Global Entrepreneurship Monitor

2015

Driving wealth creation & social development in

Canada

2016 GEM CANADA NATIONAL REPORT

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ABBREVIATIONS

Abbreviations as used in figures for country names from the *innovation driven* group.

Australia	AU	Netherlands	NL
Austria	AT	Portugal	PT
Canada	CA	Qatar	QA
Finland	FI	Slovenia	SI
France	FR	Spain	ES
Germany	DE	Sweden	SE
Greece	GR	Switzerland	SW
Hong Kong	HK	Taiwan	TW
Ireland	IE	United Kingdom	UK
Israel	IL	USA	US
Italy	IT		
Korea	KR		
Luxembourg	LU		

Why entrepreneurship? This analysis is designed to enhance understanding of innovative and productive entrepreneurship that can promote economic growth, job creation, sustainability, and quality of life. The 'ecology' in which these entrepreneurs operate is probed. In addition to attention devoted to new firm formation, activity to launch new directions within established firms is measured.

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) in terms of *attitudes, activities, and aspirations*. In this fourth year of renewed Canadian participation, some indications of trends over time can now be noted.

ATTITUDES

As is the case in other developed countries the Canadian population has positive attitudes toward entrepreneurship. It is viewed as a good career choice, and successful entrepreneurs are judged to enjoy high status. Almost 60% see good opportunities to start a business in the next six months, an attitude little changed by changes in the economic climate. Over 50% have confidence in their skills and knowledge to start a business, and no more than 44% are inhibited by fear of failure.

ACTIVITY

Early stage entrepreneurial activity: that is, activity in the last year to start a business (nascent activity) combined with activity as owner/manager of a business paying benefits to owners/manages for less than 3.5 years (baby businesses), comprises the Total Early Stage Activity (TEA) parameter. This parameter is the central GEM metric of entrepreneurial activity. Among advanced economies classified as *innovation driven* by the World Economic Forum, Canada's TEA rate of 16.7% of respondents is now the highest, followed by those of Australia and the United States. The survey also encounters a number of owner/managers of established businesses (EB) with lifetimes over 3.5 years. This group will also be dominated by small businesses.

EXECUTIVE SUMMARY

Canada's EB rate is 6.8% of respondents, which is lower than the EB rate in Australia or the US. Among innovation economies, correlation between TEA and EB is lacking.

A second dimension of entrepreneurial activity is creation of new ventures and directions within established, commonly larger, firms. Leadership of such activities for a principal employer is identified in the GEM survey leading to a rate of employee entrepreneurial activity (EEA), also called 'intrapreneurship.' The rate is 6.5% of respondents currently employed, placing Canada twelfth among the innovation economies. Among leaders in TEA, only Australia is also an EEA leader. This result is consistent with analyses that suggest Canadian businesses are weak in development of innovation strategies.

ASPIRATIONS

A number of questions probe aspirations for the state of the new business after five years. Most of these provide insight into the role the firms seek to play in the economy.

ENTREPRENEURSHIP IN THE ECONOMY

Job creation.

Almost a majority of new firms currently employ between one employee and five (47%) however, more than half of the early stage entrepreneurs declared that they expect to hire up to five employees within five years (58%). Twenty percent expect to create 20 or more jobs within five years. Self-employment is the five year goal of only about ten percent. In answer to a different question, nearly five percent project 'profound expansion' over five years.

Sectors.

GEM data groups new firms in four sectors: extractive (*e.g. mining, agriculture, etc.*), transformative (*e.g., mainly manufacturing*), business oriented services, and consumer oriented services. Internationally, consumer oriented services form the most highly populated sector. This is true for Canada this year with 48% of new firms in consumer services. This is higher than it has been in recent years where business oriented services competed for the top position.

Export orientation.
New Canadian firms have strong export orientation. Of the TEA respondents, 44% report some modest export revenue, estimated between one and twenty-five percent of total revenues. 20% project from 25% to 75% of revenue from export, and 13% anticipate more than 75% of revenue form export.

Innovation.
The most direct signals of innovation are offering new products or services in new markets. Among TEA respondents to the question, 'How many businesses offer the same product (service),' 37% replied 'many,' 53% replied 'some' and 9.4% replied 'none.' On the complementary question, 'How many customers will find the product (service) novel or unfamiliar,' 14% replied 'all,' 43% replied 'some' and 42% replied 'none.'

Technology.
A correlate of innovativeness is the use of contemporary technology. 17% of respondents report use of technology available only within the last year and 24% report use of technology between one and five years old. However, a majority do use only older technology. The Canadian data compare favourably with international levels of new technology use.

DEMOGRAPHICS

Age.
In Canada this year the age group with the highest TEA was the 25 - 34, with 22.3%. The rates decline sequentially for the 35 - 44 group, the 45 - 54 group, and the 55 - 64 age group. The TEA rates decline reaches 10.7% among the 55 - 64 cohort.

Alternatively, the data provide the percentages of the total TEA drawn from each age group. Adding the 18-24 age group contribution to that of the 25-34 age group shows that 36% of entrepreneurs are in this 17 year range of young entrepreneurs. A similar percentage of young entrepreneurs is found in the US and Australia. If we consider under 40 as the definition of young (a 22 year span), approximately 50% of TEA is in the younger share. The lead sector of activity in this younger

group is consumer services at approximately 60%. The older half is better represented in business services.

Finally, this year questions were put to the panel of experts (NES, see below) on the conditions for older entrepreneurs over 55. Experts agreed that our older population is healthier and living longer but suffers in the job market. Perhaps it is time to consider actively facilitating older entrepreneurship.

Education.
The striking feature of the results of study of TEA rate as a function of education is the fact that rate of entrepreneurial activity in each education cohort (from those with less than secondary through those with secondary diplomas to those with post-secondary credentials, and to those with post graduate experience) rises smoothly. The high rate from those with extended education suggests that the population has the knowledge to undertake sophisticated initiatives.

Gender.
The TEA rate among women is about 2/3 that of men, which is typical among comparison countries, as it was in 2013 and 2014. However, in 2015 it had reached 80% of men's rate. The fall back from the 2015 does not appear to be attributed to a specific emerging influence. The lower female TEA compared to males is consistent with a lower perception of skills to launch a business and somewhat greater inhibition from fear of failure among the female population.

ENTREPRENEURSHIP IN SELECTED PROVICES

Data are available for regions where the sample size is large enough to support statistically significant analysis. It indicates that TEA rises from the east to centre with similar values in the west. EEA is highest in the manufacturing oriented economies of central Canada.

THE FRAMEWORK CONDITIONS FOR ENTREPRENEURSHIP IN CANADA (NES)

The conditions entrepreneurs face as a consequence of national conditions and culture are evaluated by a panel of experts from nine different professional perspectives relevant to entrepreneurship. In Canada, as elsewhere, these expert panels are not generous with praise, since entrepreneurship is challenging. Ratings range from mildly approving to disapproval of the conditions considered. The clearly favourable ratings are for Canadian physical infrastructure, commercial infrastructure, and the relevant social and cultural norms. Problems were recognized most in the lack of education for entrepreneurship at primary and secondary levels, and in availability of finance.

FINAL CONSIDERATIONS

See the recommendations below.

Problems were recognized most in the lack of education for entrepreneurship at primary and secondary levels, and in availability of finance.

RECOMMENDATIONS

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

1. **Provide more targeted assistance to young and growing firms.** Expert opinion is that government policy does not give adequate attention and priority to young and growing firms. This is not addressed specifically to agencies with responsibility for small business or innovation. Other departments need to be involved, as for example with procurement where government investments can stimulate innovation. The targeting of small business in US R&D contracting is an example of good practice.

2. **Provide more education and mentoring to potential women entrepreneurs**. Canadian women do well in undertaking entrepreneurial activity compared to other developed countries, but rates are lower than men's and attitudes are more cautious. Education to ensure awareness of opportunity and mentoring to aid women remain priorities.

3. **Expand entrepreneurship training in entrepreneurship in post-secondary institutions.** Post-secondary institutions should ensure availability of training in entrepreneurship and entrepreneurial thinking beyond business faculties. Canadian data show those with post-secondary and beyond in post-graduate education make important contribution to rates of entrepreneurship. These entrepreneurs have the tools for knowledge-based ventures.

RECOMMENDATIONS

4. **Provide targeted resources for senior entrepreneurs.** The population is growing older and aging in good health. Still, experts judge that those over fifty have difficulty finding jobs. Attention needs to be given to resources to support older entrepreneurs.

5. **Support entrepreneurs who want to export.** Canadian entrepreneurs report ambitions to reach export markets. Ensure that government policy provides support.

6. **Encourage firms to develop strategy utilizing more intrapreneurship.** Intrapreneurship is one of the weaker areas in this report, and increasing intrapreneurship could improve business productivity. The entrepreneurial attitudes are there.

1. INTRODUCTION

1.1. Why Entrepreneurship?

Entrepreneurship And Intrapreneurship – GEM In Canada

The concerns over *employment* and *growth* that have been expressed in GEM Canada reports in the last three years are certainly more relevant in the context of an 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 shows that the scope, character, and quality of *entrepreneurship* strongly influences progress toward goals for all four of the above challenges. As was the case in the 2015 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 by individual respondents that are undertaken to launch new directions within a firm. This report will give emphasis to this complementary form of entrepreneurial activity, here called employee entrepreneurship.

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. It is also important to acknowledge that, in Canada, 'intrapreneurship'

initiatives inside our large and medium firms are a priority, and may be the weakest dimension of the entrepreneurship space.

The Nature and Role of Entrepreneurship

The entrepreneur was introduced to modern economic theory by Joseph Schumpeter in 1911[2]. For Schumpeter, the entrepreneur was that figure who acts to disrupt an economic cycle and create change in the economic system. With the recognition that the complex nexus of socio-economic action is hard to unravel, we can generalize to describe the entrepreneur as the actor driving change in life.

Entrepreneurship is defined for the GEM survey purposes 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.

The GEM definition includes at least the following four areas of activity that Steve Blank[3] calls the 'four pathways' of entrepreneurship[3].

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

The goal of all these processes is creation of *value*, for which empirical evidence of the contribution of entrepreneurship is persuasive[1]. This is emphasized in an OECD entrepreneurship framework[4]. That framework 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 this continuing focus and entrepreneurial activity occurring within established firms.

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[5]. This leads to the 'spillovers' that, for example, create

As was the case in the 2015 report, the results of the GEM survey document the fact that attitudes among a majority of Canadians remain quite favourable to entrepreneurs.

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 the knowledge that is imposed on incumbent large firms who must focus on 'core' businesses.

As the influential economist, William Baumol, pointed out[6], 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.

An innovative entrepreneurial venture must succeed at each stage. In most cases, the major challenges arise after technical feasibility has been established.

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. Such interest centres on entrepreneurship for 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 Starbuck's 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[7] 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?

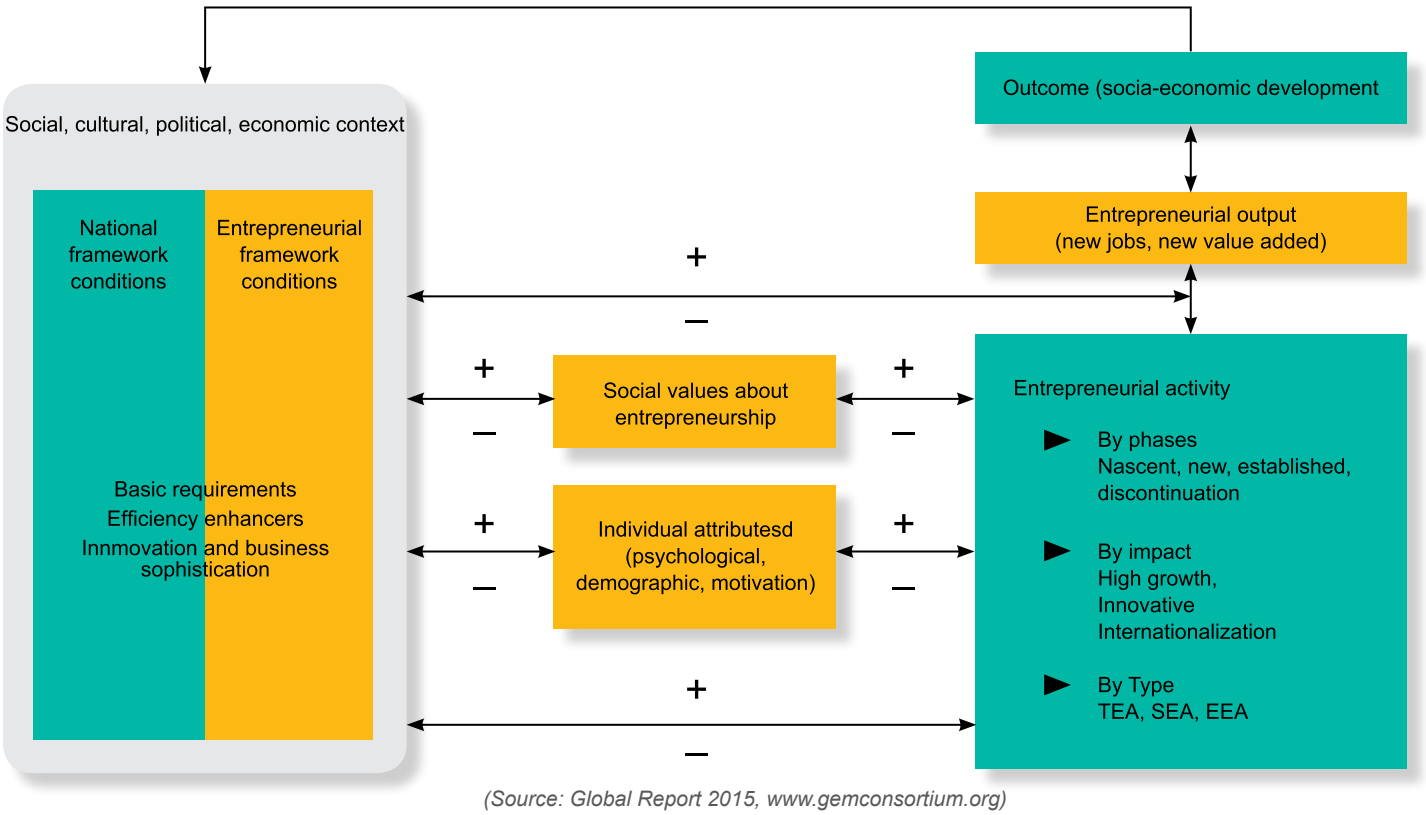
First, GEM is a global project, with participation in GEM bringing Canadian activity into a rich context of data from more than 70 countries covering a full spectrum of circumstances and policies. This is now recorded in a 17 year time series of adult population surveys (APS). Perhaps most significantly, the uniqueness of GEM also lies in the focus on the attitudes, aspirations and activity of individual entrepreneurs, and the attitudes of the community in general towards entrepreneurship. There is no comparable source of such intimate information. Every entrepreneur is a potential innovator, since all initiatives grow out of some new idea and every member of the community contributes to the culture of entrepreneurship. Most innovation literature offers a firm based perspective. GEM brings the individual initiator back into focus. An important addition to GEM is questions that address activity within firms, which also identify 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 a national panel of experts in the National Experts Survey (NES). This is the forum for evaluation of policy and infrastructure support to entrepreneurs in Canada as it exists now.

