

Methodological considerations for developing an SME Policy Index for Latin America and the Caribbean

Economic and Technical Cooperation

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F O R E W O R D

This document has been prepared in compliance with Activity II.2.7 of the Work Programme of SELA for the year 2015, entitled "Methodological considerations for developing an SME Policy Index for Latin America and the Caribbean".

The document consists of an introduction and five sections. Section I presents the SME Policy Index for Latin America and the Caribbean (IPPALC) in its aggregate version. Section II focuses on explaining, in a disaggregated way, the elements that make up the index. Sections III and IV drift away from the conceptual framework of the index to delve into its operational side, presenting the methodologies for quantification and evaluation of the tool. Section IV contains a series of reflections on the limitations of the index and some elements which could complement the future versions of the index.

This document was prepared by Economist Daniel Stagno, Official in Charge of the Direction of Studies and Proposals of the Permanent Secretariat of SELA.

INTRODUCTION

This document introduces the SME Policy Index for Latin America and the Caribbean (IPPALC, Spanish acronym), a tool created by SELA based on indices of public policies of the OECD. The IPPALC has been designed with the intention to serve policymakers in the region as an analytical framework to facilitate the configuration of a dynamic, productive, innovative, articulate and competitive business ecosystem in Latin America and the Caribbean. From a broader point of view, the index is designed to provide tools that help decision makers to advance the process of transformation and coordination of the productive structures in the region.

The document consists of five sections. The first section presents the reader with the IPPALC in its aggregated version, discussing the main features of this tool, its similarities with the indices of public policies previously implemented by the OECD in other regions, and also its fundamental methodological and conceptual differences from other versions of the index.

The second section of the paper focuses on explaining, in a disaggregated way, the elements that make up the IPPALC, arguing how each area assessed by the index serves a particular function for the productive development of the region. The second section also introduces the specific indicators proposed by SELA for the construction of each dimension of the index.

The third and fourth sections of the document drift away from the conceptual framework of the index to delve into its operational side. These sections explain the methodology chosen to quantify the qualitative information collected by the indicators. Subsequently, the processes of parallel evaluation (by actors in the public and the private sectors) and reconciliation of divergent results are explained.

The fifth section concludes the document by informing about the main limitations of the IPPALC, based on the analytical framework for the formulation of public policies for SMEs in the region. Also, this section analyses some elements which could be included in future issues of the IPPALC, which could potentially increase the analytical power of this tool.

I. THE SME Policy Index for Latin America and the Caribbean

The SME Policy Index for Latin America and the Caribbean (IPPALC) is a tool designed by the Organization for Economic Cooperation and Development (OECD) – in cooperation with the European Commission, the European Bank for Reconstruction and Development and the European Training Foundation – in order to assess the progress in the design and implementation of public policies to promote the economic activity of SMEs. Since 2006, the OECD has prepared versions of this index for various subregions and economic blocs, including the Western Balkans, North of Africa, the Middle East and the ASEAN.

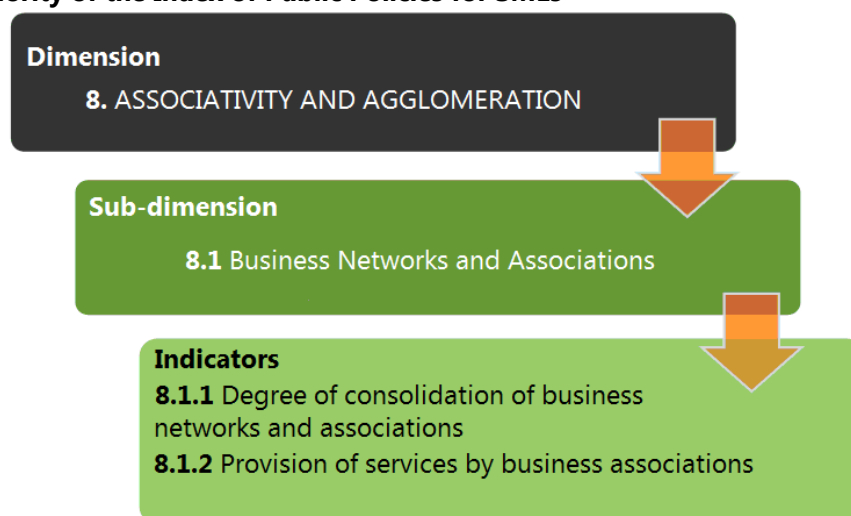
The index provides governments with a framework for assessing public policies aimed at promoting the development of SMEs. In this regard, the index is designed to identify the strengths and weaknesses in outlining and implementing policies for SMEs. In addition, the index allows for making comparisons between nations and facilitates the dialogue and cooperation on issues related to the policies for SMEs. In certain dimensions of assessment, the index can help the countries to measure the degree of convergence of their policies for SMEs with global best practices.

The elements taken into account in the Index of Public Policies for SMEs tend to vary according to the development priorities of each subregion or economic bloc using this tool. However, the various versions of the index have similar structures, based on the following:

- **Dimensions** or thematic areas for implementing public policies for SMEs (for example, access to finance). These dimensions can be understood as the pillars which support the business environment of a nation, and, therefore, are the factors that should be strengthened.
- **Sub-dimensions** or aspects of fundamental importance for the appropriate functioning of public policies in each thematic area (for instance, the legal and regulatory framework).
- **Indicators**, which assess the performance of public policies for SMEs in each sub-dimension (for example, the existence of regulations for the credit market).

CHART 1.

Order of priority of the Index of Public Policies for SMEs

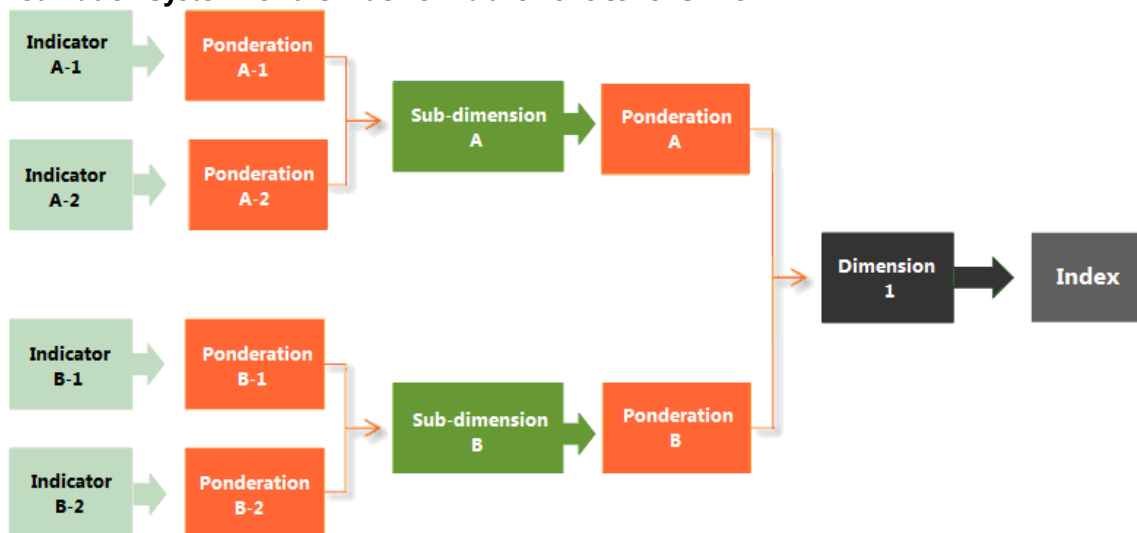


Source: Prepared by the author.

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Taking into account that not all the elements of public policies are equally important for creating a dynamic and innovative business ecosystem, the index provides different weights for its various indicators and sub-dimensions. However, recognizing that the creation of productive and competitive business ecosystems is a multidimensional task, the index assigns all dimensions the same weight.¹

CHART 2.
Estimation System for the Index of Public Policies for SMEs



Source: Prepared by the author.

The OECD's Index of Public Policies for SMEs was designed on the basis of the ten principles – or thematic areas – that make up the Small Business Act for Europe, a strategic framework that aims at exploiting the potential for growth and innovation of European SMEs with the purpose of promoting the sustainable competitiveness of the European Union, as well as its transition towards a knowledge economy (See EU, 2008). Similarly, the SME Policy Index of the ASEAN is based on the principles of the ASEAN Strategic Action Plan for the Development of SMEs (See ASEAN, 2010). This means that the indexes implemented thus far have been designed on the basis of common public policy priorities and criteria, previously agreed upon by the countries of a subregion or economic bloc as part of their coordination, articulation, cooperation and convergence processes. The case of Latin America and the Caribbean is different from the aforementioned cases because there is not a strategic framework with a regional scope for the development of small and medium-sized productive enterprises.

