GEM

ENTREPRENEURSHIP IN THE CARIBBEAN REGION

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ENTREPRENEURSHIP IN THE CARIBBEAN REGION

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LIST OF ABBREVIATIONS

APS: Adult Population Survey
EB: Established Business
EU: European Union
EFC: Entrepreneurial Framework Condition
GEM: Global Entrepreneurship Monitor
GNPPC: Gross National Product Per Capita
GNP: Gross National Product
IDRC: International Development Research Centre of Canada
MSME: Micro, Small and Medium Enterprises
NES: National Experts Survey
OCDE: Organization for Economic Co-operation and Development
PPP: Purchase Power Parity
R&D: Research and Development
SV: Secondary Variables
SBDC: Small Business Development Centers
TEA: Total Early-Stage Entrepreneurial Activity
USD: United State Dollar
UN: United Nations
WEF: World Economic Forum

INTRODUCTION 1

The Global Entrepreneurship Monitor (GEM) project is an annual assessment of the entrepreneurial activity, aspirations and attitudes of individuals across a wide range of countries. Initiated in 1999 as a partnership between London Business School and Babson College, the first study covered 10 countries; since then nearly 100 'National Teams' from every corner of the globe have participated in the project, which continues to grow annually.

GEM is unique because, unlike other entrepreneurship data sets that measure newer and smaller firms, GEM studies the behavior of individuals with respect to starting and managing a business. This approach provides a more detailed picture of entrepreneurial activity than the one that could be found in official national registry data sets.

GEM focuses in these main objectives:

- To allow comparisons about the levels and characteristics of entrepreneurial activity among different economies.
- To determine the extent to which entrepreneurial activity influences economic growth within individual economies.
- To identify factors which encourage and/or hinder entrepreneurial activity.

- To guide the formulation of effective and targeted policies aimed at stimulating entrepreneurship.

GEM provides a comprehensive view of entrepreneurship across the globe by measuring the attitudes of the population, and the activities and characteristics of individuals involved in various phases and types of entrepreneurial activity. Research teams in each participating economy administer an Adult Population Survey (APS) of at least 2.000 adults annually. Complementing the APS is a National Expert Survey (NES), which provides in-depth opinions from selected national experts in the factors that impact the nature and level of entrepreneurship in each economy.

In 2013, more than 197.000 individuals were surveyed and approximately 3.800 national experts on entrepreneurship participated in the study across 70 countries, collectively representing 75% of the world´s population and 90% of the world's total GDP.

As a country becomes more competitive, productivity will increase and wages will rise with advancing development. Countries will then move into the efficiency-driven stage of development, when they must begin to develop more efficient production processes and increase product quality because wages have risen and they cannot increase prices. At this point, competitiveness is increasingly driven by higher education and training, efficient goods markets, well-functioning labor markets, developed financial markets, the ability to harness the benefits of existing technologies, and a large domestic or foreign market.

Finally, as countries move into the innovation-driven stage, wages will have risen by so much that they will be able to sustain those higher wages and the associated standard of living only if their businesses are able to compete with new and unique products. At this stage, companies must compete by producing new and different goods using the most sophisticated production processes and by innovating new ones.

GEM CARIBBEAN 2

GEM Caribbean is a four-year project, supported by Canada´s International Development Research Centre (IDRC), that will establish, train, and strengthen entrepreneurship research teams in: Colombia, Jamaica, Suriname, Trinidad & Tobago and Barbados.

The research done by these teams, will measure the levels, underlying factors, and environmental constraints of entrepreneurship within each national environment and comparatively within the region by using the Global Entrepreneurship Monitor (GEM) methodology. The findings can assist policymakers, educators, and researchers (both applied and theory building) in creating supportive environments that encourage job creation and inclusive economic development through growth in entrepreneurship.

The overall objective of this project is to build research capacities on entrepreneurship and to provide policymakers with a stronger empirical foundation on which to build and monitor progress in the promotion of entrepreneurship and job creation in the Caribbean.

The specific objectives include:

- To build the capacity of national research teams to conduct entrepreneurship research, to report and disseminate their findings, and to sustain their work in the long-term.

- To generate research findings on entrepreneurship on a national and regional level, with a focus on high-growth entrepreneurship, particularly among youth and women as well as on creative industries in the Caribbean

- To facilitate discussion of these research findings and policy recommendations among the private sector, policy makers, educators, and researchers, particularly regarding promotion of high-growth entrepreneurship, gender and entrepreneurship.

- To generate a harmonized database on entrepreneurship in the Caribbean, open to the public, from which independent researchers can conduct deeper analysis.

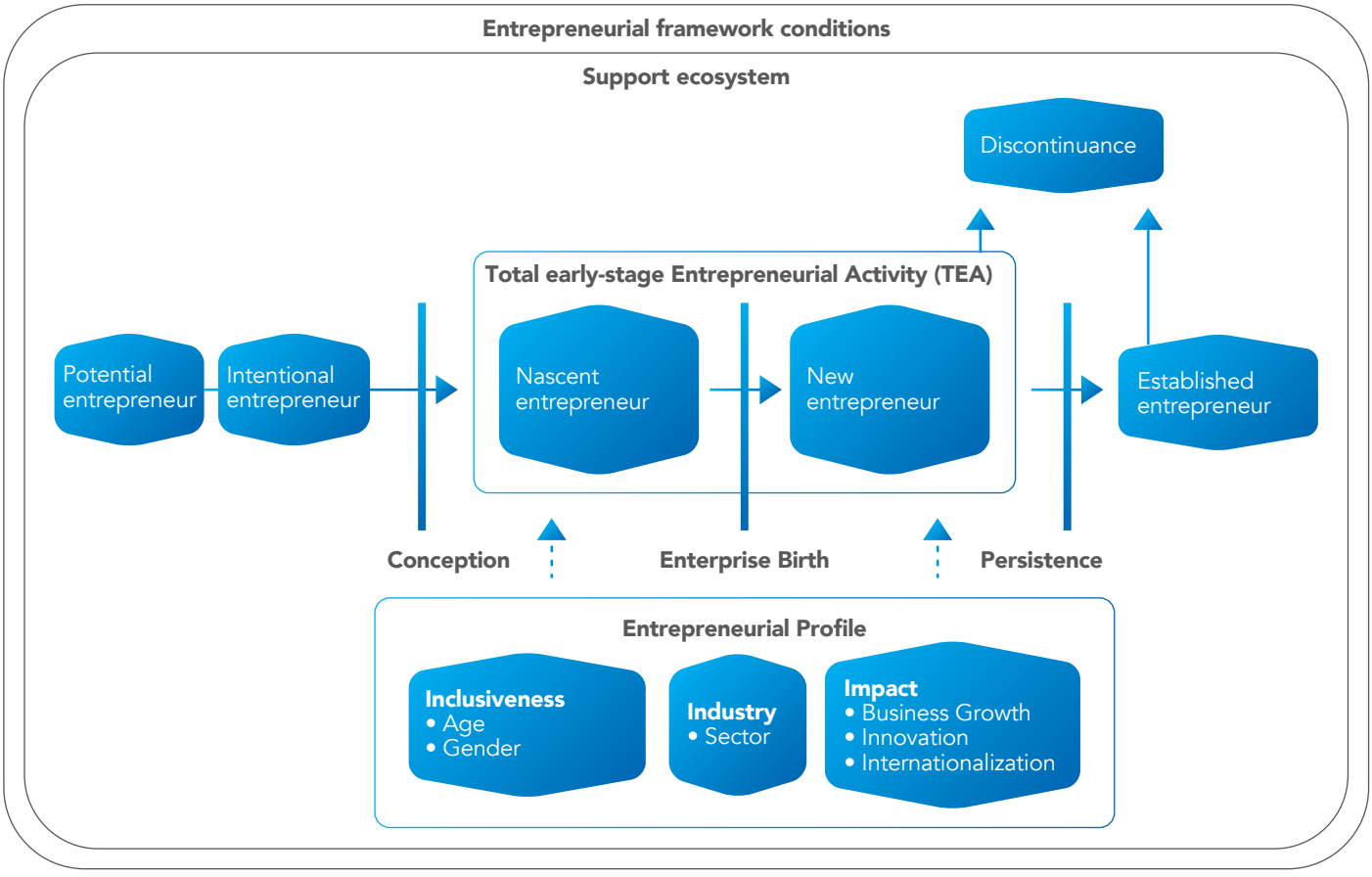
GEM MODEL 3

The GEM model defines the adult population as those aged between 18 and 64 years old. Since they are the object of the study, a representative sample is interviewed in order to learn about their attitudes, activities and aspirations towards the intention, creation, growth, and closure aspects of entrepreneurship. Figure 1 shows, with some adjustments, the main stages in which GEM divides the entrepreneurial process and how it classifies the entrepreneurs according to the level of their organizational development. The adjustments come from the "Entrepreneurial Pipeline" concept (Varela & Soler, 2013) which considers six main zones in the entrepreneurial process:

Socio Cultural Acceptance: The entrepreneurial process is a social process executed by people living in a specific cultural and social condition, for that reason the first stage measures the amount of people that have a positive perception on entrepreneurship. In the GEM research, people are asked if they consider that: 1) starting a new business is a good career choice, 2) they associate entrepreneurs with high status and 3) there is a lot of positive media attention for entrepreneurship.

A positive perception of the three concepts will foster motivation, professional orientation, commitment and resilience in people, thereby increasing the proportion of adults willing to try to start up new enterprises, and the number of

FIGURE 1. Entrepreneurial process



SOURCE: Adjusted by authors from Global Entrepreneurship Monitor 2013 Global Report (2014)

active entrepreneurs willing to keep their business growing.

Potential Entrepreneurs: The second stage in the entrepreneurial process determines the amount of people that have the potentiality to become an entrepreneur in the future. Potential Entrepreneurs are those who consider that they: are able to perceive opportunities in their area of living, have the necessary skills and abilities to create and manage a new business and have the capacity to overcome the fear of failure.

Intentional Entrepreneurs: The third stage in the entrepreneurial pipeline happens when the potential entrepreneurs express their intention of starting a new business alone or with others within the next three years.

Nascent Entrepreneurs: The fourth stage in the entrepreneurial pipeline happens when people have started to do specific activities in setting businesses and have paid salaries, wages or any other remuneration to employees and/or owners for less than three (3) months.

New Entrepreneurs: The fifth stage in the entrepreneurial pipeline happens when the people have been owned and managed a business and have paid salaries or any other remuneration to employees and/or owners for less than 42 months but more than 3 months.

Established Entrepreneurs: The sixth and final stage in the entrepreneurial pipeline happens when the people have owned and managed a new business that has survived for more than

42 months paying salaries or any other remuneration to employees and/or owners.

It is important for GEM not only to know the quantity of the adult population in any stages of the entrepreneurial pipeline in a given year, but also to understand the entrepreneurial profiles and/or the characteristics of the individuals who are in each of the stages. For this reason, the research takes into consideration variables associated to industry and impact, in addition, to demographic elements.

GEM developed a conceptual model (Figure 2) to explain the relationships that exist between socio economic environment variables, the entrepreneurial activity and the socioeconomic development indicators; and for that reason it measures those variables and correlates them with the indicators of the different stages of the pipeline.

The model explains how the social, cultural and political contexts of each country have an influence on three sets of conditions: Basic Requirements, Efficiency Enhancers, Innovation and sophistication factors; which are the critical factors for the value creation of the socioeconomic dynamism generated by the established firms and the new enterprises. The magnitude of the socioeconomic value creation is the defining variable of the socioeconomic development.

It is important to visualize that the socioeconomic development level expressed through several indicators (job generation, growth GNP, innovation, social and economic value, wealth distribution, etc), is affected by the entrepreneurial dynamic, expressed for the net value generated by enterprises (nascent, new and established) according to this equation:

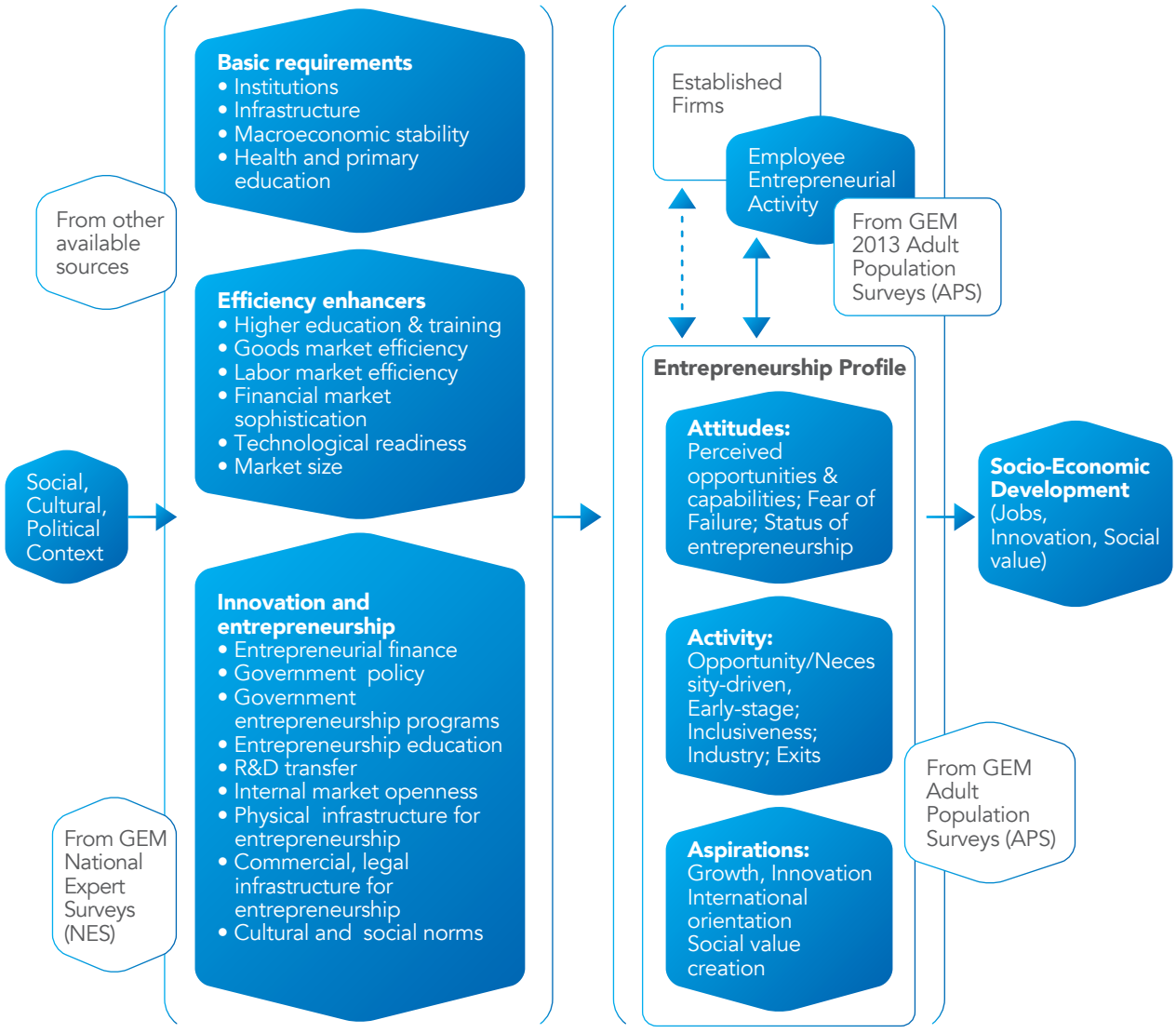
Net value generated = **Value added** (new businesses, innovation, expansion, growth) – **Value lost** (business discontinuance, obsolescence, decreasing)

In the case of established enterprises, the intern capacity of the enterprise and the employees to maintain a positive entrepreneurial dynamic (Net value generated) depends of the entrepreneurial orientation and the capacities that stimulate its managers, employees, labor, to create new sources of value (Intrapreneurship, corporate entrepreneur).

In the case of nascent and new enterprises, the critical factors for the positive entrepreneurial dynamic are associated to the profile of entrepreneurs expressed in their attitudes, activities and aspirations.

In order to increase the socioeconomic development of a country, appropriate policies must be formulated to foster the three sets of conditions so as to create more and better enterprises. The main role of GEM is to obtain measurements of different entrepreneurial variables in order to evaluate the effectiveness of these policies.

FIGURE 2. GEM model



SOURCE: Global Entrepreneurship Monitor 2013 Global Report (2014)

4 RESEARCH DESIGN

In order to compare results among participating countries, the methodology used in the GEM study is standardized worldwide, and it is composed of three basic processes:

The Adult Population Survey (APS) is a survey administered to the adult population aged 18-64. In the Caribbean region in 2013, around 12.327 surveys were conducted in Barbados, Colombia, Jamaica, Suriname and Trinidad & Tobago, representing statistically the population in terms of urban, rural, age, gender and economic strata. The surveys administered per country were: Barbados: 2.355, Colombia: 3.400, Jamaica: 2.246, Suriname: 2.290 and Trinidad & Tobago: 2.036.

These interviews to the adult population, measured multiple variables of the different types of entrepreneurs, but the main measurement is the proportion of individuals (18-64) who belong to the following three categories. "Nascent entrepreneurs", "New entrepreneurs" and "Established entrepreneurs". The first two groups: nascent entrepreneurs and new entrepreneurs are added to measure the Total Early Entrepreneurial Activity known as TEA. Additionally, the interviews measured the attitudes, aspirations and intentions regarding entrepreneurial activity, entrepreneurial profiles, businesses discontinuance and many other variables concerning entrepreneurs and their enterprises.

The National Expert Survey (NES) is a survey administered to national experts who evaluate nine conditions: financial support, government policies, governmental programs, education & training, R&D transfer, commercial & service infrastructure, openness of the market, physical infrastructure, cultural and social norms. In addition to that, the experts added their own perception on the following subjects: opportunity perceptions, skills for start-ups, motivation towards entrepreneurship, intellectual property legislation, support to woman entrepreneurs, support to business growth, innovation, well-being and youth entrepreneurship. In 2013, Barbados conducted 18 surveys, Colombia, Jamaica, Suriname and Trinidad & Tobago 36 surveys.

Secondary sources related to socioeconomic variables of the countries (Secondary Variables – SV), are composed of a series of data about each participant country which is fundamental for the basic requirements as well as for the efficiency enhancers, such as population, level of income, employment and unemployment rates, investment in research & development, commercial and physical infrastructure, competitiveness, risk indicators, corruption levels, national gross product per capita and ease in doing business within the country. This data is gathered by the central coordination team of the GEM project in London from sources such as: World Bank, International Monetary Fund, World Economic Forum, OCDE, UN, USA Census, EU, UNESCO, Doing Business Report, Heritage Foundation as well as from many other secondary sources of information.

5 MAIN RESULTS

This section presents the main results obtained from the adult population survey (APS). The GEM countries are integrated into geographic regions and into economic groups: factor driven, efficiency driven and innovation driven economies. According to this, Colombia, Barbados, Jamaica and Suriname were categorized in the efficiency driven economies while Trinidad & Tobago was categorized in the innovation driven economies.

In this report, comparisons will be made by years (2011, 2012 and 2013), between countries, geographic regions, and economic groups. It is important to take into account the following indications to better read this report: “Caribbean”, will be referring only to the group of following countries: Trinidad & Tobago, Barbados, Jamaica, Suriname, and Colombia. “Latin America & Caribbean” group will include the Caribbean and the following countries: Argentina, Brazil, Chile, Ecuador, Guatemala, Mexico, Panama, Peru, and Uruguay.

5.1 SOCIO CULTURAL PERCEPTION ABOUT ENTREPRENEURSHIP

The entrepreneurial process is a social process executed by people living in specific cultural and social conditions, for that reason the positive perception that society has on entrepreneurship is a necessary condition to motivate people to-

ward the entrepreneurial process. GEM asks if: 1) people consider starting a new business as a good career choice, 2) if people associate entrepreneurs with high status and 3) if there is a lot of positive media attention for entrepreneurship.

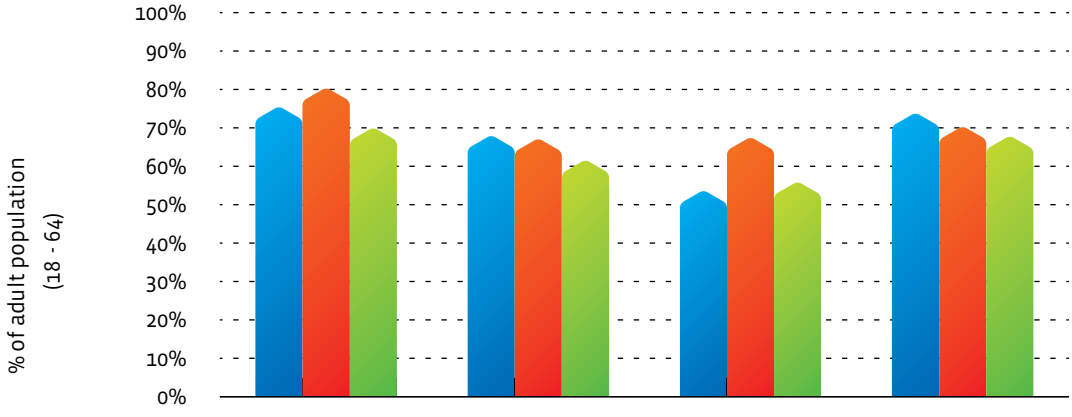
The social perception of entrepreneurship is the starting point of the entrepreneurial process because, if society has a positive perception towards entrepreneurship, more new entrepreneurs may decide to start a new business.

As indicated on Figure 3, in all three variables, Latin America and Caribbean shows better average results than the ones obtained by the efficiency-driven and the innovation-driven economies. Compared to the factor-driven economies, Latin America & Caribbean show a lower perception in all the three factors: "good career choice", "high status" and "media coverage".

Figure 4 shows the results for these three factors in 2011, 2012 and 2013 for Trinidad & Tobago, Suriname, Jamaica, Barbados, Colombia and the Latin America & the Caribbean, and some interesting points could be identified:

- In Jamaica and Trinidad & Tobago, the perception of entrepreneurship as a good career choice has been decreasing since 2011, but, in Colombia and Barbados the perception has been increasing.
- In all the three years, Colombia has maintained the highest percentage of people that consider entrepreneurship as a good career.
- Barbados has been improving in the three factors (career, status and media) along the years.
- In 2013, Jamaica obtained the best percentage in the "media" and "status" factors among the Caribbean countries.
- In Latin America & Caribbean, the "media" factor is the only one that shows improvement.

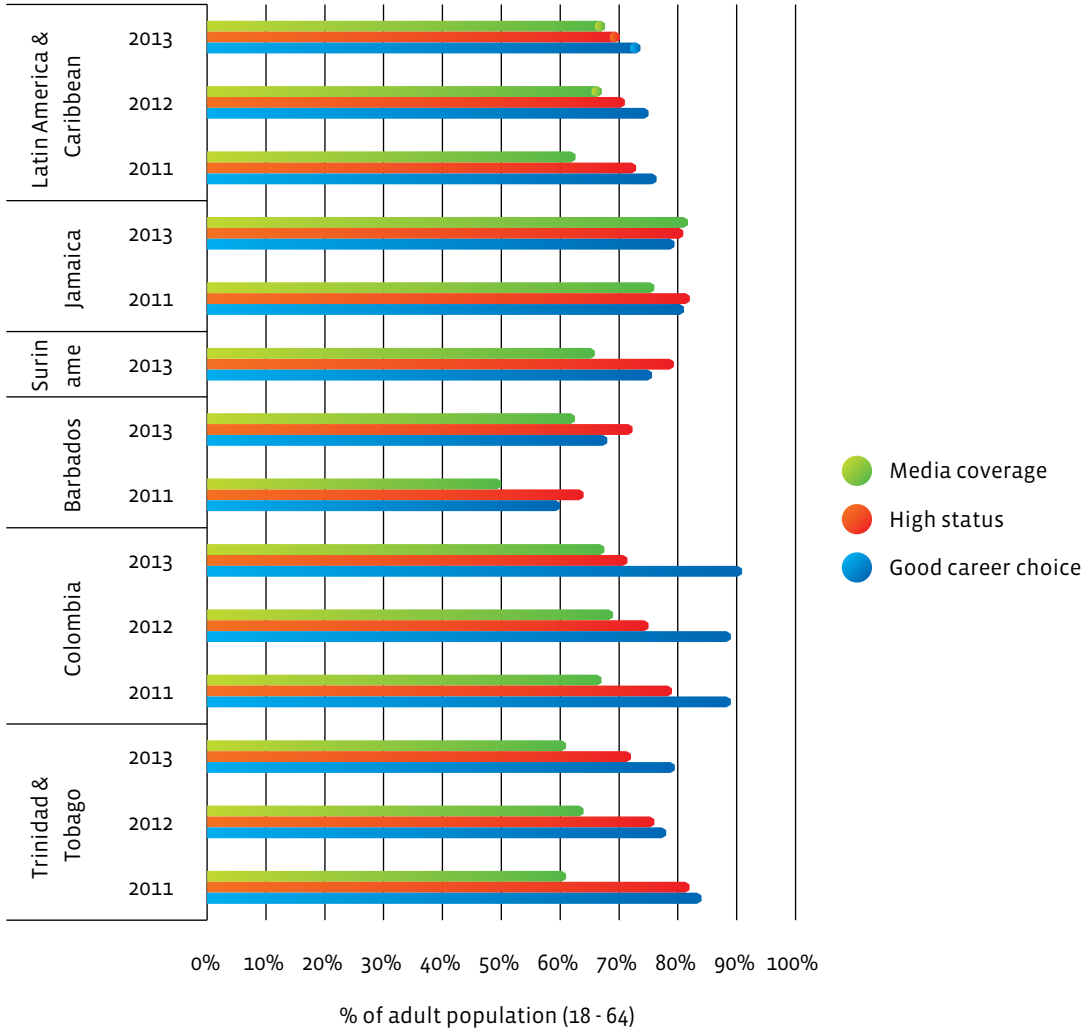
FIGURE 3. Socio-cultural perceptions about entrepreneurship vs. economic groups (2013)



	Factor - driven economies	Efficiency - driven economies	Innovation - driven economies	Latin America & Caribbean
Good career	75.3%	67.8%	53.5%	73.6%
High status	80.1%	67.0%	67.3%	70.1%
Media coverage	69.8%	61.4%	55.7%	67.6%

SOURCE: Compiled by authors.

FIGURE 4. Socio-cultural perception about entrepreneurship. Caribbean (2011-2013)



SOURCE: Compiled by authors.

- In Trinidad & Tobago and Colombia the "status" factor decreased from 2011 to 2013.

For the entrepreneurial pipeline concept, an arithmetic average of the percentages of people providing positive perception in the three factors (good career, status, media coverage) is obtained. Table 1 presents the results for the Caribbean countries and the economic and geographic groups.

Latin America & Caribbean presents a stable indicator along the years (2011-2013). The socio cultural indicator in Barbados, Jamaica and factor-driven economies has been increasing, but in Colombia, Trinidad & Tobago, efficiency-driven economies and innovation-driven economies the indicator decreased.