1.3. Entrepreneurship, Innovation, Growth – The GEM Model[8]

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 the environment faced by the individual and the expert survey attempts an overview of it. However, the GEM project does regard 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.

Figure 1.1: The GEM Model.
Social Values, Individual Attributes and Entrepreneurial Activity



(Source: Global Report 2015, www.gemconsortium.org)

GEM classifies economies that participate in the study as *factor driven, efficiency driven*, and *innovation driven* (see definitions in left column of Table 1.1). The categories are derived from the *World Economic Forum (WEF) Global Competitiveness Index*, 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 (e.g., natural resources) and efficiency enhancing factors (for efficient production in

on-going enterprises). Table 1.1 summarizes the relevant factors of the ecosystem, grouped according to the way the GEM project accumulates information about them. The contextual factors influencing entrepreneurship accumulate as economies move along the ladder of phases from factor driven to innovation driven (see the central column of Table 1.1).

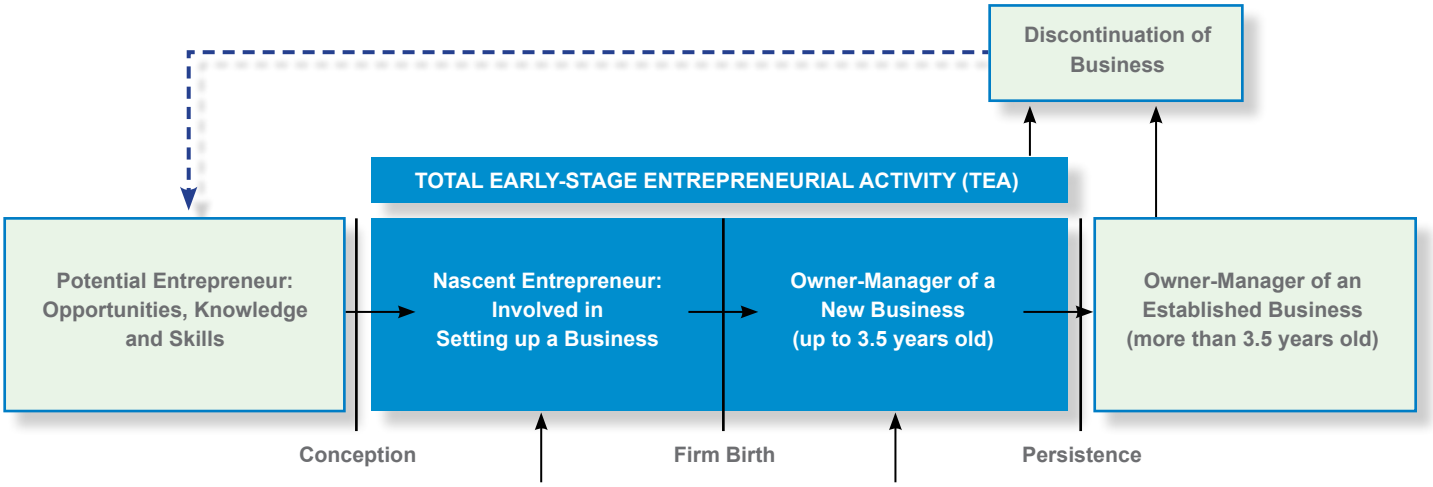
Table 1.1: Social, Cultural, Political, and Economic Context of Entrepreneurship

	From other available sources	From GEM National Expert Surveys (NES)
Economic development phases	National Framework Conditions, based on World Economic Forum pillars for profiling economic development phases	Entrepreneurial Framework Conditions
Basic requirements - keys to factor-driven economies	• Institutions • Infrastructure • Macroeconomic stability • Health and primary education	
Efficiency enhancers - key to efficiency-driven economies	• Higher education training • Goods market efficiency • Labour market efficiency • Financial market sophistication • Technological readiness • Market size	
Innovation and sophistication factors - key to innovation-driven economies	• Business sophistication • Innovation	• Entrepreneurial finance • Education for entrepreneurship • Government policy • Government entrepreneurship programs • R&D transfer • Internal market openness • Physical infrastructure for entrepreneurship • Commercial and legal infrastructure for entrepreneurship • Cultural and social norms

(Source: Global Report 2014, www.gemconsortium.org)

Beyond the structural aspects, The GEM model also views *entrepreneurship as a process occurring over different phases* from an 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). The linearity of the representation in Figure 1.2 should not mislead. Given variable contexts and conditions, it is not inevitable that any one phase leads linearly to the next. 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 as identified by the World Economic Forum (WEF). These are factor driven economies (e.g., natural resources), efficiency driven economies (e.g., well organized manufacturing) and innovation driven economies. The least developed, factor driven, economies can 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 overall lower entrepreneurship rates (jobs are plentiful), but with the values dominated by opportunity driven entrepreneurship, where attractive novel economic niches can be recognized.

Adult Population Survey (APS)

Using a survey based on telephone (land line and mobile) with on-line questionnaires, an independent polling firm randomly selects adults between the ages of 18 and 99 balanced for gender and age distribution (most other countries use the 'working age' population, 18 – 64). This international preference leads to most comparisons made here on the basis of this 'working' age range. The Canada survey allows adding information about seniors.

The responses to a series of detailed questions, phrased in everyday language, which is used throughout the GEM international entrepreneurship project, were solicited from interviewees. These are used to assess entrepreneurial attitudes, activities, and aspirations found in the national population. They provide a profile of a representative cross section of the adult population, balanced for age and gender distribution. For analysis, the sample is finally weighted slightly to achieve an accurate match of age and gender to standard Canadian demographic data. Where the sample size in a province was smaller than required for the standard set by GEM for statistical significance, some provincial samples were augmented on the basis of support from participating provinces.

The responses to a series of detailed questions, phrased in everyday language, which is used throughout the GEM international entrepreneurship project, were solicited from interviewees.

National Expert Survey (NES)

The National Expert survey (NES) themes are specified by GEM. The questionnaire presents a series of statements reflecting the GEM perspective on how conditions could support entrepreneurship. Experts drawn from nine professional areas with perspectives on entrepreneurship are asked to estimate the degree to which each is true for Canada on a nine point scale. The final section solicits open ended responses, which are coded to twelve categories. The questions cover nine major framework areas:

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

Standard Socioeconomic Data

Basic data were obtained from Statistics Canada and OECD publications as well as several other international and national agencies that also sponsored studies of relevance. Finally, academic scholarship on entrepreneurship is available. The studies and references to academic publications are cited in the report where information is drawn from them.

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, a representation of 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*[9]. 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. The entrepreneurial culture revealed shapes the challenges faced by all entrepreneurs, both the crucial *productive entrepreneurs* and those other entrepreneurs who also contribute to activity and in many cases job creation. GEM reports the broad public's perception of entrepreneurs' hopes, struggles and successes.

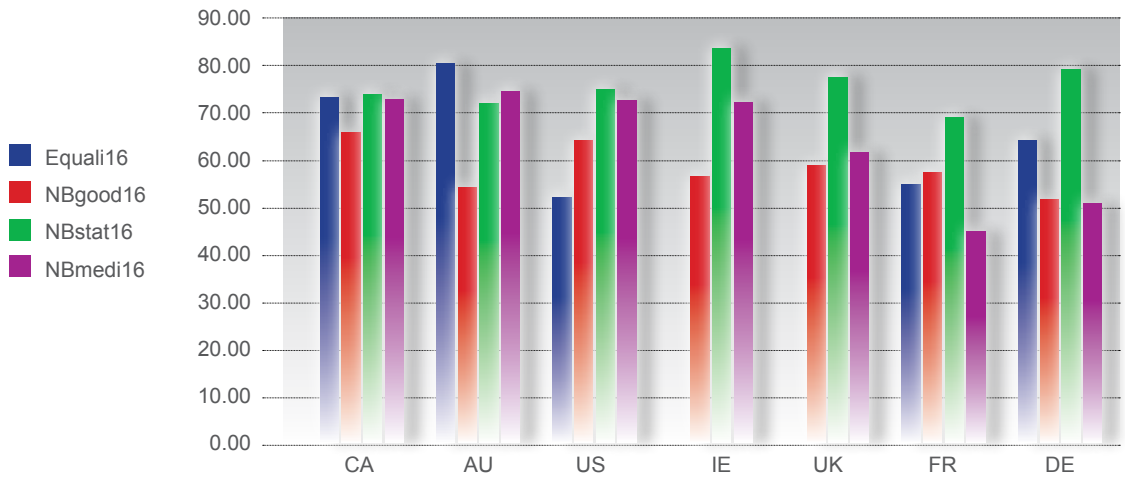
2.1.2 Perceptions of Entrepreneurial Culture

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.

2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2016

Entrepreneurship as a career. The first set of questions ask the whole population whether entrepreneurship is: a good career choice (abbreviation NBgood); whether successful entrepreneurs enjoy high status (NBstat); and do media cover entrepreneurship well (NBmedia). These opinions are set in the context of an initial question asking whether 'people in my country' prefer a more or less 'equal standard of living' in the community (Equali). Figure 2.1 shows the largely positive responses in the reference group of countries chosen for comparison with Canada (drawn from the larger set of innovation economies.)

Figure 2.1: Appraisal of Public Attitudes Toward Entrepreneurship (percent of population).



Canada shares in the generally high percentages of favourable response. Over 70% favour rough equality in wealth distribution and see high status for successful entrepreneurs as well as good media coverage. The recognition of entrepreneurship as a good career choice is only slightly lower at 65%. Most of the comparison group report percentages above 50% across the board, except that the equality question was not asked in the UK or Ireland. Canada's closest parallel economy, Australia, reports a somewhat lower ranking of the quality of the career choice as does Germany (DE).

Capacity and opportunity. In the 2016 Canada survey, four questions appraise the perception of capacity and opportunity for entrepreneurship. (The abbreviations used in the figure below follow the statement of each question.)

Have you met an entrepreneur in the last two years? (Knowent)
Do you think there is a good opportunity to start a business in the next six months? (Opport)
Do you have the knowledge and skill to start a business? (Knowskl)
Would fear of failure inhibit you from starting a business? (Frfail)

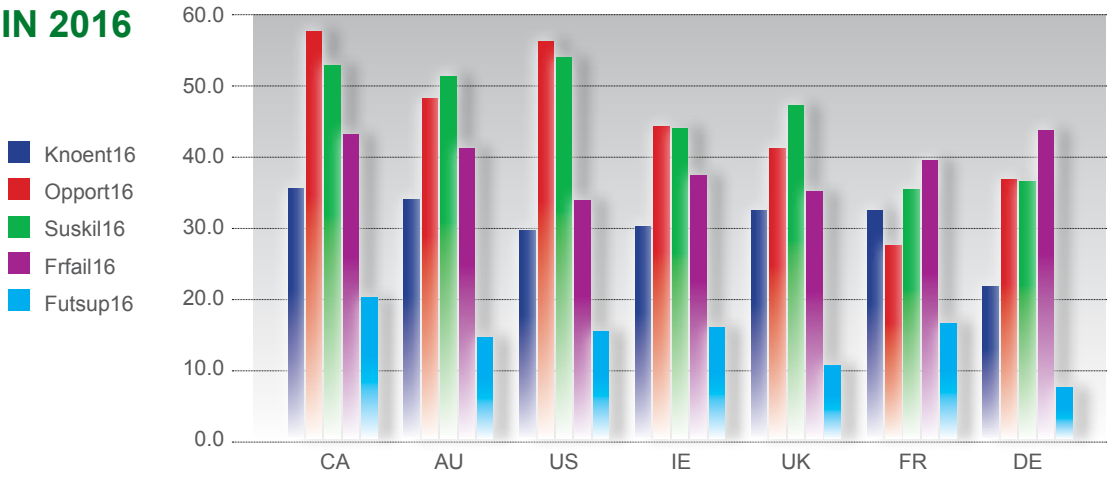
Data for Canadians aged 18 - 64 (i.e. the GEM 'working age' population) is summarized in Table 2.1, comparing the answers this year to those from 2015. The table also includes data for the share of respondents reporting intent to undertake entrepreneurial activity within the next three years (Futsup). Well over 50% saw a good opportunity within the next six months, and over 50% believe they have the knowledge and skills to start a business. The positives are tempered somewhat by 44% reporting they would be inhibited by a fear of failure. In the context of these perceptions, we find only 20%, less than half of those seeing opportunity and having skills, express intent to act entrepreneurially within the next three years. Table 2.1 shows the changes in these statistics from last year.

Table 2.1: Attitudes of the Canadian Population (2016 and 2015)

	Know ent	Opp in 6 mos	Know & Skill	Fear fail	3yr intent
Canada 16	36.3	59.0	54.1	44.1	21.3
Canada 15	31.6	53.2	50.5	42.6	17.4

It is interesting to place the Canadian population into an international comparison and this appears in Figure 2.2 where public attitudes are, as before, compared in a reference group of comparable countries. The reference group includes the US, Australia, and the UK, with France and Germany from the G7. A further Anglo-Saxon country with an economy known for high growth in new technology based firms is Ireland.

Figure 2.2: An International Comparison of Attitudes (percent of population)



Respondents in Canada and the US have a high percentage identifying opportunity and a majority of respondents from Canada, Australia, and the US express confidence in their knowledge and skills to start a business. The European attitudes are more cautious, yet the French are highest after Canada in respondents intending to act in the next three years. Fear of failure as an inhibition is lowest in the US, but over 40% in Canada, Australia and Germany. Overall, Canada's profile is seen as strong. *The message from Figures 2.1 and 2.2 is that there is no need for policy in Canada to be directed simply at developing an entrepreneurial culture; rather the policy focus needs to be on enhancing quality and productivity of activity*.

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 indicators 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.