In order to cope with the absence of regional institutions to guide the design and implementation of public policies for medium and small-sized productive enterprises, SELA proposes an SME Policy Index for Latin America and the Caribbean (IPCALC) based on a paradigm of particular interest for Latin American and Caribbean countries: the productive transformation and articulation. In this regard, the dimensions, sub-dimensions and indicators that make up the IPPCALC have been designed on the basis of the main requirements of the productive development process in the

¹ Noteworthy, in spite of being the common denominator, not all the versions of the index attach equitable weights to the assessment dimensions. Some versions attach higher value to some elements of the policies for SMEs than others. This certainly depends on which dimensions that each subregion or economic bloc considers to be the most relevant ones to their domestic reality.

region. Therefore, even the most basic indicator and the most complex dimension of the IPPALC are aimed at promoting an innovative, productive, articulated and competitive entrepreneurial ecosystem.

The IPPALC consists of nine (9) dimensions, twenty-five (25) sub-dimensions and one hundred and twenty-two (122) indicators of public policy. The next chapter highlights the importance of each dimension proposed in the index for productive development in the region, explains the function of each sub-dimension in setting up the tool and makes proposals as regards indicators for assessing the current status of public policies for SMEs in Latin America and the Caribbean. Table 1 shows the dimensions and sub-dimensions of the index (the indicators are omitted).

TABLE 1
Dimensions and sub-dimensions of the SME Policy Index for Latin America and the Caribbean

Dimension	Sub-dimensions
INSTITUTIONAL AND REGULATORY FRAMEWORK	Institutional framework Effective legislation and administrative simplification Public-private consultations Think small first
ACCESS TO FINANCE	Legal and regulatory framework Efficient bankruptcy procedures Sources of finance for SMEs Investor friendly tax regime Financial literacy
OPERATIONAL ENVIRONMENT/ SIMPLIFICATION OF PROCEDURES	Company registration Provision of e-government services E-government infrastructure
ENTREPRENEURIAL EDUCATION	Public policy framework for entrepreneurial education Entrepreneurial education in primary and secondary education Entrepreneurial education in higher education
TRAINING AND CAPACITY BUILDING	
INNOVATION, TECHNOLOGICAL READINESS AND TECHNOLOGY TRANSFER	Institutional framework for innovation and technology transfer Support services for innovation and technology transfer Financing for innovation
BUSINESS DEVELOPMENT SERVICES	Support services Information and promotion of support services
ASSOCIATIVITY AND PRODUCTIVE ARTICULATION	Business networks and associations Promotion of clusters
INTERNATIONALIZATION OF SMES	Implementation of a proactive trade policy Simplification of procedures for international trade Realization of the benefits derived from the Latin American and Caribbean integration

Source: Prepared by the author.

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II. DIMENSIONS AND SUB-DIMENSIONS**1. Institutional and Regulatory Framework**

More determined than ever, Latin American and Caribbean countries are heading towards the paradigm of productive transformation and articulation. Under this logic, a priority element in the agenda on public policies in the region is promoting the aggregate competitiveness of the business sector. Taking into account that Micro and SMEs represent about 99% of the companies operating in the region and generate approximately two-thirds of formal jobs in Latin America and the Caribbean (See OECD, ECLAC and CAF, 2013), the policies aimed at promoting competitiveness will attain better results by focusing on small-scale productive enterprises.

The productive transformation of Latin America and the Caribbean will require a stable macroeconomic environment, as well as an institutional and regulatory framework that promotes entrepreneurship and innovation, encourages clusters, raises articulation of productive processes and facilitates the internationalization of SMEs. In this regard, the public sector should play a fundamental role as a promoter and guarantor of the basic conditions for the complex process of productive development in the region.

While specific policies for productive transformation of the region will depend almost exclusively on the realities of each nation, any intervention by the public sector will require an efficient regulatory and institutional framework, as well as a profound institutional adaptation that enhances the capabilities of the State for coordination and inter-sectoral cooperation.

In addition, the intricate bureaucratic networks of public administration systems in the region and the obstacles caused by redundant regulations are barriers to productive development in Latin America and the Caribbean. Administrative complexity and inefficient regulations hinder growth of companies as they divert resources from productive or innovative activities towards other activities which do not generate added value. Therefore, an efficient legislation, together with a public administrative system debugged from excessively complex bureaucracies, will reduce the institutional factors that currently undermine the operational efficiency of SMEs in Latin American and Caribbean.

The first dimension of the SME Policy Index for Latin America and the Caribbean (IPPALC) seeks to provide policymakers with a tool to evaluate the adequacy, dynamism and effectiveness of the institutional and regulatory environment of their nations. This dimension makes emphasis on aspects pertaining to the interventions of the public sector for the promotion of SMEs.

Evaluation

The assessment of this dimension is made through four sub-dimensions: **i)** institutional framework, **ii)** effective and efficient legislation, **iii)** public-private consultations, and **iv)** think small first.

The sub-dimensions *institutional framework* and *public-private consultation* group several key elements for the elaboration of coherent and coordinated SME policy. On the one hand, the sub-dimension institutional framework assesses the management of a coherent definition of SMEs that will help avoid the asymmetric distribution of costs and benefits of public intervention between the different levels of SMEs. In addition, the sub-dimension evaluates the implementation of short and long term strategies for the formulation of public policies for SMEs. In a complementary manner,

the sub-dimension values adequacy, training, and the degree of institutional coordination for the implementation of policies of SMEs.

In turn, the sub-dimension public-private consultations assesses the frequency and intensity with which the governments consult the private sector on topics of reference for the elaboration of public policies in accordance with the realities of SMEs.

The sub-dimension *effective legislation and administrative simplification* is intended to evaluate the current situation of the nations in terms of the complexity of their regulatory framework. In addition, this sub-dimension values the efforts made in terms of bureaucratic simplification and elimination of redundant regulations.

The sub-dimension think small first complements the evaluation of the institutional and regulatory framework. This sub-dimension is intended to assess how much the public sector incorporates the interests and needs of SMEs at the time of designing public policies and regulations.

TABLE 2
Institutional and Regulatory Framework. Sub-dimensions and indicators

1. INSTITUTIONAL AND REGULATORY FRAMEWORK			
Institutional framework	Effective legislation and administrative simplification	Public-private consultations	Think small first
<ul style="list-style-type: none"> ▪ Definition of SME ▪ Government coordination of SME policy-making ▪ Agency for the implementation of public policies for SMEs ▪ Development strategy for SMEs ▪ Policies for migration of SMEs to the formal sector 	<ul style="list-style-type: none"> ▪ Delegation of responsibility for regulatory reform and administrative simplification ▪ Strategy for the simplification of administrative procedures ▪ Simplification of current regulatory framework ▪ Elimination of redundant regulations ▪ Application of regulatory impact analysis 	<ul style="list-style-type: none"> ▪ Frequency and transparency of public-private consultations ▪ Influence and representativeness of private-public consultations 	<ul style="list-style-type: none"> ▪ The design of public policies and regulations explicitly consider the interests of SMEs

Source: Prepared by the author.

2. Access to finance

The access to external sources of finance provides companies with a broad range of possibilities for leverage to cover operating requirements for capital, overcome liquidity problems, expand their production capacity and, in general, to implement good ideas. In this regard, the availability of funds can directly affect the process of technology transfer and, thus, the intensity of innovation in a particular nation. Also, increased access to external resources can produce significant effects on the degree of internationalization of enterprises and the generation of quality jobs. Therefore, the access to finance plays a cross-cutting role for the productive transformation of Latin America and the Caribbean.

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Having access to sources of finance is particularly important for micro and SMEs, since these companies generally have limited resources, which reduces their resilience to sudden changes in the dynamics of markets. However, the access of SMEs to financing tends to be disproportionately low in the region.

The rigid and outdated regulatory frameworks that reduce the range of non-traditional financing options, as well as tax systems unsuitable for small-scale enterprises, tend to impose barriers to the supply and demand of credit for SMEs. In addition, the severe information asymmetries between surplus agents and deficit agents, in conjunction with the low credit adequacy of SMEs, prevent these companies from gaining access to resources that are actually available in the market.

Data from the OECD and ECLAC report (2012) suggest that, in general terms, the access to credit for Latin American and Caribbean SMEs is limited. In fact, the report points out that less than 15% of the credits in the region are directed to medium-sized companies with low productive scales. On the other hand, the report indicates that a relatively high proportion of SMEs seeking financing obtained it. This shows that, in part, the constrained access to finance in the region is the result of self-selection, caused by complex requirements and high standards of eligibility in the traditional credit markets.

Therefore, in addition to the implementation of regulatory frameworks to facilitate and encourage financing of SMEs, the region would benefit from the implementation of measures to help generate a dynamic and diversified credit environment. Also, the Latin American and Caribbean governments face the primary task of providing the proper incentives for the expansion, sophistication and interconnection of financial markets in the region.

The access to finance should be taken into account as an aspect of the first order for the productive development of Latin America and the Caribbean. In this connection, the dimension of access to funding of the IPPALC aims at providing decision-makers in the region with key information for the design of public policies intended, on the one hand, to promote the emergence of external sources of financing for small-scale enterprises, and, on the other hand, to expand SMEs access to existing sources of funding.

