

Developing a Common Monitoring and Evaluation System for the Management of *Proyectos de Integración Productiva*

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Outline

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- Rationale and framework
- Program logic
- Proposed indicators for the common M&E system
- Impact assessment methods
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Introduction



Proyectos de Integración Productiva (PIP)

- The Inter-American Development Bank (IDB) has provided support to number of projects throughout Latin America and the Caribbean to help improve the competitiveness of small businesses through collective action. These projects are known as Proyectos de Integración Productiva (PIP).
- Funded through the Multilateral Investment Fund (MIF), these projects are intended to boost the productivity and sales of participating enterprises, leading to regional economic development.
- To date, IDB/MIF has provided support to ten projects and other projects are currently in preparation.



IDB/MIF is interested in establishing a common monitoring and evaluation (M&E) system for management purposes.

- **The intention is to develop an M&E system with common performance indicators, common data collection procedures, and common reporting systems that can be used by all Executing Agencies.**
- **The M&E system is intended to serve as a management tool, enabling managers to obtain needed information with respect to operations and results.**
- **A common system would ensure consistency across the projects and enable Executing Agencies to learn from each other.**



Nexus Associates has been asked to undertake a two-phase work plan.

- **Phase I. Initial planning for common M&E system**
 - Task I.1 Review project documents and related materials
 - Task I.2 Conduct mission to Brazil and Mexico
 - Task I.3 Define common performance indicators
 - Task I.4 Define standard data collection procedures
 - Task I.5 Conduct workshop in Cartagena
- **Phase II. Design of common M&E system**
 - Task II.1 Finalize indicators and data collection procedures
 - Task II.2 Develop M&E website
 - Task II.3 Prepare M&E manual
 - Task II.4 Conduct training workshop (optional)



Rationale and framework



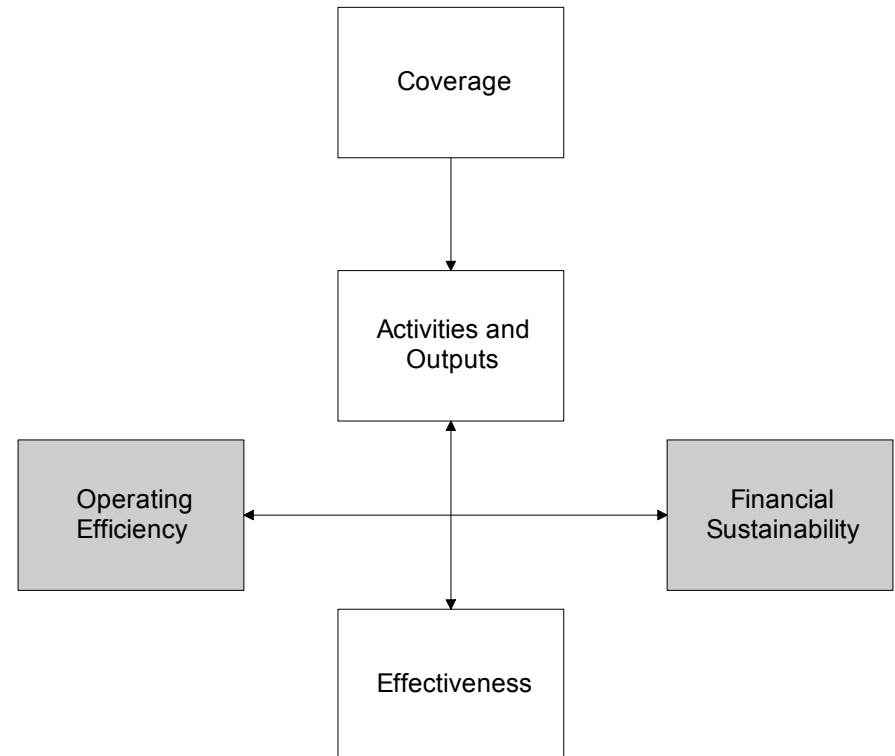
Managers are faced with important questions.

- **Managers need to address a broad range of questions as part of their management responsibilities. For example:**
 - What types of enterprises have participated in the PIP?
 - To what extent has the PIP reached enterprises in the target population?
 - What is the nature and magnitude of activities that participating enterprises have undertaken through the PIP?
 - Are the resources committed to the PIP being used in an efficient manner?
 - Has the PIP been effective in achieving intended outcomes?
 - Which activities are most cost-effective?
 - Is the PIP likely to be financially sustainable over time?
- **Answering these questions requires accurate information.**