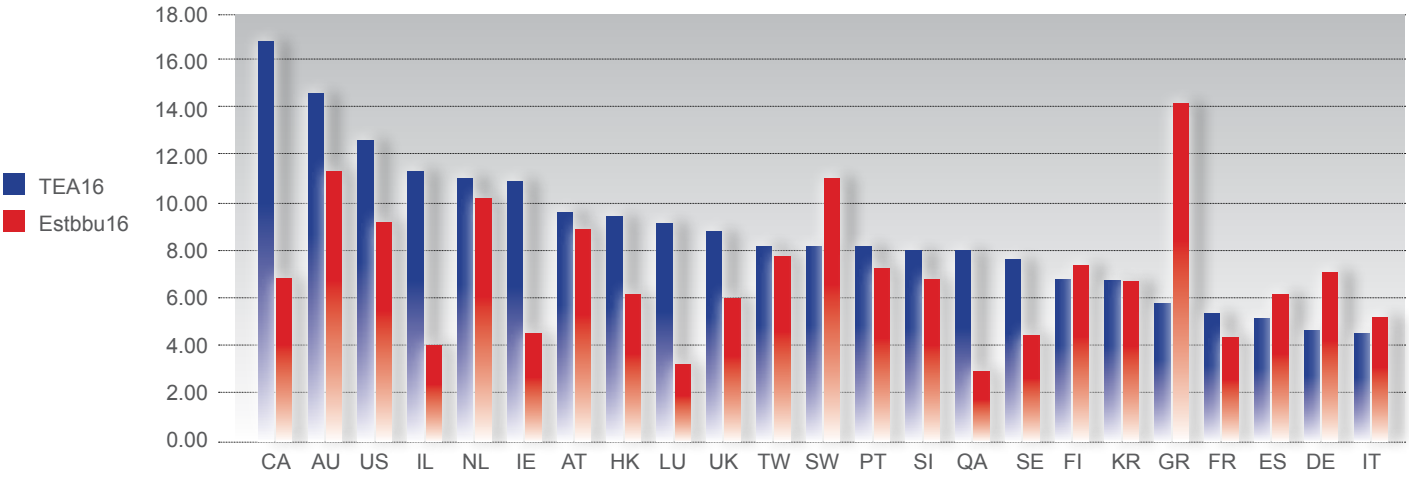
3) These two are combined (counting each individual only once) to yield an overall indicator, '***TEA***,' *the total early stage activity, or the entrepreneurship rate*.

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 defined as in operation for over 42 months. Given the random sample of the population surveyed, these last respondents will predominately be owners and/or managers of small and medium businesses that represent the next stage for the successful entrepreneurs.

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. Since 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 this year. An overall international comparison of developed countries is shown in Figure 2.2 plotted in order of decreasing TEA values for countries in the innovation driven economy group[10]. In all international comparisons, the population considered covers the 18-64 age range ('working age' range) that is surveyed in the other countries.

Figure 2.3: TEA Values for Economies in the 'Innovation Driven' Category (age 18 – 64).

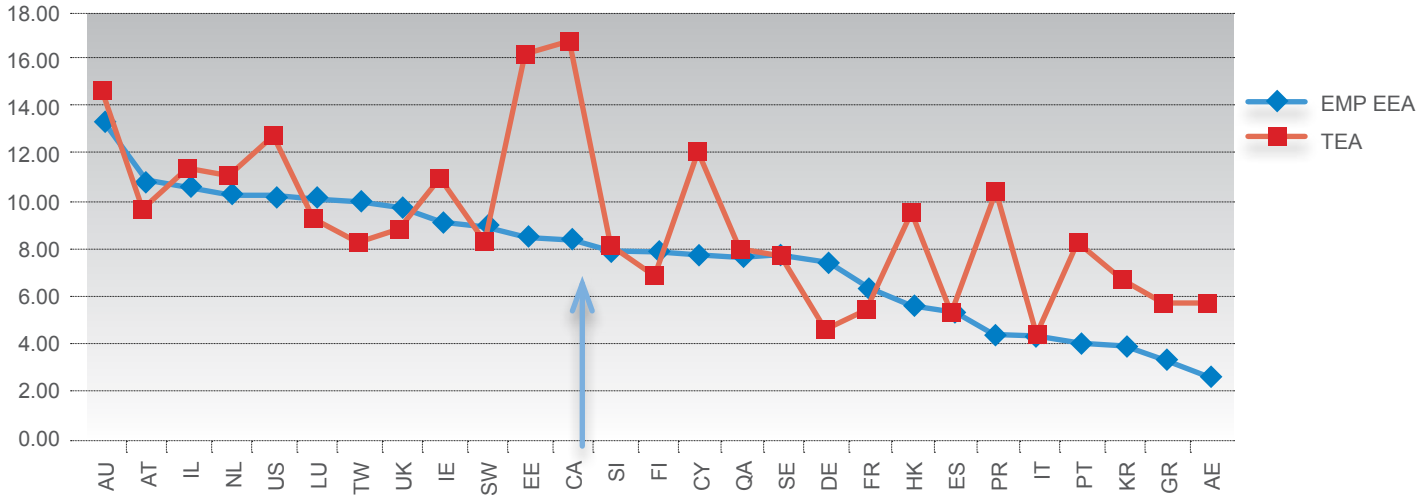


2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2016

Beyond the question of the values of TEA, the figure shows rates of reported established businesses (EB). 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.

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 entrepreneur as an actor making a difference in economic life. These are here termed either employee entrepreneurs (EEA), 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 – EMP). TEA is repeated for comparison.

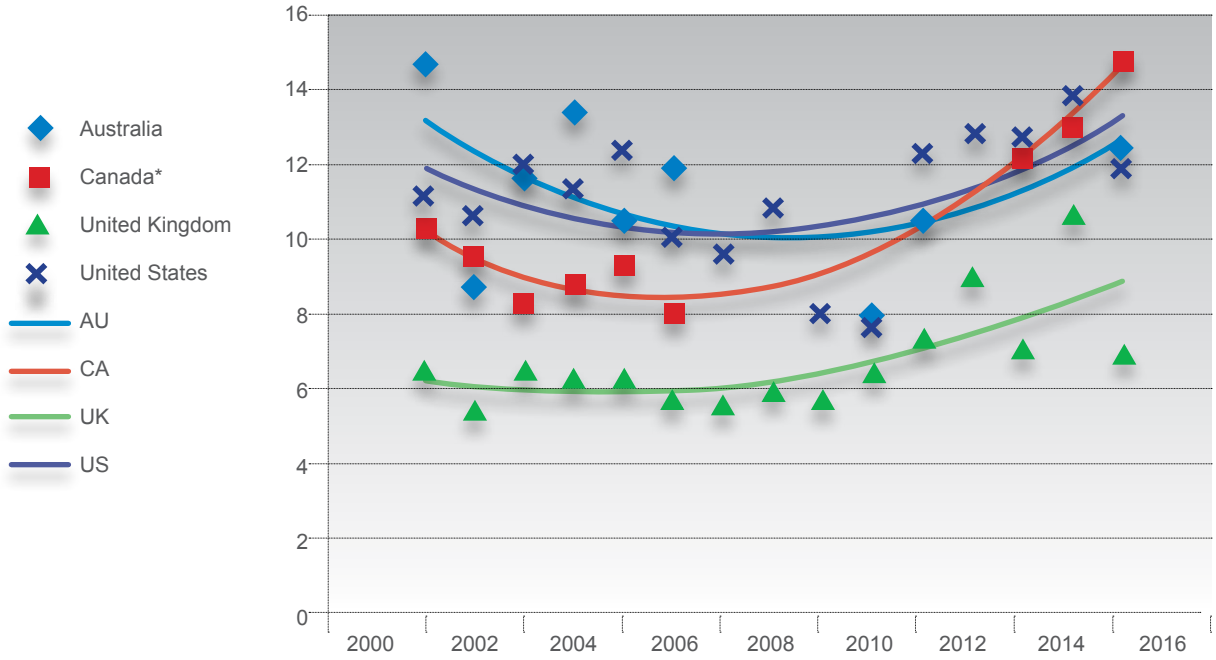
Figure 2.4: Innovation Economies in Order of Decreasing Percentage of Intrapreneurship Leading Roles Among Employed Respondents (IPACTLD)



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 between TEA and EEA EMP for Canada 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 (c.f., the US has experienced a decrease from 2014). Trends from 2001 to 2015 are shown in Figure 2.4a 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 (i.e., a simplistic, fitting of a best overall trend line is used for the figure). All of these countries have been experiencing increases in recent years. Australia has highest volatility and UK the lowest.

Figure 2.5: TEA Trends 2001 - 2015



2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2016

2.2.2 Factors Associated With TEA.

The present Canadian TEA rate of 16.7% of the 18-64 population represents a jump in the rate for men. The moderately increasing TEA trend from 2013 depended, for the 2015 increase, on a jump in the rate for women. The present share for women is more consistent with the overall trend in the years 2013 - 2016, but it remains within error of the increased women's rate from 2015. Table 2.3 shows the TEA rates for 2016 and 2015. It includes the split by gender and also the distribution between an initiative undertaken to exploit a perceived opportunity as opposed to an initiative driven by necessity (lack of alternatives). The jump in 2016 for men in Canada may reflect changing economic conditions or merely be a statistical fluctuation in the data. It is difficult to distinguish on data for one year. The data for women support the idea that the jump in 2015 had a genuine basis.

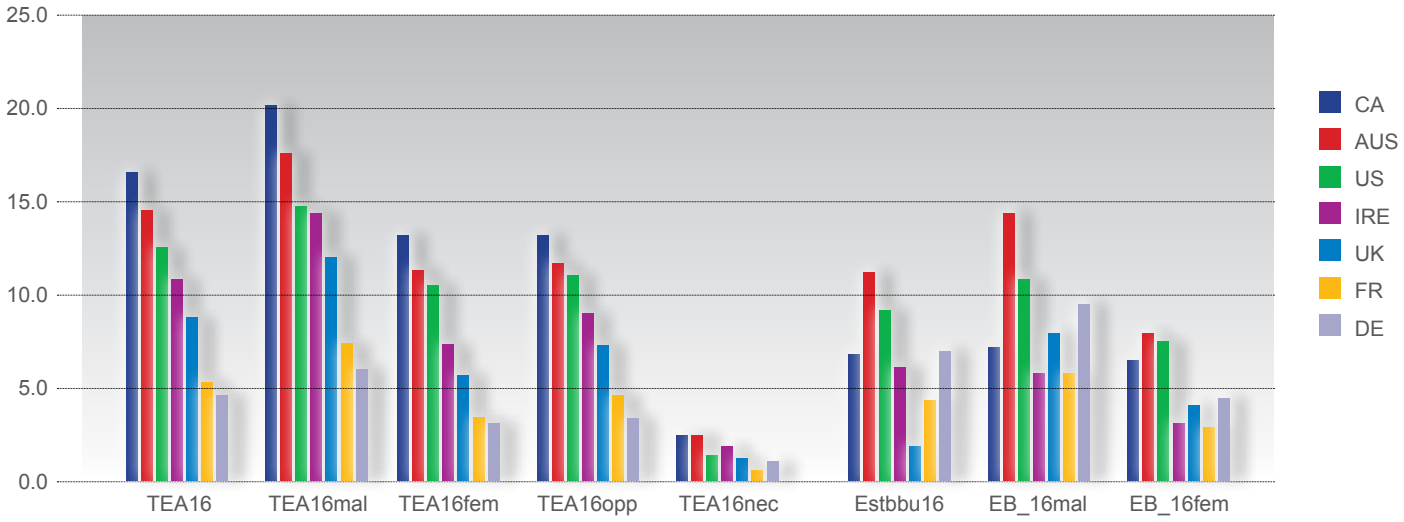
Table 2.2: TEA Related Percent of Respondents (2016 – 2015)

	TEA	TEAmale	TEAfem	TEAopp	TEAnec	Est Bus	EB male	EB fem
Canada 2016	16.7	20.3	13.3	13.4	2.4	6.8	7.1	6.4
Canada 2015	14.7	16	13.5	11.8	2	8.8	9.1	5.6

For further appreciation of the Canadian data, a comparison group was selected to include the US, Australia, the UK, with France, and Germany from the G7, and Ireland as a country with a reputation for success in high technology. 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 reports of established businesses are included for comparison. TEA rates are higher than established business rates in all countries reported except Germany (DE). But it is of note that Canada falls behind Australia and the US in percentage of reported established businesses. Another interesting country with a reputation for high tech start-ups is Israel with TEA = 13.6% and a future intent (next three years) over 25% and a high ratio of TEA/EB (established business).

Figure 2.6: TEA Related Variables

Percentage of respondents for reference economies and Canada (18 – 64).



The women's share of TEA in Canada was near 80% of men's in 2015 data. This was significantly more than that in the other high TEA comparison countries, but, at 66%, it is now in line with ratios for Australia and the US (while still the highest women's TEA in the group). In the other three high TEA economies, the female/male ratio is near 2/3, as it is now for Canada (and was in 2014).

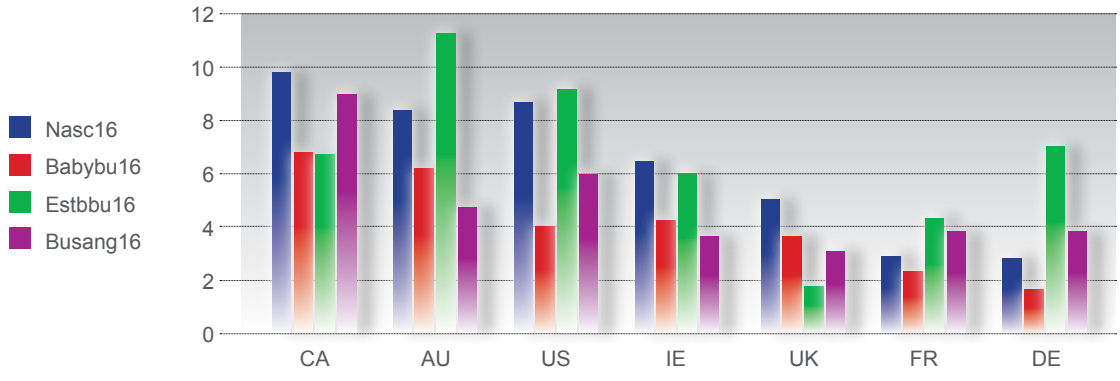
2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2016

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 rates from the US, Canada, Australia, Ireland, and the UK invite comparison to the Continental economies, Germany (DE) and France (Fr) here (results for other European countries are similar). Some European commentators[12] 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 relevant, the data suggest that a more neo-liberal economic culture is more initially favourable to the individual entrepreneur, but clear evidence is lacking to show this links to better overall economic performance[13]. It is also true that the continental examples here have a lower proportion of women entrepreneurs and, as well, may be quite competitive in established businesses.

The right hand bars in the figure report the rate of established business (i.e., in business over 3.5 years). In the countries with highest TEA, there is a considerable drop to the level of the established business rate. Is the high TEA linked to an environment where it is more difficult for young firms to survive and graduate? The TEA data can be decomposed to show the component of *nascent activity* (i.e., activity within the last year with only limited owner returns – abbreviated 'Nasc') and the component of businesses in operation for more than six months but less than three and a half years labeled *baby businesses* (abbreviated 'Babybus'). This decomposition is illustrated in Figure 2.7.