The fact that more people are finding entrepreneurship as a good career choice in Latin American & Caribbean environment is a very good indicator because it will allow having more entrepreneurs in the short medium and long range in the continent.

However, it is very important to reinforce the educational system and the media actions oriented to increase the status perception of the entrepreneurs; and to get a bigger media coverage about the successful local entrepreneurs and enterprises, in order to keep a high socio cultural perception about entrepreneurship.

The action of starting a new business depends mainly on the attitudes and values entrepreneurs have towards entrepreneurship, which are shaped and based on their experience and environment. Therefore, education, cultural norms, entrepreneurial attitudes, entrepreneurial attention and entrepreneurship perception will have a great influence in the country's entrepreneurial activity.

GEM research analyzes these aspects to understand the sociocultural framework of entrepreneurship in a country. The national experts evaluated the social and cultural norms, the entrepreneurial education and training, and the motivation for entrepreneurship. They were asked a series of statements which they had to score using a Likert scale from 1 to 5, where 5 indicates that the statement fosters entrepreneurship positively and 1 negatively. Statements such as the following ones were evaluated by the experts:

- The national culture is highly supportive of the individual's success achieved through his or her own personal efforts.
- The culture emphasizes self-sufficiency, autonomy, and personal initiative.
- The culture encourages entrepreneurial risk-taking.
- The culture encourages creativity and innovation.
- The culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her own life.
- Teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative.
- Teaching in primary and secondary education provides adequate instruction in market economic principles.
- Teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation.
- Colleges and universities provide good and adequate preparation for starting up and growing new firms.
- The level of business and management education provide good and adequate preparation for starting up and growing new firms.
- The vocational, professional, and continuous education systems provide good and adequate preparation for starting up and growing new firms.

TABLE 1. Socio cultural perception indicators (2011-2013)

	2011	2012	2013
Trinidad & Tobago	75.7%	72.7%	70.8%
Suriname	-	-	73.6%
Barbados	58.0%	-	67.6%
Jamaica	79.7%	-	80.7%
Colombia	78.3%	77.7%	76.6%
Latin America & Caribbean	70.6%	71.0%	70.4%
Factor driven	71.3%	74.7%	75.1%
Efficiency driven	66.3%	66.3%	65.4%
Innovation driven	61.3%	59.0%	58.8%

SOURCE: Compiled by authors.

TABLE 2. Socio cultural acceptance. NES (2012-2013)

	Colombia		Barbados		Jamaica		Suriname	Trinidad & Tobago		Caribbean	
	2012	2013	2012	2013	2012	2013	2013	2012	2013	2012	2013
Education and training	3.0	2.7	2.8	2.4	3.8	2.9	2.7	2.6	2.6	3.1	2.6
Cultural and social norms	2.8	3.1	2.5	2.5	2.6	3.6	2.9	2.6	3.1	2.6	3.0
Motivation for entrepreneurship	3.1	3.7	3.5	3.2	3.9	4.3	3.5	3.5	3.5	3.5	3.7

SOURCE: Compiled by authors.

- The creation of new ventures is considered an appropriate way to become rich.
- Most people consider becoming an entrepreneur as a desirable career choice.
- Successful entrepreneurs have a high level of status and respect.
- Often the mass media publish stories about successful entrepreneurs.
- Most people think of entrepreneurs as competent and resourceful individuals.

As shown on Table 2, the national experts in every country do not have a very positive perception about "cultural and social norms" and "education and training". In 2013, the lowest score (on EFCs) in all the countries was for "education and training" (decreased from 3.1 in 2012 to 2.6 in 2013, in the Caribbean region), and the indicator for "cultural and social norms" presented an increase from 2.6 in 2012 to 3.0 in 2012. This indicates that many new educational improvements should be implemented in order to improve the entrepreneurial culture in the countries.

5.2 POTENTIAL ENTREPRENEURS

The second stage in the entrepreneurial pipeline happens when people consider that they are able to perceive opportunities in their country, when they are confident in their ability to create and manage a new business and when they consider they have the capacity to overcome the fear of failure. In this stage, they have not embarked, in any actions, to start an enterprise, even though they believe they have the capacity to do it; for this reason they are called potential entrepreneurs.

Table 3, compares the three factors that define who is a potential entrepreneur in the three economic groups, Caribbean countries and the Latin America & the Caribbean region by years. Several points can be found:

- In perceived opportunities, Trinidad & Tobago and Colombia show a decrease from 2011 to 2013, but the Latin America & the Caribbean region presents a stable indicator. In 2013, Latin America & the Caribbean shows better results than the efficiency-driven economies and the innovation-driven economies, but lower than the factor-driven economies. The perceived opportunities in the factor-driven economies present a significant increase from 2011 to 2013 (12%).

- In perceived capabilities, the factor-driven economies and Barbados improved their perception, and Trinidad & Tobago presented a decrease in the 2011-2013 period. The Latin America & the Caribbean countries present better results than efficiency, innovation, but lower than the factor driven economies.

- In terms of people that consider they have the capacity to overcome the fear of fail-

ure, the Latin America & the Caribbean region shows along the years a higher perception than the three economic groups.

Figure 5 shows differences among the three factors of the "potential entrepreneur" indicator in the Caribbean countries and in Latin America & Caribbean region. In 2013, Colombia presents the highest value (68%) in the capacity to perceive opportunities and Barbados the lowest (46%); Trinidad & Tobago (75%), Jamaica (79%) and Barbados (75%) are the leaders in terms of the perception about the capacities to create and to manage a new business, but Colombia (58%) and Suriname (54%) have the lowest percentage. Colombia (32%) shows more fear of failure than Trinidad & Tobago (20%) and Barbados (23%).

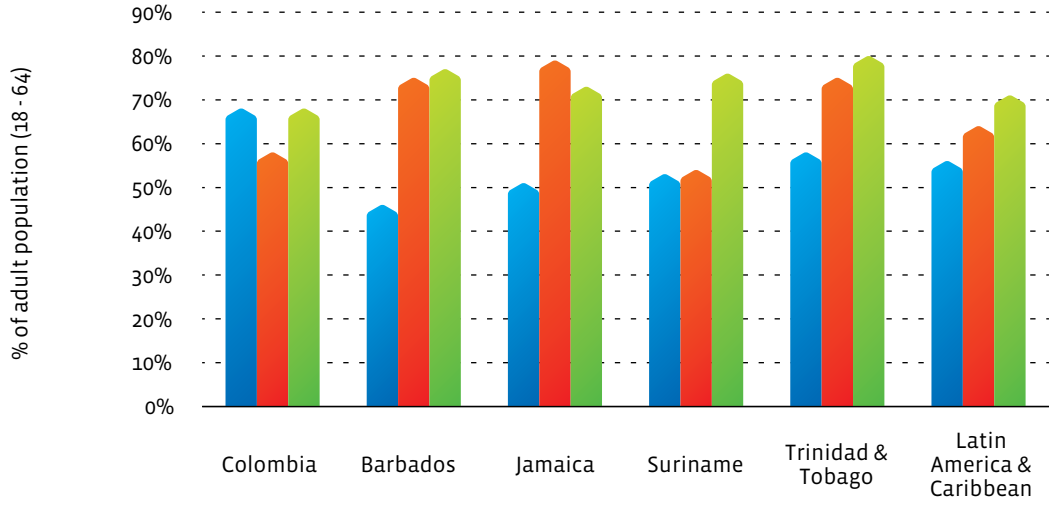
For the entrepreneurial pipeline concept, an arithmetic average of the percentage obtained in: "perceived opportunities", "per-

TABLE 3. Potential entrepreneurs. (2011-2013)

		Potential Entrepreneurs			
		Perceived opportunities	Perceived capabilities	Fearless of failure	Fear of failure
Factor-driven economies	2011	49,0%	56,0%	63,0%	37,0%
	2012	63,0%	71,0%	72,0%	28,0%
	2013	60,8%	68,7%	69,0%	31,0%
Efficiency-driven economies	2011	40,0%	52,0%	68,0%	32,0%
	2012	41,0%	52,0%	68,0%	32,0%
	2013	41,7%	51,8%	66,2%	33,8%
Innovation-driven economies	2011	35,0%	41,0%	62,0%	38,0%
	2012	31,0%	36,0%	61,0%	39,0%
	2013	33,4%	40,6%	61,8%	38,2%
Colombia	2011	73,0%	61,0%	71,0%	29,0%
	2012	72,0%	57,0%	68,0%	32,0%
	2013	67,7%	57,8%	68,2%	31,8%
Barbados	2011	44,0%	67,0%	81,0%	19,0%
	2012	47,0%	70,0%	83,0%	17,0%
	2013	45,7%	74,5%	77,0%	23,0%
Jamaica	2011	49,0%	79,0%	71,0%	29,0%
	2013	51,2%	79,1%	73,0%	27,0%
Trinidad & Tobago	2011	62,0%	81,0%	83,0%	17,0%
	2012	59,0%	76,0%	83,0%	17,0%
	2013	58,0%	75,3%	80,2%	19,8%
Suriname	2013	52,7%	53,5%	75,6%	24,4%
Latin America & Caribbean	2011	54,0%	67,0%	73,0%	27,0%
	2012	53,0%	62,0%	72,0%	28,0%
	2013	55,9%	63,7%	71,1%	28,9%

SOURCE: Compiled by authors.

FIGURE 5. Potential entrepreneurs. (2013)



	Colombia	Barbados	Jamaica	Suriname	Trinidad & Tobago	Latin America & Caribbean
Perceived opportunities	68%	46%	51%	53%	58%	56%
Perceived capabilities	58%	75%	79%	54%	75%	64%
Fearless of failure	68%	77%	73%	76%	80%	71%

SOURCE: Compiled by authors.

ceived capabilities", and "fearless of failure" (complement of fear of failure), is developed to generate an indicator.

Table 4 presents this indicator in the Caribbean countries and the economic groups.

TABLE 4. Potential entrepreneur indicator (2011-2013)

	2011	2012	2013
Barbados	63.7%	66.7%	65.7%
Jamaica	65.0%	-	67.8%
Trinidad & Tobago	74.7%	72.7%	71.2%
Suriname	-	-	60.6%
Colombia	67.3%	64.6%	64.6%
Factor-driven	55.7%	68.7%	66.2%
Efficiency-driven	53.4%	53.7%	53.2%
Innovation-driven	45.8%	42.7%	45.3%
Latin America & Caribbean	62.9%	62.3%	63.6%

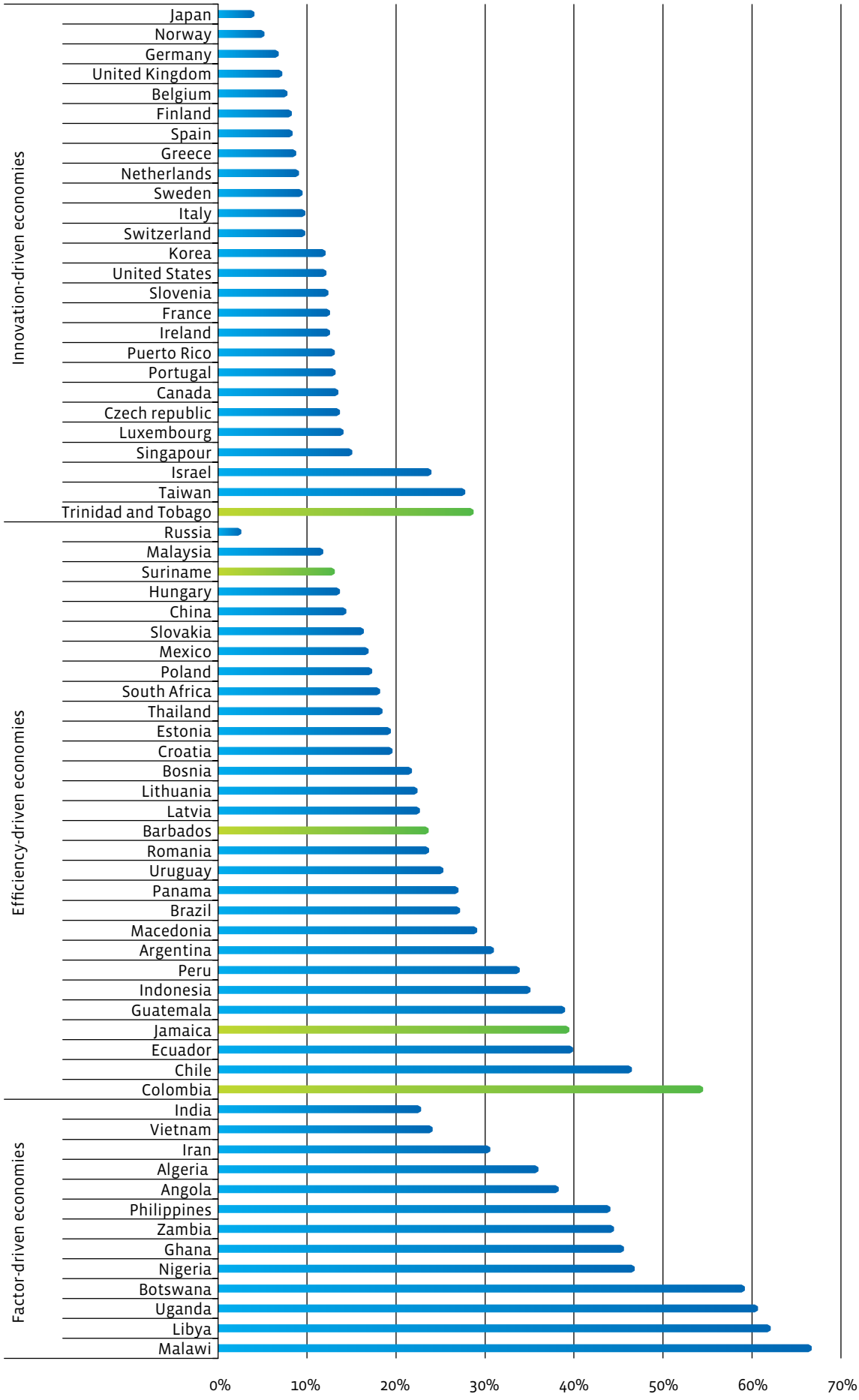
SOURCE: Compiled by authors.

In all the years, Trinidad & Tobago presents the highest entrepreneur potential indicator of all the Caribbean countries. In 2013, the integrated indicator for the Latin America & the Caribbean (63.6%) was greater than the indicator for all the economic groups, except the factor-driven economies (66.2%).

Even though the Colombian population shows a high level of capability to perceive opportunities (67.7%), it is not so confident in the capacities to manage the business (57.8%) and shows a very high level of fear of failure (31.8%). Whereas Barbados (23%), Suriname (24.4%) and Trinidad & Tobago (19.8%) have low levels of fear of failure and confidence in the capacities to manage the business (77%, 75.6% and 80.2% respectively), but show a low level in the capability to perceive opportunities (45.7%, 52.7% and 58.0% respectively).

The fact that more than 60% of the Latin American & the Caribbean population con-

FIGURE 6. Intentional entrepreneurs by countries (2013)



SOURCE: Compiled by authors.

siders they are able to identify opportunities, have the capabilities to create and manage a new business, and have a low level of fear of failure, show that people feel competent and willing to go ahead with the entrepreneurial process. This situation establishes a good environment for the development of entrepreneurs and is aligned with the positive social culture perceptions about entrepreneurship.

A very important strategy to improve the potential entrepreneur´s population will be to expose the population to the development of entrepreneurial competences in the educational and training system.

5.3 INTENTIONAL ENTREPRENEURS

The next stage in the entrepreneurial pipeline is when the potential entrepreneur expresses the intention to start a new business in the near future. To evaluate this, GEM asks these individuals if they are planning to start a new business alone or with others within the next three years.

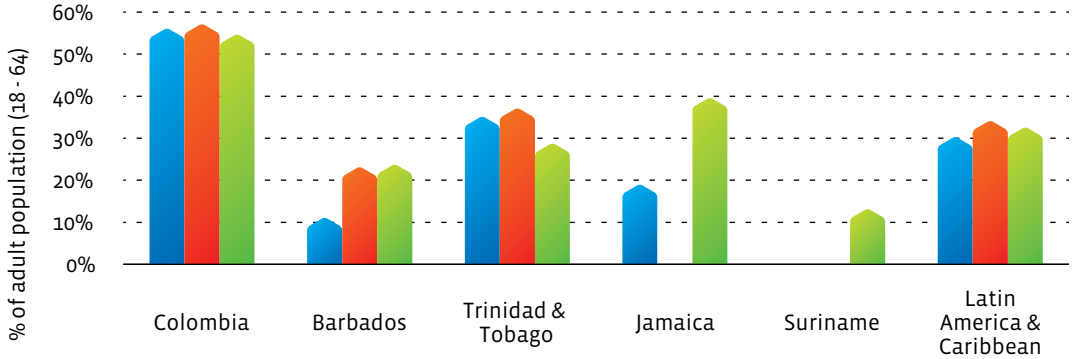
Figure 6, presents the results for all the countries that participated in the 2013 GEM cycle, classified in each one of the three economic groups.

In 2013, the countries with the highest rates of entrepreneurial intentions were: Malawi (66.7%), Libya (62.1%), Uganda (60.7%) and Botswana (59.2%) while Russia (2.6%), Japan (4.1%) and Norway (5.2%) presented the lowest scores (Figure 6).

In 2013, in the Latin America & the Caribbean region 33% of adult population will expect to start a new business in the next 3 years, this is a low percentage compared with Colombia (55%), Jamaica (40%), but high with respect to Barbados (24%), Trinidad & Tobago (29%) and Suriname (13%).

Along the years, the entrepreneurial intention indicator has been increasing in Barbados (from 11% in 2011 and 23% in 2012 to 24% in 2013) and Jamaica (from 19% in 2011 to 40% in 2013), but the indicator has been decreasing in Trinidad & Tobago (from 35% in 2011 to 29% in 2013).

FIGURE 7. Entrepreneurial intentions. Caribbean (2011-2013)



	Colombia	Barbados	Trinidad & Tobago	Jamaica	Suriname	Latin America & Caribbean
2011	56%	11%	35%	19%		30%
2012	57%	23%	37%			34%
2013	55%	24%	29%	40%	13%	33%

SOURCE: Compiled by authors.

According to the GEM 2013 Global Report, the entrepreneurial intention indicator in the efficiency driven economies is 24.8%, in the innovation driven is 12.3% and in the factor driven is 44.7%. When Barbados, is compared to factor or efficiency driven economies it still shows a low level. On the other hand, Colombia and Trinidad & Tobago have a higher rate than the efficiency and the innovation driven economies.

Taking into account the differences among the five Caribbean countries and the Latin America & the Caribbean region, a series of research questions could be proposed:

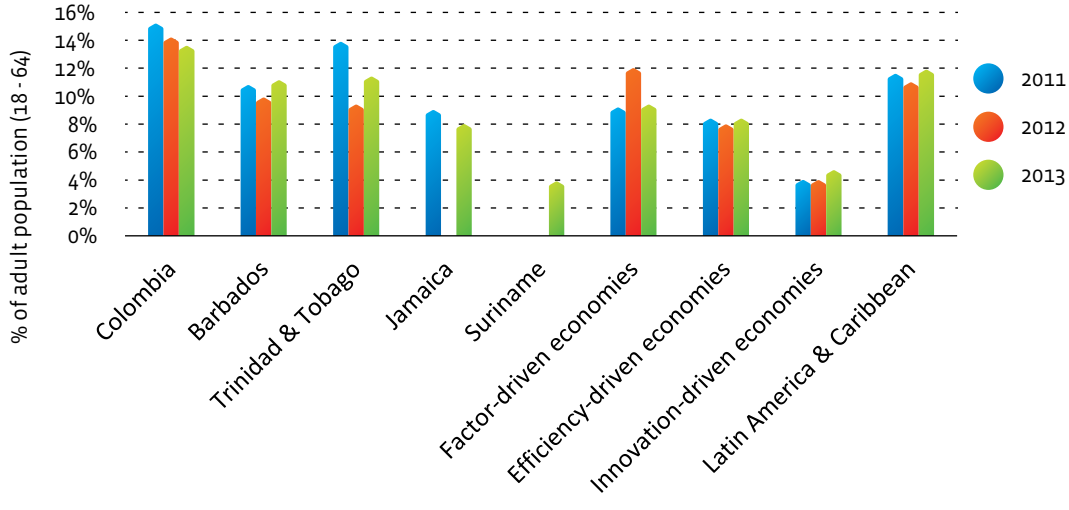
- What actions is Colombia conducting to keep high entrepreneurial intentions?
- What are the issues in the entrepreneurial pipeline, of Barbados which cause the loss of so many potential entrepreneurs in the intentional stage? (from 65.7% potential entrepreneurs to 24% intentional entrepreneurs)
- What makes Barbados intentions increase from 2011 to 2013 in a 13%?
- What is happening in Barbados to have the lowest entrepreneurial intention rate of the Caribbean region?
- What makes Jamaica intentions increase from 2011 to 2013 in a 19%?
- What should be done in terms of training and support programs to motivate the potential entrepreneurs to actually pursue their intent to start a business within the next three years?

Many policy perspectives could be derived from the significant proportion of adults that were potential entrepreneurs but do not classify as intentional entrepreneurs in each country: developing a stronger entrepreneurial vision, developing an entrepreneurial career plan, strengthening the quality of the idea development process, creating personal support systems with coaching, mentoring, and other interactive procedures that would lead to build the potential entrepreneur self-confidence and the determination required to become an intentional entrepreneur.

5.4 NASCENT ENTREPRENEURS

In this stage are the adults that have started to do specific activities in setting businesses and have paid salaries, wages or any other re-

FIGURE 8. Nascent entrepreneurs. Caribbean (2011 – 2013)



SOURCE: Compiled by authors.

muneration to employees and/or owners for less than three (3) months.

Between 2011 and 2013, Colombia, Jamaica and Trinidad & Tobago show a decrease in the "nascent entrepreneur" indicator. The results for the Latin America & the Caribbean show variations in this stage from 2011 (11.6%), 2012 (11%) to 2013 (11.9%). In 2013, 15.233 Surinamer's, 4.274.094 Colombians, 22.843 Barbadians, 149.424 Jamaicans, 99.203 Trinidadians, and 39.904.068 Latin-Americans and Caribbean's are involved in the nascent entrepreneur stage.

For the nascent entrepreneurs from Colombia, Jamaica, Barbados, Suriname, and Trinidad & Tobago some important elements were identified:

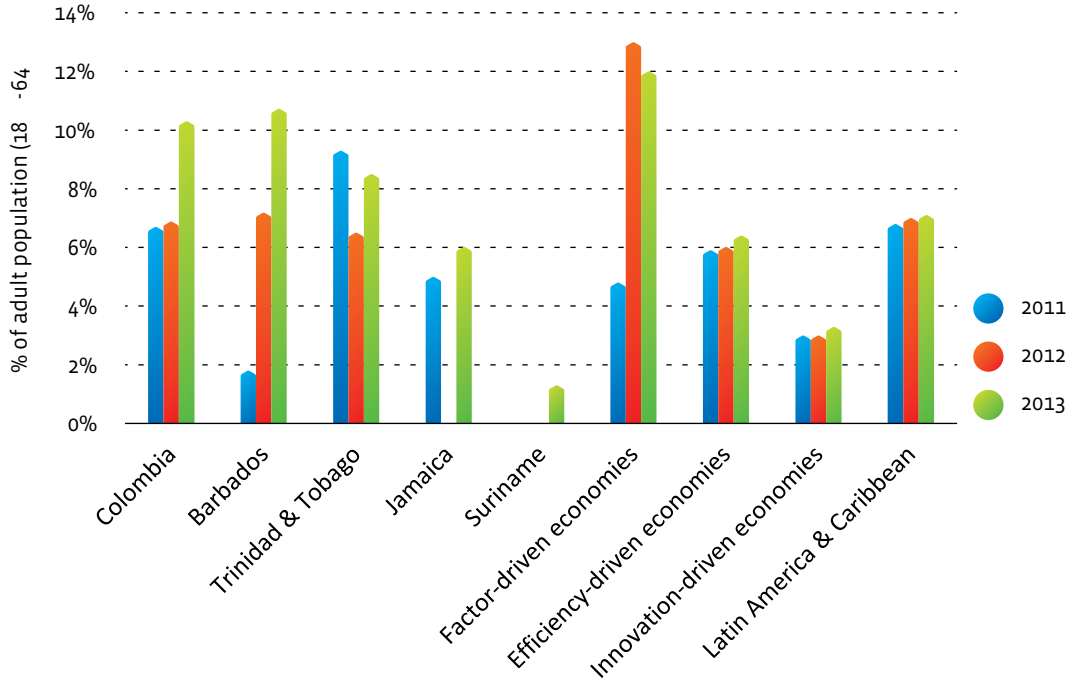
- 92% have clearly defined the product or service that they will offer.
- 28% have a business plan.
- 32% have established contact with other people to finance their business.
- 44% have a human group supporting them in the development of their venture.
- 41% already have purchased machinery, equipment or implements for their business.
- 39% already have bought raw materials, inputs, products or services to suppliers
- 30% consider that their enterprise is in operations.
- 56% already made their first sale.

In all the Caribbean countries a big leakage in the pipeline occurs when moving from intentional to nascent. Policies and programs to reduce the significant leakage have to be analyzed, designed and implemented in every country.

5.5 NEW ENTREPRENEURS

In this stage of the entrepreneurial pipeline are the adults that have started to do specific activities in setting a business and have paid salaries, wages or any other remuneration

FIGURE 9. New entrepreneurs. Caribbean (2011 – 2013)



SOURCE: Compiled by authors.

to employees and/or owners for more than 3 months but for less than 42 months.

From 2011 to 2013, Colombia (+3.6%), Jamaica (+1.0%), Barbados (+8.9%), efficiency-driven economies (+0.5%), innovation-driven economies (+0.3%) and Latin America & the Caribbean region (+0.3%) show an increase in the "new entrepreneur" indicator. In 2013, 5.078 Surinamers, 3.236.998 Colombians, 22.020 Barbadians, 112.068 Jamaicans, 73.967 Trinidadians, and 23.808.309 Latin Americans and Caribbeans are involved in the new entrepreneur stage.

For the new entrepreneurs from Colombia, Jamaica, Barbados, Suriname, and Trinidad & Tobago, some important elements were identified:

- 95% consider that they have completely defined the product and/or the services they have for their customers.
- 30% have a business plan.
- 34% have had meeting with banks and other financial sources to search for financial resources.
- 46% have a support entrepreneurial group.
- 66% have purchased machinery, equipment, implements from suppliers
- 70% have bought raw material/products or services from suppliers.
- 83% consider that their enterprise is in operations.
- 93% already made their first sale.