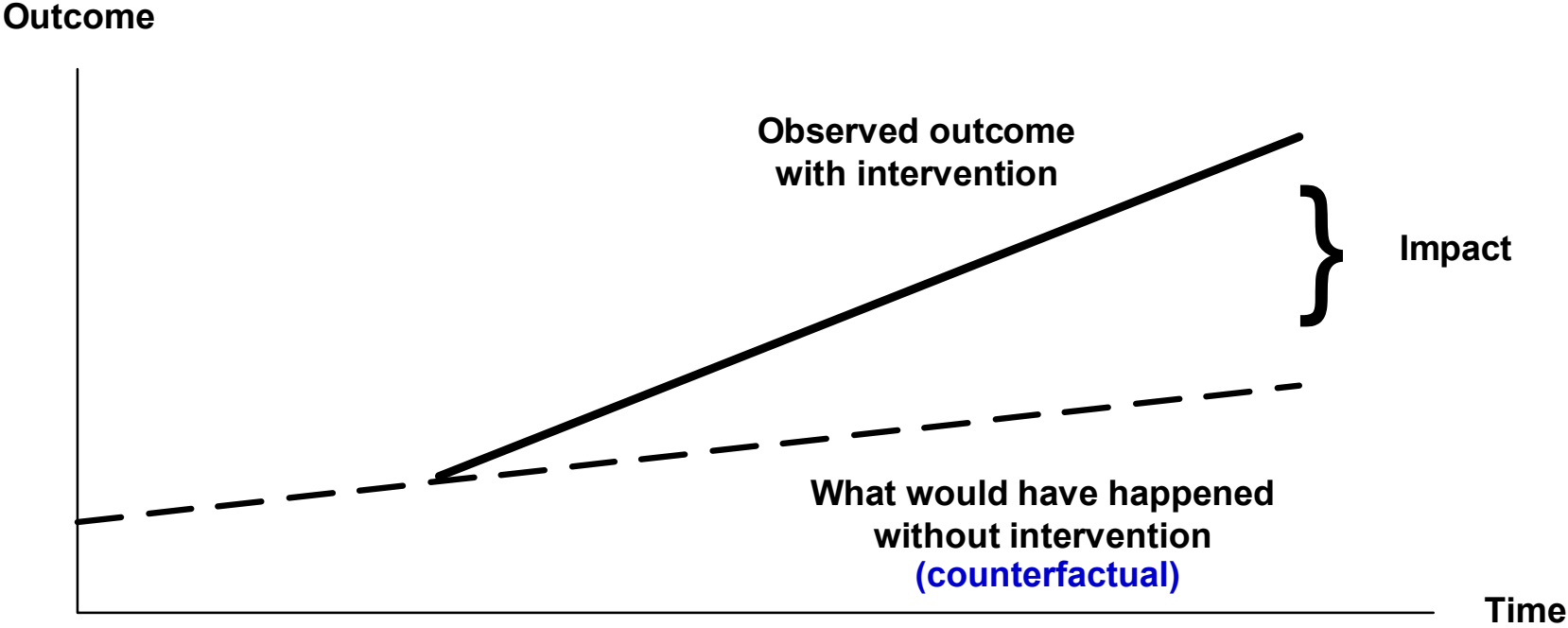


This implies that performance needs to be measured across multiple dimensions in a systematic manner.

- **Coverage.** The extent to which enterprises in the target population (cluster) have participated in the PIP.
- **Activities and outputs:** The nature and magnitude of activities undertaken by participating enterprises and associated products of these activities.
- **Operating efficiency.** The extent to which internal processes are efficient, yielding the highest level of output for a given level of input, or alternatively, using the fewest resources to achieve a given level of output.
- **Financial sustainability.** The extent to which participating enterprises are willing to pay for services provided through the PIP.
- **Effectiveness.** The extent to which the objectives of the PIP have been achieved as a result of the implementation of planned activities.



The crucial issue in assessing effectiveness is comparing the observed situation with the counterfactual.



Program logic



The projects supported by IDB/MIF at a glance...

	Number of intended participating companies	Total number of firms in the cluster
Brazil		
Footwear/leather in Paraíba	n/a	615
Lingerie in Rio de Janeiro	147	600
Wood/furniture in Pará	7	70
Mexico		
Footwear/leather in Guanajuato	200	4,745
Decorative ceramics in Guanajuato		2,000
Garment in Guanajuato		2,600
Peru		
Garment in Gamarra, Lima	250	12,000
Tourism in Cuzco	250	4,200
Central America		
Agribusiness in Central America including Dominican Republic	800	n/a
Tourism in Central America including Dominican Republic		n/a
Textile in Central America including Dominican Republic		n/a
ITC in Central America including Dominican Republic		n/a
Dominican Republic		
Furniture in Santiago de los Caballeros	60	152
Garment in Santiago de los Caballeros		100
Argentina		
ITC in Cordova	60	162
Wood/furniture in Cordova	30	240
Agribusiness (Regional products) in Cordova	440	3074
Uruguay		
Wine in Canelones	> 83	250
Nandu throughout the country	> 167	> 167
Colombia		
Agribusiness (grape) in the Cauca valley	200	350
Chile		
All sectors throughout the country	200	432,074

- Most projects focus on traditional manufacturing industries – footwear, garments, furniture and ceramics – or agribusiness.
- The expected number of participating enterprises in each cluster varies from seven to more than 300.

Source: Project documents – Donors Memorandum



PIPs are divided into components with specified activities and objectives.

	Mexico	Brazil	Peru	Central America	Dominican	Argentina	Uruguay (wine)	Uruguay (nandu)
I	Coordination between enterprises and formation of the production chain	Strengthening "industrial district" dynamics	Development of cooperative business networks	Program promotion and Investment Promoting Fund	Strengthening cooperation	Strengthening cooperation between enterprises and institutions	Enhancement of cooperation between businesses	Coordination and cooperation framework among businesses
II	Implementation of sector integration plan	Information and market access	Assistance with access to production and organizational technologies	Learning and dissemination	Improving production processes	Improving access to production and organization technology	Organization of production with increase specialization	Product standards and improving production processes
III	Modernization of COFOCE enterprise assistance services	Organization of production	Facilitating market access		Promoting joint marketing	Improving access to local and international markets	Competitive access to foreign markets	Production efficiency and the specialization of the chain's enterprises in order to establish an international foothold
IV	Evaluation and dissemination of the model and outcomes	Access of small enterprises to international markets	Monitoring and dissemination of project outcomes		Publicizing the model and its outcomes	Model evaluation, dissemination and results	Dissemination of progress results	Monitoring, dissemination and consulting

Source: Project documents – Donors Memorandum



While projects vary in terms of industry focus and mix of activities, they share a common goal...