Figure 2.7: Components of TEA Compared to Established Businesses and Angel Investment (percentage of respondents)



The first important message from Figure 2.7 is the recognition that the nascent entrepreneurs make up the majority of TEA despite the fact that baby businesses are reported over three years of their life. The established business rates serve as a crude 'reality check' on the overall entrepreneurial process. The lower values for established businesses (i.e., representative of outcomes of past entrepreneurship) remind us of the precarious character of entrepreneurial activity, especially for three of the four countries with TEA over 10% and the UK (Australia is an exception). This point is re-enforced by the systematically higher rate of nascent activity over baby businesses. The relation of TEA to established businesses may be related to general community attitudes: fear of failure; perceived opportunity; or confidence in skills. Pearson correlation coefficients over the 38 innovation economies show significant positive correlation of TEA with perceived opportunity (0.56) and perceived skills and knowledge (0.53) in the population, but no correlation with fear of failure. Of course, the established businesses reported here reflect start-up over a number of years. Any relation of established business to TEA in 2016 data reflects only the indication of an environment for entrepreneurship as an influence to 2016 entrepreneurs, but the established business rates are important characteristics of the economies and indicators of realizations of growth potential. A 2014 OECD policy paper on start-up firm dynamics[14] provides data on the fate of start-up firms after three years. Canadian data for end years 2004, 2007, and 2010 indicate 22 - 24% start-ups not reporting (inactive) after three years, 62%-65% remaining in the same size category (0 - 9 employees in the OECD report) and 4% to 5% growing out of their initial size category into 10 or more employees in their first three years.

Finally, the extent of informal investment in new businesses is reported (abbreviated Busang signaling 'angel' investment). This is considered a crucial ingredient of start-up activity, however, there is only a weak correlation of this to TEA in the 38 innovation driven economies. The respondents were asked to report on informal investment (i.e., excluding stock purchases, etc.) amounts in the last three years. Data for Canada and the reference group were shown in Figure 2.6. (The role of reported angel investment will be explored further below.)

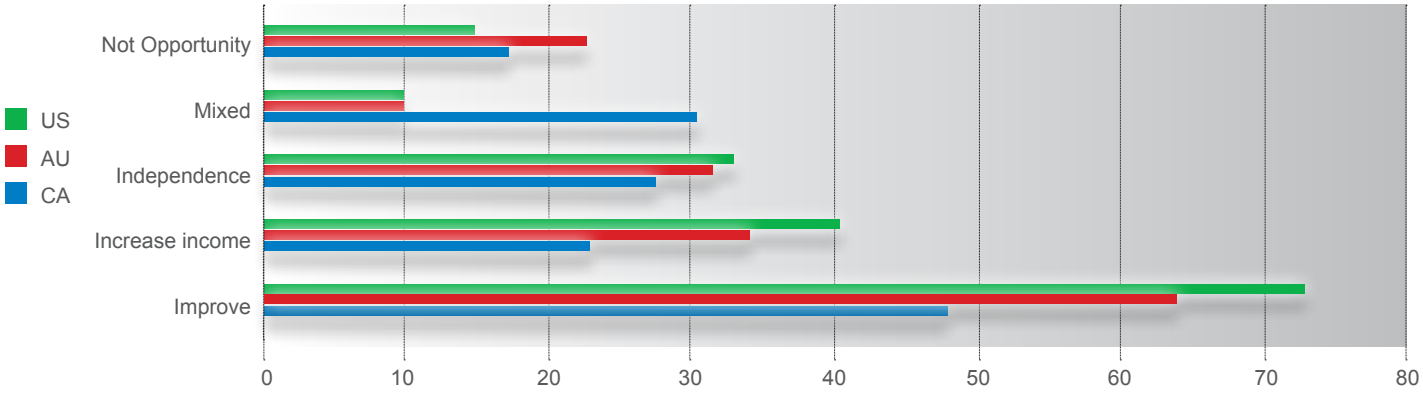
The relation of TEA to established businesses may be related to general community attitudes: fear of failure; perceived opportunity; or confidence in skills.

2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2016

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 or above the TEA rate in four European countries suggests a more stable environment. If this is correct, it suggests a higher churn rate in Canada compared to Australia and the US. The informal investor rate is higher in Canada and the US than in Australia, but the numbers involved are small and these differences may not be significant. 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 relationship of the entrepreneur to the specific attractions of a particular new activity. The areas susceptible to general questions are addressed to all entrepreneurs and centre on the economic motives and the question of gaining independence by becoming an owner. Fig. 2.8 shows percentage of entrepreneurs (TEA) who: first those who do not report a specific opportunity (Not opportunity); next those who identify mixed motives, including combinations of opportunity and necessity (Mixed); those who seek increasing income (Increase income); and those reporting improvement of self or conditions in one of various dimensions (Improve). Clearly, respondents could choose more than one category.

Figure 2.8: Motives for Entrepreneurial Activity



The generalized question around some combinations of improvements drew the highest percentage of entrepreneurs in these culturally related countries, but the Canada percentage is down from 2015. Income increase is preferred over independence in the US and Australia but not Canada where the percentage citing independence was nearly unchanged from 2015. Mixed motives were not an important response except for Canada where this response rate is increased from 2015. The changing Canadian profile may be connected to a shifting job market, but this is not reflected in the high level of perceived opportunity in the general population attitude survey.

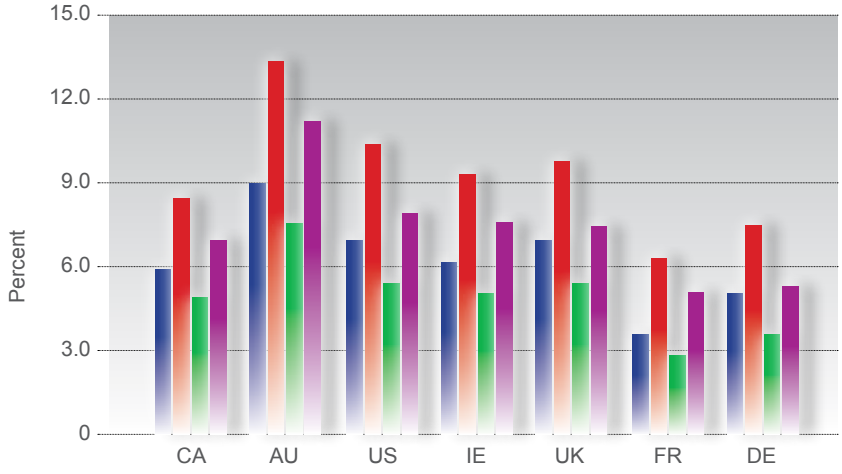
These motive data provide little insight as to which entrepreneurs are looking toward innovation or job growth – those scalable forms of productive entrepreneurship that are most highly prized.

2.2.3 Intrapreneurship – Entrepreneurial Employees (EEA).
The parallel to entrepreneurship (TEA) is that occurrence within existing organizations of new ventures or activity (e.g., new product, new organizational unit, etc.) created by employees for their principal employer – 'intrapreneurship.' As a *parallel to TEA the index is named entrepreneurial employee activity, EEA*.

The survey items are based on questions that ask about a leading role in development of new activities for a principle employer over the last three years. Figure 2.9 shows data for percentage of respondents active in EEA divided into four sets.

1) On the base of all interviewees, those reporting taking a lead role in such development over the last three years (All),
2) limiting the population base considered to only those who are now employed (Emp) – not self-employed or unemployed,
3) those who report this lead role and it is underway now (Now), and
4) among group (3), those employed and active now (Emp. now).

Figures 2.9: Intrapreneurship, EEA, Percentages of the Total Survey Population or of Those Employed



	CA	AU	US	IE	UK	FR	DE
EEA	5.9	9.0	7.0	6.2	7.0	3.6	5.1
EEA Emp	8.5	13.4	10.4	9.2	9.8	6.3	7.5
EEA Now	4.9	7.6	5.4	5.1	5.4	2.9	3.6
EEA Emp Now	7.0	11.2	8.0	7.5	7.5	5.1	5.3

We see the EEA rate in Canada is below the EEA rates of the other high TEA countries. It is also 1.5% less than the value last year and, as was seen in Figure 2.3, it has dropped to twelfth among innovation driven economies. Entrepreneurship in a corporate environment is not simply carried out under the influence of the environment considered in the GEM ecosystem model; it is also sensitive to corporate strategies. The report of the Expert Panel on Business Innovation mandated by the Council of Canadian Academies at government request[15] was quite critical of Canadian business strategy. This factor could quite plausibly be the main factor of the gap between twelfth in EEA in a reference group where it is first in TEA.

It is clear that innovation in corporate Canada needs stimulation. A direction is suggested by the influential work of Mazzucato[16] who has shown the importance of government initiative, and acceptance of major risks, in transformative innovation. For example, she identifies major government programs critically 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 AOSTRA in the Alberta oil sands.

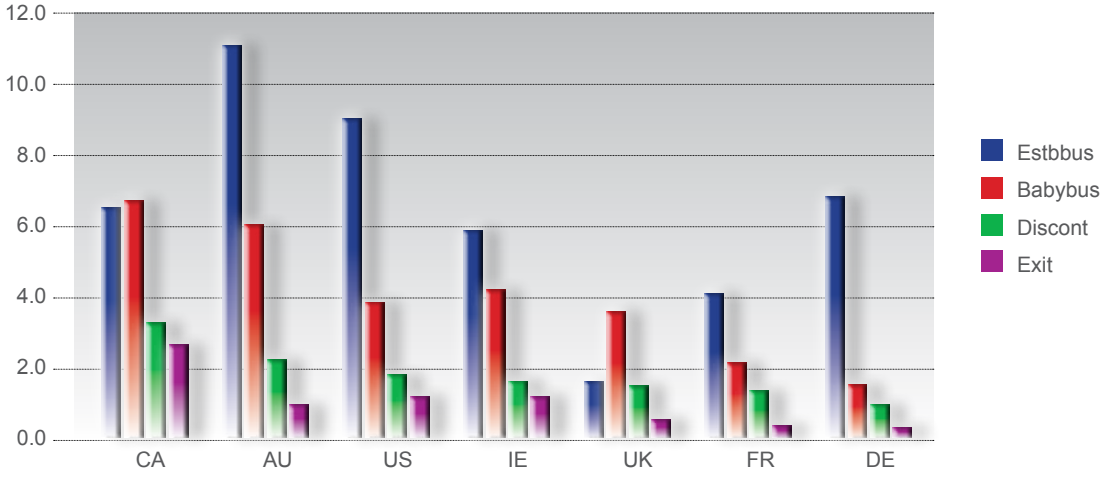
2.2.4 The Final Stages – Exit and Discontinuance.

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 described so far with the exception of the exit and discontinuance phase. There are two different paths to consider:

- **Discontinuance** is the path where owner(s) exit with ***business closure*** (Disc).
- **Exit** refers to owner exit with ***continuance of the business by others*** (Exit).

The phases from future plans, to start-up, to baby business, and to established business have been analyzed above. Figure 3.0 presents data for discontinuance (Disc) and exit (Exit) with Baby business (Babybus) and Established business (Est bus) rates to provide context.

Figure 3.0: Discontinuence and Exit With Comparisons



2. THE PRACTICE OF ENTREPRENEURSHIP IN CANADA IN 2016

The data for Canada this year are unique in the reference group. Both the discontinuance and exit rates are high in comparison to other countries, with the exit rate relatively high compared to discontinuance. Exit includes the successful entrepreneurs who sell their business and 'cash out' and almost matches the discontinuance rate. For the other countries except Ireland, discontinuance rates are clearly higher than exit. The figure also reminds us that Canada is unusual with a baby business rate equal to the established business rate. Statistics Canada data suggests that both business entry and exit rates have declined in the long term but changed only slowed in the 2000 - 2009 period with the rates close to each other[17].

2.2.5 Informal Financing of Entrepreneurship.

Informal investment in entrepreneurship is defined as the percent of respondents in the survey population who had provided funds to an entrepreneur (i.e., exclusive of stock purchases, etc.). This is reported with the abbreviation 'Busang', for business angels. Table 2.4 reports this percentage also accompanied by data on the average level of funds provided (in US dollars). In the 2015 survey there were some special questions probing the nature of the sources of informal investment. As expected, friends and family were the most important. The column headed 'Busang16' gives the overall rate of response. The column headed 'Reporting' indicates the percentage who then reported the fund level provided. The next column weights these for share of angels reporting and the last column gives the mean US$ value of funds reported. The median was US$ 5787 and two reports were over US$ 100,000. Canada leads in percentage of respondent's investment, but lags in size of investment. In the 2015 survey there was a special topic probing these contributions more fully. The 2015 data indicated that these reports are primarily of funds from friends and family. The 2015 median estimate by the entrepreneurs of the funds required to start up was US$ 30,000 with a mean of US$ 86,000. The informal investors clearly offer only a small share of these targets.

... Canada data suggests that both business entry and exit rates have declined in the long term but changed only slowed in the 2000 - 2009 period with the rates close to each other.

Table 2.3: Informal Investment – Business Angels Reporting Funding and Avg. Levels (percent of population)

	Busang16	Reporting	Weighted	Funds reported
CA	8.9	3.7	3.5	26540
AUS	4.8	4.1	4.0	55938
US	6.1	4.2	4.2	16260
IRE	3.7	2.8	2.7	33602
UK	3.2	2.0	2.3	36175
FR	3.9	2.9	2.8	27716
DE	3.9	3.8	3.1	43377

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* – that is, on the question of the extent of *productive entrepreneurship*. These aspirations are explored through a series of questions concerning expectations for firm performance now and after five years. Topics include jobs, and export orientation, which are questions critical to evaluation of the effects of entrepreneurship in the economy. These are the subject of the next chapter. Aspirations are discussed in Chapter 3.

A note on social entrepreneurship: The 2014 survey included a special topic survey of start-up activities with a goal of social benefits. Among respondents, 8.6% identified such initiatives. About half of these were also already identified under TEA. Most questions seeking more detail about these activities did not command high response rates. The 2016 survey did not include the social entrepreneurship questions. However, as noted in section 3.5 below on sector distribution, the deeper look dividing data into twelve sectors demonstrated that much of the business services sector is in services to government, education, health, and social services, many of which probably include social entrepreneurship.

3. ENTREPRENEURS IN THE ECONOMY

The *entrepreneur* who was introduced to us by Joseph Schumpeter in 'The Theory of Economic Development' in 1911 (Schumpeter, 1934)[1] 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 aims to identify and profile the early stage venture actors. It is always important to remember that not all entrepreneurial efforts are constructive. *Baumol's* categories (*above*) distinguish productive from non-productive initiatives, where the former are seen as economically creative and the latter as 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. As noted above, 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.