Evaluation

The evaluation of the access to finance dimension is carried out through five sub-dimensions: **i)** legal and regulatory framework, **ii)** efficient procedures for the treatment of bankruptcy, **iii)** sources of financing for SMEs, **iv)** investor friendly tax regime and **v)** financial literacy.

The sub-dimension *regulatory and legal framework* evaluates a series of fundamental institutional and regulatory aspects for the facilitation of access to external sources of financing for SMEs. Accordingly, the assessment of the current status of regulations governing access to credit and the use of collateral is incorporated. On the other hand, this sub-dimension incorporates a measure of the present scope of systems of cadastre in different nations and a measurement of the quality of existing information on loans for SMEs.

The sub-dimension *efficient procedures for the treatment of bankruptcy* complements the previous sub-dimension regarding the evaluation of the necessary conditions for the efficient allocation of financial resources for SMEs. In the case of this sub-dimension, emphasis is made on the evaluation of the direct and indirect costs of insolvency, as well as non-discrimination and the facilitation of access to credit in cases of non-fraudulent bankruptcy.

The sub-dimension *investor friendly tax regime* examines various tax factors that can affect both the investment decisions taken by SMEs as the quantity and quality of financing that the companies can have access to. Particularly relevant for this sub-dimension is the evaluation of the tax burden facing SMEs, as well as the cost of tax compliance and tax treatment of losses.

The sub-dimension *sources of finance for SMEs* evaluates the main non-banking options which SMEs may resort to in order to finance their operations. For example, it evaluates the penetration into capital markets, as well as the provision of micro-finance services.

Finally, the sub-dimension *financial literacy* evaluates the implementation of programmes of dissemination of financial basics for small businesses, as well as knowledge that can help reduce the self-selection of companies when applying for funding.

TABLE 3
Access to finance. Sub-dimensions and indicators

2. ACCESS TO FINANCE				
Legal and regulatory framework	Efficient bankruptcy procedures	Sources of finance for SMEs	Investor friendly tax regime	Financial literacy
<ul style="list-style-type: none"> ▪ Credit market regulations ▪ Regulations on collateral requirements ▪ Collection of credit information on SMEs ▪ Cadastre 	<ul style="list-style-type: none"> ▪ Review of bankruptcy laws ▪ Bankruptcy time (WBDB) ▪ Cost, % of the estate (WBDB) ▪ Recovery rate, % of the estate (WBDB) ▪ Access to credit after bankruptcy ▪ No discrimination against entrepreneurs after bankruptcy (second chance) 	<ul style="list-style-type: none"> ▪ Access to stock market ▪ Access to risk capital ▪ Access to angel investment ▪ Access to microfinances ▪ Access to financial leasing ▪ Credit ratings for SMEs ▪ Credit guarantees 	<ul style="list-style-type: none"> ▪ Analysis of tax barriers to SME financing through equity and venture capital ▪ Updated analysis of tax burden for SMEs ▪ Analysis of tax compliance costs ▪ Treatment of losses 	<ul style="list-style-type: none"> ▪ Financial literacy programmes for entrepreneurs

Source: Prepared by the author.

3. Operational Environment / Simplification of procedures

Regulations and administrative procedures play a fundamental role in the creation of competitive, dynamic and innovative markets. Among other things, administrative standards and procedures facilitate the provision of public goods, correct market failures that threaten competitiveness, and contribute to the internalization of negative externalities of the private sector. However, such regulations and administrative procedures can impose high costs on operating companies – particularly on smaller companies – and inhibit the formation of new enterprises, thereby generating losses of efficiency and competitiveness in the same markets they are trying to boost.

From the moment a good idea becomes an enterprise, entrepreneurs must interact with the public sector to comply with administrative and regulatory procedures, such as records, licenses, patents

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and permissions. Once the business idea turns into a tangible company, this should continue interacting periodically with the public sector to comply with regulations, pay taxes, make social security contributions, etc. Such interactions can be understood as nodes. If the interaction is simple, fast and inexpensive, the company will exceed that node without loss of efficiency. If, on the other hand, the interaction is procedurally complex and implies high financial costs, the company will lose part of its efficiency in passing through the node.

CAF (2011) argues that the complex operational environments tend to decrease the productivity of companies making up them, while discouraging entrepreneurship and reducing formalization. In addition, the complex operating environments limit the entry of FDI and opens windows for excessive bureaucracy and corruption. Such effects result in loss of competitiveness and reduced pace of economic growth in countries with complex operational environments.

TABLE 4
Facility for doing business.
Comparative statistics for Latin America and the Caribbean vs. OECD

	Comenzar un negocio			Registro de propiedad	Resolver insolvencia	
	Días	Número de procedimientos	Costo (% ingreso per cápita)	Días	Tiempo (años)	Tasa de recobro (centavos por dólar)
ALC	30,1	8,3	31,1	63,3	2,9	36
OCDE	9,2	4,8	3,4	24	1,7	71,9

Source: World Bank, Doing Business 2015.

As shown in Table 4, a company that decides to operate in Latin America and the Caribbean must spend three times the time and 10 times the resources it would devote if it opened its doors in higher-income nations. In addition, if the company declared bankruptcy, it would require 14 additional months to resolve its legal proceedings and would recover 35.9 cents on the dollar less than if it operated within the confines of the OECD. While the indicators included in the Table – taken from the Doing Business 2015 report, published by the World Bank – account for only an outline of the operational environment in Latin America and the Caribbean, the evidence suggests that complex administrative procedures and the high costs of compliance impose a barrier to entrepreneurship in the region.

The public sector can improve the environment in which companies operate and thus significantly reduce transactional costs. The progress of ICTs provides governments with a number of tools – such as e-government services – through which it can streamline administrative procedures. In addition, the implementation of one-stop shops (virtual or physical) for everyday procedures can offer greater dynamism to the operational environment and increase the overall level of productivity and competitiveness in the region. Therefore, a comprehensive policy for the productive transformation of Latin America and the Caribbean should pay particular attention to the administrative simplification as driving force of markets and promoter of efficiency.

Generating a transparent and fluid operational environment will be an essential condition to promote the productive development of the region. In this connection, the current dimension of the IPPALC aims to provide policymakers with a tool to evaluate the dynamism of operational

environments. The dimension focuses on regulatory and administrative elements, which can generate high transaction costs for SMEs in Latin America and the Caribbean.

Evaluation

The evaluation of the operational environment is carried out through two sub-dimensions: **i)** Company registration; and **ii)** E-government.

The sub-dimension *Company registration* includes a series of indicators that allow to establish the efficiency of the administrative process prior to the start of a company's activities (several of which are taken from the database of the Doing Business indicator). Among these indicators are the cost and the time required to obtain registration certificates, as well as the average cost and time for starting a business in each nation. The sub-dimension also incorporates an assessment of the use of one-stop shops as a fundamental tool for the simplification of procedures and reduction of administrative costs in the region.

In addition, the sub-dimension *E-government* includes indicators to assess the status of the public sector in terms of incorporating information technologies into administrative procedures. The sub-dimension evaluates the provision of e-government services, such as payment of taxes, social security contributions, cadastres and company registration. The sub-dimension also assesses the magnitude and quality of e-government infrastructure through connectivity, frequency of update and accessibility on the various portals through which governments provide their services.

TABLE 5
Operational Environment / Simplification of Procedures. Sub-dimensions and indicators

3. OPERATIONAL ENVIRONMENT/ SIMPLIFICATION OF PROCEDURES		
Company registration	E-government	
	Provision of e-government services	E-government infrastructure
<ul style="list-style-type: none"> ▪ Cost of obtaining the registration certificate ▪ Time for obtaining the registration certificate (WBDB) ▪ Number of administrative procedures for obtaining a registration certificate (WBDB) ▪ Cost of starting a business (WBDB) ▪ Time for starting a business (WBDB) ▪ Silence is consent to registration procedure ▪ Capital requirements ▪ One-stop registration 	<ul style="list-style-type: none"> ▪ Payment of taxes ▪ Social Security ▪ Cadastres ▪ Pensions ▪ Business Statistical Report ▪ On-line registration 	<ul style="list-style-type: none"> ▪ Update on e-government portals ▪ Connection between databases on e-government portals ▪ User-friendly interfaces on e-government portals ▪ Use of digital signatures

Source: Prepared by the author.

4. Entrepreneurial education

Since the research by Nelson and Phelps in the 1960s, Lucas and Mincer in the 1980s and Barro in 1992, the economic theory has tended to link the accumulation of human capital with the income growth of nations. Human capital is a cross-cutting factor for productive development, since long-term investments in education, capacity and technical skills result in higher levels of productivity, technological adaptation and innovation. In addition, the accumulation of human capital provides the labour force with flexibility and thus greater ability to adapt to harsh environments. Therefore, an agenda for public policies to promote productivity and competitiveness in the region cannot rule out the accumulation of human capital.

