high impact in in-creasing

market reach and increasing the economic importance of the cluster. They also promote a positive impact on the number of firms in the cluster.

Comparing economies, we find that developing economies report overall better results than transition in promoting cooperation and considerably better than advanced in increasing the economic importance, increasing market reach, and widening the range of related and supporting industries in the cluster.

FINDINGS FROM THE SURVEY

The structure of CIs needs to respect the different context that is relevant in economies of different stages of economic development; developing and transition economies, for example, pose clearly different challenges to CI practitioners. Furthermore, each cluster has its own specific barriers to competitiveness. There is no single model that can fit all CIs. Instead it is essential that each CI finds the approach that will be most effective under the given circumstances.

With the low levels of trust and economic policy less oriented towards competitiveness and clusters, CIs in developing and transition countries operate in a much more challenging environment than in advanced economies. Donor-initiated CIs operate in situations where the environment is most challenging. This fits their role of addressing weaknesses that can not be addressed with domestic resources alone. A sustainable intervention, however, would also require an action plan to address the underlying sources of these weaknesses rather than just their consequences.

An often expressed concern in advanced economies is that clusters are chosen as “strategic industries” rather than because of their underlying position in the location. There is little evidence of such “strategic creation” of clusters in developing and transition economies. On the contrary, the CIs could potentially be more forward-looking in the clusters they activate.

An often expressed concern in advanced economies is that government (especially regional development agencies) play too much of a role and do not allow the business sector to set the agenda for the CI. This does not seem to be a problem in developing and transition economies, where government generally plays much less of a role in CIs.

Instead, in developing and transition economies donors often step in to replace government as initiator and financier of CIs. In doing so, they sometimes fail to get government involved in the CI, making it impossible to pursue many activities that require government participation. This means that donors may provide help where there are weaknesses in the business environment, but they fail to address the underlying sources of these weaknesses.

Donor-funded CIs are often influenced by their need to provide measurable results in a short time, often as little as three years. Aiming for short-term results such as increased employment or exports can actually be in conflict with long-term competitiveness. Cluster initiatives are not the best tool for such projects; they should be used when enhanced long-term competitiveness is the goal.

INTRODUCTION

Cluster-based competitiveness projects, or cluster initiatives (CI), have become an increasingly wide-spread tool for economic development. At first cluster initiatives were primarily associated with advanced economies, but over the last years several hundred CIs have been conducted in developing and transition economies as well. Several international donors have applied the cluster concept in projects designed to enhance the competitiveness of a selected business sector in a particular geographic region.

Cluster initiatives operate in widely different settings. Not only do they act in different social and political contexts, but they also address different industry sectors, each with its own idiosyncratic problems and limitations. The experience from an initiative dealing with wood products in Gabon is very different from one working with tourism in Egypt. This complexity has made the search for a “best practice” an elusive task. To overcome these obstacles to analysis, systematic data is needed reflecting the experience from cluster initiatives in many different settings.

The ambition for this report is to provide a basis for improving the quality of the cluster initiatives to make them a better tool for economic development. Based on a systematic analysis of the best data available, we want to provide a benchmark of current practices based on the collective experience of the field in key areas related to the operation and organizational structure of cluster initiatives. This is an ambitious goal but it also stays clear from the even broader question of whether cluster initiatives are the right tool for economic development. Based on our experience we are convinced that in many situations they are indeed a very valuable policy instrument. But the data in this report is not designed to answer this question, even though it will enable a more informed discussion about this issue as well.

KEY CONCEPTS AND DEFINITIONS

The terms cluster and cluster initiative are often used without clear distinction among them. In this report, the term *cluster* refers to a group of companies and other institutions in related industries that are co-located in a specific geographic region. It does not refer to a specific project or a type of organization. Clusters exist whether companies are aware of it or not. We sometimes use the term *underlying cluster* to stress that clusters exist independently of any intervention, project or organization.

The term *cluster initiative* is used in this report to specifically denote a cluster development project or cluster organization. Any organized effort to enhance the competitiveness of a cluster is thus a cluster initiative. Cluster initiatives can be stand-alone, focusing on only one cluster, or they can be part of a broader regional or national competitiveness strategy with multiple cluster initiatives going on in parallel. In this report, we use the term *cluster initiative* to refer to each individual effort, so that a national competitiveness program with efforts in textile, tourism, and agricultural products would feature with three cluster initiatives, not one.

We use the term *cluster facilitator* to identify the individual that manages the cluster initiative.

The basis for the *geographical classifications* of continental regions, sub-regions, countries and areas is the country and area list provided by the United Nations Statistics Division.

In this report we also classify economy types. To distinguish developing and transition economies from advanced economies we have used two sources. The term *transition economies* is used to denote countries switching from a planned economy to a market economy, and in this report we define transition economies as those which are within the scope of the European Bank for Reconstruction and Development (EBRD). This

includes the following countries in Europe and Central Asia: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, FYR Macedonia, Moldova, Poland, Romania, Russia, Serbia and Montenegro, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. Countries in Africa and Asia are excluded in this definition. It is notable that within this group there are considerable variations in the level of income.

To distinguish *developing economies*, we used the World Bank Atlas method (July 2004), which is based on GNI per capita. According to this definition, low and mid income countries have a GNI per capita value below \$9,386, and we classify those economies as developing, except for the above mentioned transition economies.

All economies that fall outside the definition as developing or transition are classified as *advanced*, in other words high-income economies (OECD or non-OECD) which are not transition economies.

PROJECT BACKGROUND

The Cluster Initiative Greenbook, published in 2003, was the first large-scale effort to identify and compare cluster initiatives. Combining case research with an international survey (the Global Cluster Initiative Survey, GCIS 2003), it described and analyzed the setting in which they are formed, their objectives, and the process by which they are

formed and evolve over time. However, cluster initiatives from developing and transition economies were considerably underrepresented, making conclusions applicable primarily in advanced economies.

Shortly thereafter, the USAID-commissioned report “Promoting Competitiveness in Practice: An Assessment of Cluster-Based Approaches” was presented, providing a more detailed study of cluster initiatives in developing and transition economies. It was based on a combination of desk reviews, interviews and field assessments, and covered both USAID and non-USAID projects.

In autumn 2004, USAID commissioned the research on which this report is based. The objective has been to provide systematic descriptive data on cluster initiatives in developing and transition economies combined these with case studies, and to point findings relevant for international donor organizations supporting cluster initiatives in these economies.

REPORT STRUCTURE

The rest of this report is divided in two sections. Section Two, “Survey Data from GCIS 2005”, presents the replies from the survey, comparing replies from different groups of respondents. Section Three, “Findings from the Survey”, discusses and interprets some important patterns that emerge from the statistical analysis.

The Cluster Initiative Greenbook
can be downloaded from
www.cluster-research.org



SURVEY DATA FROM GCIS 2005

In this section we first describe the methodologies used to collect and analyse data on cluster initiatives in developing and transition economies. We then present how the respondents are divided into different groups for comparisons. We then present the actual survey data, beginning with the political and social setting of cluster initiatives, followed by profiles of how they were set up and how they operate, and finally how the respondents assess their performance.

METHODOLOGY

THE SURVEY – GCIS 2005

The Global Cluster Initiative Survey (GCIS) was first conducted in 2003 and focused almost entirely on advanced economies. The GCIS 2005 is a first attempt to collect systematic data from a large number of CIs in developing and transition economies. Data for advanced economies have also been collected, using the same survey instrument, and are used for comparisons in this report.

About 1 400 CIs were identified worldwide using internet searches, cluster-related reports, donors and contractors, and practitioner networks (such as TCI) as sources for respondent identification. Respondents could also sign up on the survey's website.

We collected the data using an on-line questionnaire, sent out by e-mails addressed to the cluster facilitator responsible for each CI, most of whom had been contacted in advance. Within donor-funded cluster programs, we tried to target the person responsible for the industry level, not the program level. The questionnaire included 23 pages and 71 questions, of which several had multiple sub-questions. 713 respondents started completing the questionnaire of which 450 reached the last page, taking an average of 51 minutes to do so.

Of the 713 partial respondents, 100 represented developing economies and 76 transition economies.

As for all surveys, there is a risk of bias in the responses. First, although a Spanish version of the website and questionnaire was available, there is probably a bias towards English speaking respondents and countries. Also, recently initiated CIs are probably under-represented. There could also be a skewed selection in terms of performance: unsuccessful or defunct CIs are more likely to be non-respondents. Finally, as we rely on the cluster facilitator to answer the survey, her or his bias will also be reflected in the responses. (To reduce this risk, respondents were assured absolute anonymity.) Despite these limitations, to our knowledge there no comparable data set that come close in terms of describing cluster initiatives world-wide. Moreover, the survey findings are consistent with the 2003 Greenbook as well as with the case studies and our previous experience in the field.

Two workshops with practitioners, one before the survey and one after, were arranged to get further input on which to base the analysis.

STATISTICAL METHODS

In the statistical analysis of the material, we have in most cases applied Kendall's *tau-b* to identify correlations and applied independent sample *t*-tests to distinguish differences in averages between groups. For grouping variables and forming constructs, we have used factor analysis with principal component analysis (eigenvalue cut-off level 1) applying Varimax rotation with Kaiser normalization.

RESPONDENT GROUPS

In this report, the data are cut in a number of different ways to illustrate differences between specific groups of CIs. The divisions are made

along four main dimensions: 1) the type of economy where the cluster initiative takes place, 2) the type of industry it targets, 3) the kind of actor who initiated it, and 4) the age of the cluster initiative, i.e. the initiation year.

First, the report focuses on CIs in developing and transition economies, giving data also for advanced economies for comparison.

The findings suggest that there are considerable differences between developing and transition economies. It is interesting to note that there is often not a simple linear trend from developing to transition to advanced economies, i.e. the replies from transition economies are typically somewhere between developed and advanced. Instead, patterns are more varied, suggesting that CIs in the three types of economies follow fundamentally different rules and logics.

Most data in this chapter are therefore broken down by economy type.

TABLE 1. RESPONDENT COUNTRIES

Economy	Countries ^a
Developing	Afghanistan, Bangladesh, Bolivia, Brazil, Chile, China, Colombia, Dominican Republic, Ecuador, Egypt, El Salvador, Gabon, Grenada, India, Indonesia, Iran, Jamaica, Lebanon, Mauritius, Mexico, Mongolia, Nicaragua, Pakistan, South Africa, Turkey, Uganda, Venezuela, Vietnam
Transition	Albania, Armenia, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Latvia, Lithuania, Poland, Russian Federation, Serbia and Montenegro, Slovenia
Advanced	Argentina, Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Luxemburg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Taiwan, UK, USA

a) Includes only respondents who completed at least page 6 of the questionnaire.

As many as 100 respondents in developing countries supplied complete or partial supplies. For transition economies the corresponding number is 76. The vast majority of CIs, however, are found in advanced economies. The respondent countries representing the each economy type are presented in Table 1.

Second, CIs also differ widely in the type of industry focus they have, ranging from agriculture to “high-tech” industries like ICT and biotechnology. This has a large effect on this how the CIs evolves, so in some cases we have also broken down data by industry type. We use four main industry groups, presented in Table 2.

TABLE 2. INDUSTRY GROUPS

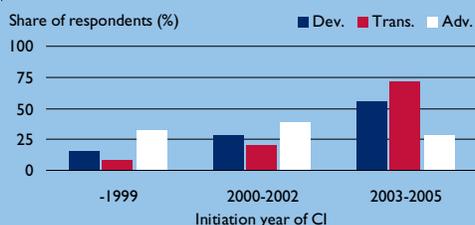
Industry group	Industry examples
Agriculture, food, basic manufacturing	Agriculture Fishing Furniture Jewelry Leather Shoes Textiles Wine
Capital intensive manufacturing	Automotive Chemicals Forest products, paper Metal manufacturing Oil, petrochemical Plastics Power equipment
“High tech”, advanced services	Aerospace Biotechnology Entertainment, media Environment services Finance ICT Medical equipment Pharmaceuticals Photonics Printing and publishing Transports and logistics
Tourism	Tourism

Roughly two-thirds of the respondents could be assigned to an industry group. The remaining are either active in several industries of different types, or we lack information about their industry focus.

Third, the type of actor who initiated the cluster initiative has a strong influence on how it is organized and operated.

Fourth, CIs evolve over time. Therefore, we have in some cases found it useful to take age into account when comparing CIs with each other. This is particularly true when comparing the impact of CIs since we can assume that the impact of a CI will be greater the longer it is active.

CIs in developing and transition economies are considerably younger than in advanced economies. This reflects the fact that cluster based development projects became popular in advanced economies as early as the mid-1990’s, while CIs

FIGURE 1. INITIATION YEAR

were not adopted in developing and transition economies on a larger scale until after the year 2000.

