



• ENTREPRENEURIAL • ACTIVITY IN THE CARIBBEAN REGION



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ENTREPRENEURIAL ACTIVITY IN THE CARIBBEAN REGION

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Global Entrepreneurship Monitor (GEM)

ENTREPRENEURIAL ACTIVITY 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

EXECUTIVE SUMMARY

“Entrepreneurial Activity in the Caribbean region” is the fourth Caribbean regional report produced by the GEM Caribbean research team, which started activities in 2011 with the support of the International Development Research Centre of Canada (IDRC), and works as a joint academic venture of the following universities: Arthur Lok Jack Graduate School of Business, University of the West Indies in Trinidad & Tobago; Cave Hill School of Business, University of the West Indies in Barbados; University of Technology in Jamaica; and the Center for Entrepreneurship Development at Universidad ICESI in Colombia.

GEM is the biggest and the oldest entrepreneurship research project, and in 2014 a total of 73 countries did participate in it, covering more than 70% of the world population and 90% of the world GNP.

The main goal of this research effort is to study in detail the different elements, variables, characteristics, factors and circumstances that affects the entrepreneurial process in each one of the Caribbean countries (in 2014, Barbados, Colombia, Jamaica, Trinidad & Tobago, Suriname) and to compare them with other countries and at the regional level with other groups of countries.

This report presents the main measurements of the entrepreneurial process in the Caribbean region. There are reports for each one of the countries that can be reviewed in: www.gemcaribbean.org, and there is a Global report that can be reviewed in: <http://www.gemconsortium.org/>

The entrepreneurial pipeline concept indicates that, in the Caribbean population in 2014, 71% of the adults between 18 and 64 years old have a positive socio-cultural perception about entrepreneurship, 66% are potential entrepreneurs, 32% are intentional entrepreneurs, 8% are nascent entrepreneurs, 6% are new entrepreneurs and 8% are established entrepreneurs.

In terms of the TEA (Total early entrepreneurial activity, composed by nascent and new entrepre-

neurs), some Caribbean countries had high indicators: at the world level in 2014: Jamaica is 13th, Colombia is 15th, Trinidad & Tobago is 24th Barbados is 31th, Suriname is 70th. At the Latin American and the Caribbean level, Jamaica is 7th, Colombia is 9th, Trinidad & Tobago is 13th, Barbados is 15th, and Suriname is 19th.

Some of the situations that were identified in previous studies, kept the same trends in 2014:

- In most of the entrepreneurial pipeline stages, the Caribbean male entrepreneurs present higher indicators than the Caribbean female entrepreneurs.
- Most of the new businesses use mainly technologies with more than 5 years in the local markets, are oriented to local markets and their products/services are not very innovative to the market.
- Significant limitations still persist in the entrepreneurial framework conditions.

Along the report many recommendations and policies are presented, some in general for all the countries and others very specific oriented. Also many additional research subjects, which are not covered by GEM methodology, are proposed.

The GEM Caribbean team is open to attend any request and provide the support required of other research teams willing to do additional research with the data base or to do research in the entrepreneurial field.

The GEM Caribbean teams is willing to discuss with government official and with people providing support to entrepreneurs some of the policy recommendation that are included in this report and in the policy briefs developed for each country.

The GEM Caribbean team acknowledges all the diffusion the readers can made to the reports produced along the years and thanks for recommendations to improve this research in the following years.



INTRODUCTION



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 2014, more than 206,000 individuals were surveyed and approximately 3,936 national experts on entrepre-

neurship participated in the study across 73 countries, collectively representing 72,4% of the world's population and 90% of the world's total GDP.

GEM groups different economies into geographic regions: Sub-Saharan Africa, the Middle East and North Africa (MENA), Latin America and Caribbean, Asia Pacific/ South Asia, Europe (distinguishing economies that are part of the European Union from those outside the European Union), and North America.

Additionally, GEM uses the World Economic Forum's Global Competitiveness Report (Schwab K., et al, 2013) classification of the economies, which considers that an economy is factor-driven when it is based on their factor endowments (primarily unskilled labor and natural resources). In this type of economy, companies compete on the basis of price and sell basic products or commodities, with their low productivity reflected in low wages. Maintaining competitiveness at this stage of development hinges primarily on: the well-functioning of public and private institutions, a well-developed infrastructure, a stable macroeconomic environment and a healthy workforce that has received at least a basic education.

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

GEM Caribbean is a four-year project, supported by Canada's International Development Research Centre (IDRC), oriented to establish, train, and strengthens 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 and development 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.

A 3D graphic featuring a white hexagonal prism with a red number '3' on its top face. The prism is surrounded by several teal and white rectangular bars, some of which are also 3D. The background is a red field with fine white diagonal lines. A small white hexagonal outline is positioned to the left of the main prism.

3

GEM MODEL

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:

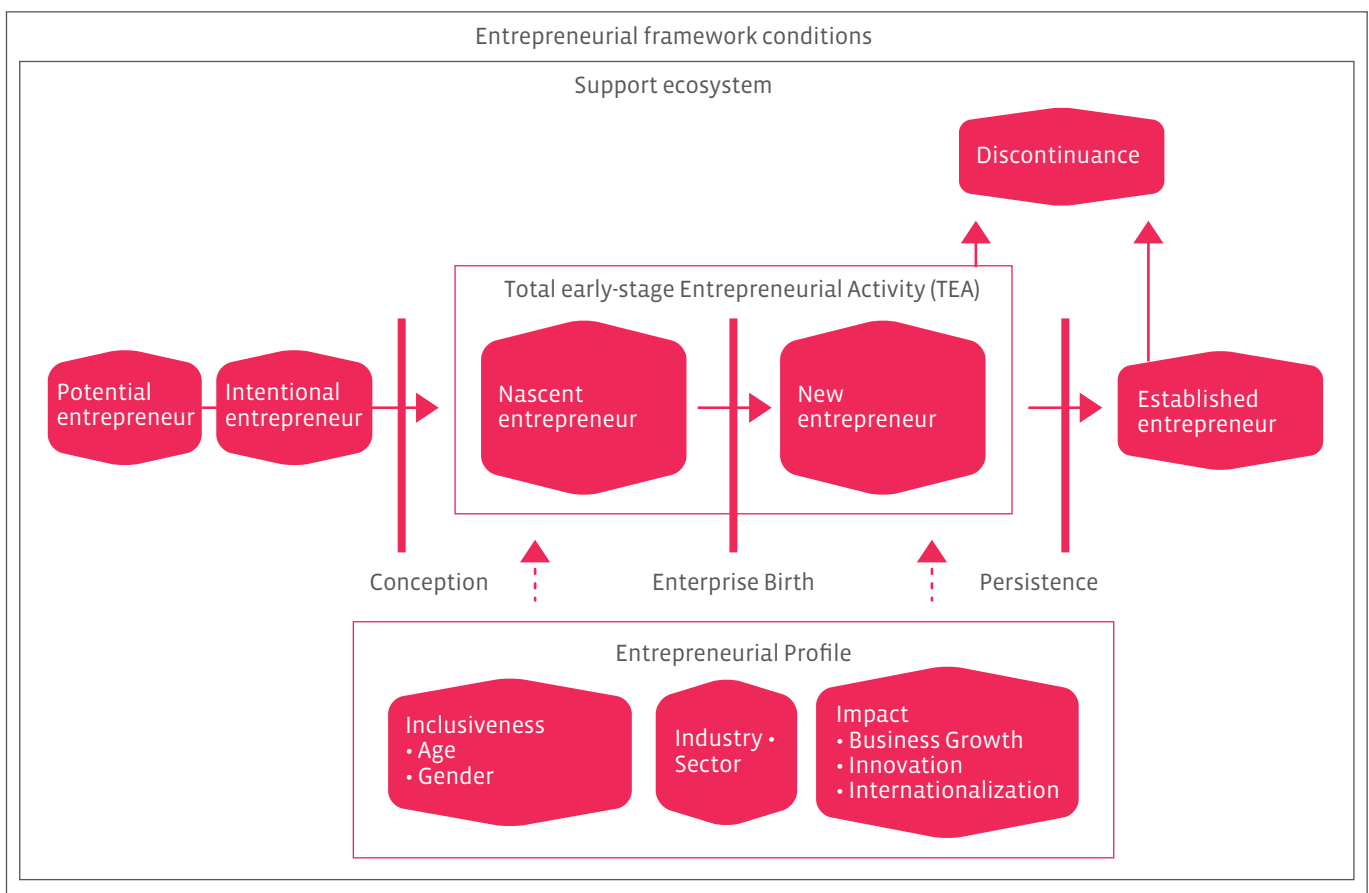
Socio Cultural Acceptance: The entrepreneurial process is a social process executed by people living in a specific cultural and social condition, for that reason the first stage measures the amount of people that have a positive perception on entrepreneurship. In the GEM research,

people are asked: 1) if they consider that starting a new business is a good career choice?, 2) if they associate entrepreneurs with high status?, and 3) if 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 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.

FIGURE 1. Entrepreneurial process



SOURCE: Adjusted by authors from Global Entrepreneurship Monitor 2014 Global Report (2015)

Intentional Entrepreneurs: The third stage in the entrepreneurial pipeline happens when the potential entrepreneurs express their firm intention to start 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 owning and managing a business and have been paying 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 been owning and managing 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 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 cyclic conceptual model (Figure 2) that shows how the context and the framework conditions influence the existing relationship between social values, personal attributes and various forms of entrepreneurial activity and how this

relationship affect the new job creation, new value added and finally, the socio economic development.

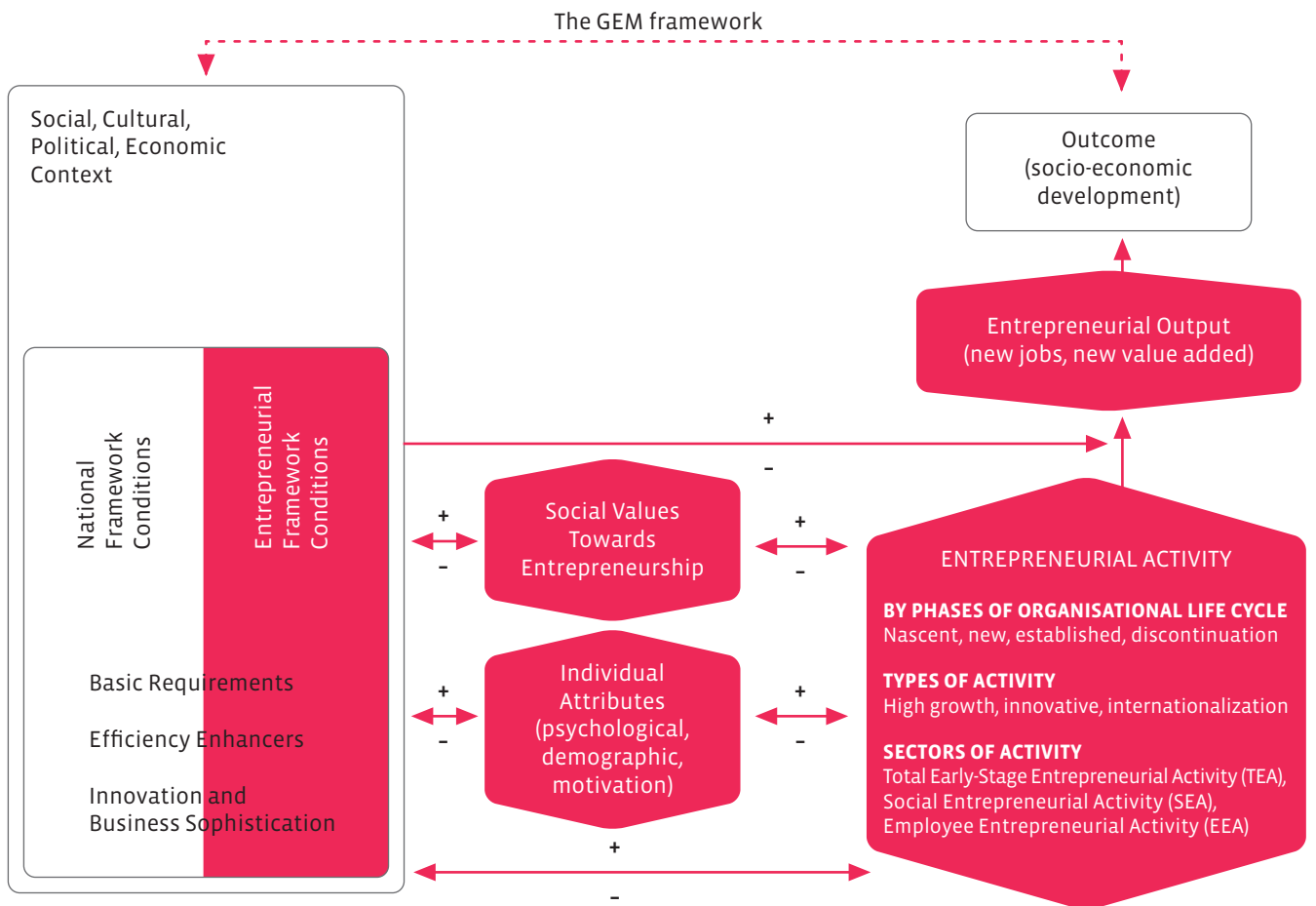
The GEM model assumes that entrepreneurial activity is not a heroic act of an individual, regardless of the environment in which the activity is performed and that entrepreneurial activity is an output of the interaction of an individual's perception of an opportunity and capacity (motivation and skills) to act upon this and the distinct conditions of the respective environment in which the individual is located.

The following are the main components of the GEM conceptual model:

- **Social Values towards Entrepreneurship:** including how society values entrepreneurship as a good career choice; if entrepreneurs have a high social status; and how media attention to entrepreneurship is contributing (or not) to the development of a national entrepreneurial culture.
- **Individual Attributes:** including several demographic factors (gender, age, and geographic location), psychological factors (perceived capabilities, perceived opportunities, fear of failure) and motivational aspects (necessity-based vs. opportunity-based venturing, improvement-driven venturing, etc.).
- **Entrepreneurial Activity:** defined according to the ventures' life cycle phases (nascent, new venture, established venture, discontinuation), the types of activity (high growth, innovation, internationalization) and the sector of the activity (Total Early-stage Entrepreneurial Activity—TEA, Social Entrepreneurial Activity—SEA, Employee Entrepreneurial Activity—EEA).



FIGURE 2. GEM model



SOURCE: Global Entrepreneurship Monitor 2014 Global Report (2015)



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:

1. The Adult Population Survey (APS) is a survey administered to the adult population aged 18-64. In the Caribbean region in 2014, 12,532 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: 2,000, Colombia: 3,691, Jamaica: 2,637, Suriname: 2,200 and Trinidad & Tobago: 2,004.

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.
2. 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 2014, Barbados conducted 22 surveys, Colombia 38 surveys, Jamaica, Suriname and Trinidad & Tobago 36 surveys.
3. 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.



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, 2013 and 2014), 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, Belize, Brazil, Chile, Ecuador, El Salvador, Costa Rica, Bolivia, Guatemala, Mexico, Panama, Peru, Puerto Rico 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 toward the entrepreneurial process. GEM asks: 1) if 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?

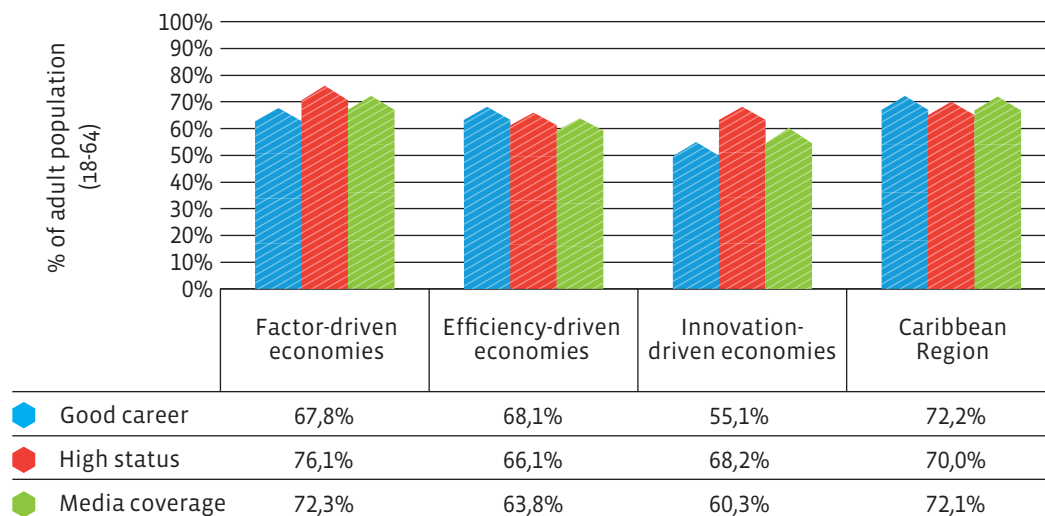
The social perception of entrepreneurship is the starting point of the entrepreneurial process because, if society has a positive perception towards entrepreneurship, more new entrepreneurs may decide to start a new business.

As indicated on figure 3, in all three variables, the Caribbean region shows better average results than the ones obtained by the efficiency-driven and the innovation-driven economies. Compared to the factor-driven economies, the Caribbean region shows a higher perception only in the “good career” factor.

Figure 4 shows the results for these three factors in 2011 and 2014 for Trinidad & Tobago, Suriname, Jamaica, Barbados, Colombia and the Caribbean region, and some interesting points could be identified:

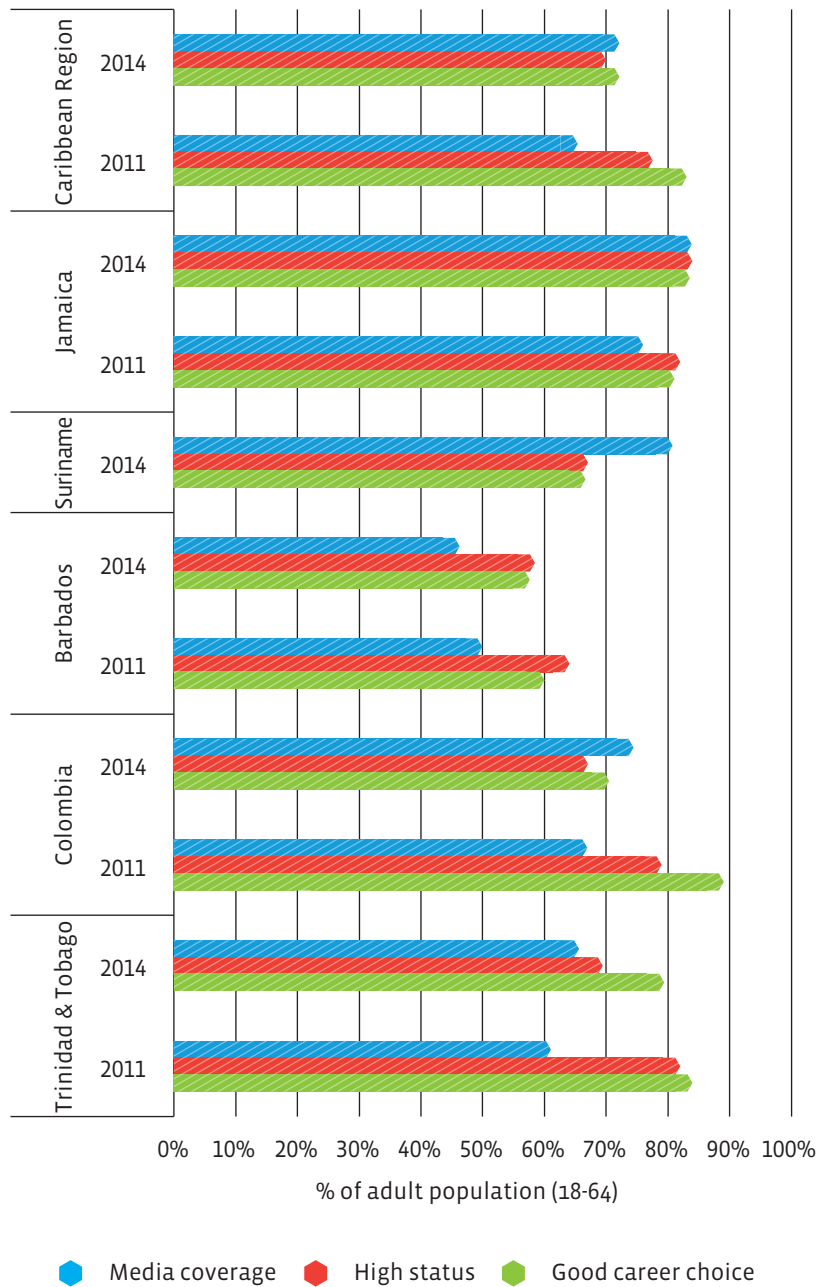
- In all Caribbean countries, the perception of entrepreneurship as a good career choice and as a high status giver has been decreasing from 2011 to 2014, but, in Jamaica both factors has been increasing.
- In 2014, Jamaica presented the highest percentage of people that have a positive socio cultural perception about entrepreneurship (career, status, media).