Public policies on entrepreneurial education, jointly with training and technical assistance, can contribute to the accumulation of human capital through the generation of knowledge and productive capacities, on the one hand, and through the consolidation of an entrepreneurial culture in the region, on the other. A comprehensive entrepreneurial education plan should cover three specific objectives: continued education of the productive force, development of general and specific capabilities for entrepreneurs, and promotion of an entrepreneurship and innovation-oriented culture.

At the early educational stages, entrepreneurial education programmes should focus on building basic capacities for entrepreneurs, such as innovation, team work and risk-taking. In subsequent stages, entrepreneurial education should focus on building specific capacities for entrepreneurs, such as basic accounting, financial planning and techniques for the effective communication of ideas.

In addition, public policy makers must take into account that a significant portion of entrepreneurial learning takes place outside the formal academic setting. Therefore, a comprehensive entrepreneurial education strategy must include policies for building skills at the informal level, through programmes especially designed for training from work, community centres or different virtual platforms.

Carrying out a progressive incorporation of entrepreneurial knowledge and skills into the traditional educational setting will require the development of institutions to allow for coordination of the various sectors involved, as well as the effective division of competences and long-term strategic planning.

In order to find a point of convergence with the productivity levels of higher-income nations, the region will need to achieve higher technology incorporation orders, as well as a growing human capital collection. Both the fourth and the fifth dimensions of the IPPALC evaluate a set of strategic factors for the accumulation of human capital in the form of technical knowledge and capacities, while the sixth dimension of the index evaluates the progress of public policies in aspects necessary for the configuration of an innovative entrepreneurial sector.

Evaluation

Evaluation of entrepreneurial education is carried out through three sub-dimensions: **i)** Public policy framework for entrepreneurship education; **ii)** Entrepreneurial education in primary and secondary education; and **iii)** Entrepreneurial education in higher education.

The sub-dimension on public policy framework for entrepreneurial education evaluates the existence and degree of implementation of long-term strategies for the promotion of entrepreneurial education at both the formal and the informal levels. As a complement to previous indicators, an assessment of the level of government coordination and delegation of responsibilities for entrepreneurial education is included. In addition, the sub-dimension includes a measure of the level of monitoring and evaluation of policies for entrepreneurial education that are under way in the region. An evaluation is made of the existence and implementation of a long-term strategy for entrepreneurship education in groups, which - by its particular ability to generate social benefits - are considered of strategic importance. Such groups include women entrepreneurs, start-ups and fastest-growing companies.

The sub-dimensions on entrepreneurial education in primary, secondary and higher education evaluate the current penetration of public policies to create general and specific capabilities for entrepreneurs at all levels of formal education. As a complement, indicators for the evaluation of the exchange of best practices on public policies for entrepreneurial learning are incorporated.

TABLE 6
Entrepreneurial education. Sub-dimensions and indicators

4. ENTREPRENEURIAL EDUCATION		
Public policy framework for entrepreneurial education	Entrepreneurial education in primary and secondary education	Entrepreneurial education in higher education
<ul style="list-style-type: none"> ▪ Strategy for the promotion of formal entrepreneurial education ▪ Strategy for the promotion of non-formal entrepreneurial education ▪ Monitoring and evaluation of policies for entrepreneurial education ▪ Government coordination and delegation of responsibilities for entrepreneurial education ▪ Strategy for the promotion of women's entrepreneurial education 	<ul style="list-style-type: none"> ▪ Penetration of entrepreneurial education in primary education ▪ Exchange of best practices on entrepreneurial education in primary education ▪ Penetration of entrepreneurial education in secondary education ▪ Exchange of best practices on entrepreneurial education in secondary education 	<ul style="list-style-type: none"> ▪ Penetration of entrepreneurial education in higher education ▪ Cooperation between private enterprises and universities ▪ Exchange of best practices on entrepreneurial education in higher education

Source: Prepared by the author.

5. Training and capacity building

Unlike business education, which focuses on creating entrepreneurial and innovative culture, training programs are aimed at preparing employees and entrepreneurs in specific skills for certain productive activities. Training programs include - but are not limited to - the preparation of citizens in specialized negotiation techniques, management of specific software for business administration, operating machinery, use of ICTS, and development of business projections and plans.

Together with entrepreneurial education, training contributes to the accumulation of human capital, and through it, the growth of productivity and competitiveness of SMEs. At the same time,

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the accumulation of specific skills in certain business activities facilitates the implementation of new ventures. Added to this, training programs diversify the workers' toolbox, thus encouraging the emergence of differently paid jobs and reducing structural rigidities in labour markets.

On the other hand, reducing the gap of skills and knowledge between large enterprises and SMEs, through training programs, facilitate the transfer of technology and flow of tacit knowledge; external effects in the long term, would lead to greater productivity for small and medium size businesses in the region.

SMEs – and especially emerging enterprises – often lack the resources to provide their employees with specific skills for optimal performance of their activities. Furthermore, even in the case of having these resources, enterprises often invest a sub-optimal amount on training their workers, given that their analysis of cost benefit does not include the external (social) benefits from a larger acquisition of skills.

The Public Sector – either as a direct supplier of training services or as a guarantor of private supply of quality training – is called to play a leading role in building a dynamic, productive and innovative business ecosystem. That is why the fifth dimension of IPPALC aims to provide decision makers with a map for the assessment of the current status and future opportunities for training workers and entrepreneurs in Latin America and the Caribbean.

Evaluation

The dimension of training and preparation is not divided by sub-dimensions as in the previous cases, but through eight indicators aimed at providing an integral representation of the current status and future opportunities for the advancement of professional training programs. The dimension emphasizes particularly on assessing the availability of training for groups that - due to its great capacity to generate social benefits - are considered of special interest, such as business women, emerging enterprises and fast growing businesses.

TABLE 7
Training and capacity building. Indicators

5. TRAINING AND CAPACITY BUILDING

- Research programmes on training needs
- Availability of training programmes
- Availability of training for start-ups
- Availability of training on international standards and structure of international markets
- Availability of training for women entrepreneurs
- Implementation of a quality assurance system for training offered
- Public funds for consultancy, information and training for growing companies
- Training for fastest-growing companies

Source: Prepared by the author.

6. Innovation, technological readiness and technology transfer

As Robert Solow argued more than five decades ago, technological change - along with the accumulation of productive factors - is a key component for the economic growth of nations. Following the IDB (2014),² that technological change or innovation can be understood as "the implementation of new or significantly improved organizational products, processes, services or models". While innovation is often associated with the development of productive technologies, it also includes progress in terms of marketing, logistics and other managerial processes that permit increase of operational efficiency of the enterprises. Innovation covers from subtle improvements that enable moderate productivity gains at the company level, to the most radical technological changes that redefine the dynamics of international markets.

Despite the complex nature of technological change, specialized literature has identified numerous estimated variables to quantify the intensity of innovation; in this sense, perhaps the most widely used proxy is investing in research and development (R&D). IDB (2014) argues that while a medium-sized OECD invests 4% of its revenues in R&D, the medium-sized Latin American enterprise assigns only 2.5% of its revenue to that concept. Also, while in a typical OECD country, for every 1000 persons about 9 researchers are identified, in Latin America and the Caribbean there are only 1.1 researchers per 1,000 persons³.

However, innovation is not only achieved through R&D. An important part of technological change is derived from the processes of technology transfer and tacit knowledge. As argued by Javorcik (2012) and SELA (2014-a), for such transfers to occur, the receiving enterprises -generally SMEs - must be within a certain threshold of technological adaptation, both in terms of machinery and equipment and in terms of skills and knowledge. Technological adaptation levels below or above this range would hinder the absorption of technology and knowledge by local businesses. As shown in the data from the Global Competitiveness Report (World Economic Forum, 2014), the level of technological adaptation of Latin American and Caribbean nations are usually relatively low, a fact which imposes a limitation for technological change originated through the transfer of technology and absorption of tacit knowledge in the region.

The low investment in R&D, together with the low technological adaptation in the region has negatively impacted the rate of technological change in Latin America and the Caribbean. The World Bank (2014-b) points out that enterprises in the region suffer from a chronic and significant innovation gap with respect to the high nations. Such a gap does not exist solely in terms of R&D or number of patents, but also in terms of innovation of products and productive processes.

Meanwhile, the lagging of innovation in Latin America and the Caribbean has contributed to the opening of the productivity gap between the region and the nations operating on the border of the production possibilities frontier (see SELA, 2014-a). In a highly competitive, globalized, economic environment, high productivity differentials result in mediocre economic growth rates for the region.

The productive transformation in Latin America and the Caribbean will require the creation of innovative ecosystems that allow the region to achieve higher levels of economic complexity. Technological change will be a fundamental aspect for the transition from the current matrix of productive activities in the region - characterized by the exploitation of natural resources and the

² Also obtained from the OECD (2005).

³ Average value for the region, the breakdown figures show significant variance.

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production of intensive manufacturing man labour - to activities with greater local content of knowledge and technology.