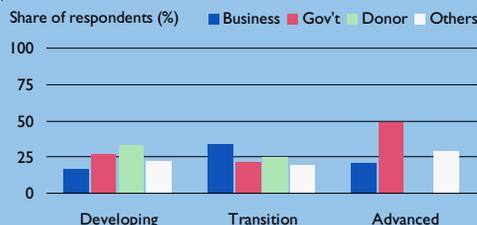
In developing economies 55% of CIs were started in 2003 or later. For transition economies that share is even higher, 72%, while the corresponding share for advanced economies is only 28%. (See Figure 1.)

Because the majority of CIs in developing and transition economies have only been in operation for a couple of years or less, it is difficult to assess their long-term performance. In this report, we shall only be able to suggest indicatively what determines success in these settings. More definitive conclusions are not possible at this point in time.

CI PROFILES

INITIATOR

In developing countries CIs often have a donor initiator (international donor organizations or international consultants). Government initiatives

FIGURE 2. TYPE OF INITIATOR

are also frequent, while CIs initiated by the business sector are less common. Other types of initiators include academic institutions and institutions for collaboration.

In transition economies the mix of initiators is quite even, with the business sector as the most frequent initiator (see box below).

In advanced economies, the CI is typically initiated by government, usually a local or regional development agency. However, there are regional variations. In both North America and Australia & New Zealand 41% are government initiated, in Northern Europe 47%, Western Europe 53%, and Southern Europe as many as 61%. (A similar breakdown for developing and transition economies is difficult due to the smaller number of replies.) The breakdown of initiators for different economies is given in Figure 2.

Figure 3 shows the age of CIs for different initiators. Within developing and transition economies, donor initiated CIs tend to be young (making the performance of donor funded CIs particularly

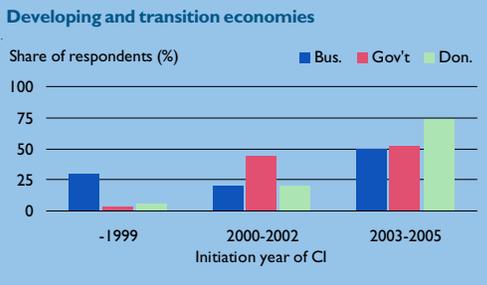
HOW DO CLUSTER INITIATIVES EMERGE?

International donors often provide the impetus for CIs in developing and transition economies. Below, Mexico and Lithuania illustrate how CIs emerge when a donor is not present and the business community itself takes the lead.

Transformando Campeche In the midst of Mexico's economic crisis in 1995, a small group of business people in Campeche recognized that the state needed a more effective approach to promoting sustainable economic development. Campeche's traditional reliance on natural resource extraction was no longer generating the economic growth and jobs that it had in the past. One of these business people attended a meeting at which representatives of Chihuahua Siglo XXI (Chihuahua in the Twenty-First Century) told of their experience in using cluster-based approaches. Based on this model, business leaders launched a state-wide effort to stimulate change and growth in five industry clusters: tourism, light industry, fishing and seafood, petroleum, and agriculture.

Lithuania Infobalt In the early 1990s, a German company organized a trade fair on information and communication technology (ICT) on an annual basis in Lithuania. Only foreign companies could afford to participate in the fair, leaving Lithuania's emerging ICT firms on the margin. In 1994, a group of Lithuanian firms decided to take matters in their own hands and organize a trade fair that would be accessible and affordable for the local industry. The result was Infobalt, an annual trade fair in Lithuania that now showcases more than 200 ICT firms and attracts 65,000 visitors each year. 2005 marks the 11th year of this successful trade show. While the trade fair was the impetus for creating Infobalt (and continues to be its primary source of funding), Infobalt's mandate and activities go significantly beyond the trade show. Infobalt is also Lithuania's leading ICT association, comprising a "partnership of business, public administration and science." The group advocates for policy, legal and regulatory reform in Lithuania, encourages public access to internet and computer technologies, and promotes joint marketing efforts. **S.L.**

FIGURE 3. INITIATION YEAR, BY INITIATOR



difficult to assess). The oldest CIs are usually business initiated.

POLICY SETTING

The policy setting in which CIs are conducted can vary considerably in terms of the degree of national centralization. Clusters and competitiveness can also be a more or less prominent feature in economic policy and debate. (See Figure 4.)

There is a higher degree of centralization of economic policy in developing and particularly transition economies compared to advanced.

Partly this difference reflects the fact that many respondents in advanced economies are active in large countries with strong regional administrations, such as Germany, UK, USA, Canada and Australia.

Clusters and competitiveness is a less prominent feature of economic policy and debate in transition economies than developing and advanced.

Donor initiators seem to be active in policy settings where national policy support is somewhat weaker, whereas government initiates in policy settings where competitiveness and cluster policy is more prominent. (See Figure 5.)

FIGURE 5. POLICY SETTING, BY INITIATOR

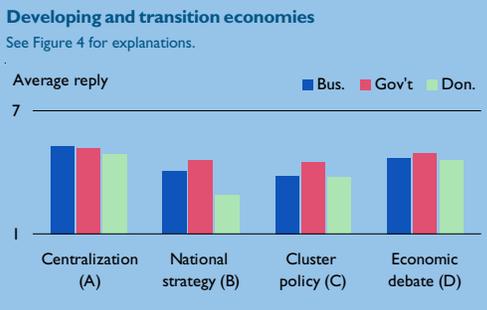
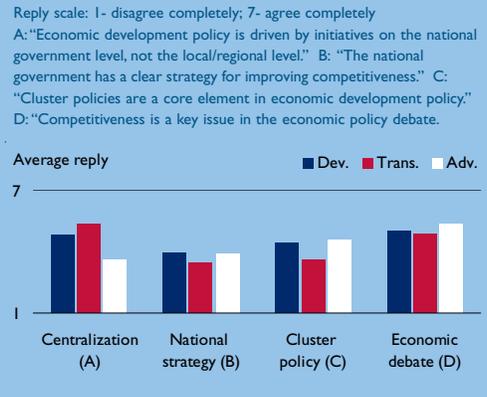


FIGURE 4. POLICY SETTING



INDUSTRY PROFILE

In developing economies, there is clearly a focus on agriculture and food related industries and on basic (typically labor intensive) manufacturing. In transition economies there is a more even mix including capital intensive industries as well as “high tech” industries. (See Figure 6.)

In developing countries there is not much of a difference between different initiators (see Figure 7A); all initiators are most active in agriculture, food, and basic manufacturing. Government is not involved in tourism at all. In transition economies (see Figure 7B), however, the differences are greater. Here, donor initiators are mostly active in agriculture, food, and basic manufacturing. Government, on the other hand, initiates CIs mostly in capital intensive industries. Business is often the initiator in “high tech” and advanced services. As in developing economies, government is not involved in tourism.

The tendency for donors to engage in basic industries could partly be a country effect. Among transition economies, donors are mostly active in those with a less advanced economy.

These differences do not appear to be an age effect since the target industries do not vary much

FIGURE 6. TARGET INDUSTRIES

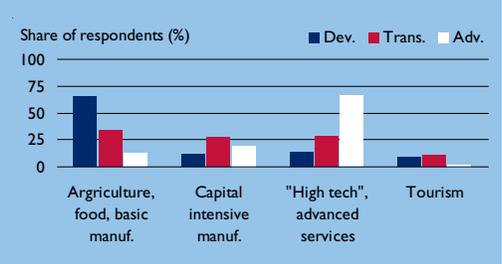


FIGURE 7A. TARGET INDUSTRIES, BY INITIATOR

Developing economies

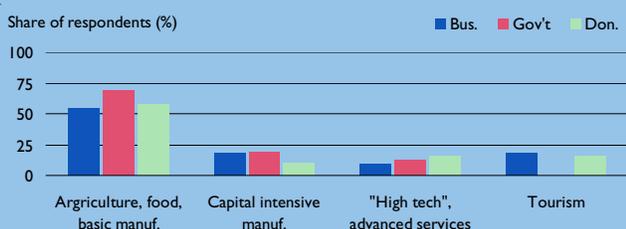
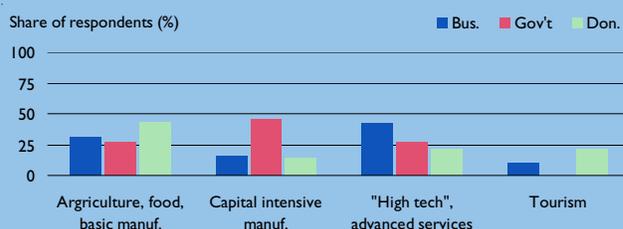


FIGURE 7B. TARGET INDUSTRIES, BY INITIATOR

Transition economies



SELECTING CLUSTERS THROUGH A COMPETITIVE BIDDING PROCESS: MACEDONIA AND JAMAICA

Some competitiveness initiatives use a competitive bidding process in order to select clusters. The experience of Macedonia and Jamaica illustrate how this approach plays out in practice.

Macedonia Competitiveness Activity (MCA) This USAID-funded competitiveness initiative supports five clusters that have been selected through a competitive bidding process. As a first step, the project team conducted numerous workshops around the country in order to introduce the cluster concept and the application process that would be used to select clusters. Then, between March 2003 and October 2004, the project held three rounds of a “request for applications” from potential clusters. The first round generated fifteen proposals, of which two were selected: (i) lamb and cheese and (ii) tourism. The second round resulted in ten applications from which information technology and wine were selected. In the last round of applications, the apparel industry was selected as the fifth cluster.

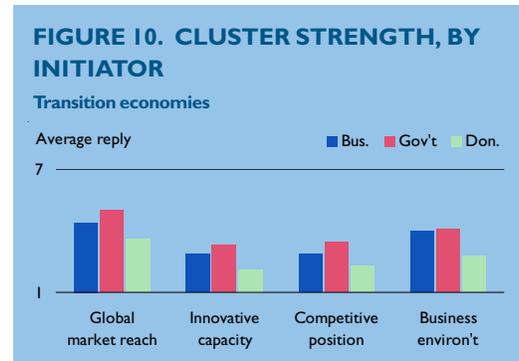
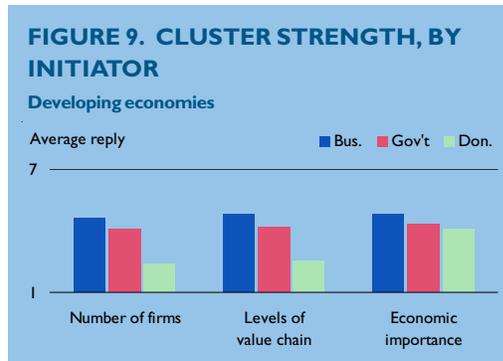
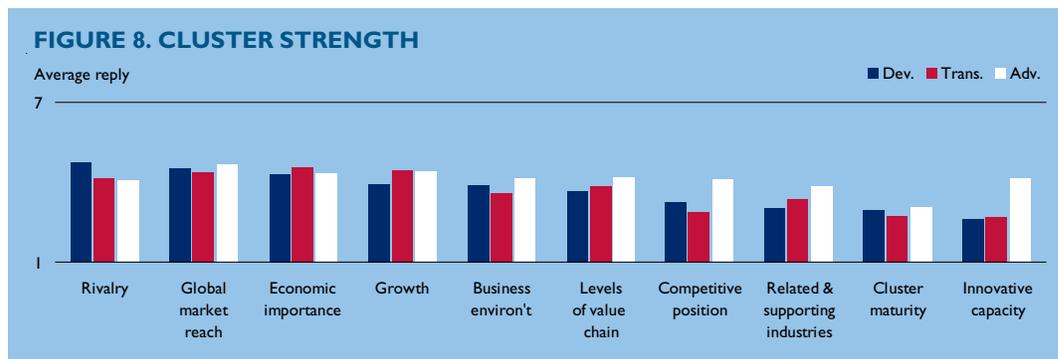
Macedonia’s National Entrepreneurship and Competitiveness Council (NECC) plays a major role in the cluster selection process. Launched and supported by MCA, the NECC is a public-private body comprised of 23 nationally-recognized leaders from government, the private sector, and civil society. The NECC makes final decisions on cluster selection. The role of the MCA project team is to review all of the applications in depth, conduct any necessary due diligence, and provide a preliminary recommendation to the NECC for its consideration. The three selection criteria are: (i) cluster leadership; (ii) cluster vision and strategy; and (iii) economic impact for Macedonia.

For the MCA, the most important advantage of using a competitive bidding approach is that it demonstrates a more open and transparent selection process (particularly significant in an environment that is so highly politicized). Moreover, the process is structured to place decision-making in the hands of the Macedonians through the NECC.