FIGURE 3. Socio-cultural perceptions about entrepreneurship: Caribbean vs. economic groups (2014)



SOURCE: Compiled by authors.

FIGURE 4. Socio-cultural perception about entrepreneurship in the Caribbean (2011-2014)



SOURCE: Compiled by authors.

- Jamaica is the unique Caribbean country that shows an increasing in all the three factors of socio-cultural perception from 2011 to 2014.
- In all Caribbean countries (except in Barbados), the “media coverage” factor is the only one that shows improvement from 2011 to 2014.

For the entrepreneurial pipeline concept, an arithmetic average of the percentages of people providing positive perception of 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.

TABLE 1. Socio cultural perception indicators (2011-2014)

	2011	2012	2013	2014
Trinidad & Tobago	75,7%	72,7%	70,8%	71,5%
Suriname	DNA	DNA	73,6%	71,5%
Barbados	58,0%	DNA	67,6%	54,1%
Jamaica	79,7%	DNA	80,7%	83,8%
Colombia	78,3%	77,7%	76,6%	70,7%
Caribbean Region	75,3%	71,0%	74,0%	71,4%
Factor driven	71,3%	74,7%	75,1%	72,0%
Efficiency driven	66,3%	66,3%	65,4%	66,0%
Innovation driven	61,3%	59,0%	58,8%	61,2%
DNA: Data Not Available				

Source: Compiled by authors.

The Caribbean region presents a stable indicator along the years (2011-2014). The socio cultural indicator in Jamaica and in the factor-driven economies has been increasing, but in Colombia, Trinidad & Tobago, Suriname, and the efficiency-driven economies the indicator has been decreasing.

The fact that more people are finding entrepreneurship as a good career choice in the 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, to increase the status perception of the entrepreneurs, to give more relevance to the successful local entrepreneurs and to the successful 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, entrepreneur-

rial 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 through the national expert survey: social and cultural norms and entrepreneurial education and training. 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.

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

	Colombia		Barbados		Jamaica		Suriname		Trinidad & Tobago		Caribbean	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Education and training	2,7	2,5	2,4	2,3	2,9	2,6	2,7	2,8	2,6	2,3	2,6	2,5
Cultural and social norms	3,1	3,0	2,5	2,6	3,6	3,0	2,9	3,0	3,1	2,9	3,0	2,9

Source: Compiled by authors.

- The vocational, professional, and continuous education systems provide good and adequate preparation for starting up and growing new firms.

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 2014, the lowest score (on EFCs) in all the countries was for “education and training”. This indicates that many new educational improvements should be implemented in order to have a better entrepreneurial culture in the Caribbean 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 are evaluated in an independent way, to measure the attributes of the potential entrepreneur from 2011 to 2014, and several points can be found:

- In perceived opportunities, all the Caribbean countries show a decrease from 2011 to 2014, except Jamaica. In 2014, 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 Co-

TABLE 3. Potential entrepreneurs. (2011-2014)

		Potential Entrepreneurs			
		Perceived opportunities	Perceived capabilities	Fearless of failure	Fear of failure
Colombia	2011	73,0%	61,0%	71,0%	29,0%
	2014	65,7%	57,4%	65,5%	34,5%
Barbados	2011	44,0%	67,0%	81,0%	19,0%
	2014	38,2%	63,5%	71,1%	28,9%
Jamaica	2011	49,0%	79,0%	71,0%	29,0%
	2014	57,0%	81,2%	72,7%	27,3%
Trinidad & Tobago	2011	62,0%	81,0%	83,0%	17,0%
	2014	58,6%	75,2%	77,7%	22,3%
Suriname	2014	41,0%	77,2%	85,5%	14,5%
	2011	65,1%	66,4%	70,3%	29,7%
Caribbean Region	2014	54,2%	69,6%	73,1%	26,9%
	2011	54,0%	67,0%	73,0%	27,0%
Latin America and the Caribbean region	2014	49,4%	64,5%	72,3%	27,7%
	2011	49,0%	56,0%	63,0%	37,0%
Factor-driven economies	2014	54,6%	64,7%	68,6%	31,4%
	2011	40,0%	52,0%	68,0%	32,0%
Efficiency-driven economies	2014	42,4%	54,9%	68,4%	31,7%
	2011	35,0%	41,0%	62,0%	38,0%
Innovation-driven economies	2014	38,9%	42,0%	62,2%	37,8%

SOURCE: Compiled by authors.

Colombia present the bigger decrease from 2011 to 2014 (7,3%) in the region.

- In perceived capabilities, Jamaica and all the economic groups improved their perception, the other Caribbean countries presented a decrease in the 2011-2014 period. In 2014, the Latin America & the Caribbean countries presented 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 failure, 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 the Caribbean region. In 2014, Colombia presents the highest value (65,7%) in the capacity to perceive opportunities and Barbados the lowest (38,2%); Suriname (77,2%), Jamaica (81,2%) and Trinidad & Tobago (75,2%) are the leaders in terms of the perception about the capacities to create and to manage a new business, but Colombia (57,4%) and Barbados (63,5%) have the lowest percentage. Colombia (34,5%) shows more fear of failure than Trinidad & Tobago (22,3%) and Suriname (14,5%).

For the entrepreneurial pipeline concept, an arithmetic average of the percentage obtained in: “perceived opportunities”, “perceived capabilities”, and “fearless of failure” (complement of fear of failure), is developed to generate an indicator. Table 4 pre-

sents this indicator in the Caribbean countries and the economic groups.

TABLE 4. Potential entrepreneur indicator (2011-2014)

	2011	2012	2013	2014
Barbados	63,7%	66,7%	65,7%	57,6%
Jamaica	65,0%	DNA	67,8%	70,3%
Trinidad & Tobago	74,7%	72,7%	71,2%	70,5%
Suriname	DNA	DNA	60,6%	67,9%
Colombia	67,3%	64,6%	64,6%	62,9%
Factor-driven	55,7%	68,7%	66,2%	62,6%
Efficiency-driven	53,4%	53,7%	53,2%	55,2%
Innovation-driven	45,8%	42,7%	45,3%	47,7%
Caribbean Region	67,3%	68,3%	65,1%	65,6%

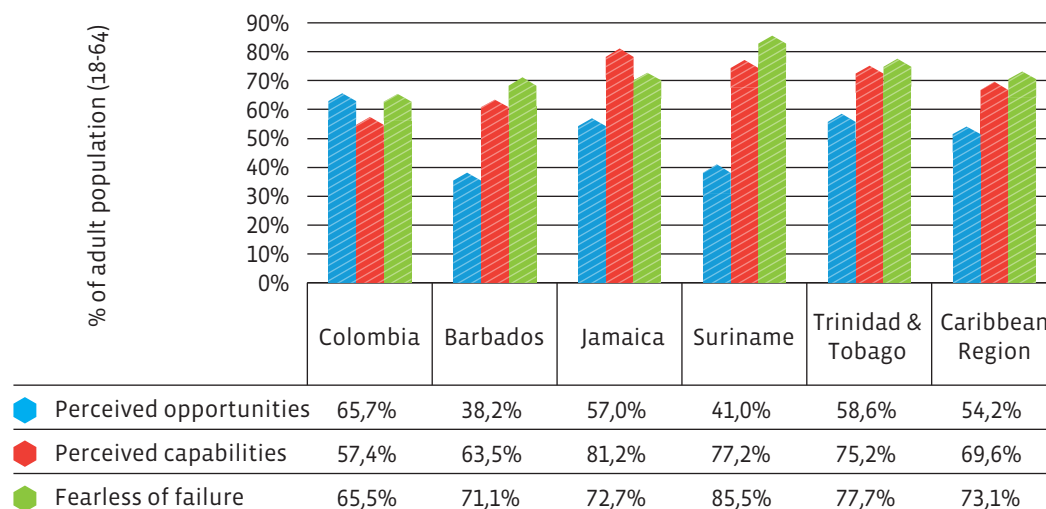
DNA: Data Not Available

SOURCE: Compiled by authors.

In all the four years, Trinidad & Tobago presented the highest entrepreneur potential indicator of all the Caribbean countries. In 2014, the integrated indicator for the Caribbean region (65.6%) was greater than the indicator for all the economic groups.

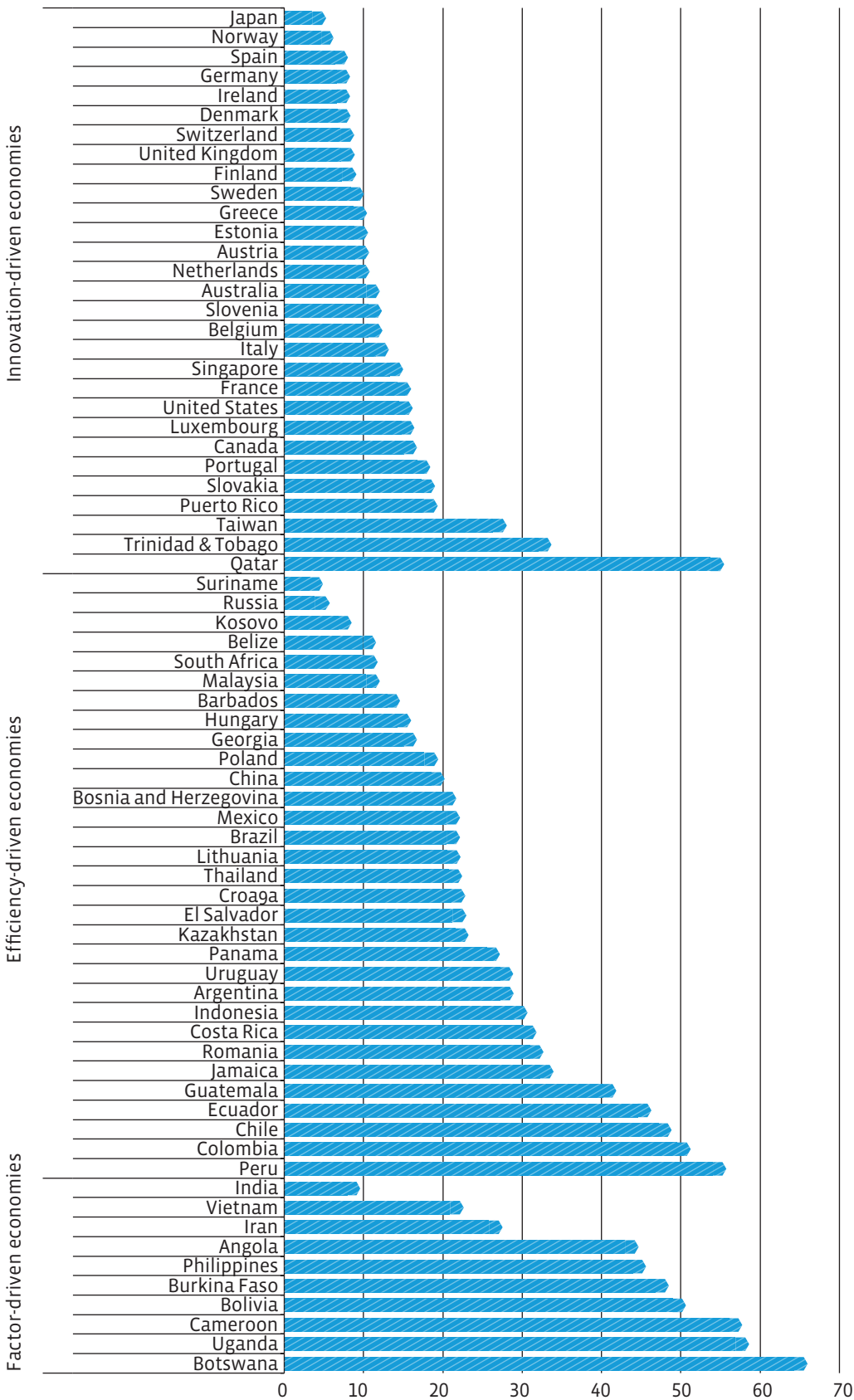
Even though the Colombian population shows a high level of capability to perceive opportunities (65.7%), it is not so confident in the capacities to manage the business (57.4%) and shows a very high level of fear of failure (34.5%). Whereas Suriname (14,5%)

FIGURE 5. Potential entrepreneurs. (2014)



SOURCE: Compiled by authors.

FIGURE 6. Intentional entrepreneurs by countries (2014)



SOURCE: Global Entrepreneurship Monitor 2014 Global Report (2015)

and Trinidad & Tobago (22,3%) have low levels of fear of failure and high level of confidence in the capacities to manage the business (77,2% and 75,2% respectively), but they present a low level in the capability to perceive opportunities (41% and 58,6% respectively).

The fact that more than 60% of the Caribbean population considers 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 the intentional entrepreneur, and to evaluate this behavior, GEM measures the percentage of adult population that is 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 2014 GEM cycle, classified in each one of the three economic groups.

In 2014, the countries with the highest rates of entrepreneurial intentions were: Botswana (65,9%), Uganda (58,6%) and Cameroon (57,7%) while Suriname (4,9%), Russia (5,7%) and Japan (5,3%) presented the lowest scores (Figure 6).

In 2014, in the Caribbean region 31,6% of adult population will expect to start a new business in the next 3 years, this is a low percentage compared with Colombia (51,3%), but high with respect to Barbados (14,6%) and Suriname (4,8%).

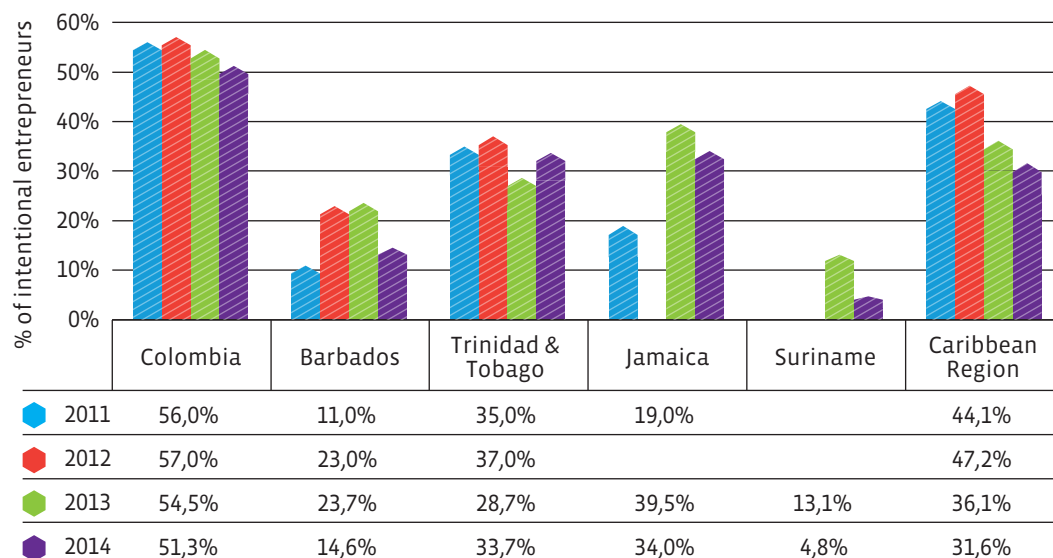
Along the years, the entrepreneurial intention indicator has been increasing in Jamaica (from 19% in 2011 to 34% in 2014), but the indicator has been decreasing in most of the Caribbean countries, for example, in the Caribbean region (from 44,1% in 2011 to 31,6% in 2014).

According to the GEM 2014 Global Report, the entrepreneurial intention indicator in the efficiency driven economies is 22.77%, in the innovation driven is 12.34% and in the factor driven is 40.19%. When Barbados and Suriname are compared to factor or efficiency driven economies they still shows a low level. On the other hand, Colombia, Jamaica 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 Caribbean region, a series of research questions could be proposed:

- What actions is Colombia conducting to keep high entrepreneurial intentions?

FIGURE 7. Entrepreneurial intentions. Caribbean (2011-2014)



SOURCE: Compiled by authors.

- What are the issues in the entrepreneurial pipeline of Barbados which cause the loss of so many potential entrepreneurs in the intentional stage? (from 57,6% potential entrepreneurs to 14,6% intentional entrepreneurs)
- What happens in the entrepreneurial pipeline of Suriname that goes from 67,9% of adult population being a potential entrepreneurs to only 4,8% being intentional entrepreneurs?
- What is happening in Suriname that has the lowest entrepreneurial intention rate of the Caribbean region?
- What is the reason for the growth of the entrepreneurial intentions of Jamaican population from 2011 to 2014?
- Why the entrepreneurial intentions in the Caribbean region have been decreasing since 2011?
- What should be done in terms of training and support programs to motivate the potential entrepreneurs to actually pursue their intention 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

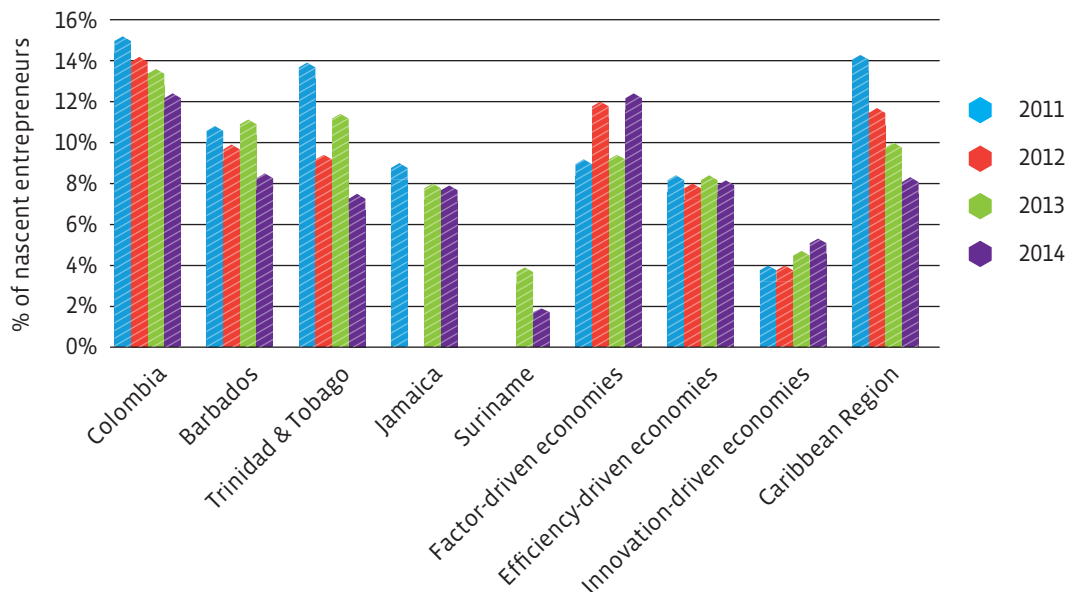
In this stage are the adults that have started to do specific activities in setting businesses and have paid salaries, wages or any other remuneration to employees and/or owners for less than three (3) months.

Between 2011 and 2014, all the Caribbean countries show a decreasing trend in the “nascent entrepreneur” indicator, behavior quite different to the one showed by the innovation driven (growth) or by the efficiency driven (steady) or by the factor driven (oscillating but with a growth trend). The decreasing trend presented in the intentional entrepreneur and in the nascent entrepreneur in all the Caribbean countries is a situation very worrying because indicates that each year the people are less involved in the process of generation of an enterprise. Obviously this indicates that increasingly, fewer people will go to the next stages in the entrepreneurial pipeline.

In 2014, 6.270 Surinamers, 3.720.000 Colombians, 16.745 Barbadians, 142.200 Jamaicans and 67.500 Trinidadians, were involved in the nascent entrepreneur stage.

In all the Caribbean countries a big leakage in the pipeline occurs when moving from intentional

FIGURE 8. Nascent entrepreneurs. Caribbean (2011 – 2014)



SOURCE: Compiled by authors.

to nascent. Policies and programs to reduce this 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 to employees and/or owners for more than 3 months but for less than 42 months.

In 2014, the new entrepreneurs rate shows very significant fluctuations between Caribbean countries (from 0.2% in Suriname to 11.9% in Jamaica). The propensity to be a new entrepreneur in the Caribbean region is higher than the propensity in the efficiency and innovation driven economies group, but lower than the propensity in the factor driven economies. From 2011 to 2014, the new entrepreneurs rate in the Caribbean region has been increasing while the nascent entrepreneurs rate has been decreasing, however, the established entrepreneurs rate has not increased and has remained constant around 8%. Before this, it is necessary to strengthen the support mechanisms for the entrepreneurs in each one of these stages.