An environment with high innovation will enable the region to achieve higher rates of economic growth. Similarly, it will help expand the supply of jobs with differentiated remunerations, stimulate consumption and contribute to the reduction of the high inequality in the distribution of income in the region.

This dimension of the IPPALC focuses on the assessment of policies aimed specifically at promoting technological change and the construction of national innovation systems in Latin America and the Caribbean. It is worthwhile to mention that these policies are necessary, but not sufficient, to achieve greater innovation intensity in the region. Recognizing the need for a multidimensional approach to achieve higher levels of innovation in Latin America and the Caribbean, some tangential aspects to promoting technological change are covered, indirectly, in the other dimensions of the indicator.

Evaluation

Assessment of this dimension is performed through three sub-dimensions: **i)** institutional framework for innovation and transfer of technology, **ii)** support for innovation and transfer of technology and **iii)** financing for innovation.

The sub-dimension *institutional framework for innovation and transfer of technology* evaluates the existence and implementation level of long-term strategies for promoting innovation in the region. Also, the sub-dimension includes an assessment of the level of government coordination and delegation of institutional responsibilities for the formulation, implementation and monitoring of innovation policies. In addition, the sub-dimension incorporates the assessment of a fundamental element for private decisions for investment in innovative activities: the framework of intellectual property rights.

The sub-dimension *support services for innovation and transfer of technology* evaluates, on one hand, the existence of public programs of various kinds that encourage small and medium enterprises to innovate. Similarly, the sub-dimension assesses the supply of services that reduce the cost of innovation for SMEs; such services include the reduction of information asymmetries and the provision of technical and management support services (in the form of incubators and technology parks). This sub-dimension also evaluates the capacity of the Public Sector to solve coordination failures, to particularly establish bridges between the SMEs and the research centres (such as universities and "think-tanks").

The sub-dimension *funding for innovation* incorporates into the analysis the financial type incentives for innovation of the SMEs. An indicator of direct financial support for innovative projects is included (for example, in the form of subsidies or low schemes of "matching" of payments). Similarly, it assesses the existence of tax credits for enterprises that incur in innovative activities and also evaluates the existence of guarantee schemes that allow the SMEs with innovation potential leverage of its activities with external resources.

TABLE 8
Innovation, technological readiness and technology transfer. Sub-dimensions and indicators

6. INNOVATION, TECHNOLOGICAL READINESS AND TECHNOLOGY TRANSFER		
Institutional framework for innovation and technology transfer	Support services for innovation and technology transfer	Financing for innovation
<ul style="list-style-type: none"> ▪ Public policy strategies for innovation ▪ Delegation of responsibility in the design, implementation and monitoring of innovation policies ▪ Budget provision for projects related to innovation ▪ Framework of Intellectual Property Rights to promote innovation 	<ul style="list-style-type: none"> ▪ Establishment of innovation centres and technology parks ▪ Information on support services for innovation ▪ Links between research institutes and private enterprises ▪ Research grants for private enterprises ▪ Technology incubators 	<ul style="list-style-type: none"> ▪ Tax credits for innovation-related activities ▪ Financial support for innovation ▪ Guarantee mechanisms for investing in innovative projects

Source: Prepared by the author.

7. Business Development Services

The low-scale productive enterprises – and particularly the micro enterprises – usually have a limited stock of managerial knowledge and skills that, on numerous occasions, are managed by their owners. Such restriction of management skills hinders those enterprises from optimal management of resources, thus limiting their competitiveness. Added to this, the lack of administrative capacity sends negative indicators to credit markets, imposing significant barriers to financial leverage of the SMEs. For some enterprises, lack of knowledge and management skills is a constraint to the full performance of their potential while, for other enterprises, the lack of these skills can mean the difference between operating and closing.

Ceteris paribus, increases of the stock of knowledge and management skills will promote the consolidation of a more productive and competitive business ecosystem in the region, facilitating the generation of virtuous circles and the overflow of external benefits for the rest of society.

However, acquisition of such tools requires a significant investment of resources, particularly for low scale production enterprises. Since social benefits are usually not incorporated by enterprises in their decision function, SMEs will only invest in expanding their stock of knowledge and management skills while the profits perceived are greater than the cost of acquiring these tools. In social terms, the above would lead to sub-optimal levels of knowledge and management skills, which could result in a limitation to the competitiveness of local enterprises and productive development of the region. In this regard, the intervention of the Public Sector in this area is often justified from a microeconomic point of view.

A possibility for intervention by the Public Sector in order to increase the stock of knowledge and management skills is the provision of business development services. This document conforms to the definition of IDB (1996) and provides services for business development as "... training, transfer of technology, marketing support, business counselling, tutoring and information designed to help small and micro enterprises to improve the performance of their enterprises". In general terms,

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business development services help the SMEs to absorb fundamental capabilities for their production process, without investing large amounts of money or time on it.

Such services may be provided directly by the Public Sector (for example, through national or regional training systems), or may, at the other end, be provided entirely by the Private Sector (with or without participation of the Public Sector as a payer or coordinator). Regardless of the role that the State plays in terms of provision and payment of these services, the strategy of productive development in Latin America and the Caribbean will benefit if the governments in the region have a long term strategy for the provision of business development services, as well as an effective institutional division of tasks and responsibilities, thus reducing excess effort and allowing efficient use of limited resources for the development of SMEs.

This dimension of the IPPALC gathers information on the current status of a set of key issues for effective and efficient supply of business development services for SMEs. Taking into consideration the asymmetry of existing knowledge and skills among small-scale enterprises, the dimension emphasizes the provision of such services for emerging enterprises.

Evaluation

The assessment of business development services is performed through two sub-dimensions: **i)** business development services and **ii)** information and promotion of business development services.

The sub-dimension *business development services*, including indicators aimed at assessing the supply, availability and accessibility to these services by the SMEs. The availability of business development services specifically aimed at the emerging enterprises are also assessed. Complementary to this, the sub-dimension assesses the institutional delegation of responsibilities and proficiency in the design, promotion and provision of business development services for SMEs.

In many cases, SMEs do not have information on the supply of business development services so, despite being interested and willing to use them, they do not access them. Therefore, the provision – direct or indirect – of business development services should be complemented with appropriate information and strategically aimed at the target groups: small-scale enterprises and emerging enterprises. The sub-dimension *information and promotion of business development services* is responsible particularly for assessment of the current status of the nations in this important aspect of the strategy that provide support services to the SMEs.

TABLE 9
Business Development Services. Sub-dimensions and indicators

7. BUSINESS DEVELOPMENT SERVICES	
Support services	Information and promotion of support services
<ul style="list-style-type: none"> ▪ Range of business services ▪ Availability of business services ▪ Access to business services ▪ Support services for start-ups ▪ Business services action plan ▪ Delegation of responsibility in the promotion, provision and evaluation of business services ▪ Establishment of one-stop shops for business services 	<ul style="list-style-type: none"> ▪ Information of business services through traditional channels ▪ Information of business services through electronic channels ▪ Promotion of e-commerce ▪ Promotion of e-government ▪ Portal for promotion of SMEs

Source: Prepared by the author.

8. Productive articulation

The enterprises that conduct their operations within ecosystems of high articulation⁴ and coordination participate in a series of collective dynamics that, in the long term, often yield benefits for those enterprises that, operating alone, would barely accomplish. According to IDB (2014), the benefits of cluster include "reduction of information asymmetries, generation of externalities for transfer of knowledge, strengthening scale economies and more facilities to generate public goods". The mechanisms that operate within clusters allow insertion of local enterprises into virtuous cycles that improve their productivity and competitiveness, while facilitating the inclusion of local businesses in activities with higher technological content and knowledge, thereby increasing the complexity of Latin American and Caribbean economic space. In this sense, business clusters are generally more productive than the sum of their parts.

However, not all interactions between enterprises are of the same "quality". That is, not all interactions optimize private company profits or generate the same amount of positive external effects for society. The probability that business interactions generate virtuous circles and external benefits is directly dependent on the level of articulation and coordination between the enterprises involved in this interaction. Therefore, it is imperative for the process of productive transformation of Latin America and the Caribbean that the nations move towards higher orders of productive articulation, and particularly geographic cluster of activities and industries.

It is important to consider that coordination and cooperation between enterprises is not always the result of market mechanisms. On the contrary, these mechanisms can lead to equilibrium in which high competition imposes coordination and cooperation costs, making it difficult to achieve certain potential benefits derived from productive clustering. Under frameworks of high competition, asymmetric information and poor reliability, State intervention can improve

⁴ "Following SELA (2014-a), by articulation reference is made to the "process of gearing efforts and seeking consensus under coordinated, cooperative [and also competitive] schemes of variable geometry in order to advance towards a common goal. As in the case of coordination, articulation aims to improve a specific situation in terms of the expected result in a non-cooperative scenario."

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coordination between enterprises and, in this way, increase aggregate productivity, thus helping generate positive overflows to the rest of society.