Jamaica Cluster Competitiveness Project As early as 1996, Jamaica identified eight industries in its National Industrial Policy Paper. However, for several years, there was little action to support and stimulate these industries. In 2002, the Jamaican Exporters’ Association (JEA) returned to these industries as the starting point for its Cluster Competitiveness Project with modest support from Department of International Development (DFID), USAID, and the Government of Jamaica (\$1.2 million over a two-year period). Initially, the project team met with leaders in each of the industries to introduce competitiveness principles and generate interest in participating in the project; the industry leaders then designated specific individuals to prepare a bid. The bids were generated in two rounds of workshops. Then, the JEA and the project team presented the proposals to a national-level steering committee comprised of leaders from the public and private sector for its selection. Like MCA, the group used three criteria as the basis for discussion and selection: (i) the size and economic importance of the cluster; (ii) the cluster’s potential for growth; and (iii) the cluster’s degree of openness, enthusiasm, and willingness to change. Following robust discussions, the steering committee members chose three clusters: agribusiness (specifically, jerk and hot sauces), tourism, and musical entertainment.

Conclusions While both Macedonia and Jamaica employed a competitive bidding process to select clusters, it is important to note that, in neither case, was the process as formal or rigid as that typically used for donor-funded contracts or grants. In both cases, the selection criteria were used to frame the questions to be examined by local stakeholders; however, there was also considerable room for discussion, consensus-building and group decision-making, and this was deemed to be extremely valuable by the project technical assistance teams. Similarly, for both projects, final decisions for cluster selection were placed largely in the hands of local public and private leaders – a key benefit of this process. However, the project technical assistance teams also played an important role in developing selection criteria, analyzing the proposals, and providing preliminary recommendations to these stakeholders. While both projects believe that the advantages of a competitive bidding process far outweigh the disadvantages, it is important to note that this approach can often mean a longer start-up phase for a competitiveness project; hence, this may not be the best approach if the project has a tight timeframe or limited resources. In some cases, a competitive bidding process may raise the public profile of an initiative and, hence, raise expectations as well. And lastly, there are always “losers” in the process. In the case of Macedonia, one cluster that lost in the first round used the feedback from the NECC to pull itself together as a cluster and re-apply successfully in a subsequent round.

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between age groups, apart from a slightly lower share of agriculture/food/basic manufacturing among those initiated before 1999.

In terms of the “cluster strength” (see Figure 8), CIs usually work with target clusters that are not very mature, but have a moderate growth and a market reach (measured on a scale from local to global) that is at least moderately global. They are typically somewhat important for the national economy as a whole.

Clusters in developing and transition countries are generally weaker than in advanced economies. Their innovative capacity is lower, and their overall competitive position is less strong. Related and supporting industries are present to a lower degree, and there are sometimes fewer levels of the value chain present.

In some aspects, however, they do not appear to be weaker than those in advanced economies. The market reach is on par with advanced economies, and they display roughly the same rate of growth.

In developing economies, business initiated CIs occur where there is a large number of firms and several levels of the value chain (see Figure 9). Overall, business seems to be active in generally stronger clusters than government or donor initiators.

In transition economies, donor initiators stand out even more. (See Figure 10.) They are active in generally weaker clusters. For example, the market reach is shorter, the innovative capacity lower, the competitive position weaker and the business environment less attractive.

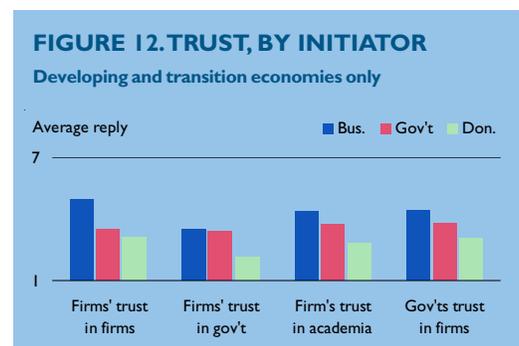
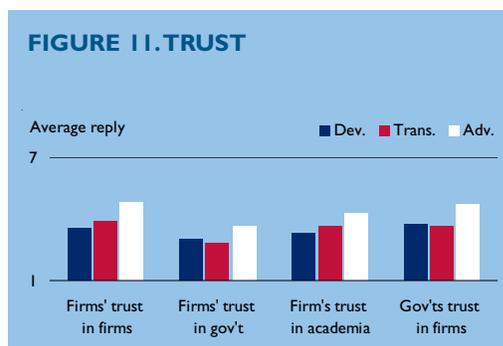
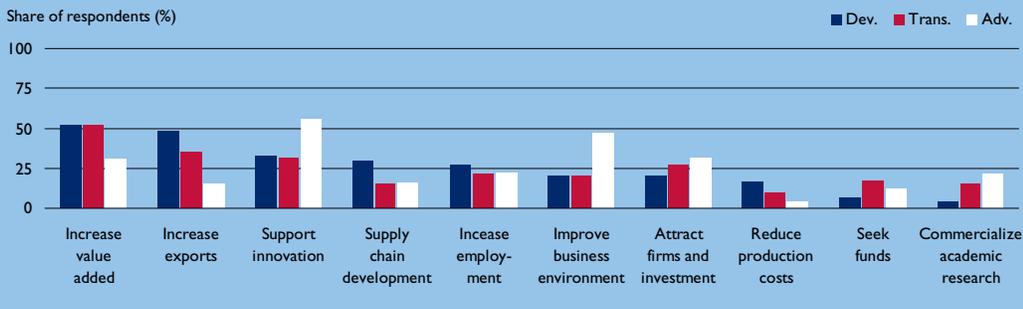


FIGURE 13. OBJECTIVES

Developing and transition economies

Share of respondents who indicated this as one of three most important objectives.



Cluster initiatives are collaborative efforts, so trust is obviously an important factor. Trust is overall lower in developing and transitional economies than in advanced (see Figure 11). The difference is particularly high in terms of trust among firms. In all economies, firms have more trust in other firms than in government. Within developing and transition countries (see Figure 12), business initiated CIs occur where trust is high, especially among firms, while donor initiators are active where trust is considerably lower, particularly firms’ trust in government.

OBJECTIVES

Respondents were requested to select up to three objectives that they considered to be most important for the project. (See Figure 13.)

Increasing the value-added of production in the cluster was considered an important objective in both developing and transition economies, followed by increasing exports and supporting innovation. Supply chain development is also an important objective in developing economies, while attracting firms and investment is more important in transition economies. As a contrast,

supporting innovation and improving the business environment are the two most important objectives in advanced economies, while export promotion is rarely an objective.

Business and government initiators in developing economies (see Figure 14A) usually focus on increasing value-added and exports, while donor initiators support supply chain development and improving the business environment.

In transition economies patterns are different. (See Figure 14B.) Here, donors focus on value-added, exports and employment, while government often focuses on innovation and commercializing academic research (see also box on page 18).

One could perhaps say that in transition economies donors have objectives similar to developing economies, while government plays a role typical in advanced economies.

ACTIVITIES

In the survey, respondents were presented a list of 25 activities often performed by CIs. They were asked to indicate to what degree they performed each activity, on a scale from “not done” to “main

FIGURE 14A. MAIN OBJECTIVES

Developing economies

Share of respondents who indicated this as one of three most important objectives.

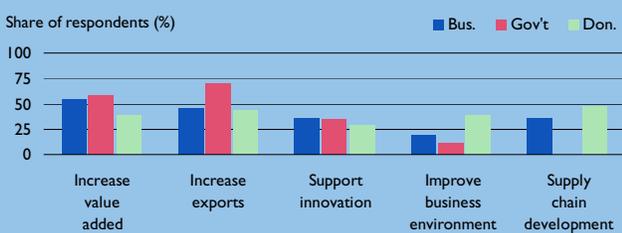
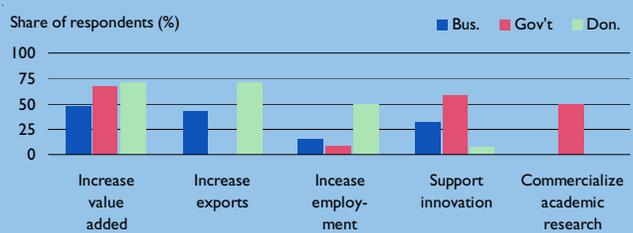


FIGURE 14B. MAIN OBJECTIVES

Transition economies

Share of respondents who indicated this as one of three most important objectives.



COMMERCIALIZING ACADEMIC RESEARCH

Commercializing academic research is a relatively important objective of cluster initiatives in transition economies compared to those in developing countries. The Innovation Technology Center in Zelenograd, Russia, illustrates how these types of cluster initiatives operate.

The context Zelenograd is "Russia's Silicon Valley." Located about 20 miles north of Moscow, Zelenograd is the home to a technical university for Russia's microelectronic industry, as well as 10 industrial companies, 8 research institutes and 130 companies specializing in microelectronics and information technology. Outdated equipment and technology is the single most important issue facing these companies.

The role of the Innovation Technology Center Founded in 1997, the Center aims to build linkages between Zelenograd's science and technology universities, research institutes, and companies so that they can be more competitive. For example, in order to respond to the requirements of complex technology projects, the Center may bring together as many ten medium-sized companies. Each company assumes a unique role on the project depending on its expertise and qualifications. The Center coordinates joint marketing and production.

In recognition of the challenges faced by its companies, the Innovation Technology Center has recently created a large facility equipped with the highly-specialized equipment needed to produce competitive products in the microelectronics industry. No single company in the town could afford to purchase such equipment. However, on a fee-for-use basis, they can access the Center's facilities and equipment to produce sophisticated products. The Center regards the development of these facilities as its most important success. With access to more modern technology and equipment, Zelenograd's companies now have the potential to produce competitive products. In fact, the Center has seen changes in the quality and sophistication of products produced by its local companies. Nonetheless, it remains difficult to compete with the large international companies that now play such an important role in the Russian market too.

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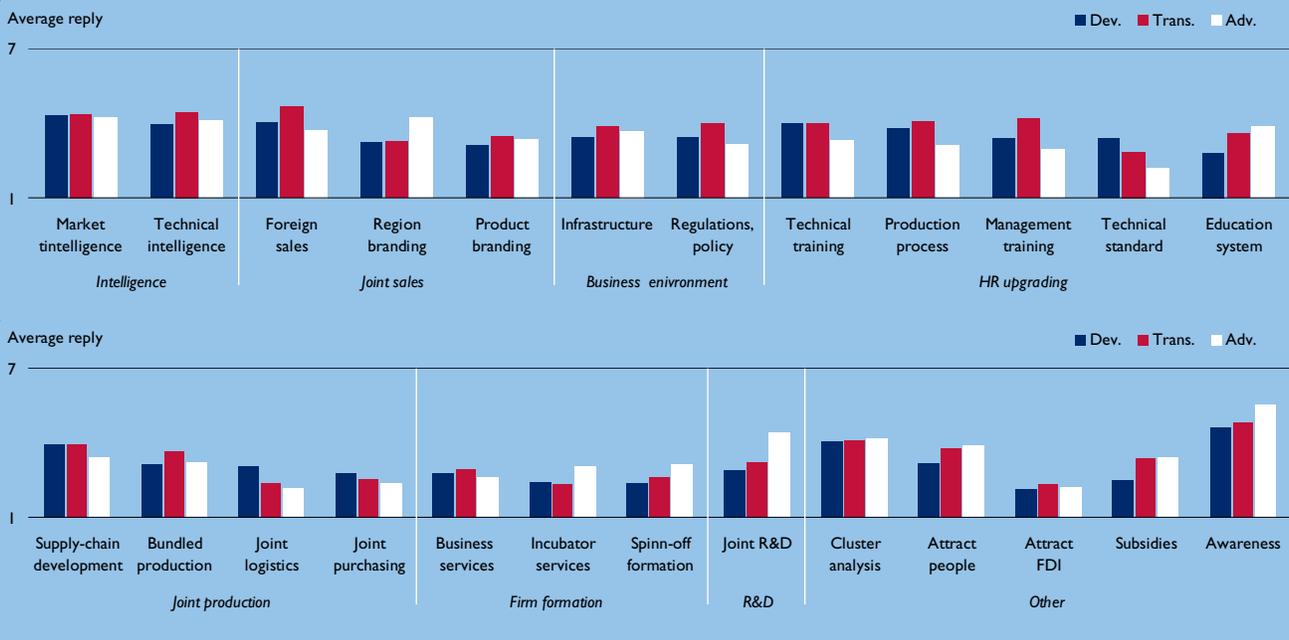
activity". Analyzing the responses we find that activities can be divided into seven groups. Within each group the activity levels of the activities are correlated, so that a CI that performs one activity will tend to perform also the others in the same group. The seven groups are presented in Table 3 and the importance of each activity is given in Figure 15.