In 2014, 660 Surinamers, 2.010.000 Colombians, 8.274 Barbadians, 214.200 Jamaicans and 66.600 Trinidadians were involved in the new entrepreneur stage.

Some research questions should be formulated at this time:

- Why the “new entrepreneurs” indicator has such a significant increase in Jamaica from 2011 (5%) to 2014 (11.9%) and a significant decrease in the factor driven economies from 2012 (13%) to 2014 (7%)?
- Why the “nascent entrepreneurs” indicator in all the Caribbean Countries has been decreasing from 2012 to 2014?
- What is happening in Jamaica that the “nascent entrepreneurs” indicator decreases but the “new entrepreneurs” indicator increases?
- Why in 2014 Suriname had the lowest nascent and new entrepreneur indicator compared to the other countries?

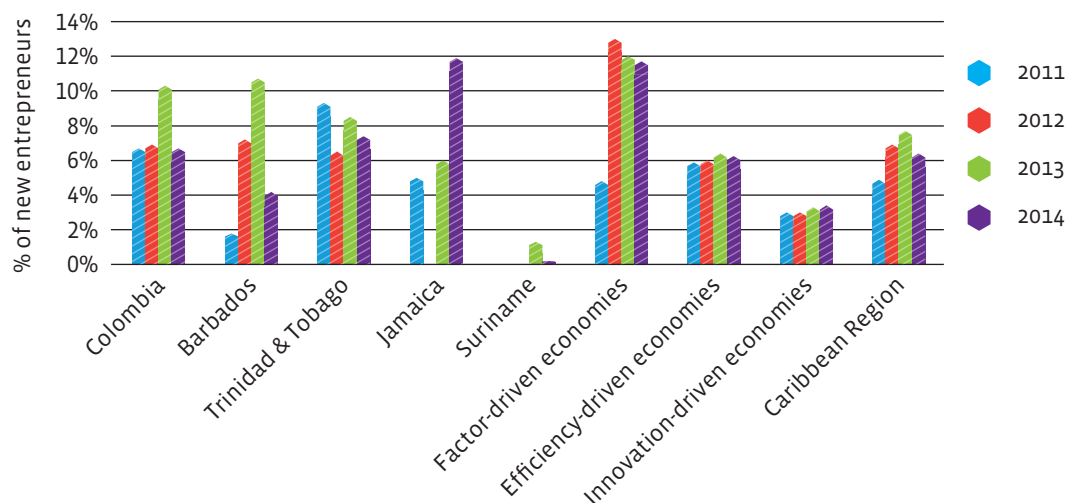
A deeper research on economic conditions, policies implemented in each stage by each country, changes in the entrepreneurial perspective of the citizens, changes in the support systems, and other local variables should be implemented.

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.

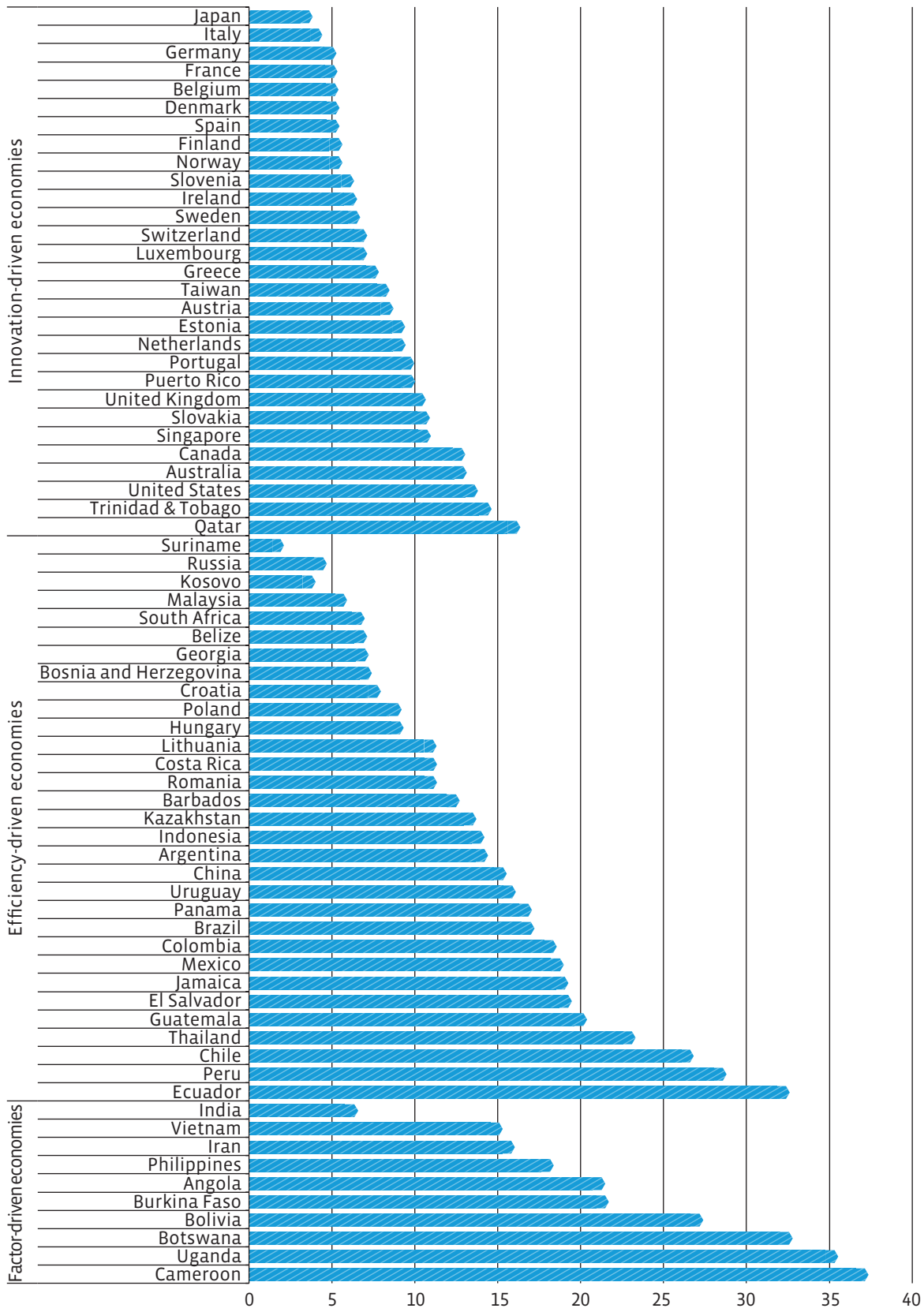
Figure 10 shows the total early entrepreneurial activity data for all participant countries in the 2014 cycle. As shown, there is a great variability in

FIGURE 9. New entrepreneurs. Caribbean (2011 – 2014)



SOURCE: Compiled by authors.

FIGURE 10. TEA by countries (2014)



SOURCE: Global Entrepreneurship Monitor 2014 Global Report (2015)

the TEA worldwide ranging from 2,1% (Suriname) to 37,4% (Cameroon) in 2014. The innovation-driven economies (8,54%) present the lowest TEA rate; meanwhile the factor-driven economies (23,3%) have the highest TEA rate.

In the innovation-driven economies the TEA goes from 16.4% in Qatar to 3,8% in Japan. In the efficiency-driven economies the TEA goes from 32,6% in Ecuador to 2,1% in Suriname, and in the factor-driven economies from 37,4% in Cameroon to 6,6% in India.

Colombia is the 9th, Barbados is 17th, Jamaica 7th and Suriname 31th among the efficiency-driven countries. Trinidad & Tobago is the second one in the innovation-driven economies.

Table 5, presents the variations in TEA, among the Latin America & the Caribbean countries, from 2011 to 2014. The most significant variations were in: Mexico from 10% to 19%, Trinidad & Tobago from 23% to 15% and Argentina from 21% to 14%.

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, except in Jamaica. The entrepreneurial pipeline in Jamaica shows that from 2011 to 2014, TEA has been increasing although the nascent entrepreneur rate has been decreasing. This situation implies that several actions had been taken in the Jamaican Government and other institutions (eg. Youth Information Centres, Jamaica Business Development Corporation) to strengthen the entrepreneurial activity of the country.

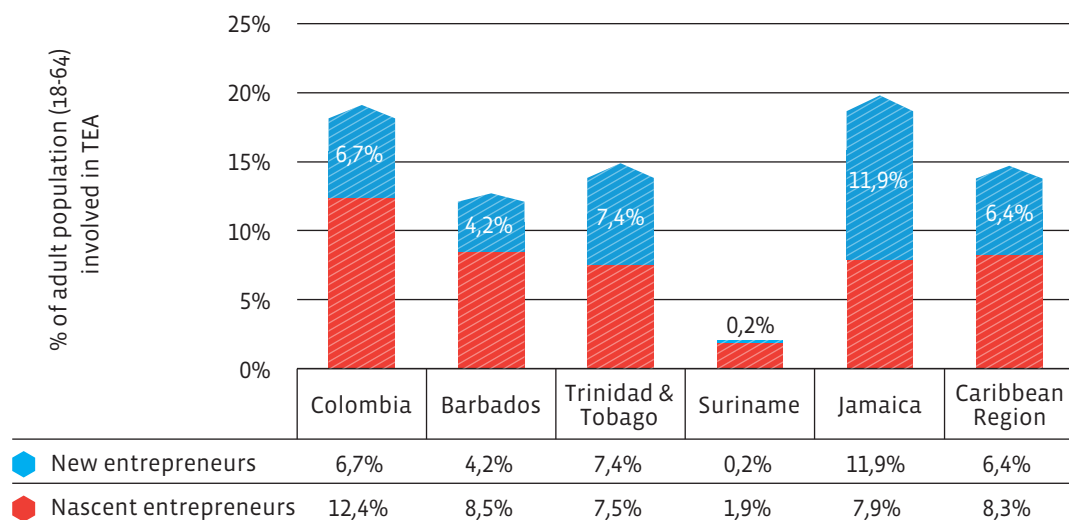
TABLE 5. TEA in the Latin America & the Caribbean region. (2011-2014)

	2011	2012	2013	2014
Argentina	21%	19%	16%	14%
Barbados	13%	17%	22%	13%
Brazil	15%	15%	17%	17%
Chile	24%	23%	24%	27%
Colombia	21%	20%	24%	19%
Ecuador	DNA	27%	36%	33%
Mexico	10%	12%	15%	19%
Panama	21%	9%	21%	17%
Peru	23%	20%	23%	29%
Trinidad & Tobago	23%	15%	20%	15%
Uruguay	17%	15%	14%	16%
Belize	DNA	DNA	DNA	7%
Guatemala	19%	DNA	12%	20%
El Salvador	DNA	15%	DNA	19%
Costa Rica	DNA	15%	DNA	11%
Bolivia	DNA	DNA	DNA	27%
Suriname	DNA	DNA	5%	2%
Jamaica	14%	DNA	14%	19%

DNA: Data Not Available

SOURCE: Compiled by authors.

FIGURE 11. TEA composition (2014)



SOURCE: Compiled by authors.

Considering the TEA results, it is possible to estimate that in the Caribbean region, 9.664.803 adults were involved in 2014 in early entrepreneurial activities (0–42 months).

Figure 12, shows the ratio (nascent entrepreneurs / new entrepreneurs) for the Caribbean countries, for the Caribbean region and for the three economic groups in 2011, 2012, 2013 and 2014. Barbados presents the most significant change in the region with a ratio, from 6.0 in 2011 to 2.0 in 2014.

Suriname in 2014 obtained the highest disparity rate (9.5) in the region, which means that only 10% 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.

TABLE 6. Nascent/new entrepreneurs ratio (2011-2014)

	2011	2012	2013	2014
Colombia	2,27	2,06	1,32	1,85
Trinidad & Tobago	1,49	1,45	1,34	
Barbados	6,00	1,38	1,04	2,02
Jamaica	1,80	-	1,33	0,66
Suriname		-	3,00	9,5
Factor	1,92	0,92	0,78	1,06
Efficiency	1,42	1,33	1,31	1,3
Innovation	1,33	1,33	1,42	1,56
Caribbean Region	2,92	1,70	1,30	1,30

Source: Compiled by authors.

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 7 presents the proportion of established entrepreneurs in each one of the countries and economies. The factor driven economies and Jamaica present the most significant improvement from 2011 to 2014. Colombia presents a decreasing trend in this indicator since 2011.

Jamaica presents the highest established entrepreneur's proportion (14,4%) which indicates that

395.136 Jamaican people have had a business for more than 42 months of paying out salaries or any other remuneration form.

TABLE 7. Established business (2011-2014)

	2011	2012	2013	2014
Colombia	7,5%	7,0%	5,9%	4,9%
Trinidad & Tobago	6,9%	7,0%	11,4%	8,5%
Jamaica	5,1%	DNA	6,3%	14,4%
Suriname	DNA	DNA	1,7%	5,1%
Barbados	4,2%	12,0%	12,4%	7,1%
Factor driven	5,6%	11,0%	13,3%	12,7%
Efficiency driven	7,2%	8,0%	8,0%	8,5%
Innovation-Driven	7,2%	7,0%	6,7%	6,7%
Caribbean Region	6,7%	8,0%	7,3%	7,9%
DNA: Data Not Available				

Source: Compiled by authors.

It is important to formulate public policies in terms of designing new support programs for businesses after their initial years that allow the survival and growth of them with a significant contribution to job creation and to the value generation.

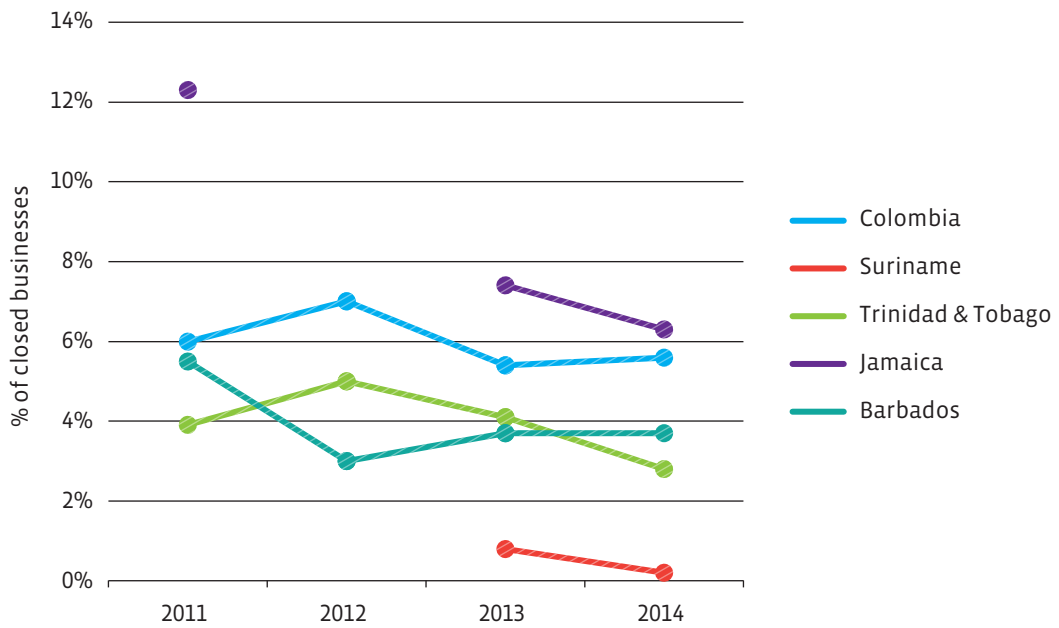
5.8 Discontinuance

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 problems, living conditions, family needs and retirement.

For 2014, in Jamaica, 6,3% of the adult population had discontinued a business in the last 12 months being the highest among the Caribbean region, followed by Colombia (5,6%), Barbados (3,7%), Trinidad & Tobago (2,8%), and Suriname (0,2%).

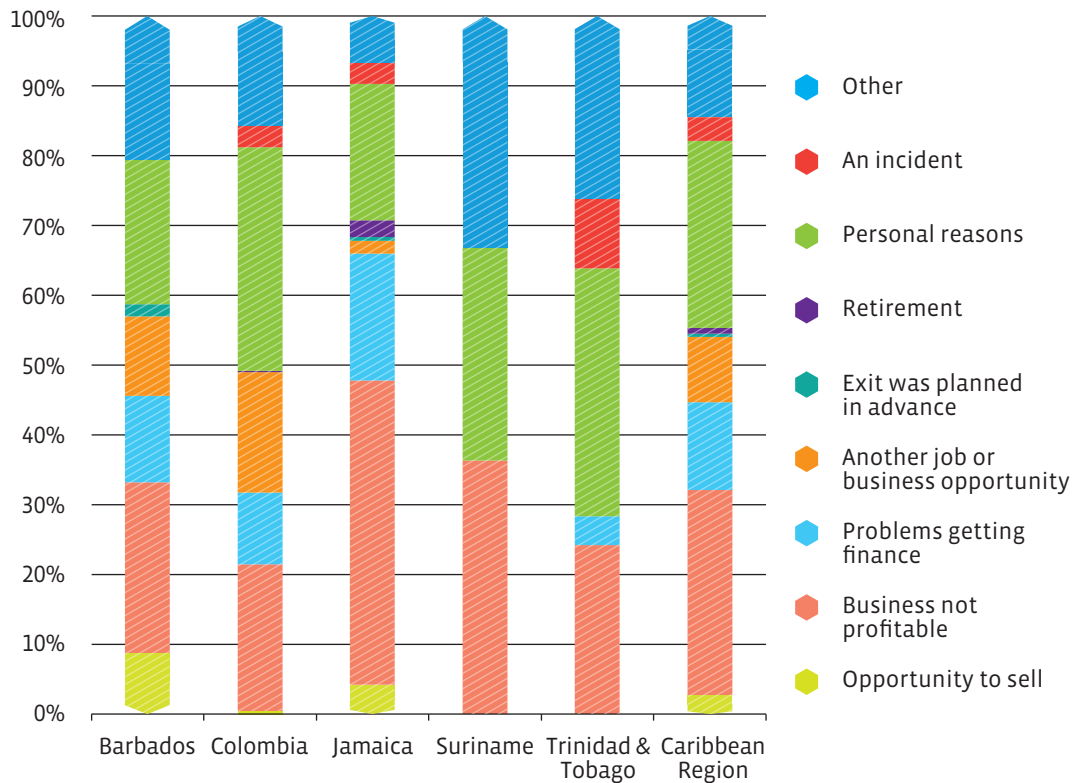
Figure 13 shows the main reasons for business discontinuance in the last 12 months in Barbados, Jamaica, Suriname, Colombia and Trinidad & Tobago. In 2014, most of entrepreneurial discontinuances are due to personal reasons and to business non profitable.

FIGURE 12. Discontinuance (2011-2014)



SOURCE: Compiled by authors.

FIGURE 13. Reasons for discontinuances. 2014



SOURCE: Compiled by authors.

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.

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.

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 Caribbean region.

Figures 14, 15, 16, 17, 18 and 19 present the entrepreneurial pipelines for 2013 and 2014 for Barbados, Colombia, Jamaica, Suriname and Trinidad & Tobago and for 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 Barbados, the principal leaks, in percentage points, occur in the following transitions.