In this regard, a productive articulation strategy that is coherently designed and efficiently implemented has the potential to generate a set of conditions that promote the competitiveness of medium and low scale enterprises in the region. In particular, productive articulation policies can facilitate the transmission of tacit knowledge between local enterprises, as well as transfer of technology from multinational enterprises to local suppliers. Additionally, productive articulation policies can help local enterprises to make use of scale economies, reduce costs of specialized services and facilitate the internationalization of their production.

The eighth dimension of the IPPALC focuses on assessing multiple conditions necessary to encourage dynamic and competitive productive clusters in Latin America and the Caribbean. To this end, the dimension values the initiatives directly related to the formation of clusters, industrial and technological parks, etc. Also, the dimension assesses the progress status in terms of institutional adequacy and training necessary for the development and implementation of strategies for productive articulation. Finally, the dimension assesses the level of partnership consolidation and business networks as a complementary, yet essential element for the success of productive articulation policies.

Evaluation

The evaluation of productive articulation is done through two sub-dimensions: **i)** business networks and partnerships and **ii)** promotion of productive clusters.

The sub-dimension *business networks and associations* includes indicators aimed at assessing the consolidation of business partnerships as well as the variety and quality of services that they provide to their members. Similarly, the sub-dimension incorporates an indicator aimed at assessing the frequency of dialogue between business partnerships and the public sector, as a fundamental aspect for the development of public policies aligned with the realities of the private sector.

The sub-dimension *promotion of productive clusters* assesses the presence of a number of conditions necessary for the effective implementation of productive cluster policies. On one hand, it includes an assessment of institutional capacities to implement clustering policies. Also, the sub-dimension assesses the implementation of policies for clustering, both in the form of financial incentives, as through direct interventions (creation of industrial parks). It incorporates, in like manner, an assessment of the supply level of basic services that help SMEs to internalize the external effects of cluster.

TABLE 10
Associativity and productive articulation. Sub-dimensions and indicators

8. ASSOCIATIVITY AND PRODUCTIVE ARTICULATION	
Business networks and associations	Promotion of clusters
<ul style="list-style-type: none"> ▪ Degree of consolidation of business networks and associations ▪ Provision of services by business associations ▪ Frequency of dialogue between the public sector and business associations 	<ul style="list-style-type: none"> ▪ The government includes criteria of agglomeration economies in the design of public policies for SMEs ▪ Designing incentives for clustering ▪ Exchange of best practices on issues of clustering ▪ Industrial parks ▪ Broadband infrastructure for fast connection and flow of knowledge in clusters

Source: Prepared by the author.

9. Internationalization of SMEs

SMEs account for about 99% of enterprises operating in Latin America and the Caribbean and generate around 67% of jobs in the region. However, the involvement of such enterprises in total regional exports is at relatively low levels; between 5% and 10% of total exports. According to OECD, ECLAC & CAF (2013), in 2010, less than 12% of medium-sized enterprises and less than 10% of small-scale enterprises in the region exported – directly or indirectly – part of their production.⁵ On the other hand, as IDB (2014) shows, enterprises in Latin America and the Caribbean have lower export levels than would be expected when considering the level of relative development of the region. Also, the study reveals that export diversification of Latin American and Caribbean nations is generally less than diversification observed in other countries with equal levels of income per capita.

In the intra-regional scope the results are not very different. Despite the significant reduction in the tariff charge and increased mobility of production factors – unquestionable achievements of sub-regional integration mechanisms – Latin American and Caribbean SMEs usually get little benefit from internationalization opportunities offered by markets in the region.⁶

A significant proportion of the factors that determine the export orientation of SMEs are structural and therefore do not depend on the institutional, regulatory and public policy framework prevailing in the various markets in the region. However, there is a wide range of issues in which the Public Sector can intervene in order to encourage internationalization of the SMEs. These factors are often associated with important information asymmetries existing in international trade, as well as the lack of basic skills among local producers, the limited access to financing and coordination failures within the private sector - as well as among institutional sectors.

SMEs that manage to place their products in international markets usually receive a number of additional advantages over enterprises that are limited to operating within the confines of their own markets. Following the arguments of Harrison and Rodriguez-Clare (2010), enterprises competing in international markets participate in dynamics that facilitate the integration of tacit

⁵ Percentage that, for the same year, reached 25% and 20% of companies, respectively, in the European Union.

⁶ See SELA, 2014-a & 2014-b for an explanation of possible causes.

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knowledge into their production through processes such as "learning by doing". Likewise, these enterprises achieve greater advantage from scale economies and usually absorb technology at significantly higher rates than enterprises operating internally in their own markets.

From a microeconomic point of view, the aforementioned effects could result in increased competitiveness of SMEs in the region while, from a macroeconomic point of view, general increases in levels of competitiveness could translate into higher economic growth rates for Latin America and the Caribbean. Therefore, a fundamental aspect for the productive development strategy of the region will be the consolidation of higher orders of internationalization of Latin American and Caribbean SMEs.

The ninth dimension of IPPALC presents to decision makers a comprehensive view of the progress of their nations in terms of policies for the internationalization of SMEs. The dimension seeks to identify various focal points for efficient intervention of the Public Sector in the interests of internationalization. Since internationalization policies cover a wide range of interventions, the dimension is confined to the evaluation of policies for promotion, simplification of export processes, attracting FDI and formation of productive chains. Also, it incorporates a particular assessment of initiatives aimed at maximizing intra-regional exports of Latin American and Caribbean SMEs.

Evaluation

The evaluation of internationalization of SMEs is performed through four sub-dimensions: **i)** implementation of a pro-active trade policy, **ii)** simplification of processes for international trade, **iii)** policy to attract FDI and consolidate productive chains, and **iv)** achievement of benefits derived from the Latin American and Caribbean integration.

The sub-dimension *implementation of a proactive trade policy* includes assessment of the current status of Latin American and Caribbean nations in terms of export promotion for SMEs. The sub-dimension also assesses the supply of information and technical advice to SMEs on the structures of international markets and export opportunities. Finally, with relatively low weighting, given that it has been assessed indirectly in other dimensions, it values the existence of financial facilities for exporting SMEs in the region.

The sub-dimension *simplifying processes for international trade* aims at assessing the current status of efforts to reduce costs and time for exports. Specifically, the sub-dimension assesses the level of computerization of international trade processes and the establishment of single contacts for export. Also, considering the high cost of gathering information for SMEs, the sub-dimension assesses the supply of specific information on regulations and technical requirements for exports.

The third sub-dimension assesses the status of the policy for attracting FDI and formation of productive chains, as both aspects are fundamental for promoting the internationalization of small and medium enterprises. On the one hand, most of the exports of the region have as their origin the transnational companies and the SMEs often act as suppliers for these companies. In this sense, the attraction of Direct Foreign Investment can help indirect internationalization of production of the SMEs. On the other hand, policies aimed at including local businesses as links in the Global Value Chains (GVC) complement cluster policies (usually at the sub-national level), allowing SMEs in the region to market their products and services outside their conventional markets without incurring the total costs associated with the internationalization of their production.

The last sub-dimension assesses multiple initiatives to increase the participation of SMEs in Latin American and Caribbean markets. While such initiatives are conceptually different, progress in any would result in greater utilization of preferential trade conditions – on the part of SMEs – within mechanisms of sub-regional integration, as well as among the Latin America and Caribbean nations that subscribe Free Trade Agreements.

TABLE 11
Internationalization of SMEs. Sub-dimensions and indicators

9. INTERNATIONALIZATION OF SMES		
Implementation of a proactive trade policy	Simplification of procedures for international trade	Realization of the benefits derived from the Latin American and Caribbean integration
<ul style="list-style-type: none"> ▪ SME export promotion strategy ▪ SME export promotion agency ▪ Providing information and advice to SMEs on the structure of international markets ▪ Export capacity building ▪ Exchange of best practices in training SMEs for export ▪ Financial incentives for export 	<ul style="list-style-type: none"> ▪ Level of computerization of procedures for international trade ▪ Information and advice on regulations and procedures related to international trade ▪ Information on requirements for access of products to the major trading partners of the nation ▪ Establishment of one-stop shops for international trade 	<ul style="list-style-type: none"> ▪ Information on opportunities and facilities derived from the subregional integration for SMEs ▪ Government strategy for the formation of regional or subregional clusters ▪ Government strategy for the formation of regional or subregional productive linkages

Source: Prepared by the author

III. QUANTIFICATION OF RESULTS

As mentioned above, the SME Policy Index for Latin America and the Caribbean IPPALC consists of nine (9) dimensions, twenty-five (25) sub-dimensions and one hundred and twenty (122) indicators of public policy. Each indicator is rated on a scale of 5 levels. Generally, the rating scale focuses on the level of implementation of a policy, law or regulation to SMEs. Level 1 is used to represent the total absence of public policies or institutions in a particular subject area, while level 5 represents the best international practices in the specific topic to be evaluated. That is, a better implementation of public policies for SMEs is matched with a score of greater magnitude. Table 12 contains a conceptual IPPALC rating scale; taken from the original OECD methodology.