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.

Shane[18], in an award winning paper, shows that 'non-productive' entrepreneurship may even be economically negative, that is, 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 picking 'losers', (i.e.,, identifying the non-productive) is much more straightforward.

> *'Policy… should stop subsidizing the formation of the typical start-up [to] focus on the subset…with growth potential'… It does not require 'picking winners.'*

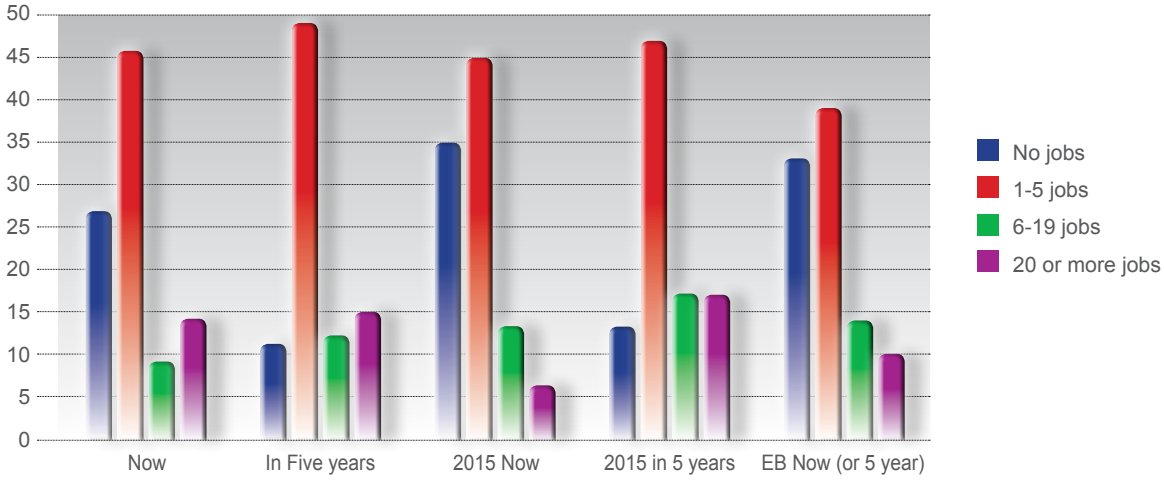
The aspects of economic roles reported on here include:

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

3.1 Job Creation

One major reason for analysis of entrepreneurship is that young firms and smaller firms play a central role in creating (and destroying) jobs. The interview responses of new Canadian businesses about jobs created and their aspirations for the first five years are summarized in Figure 3.1. By far the largest group of firms currently employ between one and five people (47%), more than half of the early stage entrepreneurs declared that they expect to hire up to five employees within five years (58%). This reflects a slight change in overall employment by firms employing one to five. However, firms can enter a group from 'no jobs' or exit to higher job levels. The number expecting to remain at 'no jobs' after 5 years dropped sharply and numbers expecting the higher employment levels increased somewhat, especially for the 20+ category. The 2016 results are compared in Figure 3.1 to the 2015 results and the employment pattern of established businesses.

Figure 3.1: Job Creation, Now and Within Five Years
(percent of TEA respondents)



3. ENTREPRENEURS IN THE ECONOMY

The data give a reasonably positive picture regarding growth aspirations among a majority of the new firms. Data for 2015 are shown that indicate little change in the overall pattern of responses from last year. The exception is the smaller projections for 20+ employment among *this year's* respondents compared to 2015.[19] A 'reality check' on the early stage aspiration is provided by the distribution of jobs among established businesses (3.5 yr. or older), where reports of current levels and projection for employment after five years are statistically indistinguishable. For most TEA respondents self-employment is not the goal and some job growth is foreseen. However, those with substantial growth aspirations are few. Policy should focus on ambitious 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 with the ambitious goal of creation of from 18,000-27,000 new jobs each year during both 2016 and 2017[19].

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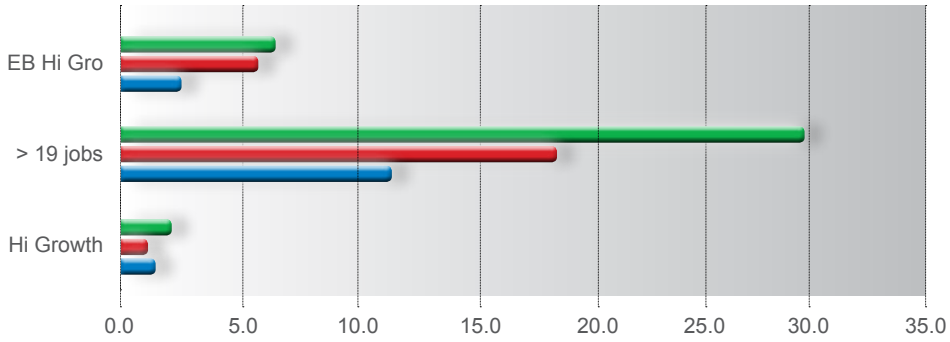
Although it is common to comment that start-ups participate intensively in job creation, there is ample research, such as the comprehensive recent OECD analysis[14]., which indicate that start-ups *create many jobs but destroy many as well.* Industry Canada estimated Canadian annual firm death rates among active enterprises in 2010 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 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 three year period. This is not inconsistent with the increases indicated above in the growth of firms expecting 20 or more employees after five years compared to the number reporting 20 or more in the early phase.

There is only limited data available for international comparisons. Figure 3.2 presents a comparison of high job growth aspirations for the USA, Australia, and Canada.

Figure 3.2: Comparison of Percentage of High 5 Year Job Growth Aspirations



The 'Hi Growth' variable here identifies respondent firms expecting to grow at least 50% while reaching employment of ten or more in five years. The '19 jobs' variable is the familiar (above) goal of 20 or more employees in five years. For a comparison, 'EB Hi Gro' is the share of established businesses projecting 50% growth and at least ten employees in five years.

The American and Australians 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. This may have some connection to the observation that Canada tends to grow firms to mid-size, but has problems with the growth of large firms.

Among 259 TEA respondents, the nascent start-ups yield a mean of 3.8 jobs with a mode of zero and the baby businesses have a mean of 14 employees with a mode of one. There are two nascent start-up firms reporting over 100 employees and four baby businesses reporting over 100 employees. This comprises about 2% of the early stage entrepreneurs.

3.1.1 Market Expansion.

A factor elucidating growth aspirations from a different perspective is the expected extent of market expansion open to the young firm.

The responses are at four levels: no expansion, some expansion, some expansion with some new technology, and profound expansion. Table 3.1 shows the distribution of the TEA respondents.

Table 3.1: Anticipation of Market Expansion

No expansion	Some expansion	Some w. New tech	Profound expansion
45.3%	38.5%	11.7%	4.5%

3.2 Export orientation

An export-oriented company is one which produces goods and services in large measure for export, and has a customer base outside the country. Alexander[20] has pointed out that a community has two classes of business: one does business beyond the community as well as with local customers, while 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. By definition, export oriented companies are participating in the larger economy identified by Alexander (above) that reaches beyond the local. Export orientation is an indicator of productive entrepreneurship and innovation in any economy. Foreign trade contributes, in any case, to overall job creation and economic growth of a country. Table 3.1 shows the extent of export orientation in terms of share of revenue among the early stage entrepreneurs (TEA) and the corresponding established businesses (EB).

Table 3.2: Percentage of Revenue from Outside Canada – 2016

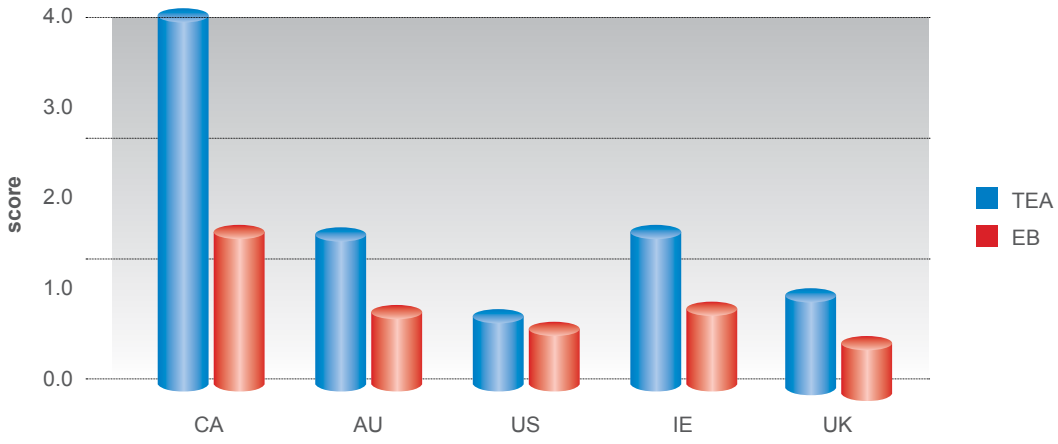
	None	1% - 24%	25 - 75%	Over 75%
TEA	23.4	43.7	19.6	13.3
EB	23.9	50.7	14.1	11.3

There is a consistent, nearly one quarter of firms, not receiving export revenue among both early stage and established firms and the share in the first quartile (1 – 25 %), is slightly larger for established firms, but a higher percentage of early stage firms are in the upper levels (>75%) export orientation. About one third of early stage firms are

significantly engaged with export business. Of course, this doesn't exhaust the possible role of new firms in exports. For example, new firms in business services may support exporters and new manufacturing may be in a global supply chain by supplying another Canadian manufacturer.

These data show that more than 40% 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 and think beyond the border and local customers. Policy can focus on coaching young firms to help them gain export revenue through agencies such as the Export Development Bank. The lower export performance by established firms suggests there is a mentoring need for start-ups if they are to succeed in becoming mature as exporters. A figure from the international survey data gives an overall picture for ambitious firms with 50% or more of anticipated revenue from export. Among these small young firms the aspirations are highest for Canadian firms among 34 innovation economies with a compound score of 3.9. The mean for the group is 1.4. Figure 3.3 shows Canada in comparison to four Anglo Saxon countries. Australia and Ireland follow Canada, and the US is lowest in this set.

Figure 3.3: High Export Orientation



Market scale and geography are important variables influencing export orientation. Canada's position as a resource strong US neighbor is distinct from all other countries in the reference group. The United States, with its large domestic market, is by far its largest trading partner, accounting for about 75% of Canada's exports in 2016 . The US/CANADA relationship may point to a factor in the high level for Canada and the low US level. A comparison between Canada and Australia may suggest the magnitude of the US neighbor effect. In contrast, Ireland and the UK are members of the European Union (at present) and exports to other European countries are free from major barriers.

3.3 Innovation

This section deals with the novelty of products and/or services offered by young firms and the extent to which there are competitors offering competitive products and/or services. These are core indicators of (and service) innovation. The novelty question asks respondent 'how many businesses offer the same product (service)'. Responses are: many – few - or none. In Table 3.2 the TEA respondent's answers are compared to those of established businesses.

Table 3.3: Competitors Offering the Same Product

	Many	Few	None
TEA	37%	53%	9.4%
EB	56.%	44%	3.4%

Clearly product novelty is seen to be higher among the young firms. A second metric is based on the question: 'how many (potential) customers regard the product (service) new/unfamiliar?' Here answers were: all, some, none. The young firms' responses are reported in Table 3.3.

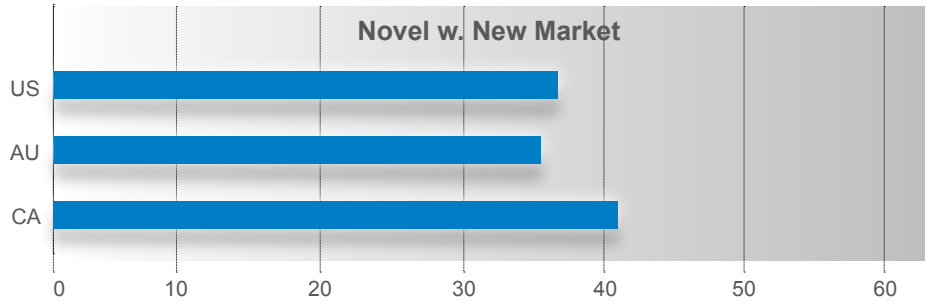
Table 3.4: Novelty or Unfamiliarity of the Product

	All	Some	None
TEA	14	43	42

The two questions probe market innovation from different perspectives and the significance is open to interpretations, as is the issue of what market each entrepreneur is referencing.

A useful question for some international benchmarks asks entrepreneurs to judge whether their new product (service) will combine elements of product novelty and new market access. The positive response percentages for the US, Australia, and Canada are shown in Figure 3. 4.

Figure 3.4: Percent Reporting Elements of Product Novelty With Access to New Markets



Differences are not large, but Canada does report a high level. The only one of the developed economies reporting a higher percentage is Luxembourg at 44%.

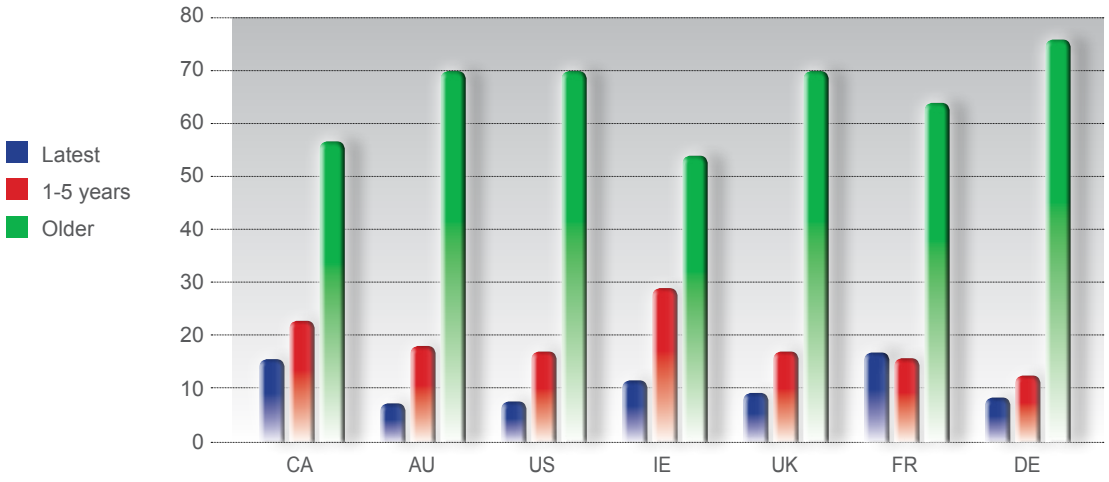
3.4 Use of New Technology

The use of new technology is considered 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. The first question probes the use of new technology, up to the latest technology introduced this year, by firms in any sector. This is considered to correlate to productivity as well as innovation. The second, asks for the percentage of new 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), introduced in the last

1-5 years (1-5 year), or older than fiveyears (Older)? Responses for Canada and a number of reference countries are shown in Figure 3.5. Canada is seen to lead Australian and American entrepreneurs in using up-to-date technology. However, Ireland and France show slightly different, but strong profiles. Certainly, Canada cannot be said to have entrepreneurs as technologically conservative as most other developed countries.