	2013	2014
From Potential to Intentional	-42	-43
From Intentional to Nascent	-13	-6

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

	2013	2014
From Socio cultural perception to Potential	-12	-8
From Potential to Intentional	-10	-12
From Intentional to Nascent	-41	-39

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

	2013	2014
From Socio cultural perception to Potential	-13	-14
From Potential to Intentional	-28	-36
From Intentional to Nascent	-32	-26

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

	2013	2014
From Socio cultural perception to Potential	-13	-4
From Potential to Intentional	-48	-63

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

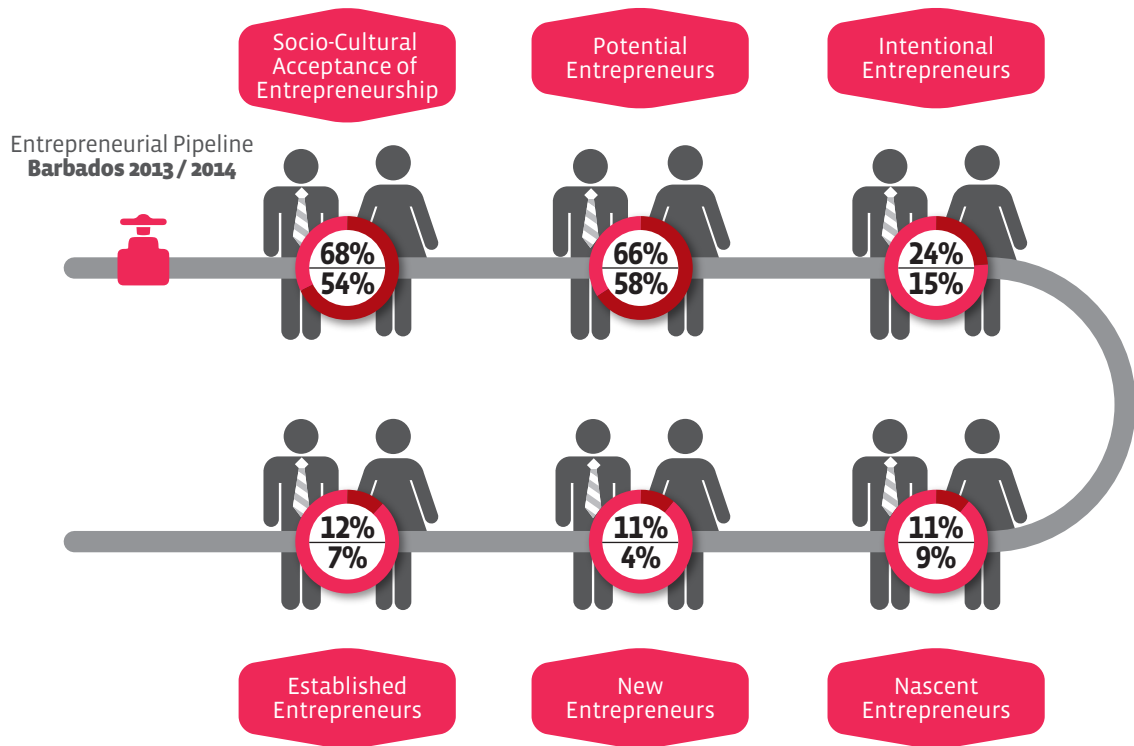
	2013	2014
From Potential to Intentional	-42	-37
From Intentional to Nascent	-18	-26

- For the Caribbean Region, the principal leaks, in percentage points, occur in the following transitions.

	2013	2014
From Potential to Intentional	-29	-34
From Intentional to Nascent	-26	-24

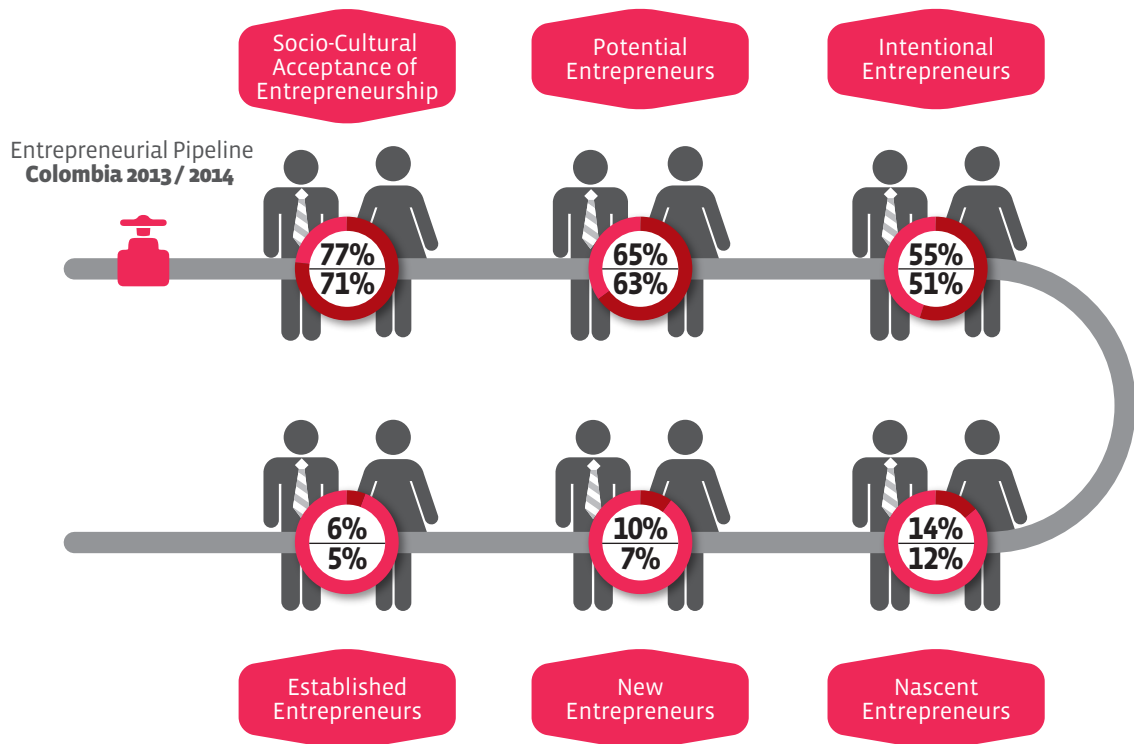
Figure 20 shows the variations in each stage of the pipeline for the Latin America & the Caribbean countries from 2011 to 2014.

FIGURE 14. Entrepreneurial pipeline for Barbados’s entrepreneurs.



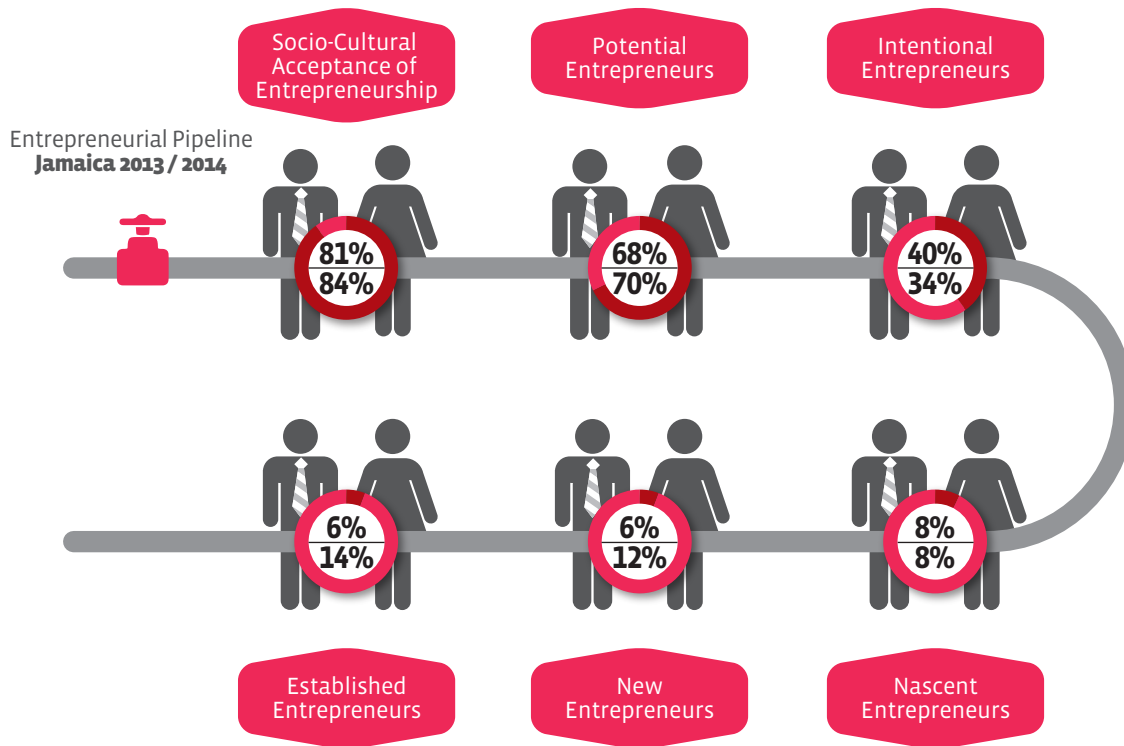
SOURCE: Compiled by authors.

FIGURE 15. Entrepreneurial pipeline for Colombia’s entrepreneurs.



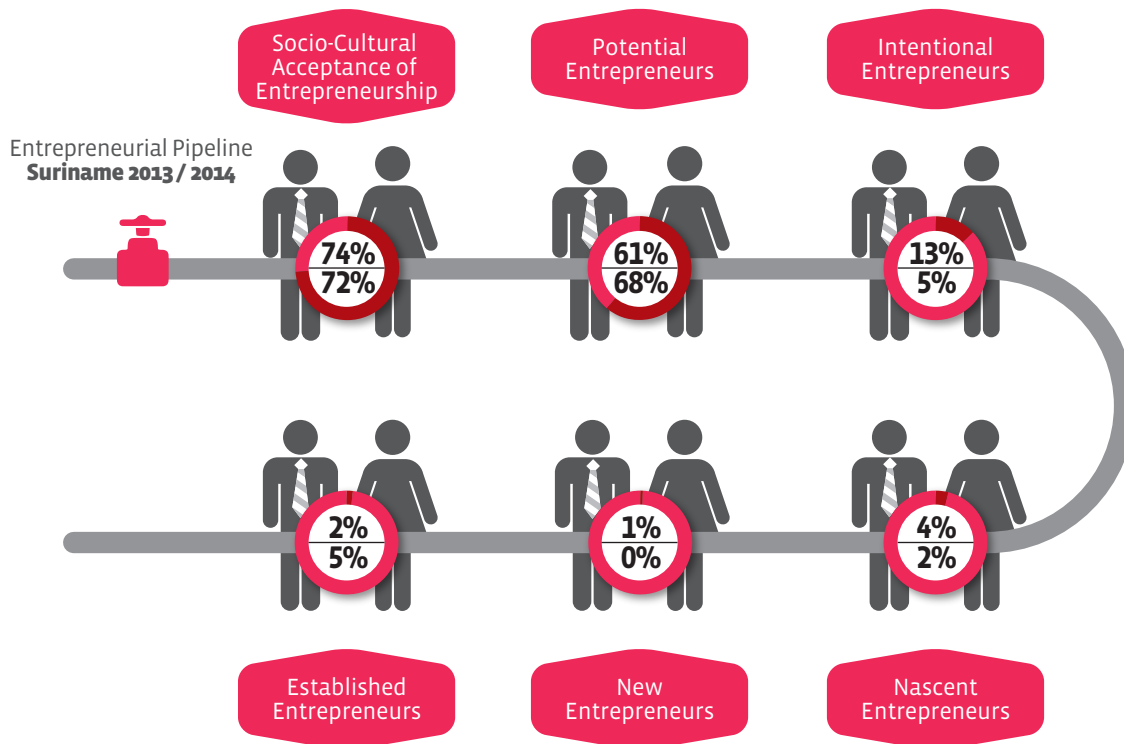
SOURCE: Compiled by authors.

FIGURE 16. Entrepreneurial pipeline for Jamaica's entrepreneurs.



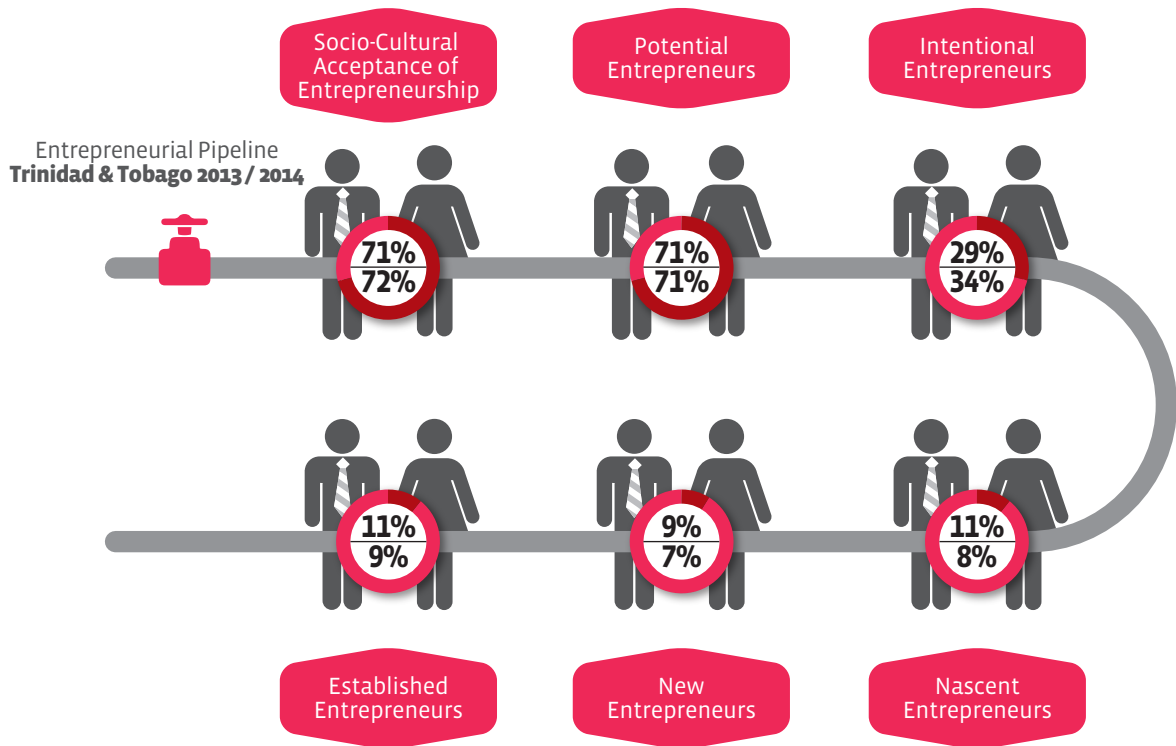
SOURCE: Compiled by authors.

FIGURE 17. Entrepreneurial pipeline for Suriname's entrepreneurs.



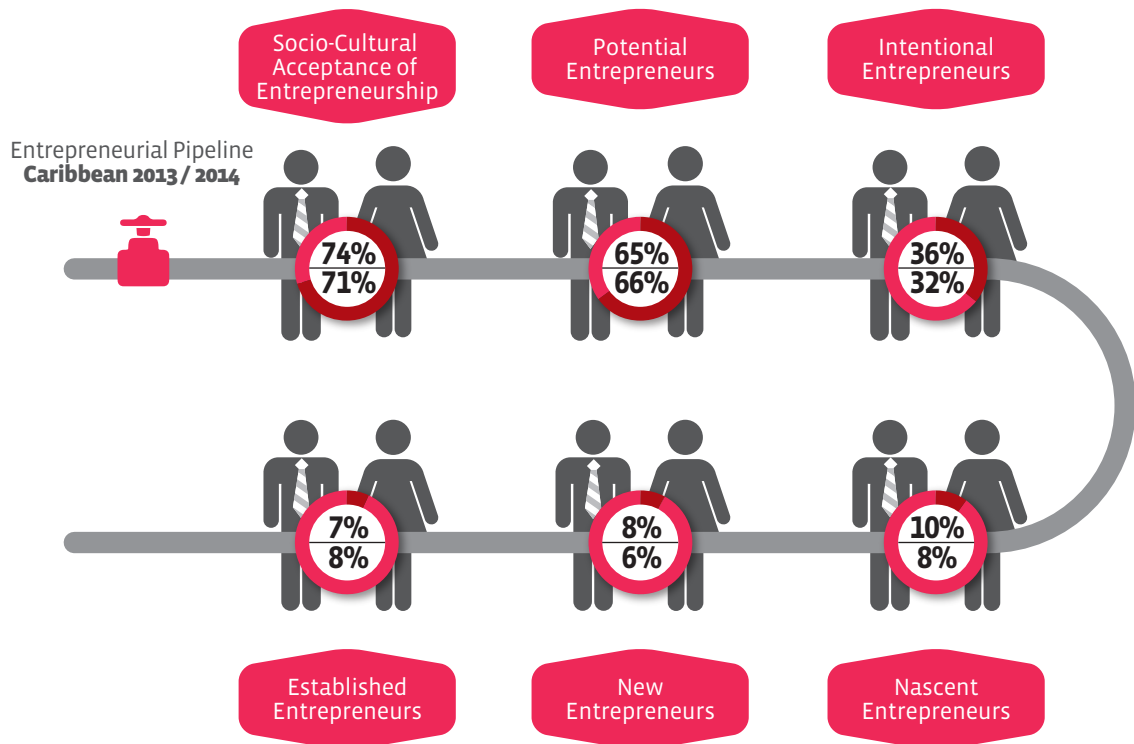
SOURCE: Compiled by authors.

FIGURE 18. Entrepreneurial pipeline for Trinidad & Tobago 's entrepreneurs.

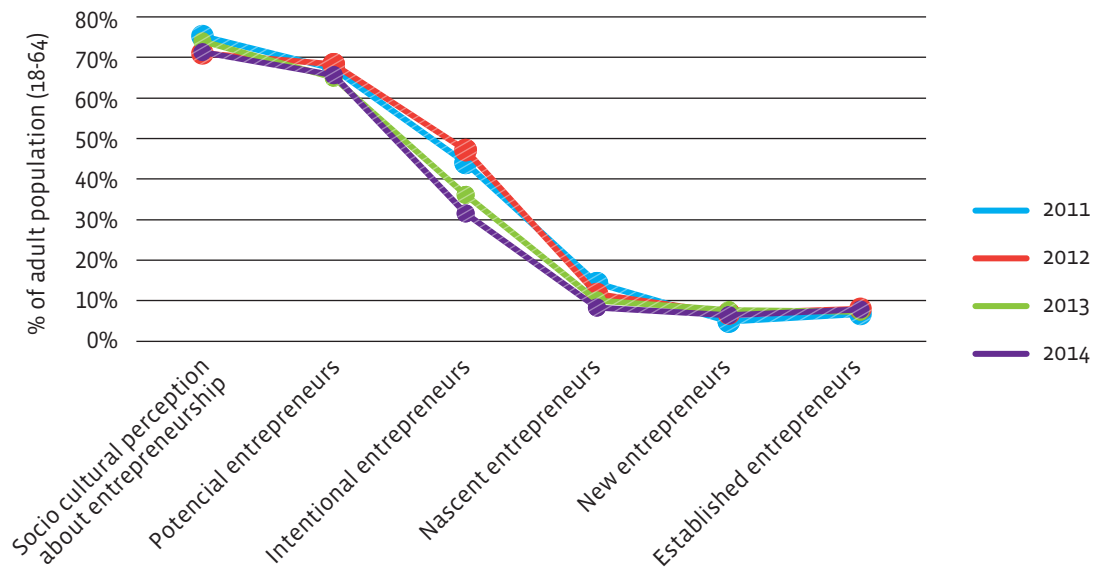


SOURCE: Compiled by authors.

FIGURE 19. Entrepreneurial pipeline for Caribbean entrepreneurs.

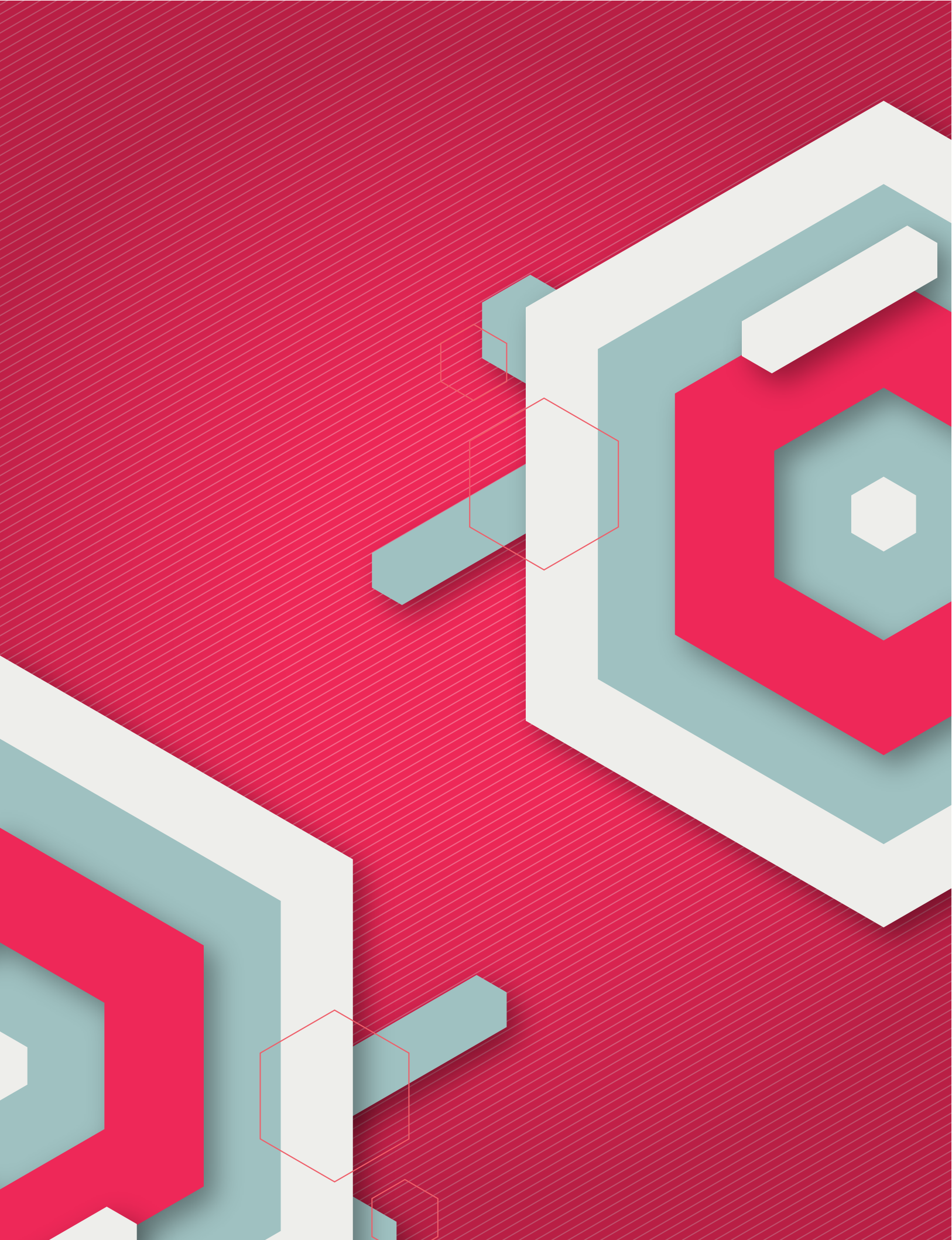


SOURCE: Compiled by authors.