Intelligence activities are equally popular in all economies. For joint sales, the differences are bigger. Branding of the region itself is more prominent in advanced economies. (See also box

on page 19.) Lobbying for changes in the business environment, such as regulations and policy, is more popular in transition than in developing economies.

Upgrading human resources is a field that is much more prominent in developing than in transition economies. (See also box on page 20.) Management training is particularly popular in transition economies. When human resource upgrading does occur in advanced economies, it is typically in the form of improving the education system.

FIGURE 15. ACTIVITIES



JOINT MARKETING AND SALES

Lithuania Infobalt Infobalt has recently launched a new initiative, Outsource2Lithuania, in an effort designed to capture the growing market for outsourcing information technology services. Recognizing that no one company in Lithuania may be able to serve the requirements of large clients at this time, this initiative encourages firms to market their ICT services together, and ultimately, to develop an image for Lithuania as the leading provider of ICT outsourcing services in Europe.

As a first step, 22 medium-sized companies have jointly created a web portal (www.outsource2lithuania.com). The portal provides basic information on the companies and their ability to provide ICT outsourcing services; it also enables foreign companies to announce prospective projects and search for potential partners. Along the same lines, Infobalt is also part of the Baltic Clustering Initiative, an effort to bring together the resources of ICT companies in Lithuania, Estonia and Latvia to respond to the requirements of large-scale international projects and tenders. One of the issues that may have an impact on its success, however, is that the associations in the three countries are not equally strong.

Nicaragua Furniture This USAID-funded pilot project has been working with a group of small wood furniture companies to carve out a new market niche. Since none of the firms have the capacity to manufacture in large volume, the project has been assisting the firms in defining niche opportunities for selling high-value products. Toward that end, the project helped companies prepare for their first exhibit at the annual furniture show in Highpoint, North Carolina. Not only were the firms able to make valuable contacts, but they also obtained first-hand feedback from potential buyers on what they needed to do to sell their furniture – most notably, improve product finishing and packaging. Based on this feedback, the USAID team provided training to firms in product finishing, pricing and other issues shared by the firms. The companies are working toward exporting their products for the first time this year. **S.L.**

Supply chain development and joint logistics are particular to developing economies. Supply chain development is also popular in transition economies. Joint production activities are generally less important in advanced economies.

Firm formation, on the other hand, is a type of activity that is more prominent in advanced than in developing or transition economies. And what typically separates advanced from the other is the high importance that joint R&D has there: it is the most popular activity (apart from generally building awareness among cluster members).

PARTICIPANTS

One way of measuring the size of a CI is the number of companies that participate actively. Some CIs have only a handful of company participants while others have more than a hundred.

CIs in transition economies have fewer companies participating. Only 40% of CIs there have more

than 20 company participants, and the median is 18. (See Figure 16.)

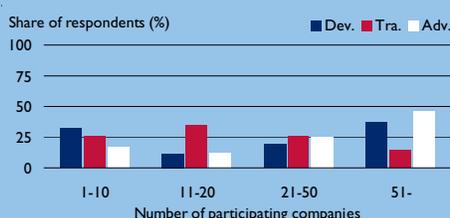
In developing economies, CIs are larger. 51% have more than 20 firms participating, and the median

TABLE 3. ACTIVITY GROUPS

Activity group	Activities
Joint production	Promote joint purchasing
	Promote joint logistics
	Promote joint or bundled production
	Promote supply chain development
Joint sales	Conduct joint branding of products/services
	Conduct joint branding of region
	Facilitate joint promotion in foreign markets
Human resource upgrading	Provide technical training
	Provide management training
	Promote production process improvement
	Establish technical standards for industry
	Improve education system
Intelligence	Collect market intelligence
	Analyze and inform about technical trends
Business environment	Promote changes in gov't regulations/policy
	Lobby gov't for infrastructure investments
Firm formation	Provide incubator services
	Promote spin-off formation
	Promote business services
Joint R&D	Promote joint R&D projects

Note: The following five of the 25 activities did not fall clearly into any one of the groups above: Improve FDI incentive; Analysis of underlying cluster; Efforts to make companies (and others) aware of each other; Attract people and talent; Promote subsidies to cluster.

FIGURE 16. NUMBER OF PARTICIPATING COMPANIES



EGYPT TOURISM: WORKFORCE DEVELOPMENT STRATEGIES FOR COMPETITIVENESS

The problem The tourism industry is vital to Egypt's economic growth. In 1999, USAID launched its Workforce Development Initiative in 1999. At that time, the tourism industry accounted for more than 14% of the Egyptian labor force; however, few workers had the skills or training needed by their employers. In fact, few firms outside of the international chains of hotels even appreciated the value of training their employees. Moreover, Egyptian universities and training providers focused largely on delivering highly-formalized degree programs that had little connection to the very practical needs of the industry. As a result, tourists came to Egypt to see the pyramids and other historical monuments, but rarely did they return, in part, because of the mediocre service they had received. Faced with greater competition from other tourist destinations, Egypt began to realize it needed to offer more than its historical sites. To be competitive in the future, the industry needed to build a highly-skilled workforce.

Launching the initiative Unlike most training projects, this initiative was grounded on industry cluster principles and practices. Hence, like most cluster initiatives, the starting point involved bringing together the stakeholders: private sector leaders (representing hotels and accommodations, restaurants, travel agencies, tour guide organizations, attractions, and others), industry and business associations, education and training providers, and representatives of government. Together, the stakeholders took a hard look at the tourism industry and assessed its strengths and weaknesses – with a special focus on the competitiveness of the industry's workforce. One of the most important results of this assessment process was the emergence of two local champions: an institution (the Egyptian Federation of Tourism Chambers) and an individual (Mr. Hussein Badran, formerly the Deputy Minister of Tourism and Director of the Tourism Authority). Their leadership proved to be a significant success factor for the initiative.

Implementing the initiative The USAID team quickly discovered that it was difficult to find local trainers who could deliver practical industry training. As a result, the central thrust of the strategy became building the local capacity to deliver skills-based training that would be relevant and useful from the perspective of Egyptian employers. The target group was 2-4 star hotels (since these hotels provide employment for more than 100,000 workers and yet provide almost no training to their staff). Based on a model developed by the American Hotel & Lodging Association, the project trained a cadre of nine mobile "hospitality master trainers." These master trainers focused the training on a group of hotels in one district at a time in order to maximize impact and provide follow-up to hotel owners and management, a strategy that proved to be important for success. On a district by district basis, systematically working throughout seven Egypt Governorates, the master trainers delivered "training of trainers" courses to hotel supervisors who, in turn, trained their front line staff in the Front Office, Food & Beverage, and Housekeeping service areas. By focusing on one locale at a time, the master trainers could observe and coach the supervisors as they trained their front line workers while at the same time ensuring that line level employees met training completion requirements.

Results The initial goal of the project was to train 2,000 hospitality workers in 2-4 star hotels. Two years later, that goal had been exceeded by more than 300 percent with a total of 9,755 individuals trained, including 8,577 front line staff in hotels, 1,156 hotel supervisors trained as trainers, and 22 master trainers capable of training other trainers. More than 500 of the hotel supervisors became "certified" trainers, a credential that is recognized worldwide in the hotel industry. Beyond the sheer number of persons trained, the project provided concrete evidence to hotel owners and managers that training can increase revenue, decrease costs, and improve employee retention and morale; hence, they now see the bottom-line value of investing in employees. Moreover, the Federation now has the capacity and the staff to sustain this industry-driven approach to training in the future.

Lessons learned This initiative emerged from a classic kind of cluster strategic planning process. However, it is important to note that creating the tourism cluster organization per se was not the end goal. In fact, once the initiative was launched, the cluster organization was not formally convened during implementation. Nonetheless, as a result of the cluster strategic planning process, important linkages had been established between tourism firms and tourism trainers that would enable this initiative to provide training that was practical, readily-applicable, and driven by the needs of firms in Egypt. Engaging private sector hotel owners and managers at every step – from developing the initial strategy through assessing results – has been key to its success. **S.L.**

is 25. There are comparatively fewer CIs in the mid-range of 10-50 companies.

In advanced economies the numbers are even higher. 71% have more than 20 participating firms, and the median is as many as 40.

Partly the low number of participating companies in transition economies is due to a lower penetration rate. Only 23% of CIs in transition countries include at least half of the companies eligible to join, compared to 32% in developing economies and 40% in advanced. However, penetration rate probably does not account for the whole difference in the number of participating firms. Another explanation might be that CIs in transition and

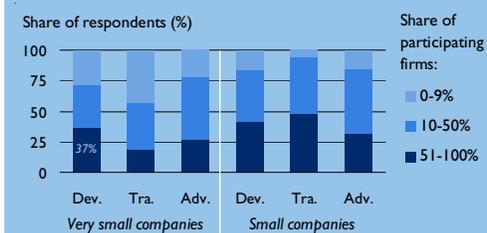
developing economies simply work with smaller industries.

In developing economies, the business initiated CIs are clearly the biggest with a median of 62 firms, compared to 16 for government and 20 for donor initiated. This would agree with the earlier observation that business initiated CIs often occur in clusters with many firms (see Figure 9). In transition economies the difference is not as great, but the pattern is different. There the median for business initiated is 17 companies, 19 for government initiated, and 22 for donor initiated.

Among the participating firms in a CI, a smaller or larger share of the companies can be very small or small companies (see Figure 17). This graph is a bit

FIGURE 17. SIZE OF PARTICIPANTS

Very small: less than 10 employees; small: 10-50 employees



complicated, so as an example, the dark blue area in the first column shows that in developing countries 37% of CIs report that more than 50% of their participating firms are micro enterprises.

In all economies there are usually fewer very small enterprises (less than 10 employees, sometimes called “micro-enterprises”) among the participants than small companies. The lowest share is found in transition economies, and the highest, somewhat surprisingly, in advanced economies.

For small companies (10-50 employees), the pattern is reversed. The highest share is found in transition economies, the lowest in advanced.

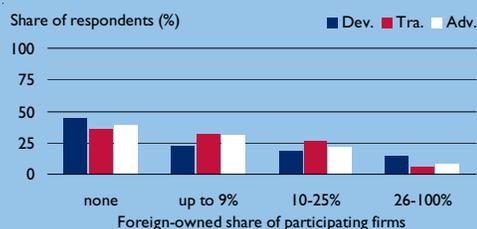
For informal sector firms (enterprises operating outside the regulatory system, the “grey sector”) is low in all economies. The share is highest in developing economies. However, an unexpectedly high share is found in advanced economy. A closer inspection shows that most of the high shares are found in North America and Australia & New Zealand.

In terms of foreign ownership, participants are similar in all economies. There are slightly more CIs in developing economies with a high share of foreign-owned participants. (See Figure 18.)

The organizational form of the CI is usually an independent formal, not-for-profit organization. Informal organizations tend to be more frequent in developing and transition economies than advanced. (See Figure 19.)

In both developing and transition economies 46% of CIs are membership organizations where participants become formal members, compared to 64% in advanced countries. Among these membership organizations, 89% in transition economies require members to sign a formal memorandum of membership, compared to 60% in both developing and advanced economies.

FIGURE 18. FOREIGN-OWNED PARTICIPATING COMPANIES



INFRASTRUCTURE AND RESOURCES

Many CIs rely on various resources and infrastructures to conduct their operations.

Most CI have an office: 71% in developing, 62% in transition, and 75% in advanced economies. Websites are more concentrated to advanced economies. Only 37% in developing and 41% in transition economies have a website, compared to 79% in advanced.

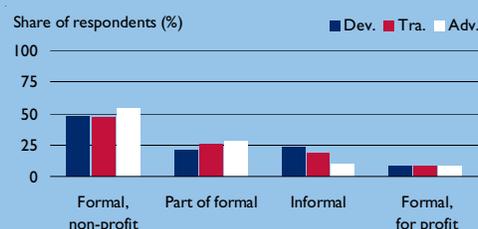
The CI staff is somewhat bigger in developing economies, with a median of three persons, compared to two for transition and advanced.

Strategically many CIs rely on an individual (the “director”, “manager” or similar) for formulating strategies and setting the agenda. Similarly, many CIs have an individual who is responsible for managing operations. In other CIs, these tasks are performed by a group of people (a “board”, “leadership team”, etc) rather than an individual.

Operational managers are most frequent. In both developing and transition economies 81% of CIs have such a manager, compared to 86% in advanced. Strategic managers are more rare: 65% in developing, 43% in transition and 52% of CIs in advanced economies. In 34% of CIs in developing economies, the operational manager and the strategic manager are the same person, 22% in transition, and 33% in advanced.

Donor initiated CIs are less likely to have managers responsible for operations or strategy. (See Figure 20.)

