



# Global Entrepreneurship Monitor

Driving wealth creation &  
social development in

## Canada



**2015 GEM CANADA  
NATIONAL REPORT**

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1.2 Why GEM? Participation in GEM brings Canadian data into a rich international context of policies and circumstances. Uniquely, GEM paints a portrait of the individual entrepreneur (or intrapreneur); *attitudes, activities, and aspirations*. In this third year of renewed Canadian participation, some indications of changes over time can now be discussed.

### ATTITUDES

The Adult Population Survey reports that more than 50% of Canadians believe that there is a good opportunity for entrepreneurship within the next six months. Almost 50% believe they have the skills and knowledge to start a business. A significantly smaller number feel inhibited by fear of failure. The general culture for entrepreneurship is strong.

### ACTIVITY

Canada has the highest rate of early stage entrepreneurship among the major developed countries in the World Bank category on innovation driven economies with 14.7% of the adult population between age between 18 and 64 years who have undertaken a business start-up in the last 3 years or are operating a new business less than 3.5 years old. Australia (12.8%) and the US (11.9%) follow. With respect to activity of entrepreneurial employees creating new directions or ventures for their employers, Canada stands fifth among the major innovation economies with a participation rate of 10.1%

## ASPIRATIONS

Aspirations have a great deal to do with the potential for impact on *innovation, employment, export, and revenue growth* - i.e. on the question of the extent of productive entrepreneurship. These issues are investigated in the next section on entrepreneurship in the economy.

## ENTREPRENEURSHIP IN THE ECONOMY

**Job creation.** Many new firms have few employees and do not intend much growth, but 17.8% of the new firms report 6 -19 jobs and 10.2% twenty or more. Aspirations for five years from now have 16.7% expecting 6 -19 employees, but the 20 or more category has reached 20.0%. After five years only 12.9% expect to remain one person enterprises.

**Technology.** 68.5% report no use of technology less than five years old. 18.3% report use of newer technologies introduced from one to five years ago. Only 12.5% report use of technologies introduced in the last year, but this figure is higher than that in countries known for technology development including the US and Germany. In Canada 6.3% of firms report operating in the high or medium technology sectors, compared to 6.1% in the US and 8.9% in Germany.

**Sectors.** Just over 50% of the entrepreneurs are active in consumer services. This is the majority category for most countries but not for the US, Australia, or the UK. It was not the majority sector in Canada in 2014 or 2013. About 25% of Canadian TEA firms are in business services, 20% are in transformative (Manufacturing, etc.) sectors, and four percent in extractive (agriculture, mining). Aggregating data over three years has allowed a more detailed sector categorization based on 1-digit ISIC industry codes. This draws attention to an important sub-category of services related to health, education, and government.

**Export orientation.** New small firms in all economies depend primarily on local customers. However new Canadian ventures have a significant degree of export orientation. Export revenue anticipated by 28% of entrepreneurs was above 25%. And a large majority expected some export revenue.

## EXECUTIVE SUMMARY

**Innovation.** Key indicators are found in reports of a combination of a new product (service) into a new market. This aspiration is reported by 36% of entrepreneurs. If innovations are seen by OECD as aspects new to the firm, the country, or the world, this is probably an indicator of all levels including the most incremental. Indications of more substantial innovations may be shown in 18% reporting a product (service) new to all customers, and 12% reporting a product (service) offered by no other firms.

### DEMOGRAPHICS

**Age.** The age distribution of TEA activity is treated in five ten year categories from initial ages of 18, 25, 35, 45, and 55. The *rate of participation* in each age range is close to the same from 18% of the youngest group to 15% in the 45 - 54 age group. It declines to 10% in the 55 - 64 age group and 4% among seniors. The share of entrepreneurship is 23% ± 1% for each group from the 25 - 32 age group to the 45 - 54 age group. The youngest (only 7 years) contribute 18% and the 55 -64 group contributes 13%. These figures indicate over 40% of entrepreneurs can be described as young entrepreneurs. If the definition of 'young' is extended to age 40, it is probably a majority.

**Education.** Fewer than 14% of entrepreneurs have only some secondary education. As education levels rise from secondary diploma through post-secondary degrees to some post-secondary experience there is a smooth increase from 11% to 20%. The high rate among the most educates suggests lively interest in entrepreneurship among those with specialized knowledge.

**Gender.** In most countries entrepreneurship rate among men is higher than that among women. In Canada, it is currently true that women express a higher fear of failure than men and a lower evaluation of their knowledge and skill for starting a business. However, the women's rate in Canada at 13.5% this year has risen to 84% of the men rate. It is the driver of the overall increase in Canada's TEA. For example the Australian share of men's is 65% and the US, 63%.

**ENTREPRENEURSHIP IN SELECTED PROVINCES**

Alberta, Ontario, Quebec, and the Atlantic group of provinces are in the process of preparing provincial reports. This report presents some key provincial data to show the impact of the differences among Canadian regions. For example, TEA tends to decline from high levels in the west to values in the eastern provinces closer to those of developed European countries. However, EEA, employee entrepreneurship, is more nearly constant across the country.

**THE FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP IN CANADA**

The National Experts Survey undertakes to evaluate the framework conditions influencing the opportunities for entrepreneurs in Canada in the areas of: *financing, governmental policies, governmental programs, education and training, research and development transfer, commercial infrastructure, internal market openness, physical infrastructure and cultural and social norms*. Expert opinion rates physical infrastructure, commercial infrastructure, and the cultural/social environment as the most favourable conditions in Canada. The experts express the greatest concern over education for entrepreneurship at primary and secondary levels, market dynamics, and R&D transfer.

## RECOMMENDATIONS

- 1. Ensure that public programs and incentives are aligned to encourage businesses to scale up** by focusing supports on growth oriented firms and delaying taxation on corporate income growth. We can take pride in Canada's lead rate of early stage entrepreneurship, but this is not necessarily a good measure of scalable and productive entrepreneurship that contributes to employment, growth and sustainability.
- 2. Leverage public procurement to strategically invest in growing businesses.** Programs in other countries (e.g. DARPA and SBIR, in the USA, and AOSTRA and AECL in Canada) have demonstrated the power of public procurement to aid transformative innovation and firm growth.
- 3. Develop and publicize more accurate measures of scale up activity** by collaborating with Statistics Canada and industry groups. While GEM provides reliable measures of early stage start up activity, measures of scale up activity are much less available.
- 4. Continue to support programs to mentor women entrepreneurs.** While this report shows that women become entrepreneurs at nearly 85% of the male rate, continued mentorship is needed because of women's lower confidence levels, as shown in the population attitude survey.
- 5. Increase education about entrepreneurial thinking at the primary and secondary levels.** Expert opinion is strong on the need for this. It is seen to be important to focus on entrepreneurial thinking rather than the mechanics of starting a company, to emphasize employment, growth, sustainability and quality of life. It is important to realize the role of entrepreneurial thinking among employees of larger firms and to foster social entrepreneurship.

## RECOMMENDATIONS

- 6. Encourage companies to develop more ambitious business strategies** so as to give more leeway for employees to develop more entrepreneurial ideas. Employee entrepreneurship is the weak point of the Canadian profile in entrepreneurship.

*Natalie Peace is a successful entrepreneur who opened her first business at 25 years old; a Booster Juice location in Kamloops, British Columbia, Canada, in 2006 while she was studying business as an undergrad at Thompson Rivers University. Within two years she owned all three locations in Kamloops, including the busiest location in British Columbia generating nearly \$2 million a year in gross revenue, and employing approximately fifty team members. In 2007, Peace graduated with her business degree, and was named Young Entrepreneur of the Year by the Kamloops Chamber of Commerce, and in 2011 Natalie was a finalist for Business Person of the Year.*

*Natalie has since sold her Booster Juice franchises, and was invited to be a contributing writer for Forbes, writing a column called Peace & Profit. She obtained her Master's Degree in Business, and was the University's very first Young Entrepreneur in Residence mentoring students and offering business guidance. Natalie developed an app for Apple and Android, designed for children called Club Kindness, teaching children to do age appropriate acts of kindness. In the fall of 2013 she accepted a position as a sessional lecturer, teaching in the Business Degree Program at Thompson Rivers University, and is currently writing a book for would-be entrepreneurs. Peace is also enthusiastically working on starting another quick-serve style restaurant with an emphasis on nutrition.*



Natalie Peace,  
Entrepreneur

## 1. INTRODUCTION

... the results of the GEM survey document the fact that attitudes among a majority of Canadians remain quite favourable to entrepreneurs.

### 1.1. WHY ENTREPRENEURSHIP?

#### ENTREPRENEURSHIP AND INTRAPRENEURSHIP - GEM IN CANADA

The concerns over *growth* and for *employment* that have been expressed in GEM Canada reports in the last two years are certainly more relevant in the context of economic downturn and uncertainty about the direction for major sectors, notably energy. Radical changes in world commodities markets, some of which may be long term, emphasize the need for the Canadian economy to evolve. To the two challenges of employment and growth, we must add concerns for *sustainability* and *quality of life*. Broad and convincing evidence<sup>1</sup> shows that the scope and character of *entrepreneurship* strongly influences goals for all four of these challenges. As was the case in the 2014 report, the results of the GEM survey document the fact that attitudes among a majority of Canadians remain quite favourable to entrepreneurs. It is not necessary to persuade Canadians that entrepreneurship is a good career or that its risks are not insurmountable. The focus of policy must be on quality growth oriented entrepreneurship that can promote:

- *Job creation,*
- *Sustainability,*
- *Economic growth,*
- *...and, in consequence, Quality of life.*

In the last few years, GEM has added increased attention to novelty and innovation occurring within established firms. This is expressed in a focus on entrepreneurial activity *within* these firms. The GEM individual focused survey now asks for reports on *intrapreneurship*, initiatives undertaken to launch new directions within a firm. This report will give new emphasis to this complementary form of entrepreneurial activity.

There can be little doubt that the present uncertain economic situation prioritizes implementation of *evidence based* entrepreneurship policy stimulating firm formation. As well, future development (in both extent and quality) requires attention to a truly Canadian innovation policy for it is important to acknowledge that, in Canada, ‘intrapreneurship’ initiatives inside our large and medium firms are a priority too, and may be the weakest .

### **THE NATURE AND ROLE OF ENTREPRENEURSHIP.**

The entrepreneur was introduced to economic theory by Joseph Schumpeter<sup>2</sup> in 1911<sup>3</sup>. For Schumpeter, the entrepreneur was that figure who acts to create change in the economic system. With the recognition that the complex of socioeconomic is hard to unravel, we can generalize to describe the entrepreneur as the actor driving change in life.

Entrepreneurship is defined in the GEM context as:

*...”any attempt at new business or new venture creation, such as self-employment, a new business organisation, or the expansion of an existing business, by an individual, a team of individuals, or an established business”<sup>4</sup>.*

The GEM definition includes at least the following four areas of activity that Steve Blank calls the ‘four pathways’ of entrepreneurship<sup>5</sup>:

- *Small business*
- *Scalable business*
- *Intrapreneurship*
- *Social entrepreneurship*

The goal all of these processes is creation of *value* as emphasized in an OECD framework<sup>6</sup>. The definition is expansive enough to include the champions of all types of innovation. Historically, GEM has reserved a special place for those entrepreneurs who create new establishments, businesses or other ventures with prospects for growth, job creation, and impact. This report attempts a balance between such activity and that occurring within established firms.

## 1. INTRODUCTION

It is well known that we live in a knowledge economy. Knowledge is the economic good that does not degrade in use and few organizations can effectively realise the full economic return on all of the knowledge they possess<sup>2</sup>. This leads to the ‘spillovers’ that, for example, create productive clustering, of which the archetype is Silicon Valley. Among the most productive forms of entrepreneurship is turning ‘spillover’ knowledge into breakthrough new ventures that escape and go beyond the constraint on full use of knowledge that is imposed on incumbent large firms who must focus on ‘core’ businesses.

As the influential economist, William Baumol<sup>7</sup> pointed out, there are three types of entrepreneurship and *innovation; productive, unproductive and destructive*. **Productive entrepreneurship** is that which has growth potential and produces significant innovations. It yields growth and quality of life benefit as well as jobs. **Unproductive entrepreneurship** simply re-shuffles the locus of accumulation of money (rents). It includes, for example, opening imitative consumer services businesses or reliance on simplistic exploitation of natural resources. Still, net employment may increase. **The most obvious form of destructive entrepreneurship**, criminal inventiveness, is outside the scope of GEM study. However, we must recognize that all forms of innovation and entrepreneurship may exhibit negative consequences, such as environmental degradation.

There is no rigid line between productive and unproductive types; more realistically, it is a continuum with these as the end points. Nevertheless, the main interest in entrepreneurship study is the productive entrepreneurial process, which is the main driver of long-term transformative growth. Much interest centres on entrepreneurship and innovation. Much innovation analysis has focused attention on R&D and technology. Yet it is clear that by no means all innovation is derived from technical inventiveness. Think of Starbucks’ coffee shops or the introduction of ‘Medicare’. In fact, analysis of innovation shows that every success depends in large measure on non-technical social factors. Hall and Martin<sup>8</sup> point out that an innovation must pass four hurdles: technical feasibility,

commercial viability, organizational capability, and social acceptability (not to be seen as a temporal sequence). They argue that uncertainty increases as we pass along this value-added chain from left to right. An innovative entrepreneurial venture must succeed at each stage. In most cases, the major challenges arise after technical feasibility has been established.

## 1.2. WHY GEM CANADA?

First and foremost GEM is a global project. Participation in GEM brings Canadian activity into a rich context of data from more than 70 countries covering a full spectrum of circumstances and policies. The uniqueness of GEM also lies in the focus on the attitudes, aspirations and activity of individual entrepreneurs, now recorded in a 16 year time series of adult population surveys (APS). There is no comparable source of such intimate information. Every entrepreneur is a potential innovator, since all initiatives grow out of some new idea. Most innovation literature offers a firm based perspective. GEM brings the individual initiator back into focus. The latest addition to GEM is questions addresses activity within firms and identifies leaders in developing new activities for a principal employer. This is designated *intrapreneurship, or employee entrepreneurship*. It plays a large role in the creativity and growth of established firms, especially larger ones.

As a complement, the *framework environment* that influences and conditions entrepreneurial activity is assessed through the national panel of experts in the *National Experts Survey* (NES). This is the forum for evaluation of policy and infrastructure for entrepreneurs in Canada.

## 1. INTRODUCTION

*Every entrepreneur is a potential innovator, since all initiatives grow out of some new idea. Most innovation literature offers a firm based perspective. GEM brings the individual initiator back into focus.*

## 1. INTRODUCTION

### 1.3. ENTREPRENEURSHIP, INNOVATION, GROWTH – THE GEM MODEL<sup>9</sup>.

The interpretation of entrepreneurship from the GEM perspective focuses on the individual entrepreneur with personal aspirations, capabilities and opportunities against an alternate perspective focusing on human capital, policy, markets, finance and culture. (These are seen as a framework faced by the individual and the expert survey attempts an overview.) However, the GEM project regards entrepreneurship as a *process in a complex ecosystem* and examines individual entrepreneurs and ventures in the context of this ecosystem and the social factors that shape the responses of the entrepreneurially oriented. The GEM model of the entrepreneur's ecosystem is shown summarized in Figure 1.1 (the more immediate components) and Table 1.1 (the larger context). In the context of the model, Box 1 summarizes the core of the GEM adult Population Survey (APS)

#### Social values, individual attributes and entrepreneurial activity

The three components of the GEM Conceptual Framework and the assumed relationships among them are at the heart of the GEM contribution to a better understanding of entrepreneurial energy in any economy. The analysis is based on the following data:

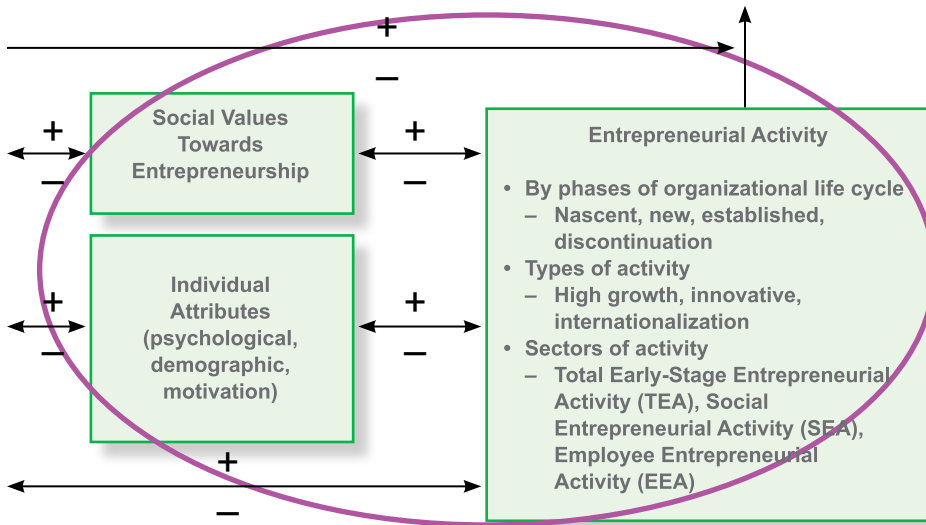
- Individual attributes—which reflect perceptions about opportunities, capabilities to act entrepreneurially, entrepreneurial intentions and fear of failure;
- Social values— which reflect how the society values entrepreneurial behavior, and
- Entrepreneurship indicators—different forms of entrepreneurial activity along the life cycle of a venture

(Source: GEM Global Report 2014)

## 1. INTRODUCTION

**FIGURE 1.1 The GEM Model**

(Arrows leading out of the diagram refer to linkages described further in table 1.1)




(Source: GEM Global Report 2014)

GEM classifies economies that participate in the study as *factor driven*, *efficiency driven*, and *innovation driven* (see definitions in Table 1.1). The categories are derived from the *World Economic Forum (WEF) Global Competitiveness Index*<sup>10</sup> which categorizes three phases of economic development based on GDP per capita, and the export share represented by primary goods. Canada is in the *innovative economy* classification, exhibiting sufficient reliance on business sophistication and innovation despite its engagement with basic resources. Businesses in an innovation driven economy are more knowledge intensive and the service sector figures more prominently in the economy. Entrepreneurship and innovation factors play a more dominant role in the development of these economies, but they still rely on a healthy profile of the basic factors and efficiency enhancing factors. The contextual factors influencing entrepreneurship accumulate as economies move along the ladder of phases.

*Businesses in an innovation driven economy are more knowledge intensive and the service sector figures more prominently in the economy.*

# 1. INTRODUCTION

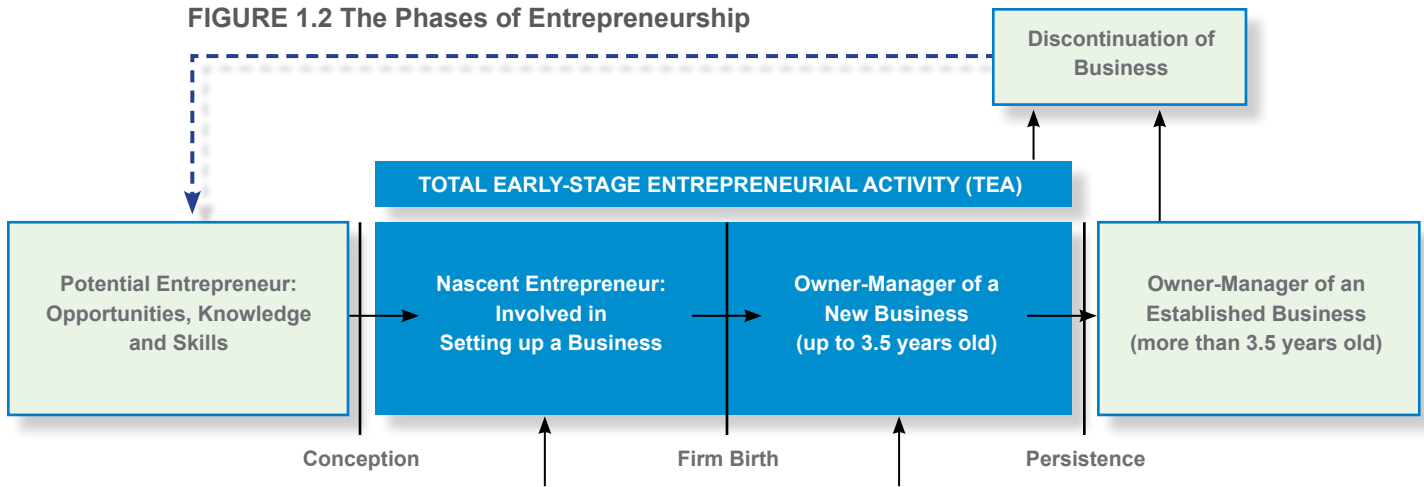
**Table 1.1 Social, Cultural, Political, and Economic Context of Entrepreneurship**

	<i>From other available sources</i>	<i>From GEM National Expert Surveys (NES)</i>
Economic development phases	National Framework Conditions, based on World Economic Forum pillars for profiling economic development phases	<b>Entrepreneurial Framework Conditions</b>
Basic requirements – key to <b>factor-driven economies</b>	<ul style="list-style-type: none"> <li>• Institutions</li> <li>• Infrastructure</li> <li>• Macroeconomic stability</li> <li>• Health and primary education</li> </ul>	 <ul style="list-style-type: none"> <li>• Entrepreneurial finance</li> <li>• Education for entrepreneurship</li> <li>• Government policy</li> <li>• Government entrepreneurship programs</li> <li>• R&amp;D transfer</li> <li>• Internal market openness</li> <li>• Physical infrastructure for entrepreneurship</li> <li>• Commercial and legal infrastructure for entrepreneurship</li> <li>• Cultural and social norms</li> </ul>
Efficiency enhancers – key to <b>efficiency-driven economies</b>	<ul style="list-style-type: none"> <li>• Higher education and training</li> <li>• Goods market efficiency</li> <li>• Labour market efficiency</li> <li>• Financial market sophistication</li> <li>• Technical readiness</li> <li>• Market size</li> </ul>	
Innovation and sophistication factors – key to innovation-driven economies	<ul style="list-style-type: none"> <li>• Business sophistication</li> <li>• Innovation</li> </ul>	

(Source: [www.gemconsortium.org](http://www.gemconsortium.org))

Beyond the structural aspects, The GEM model also views *entrepreneurship as a process occurring over different phases* from intention to start, to just starting, to running new or established enterprises or ventures, and even to exit and discontinuance (not the same parameter as business failure). Given variable contexts and conditions, it is not inevitable that any one phase leads linearly to the next. Figure 1.2 shows the phases of entrepreneurship. In exploring the early phases, the GEM project assembles data not available from business statistics.