Figure 3.5: Percentage of Entrepreneurs Using Recent vs Older Technology.



The share of TEA active in a high or medium technology industry is also often assumed to be an indicator linked to innovation and growth ambitions. GEM collects data for high and medium 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 2016 is significantly increased from 2015 (6%) and greater than in 2014 (6%) and to 2013 as well (9%). The fluctuations don't suggest a trend. Israel, with its reputation for high technology start-ups and the with Israel Venture Capital Research Center (IVC) reporting that Israel's high-tech sector attracted a staggering $4.43 billion in investment during 2015 , has a percentage of TEA (10.1), close to Canada's.

Canadian established businesses (in the survey mainly small and medium size) have a similar level of participation in these industries. Ireland has a reputation for promoting high technology industries, but it is Australia that reports the high level of both start-up and established businesses in high or medium technology. Overall, differences here are not large.

Table 3.5: Percent of TEA in High or Medium Technology Sector

	CA	AUS	US	IE	FR	DE
TEA	10.6	11.1	9.6	8.6	7.8	8.9
EB	11.3	19.6	7.5	12.1	9.8	5.2

3.5 Sectors

Respondents are asked to describe the nature of the new businesses and then the Survey firm classifies these businesses using four digit codes from the International System of Industry Codes (ISIC). Since the number of respondents in any code is relatively small, further aggregation is applied to give an informative indication of sector distribution that maintains appropriate statistical properties. The young businesses are finally assigned to one of four broad categories:

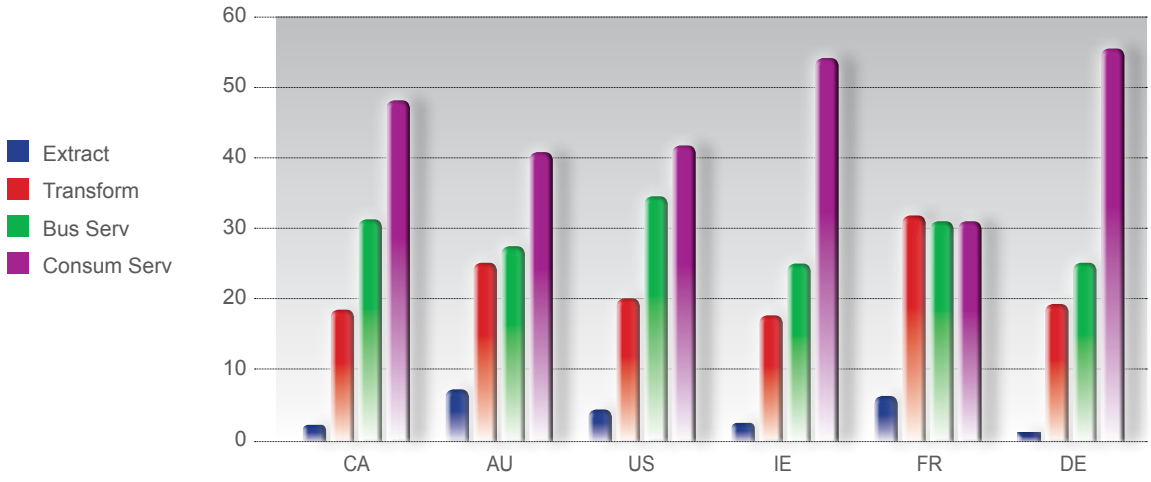
- Extractive (e.g., mining, agriculture),
- Transformative (e.g., manufacturing),
- Business oriented services,
- Consumer oriented services.

In the majority of countries surveyed, consumer oriented services are the leading sector, as might be expected for small businesses. 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[23] intensive business services (KIBS) in innovation. As pointed out by Alexander (above), 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, although some consumer service firms are also multi-national (e.g., McDonald's).

The distribution over the four sectors (Figure 3.5) offers insight into the types of economic development that can result from the entrepreneurial activity. The 2016 distribution over sectors for the reference group of countries (as above) underlines that consumer services form the lion's share of early stage firms.

Figure 3.6: Distribution (as a % of TEA) of Initiatives Over the Four Sectors



It is informative to compare the distribution over sectors of established businesses to firms in the TEA category. Consumer services no longer predominate, as is seen in Figure 3.6. The largest group is in business services. The countries where business services have reached over 40% are Canada and Australia. Business services are also the leading sector in the US and Ireland.

Figure 3.7: Distribution of Established Businesses Over the Four Sectors (as a % of EB)

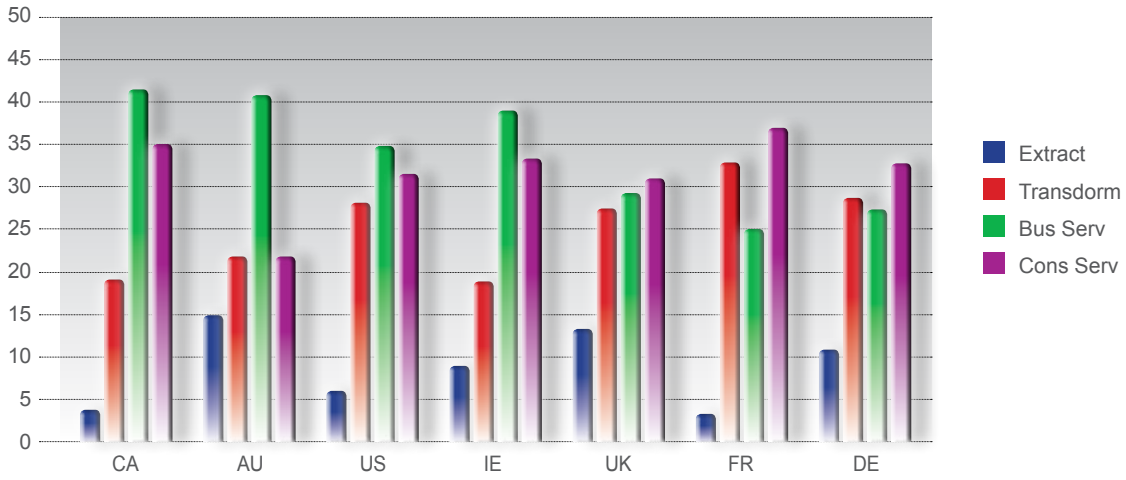


Figure 3.6 confirms the low percentage of firms in extractive sectors seen in Figure 2.5. This might be considered a puzzle in the resource intensive economies of Canada and Australia, but it is likely that there are small firms in business services whose clients are predominantly resource companies and SME engagement with resources is hidden in the business services category. Overall, the distribution of TEA and EB over the four sectors is quite similar among the group of countries, where all show the shift away from a consumer services focus in the EB group. Both Canada and the US are strong in established business services. The differences between TEA and EB may reflect higher volatility in consumer services start-up.

Over the period from 2013 to 2016 a trend in Canada is clear. In the earlier two years business service start-up was fully competitive with consumer services. In the last two years, Canada has moved toward the other countries with consumer services taking the lead in start-up.

3. ENTREPRENEURS IN THE ECONOMY

It is interesting to see the breakdown of job growth expectation by sectors. The data appear in Table 3.5.

Table 3.6: 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 no obvious correlation of sector of activity with aspirations for job creation. The two higher categories sum to near 40 for the three larger categories. (The total number of cases in the extractive sector is quite small.)

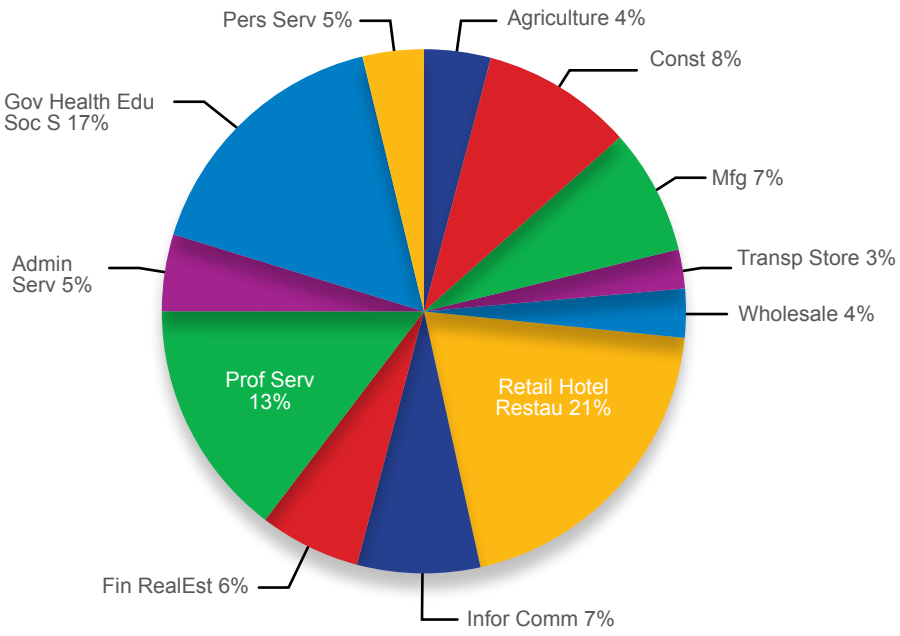
The ISIC codes provide a much finer and more precise description of sectors. However, assignment to more than four groups leaves many four digit groups with insignificantly few entries. A next step from the four-sector analysis is one using the one digit (i.e., the most significant digit) ISIC codes. This produces thirteen 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 2014 and 2015 with the 2016 data. The four-year population of entrepreneurs responding is 919. The result of this analysis is shown in Figure 3.7.

The thirteen sectors begin at the top left of the diagram with 'personal consumer services' (Pers Serve), which is seen to be a very small share of consumer oriented service in this four-sector scheme. Continuing clockwise, agriculture, forestry, and fishing (Agriculture) is a small sector. Combining mining with construction reveals a significant construction focused (Const) sector. Manufacturing (Mfg) is seen to account for less than half of the transformative sector. Transportation, storage (Transp Store) and wholesale account for two small sectors. However, retail, hotels, and restaurants (Retail, Hotels Restau) is a 20% sector forming a large part of consumer services. Information and

communications (Info Comm) is a significant sector that contributes to business services. Financial, intermediation, and real estate (Fin Real Est) is a part of business services. Professional services (Prof Serv) at 15%, are another major part of business services. Administrative services form a small category. A large category, not readily recognized in the four-sector aggregation, is the one including businesses working for the government, health, education, and social services (Gov Health Edu Soc S).

This last grouping may be the most important aspect illuminated by going to thirteen sectors. The four-sector classification doesn't call attention to the *social impacts* of *entrepreneurial activity within the business services sector*. The firms in this sector may well be engaged with social entrepreneurship, the entrepreneurship category least illuminated by the present GEM 2016 Canada survey.

Figure 3.8: The Percentage in 1D ISIC Code Sectors
(3 year sample 2014 – 2016)



3. ENTREPRENEURS IN THE ECONOMY

For Canada, this data treatment identified three better defined sectors as leading components of entrepreneurship, accounting for over 50% (Figure 3.7). To the leading sector including retail, hotel and restaurant (20%), is added the 'social' sector (17%) and professional services (15%) are also added. The emphasis on retail, hotel, restaurants, and businesses serving the social sector (i.e., education, health, government etc.) does not emerge obviously from the four-sector scheme. Among the four sectors, the transformative sector is significantly richer than only a manufacturing sector. Other contributors are probably found in information/communication, and construction. The isolation of the social sector of government, education, social services, and health as the second largest among the twelve provides a deeper perspective into the character of entrepreneurship. The three largest of the twelve sectors are: retail restaurant and hotel; government, education, social services and health; and professional services.

The three-year sample size is more than sufficient to provide significant information on job expectations in the three most populated sectors: retail hotels and restaurants; government, health, education and social services; and professional services. These data can be compared to the overall job growth data above. These data are found in Table 3.6.

Table 3.6: Numbers of Firms with 5 Year Job Growth Expectation in the Three Largest of the ISIC 1D Sectors

(Counts are the sums of data from 2014, 2015, and 2016.)

	Professional services	Retail, restau., hotel	Gov'T Educ. Health
No jobs	15	15	14
1 - 5 jobs	49	63	53
6 - 19 jobs	17	5	22
20+ jobs	19	17	11

There is considerable similarity of retail, et al. to government, education, social service, and health areas numbers at six jobs or more. The lower number of firms reporting six jobs or higher employment expectations in the professional services sector probably indicates the gap between operating small offices and entering the domain of big professional practices. The data suggests that firms in the Government, education, health and social services sector are not structured in parallel to other professional practices despite the fact that it is an area requiring professional expertise.

4. ENTREPRENEURSHIP DEMOGRAPHICS

This section includes an analysis of the impacts of age, education and gender.

4.1 Age

This section treats the 18-64 age group, which is the range of international GEM surveys. This is designated the 'working age' population. However, in Canada, the survey covers seniors as well. They are discussed separately to allow international comparisons of the younger groups.

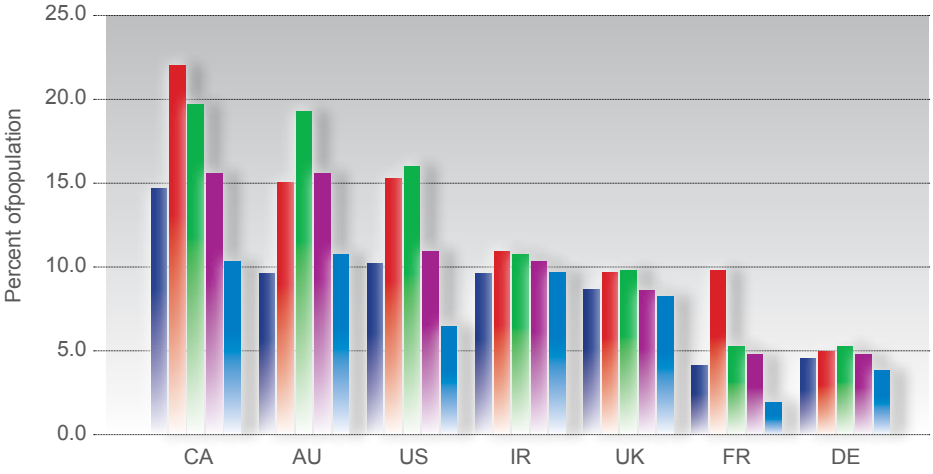
The 2015 data also indicated high activity among younger groups. Considering the data over several years, the interest in entrepreneurship among the younger population is certainly a prominent feature of the Canadian scene.