Some research questions should be formulated at this time:

- Why does the "new entrepreneurs" indicator have such a significant increase in Barbados from 2011 (1.8%) to 2013 (10.7%), and in Colombia from 2011 (6.7%) to 2013 (10.3%)?
- Why does the "nascent entrepreneurs" indicator in Colombia, Jamaica and Trinidad & Tobago has been decreasing from 2011 to 2013?
- What is happening in Colombia that the "nascent entrepreneurs" indicator decreases but the "new entrepreneurs" indicator increases?
- Why does Suriname in 2013 has the lowest "nascent/new entrepreneur" indicator compared to the other countries? While Colombia has 13.6% of nascent entrepreneurs and 10.3% of new entrepreneurs, Suriname has 3.9% and 1.3%, respectively.

A deeper research on economical conditions, policies implemented in each stage by each country, changes in the entrepreneurial perspective of the citizens, changes in the support systems, and other local variables should be implemented.

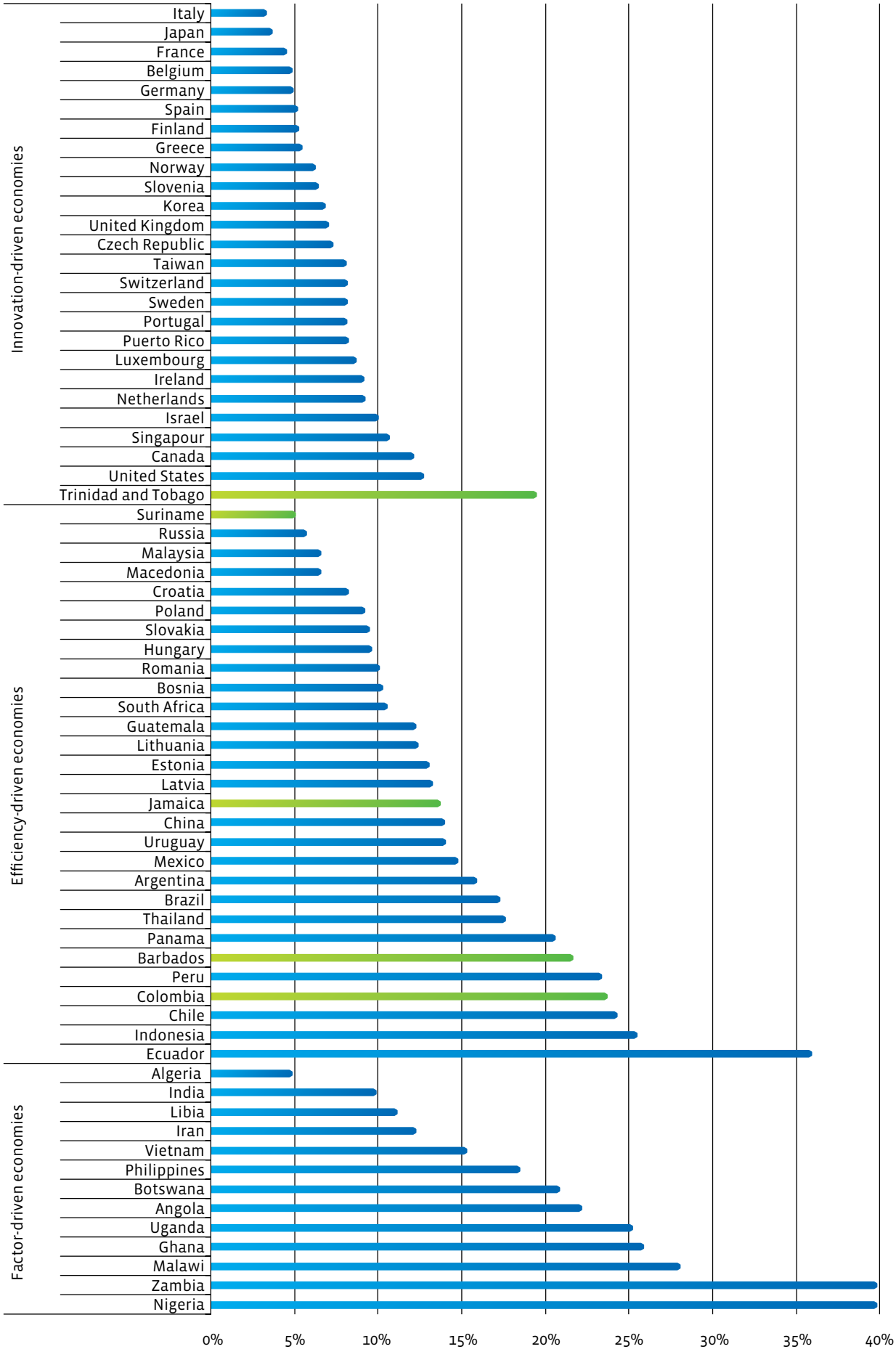
5.6 TOTAL ENTREPRENEURIAL ACTIVITY (TEA)

The central measurement of GEM is the Total Early Entrepreneurial Activity (TEA), which as indicated earlier, is made up of the adult population aged between 18–64 who have already started their business and are in one of the two initial stages: nascent entrepreneurs or new entrepreneurs.

Figure 10 shows the total early entrepreneurial activity data for all participant countries in the 2013 cycle. As shown, there is a great variability in the TEA worldwide ranging from 3.4% to 39.9% in 2013. The innovation-driven economies present the lowest TEA rate; meanwhile the factor-driven economies have the highest TEA rate.

In the innovation-driven economies the TEA goes from 19.5% in Trinidad & Tobago to 3.4%, in Italy. In the efficiency-driven economies the TEA goes from 36% in Ecuador to 5.1% in Suriname, and in the factor-driven economies from 39.9% in Zambia and Nigeria to 4.9% in Algeria.

FIGURE 10. TEA by countries (2013)



SOURCE: Compiled by authors.

Colombia is the 4th, Barbados is 6th, Jamaica 14th and Suriname 29th among the efficiency-driven countries.

Table 5, presents the variations in TEA, among the Latin America & the Caribbean countries, from 2011 to 2013. The most significant variations were in: Barbados from 13% to 22%, Ecuador from 27% to 36% and Argentina from 21% to 16%.

TABLE 5. TEA in the Latin America & the Caribbean region. (2011-2013)

	2011	2012	2013
Argentina	21%	19%	16%
Barbados	13%	17%	22%
Brazil	15%	15%	17%
Chile	24%	23%	24%
Colombia	21%	20%	24%
Ecuador	-	27%	36%
Mexico	10%	12%	15%
Panama	21%	9%	21%
Perú	23%	20%	23%
Trinidad & Tobago	23%	15%	20%
Uruguay	17%	15%	14%

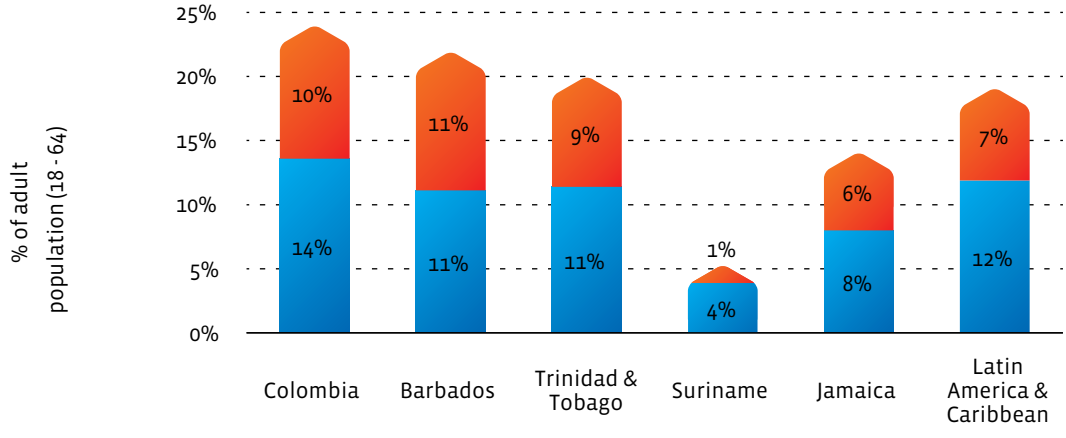
SOURCE: Compiled by authors.

Figure 11, shows the composition of TEA in terms of nascent entrepreneurs and new entrepreneurs. In most of the Caribbean countries the percentage of nascent entrepreneurs is bigger than new entrepreneurs, but in Barbados there seem to be no leakages in the entrepreneurial pipeline between those two stages.

When the ratio (nascent entrepreneur / new entrepreneurs) is established some important points can be established:

- In 2013, Suriname presents a ratio of 3, which means that only 33% of the nascent entrepreneurs become new entrepreneurs or in other terms that there is a very significant proportion of nascent entrepreneurs that are not able to get into the next stage: new entrepreneurs.
- The Latin America & the Caribbean with a ratio of (1.68), Trinidad & Tobago (1.34), Colombia (1.32) and Jamaica (1.33) present a higher conversion rate.

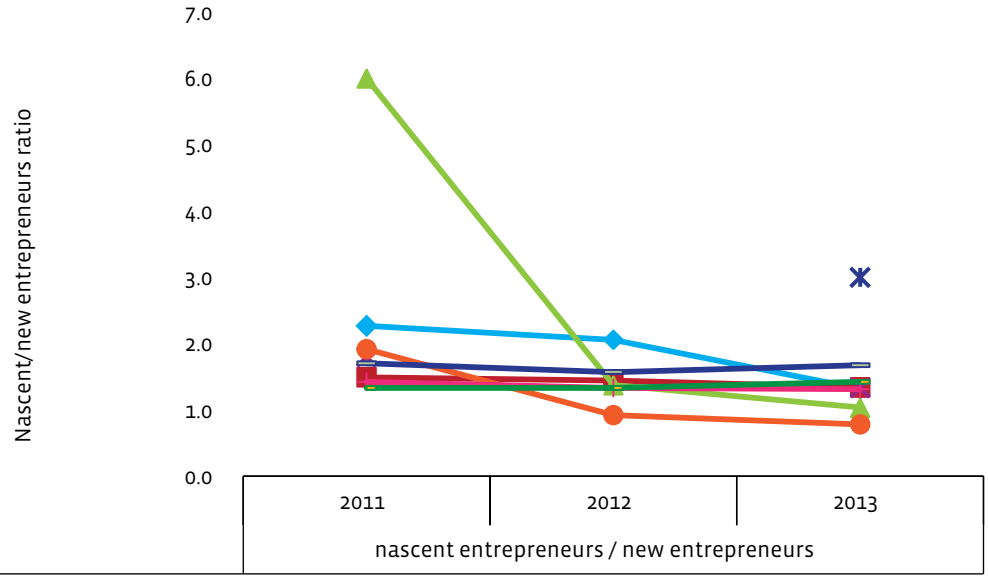
FIGURE 11. TEA composition (2013)



	Colombia	Barbados	Trinidad & Tobago	Suriname	Jamaica	Latin America & Caribbean
New entrepreneurs	10%	11%	9%	1%	6%	7%
Nascent entrepreneurs	14%	11%	11%	4%	8%	12%

SOURCE: Compiled by authors.

FIGURE 12. Nascent/new entrepreneurs ratio



	2011	2012	2013
Colombia	2.27	2.06	1.32
Trinidad & Tobago	1.49	1.45	1.34
Barbados	6.00	1.38	1.04
Jamaica	1.80		1.33
Suriname			3.00
Factor	1.92	0.92	0.78
Efficiency	1.42	1.33	1.31
Innovation	1.33	1.33	1.42
Latin America & Caribbean	1.71	1.57	1.68

SOURCE: Compiled by authors.

Figure 12, shows the ratio (nascent entrepreneurs / new entrepreneurs) for the Caribbean, and the three economic groups in 2011, 2012 and 2013. The efficiency-driven economies and the innovation-driven economies kept the ratio close to 1.3 and 1.42 in the three years. Barbados presents the most significant change in the region with a ratio, from 6.0 in 2011 to 1.0 in 2013. Suriname in 2013 obtained the highest disparity rate (3.0) in the region.

Considering the TEA results, it is possible to estimate that in the Latin America & the Caribbean countries, 62.035.736 adults were involved in 2013 in early entrepreneurial activities (0–42 months).

5.7 ESTABLISHED BUSINESSES

The sixth stage in the entrepreneurial pipeline happens when new businesses have survived for more than 42 months paying salaries. GEM categorizes these enterprises as established business.

Table 6 presents the proportion of established entrepreneurs in each one of the countries and the economic groups. Trinidad & Tobago, Barbados and the factor-driven economies present the most significant changes from 2011 to 2013 in the established entrepreneur's proportion.

TABLE 6. Established business (2011-2013)

	2011	2012	2013
Colombia	7,5%	7,0%	5,9%
Trinidad & Tobago	6,9%	7,0%	11,4%
Jamaica	5,1%	-	6,3%
Suriname	-	-	1,7%
Barbados	4,2%	12,0%	12,4%
Factor driven	5,6%	11,0%	13,3%
Efficiency driven	7,2%	8,0%	8,0%
Innovation driven	7,2%	7,0%	6,7%
Latin America & Caribbean	6,1%	8,0%	7,7%

SOURCE: Compiled by authors.

Barbados presents the highest established entrepreneur´s proportion (12.4%) which indicates that 25.519 Barbadian entrepreneurs have had a business for more than 42 months of paying out salaries or any other remuneration form.

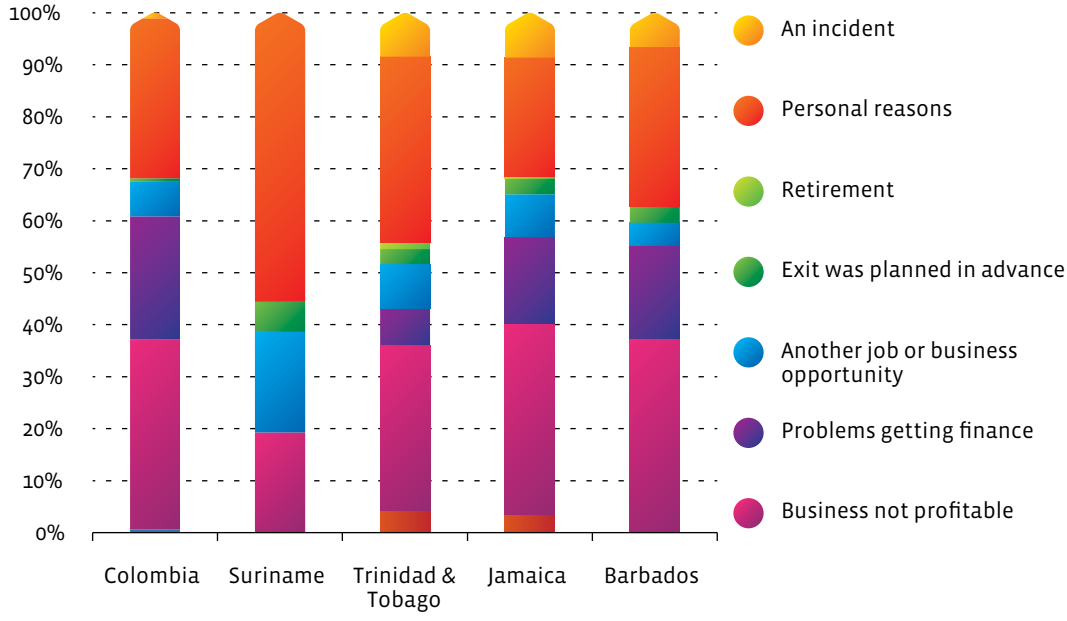
Only Colombia, the Latin America & the Caribbean region and the innovation-driven countries present a decreasing trend in this indicator.

It is important to formulate public policies in terms of designing new supports for businesses after their initial years (established businesses) that allow the job creation (current and expected); because, most of the government programs in some countries are only oriented to foresting the entrepreneurship in the initial stages (incubator for startups, seed capital, angel investors, etc.), and few programs are focused to maintain the growth of the established business.

5.8 DISCONTINUOUS ENTREPRENEURS

Along the entrepreneurial process, entrepreneurs face different situations that may force them to discontinue their initiative either temporarily or definitively. The discontinuance rate is due to several factors including the market, financial failure of the business, personal dissatisfactions of the entrepreneur with the activities required to keep the business in operation, as well as other factors dealing with health

FIGURE 13. Reasons for exit



SOURCE: Compiled by authors.

problems, living conditions, family needs and retirement.

For 2013, in Jamaica, 7.4% of the adult population had discontinued a business in the last 12 months being the highest among the Caribbean region, followed by 5.4% in Colombia, 4.1% in Trinidad & Tobago, 3.7% in Barbados and 0.8% in Suriname. Figure 13 shows the main reasons for business discontinuance in the last 12 months in Barbados, Jamaica, Suriname, Colombia and Trinidad & Tobago. Most entrepreneurial discontinuances are due to a non-profitable business (36.6%, 19.2%, 31.9%, 36.8% and 37.3), and personal reasons (30.8%, 55.6%, 35.6%, 22.9% and 30.6%), in Colombia, Suriname, Trinidad & Tobago, Jamaica and Barbados, respectively.

Again, there is a need to orient and provide a better training to the new entrepreneurs to allow them to obtain the required skills to manage the new business, have a better entrepreneurial vision and to be able to identify and study the opportunity. By including these in the entrepreneur's development program, much of the discontinuance situations could be avoided.

A policy implication may be to improve all the entrepreneurial support systems to decrease the number of entrepreneurs that discontinue their entrepreneurial endeavor due to non-profitability and financing difficulties.

5.9 ENTREPRENEURIAL PIPELINE

With all the previous results, it is possible to develop the entrepreneurial pipeline not only for each one of the countries, but also for the Latin America & the Caribbean region.

Figures 14, 15, 16, 17, 18 and 19 present the entrepreneurial pipelines for 2013 for Suriname, Colombia, Trinidad & Tobago, Barbados, Jamaica and the Latin America & the Caribbean region.

In analyzing the pipelines for each country it is possible to identify the stages in which there are significant "leaks" and identify for each country actions that should be taken to avoid the "leaks".

For Suriname, the principal leaks, in percentage points, occur in the following transitions.

From Socio cultural perception to Potential	-13
From Potential to Intentional	-48

For Colombia, the principal leaks, in percentage points, occur in the following transitions.

From Socio cultural perception to Potential	-12
From Potential to Intentional	-10
From Intentional to Nascent	-41

For Barbados, the principal leaks, in percentage points, occur in the following transitions.

From Potential to Intentional	-42
From Intentional to Nascent	-13

For Jamaica, the principal leaks, in percentage points, occur in the following transitions.

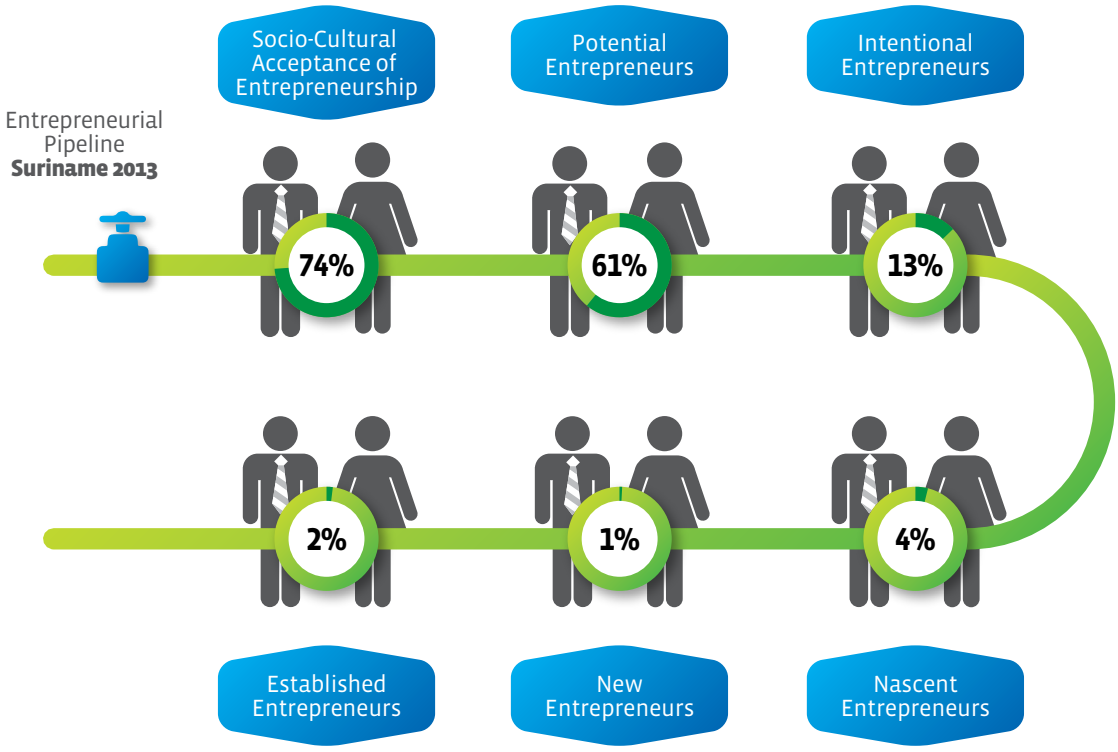
From Socio cultural perception to Potential	-13
From Potential to Intentional	-28
From Intentional to Nascent	-32

For Trinidad & Tobago, the principal leaks, in percentage points, occur in the following transitions.

From Potential to Intentional	-42
From Intentional to Nascent	-18

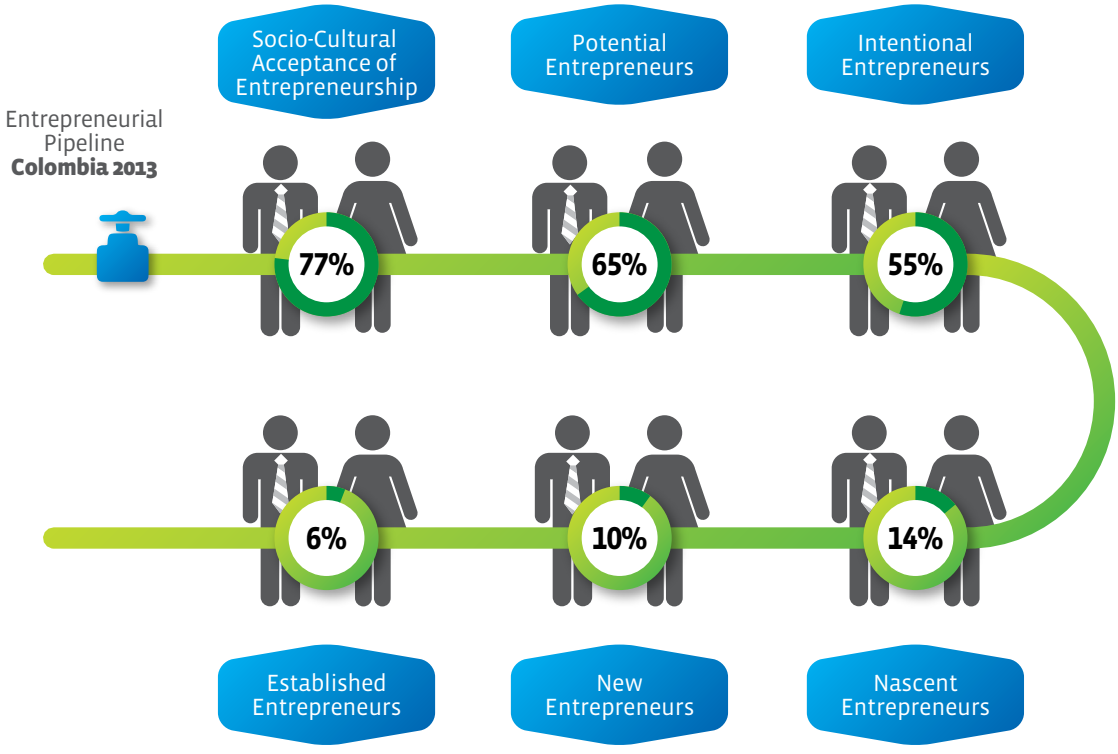
Figure 20 shows the variations in each stage of the pipeline for the Latin America & the Caribbean countries from 2011 to 2013.

FIGURE 14. Entrepreneurial pipeline for Surime´s entrepreneurs.



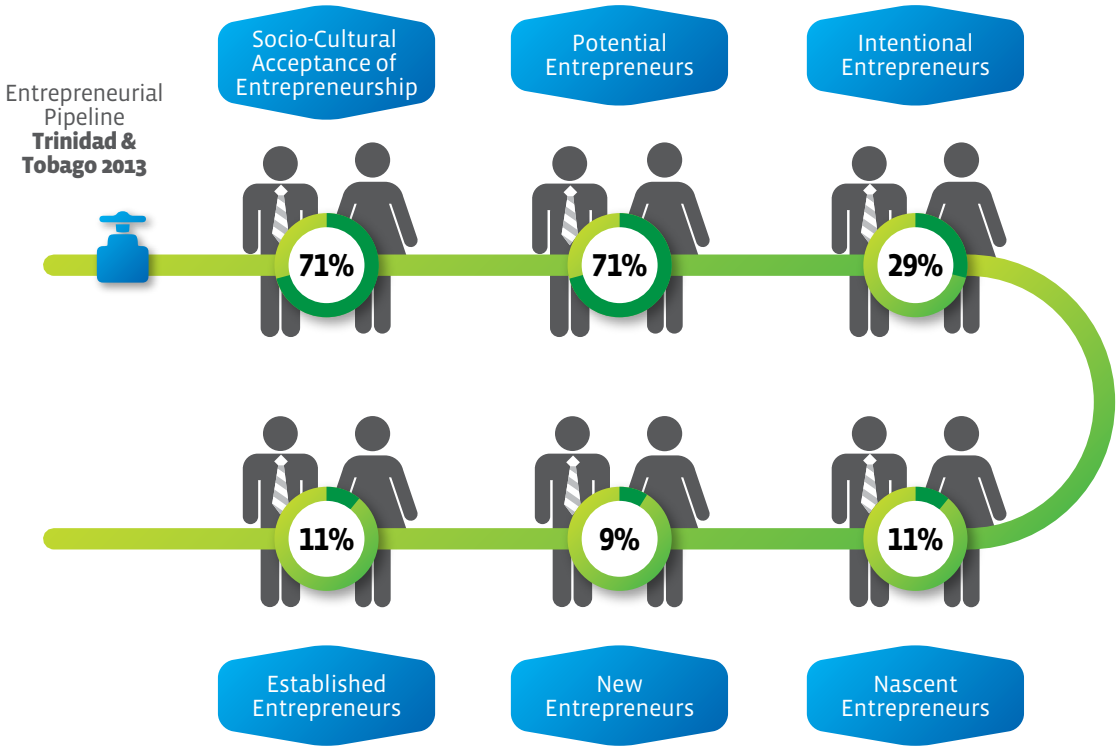
SOURCE: Compiled by authors.

FIGURE 15. Entrepreneurial pipeline for Colombia´s entrepreneurs.