FIGURE 19. ORGANIZATIONAL FORM OF THE CI



GOVERNANCE: THE CASE OF INFOBALT IN LITHUANIA

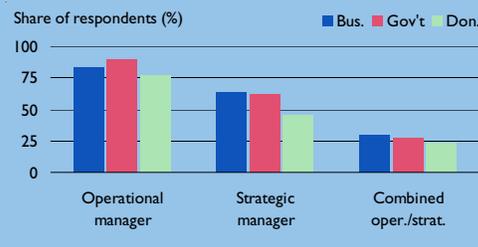
Infobalt operates as a non-profit association to represent and promote the interests of information technology and communications firms in Lithuania. Members include companies and ICT-related universities and educational institutions. While influencing and working in collaboration with government is critical to the success of Infobalt, government is not a member of the cluster initiative *per se*.

Infobalt provides an example of a cluster initiative that has more formal mechanisms and procedures for governance. For example, at its annual meeting, the members establish and come to a consensus on the overall strategic directions for the association. In addition, the members vote and select seven key managers, each of whom leads a working group in a specific technical area of concern to the association (such as copyright protection, telecommunications and electronic communications, export development, and innovation and clustering policy). In turn, each of the working groups determines its specific initiatives for that year and how they will be implemented.

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FIGURE 20. MANAGERS

Developing and transition economies



particularly true in transition economies. This reflects an often expressed opinion that it is essential that CIs are “business led”.

However, there seems to be a difference between government and donors in terms of an early transfer of influence to business. In developing economies, only 30% of the CIs initiated by donor initiators transfer decision rights about initial activities to business, compared to 41% for government initiated. In transition economies the difference is even more striking. There only 21% of initial initiators transfer power to business, compared to 58% for government initiated CIs.

In developing and transition economies, there is not a single example of a business initiated CI having government or donors select initial activities. (It does, however, happen occasionally in advanced economies.)

ACTORS AND ROLES

As shown earlier in Figure 3 we saw that in different economies different types of actors take the initiative to start the CI. For example, donor initiators are most often the initiator in developing economies.

In the initiation phase there are also some key decisions to make. First, one must decide which actors, e.g., companies, government agencies, universities, industry organizations, to involve as initial participants. Second, the CI decides on the initial activities to undertake.

Figure 21 shows that although the decision to start the CI may come from actors than business, influence is quickly shifted towards business. In all economies, business is most usually the most influential actor in deciding initial activities. This is

FINANCING

Economic contributions to CIs can take many forms. The business sector often contributes through the work they perform within the activities of the project. This contribution may be substantial although it will not be visible in the form of financial transactions.

The CI nevertheless will have some sources of income to cover the administration costs of the

FIGURE 21. INFLUENCE IN INITIAL STAGE

“Other actors” (universities, IFCs, etc) are not included in the graph, which is why numbers do not add up to 100%.

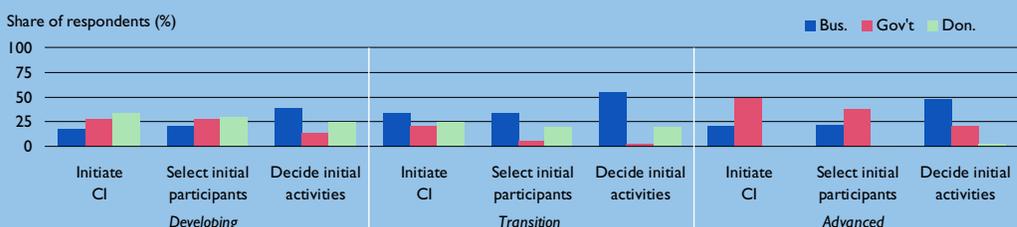
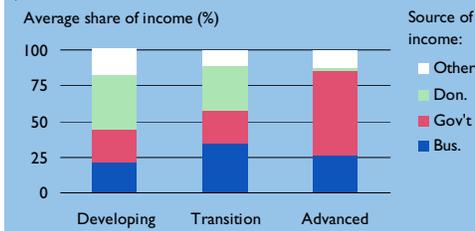


FIGURE 22. SOURCES OF INCOME



organization and for covering costs related to the activities.

In developing economies (see Figure 22), international funding (through donors and their contractors and consultants) is usually the main source of income while in transition economies the largest share usually comes from the business sector. Presumably, in transition economies, some of the international funding comes from EU, and not only from international donor agencies. In advanced economies, most of the financing is provided by government.

This pattern is similar to the initiator pattern, and the initiator clearly has a great influence on finance.

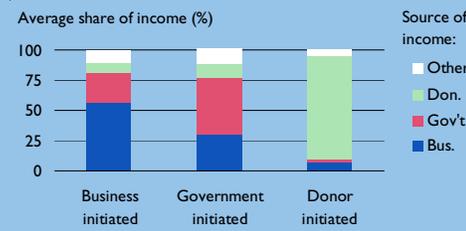
From Figure 23 it is clear that “the initiator pays”; business initiated CIs get most of their income from business, government from government, and donor from donors. However, while business initiated CIs also get a substantial funding from government and vice versa, donor initiators hardly receive any financial support from either business or government.

Financing shifts towards business over time. As CIs evolve, a larger share of their income is covered by firm membership fees and sales of services to companies. It is therefore interesting to break down the CIs in two age groups: those initiated 2003 or later, and those initiated 2002 or earlier (see Figure 24).

The two main patterns still remain. First we see that for young CIs, the initiator is the main financier. For older CIs, financing shifts towards business, but business provides more funding in business initiated than in other CIs; government provides more funding in government initiated than in other; and donors provide more funding in donor initiated than in other CIs.

FIGURE 23. SOURCES OF INCOME, BY INITIATOR

Developing and transition economies



It is also clear that over time, government initiated CIs, while shifting funding towards business, also manage to increase donor funding. This shift is much more modest for donor initiated CIs, and donors provide the majority of income also in older CIs.

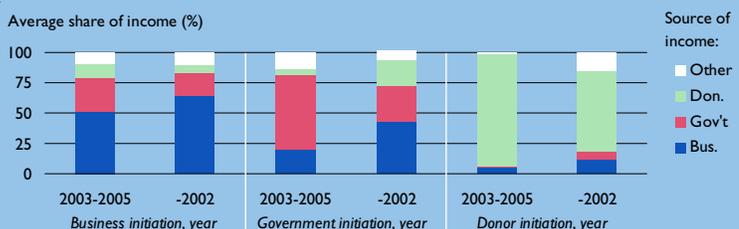
One should note, however, that although these differences are here presented as a “shift over time”, it is in fact not possible to say from this graph if they occur because an individual CI changes over time (so that older CIs used to be similar to the young ones today) or if older cohorts have always had different funding patterns (and have not shifted their funding since initiation). Further analysis has shown that the latter is not the case.

TARGETS AND PERFORMANCE MEASURING

Almost half of CIs have quantified targets (such as “increase exports by 15% per year” or “generate 2500 new jobs in 5 years”). It is somewhat more common in developing and transition economies than in advanced, with 47% and 48% respectively, compared to 41%. The patterns are ambiguous when broken down by initiator. In developing economies, donor initiators are more likely to have

FIGURE 24. SOURCES OF INCOME, BY INITIATOR AND AGE

Developing and transition economies



quantified targets, whereas in transition they are less likely than business or government.

Many CIs also assess their impact by measuring key indicators of how their industry performs. This is particularly frequent in developing and transition economies. In developing economies, CIs collect

data within an average 6 areas, compared to 7 in transition and only 4 in advanced economies.

In developing economies, donor initiated CIs measure far fewer indicators than in transition economies, on average 4 compared to 9 (see Figure 25). We recognize this pattern from quantified

MEASURING AND MONITORING RESULTS: EGYPT TOURISM WORKFORCE DEVELOPMENT

Cluster initiatives in developing countries may collect performance data in order to (i) demonstrate quantifiable results to a donor; and (ii) make better project management decisions. Both of these functions are necessary and important; however, neither one engages the industry in performance measurement except as passive providers of data to the project. The USAID-funded Egypt Tourism Workforce Development Project has taken a different approach. For this project, performance data has been a key source of information for decision-making for the industry participants, most notably, the Federation of Tourism Chambers and the hotels. Not only do they have a stake in receiving the information; they also play a major role in collecting, analyzing and using the information. For the hotels, data collection and interpretation has been an integral part of their training and presented as a tool that the hotels can use to improve their operations and staff efficiency. Developing the Federation's capacity to gather and analyze performance data has been important for sustaining the project's industry-driven approach to training. These five tools have been developed and used to collect data and monitor progress/impact through the life of the project.

The Information and Database System The project keeps a database on the people and the hotels that receive training through the initiative. The database enables the project to provide up-to-date data on the number of persons trained (the most important performance indicator from USAID's perspective) while ensuring no duplication in counting. This is important in the context of Egypt, as workers in the tourism industry frequently move from hotel to hotel. The Microsoft Access database includes the following information: (i) basic data on trainees, including years of experience and years at the hotel; (ii) data on participating hotels, including baseline training practices for existing and new employees; (iii) training events; (iv) completion of course requirements by type of employee; (v) supervisory level certification; and (vi) trainee feedback data from course participants and general managers.

Training Evaluation Assessments Following each training program, the hotel employees assess the quality of the training course by completing a one-page survey. The assessments are used to provide feedback to the trainers (who are also being trained through the project), adapt the training materials to the needs of the hotels and their employees, and continuously improve the training. In addition, an integral part of the project has been measuring the extent to which the new training is actually being applied and used on the job. Hence, once hotel employees have an opportunity to apply their new skills on the job, hotel supervisors conduct an evaluation to determine whether the training has made a difference in their job performance.

Customer Satisfaction Surveys Participating hotels are asked to collect customer satisfaction information as an integral part of the program. This has been no small endeavor, as very few of the 2-4 star hotels participating in the program had ever asked for customer feedback. The customer satisfaction surveys serve a dual purpose. First, they provide a measure of the program's impact from the customer's perspective for both USAID and the Federation. For the hotels, they have demonstrated the value of gaining customer feedback as a standard tool of hotel management.

Demand Assessments The initiative has also introduced the concept of annual demand assessments to the Federation and hotels. Its primary purpose is to help the Federation continuously track training needs in the hotel industry and ensure that new training programs are demand-driven and responsive to the needs of industry. Thus far, data for the annual demand assessment has been collected via a combination of in-person survey interviews and focus groups with the managers of participating hotels. The assessment enables the Federation to obtain feedback on the quality of training to date, assess changes in attitudes toward training and human resource development in the industry, and, most importantly, assess near-term and immediate-term training needs.

Impact Survey The project has also conducted a small and targeted impact survey in order to measure quantifiable impacts of the training program. One part of the survey measured the overall impact of the training program on hotel performance, addressing changes in productivity and the careers of trainees. The second section measured productivity changes and quality improvements for department-specific indicators, such as the breakage rate in the food and beverage departments, average check in/check out time at the front desk, and room cleanliness for the housekeeping departments. Lastly, the project developed a video documenting the impact of the project on the lives and careers of trainees, the revenue and productivity of hotels, and Egypt's tourism industry.

PERFORMANCE MEASUREMENT: LITHUANIA INFOBALT

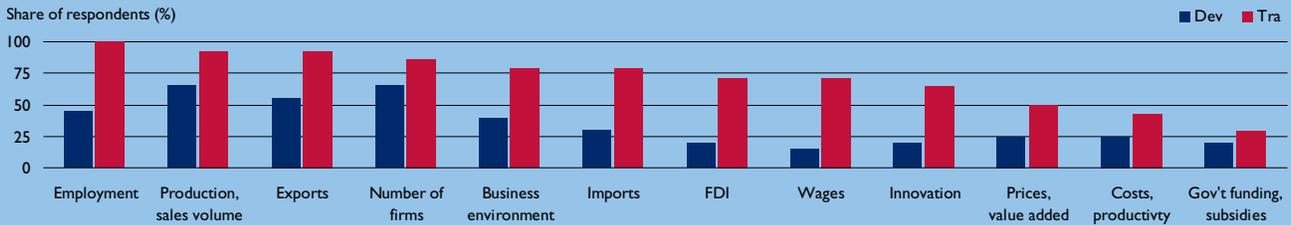
Infobalt, an association of information technology and communications firms in Lithuania, measures its success primarily in two areas: (i) the financial growth of its member firms and the industry; and (ii) its ability to influence policy, laws and regulations governing the industry. Infobalt collects primary data from its members and prepares industry reviews. In addition, a local investment banking firm, Prime Investment, conducts a semi-annual review of the ITC industry based on data provided by the management of Lithuania companies. Key metrics reported at the firm level include: total annual revenue; change in total revenue from previous year; IT services revenue; change in IT services revenue from the previous year; and value added (calculated as Earnings Before Interest, Taxes, Depreciation, and Amortization + personnel costs). Innovation is another metric of success for Infobalt. To measure changes in innovation, Infobalt tracks the number of new patents it issues to local companies in Lithuania.