**FIGURE 1.2 The Phases of Entrepreneurship**



(source: The 2014 GEM Global Report)

## 1.4. RESEARCH METHODOLOGY AND SCOPE

The GEM project begins by grouping participating countries into three categories identified by the World Economic Forum (WEF). These are factor driven economies, efficiency driven economies and innovation driven economies. The least developed, factor driven, economies deliver the highest rates of entrepreneurship with the largest fraction associated with necessity driven activity, alternatives for earning a living being scarce. The efficiency based economies are intermediate and the innovation based (knowledge) economies exhibit the overall lowest entrepreneurship rates, but with the values dominated by opportunity driven entrepreneurship, where attractive novel economic niches are recognized.

### ADULT POPULATION SURVEY (APS)

Using a telephone survey, an independent polling firm randomly selected adults between the ages of 18 and 99. (Most other countries use the ‘working age’ population, 18 – 64. This leads to most comparisons made on the basis of this age range.) The responses to a series of detailed questions, phrased in everyday language, that are used throughout the GEM international entrepreneurship project, were solicited from interviewees. These are used to assess entrepreneurial attitudes, activities, and aspirations of the national population.

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## 1. INTRODUCTION

They provide a profile of a representative cross section of the adult populations, balanced for age and gender distribution. For analysis, the sample is weighted for age and gender to standard Canadian demographic data. Where the sample size in a province was smaller than required for the standard set for statistical significance, provincial samples were augmented where assisted by the participating provinces.

### **NATIONAL EXPERT SURVEY (NES)**

National Expert survey (NES) themes are specified by GEM: finance, policy, government programs, education and training, technology transfer, support infrastructure, and wider society/culture fields. The questionnaire presented a series of statements reflecting the GEM perspective on conditions supporting entrepreneurship. The experts are asked to estimate the degree to which each is true for Canada. The final section solicits open ended responses, which are coded to nine categories. The questions cover the nine major framework areas:

- *Financing*
- *Governmental policies*
- *Government programs*
- *Education and training*
- *Research and development transfer*
- *Commercial infrastructure*
- *Internal market openness*
- *Physical infrastructure*
- *Cultural and social norms*

### **STANDARD SOCIOECONOMIC DATA**

Basic data were obtained from Statistics Canada and OECD publications. Several other international and national agencies also sponsored studies of relevance. These studies are cited in the report where information is drawn from them, as are references to academic publications.

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

The key indicators from the GEM survey probe:

- **Entrepreneurial Attitudes**  
(How strong is the common perception in the general population of a culture of entrepreneurship?)
- **Entrepreneurial Activity**  
(How much early stage activity is occurring in the general population?)
- **Entrepreneurial Aspiration**  
(What do these entrepreneurs seek to achieve?)

The primary indicators for these categories paint a portrait that is unique to the GEM methodology, representing the *individual* entrepreneur acting in the community.

### 2.1. ATTITUDES

#### 2.1.1 Attitudes Influence Entrepreneurship

For any policy designed to support highly productive entrepreneurship, *impact is hard to measure*. Yet it is clear that some of the most important policy outcomes depend on attitudes and mind sets in the *general population*<sup>11</sup>. A key policy goal for all jurisdictions is to foster a *culture of entrepreneurship and innovation* through *informing, training, and educating*. GEM provides a variety of perspectives on the success of such policy through questions, both to the entire adult population and specifically to the entrepreneurially oriented themselves. This entrepreneurial culture shapes the challenges faced by all entrepreneurs, both the crucial *productive entrepreneurs* and those other entrepreneurs who also contribute to activity and job creation. GEM reports the public perception of entrepreneurs' hopes, struggles and successes.

#### 2.1.2 Perceptions of Entrepreneurial Culture

The strength of an entrepreneurial culture is reflected by how optimistic the general population is about entrepreneurship. In most GEM participating innovation economies, this climate is good and shows little variation year to year. In the 2015 Canada survey

*A key policy goal for all jurisdictions is to foster a culture of entrepreneurship and innovation through informing, training, and educating.*

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

reports on four questions to appraise the perception of *capacity* for entrepreneurship. (Abbreviations used in figures follow the presentation of each question.)

Have you met an entrepreneur in the last two years? (know ent)

Do you think there is a good opportunity to start a business in the next six months? (opp 6 mos)

Do you have the knowledge and skill to start a business? (know and skill)

Would fear of failure inhibit you from starting a business? (fear fail)

Data for Canadians aged 18 – 64 (The Gem ‘working age’ population) is summarized in Table 2.1. The table also includes data for the share of respondents reporting intent to undertake entrepreneurial activity within the next three years (3yr intent).

**Table 2.1 Attitudes of the Canadian Population**

Know ent	Opp 6 mos	Know &Skill	Fear fail	3yr intent
31.6	53.2	50.5	42.6	17.4

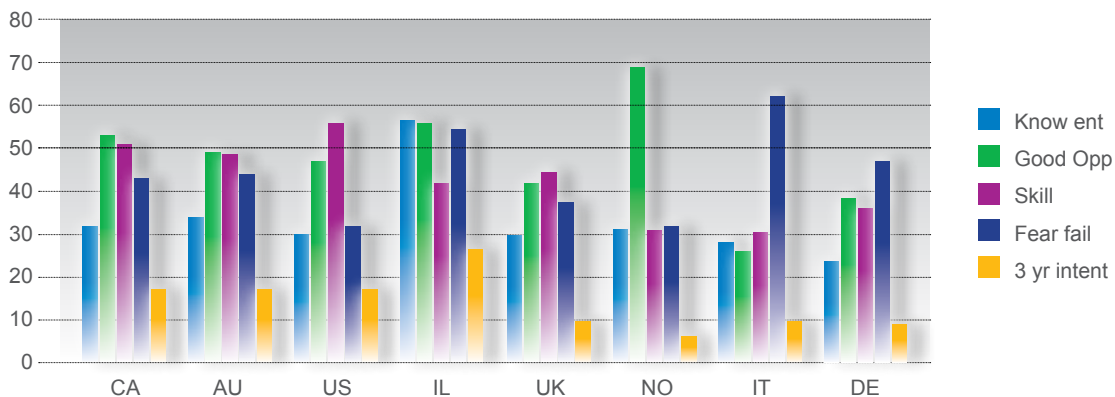
In Figure 2.1 Canadian public attitudes are compared with a reference group of comparable countries. There is little change from 2014. Over fifty percent of Canadian respondents see good opportunities in the next six months and fifty percent believe they have the skills and knowledge to start a business. In this comparison the age range 18 – 64 will be reported since that is used for GEM surveys in most other countries. For data on Canadian seniors, see below. This figure also includes intent to undertake entrepreneurial activity within the next three years (3yr intent).

The Canadian results can be put in international perspective; the reference group includes the US, Australia, the UK with Italy and Germany from the G7. A small economy known for high growth in new technology based firms is Israel and Norway represents another economy with high dependence on natural resources.

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

Probably the first aspect to remark is the similarity between Australia and Canada. This will recur below and make Canada – Australia comparisons particularly interesting throughout. Canada compares favourably with the US with somewhat more perception of near term opportunity, but, like Australia, exhibiting greater inhibition from fear of failure. The high level of knowing entrepreneurs and the high rating of opportunity in Israel (IL) are consistent with its reputation for rapid growth of high tech firms. The perceptions of opportunity in Norway are striking, while intent to undertake entrepreneurship in the next three years is low. Overall, public perception of entrepreneurship is high these countries. The reported intent to undertake entrepreneurship within three years is near 30% and very similar in the US, Australia and the UK. The Israeli (IL) reputation for entrepreneurial orientation is supported by the fifty percent intent rate.

**Figure 2.1 Attitudes Toward Entrepreneurship in Reference Countries**



**Seniors' attitudes.** Internationally, seniors are excluded. In Canada, seniors aged 65-99 were included (Fig. 2.1). The sample of seniors is over four hundred. The attitudes of seniors toward entrepreneurship were similar and still quite positive as shown in Table 2.3.

**Table 2.2 Attitudes of Seniors**

Know ent	opp 6 mos	know & skill	fear fail
23.5%	48.2%	47.4%	26.4%

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

Although seniors know fewer entrepreneurs, they see opportunity similarly to their younger colleagues and have similar confidence in skills with lower fear of failure.

### 2.2. ACTIVITY

The *heart* of the GEM survey - the indicators that provide key perspectives on the culture and circumstances of entrepreneurship - are those where action, with its risks, is reported. These identify the ongoing level of early stage start-up activity. Comparisons among countries and trends over time in conjunction with the reports of the expert survey on framework conditions provide the basic information for judging outcomes of policy.

The analysis centres on two measures that are combined to head the tabulations below.

- 1) The *nascent entrepreneurship rate*, (the percentage of the 18 -64 age population or for Canada data with seniors included ) who are currently engaged in setting up a business that has not paid salary, wages or other payments to owners for more than three months.
- 2) The *new business ownership rate*, percentage of the same pair of age populations who are currently owner-managers of new businesses that have paid wages, salaries or any other payments to owners for more than three months but not more than 42 months.
- 3) These two are combined (counting each individual only once) to yield an overall indicator, '**TEA**', *the total early stage activity, or the entrepreneurship rate*.

Understanding of the TEA is enriched by analysis of: (1) gender, and (2) opportunity versus necessity as the driver of entrepreneurship. It is also helpful to compare the early stage entrepreneurship rate to the population segment that own or manage an established business in operation for over 42 months. Given the random sample of the population, these respondents will predominately be owners and/or managers of small and medium businesses that represent the next stage for the successful entrepreneurs.

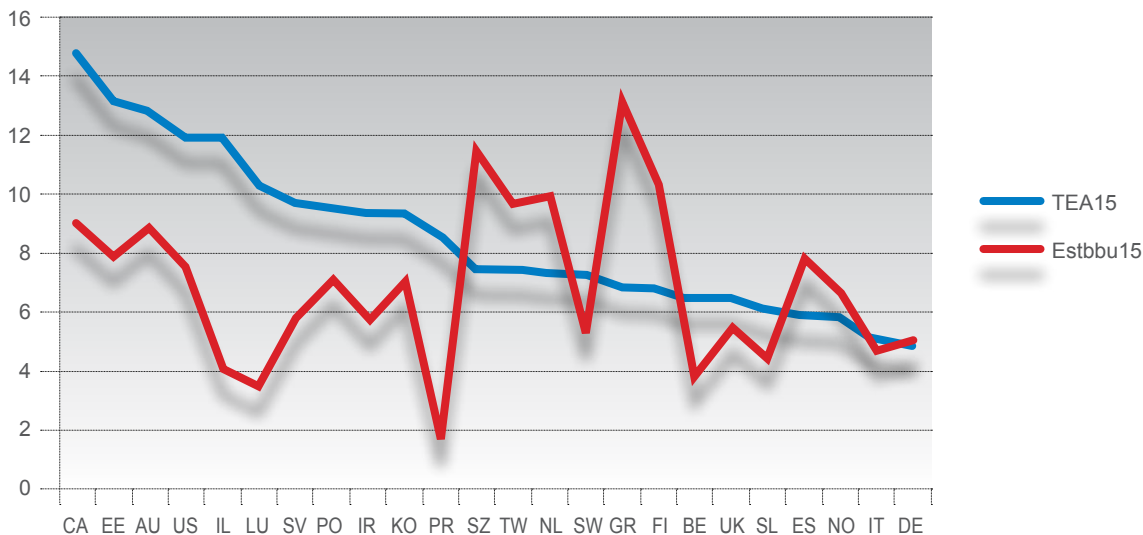
19  
...Canada is now very much at the top among innovation driven economies. The US has been a clear leader in recent years. With Canada's return to the GEM survey in 2013 Canada has been near the lead in TEA rate. We now find Canada at the top.

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

### 2.2.1 Globally, Where Does Canada's TEA Stand?

The quick answer is that Canada is now very much at the top among innovation driven economies. The US has been a clear leader in recent years. With Canada's return to the GEM survey in 2013 Canada has been near the lead in TEA rate. We now find Canada at the top. An overall international comparison of the developed countries is shown in Figure 2.2 plotted in order of decreasing TEA values for countries in the innovation driven economy group<sup>1</sup>. (In all international comparisons, the population considered covers the 18–64 age range (“working age” range) surveyed in the other countries.

**Figure 2.2 TEA Values for Economies in the 'Innovation Driven' Category (Age 18 – 64).**



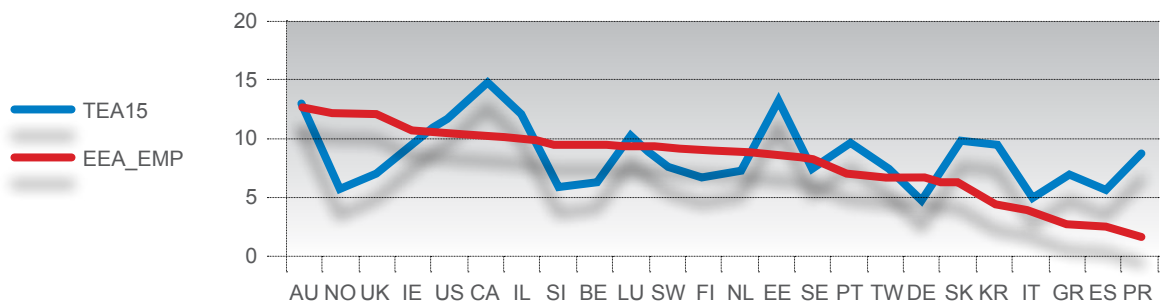
Beyond the question of the values of TEA, the figure shows rates of reported established businesses. These businesses are mainly small businesses, the graduates from the TEA stage. It is noteworthy that current rates of identification of established business do not correlate well with TEA rates, indicating different dynamics in the economies. A second important perspective on entrepreneurship is the question of activities within firms that lead into new ventures for the firm or development of new procedures and new lines of business. The leaders in these efforts fully meet Schumpeter's definition of an

<sup>1</sup> A few cases of countries with a mixture of other characteristics are omitted.

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

entrepreneur as an actor making a difference in economic life. These are here termed either employee entrepreneurs, or intrapreneurs. Respondents were asked if they had played a leading role in such activity over the past three years. Figure 2.3 presents the countries of Figure 2.2 now presented in order of their intrapreneurship (or employee entrepreneurship - EEA) rates reported as a percentage of the respondents who also reported that they were employed (i.e. the base is employed interviewees). TEA is repeated for comparison.

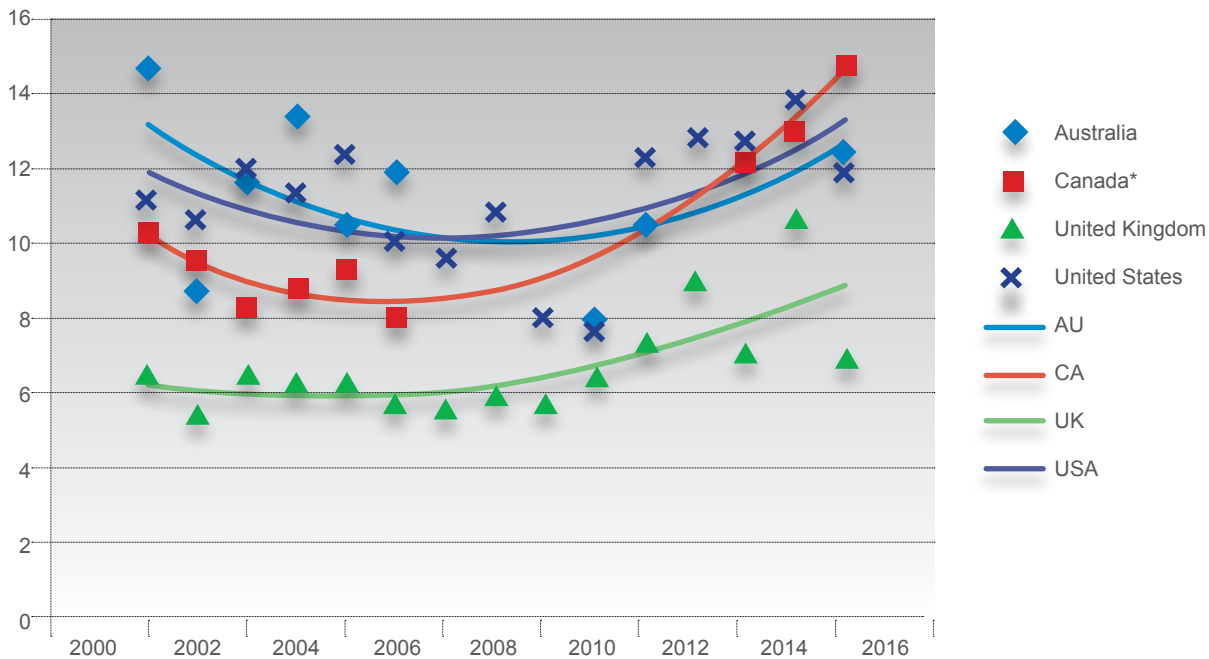
**Figure 2.3 Innovation Economies in Order of Decreasing Intrapreneurship Leading Role Among Employed Respondents (EEA\_emp)**



The order is significantly different from the TEA order. Only Australia of the four leaders in TEA remains among the four leaders. Norway and Ireland join the leaders and Canada is sixth in this indicator. In fact, the difference for Canada between TEA and EEA EMP is among the most striking.

Values of TEA do evolve over time. In part these will follow changes in business climates but such a model would oversimplify. For countries like Canada, levels of TEA have been rising in the last few years. (The US has experienced a decrease from 2014.) Trends from 2001 to 2015 are shown in Figure 2.4 for Canada in comparison to the US, UK, and Australia. Of course, the interpolation of Canada data over the 2006\* to 2013 gap is regrettable and simplistic, only fitting a best overall trend line. All of these countries have been experiencing increases in recent years. Australia has highest volatility and UK the lowest.

Figure 2.4 TEA Trends 2001 – 2016

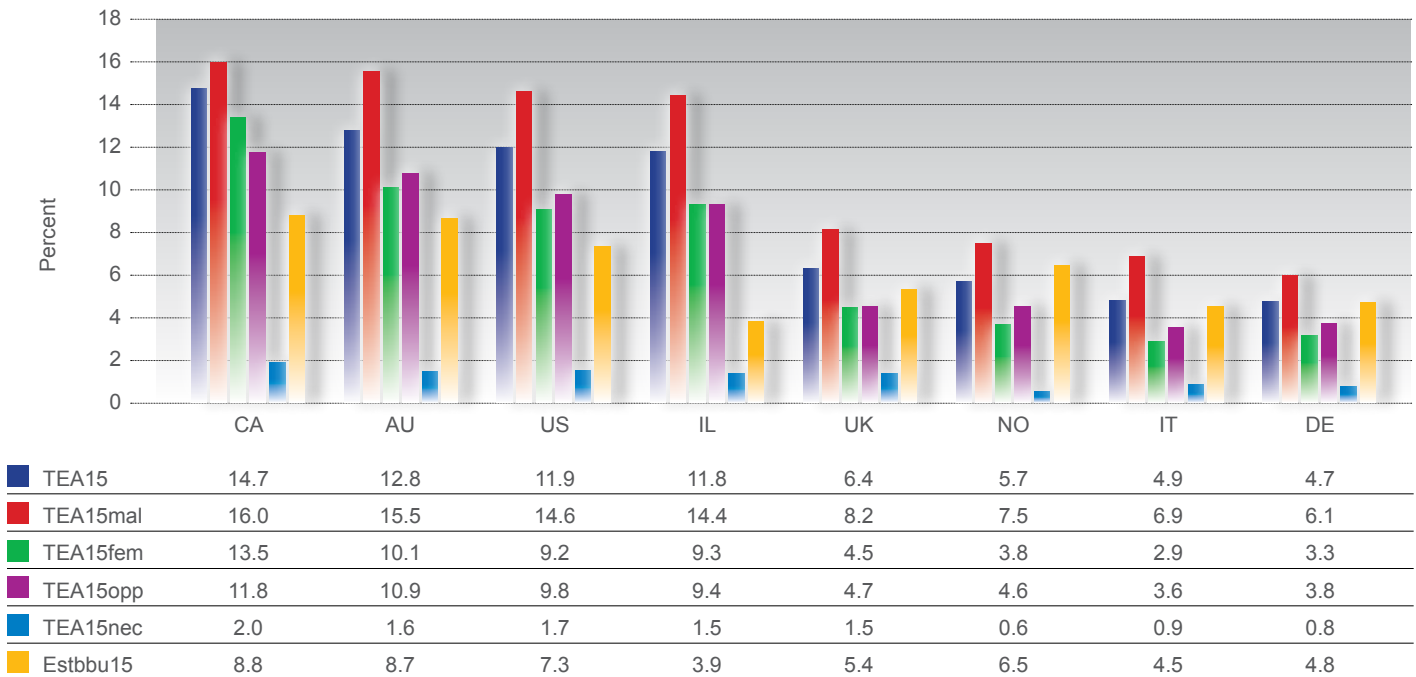


### 2.2.2 TEA and Factors in its Composition

The present Canadian TEA rate of 14.7% of the 18-64 population represents an increase of over one percent from the rate in the 2014 survey. This is entirely attributable to the increasing participation of women. The moderately increasing TEA from 2013 to 2015 results compare to the 8% found in the last full pre-2013 Canada report in 2003. A key observation in 2003 was that the women’s entrepreneurship rate was only half that of men it is now over 80%. For further appreciation of the Canadian data a comparison group was selected to include the US, Australia, the UK, Italy and Germany from the G7, Norway as a natural resource based economy, and Israel a small country with a high TEA and a reputation for success in high technology start-ups. Figure 2.5 breaks down TEA rates for Canada and the selected reference group to indicate the role of gender and the degree to which ventures were launched in response to an opportunity (opp) as contrasted to initiation from necessity (nec) in the face of a lack of alternatives. Rates of report of established business are included.