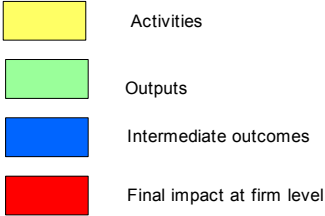
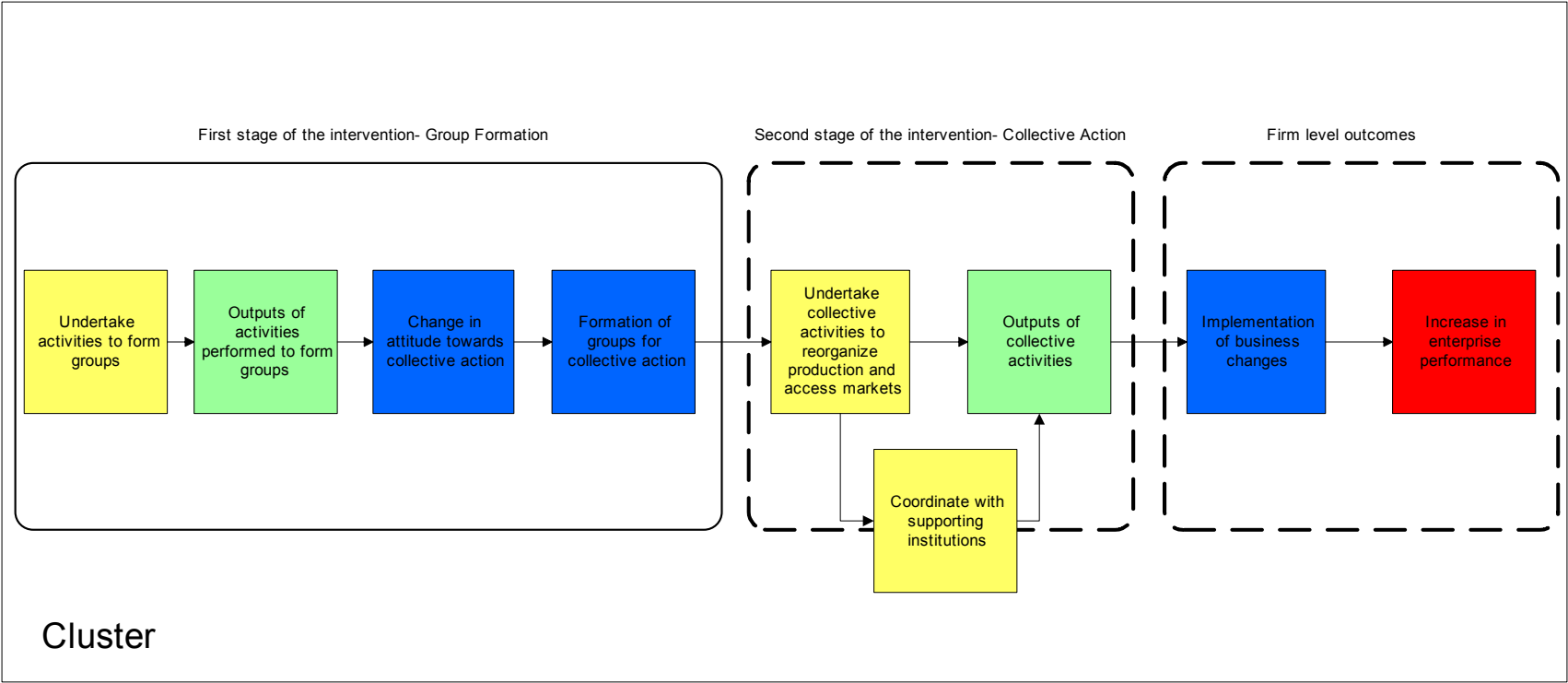
- **Argentina:** "... help increase competitiveness among the MSMEs in the province of Cordova. The program will support business clusters in the sectors of information and communication technology, furniture and other wood products, and regional products (agricultural and organic)."
- **Brazil:** "...help increase the competitiveness of SMEs that produce goods and service in the selected *industrial districts*..."
- **Central America:** "The program has the goal of improving the international competitiveness of Central American SMEs through the support to enterprise alliances..."
- **Chile:** "...contribute to the increase in productivity of different sectors of the economy that have a strong presence of micro and small enterprises with potential to be or are already operating as suppliers within the production chain and within a specific local area."
- **Colombia:** "...consolidate the agribusiness production chain of Uva Isabella in the Cauca Valley, contributing with this to the economic reactivation of small producers in the region..."
- **Dominican Republic:** "...make MSMEs in Santiago de los Caballeros more competitive. Implement an industrial integration program to boost productivity in the furniture and clothing sectors."
- **Mexico:** "...increase competitiveness of... MSMEs in selected sectors of Guanajuato by strengthening business cooperation and integration methods. The specific objective is to integrate the MSMEs of Guanajuato into the export process directly or indirectly through the development and strengthening of production integration in the selected sectors."
- **Peru:** "...help the cluster of small tourism enterprises in Cuzco, and those of the garment-making sector in Gamarra, to become more competitive. The specific objective is to create cooperative business networks capable of strengthening the dynamics for collective efficiency within each cluster, and to optimize market access for member enterprises."
- **Uruguay (Wine):** "...make Uruguay's wine-making sector more competitive by linking together the different areas involved in the production and export of fine wines. The specific objective is to carry out a production integration program among the various links in the wine production chain."
- **Uruguay (Ñandu):** "...promote the growth and enhance the quality and competitiveness of the ñandu production chain from the breeding stage to the processing and marketing of its products. The specific objective is to strengthen the relationships among the businesses in the chain, both vertically, amongst the various links, and horizontally, by conducting joint activities that ultimately enhance internal capacity of each business and improve the production chain and business environment."

To enhance the competitiveness of MSMEs through collective action

Source: Project documents – Donors Memorandum



... and have a common logic.



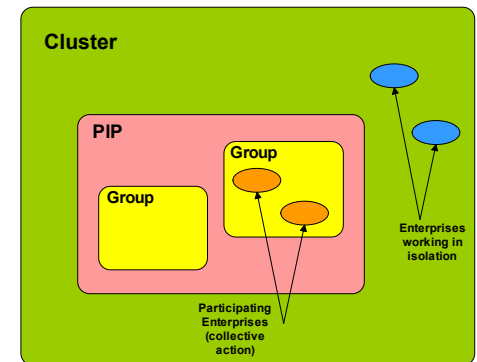
The model describes the sequence of cause and effect relationships that link activities to intended outcomes.

- **Cluster**

- A cluster is composed of enterprises in the same industry (horizontal) and/or a supply chain (vertical) within a relevant geographic area that confers external economies (agglomeration effects). An industry is a set of enterprises that provide the same goods or services. A supply chain is a set of enterprises in different industries that are required to make, sell and distribute a particular good or service to customers. (See Appendix A.)
- Clusters are an economic phenomenon that occur without planning.
- The industrial and geographic boundaries of the cluster are defined by the Executing Agency.