FIGURE 20. Entrepreneurial pipeline. Caribbean (2011-2014)

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 that 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 Caribbean region for 2014.

In analyzing the pipelines for each country by gender it is possible to identify the stages in which there are significant “leaks” in 2014:

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

	Male	Female
From Potential to Intentional	-46	-41

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

	Male	Female
From Potential to Intentional	-11	-12
From Intentional to Nascent	-41	-37

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

	Male	Female
From Potential to Intentional	-39	-33
From Intentional to Nascent	-28	-25

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

	Male	Female
From Potential to Intentional	-68	-58

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

	Male	Female
From Potential to Intentional	-41	-34
From Intentional to Nascent	-26	-26

- For the Caribbean Region, the principal leaks, in percentage points, occur in the following transitions.

	Male	Female
From Potential to Intentional	-37	-32
From Intentional to Nascent	-24	-23

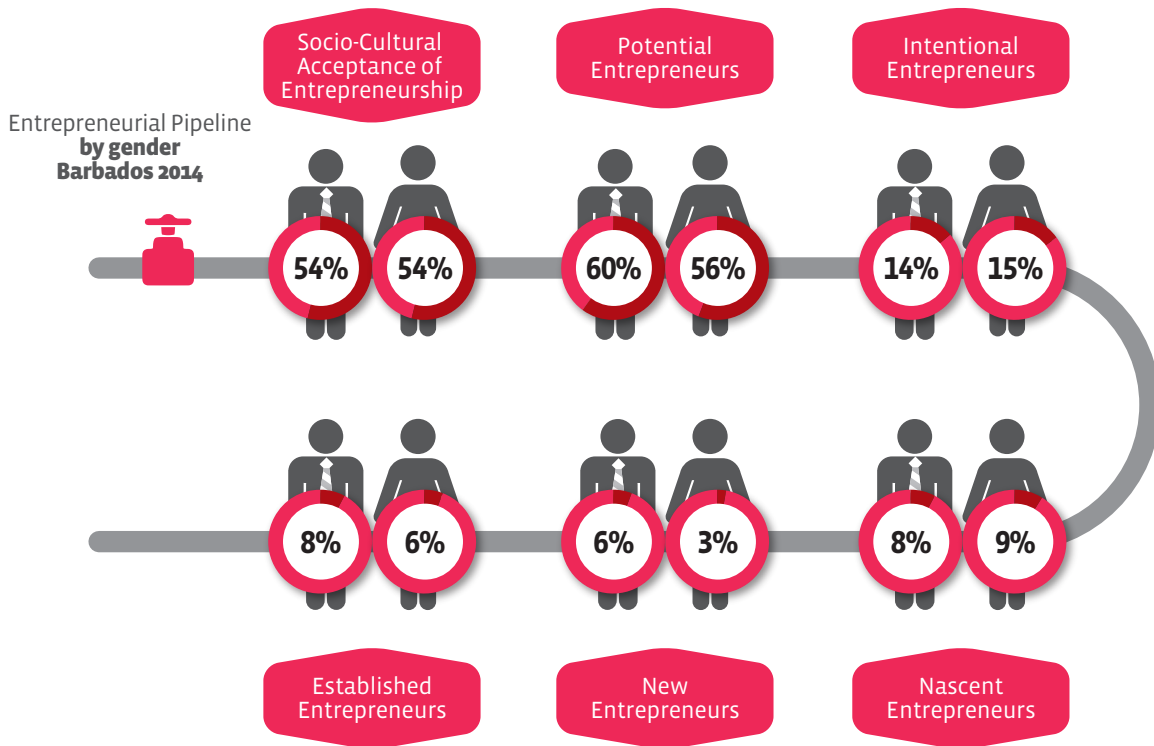
There is a significant difference in the stages of the entrepreneurial pipeline between men and women. Table 8 presents the TEA by gender for the Latin American and the Caribbean countries, and the disparity rate is defined as the ratio TEA males/TEA females. In Argentina, Colombia and Suriname the disparity is the highest (more than 1.5). Brazil, El Salvador and Ecuador with 1.0 present the lowest indicator.

TABLE 8. Gender gaps in nascent/new entrepreneurial activity rates (2014).

	TEA male	TEA female	Male/female ratio
Peru	29,7%	28,0%	1,1
Mexico	19,7%	18,3%	1,1
Argentina	17,8%	11,2%	1,6
Brazil	17,0%	17,5%	1,0
Chile	30,1%	23,7%	1,3
Colombia	22,8%	14,6%	1,6
Barbados	14,3%	11,2%	1,3
Belize	7,8%	6,5%	1,2
Guatemala	24,4%	16,9%	1,4
El Salvador	19,3%	19,7%	1,0
Costa Rica	11,7%	11,0%	1,1
Panama	18,0%	16,1%	1,1
Bolivia	29,9%	25,0%	1,2
Ecuador	33,0%	32,2%	1,0
Suriname	2,7%	1,5%	1,7
Uruguay	19,2%	13,2%	1,4
Puerto Rico	11,1%	9,1%	1,2
Trinidad & Tobago	16,1%	13,2%	1,2
Jamaica	21,3%	17,3%	1,2

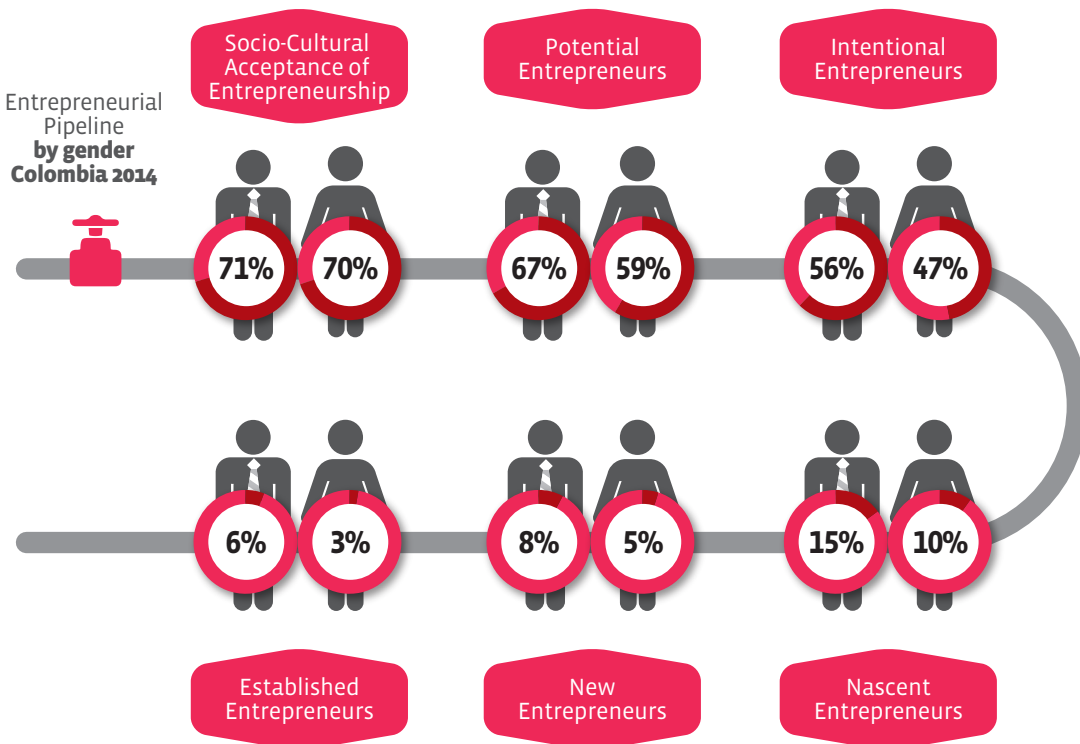
Source: Compiled by authors.

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



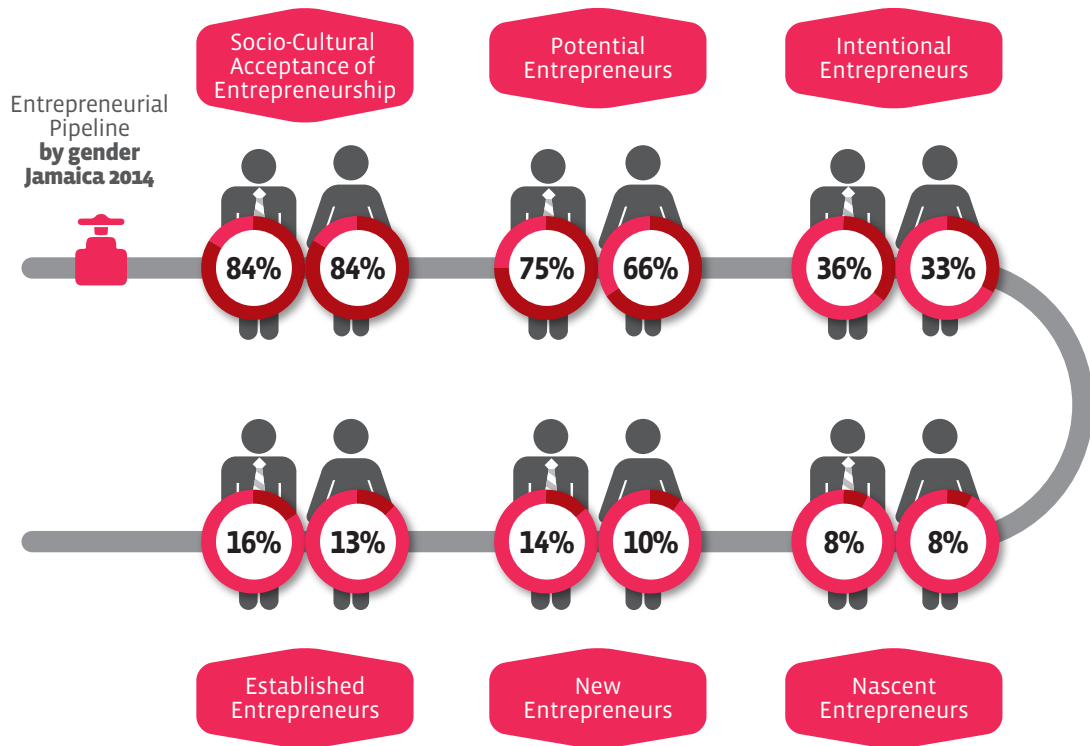
SOURCE: Compiled by authors.

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



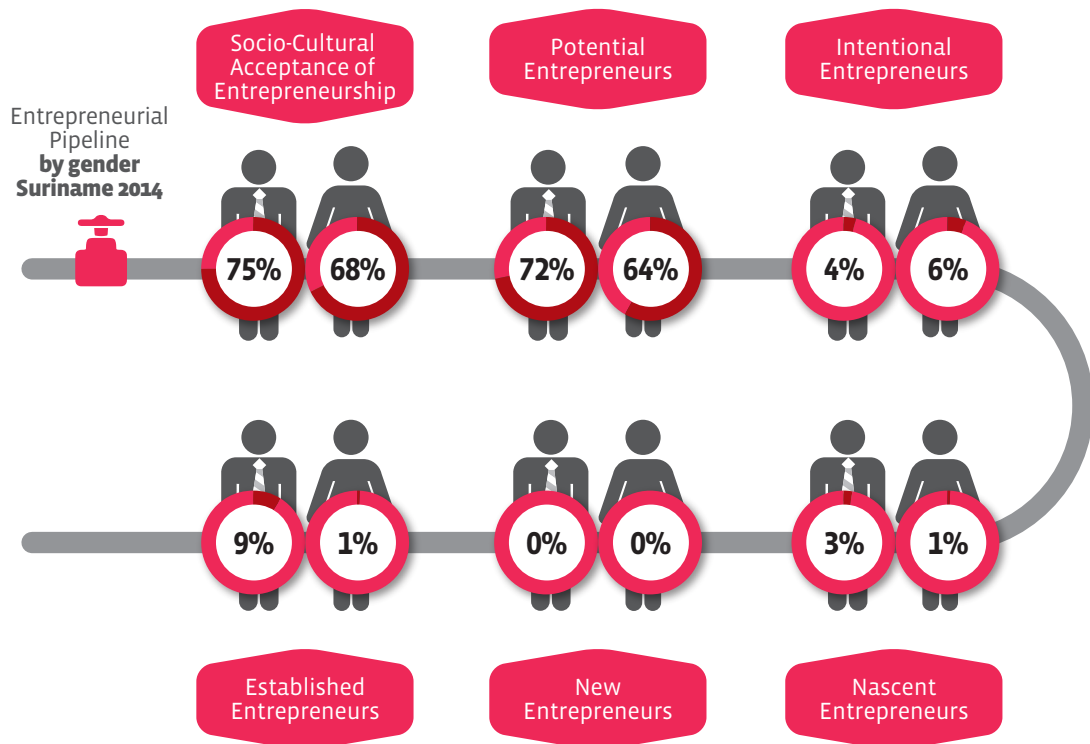
SOURCE: Compiled by authors.

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



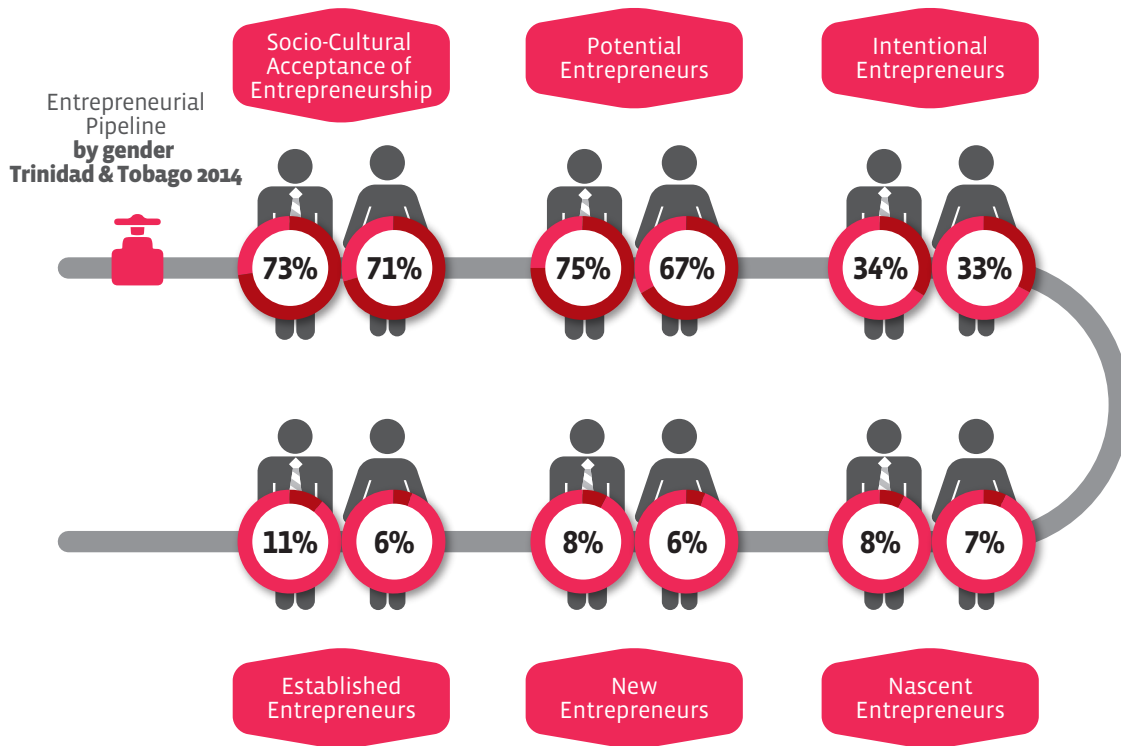
SOURCE: Compiled by authors.

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



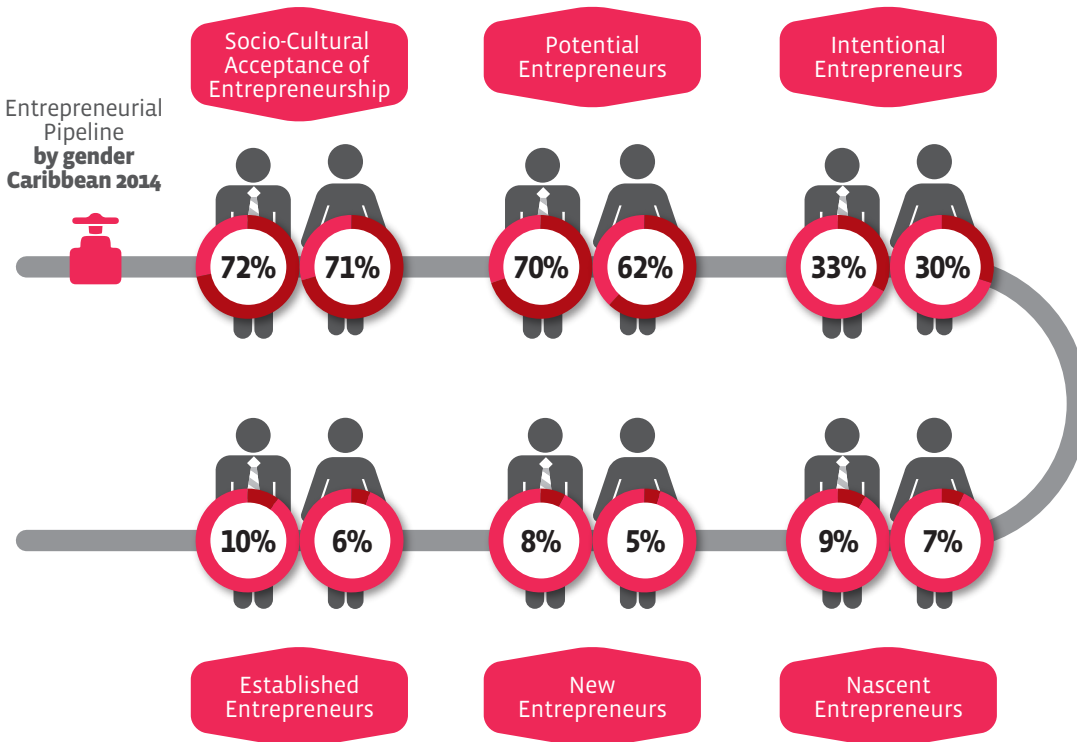
SOURCE: Compiled by authors.

FIGURE 25. Entrepreneurial pipeline of Trinidadian and Tobagonian male and female entrepreneurs.



SOURCE: Compiled by authors.

FIGURE 26. Entrepreneurial pipeline of Caribbean male and female entrepreneurs.



SOURCE: Compiled by authors.

For the established entrepreneurs, the propensity by gender is presented in table 9. The “male/female ratio” for “TEA” and for “EB” presents a very different behavior. In Suriname, the disparity in the established entrepreneur’s stage between female and male is the highest (7.0).

TABLE 9. Gender gaps in established business owner rates (2014).

	EB male	EB female	Male/female ratio
Peru	12,3%	6,3%	2,0
Mexico	4,5%	4,5%	1,0
Argentina	12,9%	5,6%	2,3
Brazil	19,5%	15,6%	1,2
Chile	10,9%	6,8%	1,6
Colombia	6,4%	3,4%	1,9
Barbados	7,9%	6,4%	1,2
Belize	4,9%	2,6%	1,9
Guatemala	9,2%	5,8%	1,6
El Salvador	13,4%	12,1%	1,1
Costa Rica	3,3%	1,9%	1,7
Panama	5,2%	1,7%	3,1
Bolivia	8,7%	6,5%	1,3
Ecuador	21,6%	13,8%	1,6
Suriname	9,0%	1,3%	7,0
Uruguay	8,7%	5,0%	1,8
Puerto Rico	2,0%	0,6%	3,4
Trinidad & Tobago	10,8%	6,2%	1,7
Jamaica	16,2%	12,8%	1,3

Source: Compiled by authors.