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Figure 2.5 TEA Values for Reference Economies and Canada (18 – 64)



## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

The Canadian women’s share is higher than that in the other high TEA countries shown and is entirely responsible for the increase of the Canadian TEA from the 2014 level. In the other three high TEA economies the female/male ratio is near 2/3, as it was for Canada in 2013. TEA is reported to be motivated by opportunity more than by necessity at a ratio of approximately five in all cases. Similar rates are reported for the other high TEA economies. (The errors in the small necessity rates render the ratios uncertain.)

The TEA from the US, Canada, Australia and the UK invite comparison to the Continental economies, Germany (DE) and Italy (IT) and Norway (NO). Some European commentators<sup>7</sup> have suggested a divide between the more neo-liberal economic policies of the US, Canada, Australia and the UK compared to those of the continental countries. If this is valid, the data suggest that a more neo-liberal economic culture is more favourable to the individual entrepreneur, but clear evidence is lacking to show this links to better overall economic performance<sup>12</sup>. It

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2014

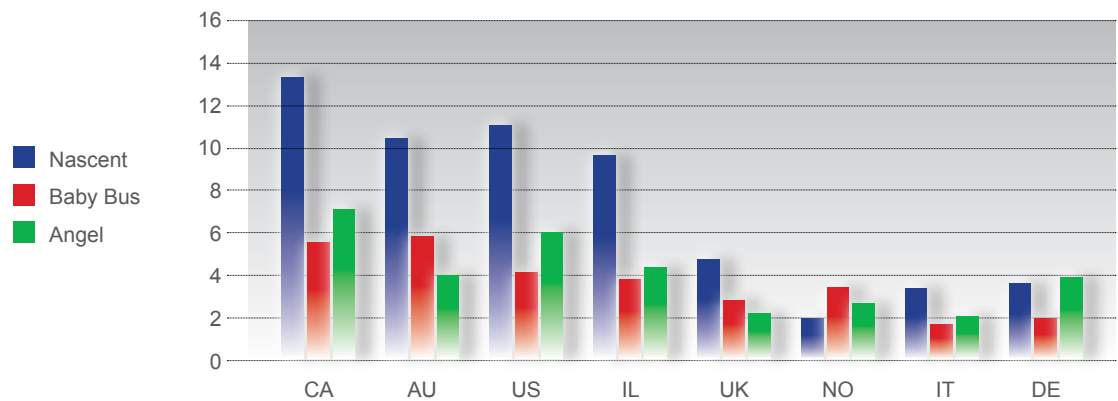
is also true that the continental examples here have a lower proportion of women entrepreneurs. The high rate now achieved by Israel (IL) is consistent with its reputation as a fertile ground for high tech firm formation.

The right hand bar in the figure reports the rate of established business (in business over 42 months). In the countries with highest TEA, there is a considerable drop to the level of established business rate. Is the high TEA linked to an environment where it is more difficult for young firms to survive and graduate? The established business rates serve as crude ‘reality check’. The lower values for established businesses (representative of outcomes of past entrepreneurship) remind us of the precarious character of entrepreneurial activity. Of course the established businesses reported here reflect start-up over a number of years. A 2014 OECD policy paper on start-up firm dynamics<sup>8</sup> provides data on the fate of start-up firms after three years. Canadian data for end years 2004, 2007, and 2010 indicate 22 – 24% not reporting (inactive), 62% – 65% remaining in the same size category (0 – 9 employees in this report) and 4% or 5% growing out of their initial size category in their first three years.

Further important parameters of the analysis of overall activity include those showing how TEA breaks down into its two components of nascent activity (start-up in the past year) and new business (those in operation but under 42 months old – ‘Babybus’). Finally, the extent of informal investment in new businesses (here called angel investment), which is a crucial ingredient of start-up activity is reported. Data for Canada and the reference group are shown in Figure 2.6. (The functioning of angel investment will be explored further below.)

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

**Figure 2.6 Data on Percent Nascent vs Young Businesses in TEA and on Informal Investment Rates**

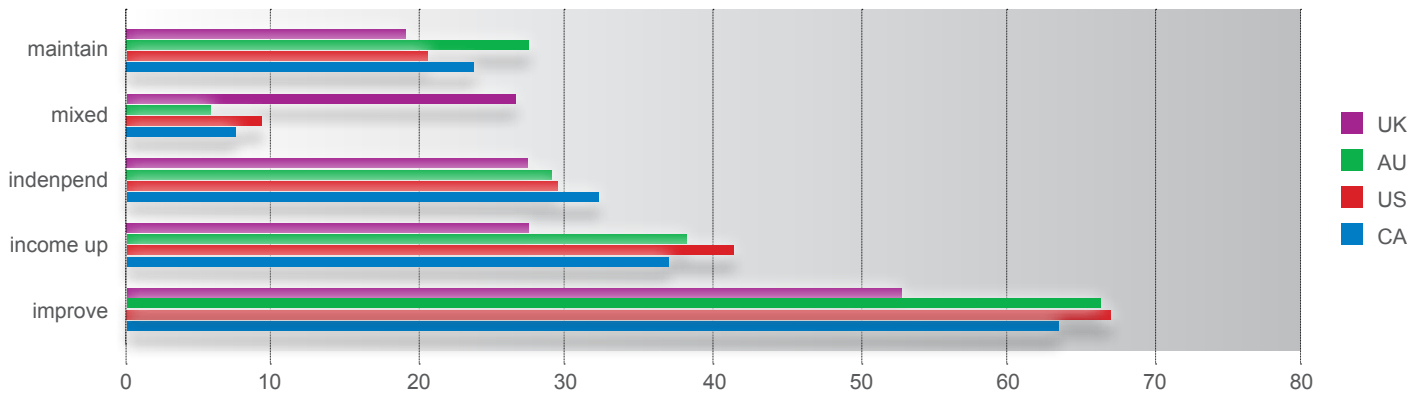


Note that nascent ventures outnumber baby businesses in most countries, including Canada. Respondents reporting informal investment outnumber baby businesses in Canada, the US, Israel, and Germany.

Tracking the relation between start-up phases and established business has some bearing on churn in firm dynamics. For example, the established business rate close to the TEA rate in four European countries suggests a more stable environment. If this is correct, it suggests a higher churn rate in the US compared to Canada and Australia. The important informal investor rate is higher in Canada or Australia than in the US. The numbers involved are small and these differences may not be significant, but it is clear that these rates are higher than those for Europe.

*Motivations.* A final indicator informing the drivers of activity concerns motives for entrepreneurial activity. This is complex. Much entrepreneurship relates directly to the relation of the entrepreneur to the specific attractions of a particular new activity. The areas susceptible to general questions addressed to all entrepreneurs centre on the economic motives and the question of gaining independence by becoming an owner. Fig. 2.7 shows percentage of entrepreneurs (TEA) who identify maintaining income (maintain), have motives mixed between opportunity and necessity (mixed), seek increasing income (income up), and improvement of self or conditions in one of various dimensions (improve).

**Figure 2.7 Motives for Entrepreneurial Activity**



The generalized question around improvement drew agreement from the highest percentage of entrepreneurs considered in these comparators to Canada that are culturally related. The UK is lower than the other three. Income increase is preferred over independence in all countries except the UK. Canada also appears stronger on independence. Mixed motives were not an important response except in the UK. These motive data provide little insight as to which entrepreneurs are looking toward innovation or job growth, the scalable productive entrepreneurship most highly prized.

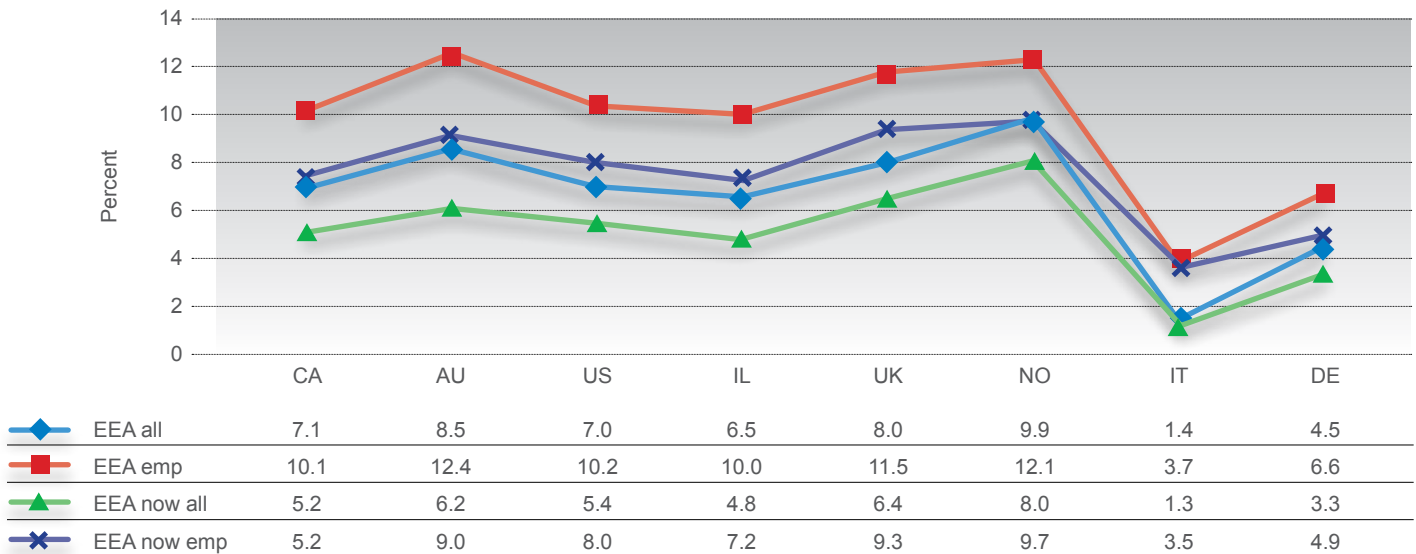
## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

### 2.2.3 Intrapreneurship – Entrepreneurial Employees (EEA)

GEM has also introduced measurement of the parallel to entrepreneurship (TEA) that occurs within existing organizations<sup>13</sup> where new ventures are created by employees for their principal employer – ‘intrapreneurship’. *Parallel to TEA the index is entrepreneurial employee activity, EEA.*

The survey items are based on questions that ask about development of new activities for your main employer over the last three years. Figure 2.8 shows data for percentage of respondents who are: (1) all interviewees reporting taking a role in such development over the three year period (All), (2) limiting the population considered to only those who are now employed (Emp) – not self-employed or unemployed, and (3) those who report this role going on currently (Now), and (4) those employed and active now (Emp. now).

Figures 2.8 Intrapreneurship, EEA, Percentages of the Total Survey Population or of Those Employed



## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

We see the EEA rate in Canada is very close to other high TEA countries except Australia and well below the EEA rates of the UK and Norway. Norway, as one of the successful Nordic countries also strongly oriented to resources, is an interesting contrast to Canada. Its entrepreneurship and established business rates are similar and lower, but it leads in EEA emp.

### *The problem of innovation in Canadian firms*

The results for the EEA rate are consistent with a widely remarked concern in Canada, a failure of innovation and its relation to lagging productivity. Both innovative activity and the adoption of ‘embedded innovation’ in the form of the adoption of the latest technology (see Ch. 3) are weak. A detailed analysis of the problem appeared in 2009 from an Expert Panel of the Council of Canadian Academies: *Innovation and Business Strategy: Why Canada Falls Short*<sup>15</sup>. Interestingly, the panel identifies *business strategy* as a major source of weakness (a key framework condition for EEA). It is clear that innovation in Canada needs stimulation. A direction is suggested by the influential work of Mazzucato<sup>15</sup> who has shown the importance of government initiative, and acceptance of the major risks, in transformative innovation. For example she identifies major government programs critically

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

contributing at several stages to the eleven transformative technologies that, exploited together, achieved the smart phone. In Canada examples of this approach were seen in the development of the Candu nuclear power system and the Alberta oil sands.

A deeper analysis for the Canadian situation emerges from a series of questions which are asked of those reporting EEA activity. A summary of detailed data are shown in Table 2.3. The questions ask first for activities new over the last three years three (EEA 3 yr), next for activities that are new now (EEA now), whether there was participation in the initial phase of idea generation (EA idea 3 yr), whether participation was in a leading or supporting role (EEA lead/support) with answers; lead (L), support(S) or both (B). The next lines of the table cover whether the respondent participated in implementation in the three years (EEA implement 3 yr), was this leading supporting or both (EEA lead/support), the current level of competition for the new product as many (M) - few firms (F) – or no firms (N) compete (EEA comp now), and finally what percent of revenue for the novelty will come from outside Canada (exports).

These more detailed questions present a problem for reporting. As the questions become more detailed, the response rates fall. In order to remain transparent, each of the entries here are accompanied by a report of the response rate.

**Table 2.3 Details of EEA Activity in Canada 2015**

	EEA 3 yr	EEA now	EEA idea 3 yr	EEA lead/support
<b>Responses (total)</b>	2057	2057	803	319
<b>%Yes, ratio, distribution</b>	11	7.1	11	L=39 S=46 B=15
	EEA implement 3 yr	EEA lead/support	EEA comp now	EEA export revenue
<b>Responses (total)</b>	404	269	386	383
<b>%Yes, ratio, or distribution</b>	68/32	L=43 S=48	M=29 F=52	>10%=22% yes
	68/32	L=43 S=48	M=29 F=52	>10%=22% yes

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

### 2.2.4 Financial requirements for start-up and levels of Informal investment

A *special topic* for the 2015 survey explored the financing of start-up firms (SU) and the sources of money. The total amount required to start the businesses was estimated to range from about 10% reporting nothing needed to about 10% requiring \$500 thousand or more. The mean is \$86,000, the median \$30,000 and the mode \$5000. The amounts of the entrepreneur's own resources required ranged to an upper 10% > \$130,000 (max. \$50 million), but a median of \$100,000 and a mode of \$10,000. The sources of funding (received or expected) and the share of entrepreneurs drawing on them are summarized in the small table below.

**Table 2.4 Funding Start-up**

Type	Crowd funding	Government	Friends, Neighbors	Family Colleague	Employer	Banks	Private investor Venture
%Yes	13%	35	12	24%	13	5%	21

We see that despite the single largest role going to government, family with friends, and colleagues account for a solid 49% core. Private investors and venture capital are quite significant, with crowdfunding and banks completing the list.

Another activity that is significant to entrepreneurship was noted above, informal investment. The funding source data show that start-up depends on a first stage of finance by family and friends, with colleagues and small investors. The survey reports on individual investors referred to as 'angels'. To gain some perspective on this first phase activity, the GEM survey asks respondents whether they have been active in providing funds to new businesses (other than stocks or mutual funds) in the past three years. As reported in Figure 2.6 the number of these angel investors can exceed the number of baby business, but did not approach the TEA rates. Table 2.5 reports first the average level of investment in US\$ reported, then the count of investors reporting funds followed by the total count of respondents indicating investments and finally a derived impact parameter of significance for country comparisons.

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

Table 2.5 Investment Levels of Informal Investors

	Angl Rate (%)	Avg. Funds US \$	Count BUF	Count BUS	Angel impact	Weighted
CA	7.1	36005	117	131	4	4.2
AU	4.1	56442	64	64	3.6	3.7
US	6.0	37369	128	130	4.7	4.6
IL	4.4	39541	58	77	2.8	2.7
UK	2.2	31003	119	121	1.5	1.6

Canadian investors perform well in comparison. The Canadian data for the relationship of these informal investors to the entrepreneurs benefitting indicates that 44% of recipients were close family members (spouse, brother, child, parent, grandchild), 6% were some other relative (blood relation). Another 19% were a friend or neighbour, and 12% were work colleagues. Only 10% fell in the category of a “stranger with a good business idea”. These informal investors do form the category of early stage support sometimes called ‘love money’. It is interesting to compare the results of Table 2.5 expressed in the expert survey (Chap. 6). The expert perspective on finance, which *acknowledges the challenges of financing a start-up, seems to be consistent* with these results.

### 2.2.5 The Final Stages – Exit and Discontinuance.

The GEM model sees the life cycle of entrepreneurship as comprising four stages: intention, early stage and new firm, **established** business and discontinuance (see introduction.) A ‘snapshot’ of the relationships **among the phases** emerges **from looking** at the activity in the successive phases that were identified in the current year surveys. The intention variable asks for intentions to start a business in the next three years (intent).

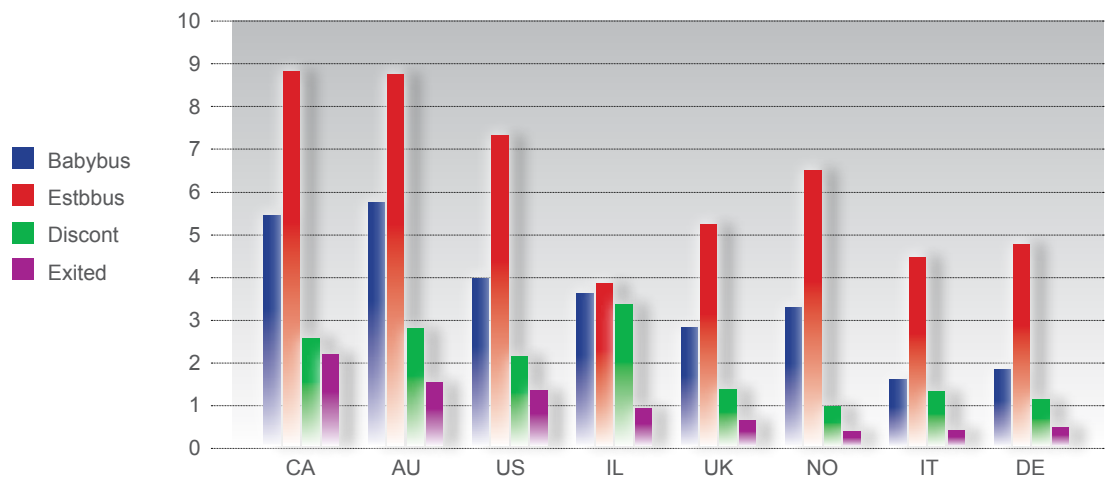
## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

The nascent stage and the baby business (business in operation for less than 42 months) were represented in the TEA variable (TEA). **Established business** was measured as those reporting ownership of a business that has been in operation for more than 42 months with income (EB).

- **Discontinuance** is measured in two variables: (i) owner exit with **business closure** (Disc) and (ii) owner exit with **continuance of the business by others** (Exit).

Intent, TEA and established businesses (EB) have been analyzed above. At the final stage, two variables for discontinuance remain - a *positive* outcome, **exit** (Exited), where the owner sells or transfers to a new owner or operator and a *negative* one, discontinuance (Discount), where the business closes. These rates are reported in Figure 2.9 in the context of the Baby business (Babybus) and Established business (Est bus) rates.

**Figure 2.9 Final Stages of Entrepreneurial Activity (% of pop.) Compared to Baby Business and Established Business Rates**



The four economies with the highest TEA rates also show the highest rates of discontinuance. That rate in Israel appears remarkably high. There is some indication that Canada has a relatively favourable exit rate. (The percentages are low which adds uncertainty to comparison. The current rates are similar to the previous year's.)

## 2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2015

In summary, it is qualitatively clear that entrepreneurial intentions and early stage activity exceed the baby business and steady-state operating businesses rates. The exit rates remind us of the relatively high churn rate for small businesses. Canada, along with Australia, Israel, and the United States, display a high rate of intention and early stage activity, suggesting that an encouraging climate exists for the aspiring entrepreneur, but these high rates of intention appear along with comparatively high departure rates in latter phases. This suggests that raising the ratio of surviving established business (compared to early stage activity) could be a policy goal for Canada, (with the US, and Australia). The indication is that a climate presenting additional difficulties for young firms may exist in these countries.

A brief note on firm turnover among formally registered small firms from Industry Canada. This reports the volatile data from 2008 and 2009 shown in Table 2.6<sup>16</sup>

**Table 2.6 Small Firm Entry and Exit in Canada 2008/2009**

Firm turnover (thousands)	2008		2009	
	Services	Goods	Services	Goods
entry	67.7	21	48.9	16.1
exit	44.6	14.4	54.5	18.2

### 2.3 Aspirations

A final key aspect of early stage entrepreneurship is the entrepreneur's aspirations. This has a great deal to do with the potential for impact on *innovation, employment, export, and revenue growth* - i.e. on the question of the extent of productive entrepreneurship. These aspirations are explored through a series of questions concerning expectations for firm performance after five years. The ambitions for the new businesses are probed with questions about: what fraction expects substantial job growth, what fraction will produce *new products* and *expand markets*, and what fraction *will export*; these are questions critical to evaluation of the effects of entrepreneurship in the economy, which is the subject of the next chapter.