- **Group formation**

- The objective of the first stage of the intervention is to form groups for collective action.
- Executing Agencies work with a subset of enterprises in the cluster that decide to participate in collective action, i.e., activities planned and undertaken by a group to achieve common objectives related to transaction costs and economies of scale.
- Executing Agencies carry out a variety of activities to assess the needs of enterprises in the cluster, increase awareness of the benefits of collective action, train entrepreneurs in the dynamics of collective action, and provide assistance in establishing groups and preparing integration plans.



- **Collective action**

- Executing Agencies continue to work with these groups in the second stage, often in concert with other institutions.
- The expectation is for participating enterprises to undertake collective activities as a group based on the plan.
- These activities could address various business needs, including reorganization of production and access to markets.

- **Enterprise-level impacts**

- It is expected that participating enterprises will implement various changes in their businesses as a direct result of these collective activities, leading to an improvement in business performance as reflected in increased sales and profitability.



Proposed indicators for the common M&E system



A decision needs to be made with respect to which indicators should be included in the common M&E system.

- **To facilitate learning, it is imperative that common indicators be used in monitoring and evaluating the PIPs.**
- **The performance indicators listed in the following slides reflect the objectives presented in the basic logic model and are relevant to all PIPs.**
- **While the suggested indicators are appropriate for any PIP, stakeholders should be cautious in using these measures to compare the performance of different programs. Additional analysis would be needed to reconcile differences among PIPs in terms of client base, geographic coverage, service focus, scale of operations, and other factors that influence relative performance.**
- **Finally, it should be noted that these are not the only indicators that Executing Agencies may want to adopt. For example, they may want to establish indicators related to the changes in the attitudes, behavior and performance of supporting institutions that deliver services to enterprises in the cluster and/or changes in the overall business environment.**



The decision to adopt a particular indicator should be based on the degree to which it is relevant, valid, reliable and practical.

Criteria	Definition
Relevance	Indicators need to be germane to the particular initiative being studied.
Validity	Indicators need to provide an accurate reflection of the underlying concept that are supposed to measure.
Reliability	Indicators should be subject to as little measurement error as possible.
Practicality	It has to be possible to obtain data needed to calculate Indicators given constraints in time, data availability and budget.

Indicators can be constructed from nominal, ordinal, interval or ratio variables (see Appendix B).

Key process indicators

- **Coverage**
 - Number of new participating enterprises in the reporting period (by classification)
 - Total number of active participating enterprises in the reporting period (by classification)
 - Percentage of enterprises in cluster that participate in the reporting period (by classification)
- **Activities / Outputs**
 - Number of activities initiated in the reporting period (by subject and type)
 - Number of activities “dropped” in the reporting period (by subject and type)
 - Number of activities completed in the reporting period (by subject and type)
 - Number of activities that are active at the end of the reporting period (by subject and type)
 - Number of enterprises participating in activities in the reporting period (by subject and type)
 - Number of outputs produced by activities in the reporting period (by subject and type)
- **Operating efficiency**
 - Cost per active participating enterprise in the reporting period
 - Cost of activity per participating enterprise for activities completed within the reporting period
 - Cost of activity per participant-training hour (training only)
- **Financial sustainability**
 - Fees paid to third-party providers as a percent of total expenses in the reporting period
 - Client paid fees as a percent of total expenses in the reporting period



Key outcome indicators

- **Changes in attitudes (immediate effects)**
 - Change in percent of entrepreneurs in cluster that trust other entrepreneurs in cluster as a direct result of the PIP
 - Change in percent of entrepreneurs that view collective action among enterprises in cluster as beneficial as a direct result of the PIP
- **Formation of groups (immediate effects)**
 - Number of new groups that entered into agreements to pursue collective action in the reporting period as a direct result of the PIP
 - Number of participating enterprises in groups in the reporting period
 - Percent of participating enterprises that shared proprietary information with other enterprises in the group as a direct result of the PIP
 - Percent of participating companies that are satisfied with collective action undertaken by group



Key outcome indicators (continued)

- **Business changes (immediate effects)**
 - Percent of participating enterprises that adopted new management practices in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that increase worker skills in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that adopted new process technologies in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that adopted measures to improve working conditions in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that adopted measures to reduce environmental impacts in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that achieved certification relative to an established standard in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that adopted a collective brand (trademark) in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that introduced new products in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that introduced new distribution channels in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that secured new customers in the evaluation period as a direct result of PIP



Key outcome indicators (continued)

- **Changes in enterprise performance (intermediate outcomes)**
 - Percent of participating enterprises that reduced defects or rework in the evaluation period as direct result of PIP
 - Percent of participating enterprises that reduced customer complaints in the evaluation period as direct result of PIP
 - Percent of participating enterprises that reduced average unit cost in the evaluation period as direct result of PIP
 - Percent of participating enterprises that reduced order-to-delivery time in the evaluation period as direct result of PIP
 - Percent of participating enterprises that reduced manufacturing lead time in the evaluation period as direct result of PIP
 - Percent of participating enterprises that increased on-time delivery in the evaluation period as direct result of PIP
 - Percent of participating enterprises that reduced environmental impacts in the evaluation period as direct result of PIP
 - Percent of participating enterprises that improved worker safety and health in the evaluation period as direct result of PIP



Key outcome indicator (continued)

- **Changes in enterprise performance (final outcomes)**
 - Percent of participating enterprises that increased sales in the evaluation period as direct result of PIP
 - Percent of participating enterprises that increased exports in the evaluation period a direct result of PIP
 - Percent of participating enterprises that increased productivity in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that increased net profit margin in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that increased employment in the evaluation period as a direct result of PIP
 - Percent of participating enterprises that survived in the evaluation period as a direct result of PIP
 - Change in sales volume (real \$) of participating enterprises in the evaluation period as a direct result of PIP
 - Change in export volume (real \$) of participating enterprises in the evaluation period as a direct result of PIP
 - Change in sales per employee (real \$) of participating enterprises in the evaluation period as a direct result of PIP
 - Change in employment of participating enterprises in the evaluation period as a direct result of PIP



Certain elements need to be in place along with common definitions in order to calculate indicators and ensure consistency across Executing Agencies.