6.2 Age

Although it is widely accepted that entrepreneurship can begin at any given age in 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 in-

dependently 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 Caribbean 2014, the age group “25-34” presents the highest propensity toward new businesses creation with a TEA rate greater than 13%. This situation is similar to that presented in 2011 and 2012, because in 2013, something interesting happened: different to the trend of other years, the higher percentage of nascent and new entrepreneurs in the Caribbean region was 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).

The age group of 45-54 shows, in the Caribbean region, an average rate of 12% in 2014. However in the same year, something interesting happens with some countries: different to the general trend in 2014, the higher percentage of established entrepreneurs in Trinidad & Tobago and Suriname are in the “35-44” age group and in Jamaica is in the “55-64” age group.

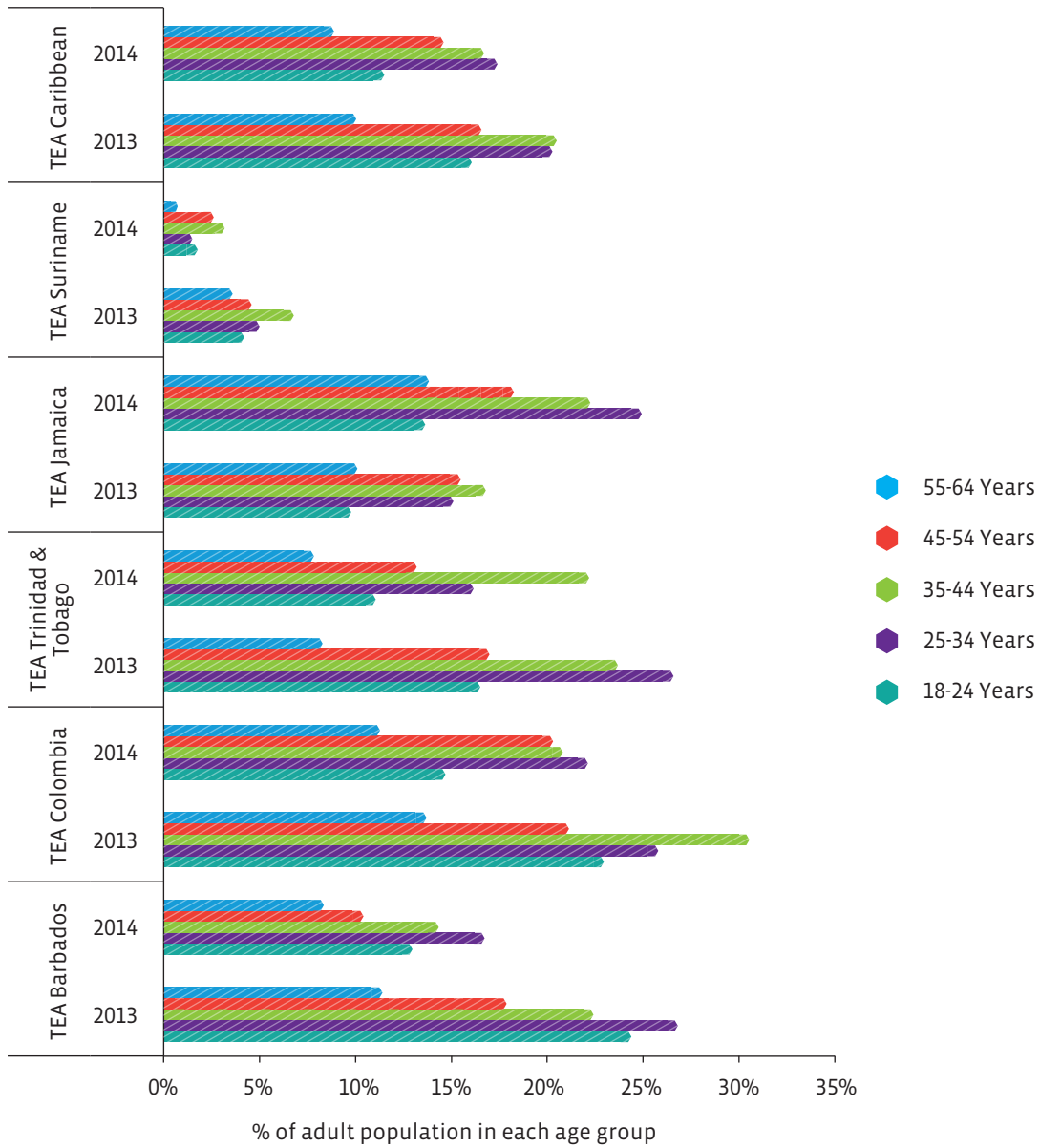
Along the years, in Colombia, an important change has occurred and it is worthwhile to research it in depth: In 2011, the age group with higher propensity to have established businesses was the “35-44” group, but in 2012 was the “45-54” age group, in 2013 was the “55-64” age group and again as in 2012, in 2014 it was in the “45-54” age group.

6.3 Household Income

The household income is measured by GEM in three categories: 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 10), 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 15,2% while the highest third household income percentile had a TEA rate of 27,0%.

FIGURE 27. TEA rate by age. Caribbean (2013-2014).



SOURCE: Compiled by authors.

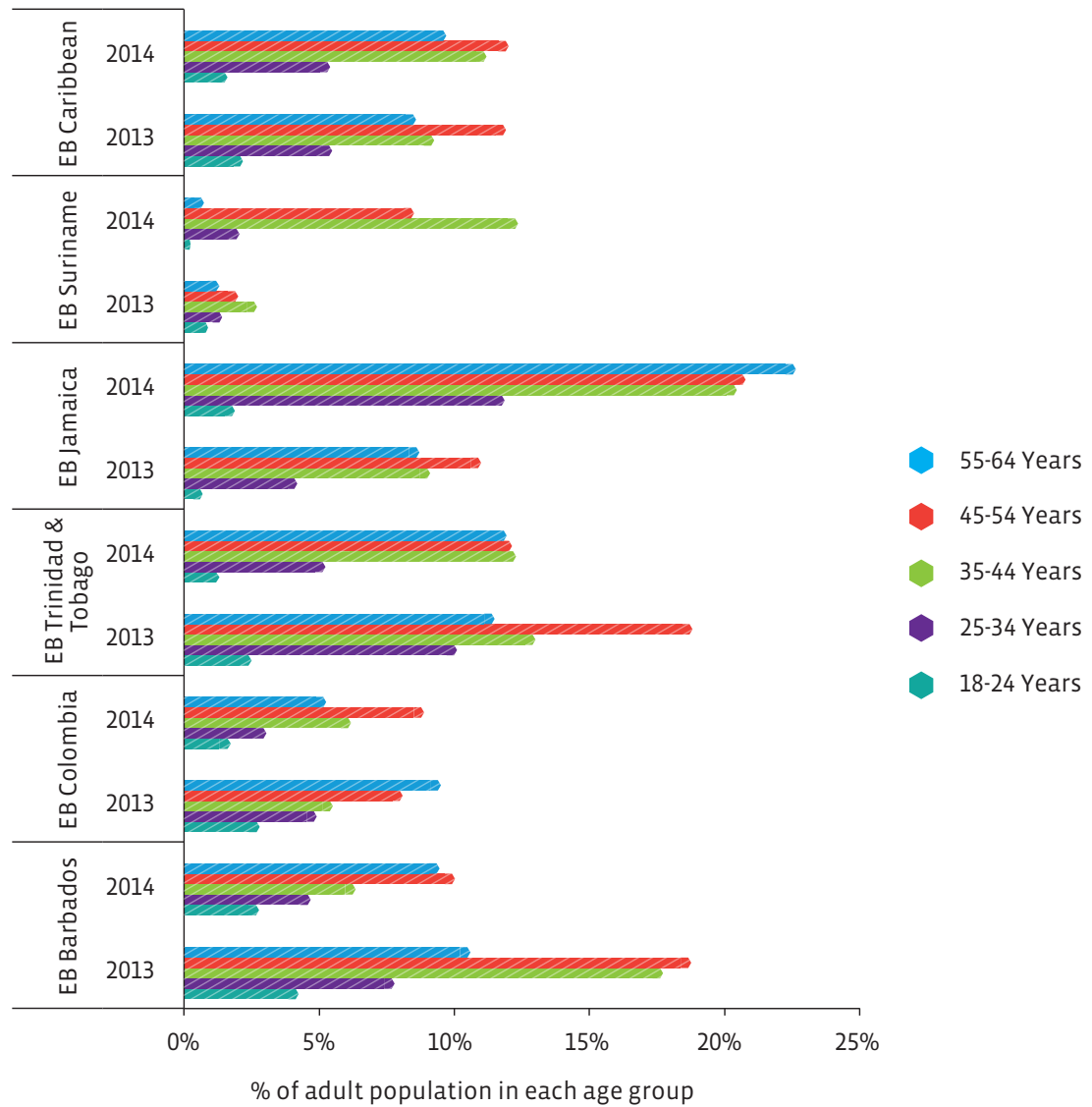
FIGURE 28. EB rate by age. Caribbean (2013-2014).**SOURCE:** Compiled by authors.

TABLE 10. TEA rates by household income level (2014)

	Lowest third percentile	middle third percentile	highest third percentile
Barbados	19,4%	9,9%	12,9%
Colombia	15,2%	18,1%	27,0%
Suriname	1,2%	1,5%	5,0%
Trinidad & Tobago	13,1%	14,2%	16,0%
Jamaica	18,2%	22,4%	0,0%
Caribbean Region	15,2%	10,0%	17,5%

Source: Compiled by authors.

TABLE 11. EB rates by household income level (2014)

	Lowest third percentile	middle third percentile	highest third percentile
Barbados	5,6%	7,7%	11,0%
Colombia	3,7%	4,1%	8,4%
Suriname	7,8%	4,3%	3,9%
Trinidad & Tobago	7,0%	7,5%	9,3%
Jamaica	14,8%	26,5%	0,0%
Caribbean Region	9,0%	5,8%	8,3%

Source: Compiled by authors.

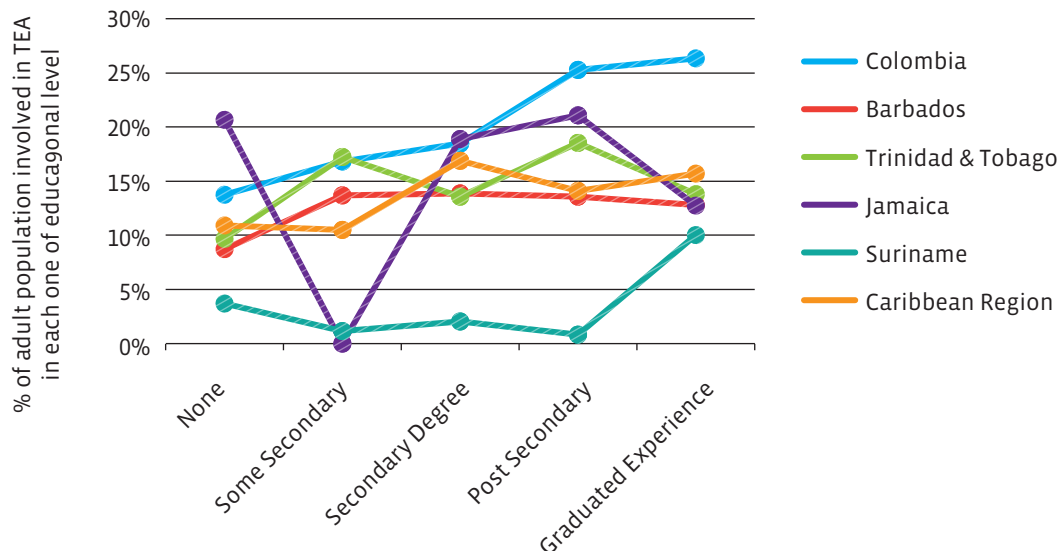
In the same way, when the established businesses (EB) rate is analyzed in relation to the household income (Table 11), it was found that as the income grows the EB rate tends to increase except in Jamaica and Suriname.

6.4 Education

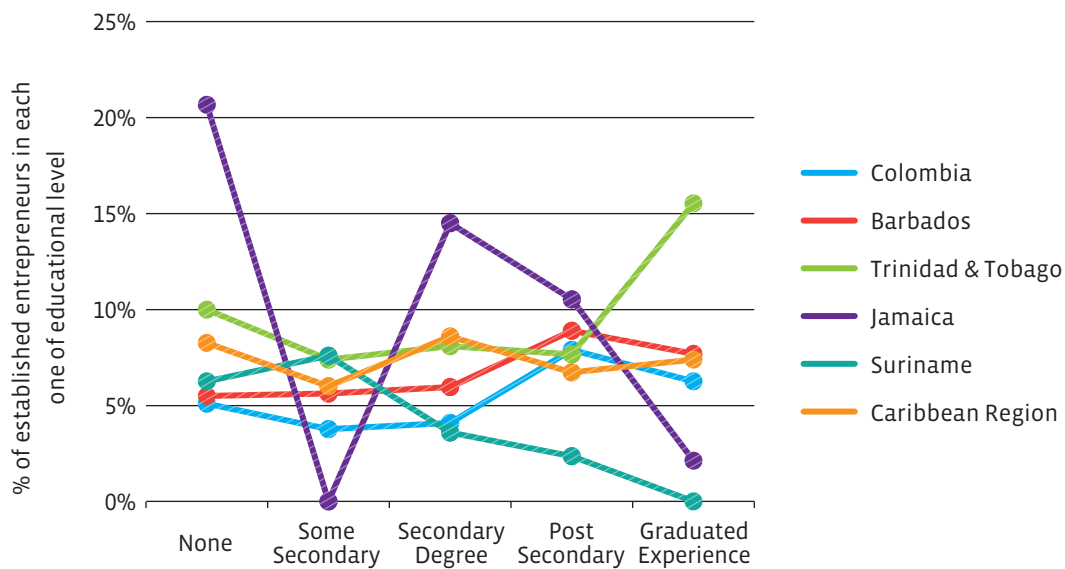
To analyze the effect of educational level in the TEA, GEM uses four categories:

- 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 Caribbean region in 2014, of the TEA rate for each one of the educational levels. Colombia and the Caribbean Region show a trend that indicates that higher the educational level higher the propensity toward early entrepreneurship (TEA). In Jamaica the same trend is observed in the first 3 levels (Some secondary, Secondary degree and Post-Secondary), but a decrease is shown for the graduated level.

FIGURE 29. TEA rates by education level (2014)

SOURCE: Compiled by authors.

FIGURE 30. Established entrepreneur rates by education level (2014)

SOURCE: Compiled by authors.

Figure 30 presents the results for five countries and for the Caribbean region in 2014 in the proportion of established businesses in every educational level. Jamaica and Suriname present a decreasing trend in the proportion of established entrepreneurs as the educational level increases. Trinidad & Tobago shows an increasing trend in the proportion of established entrepreneurs as educational level increases. In Barbados and Colombia the trend is similar but in the last level education the propensity tends to lower.

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 the higher the educational level of the people will be 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

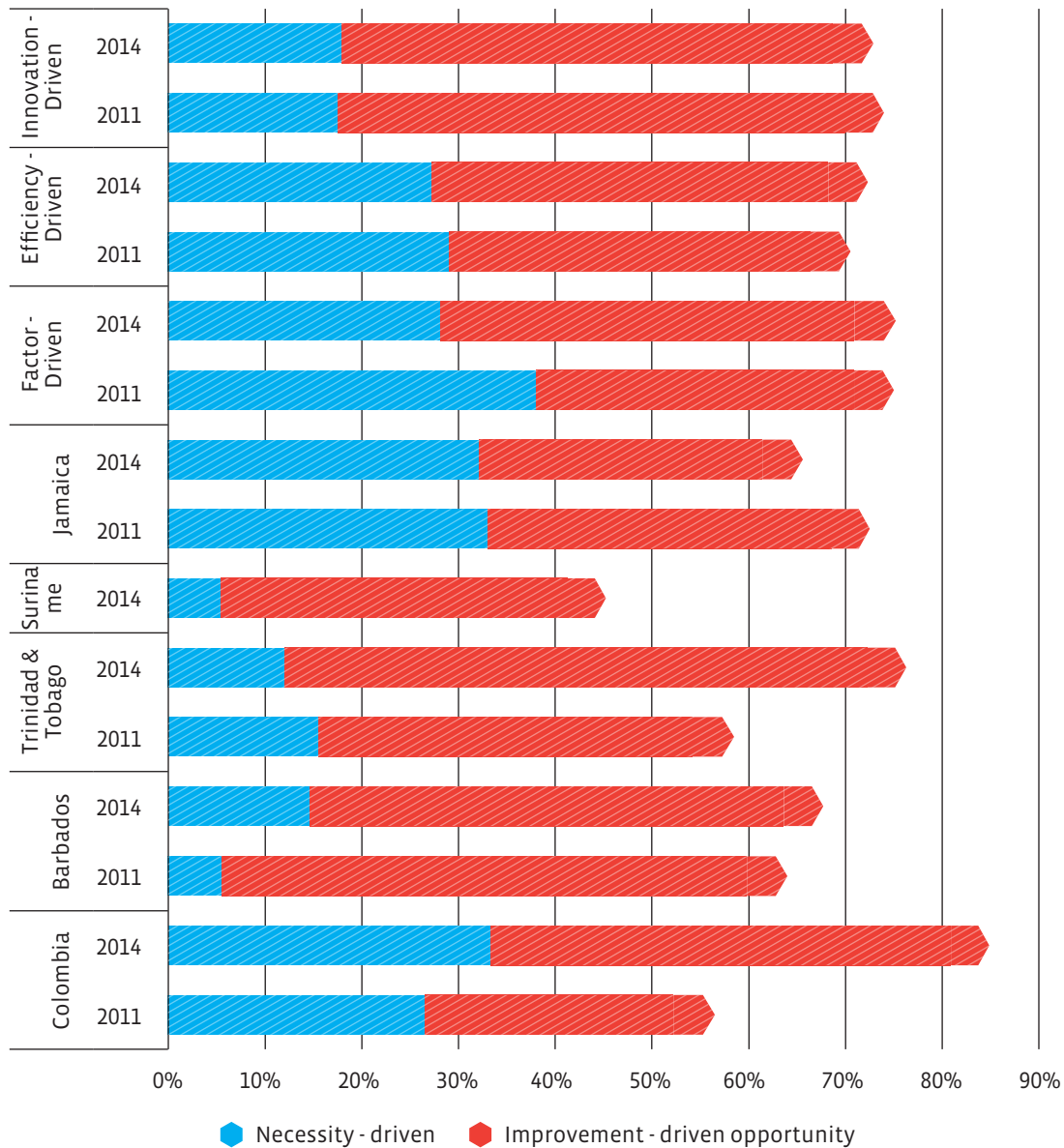
An important issue in the entrepreneurial pipeline process is to identify the circumstances which

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 be more independent, as opposed to maintain an income.

In 2014, the composition of the nascent/new entrepreneurs, by their motivation had the following characteristic, as shown by figure 31:

- In the necessity-driven, Suriname, Trinidad & Tobago and Barbados, present lower percentages than the factor and efficiency driven countries and similar or lower than the innovation driven countries.
- In the improvement-driven opportunity, Trinidad & Tobago, Barbados and Colombia present a very high percentage of their entrepreneurs

FIGURE 31. Improvement-driven opportunity vs. necessity driven motivation (2011-2014)

SOURCE: Compiled by authors.

with this orientation. Jamaica 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. 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 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.

When the motivation is analyzed in each age group as indicated in figure 32, some conclusions can be drawn:

- The motivation by necessity grew from 2013 to 2014 in most of the age groups, except in the “18-24” and “55-64” age groups.
- The pure opportunity motivation in all ages increased and the partly opportunity motivation decreased from 2013 to 2014.
- The older people and the youngest people are motivated more by opportunity than by necessity.

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.