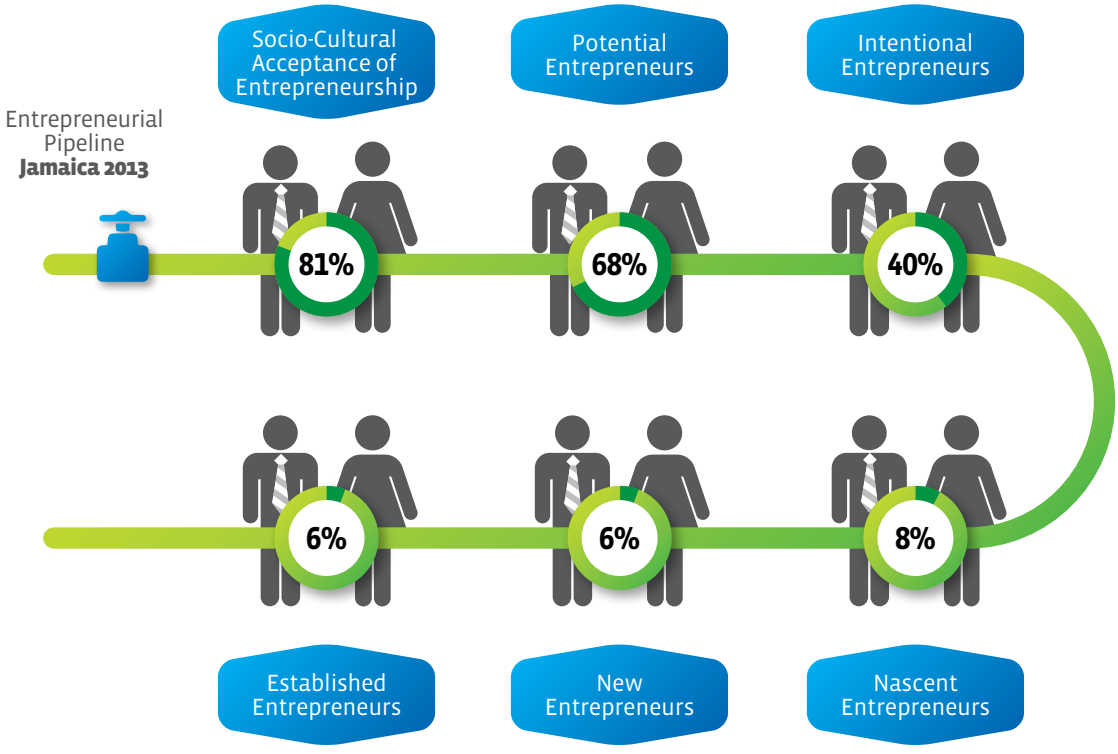
SOURCE: Compiled by authors.

FIGURE 16. Entrepreneurial pipeline for Trinidad & Tobago´s entrepreneurs.



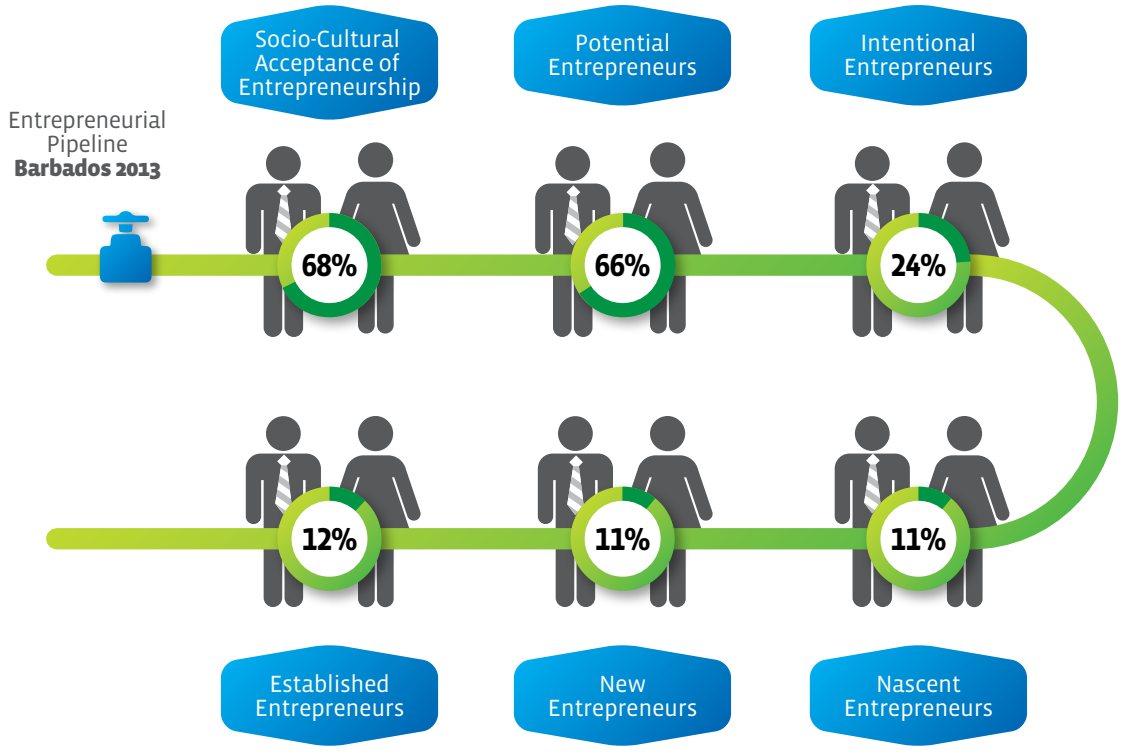
SOURCE: Compiled by authors.

FIGURE 17. Entrepreneurial pipeline for Jamaica´s entrepreneurs.



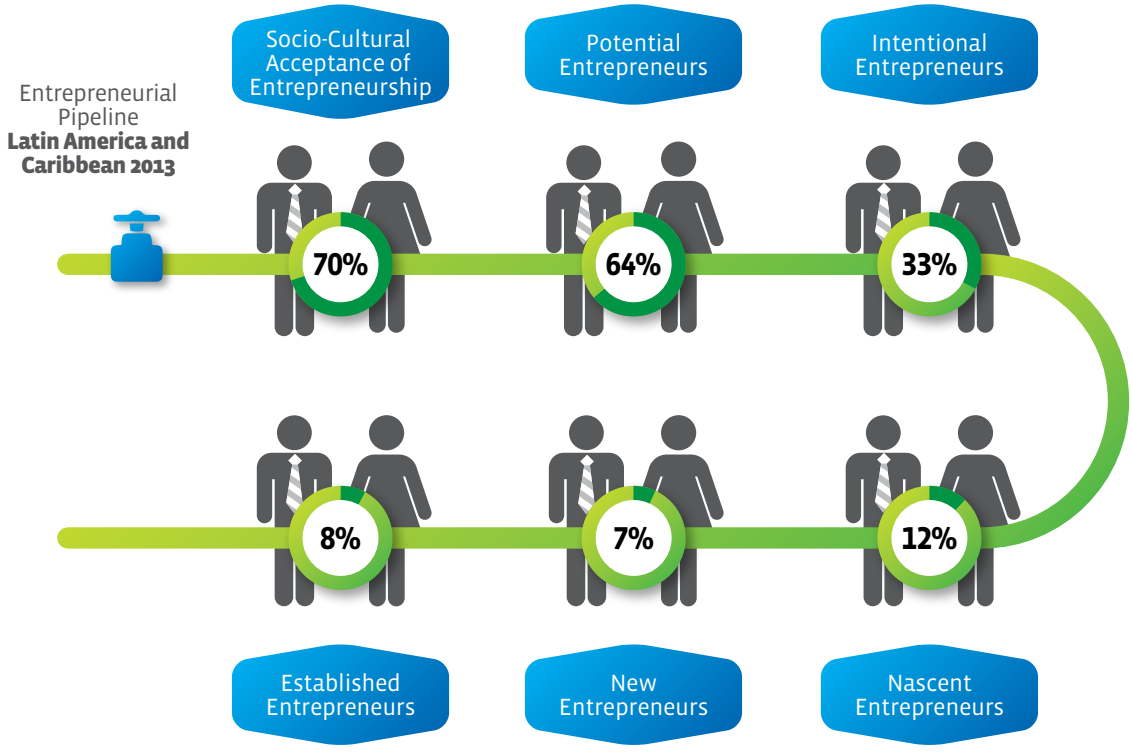
SOURCE: Compiled by authors.

FIGURE 18. Entrepreneurial pipeline for Barbados´s entrepreneurs.



SOURCE: Compiled by authors.

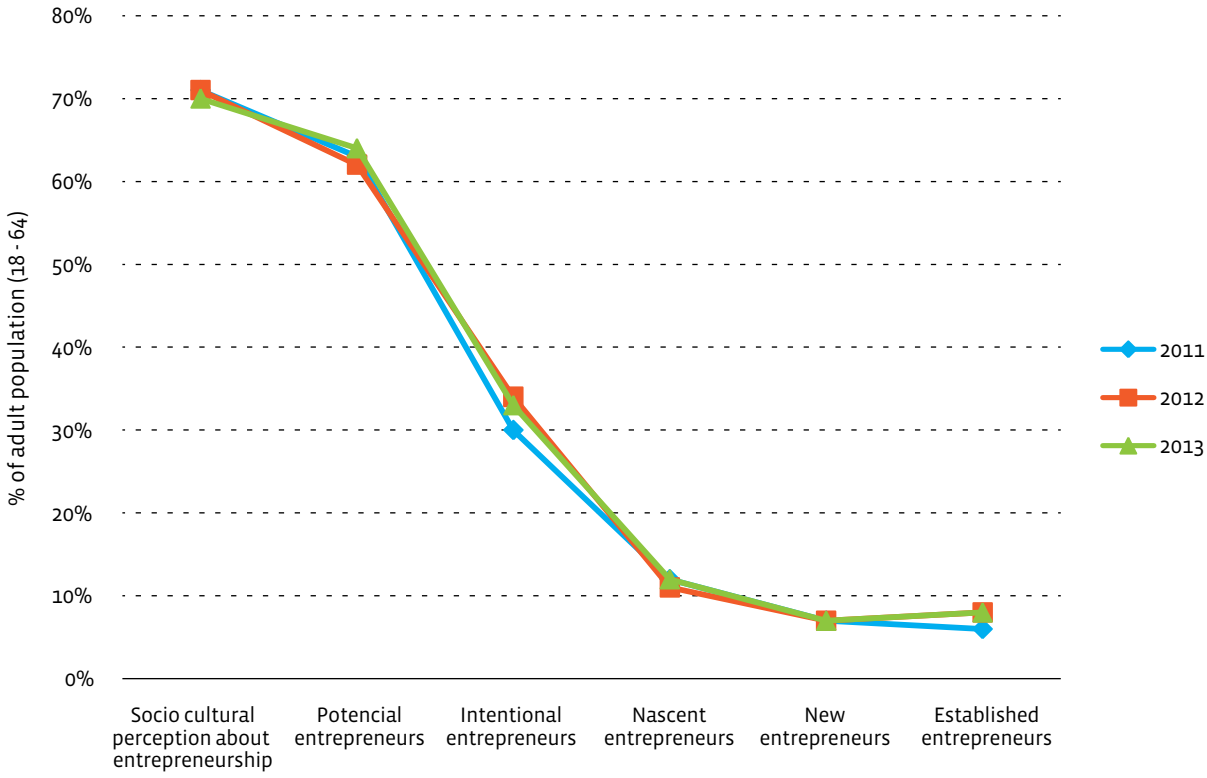
FIGURE 19. Entrepreneurial pipeline for the Latin America & the Caribbean[1] entrepreneurs.



SOURCE: Compiled by authors.

1 This figure includes all the Latin America & the Caribbean countries.

FIGURE 20. Entrepreneurial pipeline. Latin America & Caribbean (2011-2013)



SOURCE: Compiled by authors.

6 CARIBBEAN ENTREPRENEURS PROFILE

An important aspect of GEM data is the possibility it brings in terms of identifying different elements to characterize entrepreneurs. The analysis will be done with the persons that classified as nascent entrepreneurs or new entrepreneurs (TEA) in the entrepreneurial pipeline and with the persons that classified as established entrepreneurs.

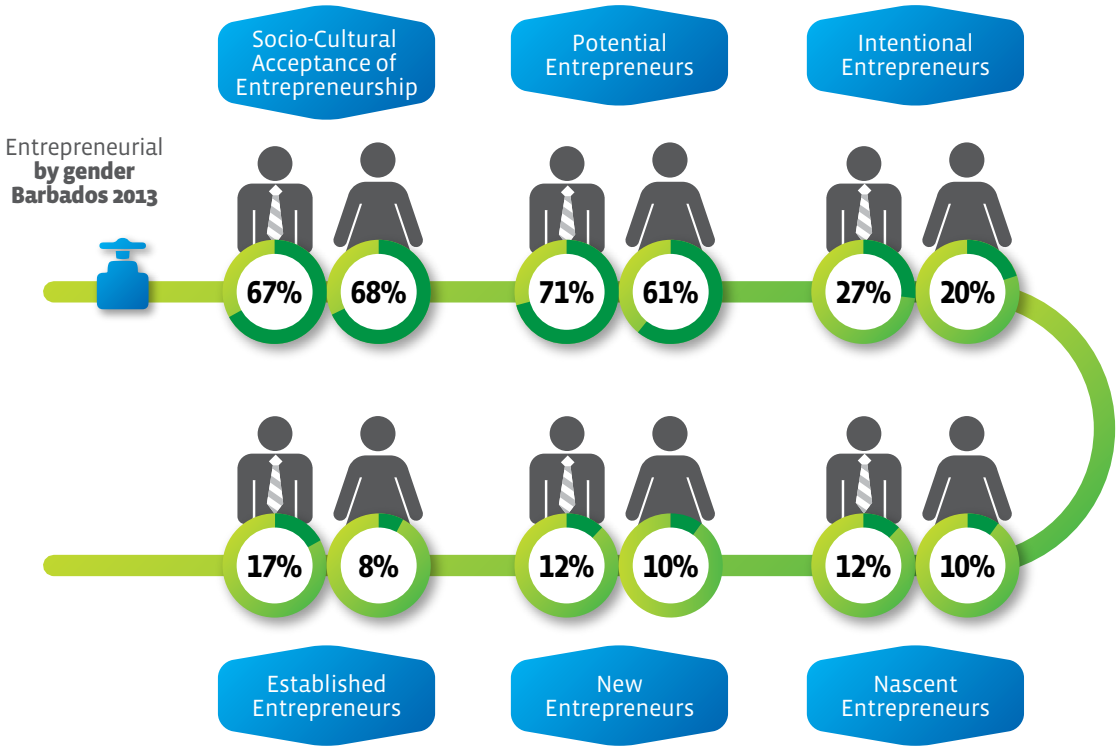
6.1 GENDER

Figure 21, 22, 23, 24, 25 and 26 present the entrepreneurial pipeline for men and women in each Caribbean country and the Latin America & the Caribbean region for 2013.

There is a significant difference in the stages of the entrepreneurial pipeline between men and women. Table 7 presents the TEA by gender for the Caribbean countries and geographic groups, and the disparity rate is defined as the ratio TEA males/TEA females. In Suriname and in the Middle East & North Africa the disparity is the highest (more than 2.0). Sub-Saharan Africa with 1.0 presents the lowest indicator.

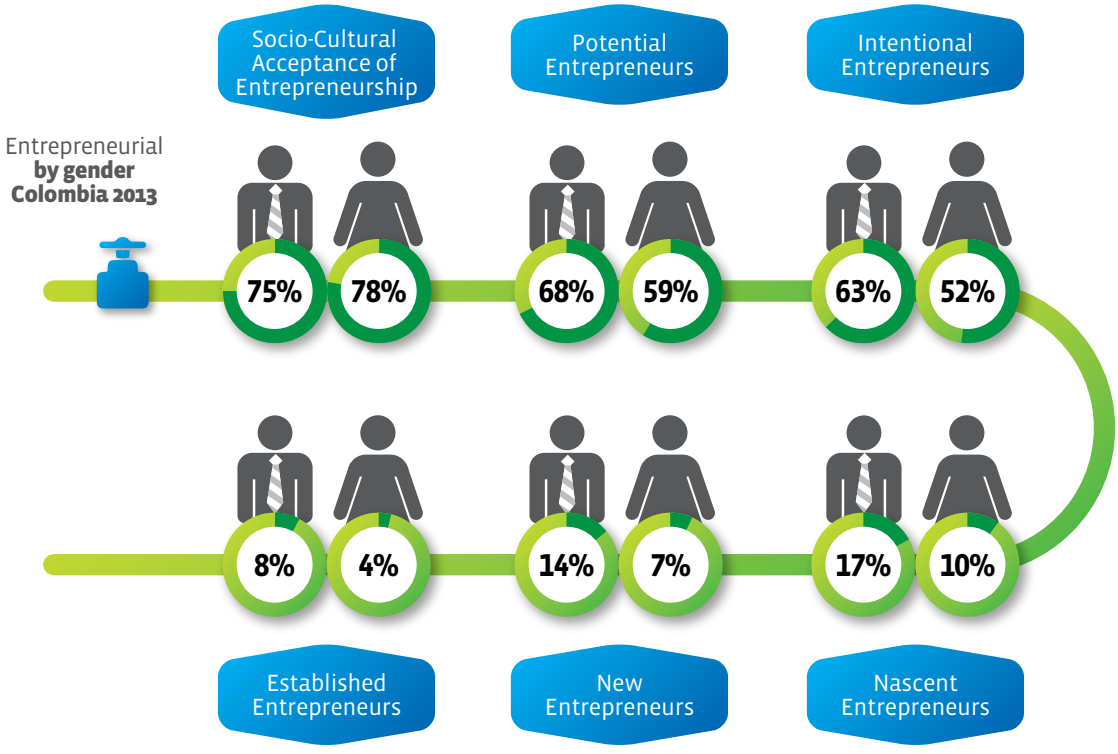
For the established entrepreneurs, the propensity by gender is presented in Table 8. In Suriname, the disparity in the established entrepreneur's stage between female and male is the highest (almost 7.0).

FIGURE 21. Entrepreneurial pipeline of Barbadian male and female entrepreneurs.



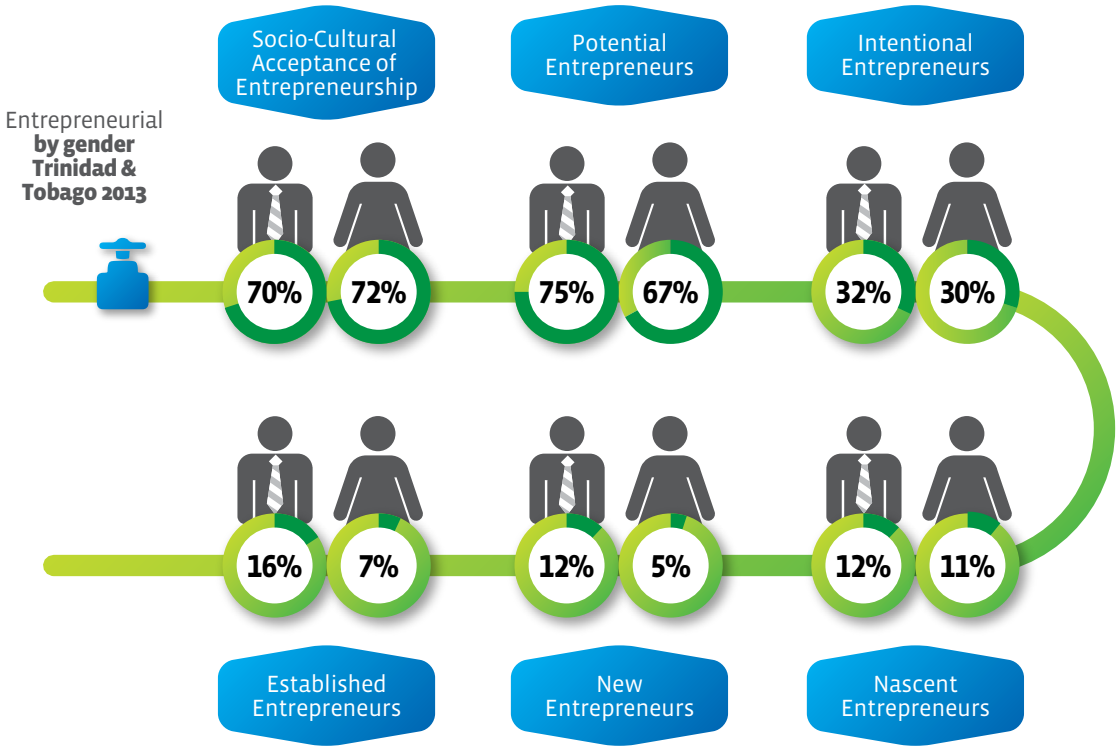
SOURCE: Compiled by authors.

FIGURE 22. Entrepreneurial pipeline of Colombian male and female entrepreneurs.



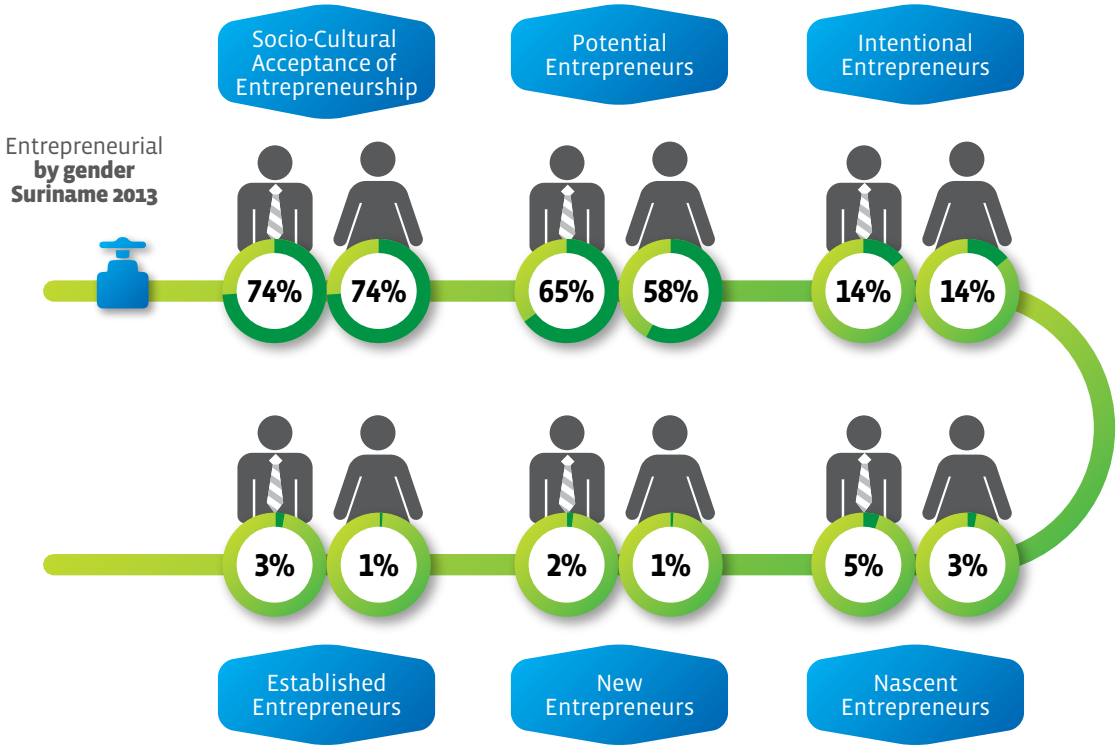
SOURCE: Compiled by authors.

FIGURE 23. Entrepreneurial pipeline of Trinidadian male and female entrepreneurs.



SOURCE: Compiled by authors.

FIGURE 24. Entrepreneurial pipeline of Suriname male and female entrepreneurs.



SOURCE: Compiled by authors.

FIGURE 25. Entrepreneurial pipeline of Jamaican male and female entrepreneurs.

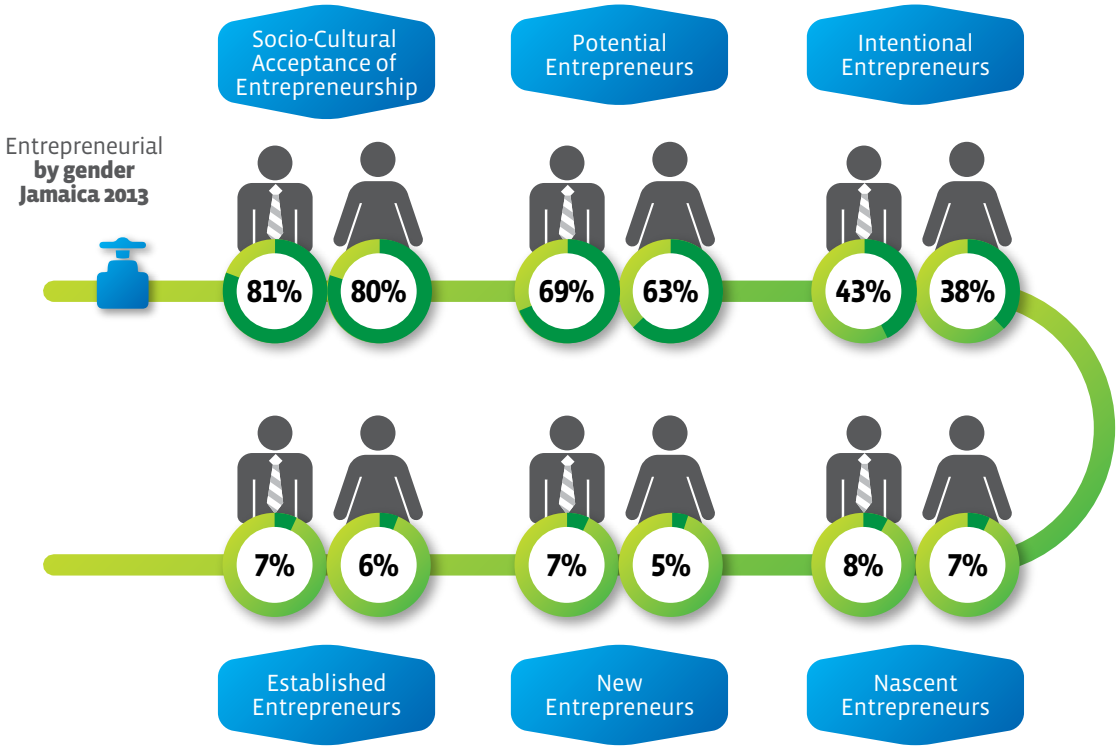
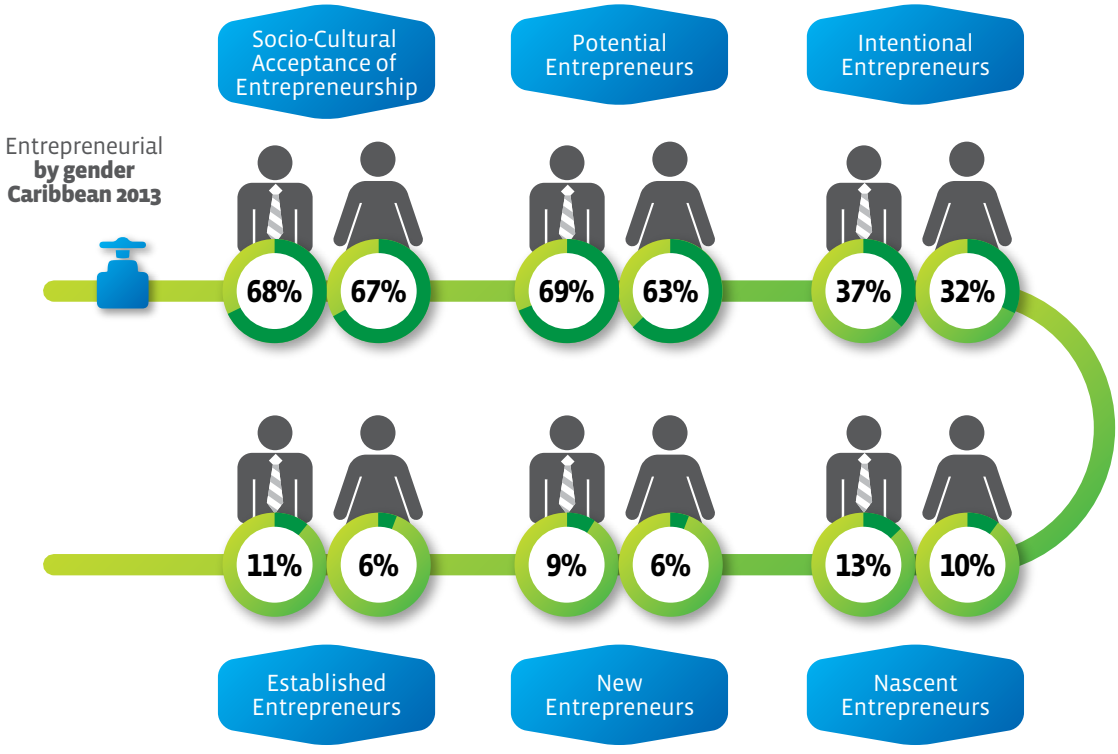


FIGURE 26. Entrepreneurial pipeline of Caribbean[1] male and female entrepreneurs.