4.1.1. The Population Aged 18-64.

Two interesting perspectives are available from examining age distribution. The first examines the TEA *participation* rate in each age range. The second, examines the *fraction* of total TEA contributed by entrepreneurs from each age range. Figure 4.1 reports participation rate for each age cohort and Figure 4.2 reports the share contributed by each age range.

The rates for Canada, unlike the other four high TEA innovation driven economies, are highest for young entrepreneurs, peaking in the 25 - 34 age range 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 who match the maximum activity age group for Australia and the US this year. However, the 2013 data also focused attention on youth with the peak participation in the 25 - 34 age group. The 2015 data also indicated high activity among younger groups. Considering the data over several years, the interest in entrepreneurship among the younger population is certainly a prominent feature of the Canadian scene.

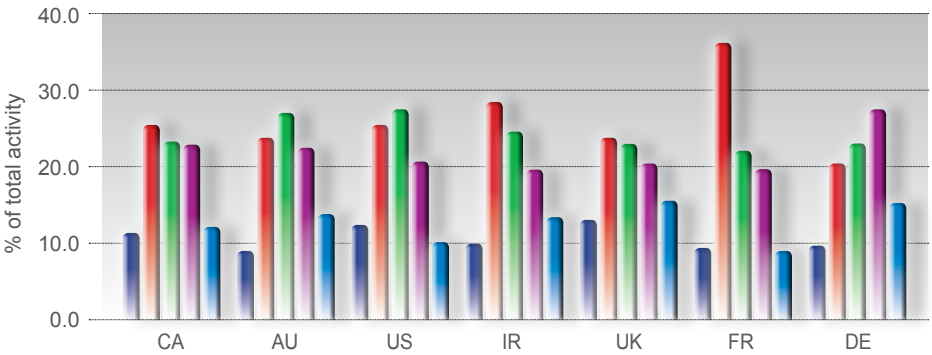
Figure 4.1: TEA Participation Rates (%) in Each Age Group



	CA	AU	US	IR	UK	FR	DE
18-24	14.6	9.4	10.7	9.4	8.2	3.9	4.2
25-34	22.3	15.1	15.6	11.9	9.8	9.7	5.0
35-44	19.4	18.7	16.8	11.3	9.9	5.5	5.7
45-54	16.2	16.1	11.7	10.8	8.1	4.8	4.8
55-64	10.7	11.5	7.3	9.7	7.7	2.4	3.2

Turning to the other perspective, Figure 4.2 reports the shares of the total TEA population coming from each age group. Despite the highest single fraction from the 25-34 age group, this shows that the young entrepreneurs are not contributing as heavily to the total. In fact, the sum of contribution from 18-24 and 25-34 groups adds up to a similar overall fraction of youth among the total population of entrepreneurs in Canada, Australia, and the US. Over 50% of the total Canadian TEA entrepreneurs are in the 35-64 age range.

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



If we were to consider 'under 40' as a definition of 'younger entrepreneurs,' we find that the TEA for this 22 year age range contributes 50%, leaving 50% for the 25 year older range.

In terms of sectors, consumer services, at 62%, is the lead sector of activity of younger entrepreneurs, with 25% in business services and 13% in transformative ventures. Our younger entrepreneurs behave more like those of other innovation economy countries.

4.1.2 Seniors

Seniors are not covered in international data, but the Canadian APS included respondents to age 99. Other aspects beyond TEA related variables are discussed here to give an overview of this important and growing age group, A sample of just over 400 seniors responded. Among the general population of seniors, 64% regard entrepreneurship as a good career choice and 80% say success brings high status. Media coverage is judged good by 80% and 64% say the community prefers equality in distribution of income. These views are close to those of the 18- 64 age groups, indicating continuation into the seniors group of the perception of entrepreneurship. However, seniors do have a different perception of their opportunities and skills. These attitudes of seniors toward entrepreneurship are shown in Table 4.1.

Table 4.1 Attitudes of Seniors

Know entr	Opport	Suskl	Frfail	Futsup
14%	47%	43%	28%	5%

Seniors know fewer entrepreneurs, see opportunity less than their younger colleagues (by over 10%) and have reduced confidence (by 11%) in skills, but with a distinctly lower (by 16%) inhibition from fear of failure. Not many are planning entrepreneurial ventures in the next three years.

The positive responses about entrepreneurial activity indicates continuation of the pro-entrepreneur attitudes, but yielded a TEA of only 3.0%, extending the downward trend from the 55-64 group. This group was predominantly male with reports of opportunity driven initiatives nearly equalled by necessity, which had not been the case in the 2013 to 2015 period. As well, most anticipate one to five employees

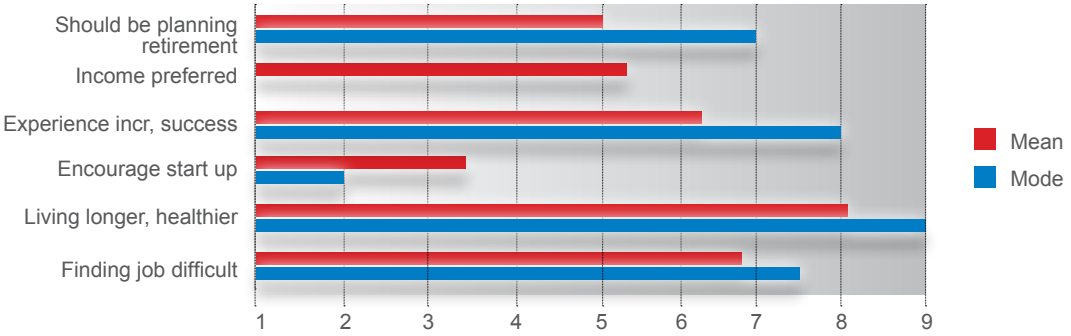
and a majority are in transformative activities, which is also a change from recent years where services were predominant. Over the last three years there has been little change in overall senior TEA, but the necessity motive is higher and no initiatives by seniors over 70 were reported.

The climate for over fifties and seniors as (as assessed by experts)

A special question set was added to the National Experts Survey (see Chap. 6) this year. It asked questions about the climate for entrepreneurship by people over the age of 55. The responses are highly relevant to the opportunities open to seniors. The messages the experts are sending to seniors in their responses to five questions are shown in Fig. 4.3. The experts evaluated the accuracy of five statements about the climate for older people (over 55) to undertake entrepreneurial initiatives. If the statement was judged completely true the score was to be nine. If completely false, it was to be scored one. The neutral response was five. Scoring means (in red) and modes (in blue) are shown in the figure.

... experts agree that finding a job after age 55 is difficult. They also recognize that people are living longer healthier lives and that this is well known. In contrast, the experts think the idea that older people are encouraged to undertake a start-up is somewhat to moderately false.

Figure 4.3: Expert Evaluation of the Climate for Entrepreneurship by Those Over Age 55



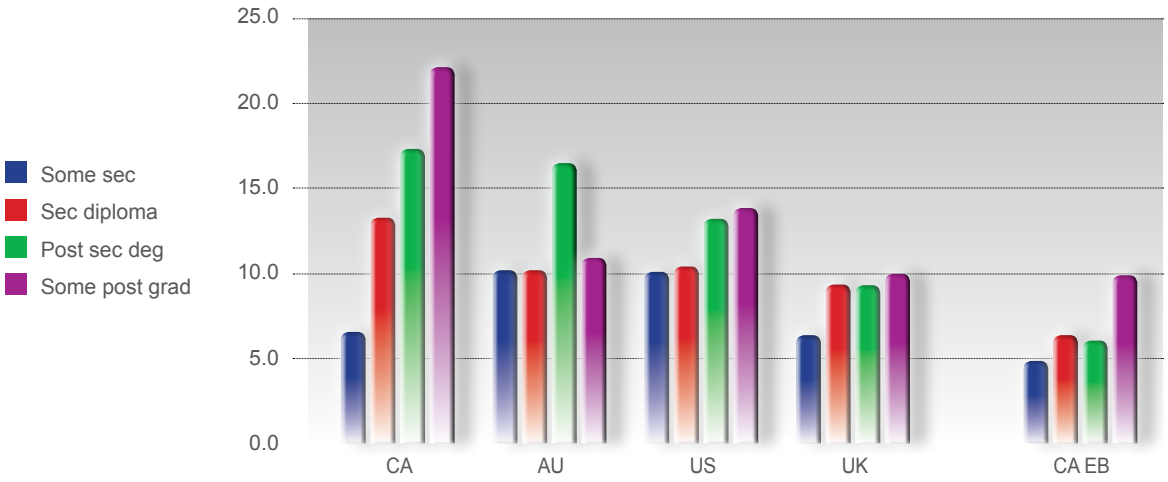
Starting at the figure bottom line, experts agree that finding a job after age 55 is difficult. They also recognize (next above) that people are living longer healthier lives and that this is well known. In contrast, the experts think the idea that older people are encouraged to undertake a start-up is somewhat to moderately false. They do agree that entrepreneurial experience increases the probability of success, but think the general climate of opinion is that at 55+ people should be planning for retirement. In this context, the idea that this population

prefers income over a business is given a neutral evaluation. *Given the rapid growth of a healthier, longer lived older share in the population and the difficulty facing the search for employment, initiatives to provide support and mentorship for aspiring older entrepreneurs seems an opportunity for good policy.*

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 to the educational attainments of owner/managers of Canadian established businesses (EB – on the right) as *a reference point*. Respondents are classed by their highest level achievement. The categories are: some secondary education (some sec), a secondary diploma (sec diploma), a post secondary credential (post sec deg), and some post-graduate experience (some post grad).

Figure 4.3: Percent of Population at Each Educational Level Reporting Entrepreneurship (TEA)



The 2016 data reveal a pattern of increasing entrepreneurial activity with increase in educational attainment. This is quite prominent in the Canadian data. It suggests that a large fraction of people with substantial skills and specialized knowledge undertake entrepreneurial activity. Specialized skills and knowledge are prerequisites for many

types of innovation in a contemporary economy. Canadian data for 2015 were similar except for a larger rate in the quite small segment of the population lacking a secondary diploma.
An interesting point is that the educational pattern among owners of established businesses parallels educational attainment patterns of the new entrepreneurs.

4.3 Gender

The entrepreneurial activity parameters for men and women were presented in Chapter 2 and a TEA rate for women of about 65% that of men was reported. This section will deal with a few results that bear on possible explanations of the difference between men's and women's early stage activity.

Do men and women bring the same *attitudes* toward entrepreneurship? Most of the general population attitudes towards entrepreneurship that were reported above show a fairly small variation between male and female respondents when the gender breakdown is considered. However, a quite significant difference does arise with respect to the perception of having needed skills and knowledge for start-up (SU skill). The question of a barrier posed by fear of failure (Fear fail) shows more women are deterred. Comparisons with data from Australia and the US would present a similar pattern (the sample covers the 18 -64 age range). The difference in intentions over the next three years stands in interesting contrast to current TEA. Women's reported interest in future entrepreneurship is at 80% that of men, which matches a high TEA rate ratio reported for 2015.

Table 4.2: Confidence in Capacity to Start a Business by Gender (% of pop.)

	Future	Opportunity	SU skill	Fear fail	Good Career	Hi Statuts
Female	16.2	54.2	42.9	42.8	66.3	74.3
Male	20.9	57.6	63.1	38	63.3	74.7

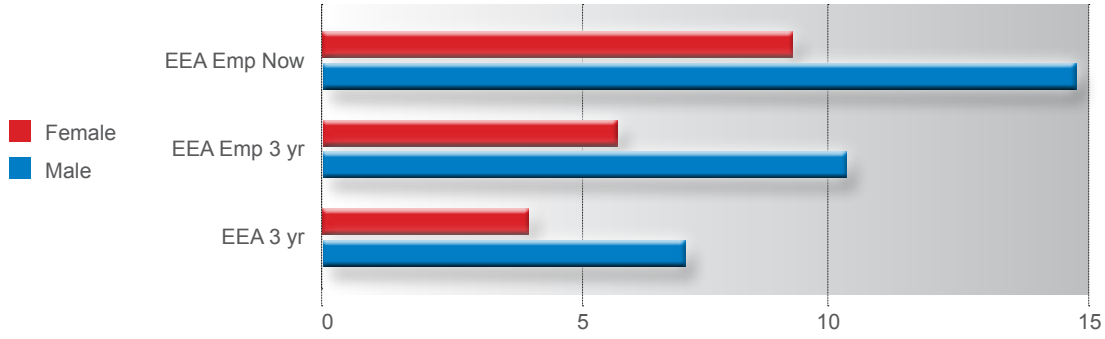
Rates in Canada, the US, and Australia are quite similar and consistently show less confidence in skills and greater fear of failure.

It may be relevant to note that *the female entrepreneurs* contributing to the TEA rate did not exhibit the lack of confidence. Opportunity over the next six months was identified as good by 80%, *confidence in their skills* was reported by 82%, and only 34% reported inhibition *from fear of failure*.

4.3.2 Gender and Intrapreneurship, EEA

The complementary activity of entrepreneurship in a leading role in a new activity on behalf of a principal employer (employee entrepreneurs – EEA) is also more commonly undertaken by men than women. In 2016 the EEA for women is approximately half that for men. Figure 4.6 shows three aspects of EEA: first the rate of EEA as a fraction of the total population active over the last three years (EEA 3 yr); second, those who are employed fulltime (EEA Emp 3 yr); and finally, those who are employees and are active this year in the new direction for the firm (EEA Emp Now).

Figure 4.5: Gender and Leading Roles as Entrepreneurial Employees.



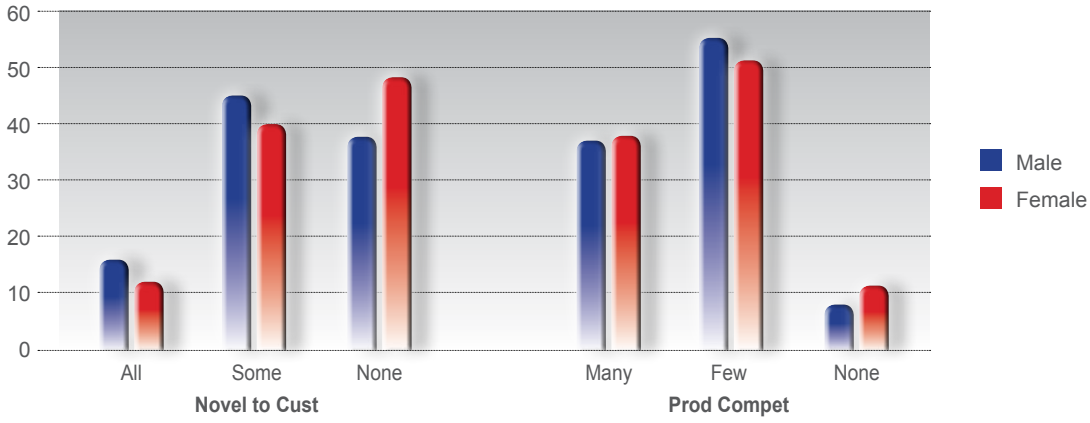
Women report leading in a new venture or activity for a principal employer (EEA) a little more than half as frequently as men, with a better ratio of about 2/3 for those employed full time and active in the current year.