- **Executing Agencies should know the characteristics of each participating enterprise that engages in collective activities as part of groups.**
- **Agencies should consider capturing the following data at the time of initial participation:**
 - Industry classification. The goods or services produced by the enterprise. It would be preferable to adopt a standard industry classification system such as the International Standard Industrial Classification of all Economic Activities--(ISIC Rev. 3.1) of the United Nations; however, this may pose problems given differences in the classification system used by individual countries.
 - Size. Scale of enterprise based on annual sales, employees and/or assets. Among these criteria, employment would be the easiest to obtain and the most relevant. Once again, it would be preferable to adopt a standard definition of micro, small and medium-sized enterprises such as that used by the ILO. However, it should be noted that MSME classifications vary by country.
 - Legal status. Indication of whether the enterprise is a corporation, partnership, sole proprietorship, or informal entity (unregistered).

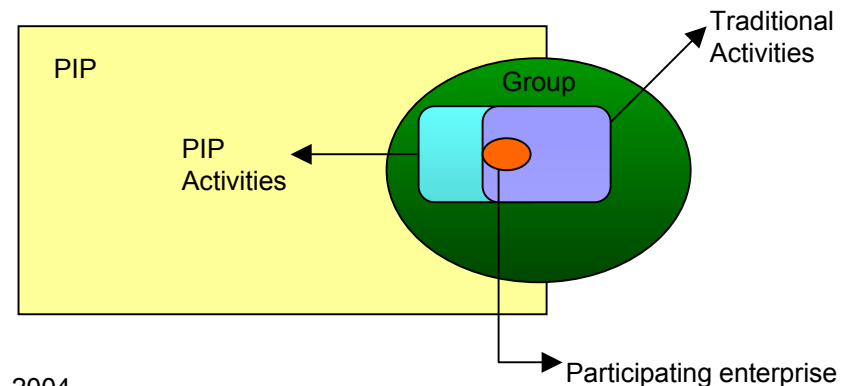
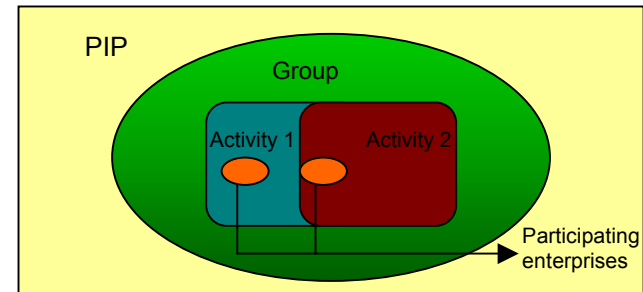
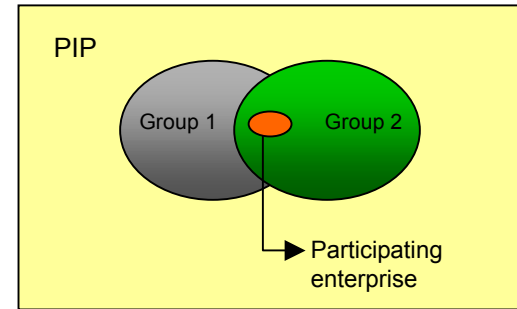
These data could be obtained through the use of a simple intake form.

- **To calculate the coverage rate, Executing Agencies would need to obtain data on the number of enterprises in the cluster by industry classification, size, and legal status. However, some or all these data may be unavailable from government or other secondary sources.**



A unique identifier for each participating enterprise is needed to avoid double counting.

- Enterprises can participate in more than one group within the PIP
- Enterprises can participate in one or more activities undertaken by a particular group
- Enterprises can also receive “traditional” services from the EA while participating in PIP



... toward common definitions (continued)

- **Executing Agencies may also want to be able to describe the nature and magnitude of activities undertaken through the PIP in a systematic manner.** (See Appendix C.)
- **Agencies should consider capturing the following data based on a standard typology for activities:**
 - **Subject.** The business process that is the principal focus of the activity, e.g., strategic planning and leadership, marketing and sales, product and process development, order fulfillment, and supporting processes. (See Appendix D.)
 - **Type.** The nature of the tasks performed, e.g., training, consulting, engineering, sales promotion, group purchasing, etc.
 - **Output.** The products produced through an activity, e.g., trained managers, reports, design, print materials, orders, etc.
 - **Provider.** The organizations that were responsible for managing activity and/or delivering related services to participating enterprises (Executing Agency or third-part provider, including public agencies, universities and other not-for-profit organizations).
 - **Duration.** The period of time (calendar days) between the start and end of the activity.
 - **Level of effort.** The amount of time (person-days) committed to the activity.
 - **Cost.** The monetary value of labor and other resources committed to the activity.
- **Rules will need to be specified for each of these items.**



... toward common definitions (continued)

- Given the central role of groups in the PIPs, Executing Agencies may also want to keep track of the groups formed as a result of its activities.
- In order to calculate certain indicators, Executing Agencies would need to indicate when a particular group came into existence and track its membership. Agencies should consider capturing the following data:
 - **Nature of agreement.** The form in which participating enterprise agree to undertake certain actions and assume specific responsibilities and obligations. At one end of the spectrum, the agreement may revolve around the establishment of a new legal entity with participating enterprises as stakeholders. At the other end, agreements may be informal commitments. There is a need to develop a typology for groups based on the nature of the agreement among participating enterprises.
 - **Date of agreement.** The issue centers on how to define when groups come into existence. In the case of a legal agreement this is relatively straightforward: The group is established based on the date specified in the contract. The date of establishment of groups based on informal commitments may be harder to pinpoint; Executing Agencies would need to define a proxy for a signed agreement.
 - **Membership.** Executing Agencies would need to be able to define whether a particular enterprise is a member of a particular group. This is related to the nature of the agreement.



... toward common definitions (continued)

- Executing Agencies may want to know how much it costs to undertake activities.
- In this regard, the cost to undertake an activity should include the value of all resources used in the activity. Costs should include direct *and* overhead expenses.
- A common method for allocating direct and overhead costs to particular activities would be needed for the common M&E system.