S.L.

FIGURE 25. IMPACT MEASURES

Donor initiated in developing and transition economies respectively

Share of respondents who measure this at least once a year



targets: donor initiated CIs are less likely to have quantified targets in developing than in transition economies.

See also the box on page 24.

CI DEVELOPMENT STAGE

CIs sometimes start out as time-limited projects. As they evolve they may become an established institution, which is less dependent on government support or the work of key individuals. This is often the normal evolution in advanced economies, and the pattern appears to be the same in developing and transition economies. With age, they tend to consider themselves permanent institutions; they are also less dependent on single key individuals; and they are more confident that they can continue even if there is change in government policy.

Looking at only young CIs in developing and transition economies, government initiated CIs are less sure of their survival in case of a policy shift than those initiated by business or donors. (See Figure 26.)

PERFORMANCE

In the questionnaire, respondents were asked to assess what impact they had in three areas.

First, organizational performance was assessed in terms of “meeting goals”, “living up to expectations”, and in negative terms of “not leading to changes” or being “mostly talk, not much action”. Also, the ability to meet deadlines and the project becoming known to potential participants was assessed.

Second, operational performance was assessed in terms of those factors listed as objectives, such as contributing to increasing exports or commercializing academic research.

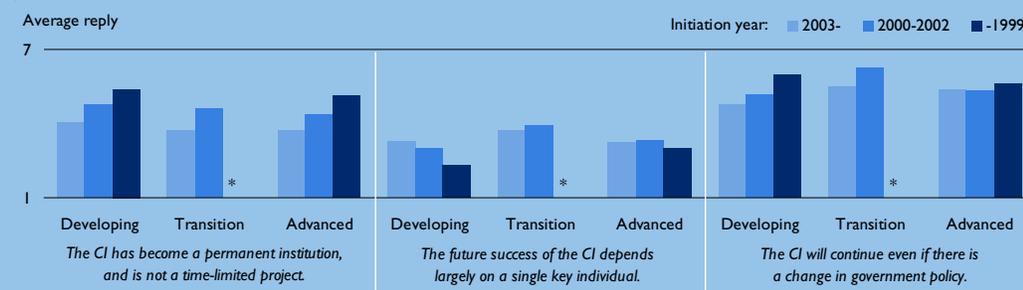
Finally, economic performance was assessed by the influence the CI had had on the underlying cluster, such as helping to increase the growth of the cluster or products being sold on a wider range of markets.

This self-assessment was only done by respondent CIs initiated in 2002 or earlier since we considered that it would be difficult to establish any impact of younger CIs.

FIGURE 26. DEVELOPMENT STAGE OF CI, BY AGE

Reply scale: 1- disagree completely; 7- agree completely. Respondents are grouped by the year of initiation.

* There are less than five respondents in this category, too few to provide meaningful statistics



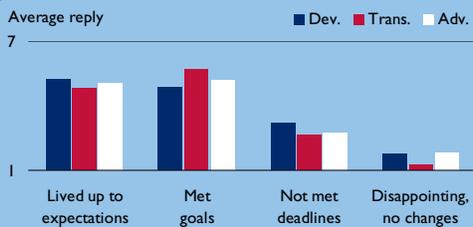
PERFORMANCE MEASUREMENT: LITHUANIA INFOBALT

Infobalt, an association of information technology and communications firms in Lithuania, measures its success primarily in two areas: (i) the financial growth of its member firms and the industry; and (ii) its ability to influence policy, laws and regulations governing the industry. Infobalt collects primary data from its members and prepares industry reviews. In addition, a local investment banking firm, Prime Investment, conducts a semi-annual review of the ITC industry based on data provided by the management of Lithuania companies. Key metrics reported at the firm level include: total annual revenue; change in total revenue from previous year; IT services revenue; change in IT services revenue from the previous year; and value added (calculated as Earnings Before Interest, Taxes, Depreciation, and Amortization + personnel costs). Innovation is another metric of success for Infobalt. To measure changes in innovation, Infobalt tracks the number of new patents it issues to local companies in Lithuania.

S.L.

FIGURE 27. ORGANIZATIONAL PERFORMANCE

Reply scale: 1 - disagree completely; 7 - agree completely.



Since there are so few CIs that have been in operation for more than two years in developing and transition economies, it has not been possible to break down performance measures by initiator in these countries in a meaningful way.

CI ORGANIZATIONAL PERFORMANCE

Results are overall best in transition economies. (See Figure 27.) CIs there have met goals and avoided disappointments better than in other economies. Meeting deadlines has been most of a problem in developing economies.

However, transition economies also score lowest in terms of living up to expectations. So although they meet their goals, they may also face higher expectations than in developing or transition economies.

CI OPERATIONAL PERFORMANCE

CIs in transition economies report their best results in acquiring funds from government and international organizations, improving business environment, and increasing innovativeness. (See Figure 28.)

Developing economies also score best in acquiring funds and improving the business environment, with export promotion being the third best area.

Advanced economies CIs perform best in increasing innovation.

In almost every field, transition CIs report better performance than developing and advanced. The exceptions are increasing employment and reducing competition where developing economies report better results, and commercializing academic research, where advanced economies perform better.

Developing economies in comparison report less impact than transition in all fields. (The only exception is “reducing competition”, where they report higher impact. This, unfortunately, from a cluster perspective is a questionable achievement.)

FIGURE 28. OPERATIONAL PERFORMANCE

Reply scale: -3 - strong negative impact; +3 - strong positive impact.

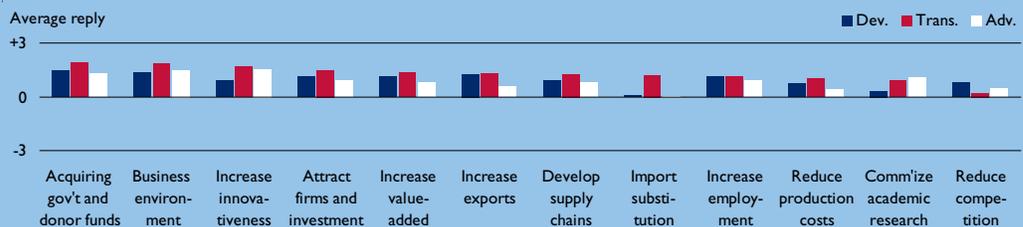
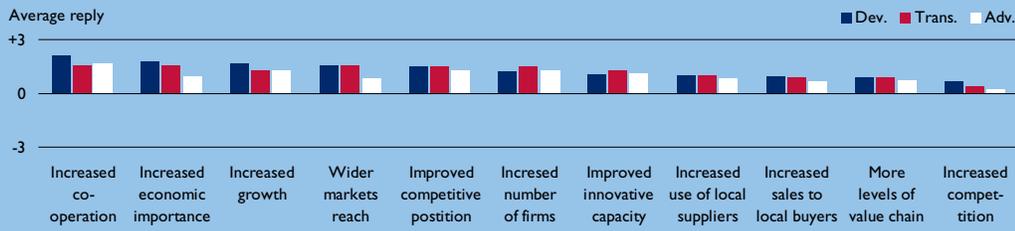


FIGURE 29. ECONOMIC IMPACT

Reply scale: -3 – strong negative impact; +3 – strong positive impact



ECONOMIC IMPACT

Increased cooperation among firms in the cluster is, not surprisingly, the strongest impact on the cluster reported in all economies – this effect lies more or less in the nature of a CI. Beyond that, developing economies report their best results in increasing the economic importance of the cluster, promoting growth, and increasing the market reach of products and services produced by the cluster. Transition economies also report high impact in increasing market reach and increasing the eco-

nomonic importance of the cluster. They also promote a positive impact on the number of firms in the cluster. (See Figure 29.)

Comparing economies, we find that developing economies report overall better results than transition in promoting cooperation and considerably better than advanced in increasing the economic importance, increasing market reach, and widening the range of related and supporting industries in the cluster.

FINDINGS FROM THE SURVEY

This section revisits and analyzes a number of areas covered in the Survey Data section. We highlight some of the aspects that have interesting implications for cluster initiatives in developing and transition economies. First we take a closer look at the political and social context where cluster initiatives take place. We then examine the objectives they pursue. The selection of clusters is another topic and, finally, we discuss the different roles played by donors, business, and government.

For convenience, the relevant graphs are repeated in this section. For the complete set of graphs and tables, please refer to Section Two.

DIFFERENT SETTINGS – DIFFERENT MODELS

Cluster initiatives operate in widely different settings. Not only do they act in different social and political contexts, but they also address different industry sectors, each with its own idiosyncratic problems and limitations. The survey asked cluster facilitators about the specific setting in which their CI operates to identify the impact of the setting on operational practices and impact of the CI.

POLITICAL CONTEXT

- *In developing and transition economies economic policy is typically centralized to the national level, and there is usually little policy support relating to competitiveness and clusters. Donor-initiated CIs take place where the national policy support for such effort is the lowest.*

The ability and readiness of government to contribute in removing barriers to competitiveness depend on the country's economic policy agenda. If competitiveness is high on the priority list and if clusters are a familiar tool in economic development policy, this can provide an environment where CIs

benefit from supportive action by government agencies. Also, if competitiveness more generally is a prominent feature of public debate, this could pave the way for a cluster initiative.

Figure 30 shows four aspects of the policy environment. First, the degree to which policy making is centralized is usually higher in developing and transition economies. The national level of government, rather than the regional or local level, drives economic policy. For the transition economies in our sample this could be driven by their small country size, but for the developing economies covered this argument does not hold. The centralization of economic policy is an issue because clusters are inherently local/regional phenomena that benefit from the involvement of government agencies at the same geographic level. While such organizations are often key drivers behind CIs in advanced economies, especially in the EU, they are less likely to be able to contribute in developing and transition economies.

Second, the profile of national economic policy and of the role of clusters differ significantly by the economies' stage of development. In transition economies, competitiveness and clusters play less of a role in economic policy. This might reflect a more macro oriented focus in these countries, such as

FIGURE 30. POLICY SETTING

Reply scale: 1- disagree completely; 7- agree completely

A: "Economic development policy is driven by initiatives on the national government level, not the local/regional level." B: "The national government has a clear strategy for improving competitiveness." C: "Cluster policies are a core element in economic development policy." D: "Competitiveness is a key issue in the economic policy debate."

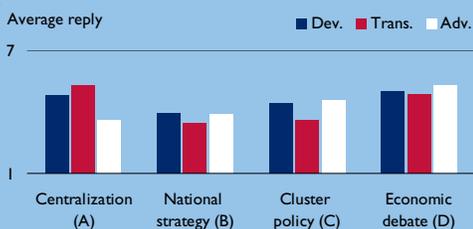
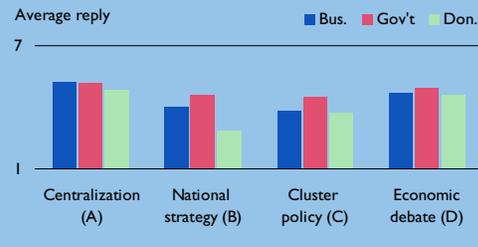


FIGURE 31. POLICY SETTING, BY INITIATOR

Developing and transition economies

See previous figure for explanations.



interest rate and currency stability and general deregulation programs. Whether this is the case or not, CIs are likely to face a policy environment where there is less enthusiasm for government intervention to enhance the competitiveness of selected industry clusters. In developing economies, the nature of the policy debate around competitiveness and clusters resembles more the situation in advanced economies. This is a first indication that the model for cluster initiatives does not develop linearly as economies progress. Cluster initiatives do not simply add on more structure as an economy become more prosperous, but seem to move through distinctly different phases in this process.

An interesting further observation emerges when looking more specifically at CIs in developing and transition economies by initiator. Donor-initiated CIs typically take place in settings where there is less government attention to competitiveness and clusters (see B and C in Figure 31). This is another pattern that continues to manifest itself throughout the data: donor-initiated CIs take place in the most challenging settings, even relative to CIs in developing and transition economies.

SOCIAL CONTEXT

In developing and transition economies there is usually less trust among companies and between companies and government than in advanced economies. Donor-initiated CIs take place where the level of trust among participants in the economy is the lowest.

A key characteristic of a cluster perspective is that it allows a systemic approach, searching for drivers and barriers to competitiveness not only within each individual company or a single industry but in dependencies within the industrial system as a whole (for example, lacking parts of the value chain, the quality of inputs, the efficiency of distribution channels). It also opens a perspective beyond the business sector: to seek solutions in areas where government and the education sectors play a key role, such as improving policies and regulations, infrastructure, and the education system.