### 3. ENTREPRENEURS IN THE ECONOMY

The *entrepreneur* who was introduced to us by Joseph Schumpeter<sup>1</sup> in ‘The Theory of Economic Development’ in 1911 is the committed agent of economic change, moving the economy onto a new cycle. Entrepreneurial action can lead to job creation and innovation that can stimulate economic growth and, in favorable cases sustainability. The *entrepreneur* acts in various contexts, as the agent launching a new enterprise, the champion of a new direction for an established firm, (as well as launching an initiative delivering social impact). Thus, analysis of the role of the entrepreneur in the economy lays a critical foundation for development of economic and social policy. The GEM survey identifies and profiles these actors.

It is always important to remember that not all entrepreneurial efforts are constructive. Baumol’s categories (above, page 9) distinguish productive from non-productive initiatives, where the first are seen as economically creative and the second simply re-arranging the distribution of economic benefits. Clearly, the productive category is closely tied to innovation. The total entrepreneurship measures do not give indications of the degree to which a given effort has productive content. (It was noted above that the less ‘productive’ may still have positive aspects, as for example, in job creation, and, in any case, trying something new is a first step toward innovation.) Finally, of course productive character does not guarantee socially beneficial outcomes.

Shane<sup>17</sup>, in an award winning paper, shows that ‘non-productive’ entrepreneurship may even be economically negative, e.g. for growth when too much local competition is generated. He recommends that policy instruments be carefully designed to focus start-up support to those new businesses that have clear growth plans, and observes that picking ‘winners’ may be hard, but identification of non-productive entrepreneurs is much more straightforward. “Policy... should stop subsidizing the formation of the typical start-up [to] focus on the subset...with growth potential”<sup>19</sup>. It does not require “picking winners”.

## 3. ENTREPRENEURS IN THE ECONOMY

The aspects of economic roles considered here include:

- Jobs created and job creation aspirations,
- Uses of technology,
- Sectoral focus,
- Export orientation,
- Indicators of innovation.

### 3.1 JOB CREATION

One major reason for analysis of entrepreneurship is that young firms and smaller firms play a central role in creating jobs. The interview responses of new Canadian businesses about jobs created and their aspirations for the first five years are summarized in Table 3.1. By far the largest group currently employs between one and five people (43%), half of the early stage entrepreneurs declared that they expect to hire up to five employees within 5 years. This reflects a very slight change in overall employment by firms employing in this range.

However, the number expecting to remain at ‘no employment’ has dropped sharply and numbers for the higher employment levels have increased. Especially for the 20+ category, the entrepreneurs aspire to significant job creation. Among the 383 TEA respondents 77 of the entrepreneurs anticipated job levels above 20 within five years. More than 140 early stage companies declared their expectation to hire more than 5 employees in next five years. Approximately 1/3 of the firms could be considered significant job creation candidates.

**Table 3.1: Job Creation, Now and Within Five Years**

Jobs created as % of TEA	None	1-5	6-19	20 or more
Currently	29.0	43.0	17.8	10.2
After 5 years expectation	12.5	50.8	16.7	20.0

The data give a reasonably positive picture regarding growth aspirations among a majority of the new firms. A reality check on these aspirations is provided by the distribution of jobs among established businesses (3.5 yr or older). Here 70% report 0 – 5 jobs, with 14.1% reporting 6 – 19 and 15.4% reporting more than 20. Policy should

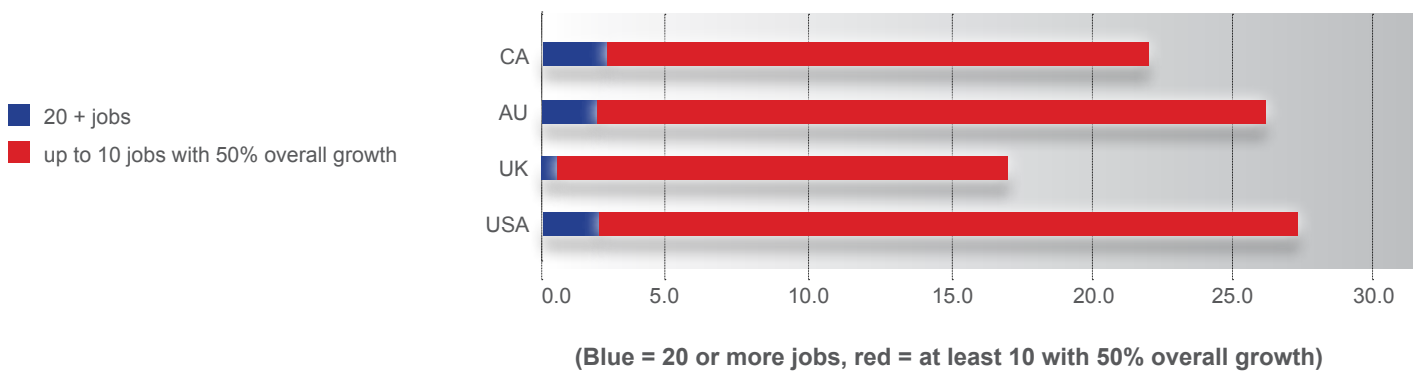
### 3. ENTREPRENEURS IN THE ECONOMY

promote job creation among start-ups through carefully constructed incentive programs such as can occur within the Job Creation Incentive Program provided by the Alberta government that intends to create anywhere from 18,000-27,000 new jobs each year during both 2016 and 2017<sup>18</sup>.

Although it is a common to comment that start-ups participate intensively in job creation, there is ample research, such as the comprehensive recent OECD analysis<sup>8</sup> or a Stanford study<sup>19</sup>, which indicate that start-ups *create many jobs but also destroy many as well*. Canadian annual firm death rates among active enterprises are reported (OECD 2015)<sup>20</sup> to be ~ 8.5% in services and ~ 5.5% in extractive and transformative industries. (Firm birth rates were slightly higher at 10% for services and 6.5% for extractive and transformative,) The OECD data (from 2005). suggest that for firms of 10 or more employees, 4.5% in extraction or manufacturing and 3% in services will achieve growth rates of 20% over a 3 year period. This is not inconsistent with the increases indicated above in the growth of firms expecting 20 or more employees after 5 years compared to the number reporting 20 or more in the early phase.

Figure 3.1 presents a comparison of total high job growth aspirations for the USA, UK, Australia and Canada.

**Figure 3.1 Comparison of Percentage of High 5 Year Job Growth Aspirations**



The first, blue, identifies firms expecting to grow to 20 or more employees in five years. The second, red, identifies those that expect to reach at least 10 employees accompanied by 50% or more business growth.

The American and Australian entrepreneurs report greater job growth aspirations than the Canadians. If the US has high job expectations, the explanatory factor may be the greater opportunity from the size and scope of the economy, but the Australian economy is smaller, which makes the comparisons interesting. Regarding new firms expecting to grow to 20 or more jobs, the numbers are small in the four countries with a slight edge for Canada.

The total employment projected by established businesses (EB) in 5 years is a mean of 2.1 jobs with a median of 2 and a mode of 2. For TEA entrepreneurs the corresponding statistics are: mean 2.4, median 2 mode 2. This finding provides a suggestion for policy - also look for established businesses entering a growth phase.

### **3.2 USE OF NEW TECHNOLOGY**

The use of new technology is expected to correlate positively with innovation and serve as an indicator, as is activity in high and medium technology industries (OECD definition). GEM assesses two aspects related to technology in entrepreneurship. First, is the use of new technology, up to the latest technology, by firms in any sector. Second, is the percentage of firms competing in medium- and high-technology sectors.

For the first aspect, early stage firms were asked about their use of technology divided into three categories. Does technology used include technology novel within the last year (latest yr.), introduced in the last 1-5 years (last 1-5 yr.) or older than 5 years (old tech)? Responses for Canada and a number of reference countries are shown in Figure 3.2. Clearly the majority of entrepreneurs do not report a critical dependence on the latest technologies. Italy reports a strikingly high level of use of the latest technology, which was the case for France (missing from 2015 data) in 2014; this finding might suggest that European firms are more likely to use the latest technology than

## **3. ENTREPRENEURS IN THE ECONOMY**

*The use of new technology is expected to correlate positively with innovation and serve as an indicator, as is activity in high and medium technology industries ...*

### 3. ENTREPRENEURS IN THE ECONOMY

those in North America and Germany, where much of it is produced. Israel is second in 1-5yr category which reflects its reputation in high technology.

**Figure 3.2 Percentage of Entrepreneurs Using Recent vs Older Technology**



The share of TEA active in high or medium technology sectors is also often assumed to be an indicator linked to innovation and growth ambitions. GEM collects data for high, medium and low technology sectors according to OECD definitions. The percentages of TEA reporting operating in one of these two technology categories is not high in any of the reference group countries. The Canadian indicator in 2015 is slightly increased in comparison to 2014 (5.7%) but still lower than the 8.7% reported in 2013. We notice that Israel has the highest percentage of TEA in high or medium technology which is consistent with the Israel Venture Capital Research Center (IVC) reporting that Israel's high-tech sector attracted a staggering \$4.43 billion in investment during 2015<sup>17</sup>.

The percentage of Canadian TEA reporting such high or medium technology is: 6.3%. Neither the use of newer technology nor technology industry participation provides a strong suggestion of the innovativeness of the new ventures. A subsequent section will try to probe this more directly.

**Table 3.2 High or Medium Technology Sector**

USA	Italy	UK	Norway	Germany	Australia	Israel	Canada
6.1	3.6	12.1	6.3	8.9	5.5	13.6	6.3

### 3.3 SECTORS

GEM data offer sector indicators through cataloguing the initiatives into four sectors:

- Extractive (e.g. mining, agriculture),
- Transformative (e.g. manufacturing),
- Business oriented services,
- Consumer oriented services.

In the majority of countries surveyed, consumer oriented services are the leading sector, as might be expected for small business. In contrast, one might expect growth potential and innovation to be associated more often with the transformative sector (manufacturing), and recent literature on innovation has emphasized the role of knowledge<sup>21</sup> intensive business services in innovation (KIBS). As pointed out by Alexander<sup>22</sup>, a region’s economy has two parts. One does business with other areas as well as local customers. The other is engaged in supplying local needs. The first of these is expected to be more innovation and growth oriented in order to participate in the larger markets. This ‘non-local’ market orientation is found mainly in sectors other than consumer services.

The distribution among these sectors (Figure 3.3) offers insight into the types of economic development that can result from the entrepreneurial activity. The 2015 distribution over sectors for the reference group of countries (as above) underlines that the consumer services form the lion’s share of early stages firms except in Norway where the business oriented services is slightly higher. Canada’s business oriented services level at 24.7%, reflects a significant decrease compared to the previous years (42.6% in 2013 and 34.8% in 2014). Canada’s profile is similar to that of Australia. The UK, Israel and the US join Norway with strength in business oriented services. The share of transformative remains close to Canada’s 20% for most of the

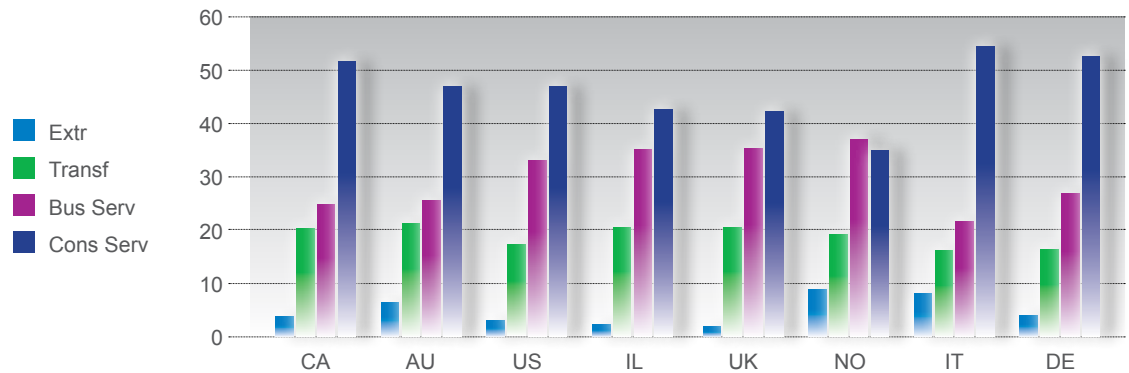
## 3. ENTREPRENEURS IN THE ECONOMY

*... a region’s economy has two parts. One does business with other areas as well as local customers. The other is engaged in supplying local needs.*

### 3. ENTREPRENEURS IN THE ECONOMY

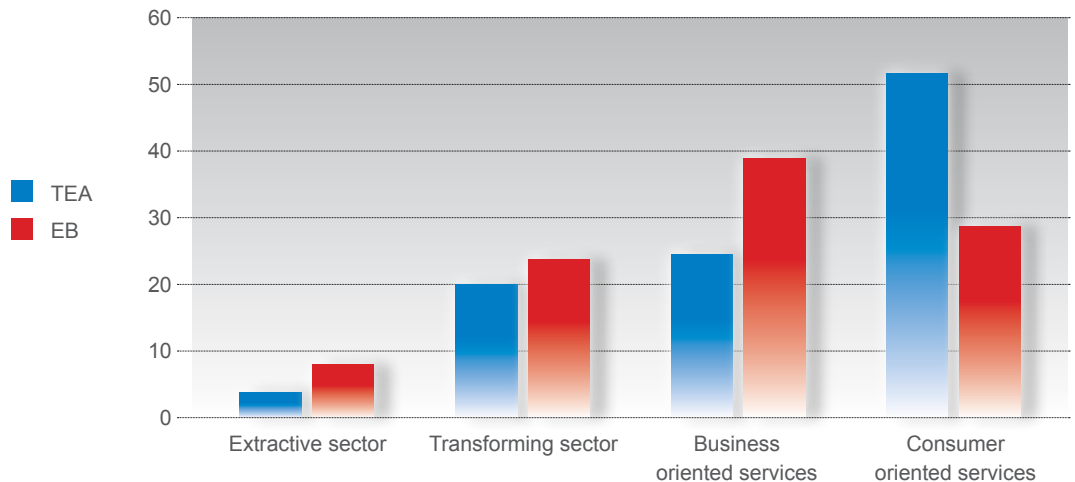
group. The extractive sector has a marginal percentage among the new initiatives (less than 9%). Norway does stand out, as expected, underling that Canada does not have an economy where small business is natural resource oriented. However, it is probably important to keep in mind that small firms may often play a supporting role in extractive sectors and be classified as business services.

**Figure 3.3 Distribution (as a % of TEA) of Initiatives Over the Four Sectors**



It is informative to compare Established Businesses sector (EB) sector distribution to the TEA distribution. Figure 3.4 shows a reduced role among established businesses for consumer services in favour of business services. Extractive and transformative sectors are also more important among establishes businesses.

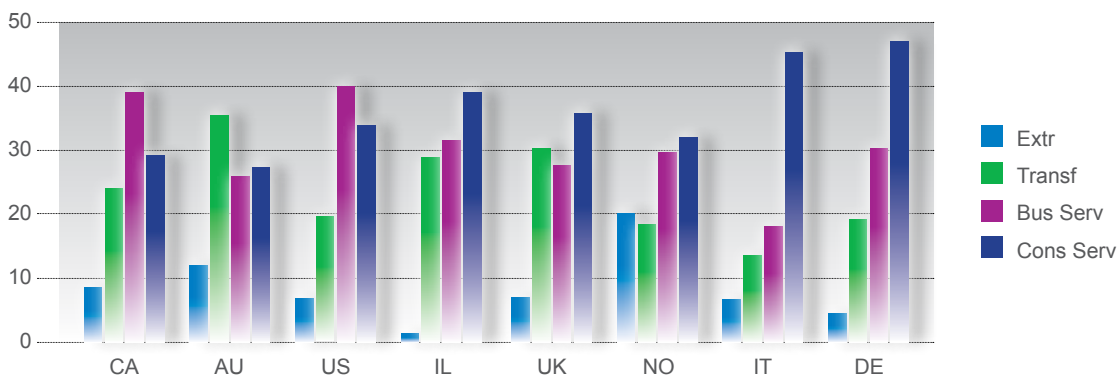
**Figure 3.4 Percentage Distribution Over Sectors of Canadian Established Business (EB) Compared to Young Firms (TEA)**



### 3. ENTREPRENEURS IN THE ECONOMY

Figure 3.5 shows the comparison between TEA and EB in the reference group, it confirms the low percentage of firms in extractive sectors, it reports also that the distribution of TEA and EB over the four sectors is quite similar among the reference group countries where all show the shift away from a consumer services focus. Both Canada and the USA are strong in business services. The results may point to higher volatility in consumer services start-up.

**Figure 3.5 Distribution of Sector Percentages Among Established Businesses, (EB)**



It is interesting to see the breakdown of job growth expectation by sectors. The data appear in Table 3.3

**Table 3.3 Job Growth Expectations (5 years) for TEA 15 by Sectors**

	Extractive %	transformative %	Business Services %	Consumer Services %
No jobs	27	14	11	13
1 -5 jobs	58	41	52	49
6 -19 jobs	15	17	14	19
20+ jobs		24	23	19

There is a suggestion here that transformative and business services sectors may be the most probable loci of substantial job creation, but differences across sectors are not large. (The number of cases in the extractive sector is quite small.)

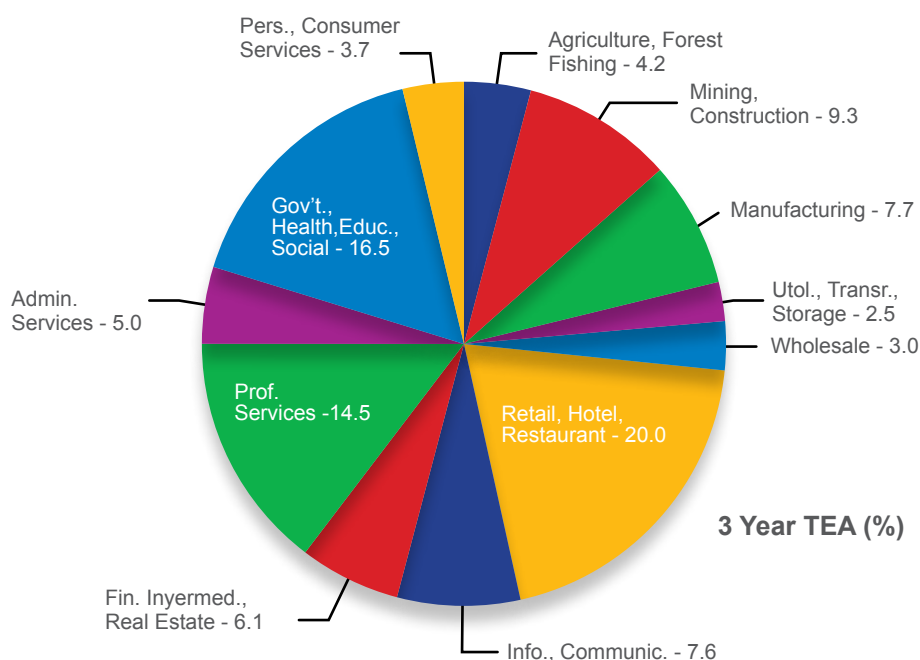
### 3. ENTREPRENEURS IN THE ECONOMY

GEM sector data is constructed by starting from interviewee descriptions of the business, which are coded in the International Standard Industrial Codes (ISIC). They are then assigned to the four sectors. The ISIC codes provide a much finer and more precise description of sectors. However, assignment to more than four groups leaves many groups with statistically insignificantly few entries. A next step from the four sector analysis is one using the one digit (i.e. the most significant digit) ISIC codes. This produces twelve sectors for the Canada data. In order to achieve significant numbers of entrepreneurs in a sector, a larger sample of TEA respondents was assembled by combining the TEA data over the three years of 2013, 2014, and 2015. The three year population of entrepreneurs is approximately one thousand. The result of this analysis is shown in Figure 3.6.

The twelve sectors begin at the top of the diagram with ‘personal consumer services’ which is seen to be a very small share of consumer services. Continuing clockwise, agriculture, forestry, and fishing is a small sector. Combining mining with construction reveals a significant 9% sector lost in the aggregation to four. Manufacturing is seen to account for less than half of the transformative sector. Transportation, storage and wholesale account for two small sectors, However, retail, hotels, and restaurants is a 20% sector contribution to a large part of consume services. Information and communications is significant sector (7.6%) that is lost in the aggregation. Financial intermediation and real estate is a significant part of business services. Professional services, at 15%, are another major part of business services. Administrative services form a small category. A large category, not readily identified in the four sector aggregation is the one including businesses working for the government, health, education, and social services. The four sector classification doesn’t reveal the *social impacts within this sector* of entrepreneurial activity.