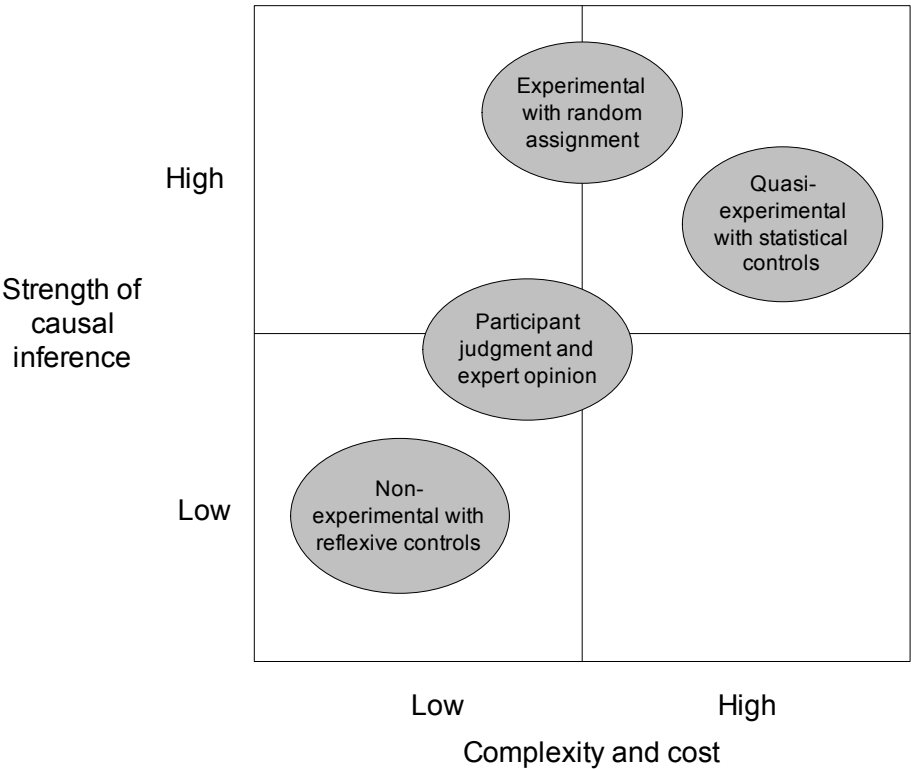


Impact assessment method



Because of the scale and nature of the PIPs, the common M&E system will need to be based on participant judgment.

- In general, evaluations should use the best possible design from a methodological perspective, taking into account the significance of the investment as well as practical considerations related to technical feasibility.
- In this case, participant judgment may be the only viable alternative:
 - Few Executing Agencies are likely to be able to obtain data needed for quasi-experiments.
 - Moreover, given the number of participants and likely variance it may be difficult to detect effects even if they exist due to low statistical power.



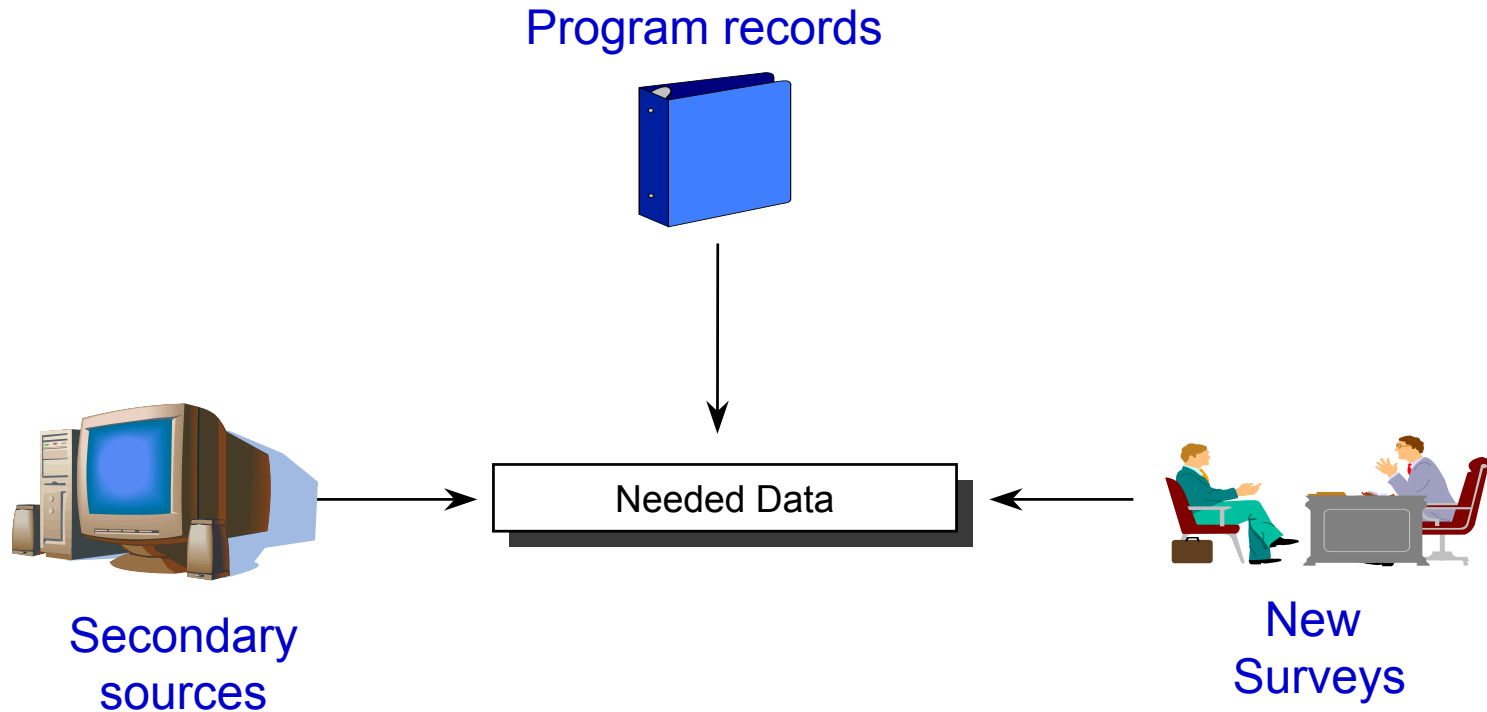
See Appendix E for a description of alternative impact assessment methods



Data collection protocol



The data needed to calculate specific indicators may come from a variety of sources.