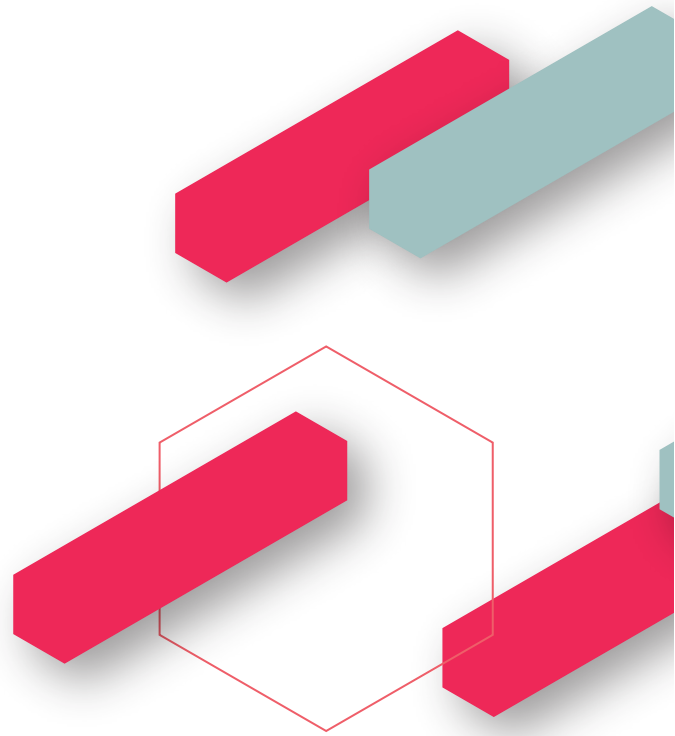
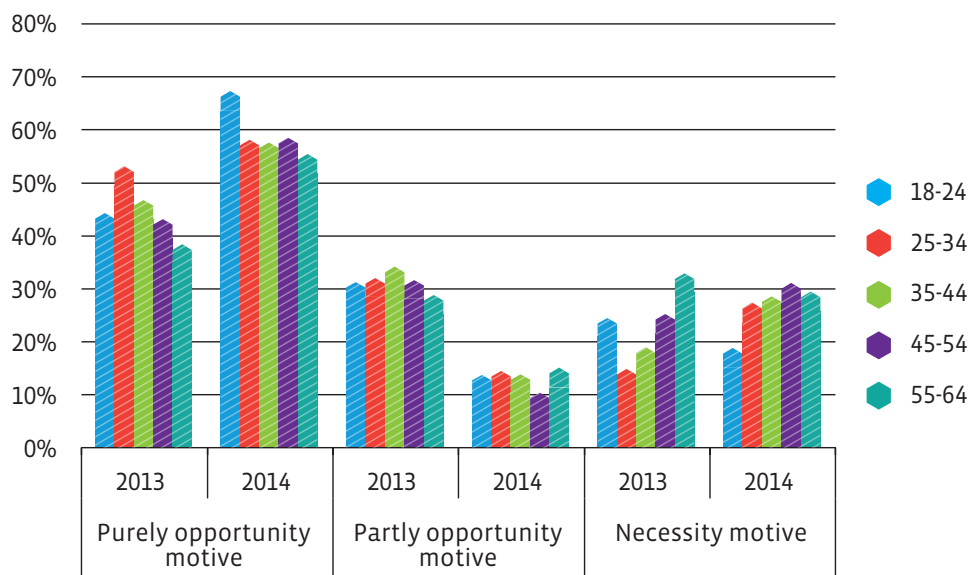


FIGURE 32. Motivation at every age group (2013-2014)



SOURCE: Compiled by authors.



CARIBBEAN

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.

jobs at the present time, in all the countries in the last 4 years; but it will grow in five years to a maximum of 30,4%.

In 2014, Colombia shows the best pattern in the 20+ jobs created (29,6%). These results allow deriving some conclusions:

7.1 Job generation

Table 12 presents the distribution of the enterprises in terms of the current and expected (in 5 years) job generation from 2011 to 2014. Less than 3,4% of the enterprises have created more than 20

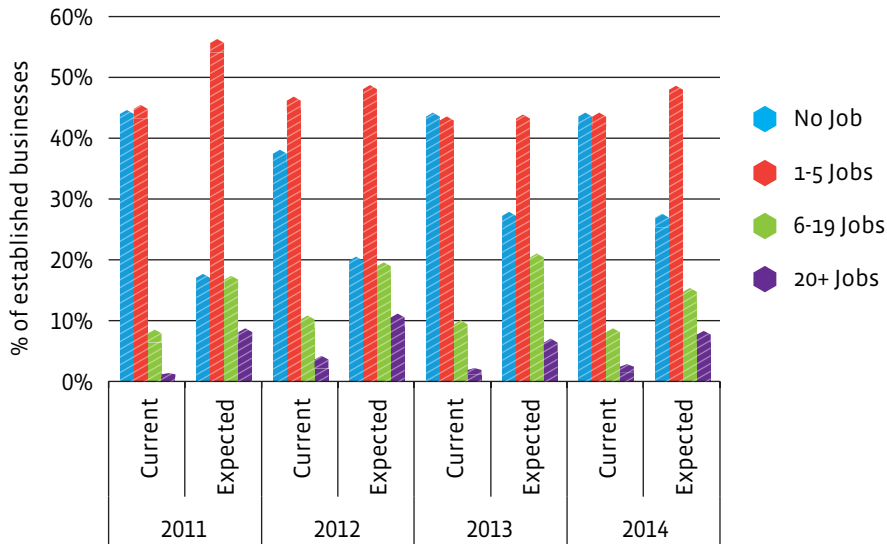
- A very significant proportion of the nascent/new enterprises had a very small contribution to the job generation at the starting time: almost 90% of them started with less than 5 jobs; which indicates very small initiatives.
- Only a small proportion of enterprises will grow to have more than 20 employees in 5 years (less

TABLE 12. Current vs. expected job generation in the nascent/new businesses (2011-2014)

	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%
2014	22,2%	1,2%	65,4%	74,4%	12,4%	17,5%	0,0%	6,9%
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%
2014	68,9%	41,6%	28,5%	43,4%	1,9%	11,8%	0,6%	3,2%
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%
2014	19,8%	2,1%	67,9%	32,7%	9,0%	35,6%	3,4%	29,6%
SURINAME								
2013	41,1%	10,6%	41,0%	75,6%	17,9%	11,5%	0,0%	2,3%
2014	7,3%	3,8%	57,5%	86,4%	35,1%	6,6%	0,0%	3,2%
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%
2014	44,0%	13,9%	46,7%	48,1%	7,0%	24,9%	2,3%	13,1%
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%
2014	44,3%	14,4%	47,4%	43,3%	6,6%	25,2%	1,6%	17,1%

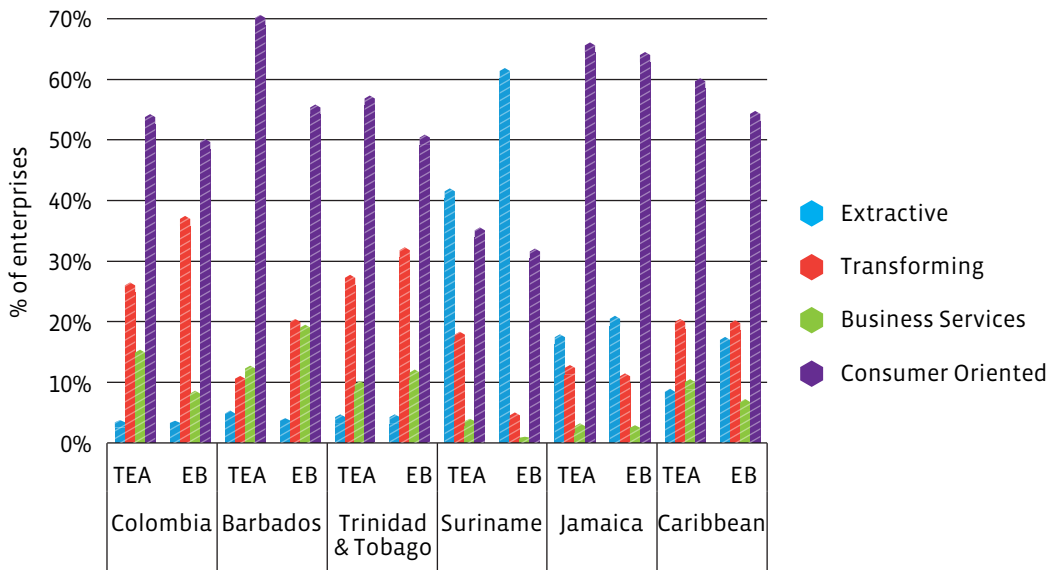
SOURCE: Compiled by authors.

FIGURE 33. Current vs. expected job generation in the established business. Caribbean (2011-2014)



SOURCE: Compiled by authors.

FIGURE 34. Sectorial distribution (2014)



SOURCE: Compiled by authors.

than 20% for the Caribbean countries) which indicates that the growth perspective is not a very clear vision in the nascent/new entrepreneurs.

Figure 33 shows the job generation in the established enterprises, current and expected in the next five years, for the Caribbean countries from

2011 to 2014. More than 47% of the established enterprises had less than 5 jobs at the current situation, and less than 11% 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

TABLE 13. Distribution of nascent/new and established enterprises by sector (2014)

	Barbados		Colombia		Trinidad & Tobago		Suriname		Jamaica		Caribbean	
	TEA	EB	TEA	EB	TEA	EB	TEA	EB	TEA	EB	TEA	EB
Agriculture, forestry, fishing	5,4%	4,1%	2,9%	3,7%	4,7%	4,7%	25,5%	61,9%	17,7%	21,0%	8,2%	17,5%
Mining, construction	2,4%	10,3%	3,5%	8,4%	9,8%	12,2%	16,5%	1,0%	1,8%	3,7%	4,0%	6,5%
Manufacturing	3,3%	6,5%	15,2%	15,3%	6,6%	10,7%	5,1%	2,0%	5,3%	3,9%	9,2%	7,3%
Utilisation, transport, storage	3,1%	3,7%	3,8%	4,6%	4,3%	6,1%	13,3%		2,2%	2,9%	3,4%	3,5%
Wholesale trade	6,5%	3,7%	7,2%	9,7%	11,3%	10,2%	9,2%	2,0%	6,2%	4,0%	7,4%	5,8%
Retail trade, hotels & restaurants	41,8%	33,9%	44,0%	38,0%	43,7%	38,2%	18,2%	30,9%	57,1%	52,9%	47,2%	42,8%
Information and communication	2,8%	0,6%	3,9%	2,7%	1,2%	1,3%		1,0%	1,4%	1,6%	2,5%	1,6%
Financial intermediation, real estate activities	1,8%	3,6%	1,5%	0,4%	0,8%	2,0%			0,6%	0,3%	1,1%	1,0%
Professional services	4,3%	10,1%	6,8%	3,9%	3,1%	3,3%			0,2%	0,5%	3,8%	2,7%
Administrative services	4,0%	5,3%	3,3%	1,6%	5,1%	5,4%	4,0%		1,0%	0,5%	3,0%	2,0%
Government, health, education, social services	20,9%	13,8%	5,7%	7,9%	7,4%	3,2%	4,0%	1,2%	5,0%	7,7%	7,8%	7,0%
Personal/consumer service activities	3,8%	4,6%	2,3%	3,8%	1,9%	2,7%	4,3%		1,6%	1,1%	2,3%	2,2%

SOURCE: Compiled by authors.

growth of their activities and provide resources for the development of growth strategies.

7.2 Sector

Table 13, classifies the different enterprises, nascent/new (TEA) and established (EB), using the International Standard Industry Classification (ISIC). In Suriname “Agriculture, forestry, fishing” is the main sector, meanwhile, in the other Caribbean countries it is the “Retail trade, hotels & restaurants” sector.

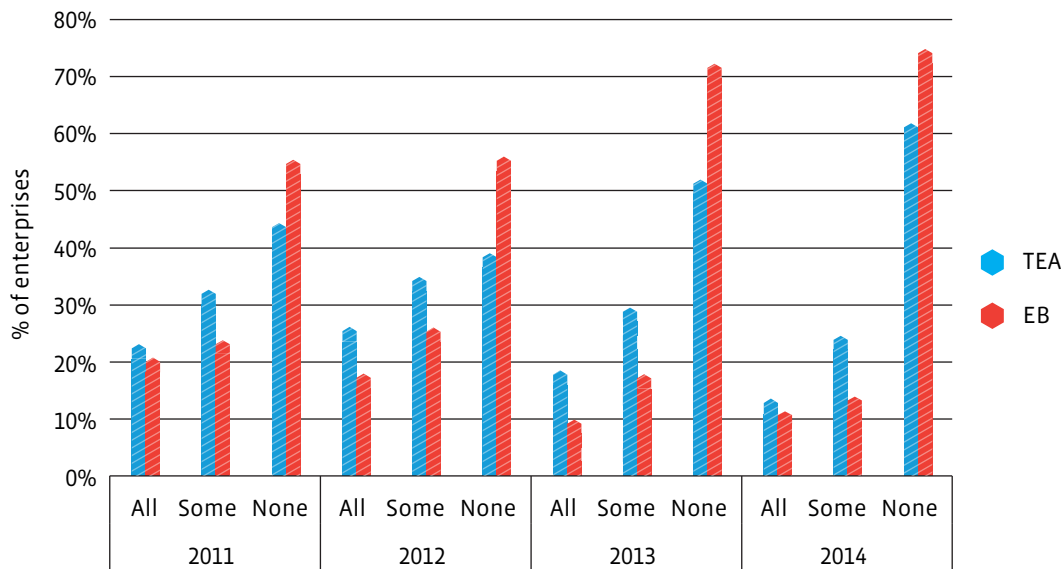
Figure 34 integrates the data in the four basic sectors: extractive, transforming, business services and consumer oriented. In all the countries, for nascent/new (TEA) and for established (EB), the consumer oriented sector is the main one, followed by trans-

forming. But, in Suriname the main sector is Extractive. In the Caribbean region, Business services and Extractive sector represent less than 25%.

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

FIGURE 35. Innovativeness of products/ services by sector groupings (2011-2014)

SOURCE: Compiled by authors.

perception of innovation in product/services, the level of competitors making the same products and the application of new technology.

Figure 35, integrates for the Caribbean countries the level of innovations in product/services. In 2014, 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

four years, is “none” with percentages greater than 39% and with a trend of increasing the lack of innovative products. The nascent/new enterprises offer more innovative products than the established ones.

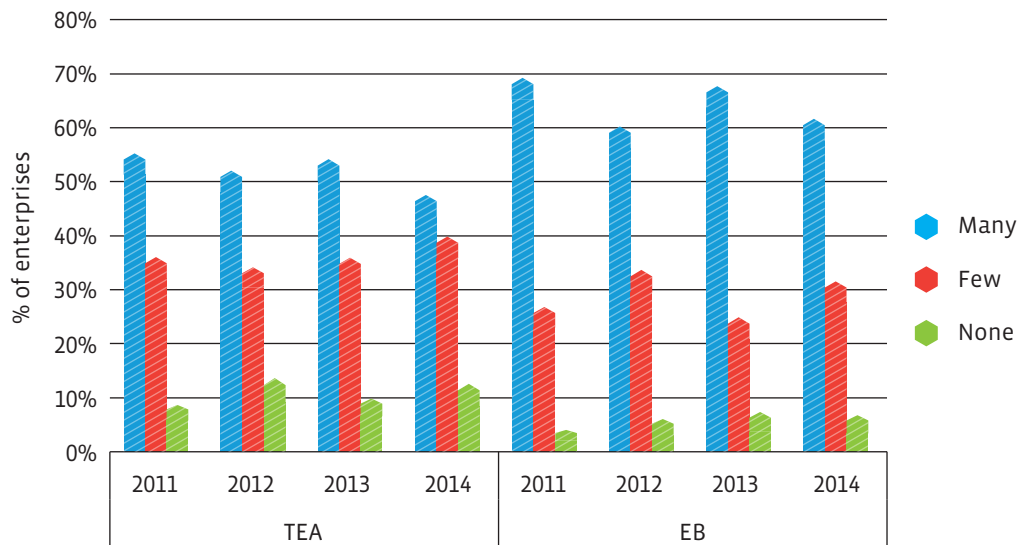
According to table 14, in all the Caribbean countries, except Colombia, less than 40% of the enterprises have products or services that are considered as innovative for all or some of their consumers.

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.

TABLE 14. Caribbean Countries and economic phases vs. new products by TEA and EB (2014)

	TEA			EB		
	All	Some	None	All	Some	None
Colombia	24,7%	34,4%	40,9%	28,9%	20,8%	50,3%
Barbados	7,6%	31,1%	61,3%	4,7%	26,7%	68,6%
Suriname	2,5%	5,1%	92,4%	21,5%	2,3%	76,2%
Trinidad & Tobago	8,5%	17,4%	74,1%	2,7%	11,4%	85,9%
Jamaica	5,3%	13,3%	81,4%	6,2%	10,0%	83,9%
Caribbean Region	13,6%	24,6%	61,8%	11,3%	13,9%	74,8%

SOURCE: Compiled by authors.

FIGURE 36. Number of direct competitors in markets entered by TEA and EB (2011-2014).

SOURCE: Compiled by authors.

The analysis about the “number of competitors” that the enterprises may have is shown in figure 36, and it indicates that more than 50% of the nascent/new and more than 65% 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 year; 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 37 shows that, in the Caribbean region, along the years, the enterprises use mainly old technologies (percentages between 65,9% and 69,4% for the TEA, and 72,5% and 83% in the EB). A low percentage of enterprises applied the latest technologies to their processes (between 2,1% and 11,3%).

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.

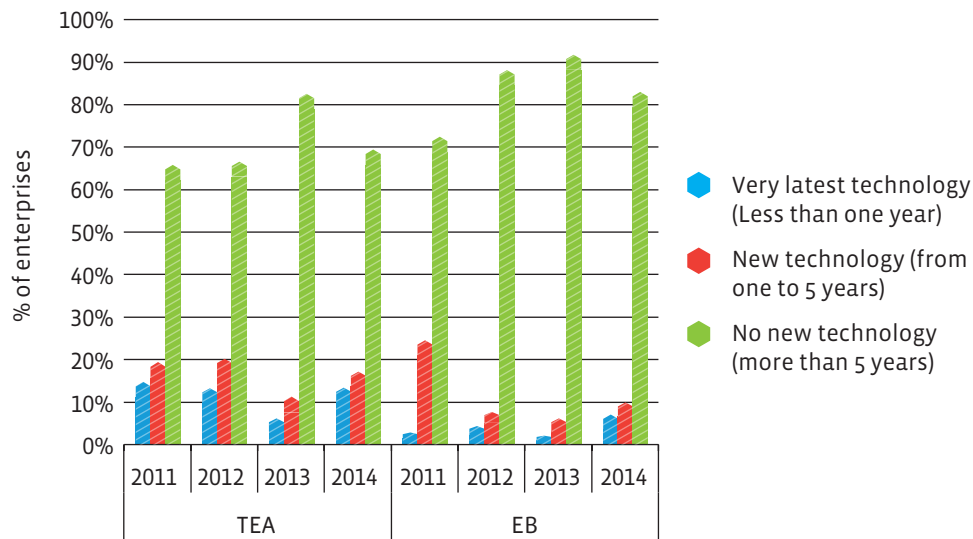
All the entrepreneurial development programs must explain and teach the concepts of innovation, flexibility, market orientation and widening market perspectives as basic elements for success and growth of the new businesses.

Government and universities must foster innovation and create a culture driven by it, 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 15 reflects that in all the Caribbean countries (except in Suriname) very few enterprises have more than 75% of their consumers outside the country: for the nascent/new it goes from 1,2% in Trinidad & Tobago to 39,7% in Suriname and for established one from 1,3% in Suriname to 14,1% in Barbados.

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 competitiveness in the international markets or the lack of international orientation. Support programs in both cases are needed.

FIGURE 37. Newness of technology used in nascent/new businesses and established business by sector (2011-2014)

SOURCE: Compiled by authors.

TABLE 15. International orientation of Caribbean businesses (2014)

	Percentage of customers from outside the country	TEA	EB
Barbados	More than 75%	9,4%	14,1%
	25 to 75%	20,9%	22,8%
	Under 25%	46,4%	45,4%
	None	23,4%	17,7%
Colombia	More than 75%	3,5%	4,4%
	25 to 75%	8,3%	10,3%
	Under 25%	66,5%	63,3%
	None	21,7%	22,0%
Trinidad & Tobago	More than 75%	1,2%	1,4%
	25 to 75%	5,8%	4,2%
	Under 25%	32,3%	34,6%
	None	60,7%	59,8%
Jamaica	More than 75%	2,8%	3,1%
	26 to 75%	7,3%	5,8%
	Under 25%	34,6%	31,4%
	None	55,3%	59,6%
Suriname	More than 75%	39,7%	1,3%
	26 to 75%	11,8%	2,6%
	Under 25%	6,3%	76,9%
	None	42,2%	19,3%
Caribbean	More than 75%	4,5%	4,3%
	26 to 75%	9,4%	8,3%
	Under 25%	48,3%	44,5%
	None	37,7%	43,0%

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 that business dynamic in turn is associated by the development of 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 2014, Suriname, Trinidad & Tobago and Jamaica surveyed 36 experts, Colombia surveyed 38 experts and Barbados only 22 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 16 presents the nine entrepreneurial framework conditions (Education, Government policy and International markets are divided in two groups) 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 (2,66) whereas El Salvador has the lowest one (1,88).
- In National Policy (General Policy), Trinidad & Tobago with 1,81 is the one with the lower acceptance and Ecuador with 2,98 are the one with the best situation.
- In National Policy (Regulation), Puerto Rico (1,78) has the less favorable conditions and Uruguay (2,78) the best one.
- In Government Programs, Guatemala (1,87) presents a very low condition and Uruguay (2,89) is at the top.
- In Education (primary and secondary), the lower level is Uruguay (1,41) and the higher one is Ecuador (2,36). This condition received an extremely low value for all the Latin American & the Caribbean countries but also very low value for most of the country groups.
- In Education (university), Suriname (3,53) is the leader and Trinidad & Tobago (2,51) is the country with the lowest score.
- The critical situation of R&D transfer moves from Belize (1,77) to Uruguay and Argentina (2,49) with an average for the Latin America & the Caribbean of 2,13.
- Commercial Infrastructure was evaluated in the range Brazil (2,50) to Suriname (3,15).
- In Internal Market (dynamics), the indicator moves from Barbados (2,06) to Brazil (3,36).
- Internal market (openness) was best evaluated in Suriname (2,98) and worst evaluated in Mexico (2,21).
- The physical infrastructure in Brazil (2,93) received the lowest score and in Chile (4,33) had the highest score.
- Cultural and Social norms fluctuated from 2,11 in Uruguay to 3,09 in Peru and Chile.