### 3. ENTREPRENEURS IN THE ECONOMY

**Figure 3.6 The Percentage in 1D ISIC Code Sectors  
(3 Year Sample 2013 – 2015)**



For Canada, this data treatment identified three better defined sectors as leading components of entrepreneurship, accounting for over 50% (Figure 3.5). To the leading sector including retail, hotel and restaurant (20%), the ‘social’ sector (17%) and professional services (15%) are added. The emphasis on retail, hotel, restaurants, and businesses serving the social sector (education, health, government etc.) does not emerge from the four sector scheme. Among the four sectors, the transformative sector is significantly larger than the manufacturing sector here. Other contributors are probably found in information/communication, and construction. The social sector of government, education, and health is contained above in business services or consumer services. The isolation of that as the second largest among the twelve provides a deeper perspective into the character of entrepreneurship. The three largest of the twelve sectors are: professional services, retail restaurant and hotel, and government education and health. The sample size is more than sufficient to provide significant information on job expectations in these sectors on 2015 data for comparison with the job growth data above. These data are found in Table 3.4.

### 3. ENTREPRENEURS IN THE ECONOMY

Table 3.4 Distribution of Job Growth Expectation in the Three Largest of the ISIC 1D Sectors

	Professional Services %	Retail, Restaurant, Hotel %	Gov't Education Health %
No jobs	15	15	14
1 - 5 jobs	63	49	53
6 - 19 jobs	5	16	22
20+ jobs	19	19	11

There is considerable similarity between retail, et al., and the government, education and health area. The gap at the middle of the professional services sector probably indicates the gap between operating small offices and entering the domain of big professional practices. This contrast suggests that the Government, education, health sector is not structured as a parallel of other professional practices despite the fact that it is an area for professional expertise.

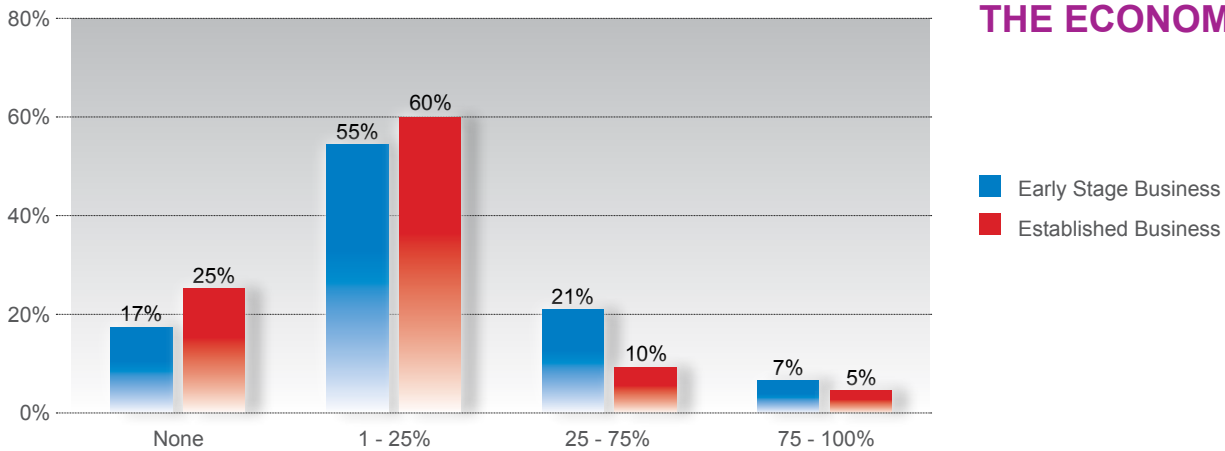
43 *Export orientation is an indicator of productive innovation in any economy. Foreign trade contributes, in any case, to overall job creation and economic growth of a country.*

#### 3.4 EXPORT ORIENTATION

An export-oriented company is one which produces goods largely for exports, and has a customer base outside the country. By definition, these companies are participating in the larger economy identified by Alexander<sup>22</sup> (ref above) that reaches beyond the local. Export orientation is an indicator of productive innovation in any economy. Foreign trade contributes, in any case, to overall job creation and economic growth of a country. Figure 3.7 shows the extent of export orientation among the early stage entrepreneurs and the corresponding established businesses.

### 3. ENTREPRENEURS IN THE ECONOMY

Figure 3.7 Percentage of Revenue From Outside Canada - 2015



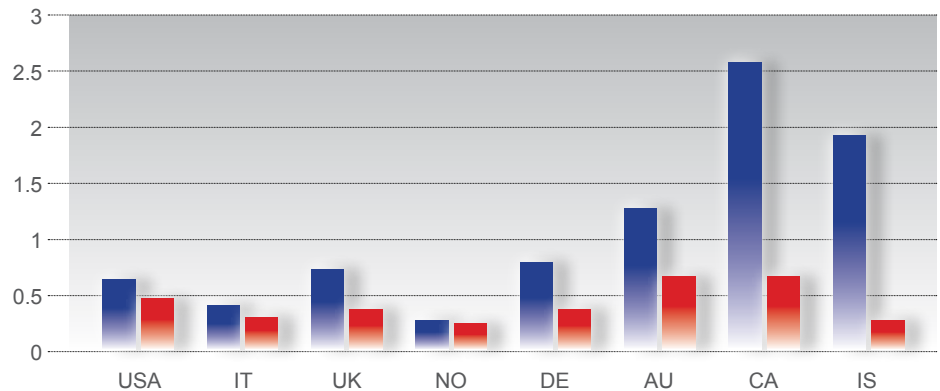
GEM data shows that more than half of the early stage entrepreneurs (55%) indicated modest export orientation with between 1-25% of revenues coming from outside Canada. Even if this export share is low it shows a propensity to look beyond the border. Beyond the 1% – 25% category we find 28% of new firms in one of the two higher categories with substantial export orientation. Policy can focus on coaching these firms to help them gain export revenue through agencies such as the Export Development Bank. The lower figures for established firms suggest the mentoring need in start-ups.

A final figure from the survey gives an overall picture for firms with 50% or more of expected revenue from export. Among these small young firms the aspirations are highest among Canadian, Australian, and Israeli firms. Although rates for established businesses are lower, Australia and Canada do sustain higher levels. Given their strikingly different geopolitical settings, the reason for this similarity is not obvious.

### 3. ENTREPRENEURS IN THE ECONOMY

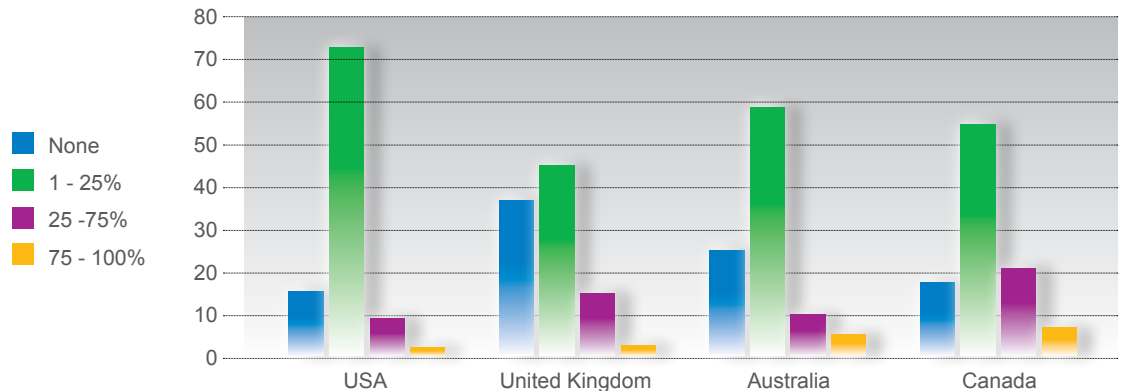
■ Early Stage Business  
■ Established Business

Figure 3.8 Percent With More Than 50% of Revenue Outside the Country



Market scale and geography are important variables influencing export orientation. Canada’s position as a resource strong US neighbour is distinct from all other countries in the reference group. The United States is by far its largest trading partner, accounting for about 79% of exports on 2015<sup>23</sup>. A comparison between Canada and other reference group shows that Canadian early stage companies have the highest rate of revenues outside the country. Regarding established businesses, we notice a similarity between Canada and Australia, both in advance comparatively to the reference group which confirms the aspiration of Canadian startups as well as established business to explore new markets.

Figure 3.9 Share of Revenue From Outside the Country



## 3. ENTREPRENEURS IN THE ECONOMY

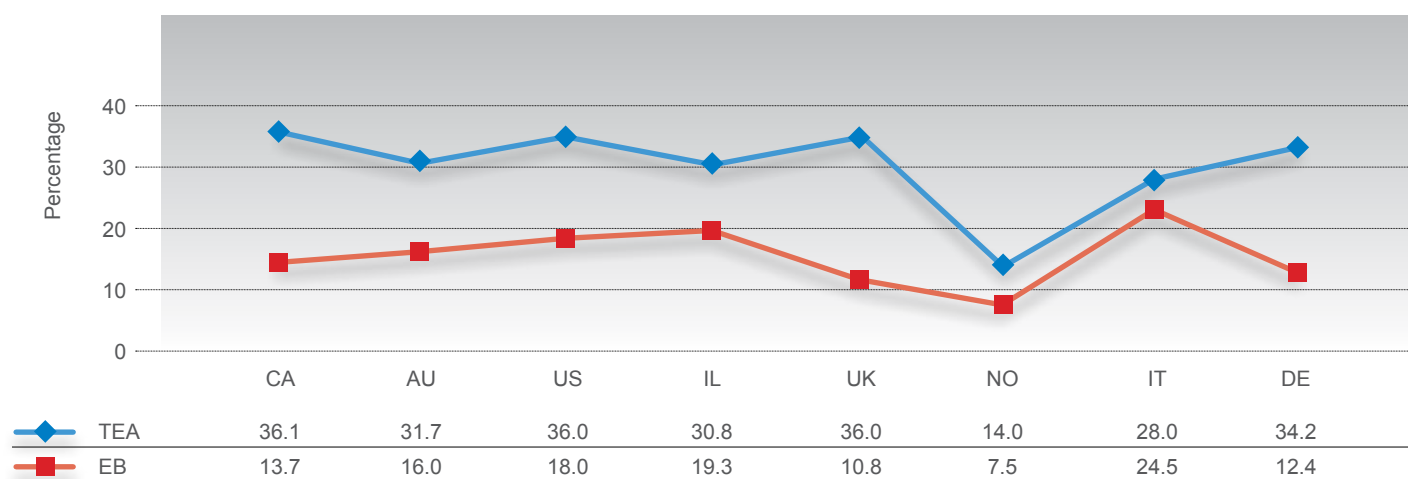
While comparing Canada with similar economies (Figure 3.8), it is noticeable that early-stage entrepreneurs in all economies depend primarily on a local customer base. Canada's share of early-stage entrepreneurs with no out-of-country customers is lower than UK and Australia and comparable to USA. However, Canada has the highest percentage of 25-75 % foreign customers.

At the higher percentages of customers out of country, 75-100%, almost all economies show same pattern of low export intensity.

### 3.5 INNOVATION

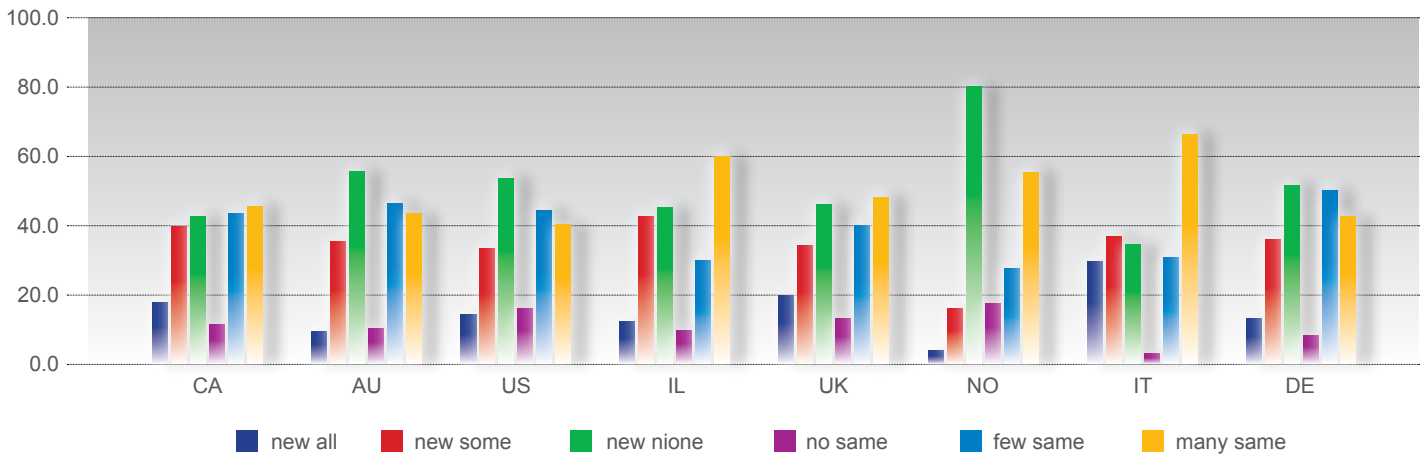
The GEM global report focuses on parameters related to new products in new markets. A lead indicator is the percentage of firms expecting to introduce new products into markets with few or no competitors. The data for Canada and its reference group are shown in Figure 3.10

Figure 3.10 New Products In New Markets



The data show that aspirations to this combination are quite high among the young firms (TEA), less so, as expected, for established firms (EB). One third is common in this group with Canada highest. A more detailed view is found in Figure 3.11 where, reading left to right, the left three bars show the product (or service) is familiar to no customers (new all), few customers (new dome), or many customers (new none) and the next three bars show a comparable product is offered by few firms (no same), some firms (few same), or many firms (may same).

Figure 3.11 Novelty and Level of Competition for New Firms (TEA)



### 3. ENTREPRENEURS IN THE ECONOMY

Both the categories of product new to no customers and products with many firms offering the same one are significant in all countries (except Norway for “new to all”). If these are good indicators, it would appear that major productive innovation is relatively rare (as expected). For Canada (similarly to a number of other countries) the “new to all customers” (18%) exceeds “no other firm the same product” (12%). This would be consistent with some innovation being incremental and improving an existing product. This is the expected category for the largest number of innovations, those stimulated by input from customers.

Canada’s position is relatively strong, consistent with the idea that as many as one third of the firms are candidates to innovate in ways captured by these indicators. This is similar to the indication offered by the share of firms that use recently developed technologies.

There is a temptation to assume that innovation indicators will be stronger for the sectors of transformative or business services initiatives. For example, the innovation literature has recently focused on activity in knowledge intensive business services. Subdividing the sample into TEA sectors leaves relatively small samples, but these are sufficient in the two services categories to make analysis interesting. The results are shown in Table 3.5. It is apparent that consumer

services young firms outdo business services firms with respect to anticipation of profound expansion and offering services with no competitors. Both are highest in offering services new to all customers, but the difference is marginal. Again we are faced with interpreting novelty to customers rated well above lack of competitors.

### 3. ENTREPRENEURS IN THE ECONOMY

**Table 3.5 Some Innovation Indicators for Service Sectors**

	profound expansion	no competitors offer	new to all customers
Consumer services	12%	12%	18%
Business services	4%	7%	15%



*Rebellion Brewing opened its doors in 2014, brewing big, bold, flavourful craft-ales with an uncompromising commitment to quality.*

*Today, we carry out our vision in three simple steps: take Saskatchewan-grown ingredients like barley, lentils, fruits and honey and make kick-ass beer; grow craft beer culture by sharing our passion for great tasting ales with our fellow rebels; and give corporate beer a swift kick in the butt.*

*Our brewmasters, Jamie Singer and Mark Heise, developed their skills right here in Saskatchewan. They competed in home brewing competitions for more than 10 years, amassing more than 150 medals with their craft-ales. They traveled across North-America, tasting, touring, brewing, learning and building friendships with craft-brewers from all over. They knew Saskatchewan was thirsty for high-quality craft beer. Today, Rebellion has five regular offerings, including Blonde, Lentil Cream, Amber, Oatmeal Stout and IPA. We also offer rotating seasonals and one-offs, covering a multitude of styles, flavours, regions and ingredients, ranging from barrel-aged beers, sour beers, coffee-infused, wild-yeast cultured, Double IPA's, Triple IPA's, mead and more. Fans can also choose from 12 offerings on our growler-fill station to take beer home.*

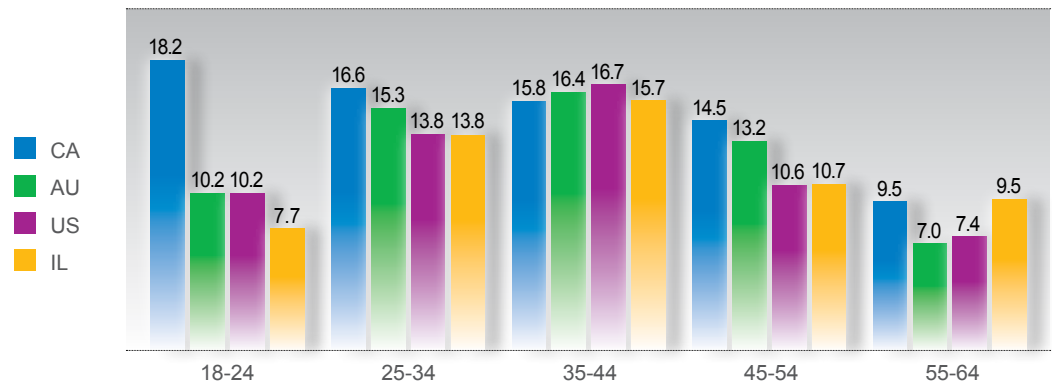
Jamie Singer  
President, Rebellion Brewing Ltd.

## 4. ENTREPRENEURSHIP DEMOGRAPHICS

### 4.1 AGE

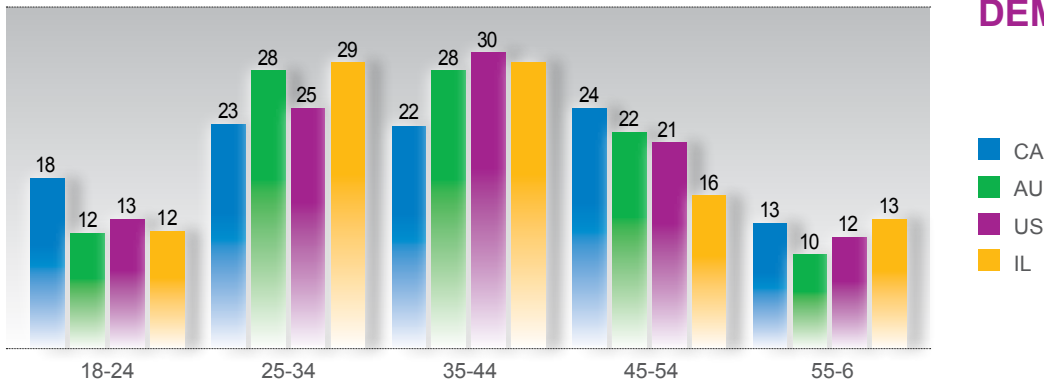
Two interesting perspectives are available from examining age distribution. First, examine the TEA *participation* rate in each age range. Second, examine the fraction of total TEA contributed by entrepreneurs from each age range. Figure 4.1 reports participation and Figure 4.2 reports the share contributed by each age range. The rates for Canada, unlike any of the other four high TEA innovation driven economies, are highest for the youngest entrepreneurs and decline smoothly on passing to older groups. It must be noted immediately that this was not the case in the 2014 data where the highest rate of entrepreneurship in Canada was among the 45 – 54 age entrepreneurs. However, the 2013 data also focused attention on youth with the peak participation in the 22 – 34 age group. The current distribution is certainly unusual, but considering the data over three years, the interest in entrepreneurship among the younger population is certainly indicated as a feature of Canadian data.

Figure 4.1 TEA Participation Rates (%) by Age Group



Turning to the other perspective, Figure 4.2 reports shares of the total TEA population from each age group. This shows that the young entrepreneurs are not contributing so heavily to the total. In fact, the sum of contribution from 18 – 24 and 25 – 34 groups sums to a very similar overall fraction of youth among the entrepreneurs in Canada, Australia, and the US. Nearly 60% of the total Canadian TEA entrepreneurs are in the 35 – 64 age range. Of course, in all this it should be remembered that the 18 – 24 age group spans only seven years not ten.

Figure 4.2 Share (%) of Total TEA Contributed by Each Age Group.



## 4. ENTREPRENEURSHIP DEMOGRAPHICS

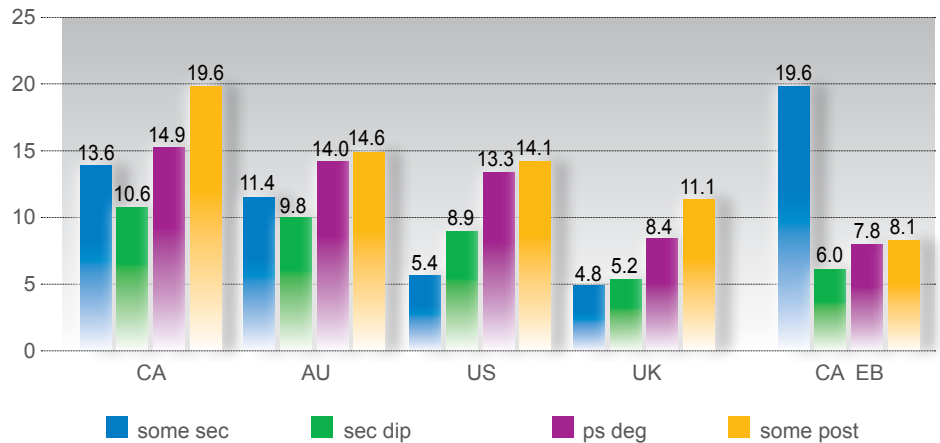
**Seniors** are not covered in international data, but the Canadian APS included respondents to age 99. This provided a final sample of 612 seniors that yielded positive responses for a TEA of 4.2%, extending the downward trend from the 55-64 group. This group divided evenly male/female with most reporting opportunity rather than necessity. Approximately 10% anticipate more than five employees and at least 50% growth in five years. Half of these entrepreneurs are over 70. The TEA rate for seniors equals that found in 2014 but that gender distribution favoured men. None projected job growth above five and the sectors reported included business services and consumer services almost evenly. With changing conditions of seniors, it will be worthwhile to continue to monitor this group. Over the last three years there has been little change. The sample size is already satisfactory.