The data for all of the process indicators need to come from the information systems maintained by Executing Agencies.

- **Internal program records are a vital source of data for monitoring and evaluation.**
- **Executing Agencies need to have information systems to capture, store and process data needed to calculate each of the agreed indicators.**
- **The design of a common M&E system assumes that Executing Agencies have information systems that have the following capabilities:**
 - Incorporates standard typologies and data elements required to calculate agreed indicators.
 - Assigns a unique identifier for participating enterprises, group and activities.
 - Assign costs to particular activities.
 - Maintain a complete history of interactions with participating enterprises.
- **Given scarce financial resources, agencies will need to assess their current information systems (including manual components) and consider the effort required to implement the proposed indicators.**



Much of the data required to calculate outcome indicators will need to come from surveys conducting by the Executing Agencies.

- **Data on participating enterprises is unlikely to be available from secondary sources.**
- **Agencies will need to undertake baseline and follow-up surveys with participating enterprises:**
 - **Baseline survey.** Executing Agencies should undertake a baseline survey as soon as possible to obtain information concerning enterprises before the intervention. (Baseline data based on recall or historical records is likely to be less reliable.)
 - **Follow-up survey.** Executing Agencies should survey participating enterprises on an annual basis to obtain data on attitudes, business changes, and enterprise performance. The survey should capture data needed to assess outcomes as reflected in the agreed indicators. Questions should account explicitly for the counterfactual.
- **The surveys should be short (no more than two pages).**



There are a number of critical issues that need to be addressed to design and administer these surveys successfully.

- The survey design, including the wording of questions, sampling strategies, administration method, and data entry procedures, all have an important bearing on the accuracy and utility of survey results.
- The survey design will be developed in Phase II; however, some issues merit attention:
 - It is essential that all Executing Agencies use the same core questions to ensure that results among different programs will be comparable.
 - Given the number of enterprises that are expected to participate, the survey should be administered to all participating enterprises.
 - » The sample size needs to be large enough to have the desired statistical power.
 - » Sending surveys to enterprises that are likely to respond in a certain way or drawing a convenience sample will bias results.
 - » Agencies need to achieve a high response rate, i.e., greater than 60 percent.
 - It would be preferable to administer the survey in-person or by telephone rather than by mail to help ensure high response rate and reliability.
 - Participating enterprises needs to be assured of confidentiality.



Example of survey questions.

Please provide your actual figures for 2004 and 2005 in the first two columns. In the third column, please estimate what your 2005 figures would have been assuming you had <u>not</u> participated in the PIP			
	Actual 2004 (baseline)	Actual 2005 (post-intervention)	Estimated for 2005, if you had <u>not</u> participated
Total sales	\$	\$	\$
Total employees			
	(A)	(B)	(C)

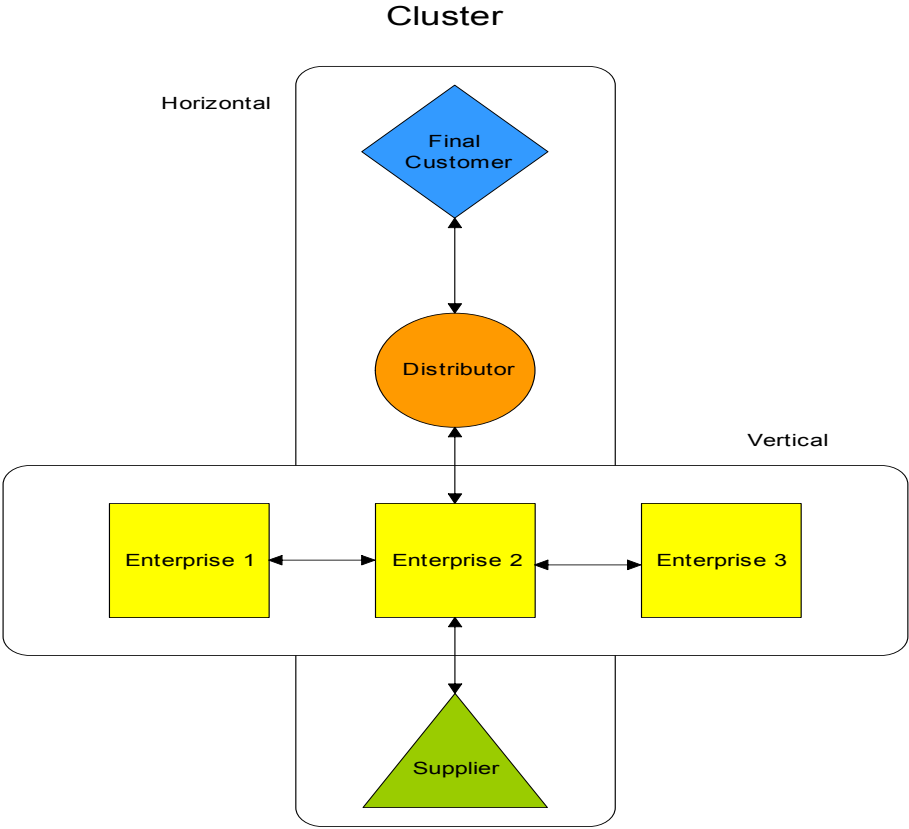
- **Baseline data can be used as a benchmark against which changes can be assessed. The difference between pre- and post-intervention is not a measure of the impact of the PIP; this requires comparison with a valid counterfactual.**
 - B-A is a measure of the growth of the participating enterprise
 - C-B is a measure of the impact of the PIP
- **The question assumes that respondents identify themselves as PIP participants.**



Appendices



Appendix A. Types of Clusters



Appendix B. Types of Variables

- **Nominal.** Contain names, labels or categories with no natural order.
- **Ordinal.** Possible values are ordered; however, the distances between values are undefined or indeterminate. Ordinal measures typically have categorical scales, e.g., excellent, good, fair and poor.
- **Interval.** Distances between adjacent values on the relevant scale are equal with respect the characteristics being measured; however, the scale does not contain a true zero reflecting the absence of the characteristic being measured.
- **Ratio.** Distances between values are equal and the scale includes a zero point which signifies the absence of the characteristic being measured.