SOURCE: Compiled by authors.

1 Figure 26 only includes the weighted average between Barbados, Jamaica, Colombia, Trinidad & Tobago and Suriname.

TABLE 7. Gender gaps in nascent/new entrepreneurial activity rates (2013).

	TEA male	TEA female	Male/ female ratio
Colombia	30%	17%	1.8:1
Barbados	24%	20%	1.2:1
Trinidad & Tobago	23%	16%	1.4:1
Suriname	7%	3%	2.3:1
Jamaica	15%	12%	1.3:1
Latin America & Caribbean	22%	15%	1.5:1
Middle East & North Africa	13%	6%	2.2:1
Sub-Saharan Africa	27%	26%	1.0:1
Asia Pacific & South Asia	14%	11%	1.3:1
Europe – EU28	10%	6%	1.7:1
Europe – Non EU28	9%	6%	1.5:1
North America	13%	9%	1.4:1

SOURCE: Compiled by authors.

TABLE 8. Gender gaps in established business owner rates (2013).

	EB male	EB female	Male/ female ratio
Colombia	8,0%	3,9%	2.1:1
Barbados	17,1%	8,0%	2.1:1
Trinidad & Tobago	15,8%	6,9%	2.3:1
Suriname	2,9%	0,5%	6.5:1
Jamaica	6,5%	6,0%	1.1:1
Latin America & Caribbean	9,2%	5,4%	1.7:1
Middle East & North Africa	9,5%	3,2%	3.0:1
Sub-Saharan Africa	15,8%	15,0%	1.1:1
Asia Pacific & South Asia	13,6%	9,5%	1.4:1
Europe – EU28	8,8%	3,9%	2.3:1
Europe – Non EU28	8,3%	4,3%	1.9:1
North America	7,6%	4,5%	1.7:1

SOURCE: Compiled by authors.

6.2 *AGE*

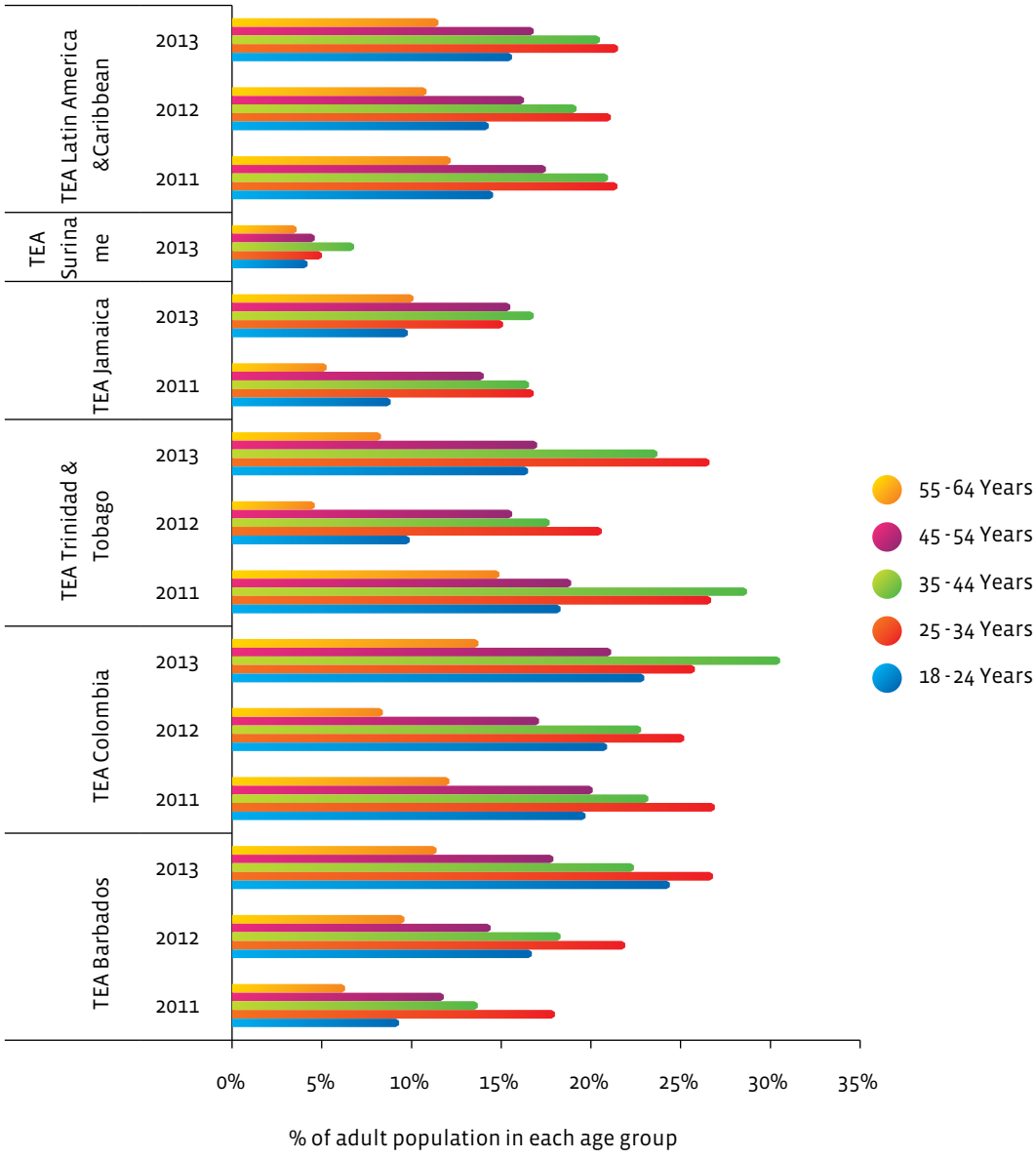
Although it is widely accepted that entrepreneurship can begin at any given time in a personal life, a constant tendency in the GEM study demonstrates that individuals more likely to start new businesses are those aged 25-34. The reasons for this may be:

- That the individuals in this age group may have developed the competences and abilities required to manage a new business through work experience.
- They may have gained expertise in a specific working area, or they may also have decided to work independently after having been employed or saved enough resources to start a new business or have been affected by the combination of many other positive and negative forces which affect the personal decision of becoming an entrepreneur.

For the GEM 2013 study, the age groups "25-34" and "35-44" present the highest tendency toward new business creation with a TEA rate greater than 20% in the Latin America & the Caribbean. However in 2013, something interesting happens: different to the trend of other years, the higher percentage of nascent and new entrepreneurs in Colombia and Jamaica is in the 35-44 age group.

In the established entrepreneur´s stage, a constant tendency in the GEM study demonstrates that individuals present the highest tendencies toward establishing businesses are between 45 and 54 years old (Figure 28).

FIGURE 27. TEA by age. Caribbean (2011-2013).

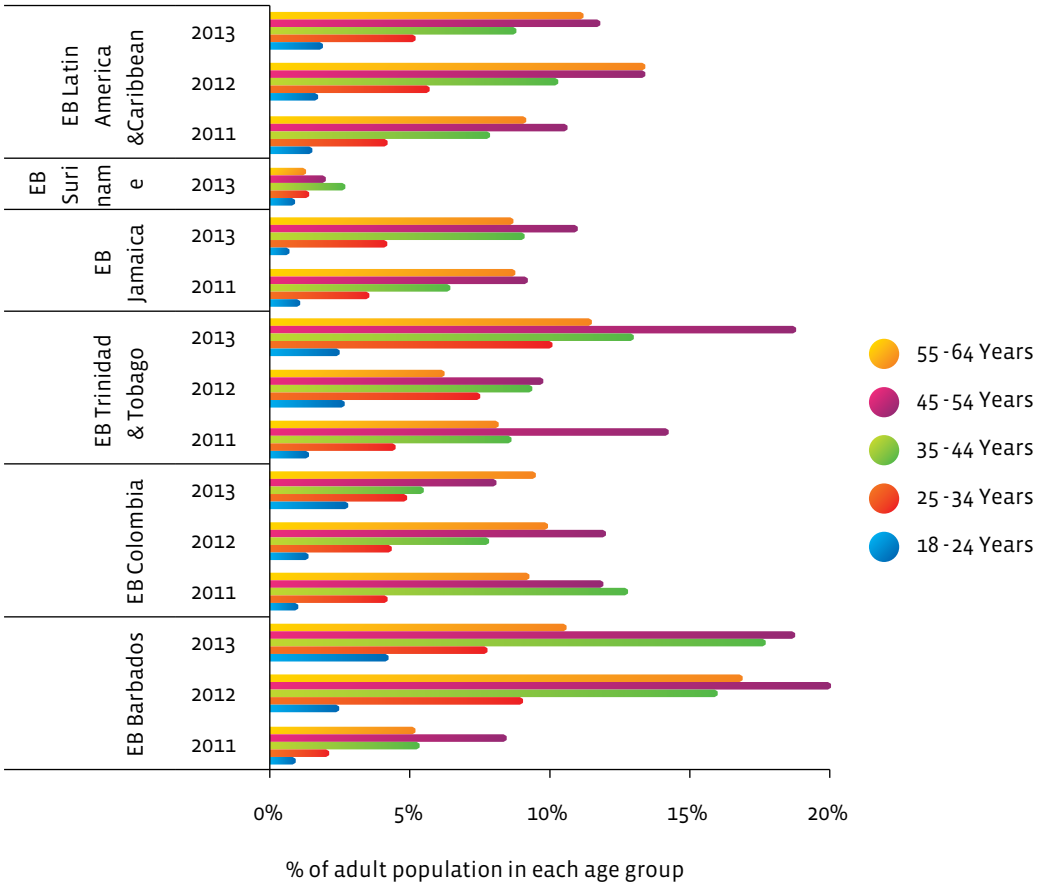


SOURCE: Compiled by authors.

The age group of 45-54 shows in the Latin America & the Caribbean an average rate of 11.8% in 2013. However in the same year, something interesting happens with some countries: different to the trend of the previous years, the higher percentage of established entrepreneurs in Colombia is in the 55-64 age group and in Suriname is in the 35-44 age group.

Along the years, in Colombia, an important change has occurred and it is worthwhile to research it in depth: In 2011, the age group with higher propensity to have established businesses was 35-44, but in 2012 it was the age group 44-54, and in 2013 it was the age group 55-64.

FIGURE 28. EB by age. Caribbean (2011-2013).



SOURCE: Compiled by authors.

6.3 HOUSEHOLD INCOME

The household income is measured by GEM through a recode into thirds: The lowest third percentile represents 33% of entrepreneurs with lowest income, the middle third percentile represents 33% of entrepreneurs with medium income, and finally the highest third percentile represents 33% of entrepreneurs with the highest income.

When the TEA is analyzed in relation to the household income (Table 9), it was found that as the income grows the TEA rate tends to increase except in Jamaica and Barbados. The country that presented the highest trend is Colombia in which the lowest third household income percentile had a TEA rate of 18.3% while the highest third household income percentile had a TEA rate of 30.0%.

TABLE 9. TEA rates by household income level (2013)

	Lowest third percentile	middle third percentile	highest third percentile
Barbados	16,4%	21,9%	20,4%
Colombia	18,3%	18,7%	30,0%
Suriname	0,5%	2,2%	3,2%
Trinidad & Tobago	10,4%	10,3%	13,1%
Jamaica	3,4%	2,8%	1,8%
Latin America & Caribbean	10,4%	12,3%	14,4%

SOURCE: Compiled by authors.

TABLE 10. EB rates by household income level (2013)

	Lowest third percentile	Middle third percentile	Highest third percentile
Barbados	13,3%	14,7%	15,2%
Colombia	3,0%	6,7%	8,5%
Suriname	0,6%	0,9%	0,8%
Trinidad & Tobago	5,4%	6,5%	7,7%
Jamaica	1,3%	2,2%	0,9%
Latin America & Caribbean	4,0%	4,6%	6,4%

SOURCE: Compiled by authors.

In the same way, when the established businesses (EB) rate is analyzed in relation to the household income (Table 10), it was found that as the income grows the EB rate tends to increase except in Jamaica and Suriname.

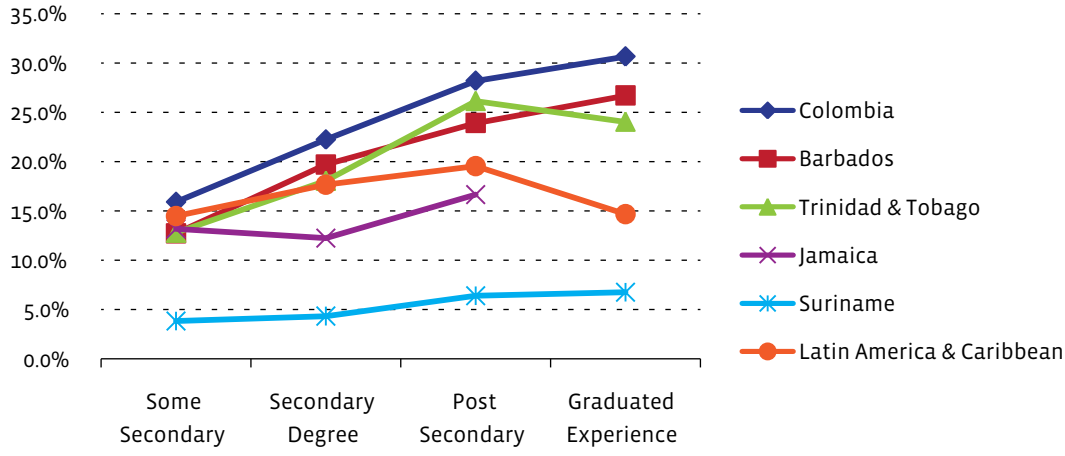
6.4 EDUCATION

To analyze the effect of educational level in the TEA, GEM uses four categories:

- Some secondary: elementary and/or high school uncompleted.
- Secondary degree: high school completed.
- Post-secondary: College, technical or technological level (completed or not).
- Graduated experience: Masters and doctoral studies (completed or not).

Figure 29 presents the results for the five countries and for the Latin America & the Caribbean region in 2013, of the TEA rate for each one of the educational levels. Colombia, Barbados and the Latin America & the Caribbean show a trend that indicates that higher the educational level higher the propensity toward early entrepreneurship (TEA). In Jamaica and Trinidad & Tobago the same trend is observed in the first 3 levels, but a decrease is shown for the gra-

FIGURE 29. TEA rates by education level (2013)



SOURCE: Compiled by authors.

duated level. In 2011 and 2012 this behavior, decreased for the graduated level, was observed in all the countries.

Figure 30 presents the results for five countries and for the Latin America & the Caribbean group in 2013 in the proportion of established businesses in every educational level. Barbados, Jamaica, Suriname and Trinidad & Tobago, present a decreasing trend in the proportion of established entrepreneurs as educational level increase. Colombia and the Latin America & the Caribbean group show an increasing trend in the proportion of established entrepreneurs as educational level increases. In 2011 and 2012, the results were quite different in values and in trends in the different countries.

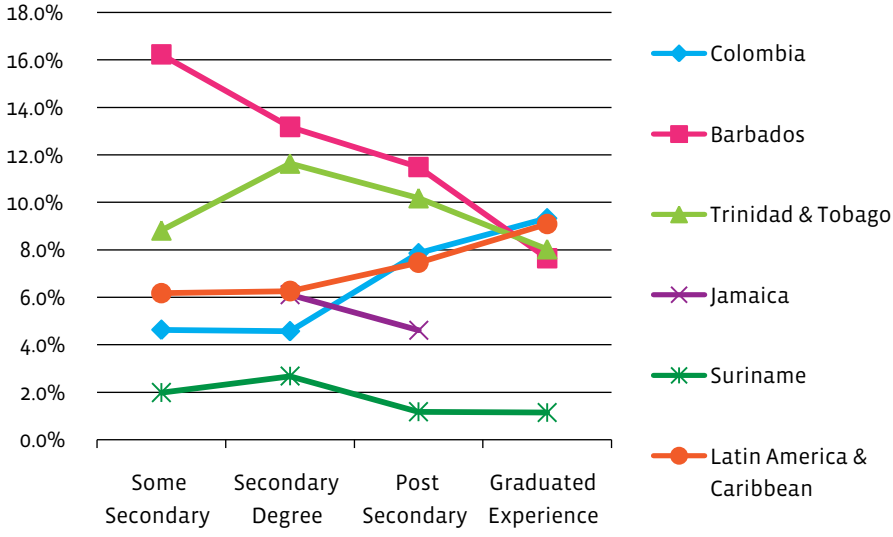
These results debunk the myth that the entrepreneurial activity is done by people with low educational levels, and should bring to the government one more argument to improve the coverage and the quality of the education provided to the citizens, because higher the educational level of the people more new businesses will be born and the probability of success will improve, because the entrepreneurs will be better trained to manage the business. To obtain even better results the educational system should provide entrepreneurial education to develop the entrepreneurial competences.

6.5 ENTREPRENEURIAL MOTIVATION

An important issue in the entrepreneurial pipeline process is to identify the circumstances which drive entrepreneurs to start a business. GEM considers that there are two basic motivations which may drive the start-up:

- Necessity-driven is defined when the entrepreneur indicate that he/she started his/her business as the last work option and had little analysis and/or preparation to start this new entrepreneurial initiative.
- Improvement-driven opportunity is defined when the entrepreneurs identify a market opportunity as a result of a thorough analysis of it (planning required and adapting their entrepreneurial competences to the business opportunity), and also, seek to either earn more money or to

FIGURE 30. Established entrepreneur rates by education level (2013)



SOURCE: Compiled by authors.

be more independent, as opposed to maintain an income.

In 2013, the composition of the nascent/new entrepreneurs, by their motivation had the following characteristic, as shown by figure 31:

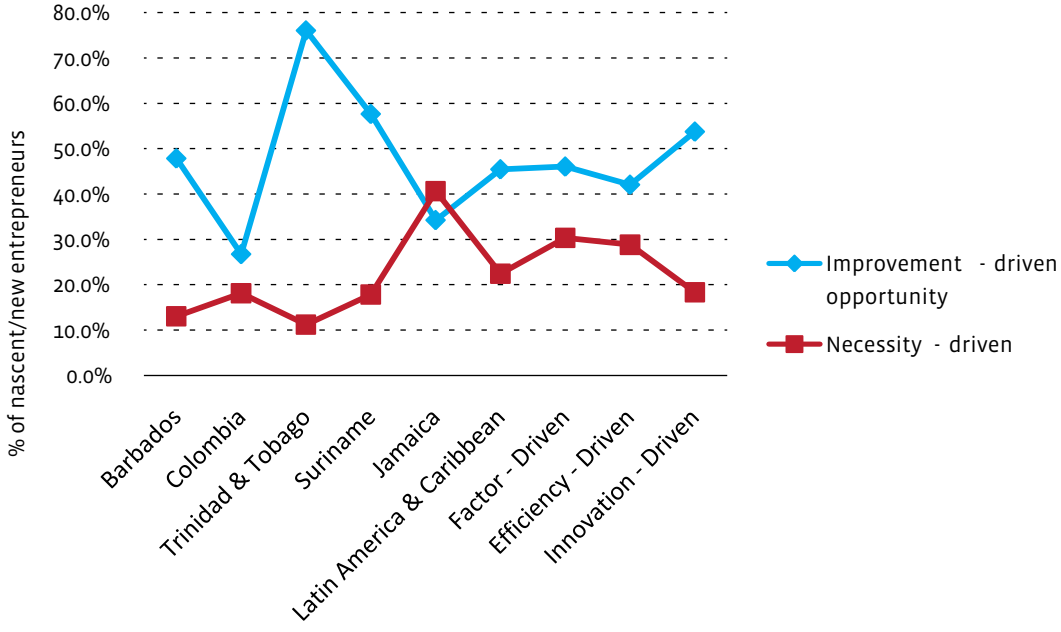
- In the necessity-driven, all the Caribbean countries, except Jamaica, present lower percentages than the factor and efficiency driven countries and equal or lower than the innovation driven countries.
- In the improvement-driven opportunity, Trinidad & Tobago and Suriname present a very high percentage of their entrepreneurs with this orientation. All the other Caribbean countries had a lower percentage than the innovation driven countries. Colombia presents the lowest percentage of improvement–driven opportunity entrepreneurs.

Ideally, no entrepreneur anywhere should begin a new business driven only by necessity and without undergoing a rigorous evaluation of the business model, in order to decrease the risk of failure, loss of resources, and specially the loss of self-confidence. In order to improve the proportion of new entrepreneurs driven by opportunity in an economy, they should be trained in areas such as:

- Analyzing market opportunities.
- Planning the way to deliver product/service in the market.
- Designing strategies to get resources needed.
- Considering different options to develop their career.
- Developing to some level the entrepreneurial competences.
- Improving the chances of making the new business initiatives to survive and to grow.
- Orienting the educational system and the entrepreneurial programs towards the development of entrepreneurial activities driven as much as possible by opportunity.

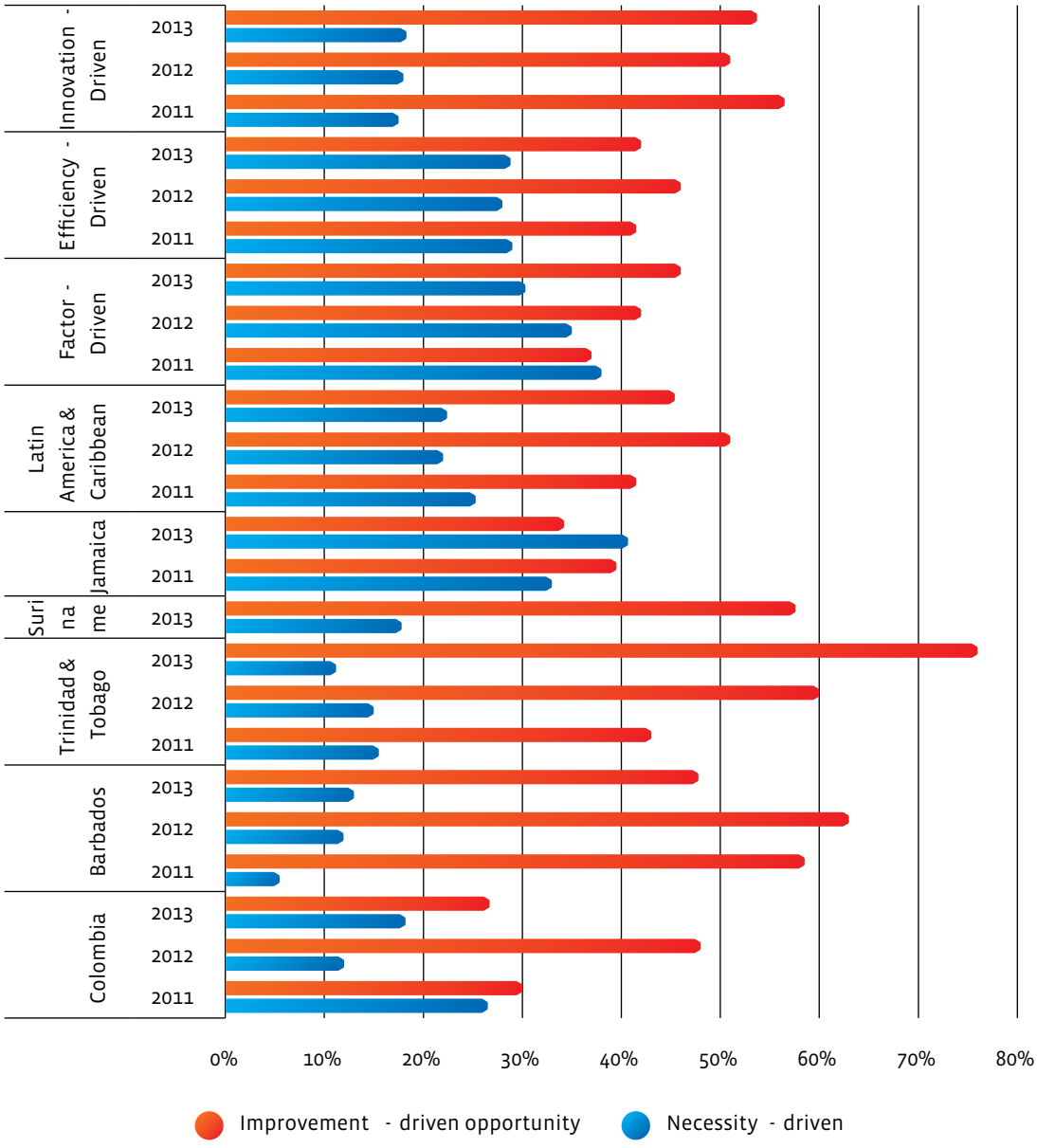
Figure 32 shows that in general in all the Caribbean countries and in the main country

FIGURE 31. Opportunity vs. necessity in Caribbean and economic groups (2013)



SOURCE: Compiled by authors.

FIGURE 32. Opportunity vs. necessity motivation (2011-2013)



SOURCE: Compiled by authors.