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 one of the nine EFC received a score above 3.0, which means average, indicates that for the entrepreneurs the entrepreneurial environment is still far from a favorable one.

Figure 38 integrates the results of Barbados, Colombia, Jamaica, Suriname (Only 2013 and 2014) and Trinidad & Tobago for the 9 EFC in the period 2011-2014.

There is a positive trend in most of the EFC from 2011 to 2014, and only physical infrastructure has been above 3.0 in all the four years. The R&D transfer is the worst scored factor, 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 generate some policy recommendations.

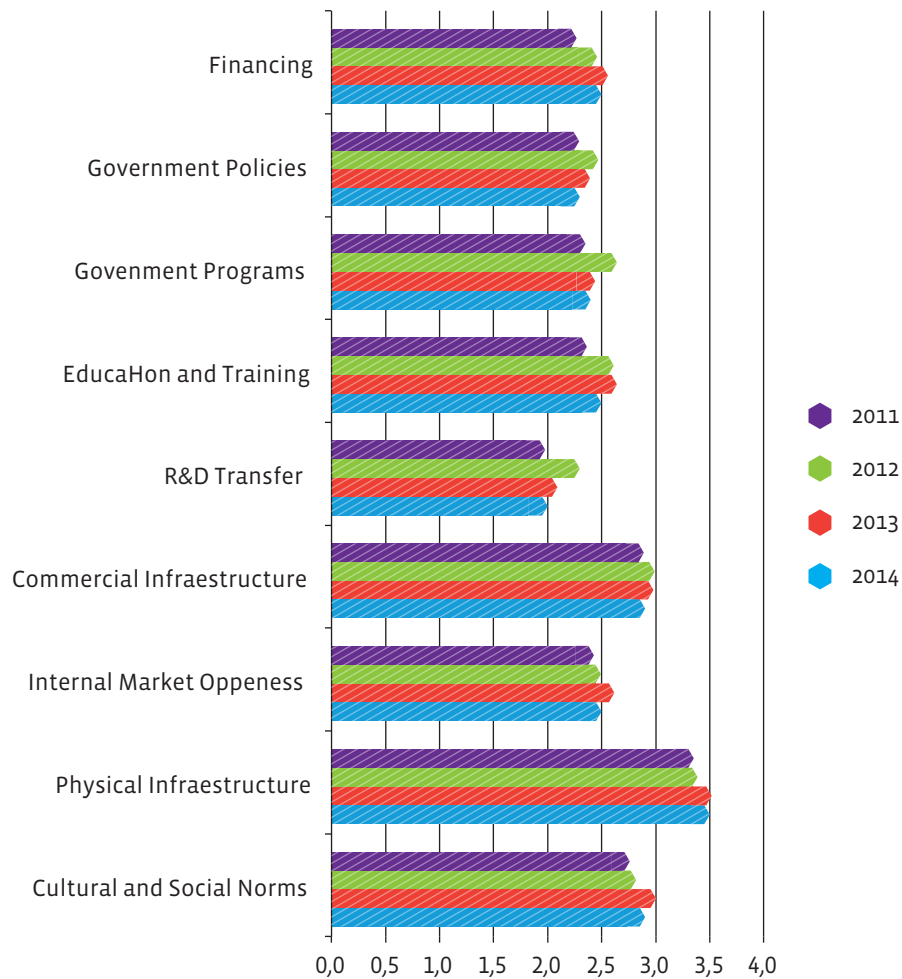
Table 17 presents the results for the components of the financing condition for 2011-2014 period, and

TABLE 16. Entrepreneurial framework conditions in the world, 2014

	Financing	National Policy (General policies)	National Policy (Regulation)	Government programs	Education (Primary & Secondary)	Education (University)	R&D transfer	Commercial infrastructure	Internal market (Dynamics)	Internal market (Openness)	Physical infrastructure	Cultural & Social norms
Latin America & Caribbean	2,20	2,35	2,15	2,51	1,86	2,98	2,13	2,79	2,59	2,50	3,56	2,79
Argentina	2,03	2,08	1,49	2,70	1,82	3,11	2,49	2,85	3,24	2,53	3,31	3,01
Barbados	2,42	2,42	1,87	2,30	1,71	2,96	1,78	2,72	2,06	2,42	3,75	2,61
Belize	2,14	2,55	2,20	2,45	2,05	2,53	1,77	2,68	2,31	2,54	3,41	2,65
Bolivia	2,25	2,15	1,97	2,34	2,13	3,11	2,33	2,81	2,98	2,65	3,30	2,79
Brazil	2,46	2,40	1,46	2,24	1,48	2,54	2,00	2,50	3,36	2,24	2,93	2,36
Chile	2,35	2,77	2,91	3,06	1,63	2,98	2,20	2,80	2,18	2,57	4,33	3,09
Colombia	2,37	2,75	2,41	2,95	2,14	2,97	2,17	2,79	2,70	2,55	3,38	2,97
Costa Rica	1,90	2,39	2,02	2,80	1,93	3,07	2,12	2,63	2,42	2,58	3,39	2,90
Ecuador	2,19	2,98	2,19	2,66	2,36	3,18	2,35	2,76	2,46	2,72	4,05	2,99
El Salvador	1,88	2,26	1,92	2,50	1,64	2,76	1,88	2,65	2,68	2,46	3,89	2,79
Guatemala	2,04	1,91	2,10	1,87	1,73	3,06	2,09	2,89	2,41	2,53	3,83	2,44
Jamaica	2,24	2,20	1,99	2,34	2,07	3,03	1,97	2,86	2,90	2,22	3,43	2,96
Mexico	2,20	2,27	1,87	2,69	2,00	3,12	2,44	2,64	2,81	2,21	3,29	2,99
Panama	1,99	2,11	2,95	2,52	1,67	2,78	2,35	2,68	2,36	2,53	4,01	2,75
Peru	2,20	2,21	2,14	2,13	1,98	2,87	1,87	2,81	2,43	2,70	3,52	3,09
Puerto Rico	1,96	2,42	1,78	2,56	1,66	3,07	2,28	2,84	2,61	2,30	3,25	2,76
Suriname	2,30	2,69	2,36	2,42	2,11	3,53	2,01	3,15	3,00	2,98	3,01	2,96
Trinidad & Tobago	2,66	1,81	2,38	2,34	1,83	2,51	1,95	2,94	2,29	2,34	3,76	3,85
Uruguay	2,21	2,22	2,78	2,89	1,41	3,43	2,49	3,02	2,09	2,40	3,79	2,11
Africa	2,49	2,84	2,50	2,65	2,06	2,84	2,07	2,78	2,83	2,41	3,02	2,99
Asia and Oceania	2,73	2,78	2,61	2,60	2,22	2,91	2,47	2,96	3,49	2,54	3,83	3,04
Europe Non-European Union	2,43	2,55	2,84	2,58	2,24	2,88	2,44	3,19	2,95	2,60	3,92	2,94
Europe-European Union	2,68	2,66	2,44	2,84	2,12	2,82	2,57	3,25	2,99	2,80	3,91	2,65
North America	3,05	2,60	2,59	2,74	2,27	3,01	2,61	3,31	2,81	2,81	4,13	3,52

SOURCE: Compiled by authors.

FIGURE 38. Entrepreneurial framework conditions (2011-2014)



SOURCE: Compiled by authors.

it can be observed that in the experts’ opinion, the “financing” condition shows an improving trend since 2011, specially, one of them: There is sufficient equity funding available for new and growing firms.

In other structural financial conditions, the scores obtained were very low, and 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 18 presents the results for several factors that measure the “R&D transfer” condition. When the results of 2011-2014 period are analyzed, the scenario is quite negative, because these low

scores have remained at the same level in the last four years.

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 (2,0), to the lack of adequate subsidies (1,9), to the lack of support to engineers and scientist to commercialize their ideas (2.0), it is possible to explain the limitations in the level of technology used in the regional enterprises, and their lack of innovativeness, competitiveness and international market orientations.

The university programs in Engineering and Sciences at the undergraduate and graduate level need to have significant entrepreneurial programs. The national research centres should stimulate research oriented to the understanding of entre-

TABLE 17. Financing (2011-2014)

	2011	2012	2013	2014
There is sufficient equity funding available for new and growing firms	2,4	2,4	2,5	2,6
There is sufficient debt funding available for new and growing firms	2,8	2,7	2,9	2,9
There are sufficient government subsidies available for new and growing firms	2,3	2,8	2,5	2,5
There is sufficient funding available from private individuals (other than founders) for new and growing firms	2,0	2,4	2,7	2,4
There is sufficient venture capitalist funding available for new and growing firms)	1,9	2,4	2,5	2,3
There is sufficient funding available through initial public offerings (IPOs) for new and growing firms	2,2	2,1	2,3	2,3

SOURCE: Compiled by authors.

TABLE 18. Research & development transfer (2011-2014)

	2011	2012	2013	2014
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	2,0
New and growing firms have just as much access to new research and technology as large, established firms	2,1	2,3	2,3	2,0
New and growing firms can afford the latest technology	1,8	2,0	1,9	1,9
There are adequate government subsidies for new and growing firms to acquire new technology	1,9	2,3	1,9	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	2,4
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	2,0

SOURCE: Compiled by authors.

preneurship and the transformation of knowledge in enterprises that add value, create employment, generate taxes and produce well-being.

The Engineering and Science professional societies, the universities, the 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 “La-

tin American Economic Outlook 2015” report by OECD (2015), in 2013, investment in R&D in Latin America was equal to 1.3% of GDP, way below the level of investment seen in OECD countries (12.7%). This gap and the concentration of R&D in only a few countries help explain why the region is lagging 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 re-

TABLE 19. Government policies (2011-2014)

	2011	2012	2013	2014
Government policies (e.g., public procurement) consistently favor new firms	2,2	2,2	2,2	2,1
The support for new and growing firms is a high priority for policy at the national government level	2,8	3,0	2,9	2,7
The support for new and growing firms is a high priority for policy at the local government level	2,4	2,7	2,7	2,4
New firms can get most of the required permits and licenses in about a week	1,6	1,8	1,8	1,7
The amount of taxes is NOT a burden for new and growing firms	2,1	2,3	2,2	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	2,7
Coping with government bureaucracy, regulations, and licensing requirements it is not unduly difficult for new and growing firms	1,9	2,2	2,0	2,1

SOURCE: Compiled by authors.

- search results through new and growing firms (e.g. spin-off ventures).
- 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 19 presents the evaluation of factors associated to “Government policy”. Again, the factors have low scores with a decreasing trend from 2012 to 2014. The low scores in the factors related to the taxes, permits, regulations, licensing and bureaucracy, in general, indicates the need to work very intensively 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 20 presents the scores obtained by factors that define the condition: “education & training” for 2011-2014 period. Although most of the components have improved from 2011 to 2014, the results are very low especially at the primary and secondary education (1.9 in 2013 and 2014).

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 entrepreneurial education for the formation of an advisory team to 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 the concepts of creativity and innovation in all educational programs, in a transversal way, to develop an attitude in the people that

TABLE 20. Education and training (2011-2014)

	2011	2012	2013	2014
Teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative	2,1	2,4	2,4	2,1
Teaching in primary and secondary education provides adequate instruction in market economic principles	2,0	2,2	2,2	2,0
Teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation	1,7	2,1	1,9	1,9
Colleges and universities provide good and adequate preparation for starting up and growing new firms	2,6	2,7	2,9	2,8
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	3,1
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	3,1

SOURCE: Compiled by authors.

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 21, presents the scores obtained by the factors that define the condition: “Government programs” for 2011-2014 period. The factors best evalu-

ated in 2014 were: “There are an adequate number of government programs for new and growing businesses” 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

TABLE 21. Government programs (2011-2014)

	2011	2012	2013	2014
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	1,8
Science parks and business incubators provide effective support for new and growing firms	2,5	2,5	2,7	2,6
There are an adequate number of government programs for new and growing businesses	2,5	3,0	2,5	2,7
The people working for government agencies are competent and effective in supporting new and growing firms	2,5	2,8	2,6	2,7
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	2,3
Government programs aimed at supporting new and growing firms are effective	2,4	2,7	2,5	2,5

SOURCE: Compiled by authors.

TABLE 22. Commercial & Professional Infrastructure (2011-2014)

	2011	2012	2013	2014
There are enough subcontractors, suppliers, and consultants to support new and growing firms	3,3	3,3	3,4	3,3
New and growing firms can afford the cost of using subcontractors, suppliers, and consultants	2,2	2,2	2,3	2,2
It is easy for new and growing firms to get good subcontractors, suppliers, and consultants	2,6	2,8	2,7	2,6
It is easy for new and growing firms to get good, professional legal and accounting services	3,2	3,4	3,4	3,3
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	3,2

SOURCE: Compiled by authors.

only their coverage, but specially their effectiveness and impact on supporting new and growing firms.

Table 22 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” presents similar values through the years. Some of recommendations presented in the condition “Government programs” are valid here because the lack of institutions that provide advisory, consulting, mentoring, under appropriate condition and costs, 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 23 presents the factors associated with the condition “Internal market openness” where the scores are low and present a decreasing trend in the 2013-2014 period.

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 are not able to get to the new entrepreneur stage. If the new Caribbean

TABLE 23. Internal Market Openness (2011–2014)

	2011	2012	2013	2014
The markets for consumer goods and services change dramatically from year to year	2,5	2,6	3,0	2,7
The markets for business-to-business goods and services change dramatically from year to year	2,5	2,5	2,9	2,5
New and growing firms can easily enter new markets	2,7	2,7	2,7	2,6
The new and growing firms can afford the cost of market entry	2,2	2,3	2,4	2,4
New and growing firms can enter markets without being unfairly blocked by established firms	2,6	2,6	2,4	2,4
The anti-trust legislation is effective and well enforced	2,1	2,3	2,3	2,3

SOURCE: Compiled by authors.

TABLE 24. Cultural and Social Norms (2011–2014)

	2011	2012	2013	2014
The national culture is highly supportive of individual success achieved through own personal efforts	3,2	3,2	3,2	3,3
The national culture emphasizes self-sufficiency, autonomy, and personal initiative	2,7	2,7	2,9	2,8
The national culture encourages entrepreneurial risk-taking	2,4	2,5	2,6	2,5
The national culture encourages creativity and innovativeness	2,6	2,7	3,1	2,8
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	3,1

SOURCE: Compiled by authors.

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 24 indicates that the factors associated to the condition: “Cultural and social norms” present a decreasing trend from 2013 to 2014.

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 25 presents the assessment of the experts to the factors associated with the condition “Physical Infrastructure”. This is the condition best scored along the years.

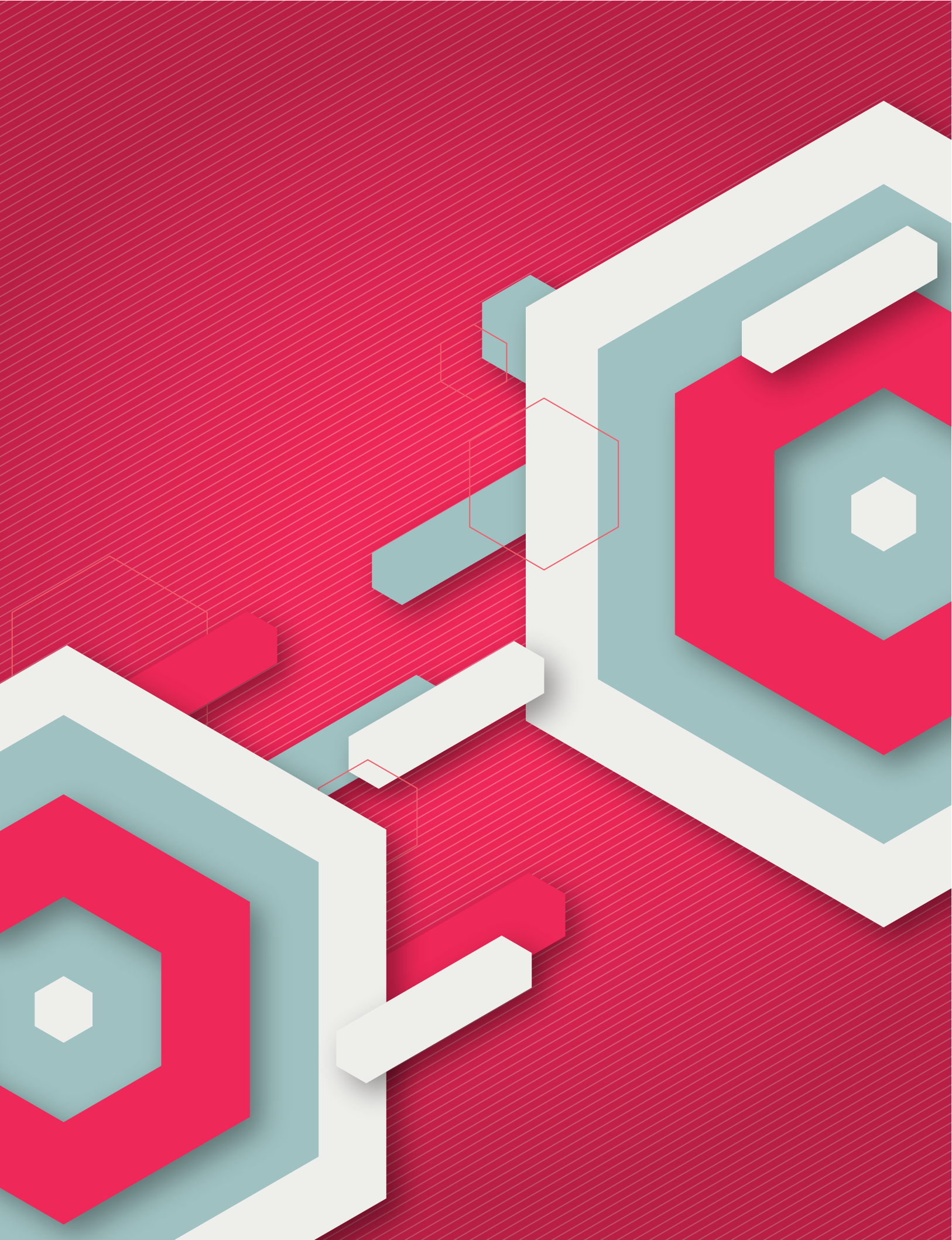
The support that the physical infrastructure provides to new and growing firms is the category with the lowest scores. It is associated with the problems of good highways, transportation system, airport and in general, logistic This is a very sensitive area because it affects the value generation and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

TABLE 25. Physical Infrastructure (2011–2014)

	2011	2012	2013	2014
The physical infrastructure (roads, utilities, communications, waste disposal) provides good support for new and growing firms	3,2	3,1	3,3	3,2
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	3,8
A new or growing firm can get good access to communications (telephone, internet, etc) in about a week	3,3	3,2	3,6	3,3
New and growing firms can afford the cost of basic utilities (gas, water, electricity, sewer)	3,1	3,5	3,6	3,5
New or growing firms can get good access to utilities (gas, water, electricity, sewer) in about a month	3,6	3,6	3,4	3,6

SOURCE: Compiled by authors.





9

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, as final conclusions of the research work, some 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 Caribbean countries present higher indicators, in many stages, than some economic groups, 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, indicating 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 is 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.
- 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 competitiveness 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 organizations, research teams that will study and measure different elements of entrepreneurship as tools to evaluate support systems and programs.

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ANNEX 1. NATIONAL TEAMS GEM CARIBBEAN 2014

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NOTES

A series of horizontal dotted lines for taking notes.

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