Searching for and implementing solutions in such a multi-sector environment requires trust between the different actors involved. CI managers often testify to the great importance of trust. (The first Greenbook provided evidence that in advanced economies, a high level of trust among firms is correlated to better performance.) Therefore, it is interesting to note that trust seems to vary in a systematic manner (see Figure 32). Developing and transition economies have consistently lower levels of trust than advanced. Trust generally improves as economic development is taking place although trust between firms and government seems to be even more strained in transition than in developing economies.

Not only is trust generally lower in developing and transition economies, donor-initiated CIs in these economies take place where there is less trust even relative to this low benchmark (see Figure 33). Not surprisingly, the trust is highest in business-

FIGURE 32. TRUST

Average reply

7

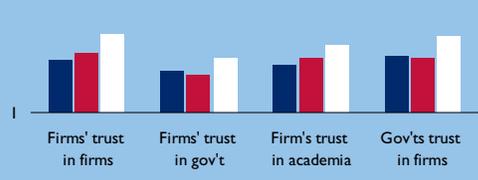


FIGURE 33. TRUST, BY INITIATOR

Developing and transition economies only

Average reply

7

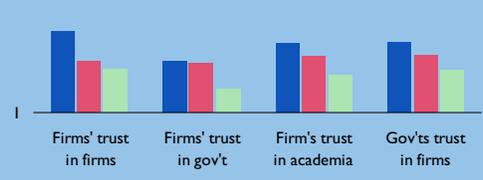
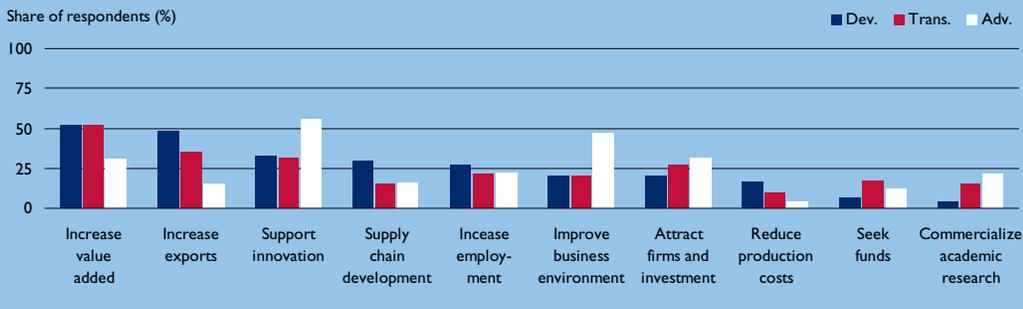


FIGURE 34. OBJECTIVES**Developing and transition economies**

Share of respondents who indicated this as one of three most important objectives.



initiated CIs but even government-initiated CIs score more highly than donor-initiated ones.

In a low-trust environment collaborative efforts such as cluster initiatives face a clear challenge. Potential cluster initiatives that could provide significant benefits will not get started. And even within cluster initiatives that have gotten under way scarce resources might be needed to build the trust that is required for more complex co-operation among cluster participants.

In the high-trust environment more typical for advanced economies, CIs can develop action plans from the outset in a collaborative open process that involve all relevant players. Such a process is likely to fail in the context of a developing or transition economies where trust is largely absent. One reaction is to follow an approach where the analysis and the definition of an action agenda is largely left to outside specialists, in particular donor organizations and specialized consultants they deploy. Another reaction is to focus on activities such as infrastructure upgrading or training courses for entrepreneurs that rely less on the cooperation between groups that are known not to trust each other.

Cluster initiatives can be an important tool to increase the level of trust over time. If that is one of their main objectives, goals and activities have to be structured accordingly. If cluster initiatives are not specifically designed to increase the level of trust, other efforts might be necessary to address this issue. And the burden low trust puts on CIs should be taken into account when setting appropriate performance goals for a CI.

THE RIGHT TOOL FOR THE RIGHT OBJECTIVE

- *In developing and transition economies CIs usually have other types of objectives than in advanced companies. There is more emphasis on increasing value-added and exports and less emphasis on innovation and business environment improvement.*

While all cluster initiatives are focused on improving the competitiveness and economic development of their cluster, they set quite different operational objectives to reach this overarching goal. Figure 34 shows ten different objectives that CIs often pursue. Objectives in advanced economies usually have to do with enhancing innovation and are often focused on the business environment surrounding companies. In contrast, in developing and transition economies, value-added and exports are at the center and efforts are targeted more directly at activities within companies.

The objectives for CIs in developing and transition economies seem broadly in line with the most pressing needs of the clusters expected to be present. But the focus on internal company sophistication versus external business environment quality could also be linked to the absence of strong local/regional government noted above. Without such a counterpart, CIs are forced to focus on those parts of the microeconomic foundations of competitiveness that they can actually affect.

Within developing and transition countries, we also break down CI objectives by the type of initiator (see Figure 35A and B) that launched the CI. In developing economies, donor-initiated CIs focus primarily on supply chain development, followed by export promotion. Increasing value-added and improving the business environment are also frequent objectives. This seems to represent

FIGURE 35A. MAIN OBJECTIVES

Developing economies

Share of respondents who indicated this as one of three most important objectives.

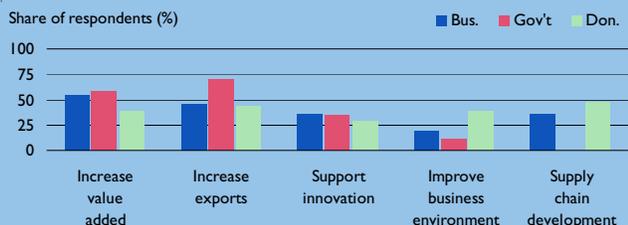
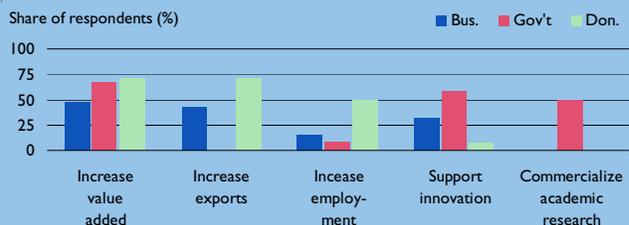


FIGURE 35B. MAIN OBJECTIVES

Transition economies

Share of respondents who indicated this as one of three most important objectives.



a well-rounded range of objectives, paying attention to company, industry, and environment factors. In transition economies, donor-initiated CIs have a more narrow range of objectives, focusing mostly on export promotion and increasing value-added. This could indicate a more narrow perspective on cluster development, especially one drawing less on support from government. In both situations, donor-initiated CIs report significantly different objective structures than company- or government-initiated CIs. This could signal a different approach by the donors or a different selection of underlying clusters for a CI.

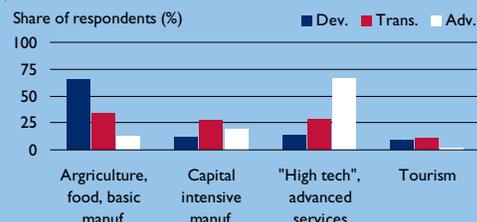
SELECTING THE RIGHT CLUSTER FOR A CI

Some cluster initiatives result from initiatives taken by the business sector itself, and in those cases the target industry is given from the outset. But when government or donors are the initiators, they need to select the industry (or industries).

TYPE OF INDUSTRY

- *In developing countries CIs often focus on “basic” industries. In transition economies there is more of a mix between industry types, but donors emphasize “basic” industries more than other initiators.*

FIGURE 36. TARGET INDUSTRIES



CIs in developing economies usually target basic industries, such as agriculture, furniture, and textiles (see Figure 36). In advanced economies there is a similar focus on “high tech” industries, such as biotech and ICT. In transition economies there is a more even mix between these types and capital intensive manufacturing, such as automotive or plastics. Tourism is sometimes the target in developing and transition economies but rarely in advanced.

These patterns may simply reflect the general industry profiles in the respective economies. Agriculture obviously plays a bigger role in developing economies than in advanced. They certainly refute the suspicion that CIs are being used in developing and transition economies to “create” clusters with no clear support in the underlying business environment as would be typical for a strategic industrial policy approach.

If we split up the CIs by initiator an interesting pattern appears. In developing economies, initiators act similarly to each other (see Figure 37A). They all focus primarily on basic industries. Donors are slightly less involved in capital intensive manufacturing, and government stays away from tourism, but otherwise the differences are small.

In transition economies, however, initiators have diverging preferences (Figure 37B). Again, government does not initiate tourism-related CIs. Donors are often involved in basic industries, while government is more often targeting capital intensive manufacturing. Business-initiated CIs often occur in “high tech” industries.

In advanced economies, there is sometimes a tendency to favor “high-tech” industries that are considered attractive, using CIs to “build clusters” rather than enhancing the competitiveness of existing ones. In contrast, in developing and

FIGURE 37A. TARGET INDUSTRIES, BY INITIATOR

Developing economies

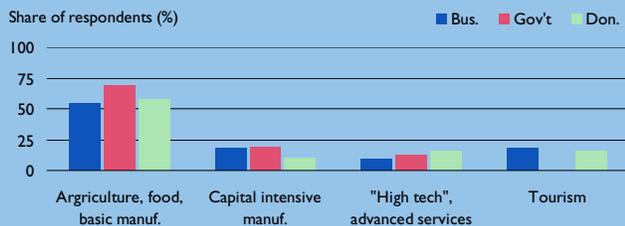
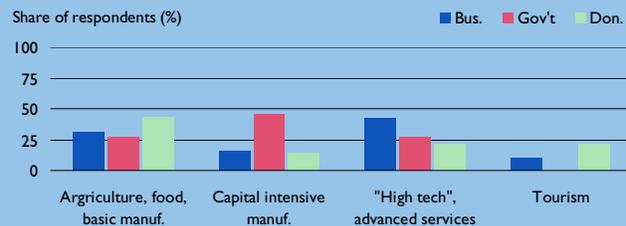


FIGURE 37B. TARGET INDUSTRIES, BY INITIATOR

Transition economies



transition economies neither government nor donors seem overly focused on such industries. For donors the tendency might actually be the opposite: sticking to agriculture and basic industries, possibly neglecting opportunities in capital intensive manufacturing.

These differences raise questions about how donors select the clusters to target. Are the differences the result of strategic choices that donors make? Are donors choosing the optimal clusters to support or should they change their selection strategy? One reason for donors focusing on basic industries such as agriculture could be their (and their contractors') existing familiarity with those areas. If the donor requests contractors to suggest suitable industries to target and the contractors are not reimbursed for preparing such a proposal, contractors would have an incentive to evaluate industries with which they are reasonably familiar, i.e., if their proposal is not accepted they will not be reimbursed for costly evaluations of unfamiliar industries.

Further research and case studies are needed to shed more light on these questions. It seems quite likely, however, that donors could improve the impact of their CIs by taking a more conscious approach towards cluster selection without falling into the "strategic industrial policy" traps of the past.

CLUSTER STRENGTH

- In all economies, CIs target clusters that are relatively strong and the main difference across levels of economic development is that the competitive position is stronger and the innovative capacity is higher in advanced economies. In developing and transition economies, donors target clusters that are less developed than those targeted by other initiators.

The strength of a cluster can be measured along many different dimensions. In the survey, cluster facilitators were specifically asked about the composition of the cluster (size, range of related industries, levels in the value chain), development (maturity, growth), integration (use of local suppliers and customers, etc), and competitiveness (position of companies, attractiveness of business environment, innovative capacity, etc).

In all types of economies, CIs typically target clusters that have a significant reach into global markets and are of economic importance to the national economy as a whole (see Figure 38). There are surprisingly small differences reported between clusters in developing, transition, and advanced economies, but in advanced economies, clusters tend to have a stronger competitive position and a higher innovative capacity.