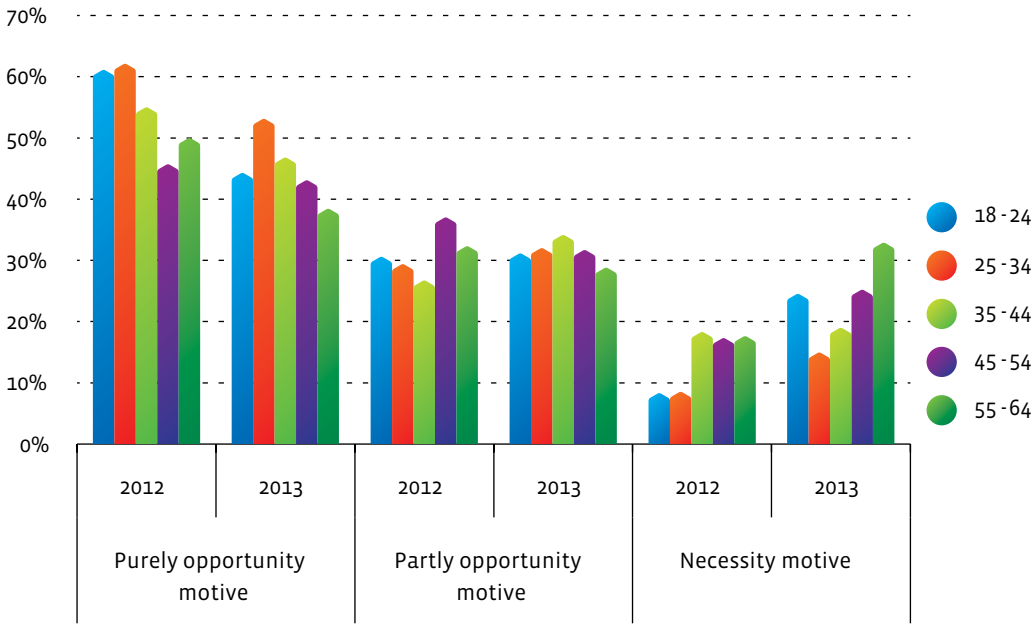
groups, most of the entrepreneurs are driven by improvement opportunity along the 2011-2013 period.

When the motivation is analyzed in each age group as indicated in figure 33, some conclusions can be drawn:

- The necessity motivation grew from 2012 to 2013 in all age groups, but especially in the 45-54 and the 55-64 groups.
- The pure opportunity motivation in all ages decreased from 2012 to 2013.
- The groups 18-25, 25-34 y 35-44 present the higher indicator in pure opportunity motivation in 2012 and in 2013.

Given the differences in the motivation orientation for each age group, it is very important to develop policies and support programs specifically oriented to the different age groups, and to the different motivation orientation.

FIGURE 33. Situation composition at every age group (2012-2013)



SOURCE: Compiled by authors.

7 ENTERPRISES CHARACTERISTICS

Another important aspect of GEM data is the possibility it brings in terms of identifying different elements to characterize enterprises. The analysis will be done with the enterprises that classified in the nascent/new business and the established business categories.

7.1 JOB GENERATION

Table 11 presents the distribution of the enterprises in terms of the current and expected (in 5 years) job generation capacity, not only for 2013 but also for 2011 and 2012.

It is important to observe that except in the Colombian case, more than 40% of the nascent/new enterprises had not generated one single job at the present time, but in five years in all the countries this indicator improves significantly. For 2013, Colombia moves from 19.2% at the present to 2.9% in five years.

Less than 3.2% of the enterprises have created more than 20 jobs at the present time, in all the countries in the last 3 years; but it will grow in five years to a maximum of 30.4%. Colombia shows the best pattern in the 20+ jobs created. These results allow deriving some conclusions:

TABLE 11. Current vs. expected job generation in the nascent/new businesses (2011-2013)

	No Job		1-5 Jobs		6-19 Jobs		20+ Jobs	
	Current	Expected	Current	Expected	Current	Expected	Current	Expected
Barbados								
2011	47,4%	27,6%	42,1%	52,1%	10,5%	17,9%	0,0%	2,3%
2012	62,5%	19,7%	34,1%	55,9%	2,2%	16,2%	1,2%	8,3%
2013	46,0%	19,7%	47,9%	56,3%	4,8%	16,2%	1,3%	7,8%
Jamaica								
2011	41,0%	10,2%	57,7%	82,4%	1,3%	7,4%	0,0%	0,0%
2013	50,7%	34,5%	46,5%	48,6%	2,2%	11,6%	0,6%	5,3%
Colombia								
2011	30,6%	2,9%	54,2%	46,6%	13,5%	33,1%	1,7%	17,4%
2012	37,1%	4,1%	53,2%	41,9%	6,5%	30,6%	3,2%	23,3%
2013	19,2%	2,9%	60,0%	34,0%	19,1%	32,6%	1,7%	30,4%
Surinam								
2013	41,1%	10,6%	41,0%	75,6%	17,9%	11,5%	0,0%	2,3%
Trinidad & Tobago								
2011	41,8%	13,5%	40,4%	54,9%	16,3%	23,0%	1,4%	8,6%
2012	48,9%	12,9%	40,8%	53,6%	8,6%	19,8%	1,7%	13,8%
2013	40,5%	11,8%	51,5%	50,8%	5,4%	25,5%	2,7%	11,8%
Caribbean								
2011	35,0%	7,0%	51,0%	50,0%	13,0%	29,0%	1,0%	14,0%
2012	45,0%	7,0%	47,0%	45,0%	6,0%	27,0%	3,0%	20,0%
2013	35,2%	10,7%	52,8%	44,3%	10,5%	25,6%	1,6%	19,4%

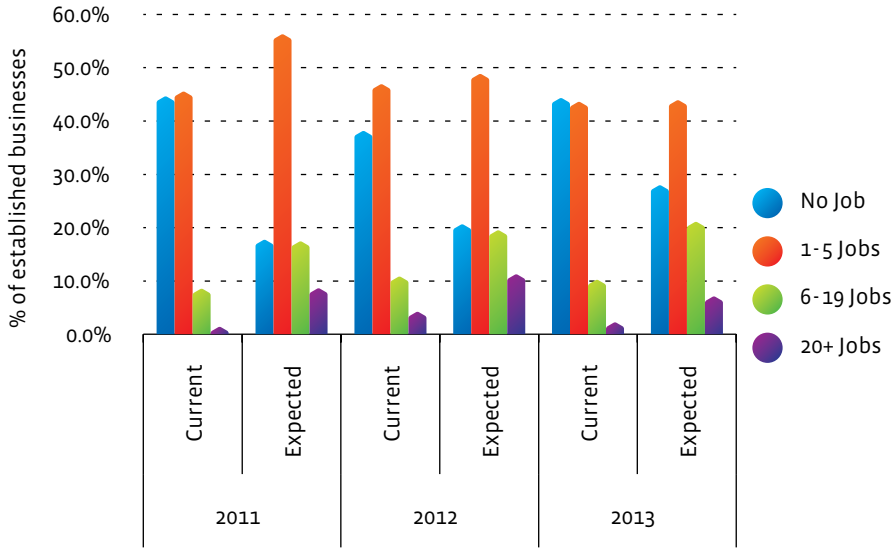
SOURCE: Compiled by authors.

- A very significant proportion of the nascent/new enterprises had a very small contribution to the job generation at the starting time: more than 80% of them started with less than 5 jobs; which indicates very small initiatives.
- Only a small proportion of enterprises will grow to have more than 20 employees in 5 years (less than 20% for the Caribbean countries) which indicates that the growth perspective is not a very clear vision in the nascent/new entrepreneurs.

Figure 34 shows the job generation in the established enterprises, current and expected in five years, for the Caribbean countries from 2011 to 2013. Again more than 80% of the established enterprises had less than 5 jobs at the current situation, and less than 30% are expecting to have more than 20 jobs generated.

From this analysis a recommendation is derived: the need to develop a support system that orients businesses and the entrepreneurs to a vision of growth of their activities and provide resources for the development of growth strategies.

FIGURE 34. Current vs. expected job generation in the established business. Caribbean (2011-2013)



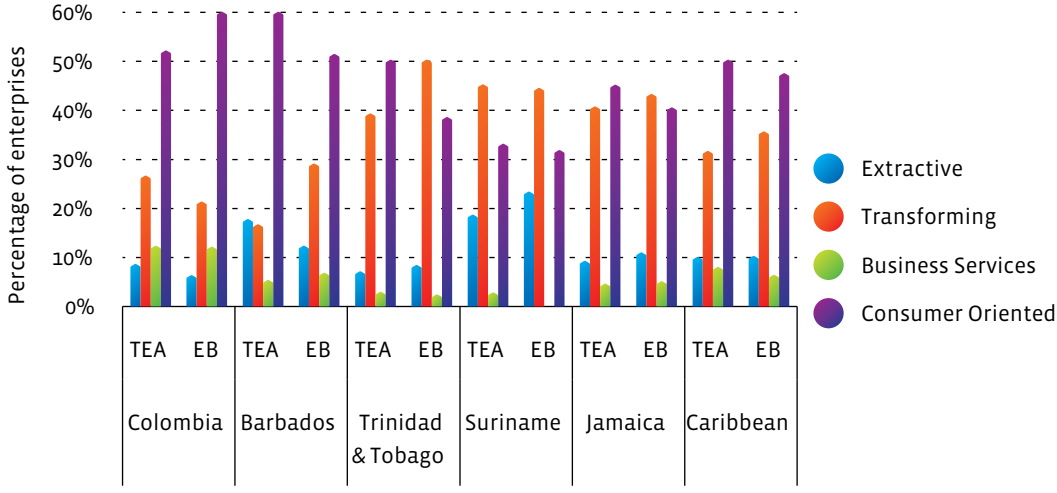
SOURCE: Compiled by authors.

7.2 SECTOR

Table 12, classifies the different enterprises, nascent/new (TEA) and established (EB), using the International Standard Industry Classification (ISIC). The distribution is as expected quite different for each country. In Barbados, Trinidad & Tobago, Suriname and Jamaica, "the government, health, education and social services" is the main sector, meanwhile; in Colombia it is the "wholesale trade". The "information and communication", and "the financial intermediation, real estate activities", only show up their existence in Colombia.

Figure 35 integrates the data in the four basic sectors: extractive, transforming,

FIGURE 35. Sectorial distribution (2013)



SOURCE: Compiled by authors.

TABLE 12. Distribution of nascent/new and established enterprises by sector (2013)

	Barbados		Colombia		Trinidad & Tobago		Suriname		Jamaica		Caribbean	
	TEA	EB	TEA	EB	TEA	EB	TEA	EB	TEA	EB	TEA	EB
Agriculture, forestry, fishing	16,4%	9,7%	8,1%	4,6%	7,2%	8,5%	13,7%	23,4%	8,2%	8,7%	9,1%	8,7%
Mining, construction	5,7%	11,7%	3,2%	7,5%	7,5%	9,1%	13,8%	-	2,1%	3,3%	4,8%	8,2%
Manufacturing	1,2%	4,1%	13,8%	19,5%	3,6%	6,5%	16,6%	9,3%	9,4%	5,3%	9,9%	8,6%
Utilisation, transport, storage	2,7%	5,8%	3,8%	2,7%	8,6%	13,5%	11,7%	32,2%	5,6%	6,0%	5,4%	8,2%
Wholesale trade	8,5%	10,3%	31,9%	32,2%	19,9%	21,3%	8,3%	3,1%	25,0%	31,0%	24,4%	21,1%
Retail trade, hotels & restaurants	15,1%	4,9%	12,2%	3,6%	21,8%	13,3%	4,6%	3,3%	12,4%	7,1%	14,0%	7,0%
Information and communication	-	-	4,0%	2,4%	-	-	-	-	-	-	1,9%	0,6%
Financial intermediation, real estate activities	-	-	5,1%	2,7%	-	-	-	-	-	-	2,4%	0,6%
Professional services	4,9%	6,3%	2,8%	6,3%	2,4%	1,0%	2,9%	-	4,3%	3,3%	3,2%	4,2%
Administrative services	0,6%	0,6%	0,5%	0,7%	0,6%	1,5%	-	-	0,3%	1,8%	0,5%	1,0%
Government, health, education, social services	41,5%	39,2%	13,0%	12,3%	23,9%	22,3%	21,4%	25,4%	30,1%	26,8%	21,4%	26,2%
Personal/ consumer service activities	3,4%	7,4%	1,6%	5,5%	4,5%	3,0%	7,0%	3,3%	2,6%	6,7%	2,9%	5,6%

SOURCE: Compiled by authors.

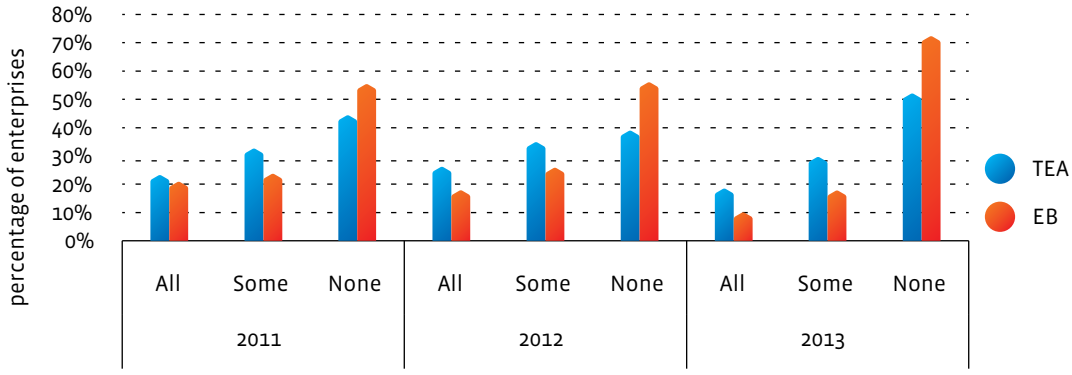
business services and consumer oriented. In all the countries, and for nascent/new (TEA) as for established (EB), the consumer oriented sector is the main one, followed by transforming. Extractive and business services represent less than 10% in the Caribbean region.

7.3 INNOVATION

Innovation is a basic concept to entrepreneurship development and it can be expressed and implemented in different ways: product, process, delivery form, promotion mechanism, new market niches, material, technologies, etc. It is expected that innovation should add value to the enterprise, allow the products to sell better, and in bigger quantities, and in that way increase the size and value of the enterprise.

To understand the level of innovation of new enterprises, GEM analyzes three main variables: the perception of innovation in product/ services, the level of competitors making the same products and the application of new technology.

FIGURE 36. Innovativeness of products/ services by sector groupings (2011-2013)



SOURCE: Compiled by authors.

Figure 36, integrates for the Caribbean countries the level of innovations in product/services. In 2013, for the nascent/new and the established enterprises there are three levels identified: Level all means that the entrepreneur considers that all the consumers will consider the product/services as innovative ones. Level some means that some of the consumers will consider the product/services as innovative ones and the level none means that none or the consumer will consider the product/services as innovative ones.

For the nascent/new and for the established enterprises the most frequent situation, in all the three years, is "none" with percentages greater than 40% and with a trend of increasing the lack of innovative products. The nascent/new enterprises offer more innovative products than the established ones.

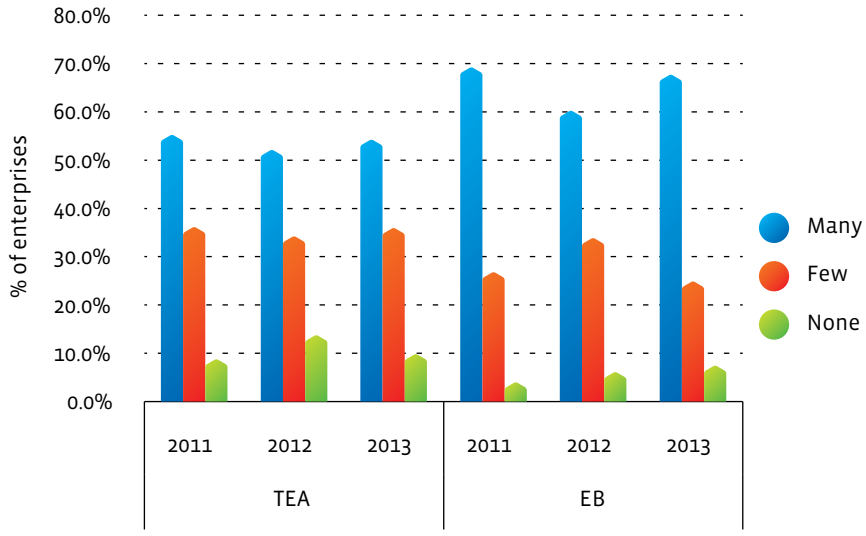
When a comparison is made between the countries and some groups of countries, all the Caribbean countries, except Colombia, have a lower percentage of enterprises with product/services that are considered as innovative for all their consumers than the factor, efficiency and innovation driven economies, for nascent/new and for established enterprises (Figure 36).

TABLE 13. Caribbean Countries and economic phases vs. new products by TEA and EB (2013)

	TEA			EB		
	All	Some	None	All	Some	None
Colombia	37,2%	46,2%	16,7%	27,5%	42,6%	30,0%
Barbados	9,7%	22,5%	67,8%	3,4%	13,6%	83,0%
Suriname	1,1%	22,4%	76,5%	2,9%	9,1%	88,0%
Trinidad & Tobago	5,2%	12,1%	82,8%	4,5%	8,5%	87,0%
Jamaica	5,2%	19,3%	75,5%	7,6%	6,9%	85,5%
Latin America & Caribbean	17,7%	21,8%	60,5%	13,0%	19,3%	67,7%
Factor-driven	13,8%	23,2%	63,0%	13,6%	16,8%	69,6%
Efficiency-driven	15,3%	27,4%	57,3%	12,6%	20,8%	66,6%
Innovation-driven	18,0%	27,4%	54,7%	9,7%	20,6%	69,7%

SOURCE: Compiled by authors.

FIGURE 37. Number of direct competitors in markets entered by TEA and EB (2011-2013).



SOURCE: Compiled by authors.

These results show the need to develop more entrepreneurial competences related to innovation: flexibility, change orientation, perceptual capacity, creativity, market orientation, design, etc., to allow them to include more innovative approaches in their entrepreneurial activity.

The analysis about the "number of competitors" that the enterprises may have is shown in figure 37, and it indicates that more than 50% of the nascent/new and more than 60% of the established businesses are in highly competitive markets. The lack of uniqueness in the market is not by itself a problem, but when the reason could be the lack of new product/services, many challenges lay ahead for those business, and the strategy of lower prices is the only one to keep or gain customers.

The third factor that GEM analyses in terms of innovation is the technology that the enterprises are using, and three levels are defined: Latest means that the technology has been available in the local markets for less than 1 years; new means that it has been available in the local markets between 1 to 5 years; no new (or old) means that it has been available in the local market for more than 5 years.

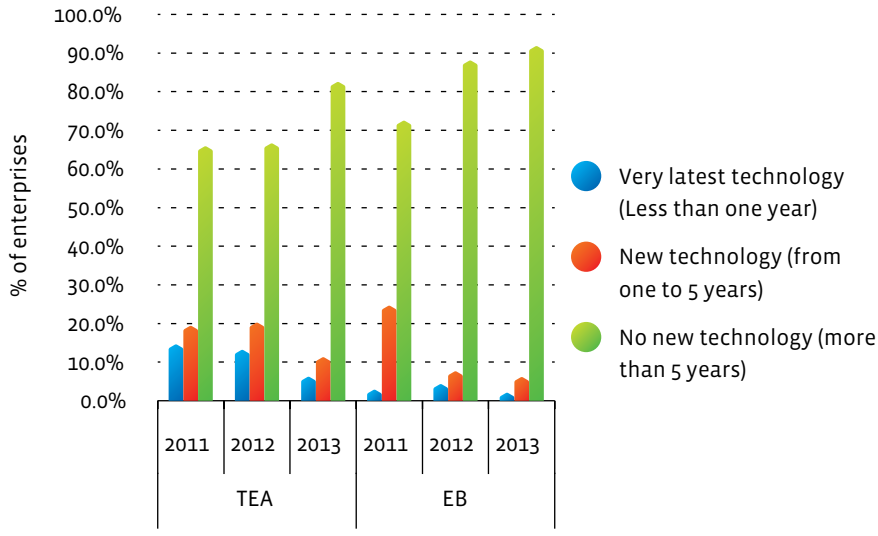
Figure 38 shows that, in the Caribbean region, along the years, the enterprises use mainly old technologies (percentages between 65.9% and 82.5% for the TEA, and 72.5% and 91.8% in the EB). A low percentage of enterprises applied the latest technologies to their processes (between 14.7% and 2.1%).

When the three elements of innovation: new products/services, markets with a low number of competitors and the use of modern technology are taken into consideration, the new Caribbean enterprises show a significant disadvantage which requires the implementation of relevant changes in policy.

All the entrepreneurial development programs must explain and teach the concepts of innovation, flexibility, market orientation and widening market perspectives as basic elements for success and growth of the new businesses.

Government and universities must foster innovation and create a culture driven by it,

FIGURE 38. Newness of technology used in nascent/new businesses and established business by sector (2011-2013)



SOURCE: Compiled by authors.

so that regardless of whether individuals are entrepreneurs or employees, they recognize the importance that innovation has for competitiveness.

7.4 INTERNATIONAL ORIENTATION

Another measurement of GEM is the extent in which entrepreneurs sell to customers outside their economies, as an indicator of international orientation and of international competitiveness. Table 14 reflects that in most Caribbean countries very few enterprises (nascent/new (TEA) and established business (EB)) have more than 75% of their consumers outside the country: for the nascent/new it goes from 1.8% in Trinidad & Tobago to 9.8% in Jamaica and for established one from 1.6% in Colombia to 8.2% in Jamaica.

Given that the composition of the portfolio in terms of international costumers is low, a deeper research should be oriented to find out if the problem is the lack of competitivity in the international markets or the lack of international orientation. Support programs in both cases are needed.

TABLE 4. International orientation of Caribbean businesses (2012)

	Percentage of customers from outside the country	TEA	EB
Barbados	More than 75%	6,1%	3,4%
	25 to 75%	8,3%	5,5%
	Under 25%	50,8%	48,7%
	None	34,8%	42,3%
Colombia	More than 75%	4,8%	1,6%
	25 to 75%	9,6%	6,9%
	Under 25%	71,6%	74,9%
	None	14,0%	16,6%
Trinidad & Tobago	More than 75%	1,8%	
	25 to 75%	5,2%	2,6%
	Under 25%	29,9%	35,0%
	None	63,1%	62,4%
Jamaica	More than 75%	9,8%	8,2%
	26 to 75%	6,6%	7,6%
	Under 25%	40,2%	43,5%
	None	43,4%	40,7%
Suriname	More than 75%	1,9%	3,3%
	26 to 75%	8,0%	14,0%
	Under 25%	36,4%	38,4%
	None	53,7%	44,3%
Caribbean	More than 75%	4,8%	2,6%
	26 to 75%	8,0%	5,9%
	Under 25%	54,7%	50,8%
	None	32,5%	40,7%

SOURCE: Compiled by authors.

8 ENTREPRENEURIAL FRAMEWORK CONDITIONS

As indicated in section 2, the GEM model considers that socio economic growth is associated to the business dynamic and this business dynamic in turn is associated by the established and the new entrepreneurs. But it also considers that to have more and better entrepreneurs some Entrepreneurial Framework Conditions (EFC) should be developed, because if they are at a favorable level, it will influence the entrepreneurial opportunities, capacities, preferences, aptitudes, aspirations, activities, and the decision of the entrepreneurs to develop more and better enterprises.

To measure these conditions, GEM applies a National Expert Survey (NES) to 36 national experts in 9 core areas. In 2013, Suriname, Trinidad & Tobago, Colombia and Jamaica surveyed 36 experts and Barbados surveyed 18 experts (entrepreneurs, policy makers, business and support services providers, Investors, financiers, bankers, educators, teachers, entrepreneurship researchers), in the 9 different areas indicated in the GEM model: Social and cultural norms, physical infrastructure, internal market openness, commercial and business infrastructure, R&D transfer, education and training, government programs, government policies, financing.

Each expert, evaluates a different set of statements using a Likert scale from 1 to 5, where 5 indicates that the statement fosters entrepreneurship and 1 that the statement blocks entrepreneurship.

For every EFC, a Likert evaluation for each country or group of countries was average to get an indicator about it. Table 15 presents the nine entrepreneurial framework conditions (Education, Government policy and International markets divided in two groups)

TABLE 15. Entrepreneurial framework conditions in the world. 2013

	Financing	Public Policy (General policies)	Government policy (Regulation)	Government programs	Education (Primary & Secondary)	Education (University)	R&D transfer	Commercial infraestructure	Internal market (Dynamics)	Internal market (Openness)	Physical infraestructure	Cultural & Social norms
Latin America & Caribbean	2,4	2,6	2,3	2,6	2,0	3,1	2,2	2,9	2,7	2,4	3,7	2,9
Argentina	2,2	2,0	1,5	2,8	2,2	3,3	2,7	3,0	3,2	2,6	3,5	3,2
Barbados	2,0	2,8	2,0	2,3	2,0	2,7	1,6	3,0	2,5	2,4	3,4	2,5
Brazil	2,3	2,5	1,7	2,3	1,5	2,4	2,0	2,4	3,0	2,1	3,0	2,7
Chile	2,5	3,4	3,2	3,1	1,7	2,7	2,2	2,7	2,4	2,3	4,2	2,8
Colombia	2,3	2,8	2,6	3,0	2,3	3,2	2,4	2,8	2,9	2,8	3,3	3,1
Ecuador	2,2	2,9	2,1	2,5	2,0	3,2	2,1	2,9	2,3	2,4	4,2	3,1
Guatemala	2,2	2,2	2,1	2,4	1,8	3,2	2,2	3,4	2,4	2,4	3,8	2,6
Jamaica	2,9	2,6	2,2	2,3	2,2	3,5	2,3	3,2	3,8	2,7	3,8	3,5
Mexico	2,4	3,0	2,2	3,1	2,0	3,3	2,6	2,7	2,5	2,4	3,9	3,1
Panama	2,4	2,7	2,8	3,1	1,6	2,8	2,3	2,8	2,8	2,4	3,8	3,0
Peru	2,3	2,0	2,1	2,2	2,1	2,8	1,9	2,7	2,6	2,6	3,4	2,9
Suriname	2,4	2,4	2,2	2,0	2,1	3,3	1,8	2,8	2,7	2,2	3,3	2,8
Trinidad & Tobago	3,1	2,2	2,2	2,4	2,1	3,0	2,0	3,1	2,8	2,0	3,8	3,0
Uruguay	2,2	2,3	2,8	3,2	1,7	3,5	3,0	3,1	2,0	2,8	3,8	2,4
Middle East & North Africa	2,6	2,3	2,1	2,1	1,8	2,7	2,2	2,8	3,3	2,4	3,6	2,9
Sub-Saharan Africa	2,5	2,5	2,2	2,3	2,1	2,7	2,0	2,8	3,2	2,7	3,0	2,9
Asia Pacific & South Asia	3,0	2,8	2,6	2,7	2,2	2,9	2,6	3,1	3,6	2,7	3,8	3,2
Europe-Non-EU28	2,5	2,5	2,5	2,6	2,3	2,9	2,5	3,1	3,1	2,5	3,6	2,7
Europe-EU28	2,6	2,6	2,4	2,8	2,1	2,8	2,5	3,2	3,1	2,6	4,0	2,6
North America	2,4	2,7	2,0	2,6	2,0	2,9	2,3	3,1	3,1	2,6	3,8	3,2

SOURCE: Compiled by authors.

for the different Latin American countries and for some country groups.