TABLE 12
Conceptual scale to value indicators

Level 1	Level 2	Level 3	Level 4	Level 5
There is no law, institution, tool, information or service in place to cover the area concerned	There is a draft law, institution, tool, information or service and there are some signs of government activity to address the area concerned	A solid legal and/or institutional framework is in place for the area concerned.	Level 3 + some concrete indications of effective policy implementation of the law, institution or tool	Level 3 + some significant record of concrete and effective policy implementation of the law, institution, tool or service. This level comes closest to good practices identified for OECD countries

Source: OECD (2014).

One of the fundamental processes for building IPPALC focuses on establishing particular rating scales for each indicator, without deviating, of course, from the common logic of assessment presented in Table 12. In this regard, a fundamental aspect for implementation of IPPALC is to seek the consensus among nations as to the specific criteria for the assessment of each indicator. The choice of assessment probes should be done in the early stages of implementation of the tool to ensure homogeneity of information gathered at later stages.

To add the individual results of the indicators in sub-dimensional and, later, in dimensions, IPPALC uses a weighting system that recognizes the existence of priorities in the implementation of public policies for SMEs that facilitate productive development of the region. The indicators and sub-dimensions of relatively greater importance for the transformation of the business ecosystem receive a score of 3 points, while indicators and sub-dimensions that meet complementary roles in the productive development of the region receive a score of 2 points or 1 point.

As in the case of common criteria for assessing indicators, achieving early consensus regarding the weighting of indicators and sub-dimensions is a key element for IPPALC implementation. Conciliation of weightings would avoid difficulties arising from the divergence of criteria among countries in later stages of the implementation of the tool. The weighting that SELA presents in this document is based on the OECD methodology for the development of Indices in other sub-regions.

EQUATION 1

Aggregation process of indicators and sub-dimensions in the IPPALC dimensions

$$\sum_{j=1}^n \left\{ \left[\sum_{k=1}^n \left(Ind_{i,t} \times \frac{Pond_{i,t}}{\sum_{i=1}^n Pond_{i,t}} \right) \right] \times \frac{PondSD_k}{\sum_{k=1}^n PondSD_k} \right\}$$

Equation 1 shows the aggregation process of indicators and sub-dimensions⁷. On its part, the aggregate output of the tool, the Index, is obtained through a simple average of the various dimensions of public policy for SMEs⁸

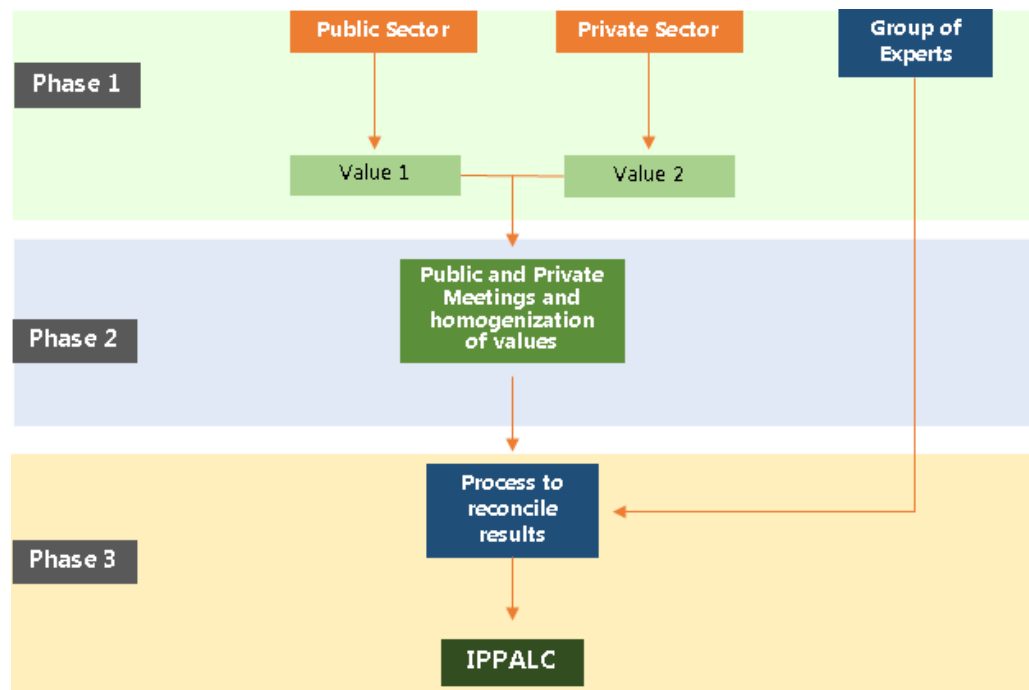
⁷ In Equation 1, the variable $Ind_{i,t}$ refers to the i-th indicator of the k-th sub-dimension of the j-th dimension. Likewise, $Pond_{i,t}$ refers to the i-th weighting of the k-th sub-dimension of the j-th dimension. Finally, $PondSD_k$ refers to the weighting of the k-th sub-dimension of the j-th dimension.

⁸ The use of a simple average for the dimensions is based on the idea that all subject areas included in the indicator are necessary for the configuration of a productive and competitive business ecosystem in LAC.

IV. EVALUATION

Given the qualitative nature of the information that feeds the IPPALC, the assessment process of the indicators of public policy for SMEs has been carefully designed and should be rigorously implemented to avoid bias and inconsistent measurements. In this regard, the IPPALC contemplates a titration process and conciliation of results in three phases, as shown in Chart 3.

CHART 3
Evaluation process of the IPPALC



Source: Prepared by the author.

In the first phase of the assessment process, the organizations from the Public Sector with competence in each subject received assessment probes previously accepted by all nations. Similarly, non-governmental organizations in each country - with proven experience in the specific area to be assessed - are supplied with assessment grids. Subsequently, agents in both institutional sectors proceed to assess indicators of public policies for SMEs according to the five previously established levels.

In the second phase of the assessment process public-private meetings are conducted to allow the homogenization of the valuations of the agents in both institutional sectors. Valuations at this stage, which achieve convergence to a single result accepted by both institutional sectors, are passed to the weighting and aggregation process for the conformation of IPPALC.

However, indicators that cannot be conciliated in public-private meetings move to the third stage of the assessment process. At this stage, the divergent assessments are adjusted by groups of experts in consultation organizations that are responsible for the implementation of the IPPALC. The results obtained at the end of this phase of the assessment process pass to the process of weighting and aggregation, thus forming the final version of the IPPALC.

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V. FINAL REMARKS

The key factor to the success of IPPALC as an analytical tool for the development of public policies for SMEs in the region will be achieving consensus among participating nations. From the early stage of conceptualization of the dimensions, sub-dimensions and indicators to be included in the Index, coordinators elected by each nation must participate in a process of open dialogue which derive a consensus on three key elements: **i)** what information should be assessed, **ii)** what criteria should be used to assess such information and **iii)** what weight is assigned to each piece of information gathered.

By overcoming the difficulties arising from the divergence of criteria among nations, the Index will prove a useful tool for public policy makers in the region. Yet, the IPPALC is far from providing a complete analytical framework for designing and implementing policies for SMEs. The Index only takes into account elements directly related to the promotion of SMEs in the region. However, it does not incorporate other elements that, although they are not directly related to public policy for SMEs, help shape the environment in which these enterprises operate. These elements highlight the stability of the macroeconomic environment, basic and diversified quality education, legal security, public safety, etc. In this regard, the use of IPPALC as a complementary tool is suggested, but does not substitute, traditional analytical tools for determining competitive and dynamic ecosystems.

On the other hand, the version of the IPPALC contained herein lacks indicators to assess the effectiveness and efficiency of policies for SMEs in the region. These indicators have been deliberately excluded because they blur the objective that guides the current version of the Index. However, successive versions of IPPALC could be widely favoured by including such assessments. In fact, the new OECD methodology (to be published between 2015 and 2016) will include indicators of effectiveness and efficiency to give policymakers a more complete tool for decision making.

Likewise, SELA has identified a set of elements directly related to the public policy framework for SMEs, whose inclusion in the Index may be useful for configuring a holistic tool that allows greater analytical breakdown of essential variables for the productive development of Latin America and the Caribbean. These elements include (but are not limited to):

- Technical training of the Public Sector for the design, implementation and assessment of public policies for SMEs
- Connectivity between SMEs and Multinational Enterprises
- Training of SMEs for compliance of standards and technical regulations
- Policies for facilitating self-discovery process of SMEs
- Use of public procurement as a tool to bring dynamism to the SMEs environment
- Technical training of the Public Sector for the efficient resolution of coordination failures

- Entrepreneurship for minority and excluded groups
- SMEs in a green economy
- Profits gained from sub-regional integration processes

The implementation of a common framework, carefully built, for the assessment of public policies for SMEs will be a key tool for the creation of a business ecosystem that contributes to the transformation and productive articulation of Latin America and the Caribbean. In particular, the IPPALC will be instrumental for the design and implementation of public policies aimed at strengthening the SME environment in the region and, likewise, will open a new window of opportunities for cooperation, coordination and joint efforts among Latin American and Caribbean nations towards achieving a common goal: productive development of the region.