### 4.2 EDUCATION

Educational attainment is a variable that is best benchmarked by comparing similar systems since cultural factors play a large role. Data are reported here for Canada, the US, Australia, and the UK in Figure 4.3. The data for Canada are compared (on the right) to the educational attainments of owner/managers of Canadian established businesses (EB) as a *reference point*. Respondents are classed by highest achievement. The categories are: some secondary education (some sec), a secondary diploma (sec dip), a post secondary credential (ps deg), and some post-secondary experience (some post).

## 4. ENTREPRENEURSHIP DEMOGRAPHICS

Figure 4.3 TEA Rate (% pop.) by Educational Attainment Compared to Education Reported by Canadian Established Business Owners.



Patterns are similar among these countries. At the minimal education level there is a significant rate of entrepreneurial activity. (It should be noted the number of respondents at this educational level is small). Similarly to 2014 rates, this first level outpaces entrepreneurship among secondary graduates, but not holders of a post-secondary qualification. Starting from holders of secondary diplomas, entrepreneurship is uniformly more common as education level rises to a post-secondary qualification, then to post graduate experience. This common pattern indicates importance of knowledge and skills. Canada stands out in TEA among those with post-graduate experience suggesting an edge in areas where highly specialized skills and knowledge are important. (Australia occupied this position in 2014 data.) Once again Canada and Australia are generally similar.

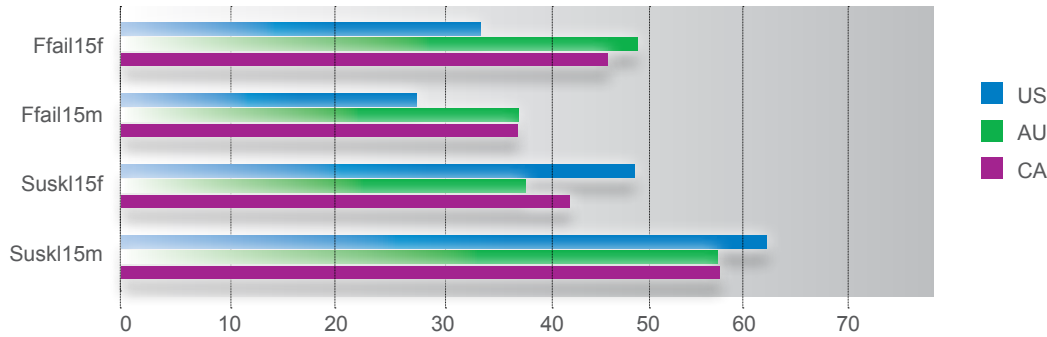
An interesting point is that the educational pattern among owners of established businesses parallels educational attainment patterns of the new entrepreneurs for higher education levels but has a very large share in the first “some secondary” category. This is in sharp contrast to data for the previous two years.

### 4.3 GENDER

*Confidence.* Most of the general population attitudes towards entrepreneurship reported above show little variation between male and female respondents. However, differences of significance do arise with respect to the perception of having needed skills and knowledge (Suskl), and the question of a barrier posed by fear of failure (Ffail). Women express somewhat less confidence in skills and a somewhat higher fear of failure. Comparisons among Canada, Australia, and the US are shown in Figure 4.4. (In Fig 4.4, f and m designate female and male. The sample covers the 18 - 64 age range)

## 4. ENTREPRENEURSHIP DEMOGRAPHICS

**Figure 4.4 Confidence in Capacity to Start a Business by Gender (% of pop.)**



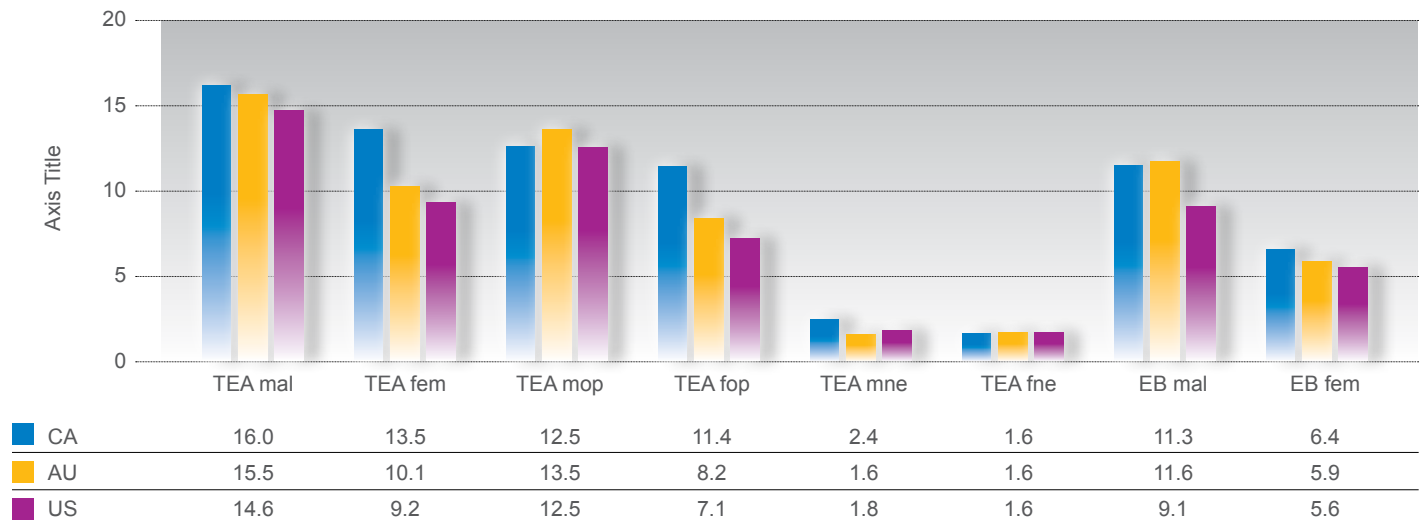
Rates in Canada and Australia are quite similar and show less confidence in skills and greater fear of failure than reported for the US. These general population data don't offer an immediate explanation for the increase in female entrepreneurship that has driven the increase in Canadian TEA in 2015.

*TEA rates.* The male-female rates of early stage entrepreneurship were noted above (and are repeated here in a larger context). In most countries the TEA reported by males is higher than that reported by females, although the ratios vary widely among developing countries. The ratios vary less among culturally similar countries such that detailed comparison is meaningful. The figure compares Canada to Australia and the US. As well, it is quite interesting to compare the gender ratios for early stage efforts to those found among the owners/

## 4. ENTREPRENEURSHIP DEMOGRAPHICS

managers of *established businesses* (EB = business life >3.5 years), which are presented next to Canadian TEA in the figure. The gender ratio for the comparison countries is approximately 3/2, a bit lower for the UK. For Canada the ratio of ~0.8 stands out and has changed from 2014 and 2013.

**Figure 4.5 TEA by Gender With Necessity vs. Opportunity. Canadian EB Rates are Compared**



(op = opportunity, ne = necessity motivations)

The gender ratios are shown explicitly in the small table below. The current Canadian ratio has evolved from the values near 3/2 in 2013, increasing on 2014 and arriving over 0.8 this year, indicating an upward trend. It is to be hoped that the established business ratio will follow before too long. The opportunity share gives no hint that increasing participation by women is driven by necessity.

**Table 4.1 Female to Male Ratios of TEA and TEA Opportunity Motivated**

	CA	AU	US	EB
TEA f/m	0.84	0.65	0.63	0.56
OPP f/m	0.91	0.61	0.57	

Turning to the question of intrapreneurship (employee entrepreneurs – EEA), it appears that among the currently employed the female to male EEA ratio remains near 2/3.

*Gender and economic factors: business sector, job aspirations, technology.* Further exploration of gender roles raises questions of economic sector participation, job growth aspirations and use of technology. Table 4.2 shows percentage of entrepreneurs active in each of the four sectors mentioned above, and reports the percentage with high growth and job expectations (>10 jobs and 50% growth) within five years. (Abbreviations follow parallel analyses in earlier sections.) We see that dominance by the consumer services sector is even greater among women, and that the share that project high five year growth leading to ten or more jobs and 50% growth (jobs + growth) is at 8.8% compared to 11.4 % for men. Women participate to a similar degree to men in business services, but men double women in the share in the transformative sector.

**Table 4.2 Sector Distribution Among TEA by Gender**

	Extract	Transform	Bus. Serv	Consumer Serv	Job +grow
% fem,	2.9	12.1	23.5	61.4	8.8
% mal	4.8	26.2	25.7	43.2	11.4

Among indicators of innovativeness there are only small differences between activity of the genders with respect to: how many customers find products new, how many businesses offer competitive products, and how many firms offer the same products.

There is also a modest gender difference in engagement with technology. Approximately 9% of the male initiatives were in the medium or high tech sectors (OECD def.). Among female respondents, only 3% were in these domains. On the use of contemporary technology, among men 33% reported using technologies introduced over the last five years whereas on 29% of the women used such recent technologies. These results probably relate to the differences in distribution over sectors.

## 4. ENTREPRENEURSHIP DEMOGRAPHICS

*Among indicators of innovativeness there are only small differences between activity of the genders with respect to: how many customers find products new, how many businesses offer competitive products, and how many firms offer the same products.*

## 4. ENTREPRENEURSHIP DEMOGRAPHICS

*Social entrepreneurship.* The 2014 survey included a survey of activity in start-up of activates with a goal of social benefits. Among respondents, 8.6% identified such initiatives. About half of these were already identified under TEA. Most questions seeking more detail about these activities did not command high response rates. The 2015 survey did not include the social entrepreneurship questions.



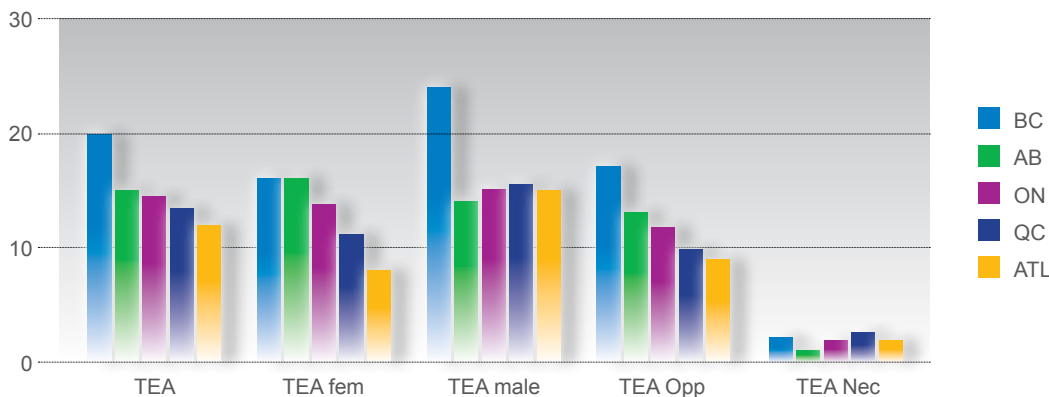
*Exigence Technologies is a material science firm applying the world's most advanced science to solve industrial contamination and hygiene challenges. The firm's rechargeable, self-disinfecting coatings can eradicate bacteria and fungi 100X faster than the current market leading technology, without releasing toxic chemicals or creating resistant bacteria. Exigence is creating value by working closely with the world's largest companies in food processing, agriculture biosecurity, water treatment, and oil & gas to apply the technology breakthrough to existing market opportunities and challenges, ensuring customers and channel partners in the process. Zach is the founder and leader of Exigence Technologies.*

Zach Wolff  
Founder  
Exigence Technologies

## 5. ENTREPRENEURSHIP BY PROVINCE

An important characteristic of Canada is that it is a nation of regions. Economic structure, culture and geography vary widely. Consequently, an analysis of Canada cannot be complete without some comparative data for provinces. Where the number of entrepreneurs identified in the national survey exceeded fifty, the provincial component of the national values reported above are collected in Figure 5.1 as the percentage participation in each province or for three Atlantic provinces (NL,NS,NB) aggregated. The figure shows the early stage entrepreneurship rates (TEA) and the breakdown by gender. As well, the reports of motives of opportunity vs. necessity are noted. The number of significant figures is adjusted to reflect error estimates. The report is based on two significant figure data except in the case of the two large provinces of Ontario and Quebec where values are calculated to three. This compares Atlantic Canada as a group, two large central Canadian provinces (one French speaking and one mainly English speaking) and two larger Western provinces (one an interior resource economy and one a coastal resource economy.) As in past years, the highest TEA rates decline west to east. In Alberta and Ontario female and male entrepreneurship rates are close and the female rate in BC matches AB. These are responsible for the female rate across Canada being closer to the male rate than is the case in other developed countries of the *innovation economy* group. The very high rate for male entrepreneurs in BC is quite different from results of the previous two years. It may reflect a fluctuation of limited significance.

**Figure 5.1 Early Stage Entrepreneurship (TEA %) Related Parameters by Province.**

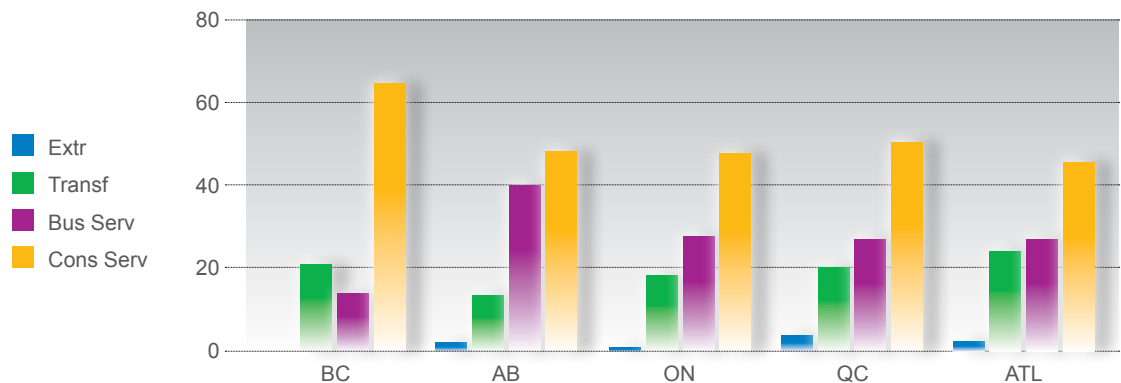


The share of opportunity motive follows the trends of overall TEA.  
Necessity motivation remains low

## 5. ENTREPRENEURSHIP BY PROVINCE

Turning attention to entrepreneurial employees (EEA) – the intrapreneurs – a different picture emerges. The rate of initiation of novel initiatives for their principal employer remains within plus or minus 1% of the national value of 10.1% across the country. Some differences among provincial economies are revealed by examining the distribution of entrepreneurial activity over the four sectors used for GEM data: the extractive (Extr) centering on agriculture and mineral resource extraction, the transformative (Transf) which includes manufacturing, business oriented services (Bus Serv), and consumer oriented services (Cons Serv). The distribution over these areas are shown for each of the regions in Figure 5.2

**Figure 5.2 Distribution of Activity Over Four Sectors (%) by Province**



Levels of transformative (e.g. manufacturing) entrepreneurship are fairly even across the country. BC has a high level of activity in consumer oriented services in contrast to Alberta's high level in business oriented services. With low extractive activity, it is likely that new smaller businesses serving the resource industry are in the business services category. All but BC are below 50% in consumer services in contrast to the majority of other jurisdictions in the reference group above.

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

The Canadian framework conditions that create the environment for entrepreneurship are probed by the National Experts Survey (NES). Forty-two experts from nine professional perspectives responded to a series of *statements* used in the global NES study. These statements express GEM formulations of circumstances favourable to entrepreneurship. The experts identify how *favourable* conditions in Canada are by rating the statements on a new nine point scale:

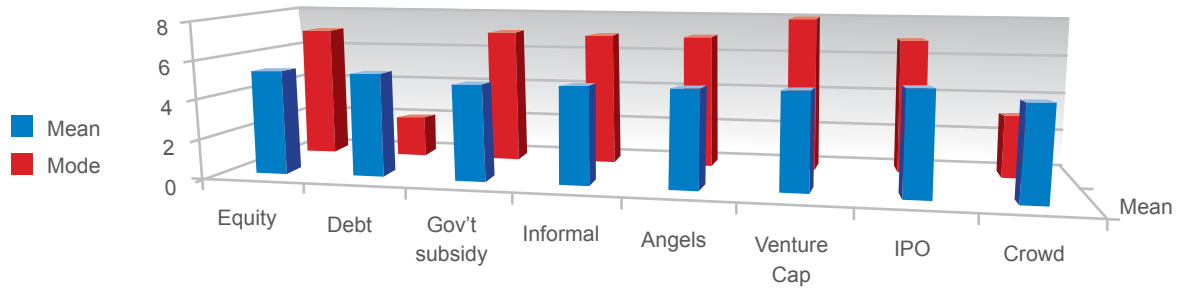
1. Completely false
2. False
3. Moderately false
4. Somewhat false
5. Neither true nor false
6. Somewhat true
7. Moderately true
8. True
9. Completely true

These are coded on the 1-9 scale. Discussion here will report the *mode*, the most probable value, which treats the options as ordered categories, and the *means* that assume a quasi-continuous underlying variable (e.g. expert satisfaction) with equal intervals. Mean scores above 5 indicate *some satisfaction* with the affirmatively worded statement on one of the conditions favourable to entrepreneurship. An alternative view is given by the *modes* that identify the evaluation of the statement given by the *largest number* of experts, a convergent group within the panel. The survey has been carefully validated for quantitative significance and international comparability by members of the GEM consortium. Finally, the experts provided open ended comments that were coded into categories.

### 6.1 FINANCE

Availability of finance is, of course, critical. The population survey has provided one possibly positive sign, the relatively high incidence of informal investing. However this needs to be put in the context of the alternatives of *equity, debt, government subsidy, informal investors, professional angels, venture capital, IPOs and private lenders (crowdfunding)*. The informal investors identified in the population survey form a part of the categories here of informal investors, private lenders (crowd), and professional angels. Questions to experts asked whether each of these was *sufficient* to Canadian needs. The score of 5 represents neither true nor false where 1 represents completely false and 9 completely true. The mean gives insight on balance of opinion and the mode emphasizes where a major group is converging. Finance question scores are summarized in Figure 7.1.

Figure 6.1 Sufficiency of Financial Sources



## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

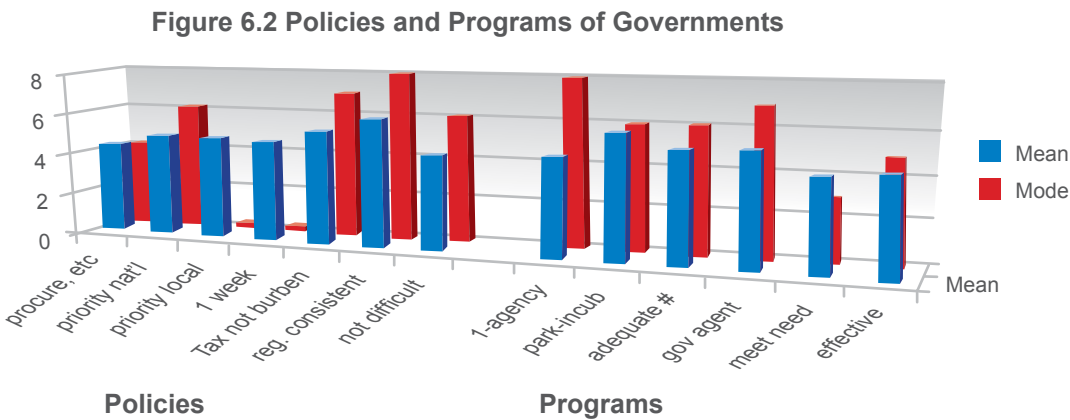
On balance, expert opinion is positive, with the mode of ‘moderately true’ of sufficiency in five of the eight cases. Means are near neutral to slightly positive. Only in the case of Debt and informal lenders (crowd) funding did the experts arrive at a false side mode. There is some doubt as to whether IPO funding is important to first stage new firms. The conclusions here should probably be interpreted with an eye to analysis in the EY G20 Entrepreneurship Barometer<sup>24</sup> which finds Canada among the most favourable countries for finance, with the cost of starting a business dropping by a factor of two in recent years. Data from the population survey (APS) includes evidence about informal business angels who have contributed in the last three years to a venture not their own and not via share or mutual fund purchase. This can account for a part of the informal investors and professional angels evaluated by the experts. The participation rate in Canada was 7.1% which compares favourably to US and Australian rates. Levels of investment were reviewed in Table 2.5.