	Nominal	Ordinal	Interval	Ratio
Mutually exclusive				
Logical ordering				
Equal distance between scale values				
True zero point on scale				
	Technologies Used	Quality on scale of 1-5	Temperature	Annual Sales



Appendix C. Examples of Activities and Outputs

Stage	Examples of Activities	Examples of Outputs
Group formation	Outreach	Aware entrepreneurs
	Training	Trained entrepreneurs
	Consulting / Research	Report
Collective action	Training	Individuals trained from participating enterprises
	Consulting/Research	Reports Databases Advice/recommendations
	Engineering	Product / process designs
	Group purchasing	Orders for materials
	Group production	Goods or services
	Sales promotion	Group brand or trademark Print material (e.g., catalogues, advertisements, direct mail) Trade fairs
	Standards development	Standards

Appendix D. Subject of Activities

- **Strategic planning.**
 - Firms take steps to determine how they will compete successfully in chosen markets and generate an acceptable return on investment. This includes efforts to formulate business strategies and provide coherent leadership to ensure that strategies are implemented as planned. In developing strategies, companies draw on information obtained from marketing and sales as well as other functions within the enterprise. Changes in strategic plans have implications for many, if not all, other processes within the firm.
- **Product and process development.**
 - This process centers on activities that firms undertake to develop new, and/or or improve existing, products and production processes. While most MSMEs are producers of intermediate goods and do not have responsibility for product design, they all need to figure out how products can be made within their own plants. In addition, manufacturing in Mexico is not limited solely to low-cost commodity producers; there is a significant and growing number of technology-intensive companies that produce unique products of their own design.
- **Marketing and sales.**
 - All companies need to market and sell their products in order to stay in business. This process includes activities undertaken by firms to assess market opportunities, identify customer requirements, position the firms and/or products in the market, and obtain new orders from customers.
- **Order fulfillment.**
 - This process represents the core ongoing activities of the firms with respect to fulfilling orders for products and maintaining customer relations. It includes production planning, procurement and in-bound logistics, production, testing and quality assurance, and after sales customer service.
- **Support processes.**
 - These processes support all other activities across the firm. They include information services, human resource management, and financial and administrative support.



Appendix E. Alternative Impact Assessment Methods



Certain conditions need to be satisfied to demonstrate that the PIP was effective in achieving desired outcomes.

- Outcomes must be responsive to the intervention.
- Plausible alternative explanations for the observed outcome have to be ruled out – rival hypotheses must be disproved.
- The mechanism by which the outcome was produced has to be explained – in other words, a theory linking the intervention to the outcome must be articulated.
- Similar results must be replicable in similar settings.



There are four approaches that could be used to estimate impacts with respect to attitudes, business changes and business performance.

- **Experiments with random assignment**
- **Quasi-experiments with constructed controls**
- **Participant judgment and expert opinion**
- **Non-experiments with reflexive controls**



Experiments with random assignment is the gold standard of evaluation designs.

- Enterprises are randomly assigned to two groups. Companies in the treatment group receive assistance; those in the control group receive an alternative type of assistance or none at all.
- Random assignment helps guarantee that the two groups are similar; extraneous factors that influence outcomes are present in both groups. Because of this comparability, claims that differences between the two groups are the direct result of the program are more difficult to refute.
- Experimental designs are used quite frequently to test the efficacy of new treatments in health, social welfare and education. However, this approach has not been used extensively in evaluating the impact of business assistance programs for four principal reasons:
 - Political considerations make random assignment difficult;
 - The services provided to companies are not standardized;
 - It is frequently hard to maintain experimental conditions; and
 - Experiments tend to be costly and difficult to administer.
- Moreover, experiments need to be established before projects are initiated.



Quasi-experiments with constructed controls is also a strong method for evaluating impacts.

- **The performance of participating companies is compared to other similar firms that have not received assistance. However, instead of random assignment, a comparison group is constructed after the fact.**
- **Valid comparisons require that the two groups be similar with respect to key characteristics, exposure to external events and trends, and propensity for program participation. To the extent that the two groups are similar, observed differences can be attributed to the program with a high degree of confidence.**
- **There are several types of designs that fall within this general category:**
 - Simple differences-in-difference with generic or matched controls;
 - Regression discontinuity with administrative controls; and
 - Multivariate regression with statistically equated controls including controls for potential selection bias.
- **Data on outcome and control variables for participating enterprises and similar non-participating enterprises are required. It should be noted that data from secondary sources may be unavailable or not-existent in the case of informal enterprises. Generally, the approach also requires large samples.**
- **Considerable technical expertise is needed to implement this type of evaluation.**



While less rigorous, participant judgment can be used to assess impacts.

- This approach relies on program participants to make judgments concerning impacts.
- Individuals are surveyed and asked to estimate the extent to which their attitudes, behavior and performance changed as a direct result of the program – in effect, to compare current performance to what would have happened in the absence of the program.
- While people may have difficulty estimating the net effect of the intervention, this approach may be the only viable option for many of the PIPs given data and budget constraints.



Results from non-experiments with reflexive controls are generally not valid.

- Many programs have been evaluated by comparing the performance of program participants before and after the intervention, attributing all of the observed changes to the program.
- While widespread, results from studies that rely exclusively on reflexive controls should be treated with substantial skepticism. The performance of enterprises is affected by numerous factors, including firm-specific effects, industry trends, and general economic conditions.
- Before-and-after designs cannot isolate the impact of the program from these other extraneous factors. As a result, estimates of program impacts based on this approach are not valid.