A N N E X I

**INDEX OF PUBLIC POLICIES FOR SMEs IN LATIN AMERICA
AND THE CARIBBEAN**

		Weight
1 INSTITUTIONAL AND REGULATORY FRAMEWORK		
1.1	Institutional framework	3
1.1.1.	Definition of SMEs	2
1.1.2.	Government coordination of SME policy-making	3
1.2.3	Agency for the implementation of public policies for SMEs	2
1.1.4	Development strategy for SMEs	3
1.1.5	Policies for migration of SMEs to the formal sector	1
1.2	Effective legislation and administrative simplification	2
1.2.1	Delegation of responsibility for regulatory reform and administrative simplification	3
1.2.2	Strategy for simplification of administrative procedures	3
1.2.3	Simplification of current regulatory framework	2
1.2.4	Elimination of redundant regulations	2
1.2.5	Application of regulatory impact analysis	1
1.3	Public-private consultations	2
1.3.1	Frequency and transparency of public-private consultations	3
1.3.2	Influence and representativeness of private-public consultations	2
1.4	Think small first	1
1.4	The design of public policies and regulations explicitly consider the interests of SMEs	1
2 ACCESS TO FINANCE		
2.1	Legal and regulatory framework	3
2.1.1	Credit market regulations	3
2.1.2	Regulations on collateral requirements	2
2.1.3	Collection of credit information on SMEs	2
2.1.4	Cadastre	3
2.2	Efficient bankruptcy procedures	2
2.2.1	Review of bankruptcy laws	3
2.2.2	Bankruptcy time (World Bank, Doing Business)	1
2.2.3	Cost, % of the estate (World Bank, Doing Business)	1
2.2.4	Recovery rate, % of the estate (World Bank, Doing Business)	1
2.2.5	Access to credit after bankruptcy	1
2.2.6	No discrimination against entrepreneurs after bankruptcy (second chance)	1
2.3	Sources of finance for SMEs	3
2.3.1	Access to stock market	2
2.3.2	Access to risk capital	2
2.3.3	Access to angel investment	1
2.3.4	Access to microfinances	2
2.3.5	Access to financial leasing	2
2.3.6	Credit ratings for SMEs	2
2.3.7	Credit guarantees	2

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2.4	Investor friendly tax regime	2
2.4.1	Analysis of tax barriers to SME financing through equity and venture capital	1
2.4.2	Updated analysis of tax burden for SMEs	2
2.4.3	Analysis of tax compliance costs	1
2.4.4	Treatment of losses	2
2.5	Financial literacy	1
2.5.1	Financial literacy programmes for entrepreneurs	1
3	OPERATIONAL ENVIRONMENT/ SIMPLIFICATION OF PROCEDURES	
3.1	Company registration	2
3.1.1	Cost of obtaining the registration certificate	2
3.1.2	Time for obtaining the registration certificate (World Bank, Doing Business)	1
3.1.3	Number of administrative procedures for obtaining a registration certificate (World Bank, Doing Business)	1
3.1.4	Cost of starting a business (World Bank, Doing Business)	2
3.1.5	Time for starting a business (World Bank, Doing Business)	1
3.1.6	Silence is consent to registration procedure	2
3.1.7	Capital requirements	2
3.1.8	One-stop registration	3
3.2	E-government	2
<i>3.2.1</i>	<i>Provision of e-government services</i>	
3.2.1.1	Payment of taxes	2
3.2.1.2	Social Security	2
3.2.1.3	Cadastres	2
3.2.1.4	Pensions	2
3.2.1.5	Business Statistical Report	1
3.2.1.6	On-line registration	1
<i>3.2.2</i>	<i>E-government infrastructure</i>	
3.2.2.1	Update on e-government portals	1
3.2.2.2	Connection between databases on e-government portals	1
3.2.2.3	User-friendly interfaces on e-government portals	1
3.2.2.4	Use of digital signatures	2
4	ENTREPRENEURIAL EDUCATION	
4.1	Public policy framework for entrepreneurial education	3
4.1.1	Strategy for the promotion of formal entrepreneurial education	3
4.1.2	Strategy for the promotion of non-formal entrepreneurial education	3
4.1.3	Monitoring and evaluation of policies for entrepreneurial education	2
4.1.4	Government coordination and delegation of responsibilities for entrepreneurial education	2
4.1.5	Strategy for the promotion of women's entrepreneurial education	1
4.2	Entrepreneurial education in primary and secondary education	3
4.2.1	Penetration of entrepreneurial education in primary education	3

4.2.2	Exchange of best practices on entrepreneurial education in primary education	1
4.2.3	Penetration of entrepreneurial education in secondary education	3
4.2.4	Exchange of best practices on entrepreneurial education in secondary education	1
4.3	Entrepreneurial education in higher education	3
4.3.1	Penetration of entrepreneurial education in higher education	3
4.3.2	Cooperation between private enterprises and universities	2
4.3.3	Exchange of best practices on entrepreneurial education in higher education	1
5	TRAINING AND CAPACITY BUILDING	
5.1	Research programmes on training needs	3
5.2	Availability of training programmes	2
5.3	Availability of training for start-ups	2
5.4	Availability of training on international standards and structure of international markets	1
5.5	Availability of training for women entrepreneurs	2
5.6	Implementation of a quality assurance system for training offered	1
5.7	Public funds for consultancy, information and training for growing companies	1
5.8	Training for fastest-growing companies	2
6	INNOVATION, TECHNOLOGICAL ADAPTATION AND TECHNOLOGY TRANSFER	
6.1	Institutional framework for innovation and technology transfer	3
6.1.1	Public policy strategies for innovation	3
6.1.2	Delegation of responsibility in the design, implementation and monitoring of innovation policies	2
6.1.3	Budget provision for projects related to innovation	2
6.1.4	Framework of Intellectual Property Rights to promote innovation	3
6.2	Support services for innovation and technology transfer	2
6.2.1	Establishment of innovation centres and technology parks	2
6.2.2	Information on support services for innovation	1
6.2.3	Links between research institutes and private enterprises	2
6.2.4	Research grants for private enterprises	1
6.2.5	Technology incubators	2
6.3	Financing for innovation	2
6.3.1	Tax credits for innovation-related activities	2
6.3.2	Financial support for innovation	2
6.3.3	Guarantee mechanisms for investing in innovative projects	1
7	BUSINESS DEVELOPMENT SERVICES	
7.1	Support services	3
7.1.1	Range of business services	2
7.1.2	Availability of business services	2
7.1.3	Access to business services	2
7.1.4	Support services for start-ups	1
7.1.5	Business services action plan	3

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7.1.6	Delegation of responsibility in the promotion, provision and evaluation of business services	3
7.1.7	Establishment of one-stop shops for business services	3
7.2	Information and promotion of support services	2
7.2.1	Information of business services through traditional channels	2
7.2.2	Information of business services through electronic channels	2
7.2.3	Promotion of e-commerce	1
7.2.4	Promotion of e-government	1
7.2.5	Portal for promotion of SMEs	1
8	ASSOCIATIVITY AND PRODUCTIVE ARTICULATION	
8.1	Business networks and associations	2
8.1.1	Degree of consolidation of business networks and associations	3
8.1.2	Provision of services by business associations	1
8.1.3	Frequency of dialogue between the public sector and business associations	2
8.2	Promotion of clusters	3
8.2.1	The government includes criteria of agglomeration economies in the design of public policies for SMEs	3
8.2.2	Designing incentives for clustering	2
8.2.3	Exchange of best practices on issues of clustering	1
8.2.4	Industrial Parks	2
8.2.5	Broadband infrastructure for fast connection and flow of knowledge in clusters	1
9	INTERNATIONALIZATION OF SMES	
9.1	Implementation of a proactive trade policy	3
9.1.1	SME export promotion strategy	3
9.1.2	SME export promotion agency	2
9.1.3	Providing information and advice to SMEs on the structure of international markets	2
9.1.4	Export capacity building	2
9.1.5	Exchange of best practices in training SMEs for export	1
9.1.6	Financial incentives for export	1
9.2	Simplification of procedures for international trade	2
9.2.1	Level of computerization of procedures for international trade	2
9.2.2	Information and advice on regulations and procedures related to international trade	1
9.2.3	Information on requirements for access of products to the major trading partners of the nation	1
9.2.4	Establishment of one-stop shops for international trade	1
9.3	Policy of attracting FDI and productive linkages	3
9.3.1	Strategy for the inclusion of SMEs in global value chains	2
9.3.2	FDI attraction strategy	2
9.3.3	Investment promotion agency	1

9.4	Realization of the benefits derived from the Latin American and Caribbean integration	3
9.4.1	Information on opportunities and facilities derived from the subregional integration for SMEs	3
9.4.2	Government strategy for the formation of regional or subregional clusters	2
9.4.3	Government strategy for the formation of regional or subregional productive linkages	2

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