## 6.2 GOVERNMENT POLICY AND PROGRAMS

Government policies were probed on five aspects:

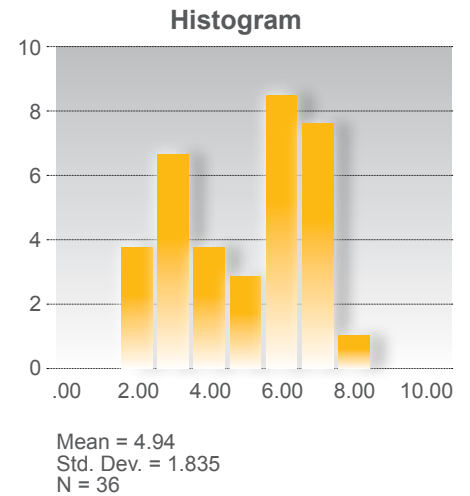
- that government policies (e.g. procurement) consistently *favour new firms* (procure, etc.),
- that the *support* of new and growing firms is a *national*, federal government, high priority (priority Nat'l),
- that support for new and growing firms are a high priority for *local governments* (priority local),
- that new firms can get required permits and licences in about a week (1-week),
- that the amount of *taxes* is NOT a burden for new and growing firms (tax not burden).
- Taxes and other regulations are applied in a predictable and *consistent* fashion (reg consistent)

Means and modes on the 1-9 scale are shown in Figure 7.2 along with data on government programs. In the policy set, two modes are not reported. The distributions were at least bimodal.



Mean scores lean to the negative side. However, consistency of regulation, the suggestion that taxes are NOT a burden, and that navigating the bureaucracy is not difficult receive a mean score tending toward 'somewhat true' and favourable modes. The federal

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.



In my country, the support for new and growing firms is a high priority for policy at the national government level.

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

*The experts believe policies such as procurement do not consistently favour new and growing firms. The use of procurement is one of the strong tools available to governments to support innovation, but seem to be hard for Canadian governments to master.*

government's granting priority in programs to young and growing firms received a positive mode with negative sentiment strongly reported. The bimodal histogram appears on the right above. For priority given by local governments, (in the Canadian context both provincial and municipal or both), to new firms receives a mode of 6, 'somewhat true', with similar response rate at 3 'partially false' with a slightly negative mean, reflecting a split opinion. The experts believe policies such as procurement do not consistently favour new and growing firms. The use of procurement is one of the strong tools available to governments to support innovation, but seem to be hard for Canadian governments to master. Issuing permits and licenses is *not* seen as timely ("within a week"). This is in contrast to conclusions drawn by EY<sup>26</sup>). This connects to an ongoing government conversation in Canada about reduction of 'red tape'. Experts feel reduction should continue. The absence of modes for government promptness (1 week) and small and growing firm priority in policy at local (provincial, municipal) in the chart reflect the bimodal character of the distributions.

Government policies were probed for six characteristics:

- a wide range of services for new and growing firms can be obtained through a single agency (1-agency)
- science parks and incubators provide effective support (parks-incub)
- an adequate number of program for new and growing firms (adequate #)
- people working in government agencies are competent and effective in provision of support to new and growing firms (gov agents)
- those needing government help for a new and growing business can find what they need (meet need)
- programs supporting new and growing firms are effective (effective)

The suggestion that young and growing firms can access services through a single agency received a mildly positive rating with a mode of 8 (true), but with signs of a bimodal distribution. Provision of effective support for science parks and *incubators* is rated 'somewhat

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

true' (6) by the largest number (with the mean at 5.6). The adequacy of the number of programs for the small and growing firms is similarly judged with the mode at 6 and the mean at 5.2. Government workers (gov agents) are judged netter contributors (mode of 7) and as more or less 'competent and effective in supporting new and growing firms' (mean 5.3). The question of satisfying needs draws a low mean and a higher mode indicating a significant split of opinions. What is notable on several of these questions is a group with a fairly strong negative opinion (1 or 2), suggesting some elements of frustration. The last two issues, whether needs are satisfied and whether programs are effective for the small and growing firms both are rated low. The needs issues have a mode of 2 and a mean of 4.2, while with the effectiveness issues, the mode is 3 and the mean is 4.5. It is difficult to make general suggestions since these opinions apply to the federal, the provincial, and the local governments. There does seem to be a need for government focus, which should probably relate to strong coordinated action for innovative firms with growth potential in preference to support to start up in general.

Expanded activity of the Business Development Bank of Canada (BDC) is foreseen. The BDC plays an important role in helping Canadian small and medium-sized enterprises grow and become more competitive, innovate, increase their efficiency and explore new markets, at home and abroad.

### 6.3 EDUCATION AND TRAINING

The statements presented to experts look to issues about education and training as appropriate to each level.

- For the primary and secondary levels: the initial issues are *encouragement of creativity, self-sufficiency and initiative (creativity)*

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

These characteristics are widely recognized as a commitment of school systems.

- At later (esp. secondary), introduction to *market economic principles (economics)* is added
- Finally, adequate secondary schools attention to *entrepreneurship and new firm formation* is suggested

The ratings decline over these three goals for the primary and secondary system with modes of 6, 5, and 3. *Clearly, Canadian school systems are not meeting the expectations GEM proposes in any area beyond basic creative attitudes, self-sufficiency, and initiative.* However, these three are central to personal development and may require more early and continuing attention than do the specific skills. The core characteristics may provide a good base for development of entrepreneurial thinking.

At the post-secondary level a distinction is drawn between:

- college and university programs in general (post sec)
- and business and management education (management)

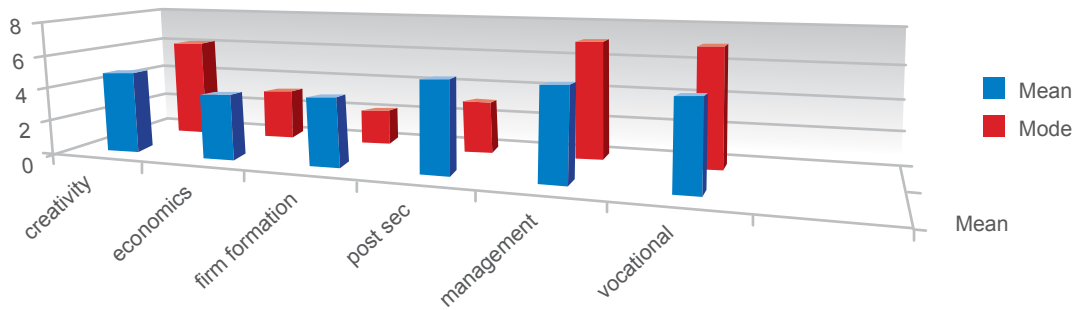
In these domains the statement evaluated is that preparation is adequate for starting up and growing new firms. The mean score is 5.3 and the distribution is binary (mode 3 or 7). A similar statement directed to business and management education receives a similar mean score (5.3), but a mode of 7.

Finally, a similar statement directed toward:

- professional, continuing and vocational education (evocational).

This draws a mean score of 5.1, but with the mode a 7.

Figure 6.3 Education and Training



The standards set by the phrasing of GEM propositions indicate that low scores require increased focus on entrepreneurial thinking and entrepreneurship in primary and secondary education, where the existing attention to creativity, independence and initiative are recognized to a degree. At the post-secondary level, experts appear to recognize the significant new initiatives arising in post-secondary institutions, but still find substantial needs at all levels with strength recognized in the spheres of business and management, and vocational, professional and continuing education.

Expert opinion is clear that improvements are necessary, but it seems important to go beyond the coverage of the GEM propositions. *Policy for entrepreneurship education must be entrepreneurship for innovation and sustainability. Moreover it must recognize the importance of social entrepreneurship, and ‘intrapreneurship’, (the entrepreneurial employees within firms).* This last may be a weak point for Canada according to the intrapreneurship (EEA) statistics reported above,)

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

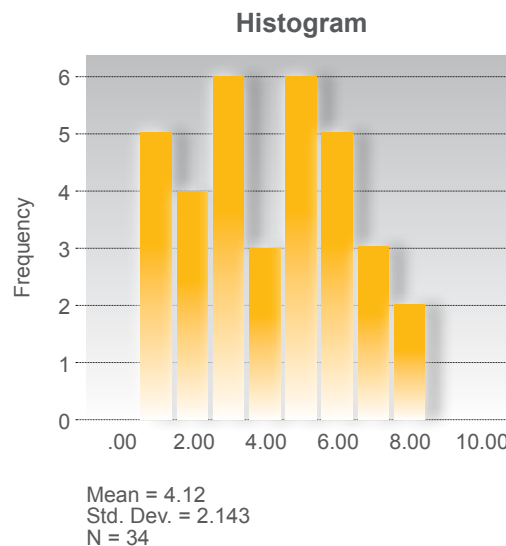
## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

### 6.4 R & D TRANSFER

R&D transfer policies were probed to cover five aspects using six assertions:

- New Science & Technology (S&T) and other knowledge are efficiently transferred from universities and public research centres to new and growing firms (eff transfer);
- Growing firms have just as much access to new research and technology as large established firms (lrg-sml equal access);
- New and growing firms can afford latest technology (new afford);
- There are adequate government subsidies for new and growing firms to acquire technology (gov't. subsidy);
- The S&T base efficiently supports the creation of world-class new technology based ventures in at least one area (world class);
- There is good support available for engineers and scientists to have their ideas commercialized (idea commercialize).

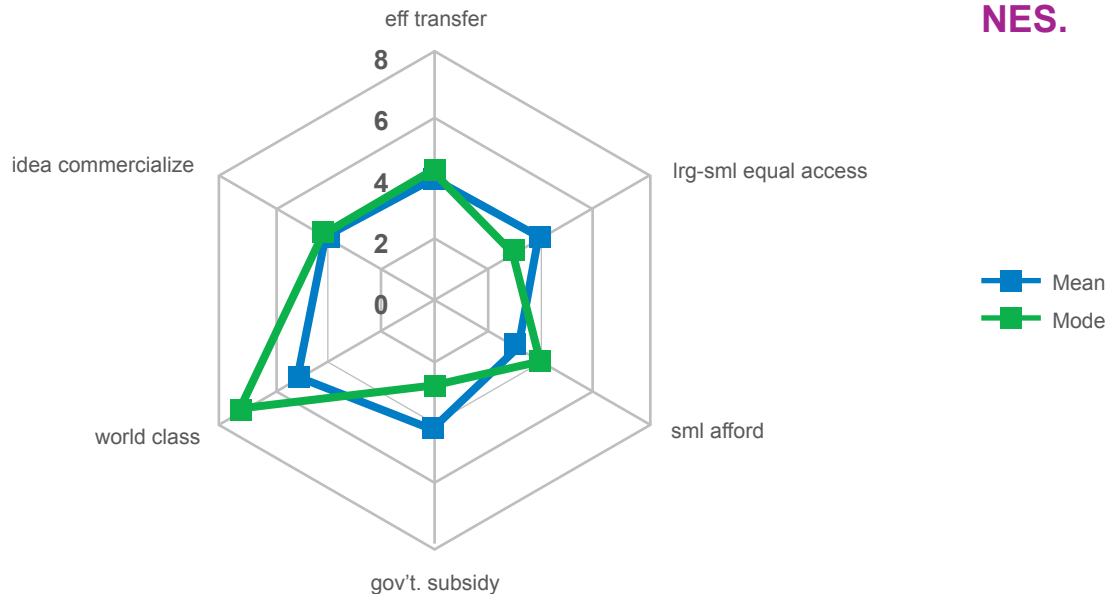
The data in Figure 6.3 show significantly negative reactions with respect to the first, third and fourth of these propositions. Both public research centres and larger firms are not judged efficient at making new research and technology available to small and growing firms, nor is the government subsidizing access. These results are consistent with the low level of use of the latest technology by entrepreneurs surveyed (see Chap. 3). There is more optimism about Canada's capacity to support a world class technology firm and for Canadian scientists and engineers to commercialize.



In my country, new and growing firms have just as much access to new research and technology as large, established firms.

The question of equality of access to knowledge between large and small firms divided the experts. A small histogram is shown on the right. The larger group had negative attitudes.

Figure 6.4 R & D Transfer



## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

### 6.5 COMMERCIAL AND SERVICE INFRASTRUCTURE, MARKET OPERATION

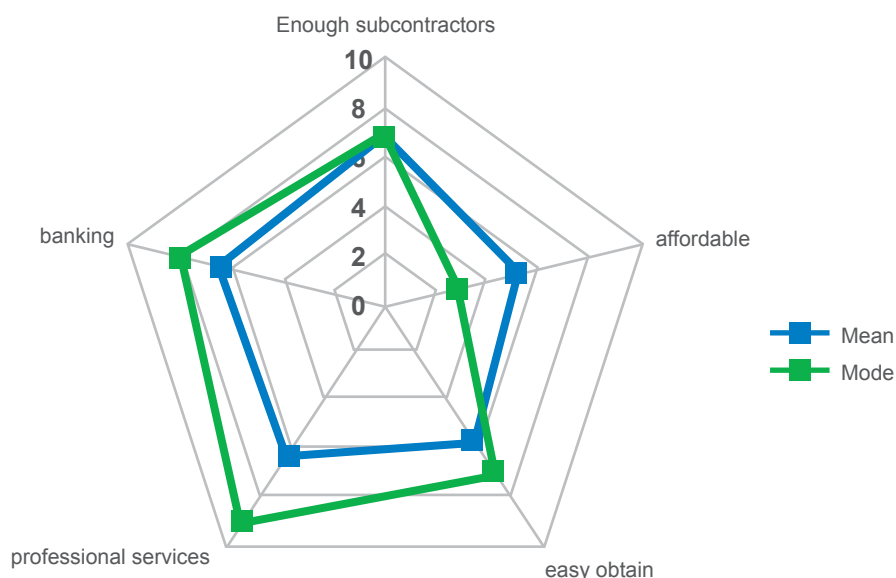
In the important area of services and infrastructure, five needs are addressed:

- Subcontractors, suppliers, consultants -
  - There are enough (enough, subcontractors)
  - Small and growing firms can afford them,(affordable)
  - It is easy for small and growing firms to get these support services; (easy to obtain)
- It is easy for small and growing firms to get good professional legal and accounting (professional services);
- It is easy for small and growing firms to get good banking (banking).

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

Experts give positive responses to supply of subcontractors, etc., ease of access to subcontractors, professional legal and accounting, and banking services. The affordability, of subcontractors, suppliers, and consultants is seen as the problem area. The distribution of expert opinion does split on this and the distribution is bimodal. This probably reflects the common lack of resources facing a start-up, and whether or not this lack affects the response about affordability.

Figure 6.5 Access to Commercial Services



### 6.6 MARKET DYNAMICS

Market structures and market access are major framework factors influencing new firms. These factors include

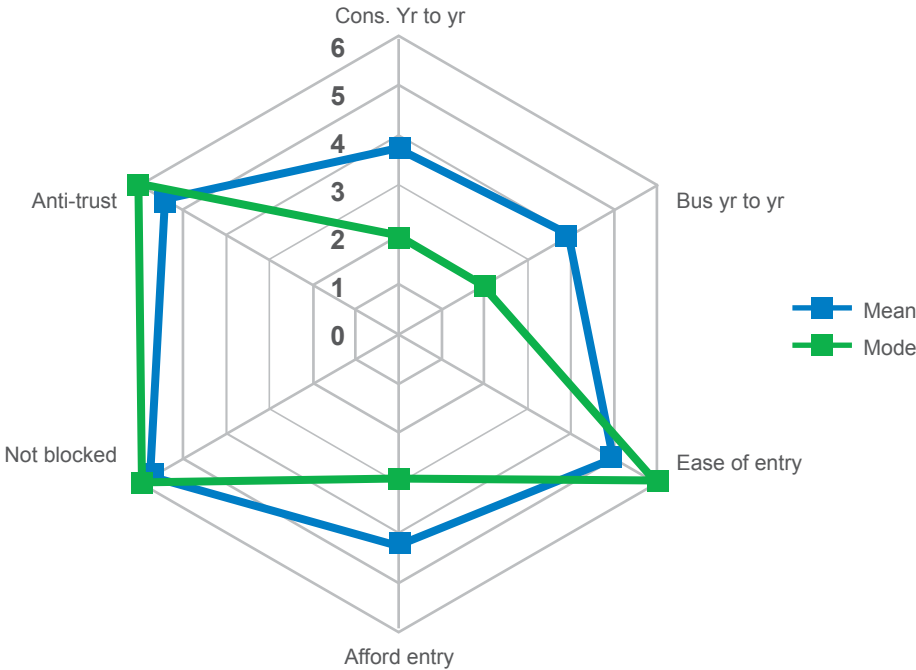
- Consumer market volatility (Cons yr to yr)
- Business market volatility (Bus yr to yr),
- Ease of entry to new markets (Ease of entry),
- Can afford entry (Afford entry)
- Not unfairly blocked by established firms (Not blocked)
- Effective and enforced anti-trust (competition) legislation (Anti-trust).

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

The expert evaluations of market dynamic are summarized in Figure 6.5. Markets are seen as moderately volatile, with cost of entry (viewed a bit more favourably last year) being more of a barrier. Curiously, established firm unfair resistance is seen quite variably with similar numbers of respondents indicating 2 (false), 5 (neutral), 6, 7 (partially trues) and even 8 (true). The mode is split between 5, 6 and 7. This suggests that there are conditions that need further investigation. Competition legislation is seen as moderately effective. The issue of unfair blockages by established firms.

The affordability ratings are again interesting disagreement with data from the EY G20 Entrepreneurship Barometer<sup>24</sup>, that founds Canadian cost of entry low and reports a recent sharp decline.

Figure 6.6 Market Dynamics for New and Growing Firms



## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

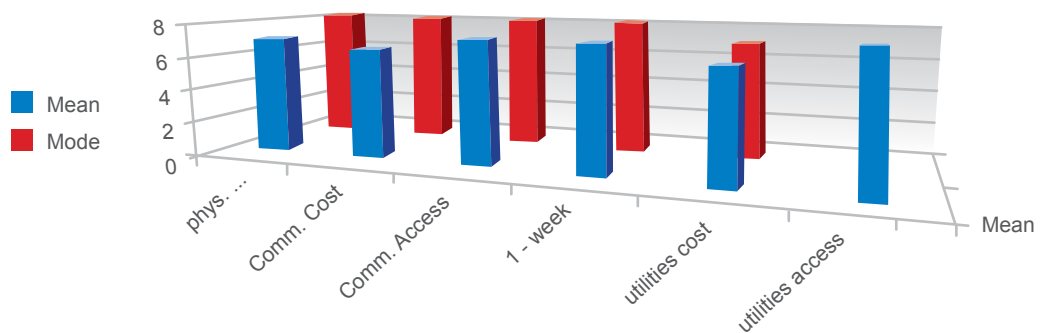
### 6.7 PHYSICAL INFRASTRUCTURE

Physical infrastructure for new and growing firms is appraised by the experts' views of five statements:

- Physical infrastructures provides good support;
- It is not too expensive to access good communication (phone, internet, etc.);
- Good access to communication is available to new firms;
- A new firm can get access to communication (iPhone, etc.) in about a week;
- New and growing firms can afford basic utilities (gas, water, electricity, etc.);
- New and growing firms can get good access to basic utilities.

In parallel to the last two years, this is the most favourably rated area. All of these were found moderately true or true in the Canadian environment. Modes for the first four were 8 (true). The last two dropped to 7 (moderately true). Means remained at 7 or above except for the two involving cost which dropped to six and one half. Here there is more than just concern for new firms limited resources. Much of the Canadian communication system is high cost. The mode for utilities access is equally at 7 (moderately true) or 8 (true), so it is missing from the figure.

Figure 6.7 Physical Infrastructure

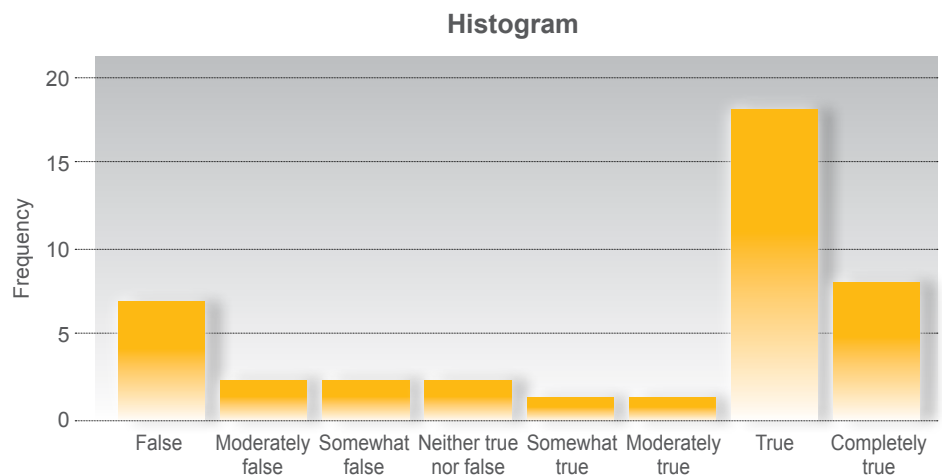


## 6.8 CULTURAL AND SOCIAL NORMS

The fundamentals of Canadian national culture are regarded as reasonably favourable for entrepreneurship. The opinions of respondents to the Adult Population Survey above are perhaps more positive than the view of the experts. Three statements command a reasonable degree of assent:

- Canadian culture is highly supportive of individual success achieved through personal effort (Ind. Success);
- Canadian culture emphasizes self-sufficiency, autonomy and personal initiative (autonomy);
- Canadian culture encourages entrepreneurship and entrepreneurial risk taking (risk);
- Canadian culture encourages creativity and innovativeness (innovativeness).
- In Canadian culture, responsibility for managing his or her own affairs lies with the individual, rather than the collective. (managing own life)

Modes of 7 (moderately true) are reported for all of these cultural aspects except the last, which received more responses for 8 (true). However, there was an interesting split in the evaluation with a significant number of firmly negative responses. This is shown in the histogram on the right. This probably reveals a fundamental split of political values.



In my country, the national culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her own life.