This table shows than in many of the countries the experts considered that many of the EFC were at the low level (below 3) and in very few cases a figure above four was provided as average.

Among the Latin America & the Caribbean countries, the relative situations are as follows:

- In Financing, Trinidad & Tobago has the highest value (3.1) whereas Barbados has the lowest one (2.0)
- In Public policy (regulation), Chile with 3.4 is at the top and Peru and Argentina (2.0) are at the bottom.
- In Public policy (general), Argentina with 1.5 is the one with the lower acceptance and Panama and Uruguay with 2.8 are the ones with the best situation.
- In Public policy (regulation), Brazil (1.7) has the less favorable conditions and Chile (3.2) the best one.
- In Government programs, Suriname (2.0) presents a very low condition and Uruguay (3.2) is at the top.
- In Education (primary and secondary), the lower level is Brazil (1.5) and the higher one is Colombia (2.2). This condition received an extremely low value for all the Latin American countries but also very low value for most of the country groups.
- In Education (university), Jamaica and Uruguay (3.5) are the leaders and Brazil (2.4) is the country with the lowest score.
- The critical situation of R&D transfer moves from Barbados (1.6) to Uruguay (3.0) with an average for the Latin America & the Caribbean of 2.2.
- Commercial Infrastructure was evaluated in the range Brazil (2.4) to Guatemala (3.4).
- In internal market (dynamics), the indicator moves from Uruguay (2.0) to Jamaica (3.8).
- Internal market (openness) was best evaluated in Uruguay and Colombia (2.8) and worst evaluated in Trinidad & Tobago (2.0).
- The physical infrastructure in Uruguay (2.4) received the lowest score and in Chile (4.2) had the highest score.
- Cultural and Social norms fluctuated from 2.4 in Uruguay to 3.5 in Jamaica.

These results show without doubt that significant work has to be done in all the Latin American & the Caribbean countries to improve the level of the framework conditions: The fact that only two of the twelve EFC received a score above 3.0, which means average, indicates that still for the entrepreneurs the entrepreneurial environment is far from a favorable one.

Figure 39 integrates the results of Barbados, Colombia, Jamaica, Suriname and Trinidad & Tobago for the 9 EFC in the period 2011-2013 (Suriname only in 2013).

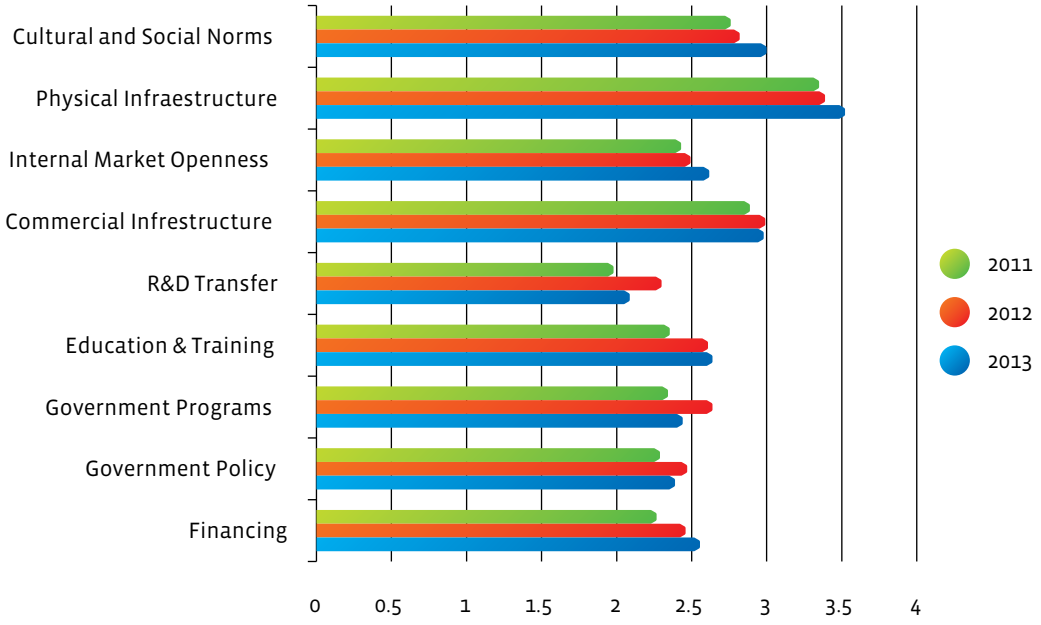
There is a positive trend in most of the EFC from 2011 to 2013, and only physical infrastructure is above 3.0. The R&D transfer is the worst, but in all of them significant developments are required. The policies should be oriented to improve all the EFC as a requirement to have a stronger entrepreneurial basis.

Even though through the document some of the NES results have been analyzed, it is important to consider in detail, some of them to be able to generate some policy recommendations.

Table 16 presents the results for the components of the financing condition for 2011, 2012 and 2013, and it can be observed that in the experts' opinion, the "financing" condition shows an improving trend since 2011, specially, two of them:

- Sufficient venture capitalist funding is available for new and growing firms
- Sufficient funding is available from private individuals (other than founders) for new and growing firms.

FIGURE 39. Entrepreneurial framework conditions (2011-2013)



SOURCE: Compiled by authors.

However, in respect to other conditions, the score obtained in the "financing" condition is very low. The design and effective implementation of new financing mechanisms (agile, appropriate, and effective coverage) are required for all new businesses. The strengthening of: grant funds, seed capital, credit lines with suitable conditions, network of private investors (angels and venture), incentives to invest in new companies, associative systems etc., are urgent elements in the business environment.

Table 17 presents the results for several factors that measure the "R&D transfer" condition. When the results of 2011, 2012 and 2013 are analyzed, the scenario is quite negative,

TABLE 16. Financing (2011-2013)

	2011	2012	2013
There is sufficient equity funding available for new and growing firms	2,4	2,4	2,5
There is sufficient debt funding available for new and growing firms	2,8	2,7	2,9
There are sufficient government subsidies available for new and growing firms	2,3	2,8	2,5
There is sufficient funding available from private individuals (other than founders) for new and growing firms	2,0	2,4	2,7
There is sufficient venture capitalist funding available for new and growing firms)	1,9	2,4	2,5
There is sufficient funding available through initial public offerings (IPOs) for new and growing firms	2,2	2,1	2,3

SOURCE: Compiled by authors.

TABLE 17. Research & development transfer (2011-2013)

	2011	2012	2013
New technology, science, and other knowledge are efficiently transferred from universities and public research centers to new and growing firms	2,0	2,3	2,2
New and growing firms have just as much access to new research and technology as large, established firms	2,1	2,3	2,3
New and growing firms can afford the latest technology	1,8	2,0	1,9
There are adequate government subsidies for new and growing firms to acquire new technology	1,9	2,3	1,9
The science and technology base efficiently supports the creation of world-class new technology-based ventures in at least one area	2,3	2,7	2,5
There is good support available for engineers and scientists to have their ideas commercialized through new and growing firms	1,8	2,2	1,8

SOURCE: Compiled by authors.

since the indicators are low and have been declining from 2012 to 2013.

Due to the lack of capacity of the growing firms to buy/develop/adapt the latest technologies (1.9), to the lack of efficiently transfer of science, technology and knowledge from the university and research centers (2.2), to the lack of adequate subsidies (1.9) to the lack of support to engineers and scientist to commercialize their ideas (1.8), it is possible to explain the limitations in the level of technology used in the regional enterprises, and their lack of innovativeness, competitivity and international market orientations.

The Engineering and the Science university programs at the undergraduate and graduate level need to have significant entrepreneurial programs. The national research centres should stimulate research oriented to the understanding of entrepreneurship and the transformation of knowledge in enterprises that add value, create employment, generate taxes and produce well-being.

The Engineering and Science societies, the universities, research centres and the community in general should provide a significant recognition to the professionals who are able to develop engineering, technology and science based enterprises on an equal footing to the recognition assigned to conducting academic research and writing and publishing papers in peer reviewed journals. The government has also to review its policy in terms of the resources assigned for research and development as a proportion of GDP, because according to "Latin American Economic Outlook 2013" report by OECD and the United Nations, in 2009, investment in R&D in Latin America was equal to 0.7% of GDP, way below the level of investment seen in OECD countries (2.4%). This gap and the concentration of R&D in only a few countries help explain why the region is lagging behind in this area.

Three main policy recommendations can be formulated about R&D transfer:

1. Integrate entrepreneurship curricula across university programs, including engineering and science programs.
2. Place a higher value on the work of scientists and academicians to commercialize their research results through new and growing firms (e.g. spin-off ventures).
3. Increase the amount of government expenditure on R&D as well as on programs to encourage technology transfer from universities and public research centres to new and growing firms, and programs to

support new and growing firms in the acquisition of new technology and commercialization of their own R&D activities.

Table 18 presents the evaluation of factors associated to "Government policy". Again, the factors have low scores with a decreasing trend from 2012 to 2013. The low scores in the factors related to the taxes, permits, regulations, licensing and bureaucracy, in general, indicates the need to work stronger in these areas, not only in the policies at the regional and national level, but in terms of the specific entities that apply the procedures.

Several recommendations arise here:

- It is necessary that the policy to support new entrepreneurs and new businesses become a priority for all levels of government. Also, government should create mechanisms in its procurement processes, so that new businesses can have a share in them.
- It is urgent to review the taxation conditions (fees, procedures, penalties, incentives, etc.) so that the process of creation and entrepreneurial development will be facilitated.
- It is necessary to contribute to the improvement of legal procedures because they are hindering the new entrepreneurial activity.

The capacity of the entrepreneur to go from an idea to the realization of a successful business is related to the entrepreneurial competences (knowledge, abilities and skills) the individual may have developed and they depend on, the type and quality of education obtained, and the training and the skill developed by the educational process. Table 19 presents the scores obtained by factors that define the condition: "education & training" for 2011, 2012 and 2013. Although all components have improved from 2011 to 2013, the results are very low especially at the primary and secondary education (1.9 in 2013).

Several specific actions are suggested:

- Enriching the curriculum at all levels not only with the development of labor competences but also with entrepreneurial competences. Therefore it is necessary to identify and convene a group of Caribbean experts in each country in the subject of

TABLE 18. Government policies (2011-2013)

Government Policies	2011	2012	2013
Government policies (e g , public procurement) consistently favor new firms	2,2	2,2	2,2
The support for new and growing firms is a high priority for policy at the national government level	2,8	3,0	2,9
The support for new and growing firms is a high priority for policy at the local government level	2,4	2,7	2,7
New firms can get most of the required permits and licenses in about a week	1,6	1,8	1,8
The amount of taxes is NOT a burden for new and growing firms	2,1	2,3	2,2
Taxes and other government regulations are applied to new and growing firms in a predictable and consistent way	3,1	3,1	3,0
Coping with government bureaucracy, regulations, and licensing requirements it is not unduly difficult for new and growing firms	1,9	2,2	2,0

SOURCE: Compiled by authors.

TABLE 19. Education and training (2012)

Education & Training	2011	2012	2013
Teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative	2,1	2,4	2,4
Teaching in primary and secondary education provides adequate instruction in market economic principles	2,0	2,2	2,2
Teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation	1,7	2,1	1,9
Colleges and universities provide good and adequate preparation for starting up and growing new firms	2,6	2,7	2,9
The level of business and management education provide good and adequate preparation for starting up and growing new firms	2,8	3,2	3,3
The vocational, professional, and continuing education systems provide good and adequate preparation for starting up and growing new firms	2,9	3,1	3,2

SOURCE: Compiled by authors.

entrepreneurial education for the formation of an advisory team on the Ministry of Education that assists in the design of the curricula needed to develop the entrepreneurial competences that facilitate the creation of new businesses.

- Boosting concepts of creativity and innovation in all educational programs, in a transversal way, to develop an attitude in the people that consider these two elements as permanent elements in all vital activities.
- Allocate resources for research in entrepreneurship education and training of teachers, professors and national researchers in this area.
- Implement training programs in all educational segments that enable the development of entrepreneurial skills and allow to know: how?, Where?, with who?, when?, and how? to create and manage a company.

Table 20, presents the scores obtained by the factors that define the condition: "Govern-

TABLE 20. Government programs (2011-2013)

	2011	2012	2013
A wide range of government assistance for new and growing firms can be obtained through contact with a single agency	2,0	2,2	2,0
Science parks and business incubators provide effective support for new and growing firms	2,5	2,5	2,7
There are an adequate number of government programs for new and growing businesses	2,5	3,0	2,5
The people working for government agencies are competent and effective in supporting new and growing firms	2,5	2,8	2,6
Almost anyone who needs help from a government program for a new or growing business can find what they need	2,2	2,6	2,4
Government programs aimed at supporting new and growing firms are effective	2,4	2,7	2,5

SOURCE: Compiled by authors.

ment programs" for 2011, 2012 and 2013. The factors best evaluated are: "Science parks and business incubators provide effective support for new and growing firms" and "the people working for government agencies are competent and effective in supporting new and growing firms".

The following recommendations are made:

- The need to establish and to strengthen centers for entrepreneurship development in each Caribbean country. There are many international and local models that should be evaluated to identify the best design for each country and condition.
- The need to review the operation of the science parks and business incubators, to increase not only their coverage, but specially their effectiveness and impact on supporting new and growing firms.

Table 21 presents the results for the condition: "Commercial and Professional infrastructure". For nascent and new entrepreneurs, to have access to a good commercial infrastructure (suppliers and subcontractors) and professional (advisors, consultants, partners, etc.), it is a required condition to develop businesses effectively.

The condition: "Commercial & Professional Infrastructure" present low values with a decrease trend from 2012 to 2013. Some of recommendations presented in the condition: "Government programs "are valid here because the lack of institutions that provide advisory, consulting, mentoring, etc.., under appropriate condition and the cost, are critical factors. Also, the problem of banking services and its cost demand a stronger interaction between the government and financial institutions to facilitate the processes of banking of new businesses.

Table 22 presents the factors associated with the condition: "Internal market openness" and here although the scores are low, an improving trend in the 2012-2013 period is showed.

Government needs to develop and implement policies in a joint effort with the private sector to improve the conditions on the internal market openness, especially when the effect of the free trade agreements and the revaluation policy has been favoring the foreign entrepreneurs and enterprises.

The difficulties in finding a real niche in the market may be one of the main causes of the number of nascent entrepreneurs that

TABLE 21. Commercial & Professional Infrestructure (2011-2013)

	2011	2012	2013
There are enough subcontractors, suppliers, and consultants to support new and growing firms	3,3	3,3	3,4
New and growing firms can afford the cost of using subcontractors, suppliers, and consultants	2,2	2,2	2,3
It is easy for new and growing firms to get good subcontractors, suppliers, and consultants	2,6	2,8	2,7
It is easy for new and growing firms to get good, professional legal and accounting services	3,2	3,4	3,4
It is easy for new and growing firms to get good banking services (checking accounts, foreign exchange transactions, letters of credit, and the like)	3,1	3,3	3,1

SOURCE: Compiled by authors.

TABLE 22. Internal Market Openness (2011–2013)

	2011	2012	2013
The markets for consumer goods and services change dramatically from year to year	2,5	2,6	3,0
The markets for business-to-business goods and services change dramatically from year to year	2,5	2,5	2,9
New and growing firms can easily enter new markets	2,7	2,7	2,7
The new and growing firms can afford the cost of market entry	2,2	2,3	2,4
New and growing firms can enter markets without being unfairly blocked by established firms	2,6	2,6	2,4
The anti-trust legislation is effective and well enforced	2,1	2,3	2,3

SOURCE: Compiled by authors.

are not able to get to the new entrepreneur stage. If the new Caribbean companies cannot access the local market, there is not a chance that they will be able to get a place in the international markets.

Table 23 indicates that the factors associated to the condition: "Cultural and social norms" present an increased trend.

In the entrepreneurial pipeline analysis, it was shown that the adult population has a very positive perception of entrepreneurship, but in the potential entrepreneurs, it was shown a high fear to failure, and here, in the NES, the experts reinforce it that there is a problem with the risk taking. In the case of women, the study shows that the risk propensity of them is lower, and this may be the partial explanation for the lower scores that women show along the entrepreneurial pipeline.

The cultural norms of self-sufficiency, autonomy, personal initiative, risk-taking, creativity, and innovativeness, associated with an entrepreneurial culture, should be reinforced by the educational system (through entrepreneurial education) and the media (in terms of providing recognition to entrepreneurs in all stages of the entrepreneurial pipeline) in order to develop a stronger entrepreneurial culture.

Table 24 presents the assessment of the experts to the factors associated with the con-

TABLE 23. Cultural and Social Norms (2011–2013)

	2011	2012	2013
The national culture is highly supportive of individual success achieved through own personal efforts	3,2	3,2	3,2
The national culture emphasizes self-sufficiency, autonomy, and personal initiative	2,7	2,7	2,9
The national culture encourages entrepreneurial risk-taking	2,4	2,5	2,6
The national culture encourages creativity and innovativeness	2,6	2,7	3,1
The national culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her own life	2,9	3,0	3,2

SOURCE: Compiled by authors.

dition “Physical Infrastructure”. This is the condition best scored along the years, and generally shows a trend to improvement.

The support that the physical infrastructure provides to new and growing firms is the category with the lowest scores. It is associated with the problems of good highways, transportation system, airport and in general, logistic This is a very sensitive area because it affects the value generation and hinders the openness and the internationalization of the enterprises, by increasing the costs.

The higher cost and the lower quality of communications and basic utilities are problems that should be considered because they will reduce the competitivity of the Caribbean enterprises.

TABLE 24. Physical Infraestructure (2011–2013)

	2011	2012	2013
The physical infrastructure (roads, utilities, communications, waste disposal) provides good support for new and growing firms	3,2	3,1	3,3
It is not too expensive for a new or growing firm to get good access to communications (phone, Internet, etc)	3,6	3,5	3,7
A new or growing firm can get good access to communications (telephone, internet, etc) in about a week	3,3	3,2	3,6
New and growing firms can afford the cost of basic utilities (gas, water, electricity, sewer)	3,1	3,5	3,6
New or growing firms can get good access to utilities (gas, water, electricity, sewer) in about a month	3,6	3,6	3,4

SOURCE: Compiled by authors.

9 SPECIAL TOPICS

In 2013 GEM decides to study at a global level special subjects that traditionally have not been measured in the entrepreneurial activity: the relation between well-being and entrepreneurship including: life satisfaction, work-life balance and satisfaction with the job. Parallel to that decision, the GEM Caribbean countries decided to include as special topic the "health condition" of the entrepreneurs.

9.1 "WELL-BEING" AND "ENTREPRENEURSHIP"

The subject of well-being was for many years a subject that was not included in all the socio economic measurements of development, but in the last decade many researches have been working on the idea that it is a very important objective of any development policy. Agner (2010) and Stiglitz, et al (2009), indicate that the times are ripe for our measurement system to shift emphasis from measuring economic production to measuring well-being. New "happiness" measurements as the world happiness report (Helliwell et al., 2013), and the OECD measurement of well-being (OECD, 2009) are examples of this trend.

Given the area of work of GEM, some questions could arise to relate entrepreneurship and well-being: Are the entrepreneurs happier or do they have a higher subjective feeling of well-being than the employees?, Are there di-

fferences in well-being between males and females entrepreneurs?, Are there differences between opportunity and necessity driven entrepreneurs? Unfortunately there is not much literature and empirical evidences about this matter at an individual level (Cooper & Artz, 1995; Carree & Verheul, 2012; Naude et al 2013).

The entrepreneurial literature indicates that given the autonomy, flexibility, independence, self-determination, leadership position, possibility of carrying their own ideas, the entrepreneurs should have a higher level of job satisfaction than the employees (Benz & Frey, 2004); Blanchflower, 2004; Lange, 2012; Moskowitz & Vissing-Jargansen, 2002; Ajayi-obe & Parker 2005; Taylor, 2004).

Block and Koellinger (2009) mention that entrepreneurs experience "procedural utility", that the process of being an entrepreneur provides enjoyment over and above the material success of being an entrepreneur.

GEM decided to include the subject in the adult population survey (APS) with a set of questions to get direct measurements of the subject from the actors, and in the national expert survey (NES) with a series of sentences, to get an idea of the entrepreneurial framework conditions (EFC) associated with well-being.

Conceição & Bandura (2008) indicated that there is not a clear consensus about how to measure well-being. GEM adapted a set of tested constructs related to subjective well-being (life satisfaction), work-life balance and satisfaction with the job.

To measure subjective well-being, the Satisfaction With Life Scale (SWLS) (Pavot and Diener, 2008), a five-item instrument designed to measure global cognitive judgments of satisfaction with one´s life, was adopted (Table 25).

TABLE 25. Subjective well-being

1. In most ways, my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have obtained the important things I want in life
5. If I could live my life again, I would not change anything

The results of the APS were processed and for each category of people (entrepreneurs, male entrepreneurs, female entrepreneurs, opportunity driven entrepreneurs, necessity driven entrepreneurs, employees, unemployed) and standardized Z scores were developed to measure mean differences.

To measure work conditions the ideas of Spritzer et al (1997) and of the EU Commission, allowed the design of five questions presented in table 26, which also were evaluated in a Likert scale from 1 "strongly disagree" to 5 "strongly agree".

TABLE 26. Work conditions

1. I can decide on my own how I go about doing my work.
2. The work I do is meaning for me.
3. At my work, I am not exposed to excessive stress.
4. I am satisfied with my current work.
5. I am satisfied with my current income from work.

Satisfaction with the work-life balance is defined as "an overall level of contentment resulting from an assessment of ones degree of success at meeting work and family role demands (Valcour, 2007).

The NES approach included four statements to inquire whether the national conditions help the work–life balance of individuals and the perception about work and life satisfaction (Table 27).

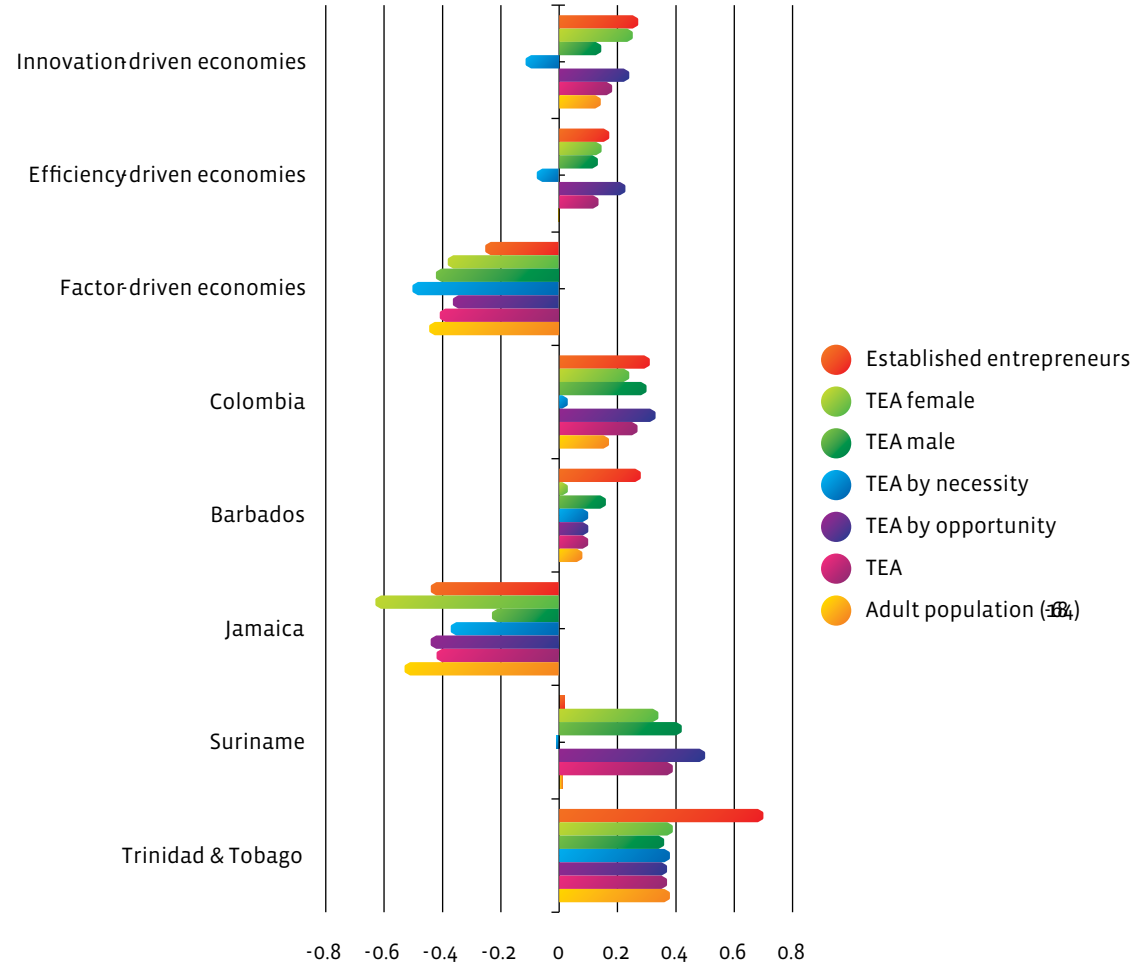
TABLE 27. NES questions.

1. In my country, the general conditions (economic, social, political, cultural) allow people to perfectly harmonize personal and working life
2. In my country, Existing labor regulations allow people to perfectly harmonize personal and working life
3. In my country, Entrepreneurs usually appear as more satisfied with their working life than non-entrepreneurs
4. In my country, Entrepreneurs usually appear as more satisfied with their personal life than non-entrepreneurs

In all the 3 cases a likert scale was used, with 1 meaning "strongly disagree" and 5 meaning "strongly agree".

Figure 40 and table 28 present the results in Z scores of the subjective well-being for the Latin American countries, for the three main economic groups (factor driven, efficiency driven and innovation driven) and for the Latin America & the Caribbean group. In http://gemconsortium.org/docs/download/3106 it is possible to find the data for each one of the countries studied in the well-being section.

FIGURE 40. Subjective well-being Indicators. General results by Caribbean countries and economic groups. 2013



SOURCE: Compiled by authors.