FIGURE 38. CLUSTER STRENGTH

Average reply

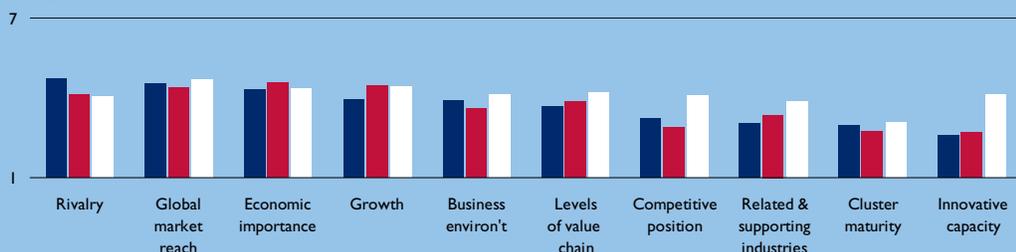
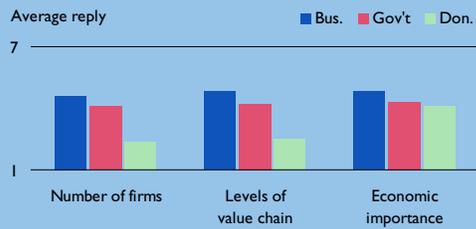


FIGURE 39. CLUSTER STRENGTH, BY INITIATOR

Developing economies



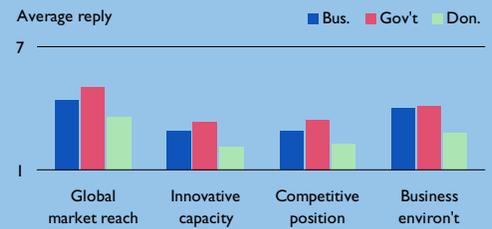
For the transition and developing economies, the survey data reveal systematic differences between the clusters targeted by donors compared to other CI-initiators.

In developing countries (see Figure 39), donor-initiated CIs target clusters that have fewer firms, fewer levels of the value chain represented in the clusters, and the economic importance of the cluster to the nation as a whole is smaller. Business- and government-initiated CIs systematically work with more developed clusters. (See also the box on page 35.)

In transition economies, there are other indications that donors end up with noncompetitive clusters (see Figure 40). Donor-initiated CIs there deal with clusters that have lower sales to global markets, less innovative capacity and companies with weaker competitive positions. In addition, they typically have a less favorable business environment than business- and government-initiated CIs. There are many factors that could account for these differences in CIs initiated by donors compared to others. When conditions are favorable enough, CIs can occur spontaneously as initiatives from the business sector itself or, if the government policy is geared towards competitiveness, as government-initiated CIs. This could leave donor intervention necessary only for the least “susceptible” clusters. Another set of reasons has to do with how donors themselves are evaluated, which in turn influences their contractors’ incentives. If a donor is under pressure to provide tangible results in a short timeframe, this would be an incentive to choose a small industry with apparent shortcomings in terms of competitiveness, rather than a large industry with an already strong position and where only a closer analysis can reveal which actions are needed to improve competitiveness further. The donors’ tendency to specify not only which industry to target but also which actions to take and which specific quantified targets

FIGURE 40. CLUSTER STRENGTH, BY INITIATOR

Transition economies



to reach within a limited timeframe (sometimes as short as three years), suggests that this could indeed be a reason why surprisingly weak and economically insignificant clusters are sometimes chosen for donor supported CIs.

Regardless of the reasons, the findings raise some important questions for donors. How do donors actually go about selecting industries to target with CIs? Which criteria do they apply? Finally, most importantly, does the impact for which they are aiming match the tools they are using? Further research and case studies are needed to shed more light on these questions. It again seems likely, however, that donors could improve the impact of their CIs by taking a more conscious approach towards the underlying strength of the clusters selected for a CI.

DONORS, BUSINESS, AND GOVERNMENT

A key strength of the cluster approach is its ability to address all kinds of barriers to competitiveness, whether they emanate from shortcomings in the business sector, the government, or the education sector. But although some form of involvement from multiple sectors is usually a prerequisite for successful cluster initiatives, the exact nature and relative extent of each party’s involvement can vary considerably.

LETTING BUSINESS TAKE THE LEAD

- *A dominating role of government that leaves businesses on the sidelines of CIs is a major concern in advanced economies. In developing and transition economies the challenge is different. While business tends to be involved, government often lacks the capacity to do its part. Donors step in where government is unable to act, but donors*

CLUSTER INITIATIVES IN TROUBLED INDUSTRIES: THE EXPERIENCE OF MAURITIUS AND MEXICO

Some countries and regions have adopted the cluster approach as a strategy for “rescuing” a troubled industry (often an industry that has been the mainstay of the economy for many years, but is now under threat from global competition). The temptation is strong, as these industries typically employ large numbers of people and involve long-standing leaders in the business community. However, the experience of the textile industry in Mauritius and the seafood and fishing industry in Campeche, Mexico also illustrate some of the challenges that may emerge.

The context Often considered one of Africa’s economic success stories, Mauritius has been hit hard by competition in recent years. Its traditional pillars of economic growth – sugar, textiles and clothing – have grown ever more fragile in an era of declining trade preference schemes and global competition. In response, Mauritius has embarked on an ambitious campaign to increase productivity across all dimensions of society, ranging from individual citizens to schools, public institutions, and private businesses and industries. Clustering is one of several tools Mauritius has used to foster increased productivity and competitiveness. Like Mauritius, the state of Campeche in Mexico had prospered for many years due to its abundant natural resources, especially petroleum and shrimp. However, by the mid-1990s, growth was at a standstill, and the state began to face increasingly unacceptable levels of unemployment. In 1996, *Transformando Campeche* was launched in an effort to engage leaders from business, government and education in a partnership to turn around the state’s economic future.

The cluster selection process As Mauritius began to explore the cluster concept, its top priority was the textile industry, in large part, because this industry needed urgent attention. Some firms had already begun to leave the country for Madagascar, Ghana, and Lesotho, where labor costs were lower; other firms were simply closing down. The industry was in sharp decline. By comparison, the decline of Campeche’s fishing industry was far more gradual (although also well into crisis mode at the start of *Transformando Campeche*). However, one of the key measures used to select clusters for this initiative was relative employment concentration. By this metric alone, the fishing industry appeared to have promise as a cluster; there were a high concentration of firms and supporting industries in the state. This metric revealed little about the underlying problems facing the industry and its potential for future growth.

Cluster members In both Mauritius and Mexico, key components of the industry were not part of the cluster initiative. In Mauritius, only small firms seemed to have some interest in cluster activities. The larger firms were vertically-integrated, and hence, saw little need to collaborate with other firms. In contrast, in Campeche, the larger businesses representing medium and deep-sea fishermen dominated the CI; the initiative also included representatives from the local industry association, government, academia, and research centers. Notably, one group was not invited to participate in the initiative: coastal fishermen (ostensibly because coastal fishermen operate more as individuals and not as business entities). Ironically, it was the practices of these fishermen that threatened the industry’s viability and growth.

Implementation *Transformando Campeche* began with a big bang in the fishing industry. The approach generated strong enthusiasm, and during strategic planning, the cluster generated ideas for forty different initiatives. But, when it came to implementation, only a few initiatives got off the ground. Entrepreneurs complained that the “government never stepped forward.” One cluster member concluded, “We continue to work as we always have... with everyone digging their own ditch.” Likewise in Mauritius, the cluster had some small successes at the beginning. The initiative prepared joint marketing materials, shared exhibit costs for trade fairs, and hired and paid for a facilitator. But, over time, because of the difficulties faced by enterprises in the sector, firms steadily dropped out of the project. As firms left, the remaining CI members could no longer afford to pay its facilitator, and without the facilitator, group cohesion dissolved. The CI no longer meets at this time.

Lessons learned Much of the success of a cluster initiative lies in building trust and collaboration among firms. However, firms are probably least likely to trust one another when an industry is in decline. Indeed, in these types of circumstances, the cluster initiative may create an expectation that the role of government is to step in to solve its problems, turning industry’s attention away from the need to focus on the external market and internal productivity. The experience of Mauritius and Campeche also highlights the critical need for strong facilitation and technical assistance, particularly as the cluster initiative moves from strategic planning to actual implementation of initiatives. This is often the most vulnerable time for a cluster initiative, especially in industries facing major adjustment.

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seem to have no strategy to involve government over time.

In advanced economies there is often a fear that government might be too influential. It is argued

that government needs to step back and allow business to take the lead in order for the CI to produce valuable results. Is there cause for similar concern in developing and transition economies?

Figure 41 shows that while government is by far the dominant initiator of CIs in advanced economies, this is not the case in developing and transition economies. In developing countries it is instead donors who are the most frequent initiators, and in transition economies CIs are often business-initiated.

In the early stages of the CI, the initiator can choose to retain control, or to involve other actors in the early key decisions, such as selecting which players to invite as the initial participants and

FIGURE 41. TYPE OF INITIATOR

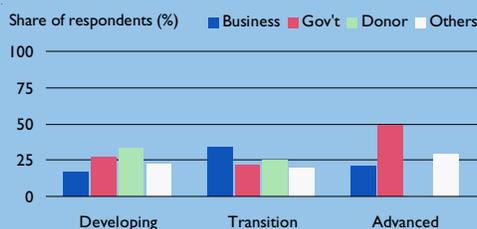
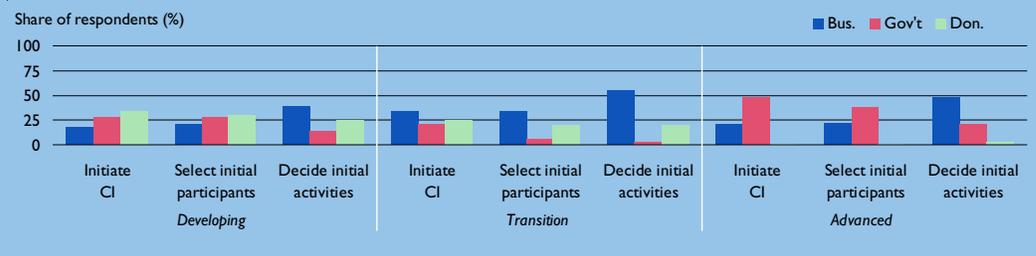


FIGURE 42. INFLUENCE IN INITIAL STAGE

"Other actors" (universities, IFCs, etc) are not included in the graph, which is why numbers do not add up to 100%.



which initial activities to undertake. Figure 42 shows which party was most influential in these decisions.

In advanced economies, government plays an important role in facilitating the launch of a CI and in participating in the CI over time. The danger, however, is that government might remain too dominant, taking operational decisions that should be better left to businesses and the cluster at large. In selecting initial participants, government is less frequently the most influential party, and when it comes to deciding initial activities, business is usually the dominant part (Figure 42). This is a pattern of “transfer of influence” that is often mentioned as crucial in securing business-orientation in a CI.

In developing and transition economies, there is a similar pattern. Government influence decreases over time while business becomes more important. But it is noteworthy that while government influence declines strongly from initiation to selection of participants, the corresponding decline for donors is not as marked. This suggests that in

the initial phase, government is quicker than donors in handing over control to business. In the longer run, however, donor-initiated CIs appear to allow as much business sector influence as government, or even more.

The more important challenge for donor-initiated CIs in developing and transition economies, however, is a different one. Donors enter when domestic government institutions are too weak to play their role in launching a CI and getting involved. After a few years, government is still a lot less influential in donor-initiated CIs than in government-initiated ones. Government is an important influence on the competitiveness of a cluster and the quality of the cluster-specific business environment. While donors can make a contribution by addressing the effects of weak government, a sustainable improvement requires addressing the weakness of government institutions, especially at the local and regional levels, itself. Donors should have a clear strategy on how to achieve this goal as part of their cluster and competitiveness projects.

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Cluster Initiatives in Developing and Transition Economies. Sep 2006. 12. Industrial districts and clusters have long been known for their positive contribution to local development. In recent years, inspired by successful examples such as the Silicon Valley, many local government and public agencies in Europe and elsewhere have started to launch initiatives to develop technology clusters in selected locations. Usually, cluster initiatives are carried out by ad hoc cluster organisations. Cluster Initiatives in Developing and Transition Economies Authors: Christian Ketels, Göran Lindqvist, Årjan Sjöqvist ISBN 91-974783-2-6 © 2006 Christian Ketels, Göran Lindqvist, Årjan Sjöqvist Center for Strategy and Competitiveness, Stockholm. First edition, May 2006 Layout and illustrations: Göran Lindqvist Front cover illustration: Mandelbrot Set fractal generated with Fractal Forge Typefaces: Adobe Gill Sans Std, Adobe Gill Sans Std Light, Adobe Garamond Websites: www.cluster-research.org, www.sse.edu/csc 2 CLUSTER INITIATIVES IN DEVELOPING AND TRANSITION ECONOMIES. Our understanding of how cluster initiatives in developing and transition countries operate has benefited particularly from discussions. The distribution of FDI to the developing countries and economies in transition has been quite uneven. The top 10 countries received \$89 billion, or 72 percent of the FDI flows, in 1997. Such a setting carries threats and dangers, as well as opportunities, for host-country development in the developing countries and economies in transition. At the same time, those characteristics of imperfect competition that are so worrisome indicate that FDI may feature rents (including high profits and high wages), access to privately controlled activities (including technology, marketing, and best management practices), and potential spillovers and externalities that are of high value to host economies.