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

There is a second dimension of the social environment. Do social, political and cultural conditions in Canada work to support entrepreneurial activity to solve social and environmental problems? Some of the questions are directed more at economies and states in the factor and efficiency groups, but at least four of the questions are quite relevant to an innovation driven economy and certainly, Canada. The propositions are quoted exactly here. The entrepreneurship expert panel responses follow each question.

- In Canada, the government is able to bring together potential entrepreneurs, businesses and civil society organizations around specific social, environmental or community projects. Mean 4.5 Mode 4 (somewhat false)
- In Canada, consumers are putting pressure on businesses to address social and environmental needs. Mean 6.2 Mode 7 (moderately true)
- In Canada, there are sufficient private and public funds available for new and growing firms that aim at solving social and environmental problems. 3.8 Mode 2 (false).
- In Canada, there is a lot of media attention for new and growing firms that combine profits with positive social and environmental impact. Mean 5.1 Mode 4 (somewhat false)

These responses seem to suggest that it is *not easy to bring groups including business and entrepreneurs together around specific collaborative* initiatives of the type that an optimist about sustainable development recommend nor is it easy for social and environmental initiatives to raise required funds. It is, however, recognized that some significant consumer interests are promoting social and environmentally valuable ventures. There is probably room for entrepreneurship policy to influence this balance.

## 6.9 AGGREGATE EXPERT OPINION OF MAJOR FRAMEWORK CONDITIONS

Finally it is interesting to aggregate the separate issues in each of the areas above and give an overall overview of expert opinion in each of the broad framework area from *finance* to *cultural and social norms*. The methods of aggregation are slightly different for “Means” and “Modes.” *Aggregate means* are calculated by averaging the means in the separate items (e.g. debt or venture capital in finance) with equal weight to all of the sub-areas in calculating the aggregate (e.g. finance). *Aggregate modes* are calculated by taking the matrix of all responses in a major area (e.g. finance) and searching the overall mode. The sections above aimed at collecting expert opinion about the major framework conditions GEM defines. These aggregate means and modes are the effort to gain an overview of each of these key conditions for entrepreneurship.

- *Financial*
- *Gov’t policies*
- *Gov’t programs*
- *Education and training – primary, secondary*
- *Education and training – post-secondary, vocational*
- *R&D transfer*
- *Commercial services infrastructure*
- *Internal market dynamics*
- *Physical infrastructure*
- *Cultural and social norms (for entrepreneurship)*

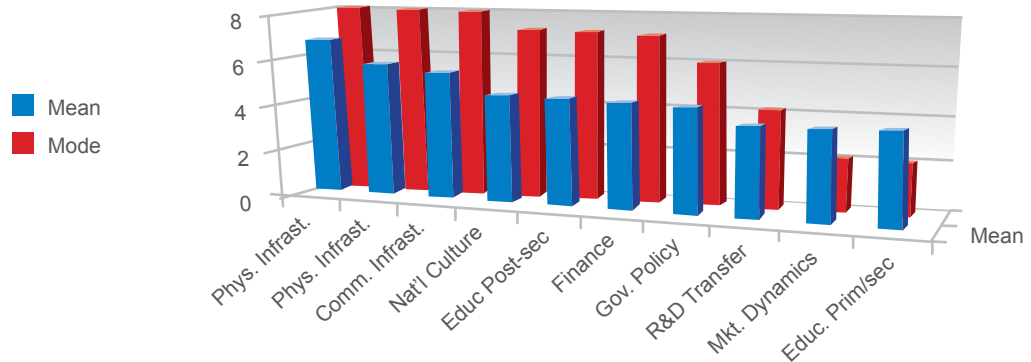
The ordering of modes and means for these grouped variables are shown in Figure 6.7. As was the case last year, the highest rated framework condition in Canada is physical infrastructure for the young and growing firms. This is followed by professional and commercial infrastructure, again as it was last year. Those two and the Canadian social and cultural environment share favorable global modes over the aggregated items of ‘*true*’. Mean scores for the second and third place them near neutral indicating that there are experts who are not satisfied.

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

Post-secondary education, finance, government policy and government programs are found to be more or less satisfactory in aggregate. The weak point are primary and secondary education, and R&D transfer. Market dynamics is a special case. The first two variables deal with market volatility, which might not be considerable desirable. If scoring is split between the first two variables and the last three, it is found that the first two drive the mode of two. The last four have a mode of 6 ('somewhat true').

Figure 6.8 Mode and Mean Expert Rankings of Framework Condition Variables



The low rank of R&D transfer is consistent with Canadian conventional wisdom, but the low ranking of primary and secondary education might be the subject of controversy around the concept of 'entrepreneurial thinking' as opposed to the specific question of study of firm formation.

### 6.10 OPEN-ENDED COMMENT: CONSTRAINTS, FACILITATING FACTORS AND RECOMMENDATIONS

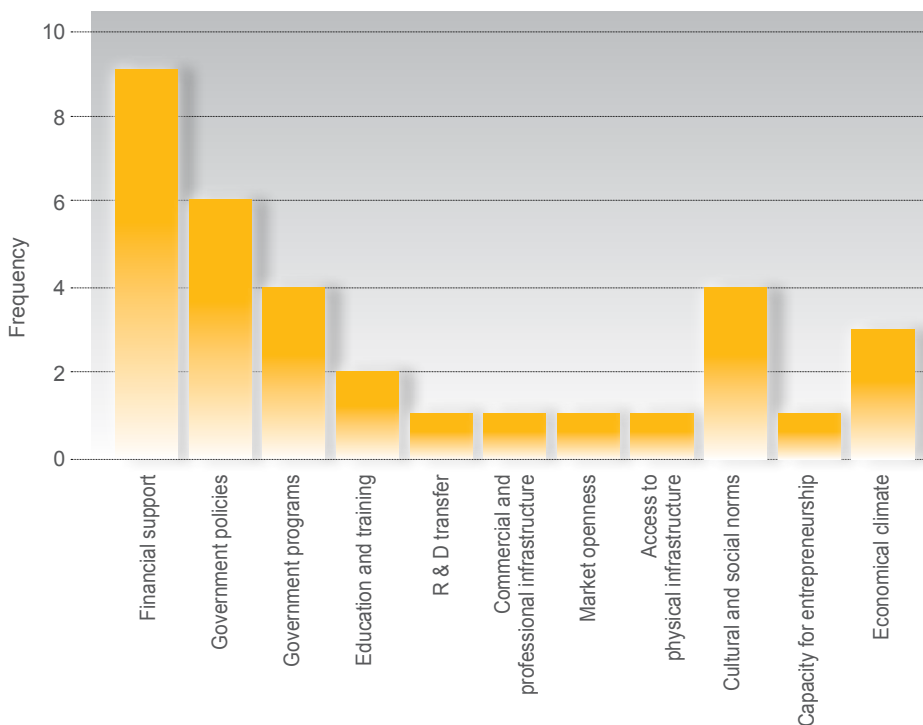
After completing the structured questions, NES expert respondents were asked to provide open-ended comments identifying *constraints* entrepreneurs face, *facilitating factors* supporting entrepreneurship, and their own *recommendations* for modification of framework conditions. A wide variety of ideas emerged. Their richness cannot be represented here, but the responses were coded as fitting one of

fourteen topics and the focus of concerns can be recognized in the frequency of mention of each of these topics. In each case, experts were asked to give three ideas in a priority order of first in importance to third in importance. A relatively small number of topics dominated these responses.

Figure 6.9 shows the distribution of area of first importance *constraint* in the expert responses. Finance, government policies and programs, and cultural/social norms for entrepreneurship are the areas cite frequently. If we turn to items of second level concern, the issues around cultural/social norms and education and training are prominent. The areas already mentioned are reinforced by responses at the third priority level. It is interesting to note that constraints associated with the cultural and social climate are not confirmed in the adult population survey of attitudes.

## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

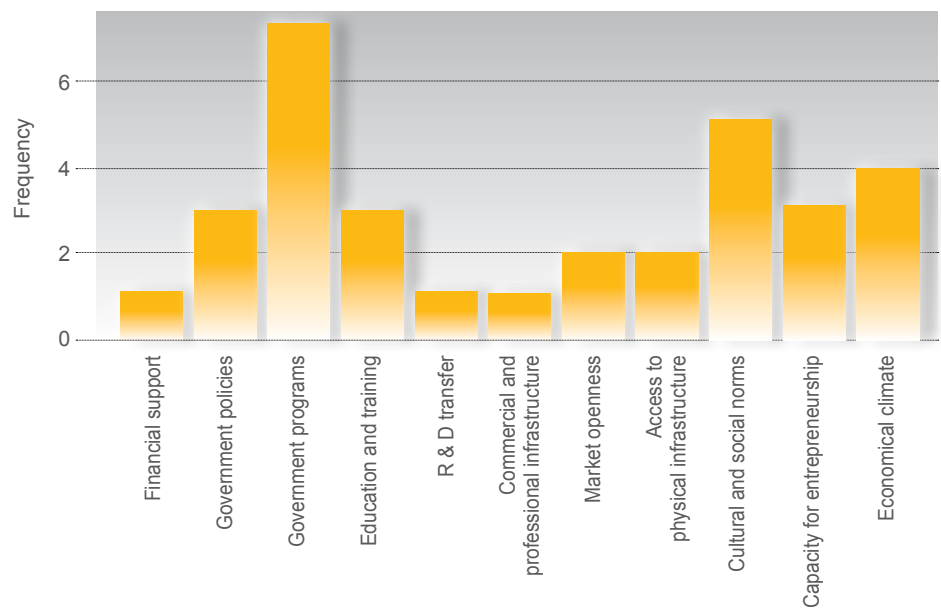
**Figure 6.9 First in Importance Constraining Conditions**



## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

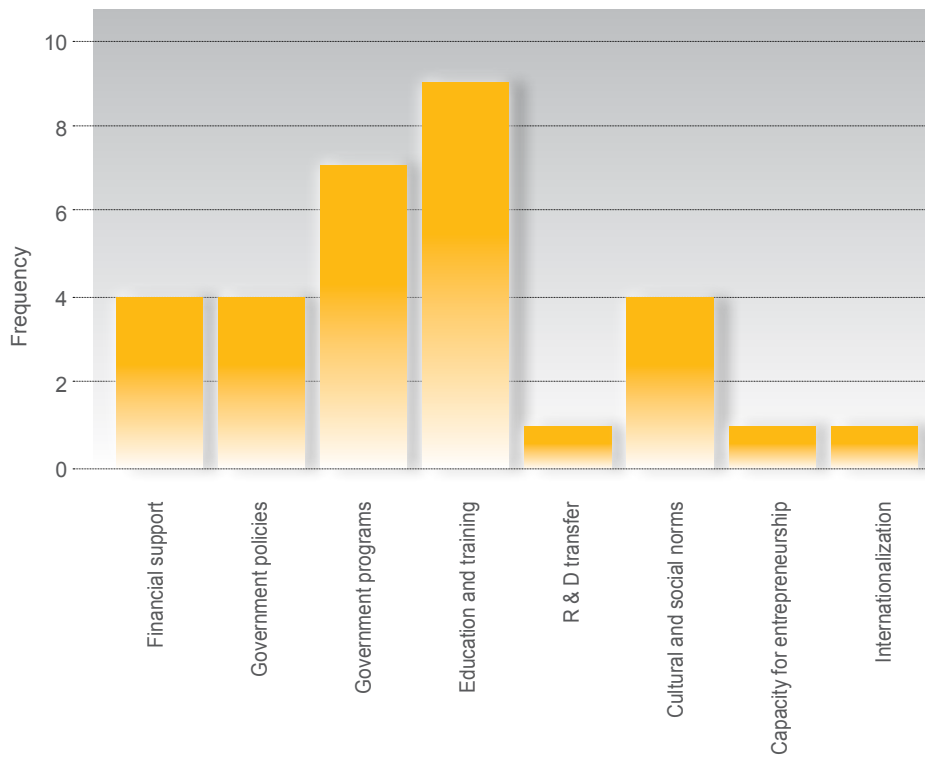
Turning to the question of factors that *foster* entrepreneurship, the first priority issues are reported in Figure 6.10. The distribution over factors is more even but government programs, cultural/social norms, and the economic climate are prominent. At the second level of priority, government program and education and training stand out as fostering factors. The third priority level reinforces education and cultural/social norms and adds capacity for entrepreneurship.

Figure 6.10 First in Importance Fostering Conditions



It is certainly logical to ask the expert panel for *recommendations* and some of the specifics influence the recommendations in this report. Figure 6.11 reports the areas, to which the highest priority recommendations were directed. From the areas of concern identified above, it is not surprising that recommendations about education and government were prominent.

Figure 6.11 First in Importance Expert Recommendations



## 6. EXPERT EVALUATION OF FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP: NES.

At the second level of priority, education was reinforced, at the third priority level, government and education were areas of additional recommendation, and recommendations related to cultural/social norms and capacity for entrepreneurship were notable.

## 7. CONCLUSIONS AND IMPLICATIONS

### CULTURE

In common with reference countries, the APS data continue to demonstrate wide public recognition of the opportunities for entrepreneurship, and the capacity (in contrast to expert opinion) to undertake ventures. If expert opinion is sound, it would appear that the broad population underestimates the challenges of firm formation. Entrepreneurship is seen as a good career choice and success delivers high social status. There is little reason for policy to further encourage an overall culture of entrepreneurship. Rather attention should be directed to high impact, quality initiatives, encouraging productive entrepreneurship and innovation.

### ACTIVITY

This year, Canada enjoys a small edge in TEA early stage entrepreneurship rate over all similar economies. In common with the other leaders, the US and Australia, 2014 data indicate a small, but possibly significant, increase in TEA. This present overall level is perhaps as high as is needed in a developed market economy. However, the TEA includes a higher number of nascent entrepreneurs than new businesses. The TEA is strongly reflecting the highest risk most vulnerable phase. Some other industrialized countries not so high in TEA sustain parallel levels of established businesses as the TEA leaders.

Canada's leading position this year is a consequence of the increase of women's entrepreneurship. In 2015 women's TEA was over 80% of the men's rate. The other leading countries have women's rates nearer 65% of men's, as did Canada fairly recently.

The analysis of sectors on a larger sample using three years of data reveals that a significant share of entrepreneurial activity is oriented toward health education and government. This provides some important insight into the nature of the service sectors, and may link to some degree to social entrepreneurship. Another aspect identifies the importance of hotels and restaurants, which no doubt accounts for some of the consumer service activity associated with high job growth aspirations. Some of this group are important to the tourist industry.

77  
*Canada's leading position this year is a consequence of the increase of women's entrepreneurship. In 2015 women's TEA was over 80% of the men's rate. The other leading countries have women's rates nearer 65% of men's, as did Canada fairly recently.*

## 7. CONCLUSIONS AND IMPLICATIONS

### FINANCE

Expert opinion suggests that the framework conditions surrounding finance are somewhat improved. However, ratings are not high and experts identify finance constraints in open ended comment. Finance remains an important area for policy development, especially in a fluid era with the emergence of such phenomena as crowd financing through social media. The special topic this year on informal investors gives support to the view that family, friends, and colleagues are a critical source for early stage activity.

### GOVERNMENT PROGRAMS AND POLICY

Experts offer a variety of suggestions. Perhaps the most important aspect for policy is assimilation of the consequences of the recent research<sup>25</sup> showing that governments play a crucial role in accepting the early phase risks of transformative innovation. For example, Programs at all levels could promote the rapidly emerging green technology industry in Canada as a transformative sector. Model programs include the US DARPA and DARPA-E and Canadian experience is found in the cases of AOSTRA in Alberta and AECL. Start-up businesses are not the only focus that government policy should include. The employee entrepreneur is an important contributor identified in the GEM survey in a manner analogous to the characterization of the individual entrepreneur rather than the firm being the value of the GEM study of start-up.

### EDUCATION

The Canadian education systems, from the earliest levels, are suitably creativity oriented, but lacking in specific basic economic education and introduction to entrepreneurship itself. Encouragement to entrepreneurship education is a recognized need. An improving expert appraisal of the post-secondary level may reflect a stirring across Canada to improve university level entrepreneurship education. However, it is important to focus on the overall goals of public policy: employment, growth, sustainability and quality of life. Entrepreneurship education must orient attitudes toward 'productive entrepreneurship' (Baumol) and innovation. As Shane<sup>19</sup>

## 7. CONCLUSIONS AND IMPLICATIONS

has shown, the simple act of entrepreneurship does not produce positive economic outcomes in many cases. The weakness of employee entrepreneurship in established firms (EEA) emphasizes the broad significance of entrepreneurial thinking. Thus, the goal for education is fostering an *entrepreneurial attitude* supporting productive entrepreneurship whether in founding innovative firms, engaging in social entrepreneurship, or recognizing innovative opportunities in established firms. The need is for cultivating entrepreneurial thinking and the skills to develop initiatives of all types. At the post-secondary level this requires interdisciplinary initiatives.

### INNOVATION

There is a measure of innovation in every entrepreneurial act, an opportunity has been recognized. However, substantial innovation is not commonly achieved by firms that remain small. A key indicator is growth aspiration. It emerged above that a significant number of new initiatives intend job growth, but large job growth is rare and conclusions based on the small number of respondents with high growth ambitions are anecdotal at best. Some cases in the data with high growth ambitions were described above and in the 2014 report. Beyond this a good share of TEA respondents indicated products or processes new to all or most customers. The sector distribution, in Canada has lesser emphasis on consumer services (the area where counterproductive entrepreneurship<sup>13</sup> is most likely to arise), than that of comparable countries. This suggests the presence of activity in areas favourable for innovation, especially including the “knowledge intensive business services” (KIBS) sector. The negative aspect is the comparatively low level of entrepreneurial employee activity (EEA).

A key document on innovation in Canada was published in 2013<sup>26</sup> by the Ottawa based Institute for Science and Public Policy. Developed by a group led by Richard Hawkins, it was circulated for endorsement by the majority of leading innovation scholars in Canada. It argues for uniquely Canadian innovation policy noting:

## 7. CONCLUSIONS AND IMPLICATIONS

*“We should remember Canada’s great achievements as an innovative society. Canada became an agricultural superpower out of soil that Captain Palliser concluded would never grow anything. The streets of Quebec gave birth to the Cirque du Soleil, making Canada, of all places, the hub of a global multi-billion dollar circus arts industry. The humble snowmobile gave rise to one of the largest civil aviation and public transport clusters in the world. Canada is one of the world’s largest exporters of English and French language media content. It has a thriving biotech sector. It manufactures oils out of [both] sand and seeds.”*

The document reminds us that innovation is not by any means technology dominated. It also points out the merits of policy focus on Canada’s geopolitical-economic ecosystem. This should favour policy attention to initiatives that are ‘sticky’ to the environment and not simply the internationally ‘hot’ areas.

### RESEARCH AND DEVELOPMENT

Basic R&D is strong as the Council of Canadian Academies study, *The State of Science and Technology in Canada*<sup>27</sup>, shows:

*With less than 0.5 per cent of the world’s population, Canada produces 4.1 per cent of the world’s research papers and nearly 5 per cent of the world’s most frequently cited papers.*

However, Industry Canada’s Science Technology and Innovation Council<sup>28</sup> took a more pessimistic view suggesting Canada is ‘treading water’ with major concerns for business performance of Research and Development (BERD) as a share of GDP and business investment in Information and Communications Technologies. The NES experts are aware of both of these views and generally give a consistent appraisal of the entrepreneurial situation. Their main points would recommend action to make science and technology knowledge more readily available to small growth oriented firms. One of the most powerful drivers of innovation is ‘spillover’ of knowledge not used in the core business of mature firms to support founding new firms able to exploit the knowledge in support of a new direction.

## 7. CONCLUSIONS AND IMPLICATIONS

### CULTURE AND SOCIAL NORMS

There is a curious split. The survey of the general population seems quite positive about the opportunities, whether entrepreneurship is a good career, and how it is treated in the media. Nevertheless, some experts express significant reservations while others see aspects of culture as facilitating factors. This is, perhaps, best understood in distinguishing types of activity. The positive public attitude is probably a mix of the sense of opportunity to start a small (local?) business and admiration of the highly successful ‘celebrity entrepreneurs’. In contrast, expert opinion is more concerned about the climate of support for a middle ground entrepreneur who is creative even if not spectacular. Perhaps the best answer to this dichotomy is the recommendation from Shane<sup>17</sup> that governments sharpen their focus on scalable, sustainable, growth oriented, initiatives.



*After a catastrophic first experience in business, Nicolas decided to launch PUR vodka in 2006. Today known as one of the best vodkas in the world, PUR vodka has won more than 40 prestigious international awards including 4 times world's best vodka ! A true success story, Nicolas is the CEO of PUR vodka and romeo's gin. A couple months ago, he launch his first book, «PUR entrepreneur» which became best seller only after a couple of weeks. A very popular keynote speaker, Nicolas travels the country and abroad to share his passion about crazy ideas and entrepreneurship !*

Nicolas Duvernois  
President & CEO  
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**THECIS** (The Centre for Innovation Studies) is a not for profit organization devoted to study and promotion of innovation. Based in Calgary, Alberta, and Incorporated in 2001, it operates through a network of 35-40 **THECIS** Fellows.

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The 2015 GEM Canada report is available at [www.gemcanada.org](http://www.gemcanada.org)

The 2015 GEM Global report is available at [www.gemconsortium.org](http://www.gemconsortium.org)

Although GEM data were used in the preparation of this report, their interpretation and use are the sole responsibility of the authors and the GEM Canada team.

In addition to the 2015 GEM Canada report, there will be provincial reports published for Alberta, Ontario, Quebec and Atlantic Canada. These will be available at [www.gemcanada.org](http://www.gemcanada.org) in due course.

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