TABLE 28. Subjective well-being Indicators. General results by geographic region. 2013

	18-64 population	Early-stage entrepreneurial activity (TEA)	TEA by opportunity	TEA by necessity	TEA male	TEA female	Established entrepreneurs
Latin America & Caribbean	0,31	0,40	0,45	0,24	0,44	0,34	0,42
Argentina	0,41	0,39	0,46	0,20	0,40	0,38	0,52
Brazil	0,17	0,14	0,28	-0,21	0,23	0,05	0,22
Barbados	0,08	0,10	0,10	0,10	0,16	0,03	0,28
Chile	0,58	0,65	0,73	0,30	0,67	0,61	0,76
Colombia	0,17	0,27	0,33	0,03	0,30	0,24	0,31
Ecuador	0,54	0,62	0,68	0,49	0,69	0,54	0,56
Guatemala	0,37	0,44	0,49	0,32	0,46	0,41	0,40
Jamaica	-0,53	-0,42	-0,44	-0,37	-0,23	-0,63	-0,44
Mexico	0,21	0,22	0,37	0,07	0,18	0,28	0,39
Panama	0,72	0,66	0,67	0,61	0,73	0,55	0,73
Peru	0,46	0,71	0,77	0,51	0,75	0,66	0,42
Suriname	0,01	0,39	0,50	-0,01	0,42	0,34	0,02
Uruguay	0,29	0,34	0,34	0,33	0,33	0,35	0,43
Trinidad & Tobago	0,38	0,37	0,37	0,38	0,36	0,39	0,70
Puerto Rico	0,49	0,79	0,78	0,75	0,90	0,60	0,91
Factor-driven economies	-0,445	-0,409	-0,364	-0,504	-0,422	-0,382	-0,253
Efficiency-driven economies	-0,002	0,135	0,227	-0,077	0,133	0,146	0,171
Innovation-driven economies	0,143	0,182	0,240	-0,115	0,145	0,252	0,271

SOURCE: Compiled by authors.

To analyze this table, it is important to keep in mind that the prevalence indicators of the standardized scale of SWLS gives a hypothetical range of -1.7 (lesser rate of subjective well-being) to 1.7 (higher rate of subjective well-being). Each one of the columns deals with the persons that fulfill the requirements of the column denomination, and the value reported indicates the standardized score inside that population. Several conclusions can be derived:

- In all categories: total adult population, nascent/new entrepreneurs nascent/new driven by opportunity, nascent/new driven by necessity, nascent/new male entrepreneurs, nascent/new female entrepreneurs, established entrepreneurs; the scores of

the Latin America & the Caribbean countries indicated a better well-being of their citizens with respect to the people in the same category in the factor, efficiency and innovation driven countries. Jamaica is the exception in all the categories and Brazil in some of them.

- Trinidad & Tobago present a better indicator of well-being in all the categories among all the Caribbean countries, and Jamaica presents the worst.
- Colombia, Barbados, Suriname and Trinidad & Tobago obtained scores above average in all the categories. Jamaica scores are below average in all the categories.
- In Colombia, Barbados, Jamaica and Trinidad & Tobago the established entrepreneurs present better scores than the nascent/new entrepreneurs.
- In Colombia, Barbados, Suriname and Jamaica the nascent/new female entrepreneurs present lower scores than the nascent/new male entrepreneurs. In Trinidad & Tobago, the result is better for the nascent/new female entrepreneurs.
- There are very difficult results when nascent/new entrepreneurs driven by opportunity are compared with the ones driven by necessity. Colombia, Suriname, innovation driven, efficiency driven and factor driven present better well-being levels for the opportunity driven, Barbados present similar well-being levels and Trinidad & Tobago present better well-being levels for the necessity drive.

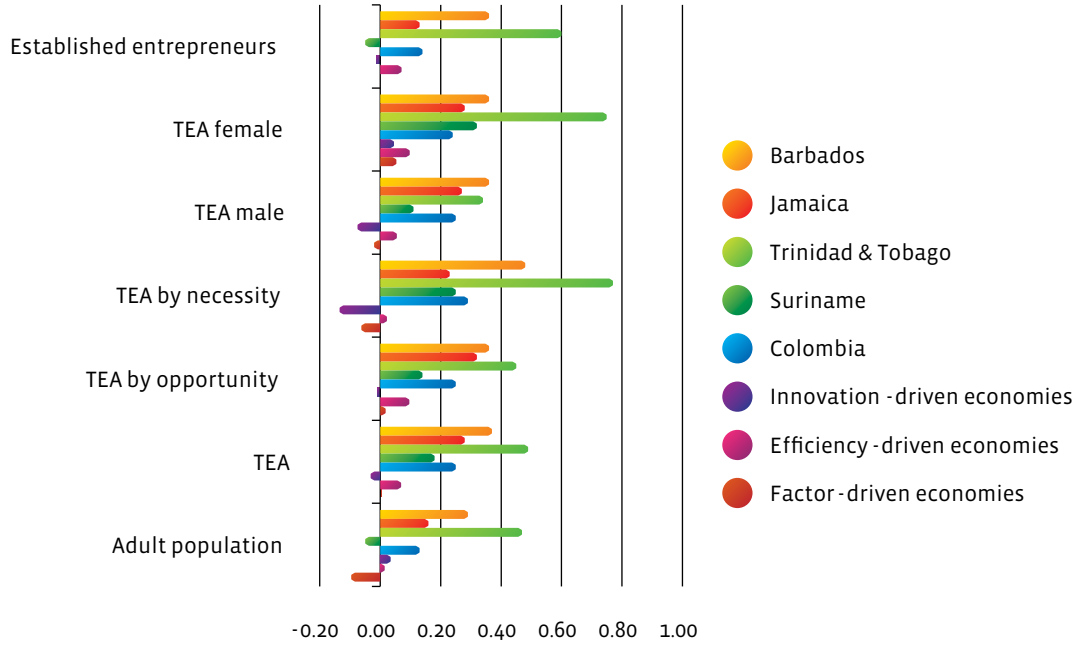
9.2 WORK CONDITIONS AND WORK–LIFE BALANCE.

Figure 41 present the normalized Z scores in each one of the Caribbean countries, and in the factor, efficiency and innovation driven economies for each one of the categories.

Several conclusions can be derived:

- All the Caribbean countries had better results in terms of work conditions and work

FIGURE 41. Satisfaction with balance between personal and professional life. 2013



SOURCE: Compiled by authors.

life balance than the factor, efficiency and innovation driven economies.

- Trinidad & Tobago among all the groups present better results when compared with the Caribbean countries and with the three economic groups.
- Female entrepreneurs present better indicator than male entrepreneurs, except in Colombia, Barbados and Jamaica.
- The nascent/new entrepreneurs have better indicators than established entrepreneurs, except in Trinidad & Tobago, factor-driven and efficiency-driven economies.
- The entrepreneurs nascent/new or established have in most of the cases better results than the adult population and of the non-entrepreneurs.

9.3 ENTREPRENEURSHIP FRAMEWORK CONDITIONS AND WELL-BEING

The national experts were also asked to score four statements related to well-being in general. Table 29 presents the scores for each one of them. Two of the statements are below 3.0 (average) and two are above. The idea "that the general conditions (economic, social, political, and cultural) allow people to perfectly harmonize personal and working life" has the lowest score (2.59). The condition with the better score is that entrepreneurs usually appear as more satisfied with their working life than non-entrepreneurs.

9.4 HEALTH

The Caribbean team decided to include in the 2013 APS questionnaire a set of questions oriented to have a measurement about the health condition of the Caribbean entrepreneurs in order to compare it with the employee and with the total adult population.

The EQ-5D-5L descriptive system that has been shown in several studies in different countries was used. It is based in the "Self Report Health (SHR)" which has 5 health dimensions and they were evaluated at 5 levels as indicated in table 30.

In addition to these dimensions, each person was asked to produce an overall rating of their health on a scale of 0 (worst possible health) to 100 (best possible health), called the visual analogue scale (VAS).

Figure 42 presents the proportion of entrepreneurs that consider that their health is in level 1 (best) in each one of the dimensions. Caribbean entrepreneurs reported more problems in the dimension: pain or discomfort, followed by anxiety/depression.

With the purpose of integrating all the answers in each dimension, an average was obtained for each one of them. Average values close to one (1) in any dimension indicate very good health conditions and average

TABLE 29. Well-being. NES 2013.

	2013
In my country, the general conditions (economic, social, political, cultural) allow people to perfectly harmonize personal and working life	2,59
In my country, Existing labor regulations allow people to perfectly harmonize personal and working life	2,90
In my country, Entrepreneurs usually appear as more satisfied with their working life than non-entrepreneurs	3,38
In my country, Entrepreneurs usually appear as more satisfied with their personal life than non-entrepreneurs	3,30

TABLE 30. The 5 Dimensions of the EQ-5D-5L Descriptive System and their Levels.

Level	Mobility	Self care	Usual Activities (e.g. work, study, housework, family or leisure activities)	Pain/ Discomfort	Anxiety/ Depression
1	I have no problems in walking about	I have no problems bathing or dressing myself	I have no problems doing my usual activities	I have no pain or discomfort	I am not anxious or depressed
2	I have slight problems in waking about	I have slight problems bathing or dressing myself	I have slight problems doing my usual activities	I have slight pain or discomfort	I am slightly anxious or depressed
3	I have moderate problems in waking about	I have moderate problems bathing or dressing myself	I have moderate problems doing my usual activities	I have moderate pain or discomfort	I am moderately anxious or depressed
4	I have severe problems in waking about	I have severe problems bathing or dressing myself	I have severe problems doing my usual activities	I have severe pain or discomfort	I am severely anxious or depressed
5	I am unable to walk about	I am unable to bathe or dress myself	I am unable to do my usual activities	I have extreme pain or discomfort	I am extremely anxious or depressed

values close to 5 indicate very bad health conditions.

Table 31 presents the results obtained for each dimension in each country by the entrepreneur (nascent/new and established). Trinidad & Tobago present the best image in health indicator by having the biggest proportion of entrepreneurs at the level 1 in the entire dimension.

The fact than in all the countries in the mobility, self-care, usual activities dimensions 90% or more of the entrepreneurs are in the

FIGURE 42. Caribbean entrepreneurs that reported the better levels (level 1) of health in each of the 5 dimensions. 2013

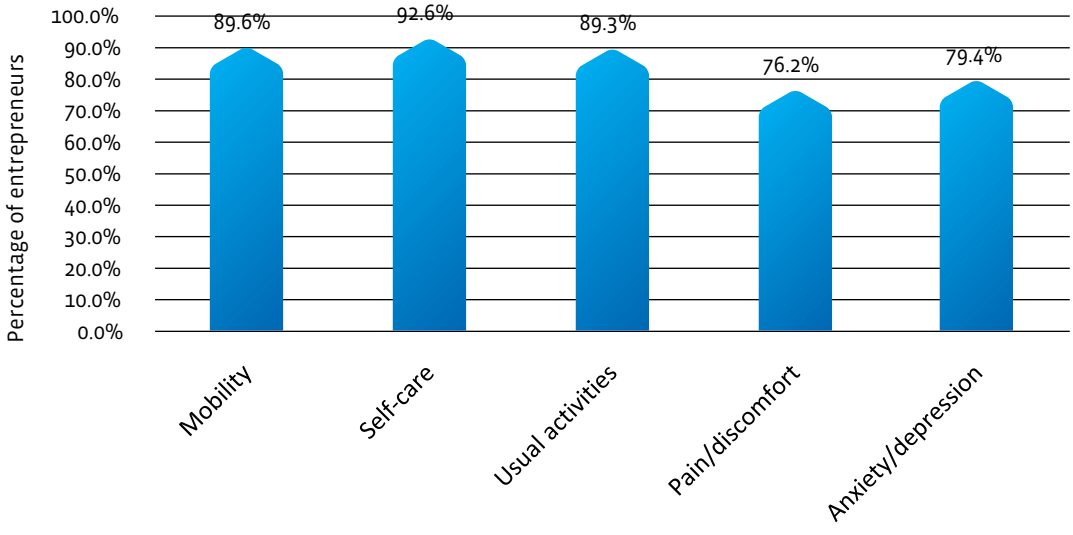


TABLE 31. Health dimensions in the Caribbean region. 2013.

Mobility	Caribbean	Barbados	Jamaica	Trinidad & Tobago	Colombia
1	89,6	91,4	89,6	92,6	86,9
2	5,3	4,7	5,3	4,8	7,6
3	0,8	1,9	0,8	1,6	3,7
4	0,6	1,2	0,6	0,9	0,8
5	3,8	0,8	3,8	0,0	0,4
Self-care					
1	92,6	97,5	92,6	98,5	96,4
2	2,9	1,3	2,9	1,2	1,7
3	0,5	0,5	0,5	0,3	0,7
4	0,5	0,4	0,5	0,0	0,1
5	3,5	0,2	3,5	0,0	0,2
Usual activities					
1	89,3	94,1	89,3	94,4	87,9
2	5,4	3,7	5,4	4,2	7,3
3	1,0	1,6	1,0	1,2	3,3
4	0,8	0,4	0,8	0,2	0,8
5	3,6	0,2	3,6	0,0	0,1
Pain/discomfort					
1	76,2	75,8	76,2	82,0	68,6
2	16,3	16,8	16,3	12,4	21,2
3	2,8	5,1	2,8	3,9	7,6
4	1,6	1,6	1,6	1,6	1,5
5	3,1	0,6	3,1	0,1	0,3
Anxiety/depression					
1	79,4	87,1	79,4	90,3	66,1
2	12,3	9,7	12,3	6,9	20,5
3	2,6	2,3	2,6	1,6	10,7
4	2,0	0,5	2,0	0,8	1,3
5	3,7	0,4	3,7	0,4	0,6

TABLE 32. Health dimensions by categories. 2013

	TEA	EB	Seeking employment	Total population
Mobility	1,23	1,24	1,09	1,24
Self-care	1,24	1,14	1,05	1,19
Usual activities	1,28	1,18	1,18	1,24
Pain/discomfort	1,44	1,39	1,27	1,39
Anxiety/depression	1,46	1,3	1,31	1,38

level 1 (the best one) is a very positive result. The pain/discomfort and anxiety depression dimension are in all the countries, except Colombia, above 75% in level 1.

Colombia shows lower levels of health among their entrepreneurs in all dimensions, except self-care. The anxiety/depression indicator for Colombia with significant number of cases in level 2 (20.5%) and 3 (10.7%) indicates the need to develop strong support programs to the entrepreneurs to handle these behaviors.

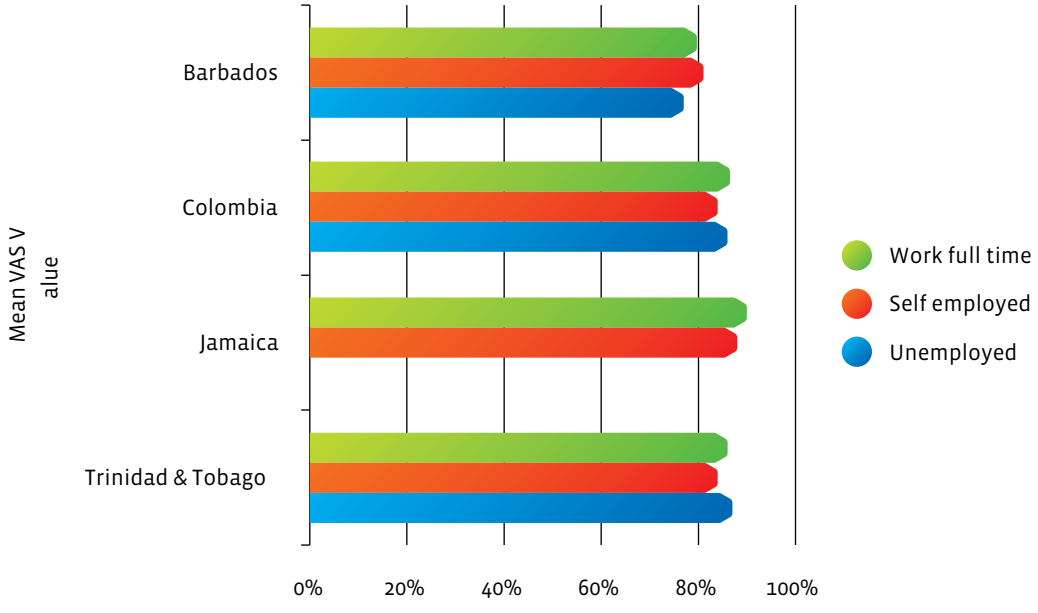
In order to have a single indicator that makes it easier to compare the health situation of: nascent/new, established, people seeking for employment and the whole population; an average of the level given to each dimension were took for the people that is in each ones of the above mentioned groups.

Table 32 presents the aggregated results for the Caribbean and the following conclusions can be derived.

The nascent/new entrepreneurs present higher results, lower health, than the other groups, except in mobility.

The people seeking for an employment present the lowest results, better health, in all the dimensions.

FIGURE 43. VAS Scores for Respondents Broken down by Work Arrangements. 2013



Established entrepreneurs present better health perspective than the total population.

Pain/discomfort and Anxiety/depression are the dimensions with the highest scores, which means lower health situation.

When the VAS indicators are used the results for the Caribbean countries, presented in figure 43, indicate that in general entrepreneurs evaluate their health at a lower level that the one provided by the full time employees (except in Barbados), and lower than the people seeking for an employment (except in Barbados).

10 CONCLUSIONS AND RECOMMENDATIONS

Along this report the main conclusions have been presented for each one of the entrepreneurial pipeline stages, and the main "leaks" had been identified. In addition to that different analysis have been done either about the entrepreneurs, or the enterprises, or the entrepreneurial ecosystem, but it is important to stress in some points as final conclusions of the research work, more oriented to actions that the different support system stakeholders should take:

- For all the Caribbean countries, the measurements of the main entrepreneurial factors and the entrepreneurial dynamics of the system, using a proved methodology, is a basic instrument for the design, development and evaluation of policies, programs and project oriented to support entrepreneurial activities in each country. In that sense is fundamental that government, private sector and Universities keep the effort and the financial and logistic support to continue this procedure every year.

- Even though the entrepreneurial pipelines for the Latin American and Caribbean countries present higher indicators, in many stages, than other countries, there is at every country specific elements that has to be addressed to improve the flow of entrepreneurs along the system. This suggests that a number of contextual factors, specific to each country, affect the differing levels of entrepreneurial activity, indi-

cating that there is no "one-size fits all" policy prescription that can be applied across the countries and that specific policies should be defined in each country for every stage of the pipeline

- A policy of exchange of experience among the Latin American and the Caribbean countries has to be implemented to learn what is working well in each one of the countries and from that, proceed to do the adaptation of the different policies and programs to each one of the countries and the stages.

- Policies to enhance the socio-cultural perception about entrepreneurship, and entrepreneurial ecosystem are the basic ones for the operation of the entrepreneurial dynamics. The net generation of value of the new and existing enterprises is a key element to the socioeconomic development of the countries and especially to the creation of jobs. These two elements will improve the operation of the entrepreneurial pipeline.

- The entrepreneurial pipeline concept shows the entrepreneurial process dissected in well-defined stages and it should be used to identify in every country the "leaks" and to define the support system that is required to decrease the size of the "leaks". Goals for each stage and for each country should be formulated and the evaluation of the support system should be done against those goals.

- There is an insufficient focus on entrepreneurship in the educational and training systems, so more emphasis needs to be placed on integrating entrepreneurship curriculum in all levels of the educational and training system (undergraduate and graduate), including more focus on entrepreneurial education. The development of the entrepreneurial competences is a must in a modern educational system.

- In every country a national high level commission should be formed to study the best procedures to promote entrepreneurial education at all levels. The best national experts in the area should be called to design the strategy that will do the adjustment at the educational system to move it to the required for the future society, based more in work than in jobs.

- To solve the "leaks" it is necessary to improve the entrepreneurial support system, designing specific procedure for each one of the entrepreneurial pipeline stages. Mentoring, Coaching, assistance, market support, financial resources, etc. has to be in place to help build the confidence of the population that in any of the stages, and to provide the required components to look for successful ventures.

- It is important to research better, the reason behind the lower entrepreneurial propensity of women and to design specific programs and support systems for them, to allow a bigger proportion of women to be part of the new entrepreneurial culture.

- The changes in the entrepreneurial propensity of the people above 44 years should be studied and programs oriented to their specific needs should be designed and implemented.

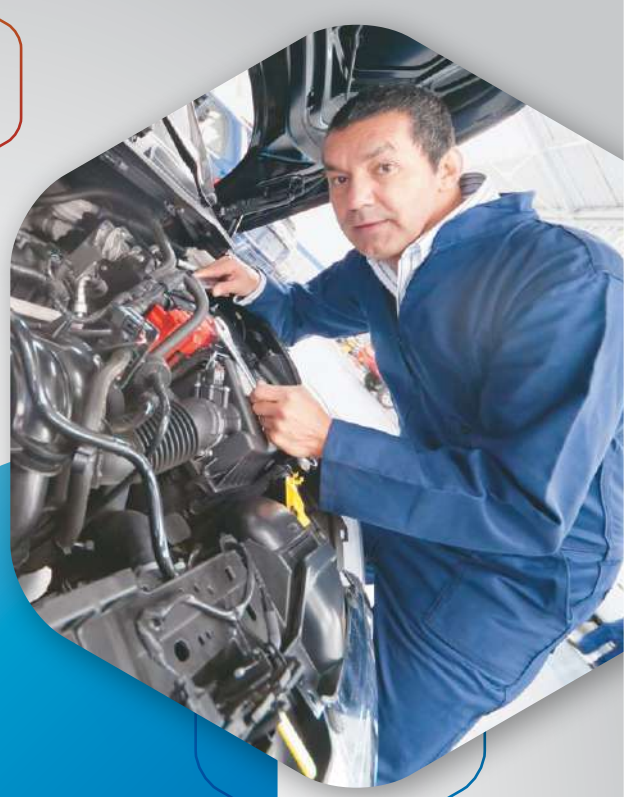
- Innovation, in its wide spectrum of possibilities, has to define as a basic policy for the countries, because it is tool that would provide in the medium and long run the competitivity elements that new and existing enterprises require not only to survive, but specially to grow in terms of value and especially in terms of jobs created. This policy should include subjects as innovation culture, innovation centers, supporting, financing and providing recognition to technology based enterprise, spin-off from research projects; support for R&D activities and their application to

productive projects, support to technology transfer mechanism, development of entrepreneurial competences as: creativity, flexibility, wider perception, market orientation, inventive, in all the educational and entrepreneurial system, entrepreneurial education for engineer and scientist; research grants for the development of new enterprises, among others.

- Special programs have to be designed for the growth of the new and the established enterprises, because they need a special environment to develop their full potential. Mentoring, coaching, entrepreneurial networks, training and growth management are basic elements in addition to financial support for growth, R&D transfer, international orientation, innovation development. These special programs will increase the socio economic impact of those enterprises.

- The government in each Caribbean country should implement, maybe in a joint venture with different research group and with the entrepreneurial organization, research teams that will to study and measure different elements of entrepreneurship as tools to evaluate support systems and programs.

- Significant changes have to be included in the financing policies used, not only to develop and train the entrepreneurs, but also for startup and for survival and growth of the enterprises.



REFERENCES 11

Ajayi-Obe, O. and Parker, S.C. (2005). The changing nature of work among self-employed in the 1990s: Evidence in Britain. Journal of Labor Research, 26(3), 501-517.

Angner, E. (2010). Subjective well-being. Journal of Socio- Economics, 39, 361–368.

Benz, M. and Frey, B. S. (2004). Being independent raises happiness at work. Swedish Economic Policy Review, 11(2), 95–134.

Blanchflower, D. G. (2004). Self-employment: More may not be better. National Bureau of Economic Research.

Block, J. and Koellinger, P. (2009). I can't get no satisfaction—Necessity entrepreneurship and procedural utility. Kyklos, 62(2), 191- 20.

Bosma, N., K. Jones, E. Autio & J. Levie (2008). Global Entrepreneurship Monitor, 2007 Executive Report. Wellesley, Mass., London, UK: Babson College and London Business School.

Carree, M. and Verheul, I. (2012). What makes entrepreneurs happy? Determinants of satisfaction among founders. Journal of Happiness Studies, 13(2), 371–387.

Conceição, P. and Bandura, R. (2008). Measuring Subjective Wellbeing: A Summary Review of the Literature. UNDP Development Studies Working Papers Series, May. Online:http://web.undp.org/development-studies/docs/subjective_wellbeing_conceicao_bandura.pdf.

Cooper, A.C. and Artz, K.W. (1995). Determinants of satisfaction of entrepreneurs. Journal of Business Venturing, 10(6), 439–455.

Helliwell, J. F., Layard, R. and Sachs, J. (Eds.). (2013). World Happiness Report. New York: UN Sustainable Development Solutions Network.

Lange, T. (2012). Job satisfaction and self-employment: Autonomy or personality. Small Business Economics, 38(2), 165–177.

Moskowitz, T. J. and Vissing-Jorgensen, A. (2002). The Returns to Entrepreneurial Investment: A Private Equity Premium Puzzle? American Economic Review, 92, 745-79

Naude, W. Amorós, J.E. and Cristi, O. (2013). Surfeiting, the Appetite May Sicken: Entrepreneurship and Happiness. Small Business Economics (Forthcoming).

OECD (2009). The impact of the global crisis on SME and entrepreneurship financing and policy responses. OECD: Paris.

Pavot, W., and Diener, E. (2008). The Satisfaction with Life Scale and the emerging construct of life satisfaction. Journal of Positive Psychology, 3, 137–152.

Roland, X., Kelley, D., Kew, J. Vorderwülbecke, A & Herrington, M. (2013). Global Entrepreneurship Monitor: 2012 Report. Recovered from the web site of GEM Consortium: www.gemconsortium.org/docs/download/2645

Schwab, K. (Ed.) (2013). The Global Competitiveness Report 2013-2014. Geneva, Switzerland: World Economic Forum. Recovered from: www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf

Spreitzer, G. M., Kizilos, M. A., and Nason, S. W. (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness satisfaction, and strain. Journal of Management, 23(5), 679-704.

Stiglitz, J.E., Sen, A., and Fitoussi, J.P. (2009). Report by the Commission on the Measurement of Economic Performance and Social Progress. Available at http://www.stiglitz-sen-fitoussi.fr/en/index.htm.Taylor, M. (2004). Self-employment in Britain: When, who and why? Swedish Economic Policy Review, 11(2), 139–173.

Taylor, M. (2004). Self-employment in Britain: When, who and why? Swedish Economic Policy Review, 11(2), 139–173.Block, J. and Koellinger, P. (2009). I can't get no satisfaction—Necessity entrepreneurship and procedural utility. Kyklos, 62(2), 191- 20.

Valcour, M. (2007). Work-based resources as moderators of the relationship between work hours and satisfaction with work-family balance. Journal of Applied Psychology, 92(6), 1512-1523.

Varela, R., & Soler, J (2013). GEM Caribbean: Colombian National Report 2011. Recuperado de: http://www.gemcaribbean.org/causes/gem-caribbean-2011-colombian-report/

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