4.3.3 Gender and Economic Factors

Further exploration of gender roles raises questions about economic sector participation, job growth aspirations, innovation and the use of technology – *business sector, job aspirations, innovation, and technology*.

Innovation is most directly measured by the questions that ask about product novelty and about the existence of competing firms. A product (service) may be judged unfamiliar to customers with answer categories 'all,' 'some,' 'none' (see section 3.3). Clearly, if the product is unfamiliar to all, the firm is achieving an innovation in its market. Similarly, a firm may confront many, few, or no other firms offering similar products. If no other firms offer this clearly signals innovation in the market. Figure 4.7 shows the gender differences in these data.

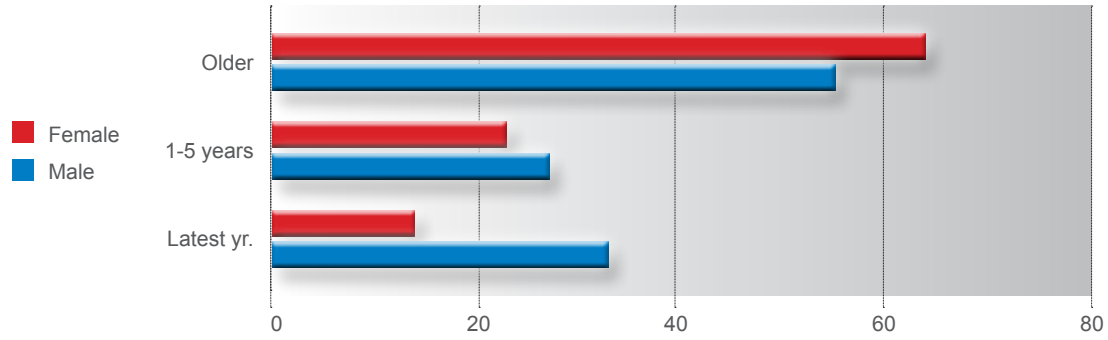
Figure 4.6: Gender Differences in Product Novelty and Presennce of Competitors (percent).



Most significant innovation is associated with products (services), unfamiliar to all customers (Novel to Cust), and Products not matched by competitors (Prod Compet). The male and female entrepreneurs differ very little on these innovation indicators.

Use of latest technology is another characteristic of innovative or high productivity firms. Figure 4.8 shows the gender differences in young firms using: technology introduced in the last year (Latest yr.), technology introduced one to five years ago (1-5 years), and older technology.

Figure 4.7: Use of the Latest Technology

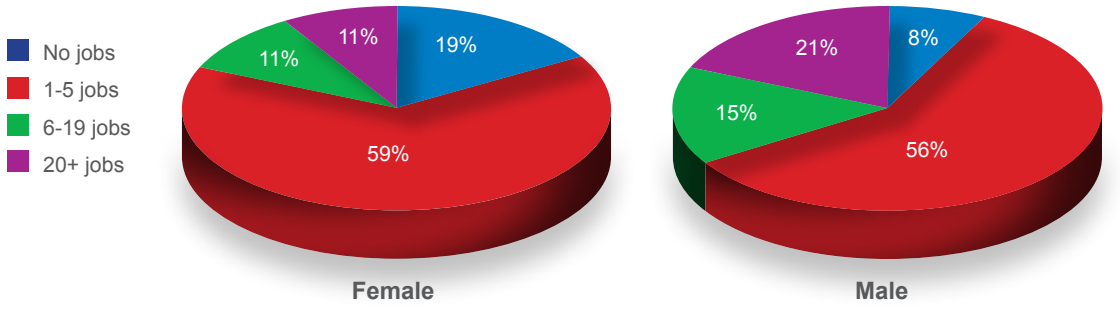


4. ENTREPRENEURSHIP DEMOGRAPHICS

A significantly larger share of firms founded by men are exploiting the latest technology.

Job creation and especially aspirations to job growth are key characteristics of the economic contribution of new firms. Perhaps the most significant question is the one asking for the entrepreneurs' aspirations for their firms' job numbers after five years when they may be fully established. Figure 4.9 shows the distributions over the four categories: no jobs (self-employment), one to five jobs, six to 19 jobs, and twenty or more jobs.

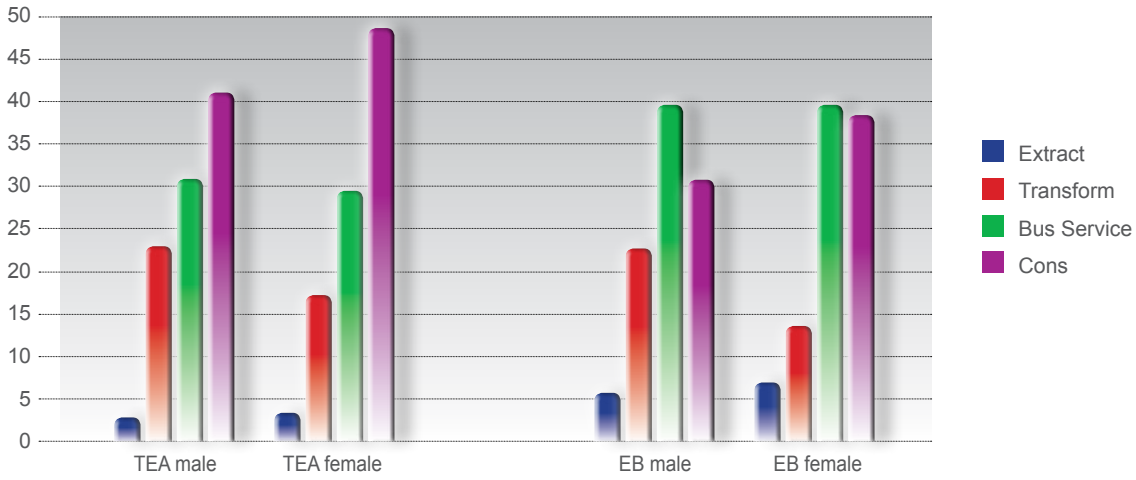
Figure 4.8: Distribution of Job Aspriations After Five Years Comparing Female and Male Entrepreneurs



It is evident that a majority of the initiatives aim at small business with one to five jobs in both cases. However, many fewer men intend self-employment with no jobs created beyond their own, and nearly twice as many men plan for their firms to employ over twenty. One factor in this may be lesser participation by men in the consumer oriented sector, as shown in the next section.

The sector of entrepreneurial activity shows significant gender variation with respect to consumer oriented services with the share of women's activity being much higher than men's. This is correlated to the lower female participation in transformative activity. It is interesting to compare the TEA values to the sector distribution of established businesses (i.e., those over 3.5 years old). The dominance of consumer oriented services is gone and the leading sector is business oriented services with approximately equal shares of men's and women's businesses. These distributions are shown in Figure 4.10

Figure 4.9 Sector Distribution of Men's Ventures Compared to Those of Women (percent)

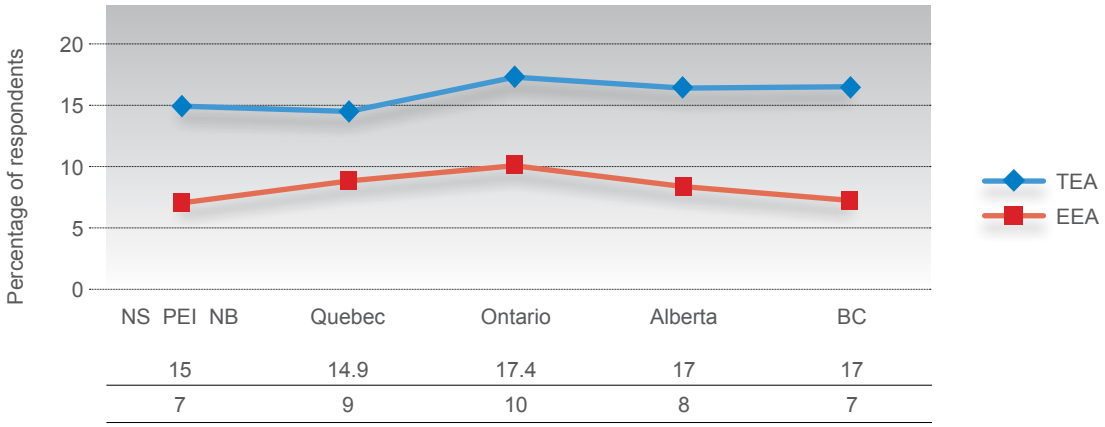


5. ENTREPRENEURSHIP BY PROVINCE

An important characteristic of Canada is that it is a nation of regions. Economic structure, culture and geography can vary widely. Consequently, an analysis of Canada cannot be complete without some comparative data for provinces. For Ontario, Quebec, and Alberta, detailed provincial reports are available. A collective report on the Atlantic Provinces (Newfoundland, Nova Scotia, Prince Edward Island, and New Brunswick) was published for 2015. These should be consulted for information in a depth parallel to the national report.

The data in this report are based on the responses in the national survey. Where the number of provincial respondents identified in the national survey was 200 or greater (over 400 in Quebec and over 600 in Ontario) the provincial component of the national values reported in Chapter 2 are collected in Figure 5.1 as the percentage participation in each province. Data for three Atlantic provinces, Nova Scotia, Prince Edward Island and New Brunswick, were aggregated to give a smaller sample. Data of lower precision are included in Figure 5.1 (denoted NS, PEI, NB). The figure suggests the trends in the early stage entrepreneurship rates (TEA). The report is based on two significant figure data for smaller samples, but three significant figures in the case of the two large provinces of Ontario and Quebec. 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.)

Figure 5.1 Early Stage Entrepreneurship (TEA %) and Employee Led Entrepreneurship (EEA) by Province



	NS	PEI	NB	Quebec	Ontario	Alberta	BC
TEA		15		14.9	17.4	17	17
EEA		7		9	10	8	7

Some differences among provincial economies are suggested by examining the distribution of entrepreneurial activity. Roughly speaking, TEA rates increase from east to west. This links to the stereotype of the independent westerner. In contrast, EEA values are highest in the highly industrialized manufacturing central provinces and decrease somewhat in the heavily resource dependent western provinces.

6. THEN FRAMEWORK SUPPORTING THE CANADIAN ENTREPRENEURSHIP ENVIRONMENT: 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 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 nine options as ordered discreet categories, and the *means* that assume a quasi-continuous underlying variable (e.g., expert satisfaction) with equal intervals. Mean scores above five indicate some *satisfaction* with the affirmatively worded statement on that particular condition 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[24]. The survey has been carefully validated for quantitative significance and international comparability by members of the GEM consortium.

As a final task, the experts provided open ended comments and open ended recommendations that were coded into categories.

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.

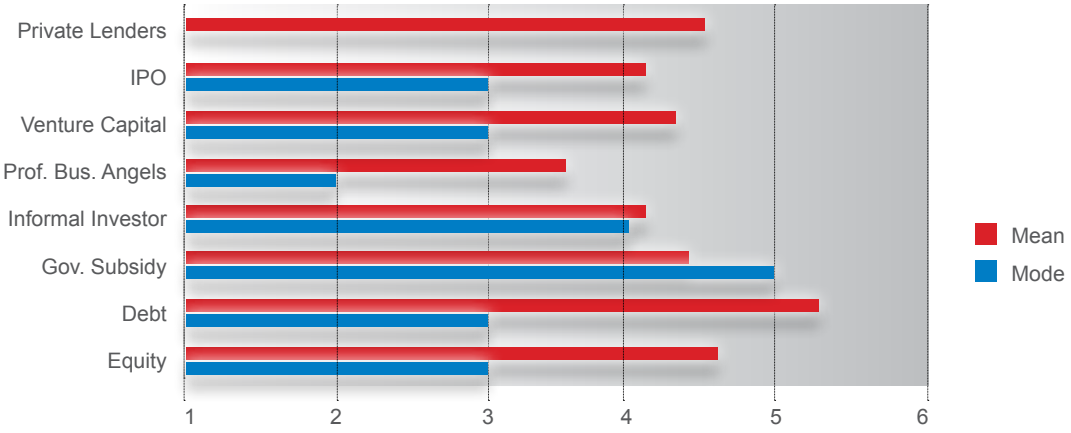
6.1 Finance

Availability of a sufficient level of finance is a critical element of any entrepreneurial ecosystem, so it is the first element treated here. The Expert Panel was asked to evaluate the financing alternatives of:

- *equity,*
- *debt,*
- *government subsidy,*
- *informal investor contribution (family, friends),*
- *professional angel investors,*
- *venture capital,*
- *initial public offerings (IPOs),*
- *and private lenders (including crowdfunding).*

The statements evaluated by the experts asked for rating of the *sufficiency of each of the nine finance types* to meet Canadian entrepreneurs' needs. A score of 5 indicates that the assertion of sufficiency is neither true nor false where 1 represents *completely false* and nine *completely true*. The mean gives insight on the balance of opinion and the mode emphasizes where a major group is converging. Finance question scores are summarized in Figure 6.1.

Figure 6.1 Expert Appraisal of the Sufficiency of Finance



The data reported in Figure 6.1 are modes and means of the expert appraisal on the one to nine scale. The mean gives insight into the balance of opinion and the mode emphasizes a score where a major group is converging.[24] The values are distinctly below those of the experts last year. Where the 2015 finance climate was rated moderately strong, the present evaluation must be considered weak. Only debt financing reached a neutral mean of five and only government subsidy to young, small firms commanded a neutral mode of five. The shift may reflect a reaction to the weakening of the economy. (Note: no mode is shown for private lenders. The responses were multi-modal.)

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 category can account for a part of the informal investors and professional angels evaluated by the experts. The informal investors

identified in the population survey may fit within the categories in Figure 6.1 either as informal investors, private lenders (e.g., *crowd*), or perhaps include some professional angels. The participation rate in Canada was 8.9% which compares favourably to US and Australian rates. Levels of investment were reviewed in Table 2.6. Canada has the highest participation rate, but higher average investments are reported in Australia. The population survey provided a positive hint about finance in the relatively high incidence in Canada of informal investing. However, this does not seem to undermine the experts' pessimism.

6.2 Government Policy and Programs

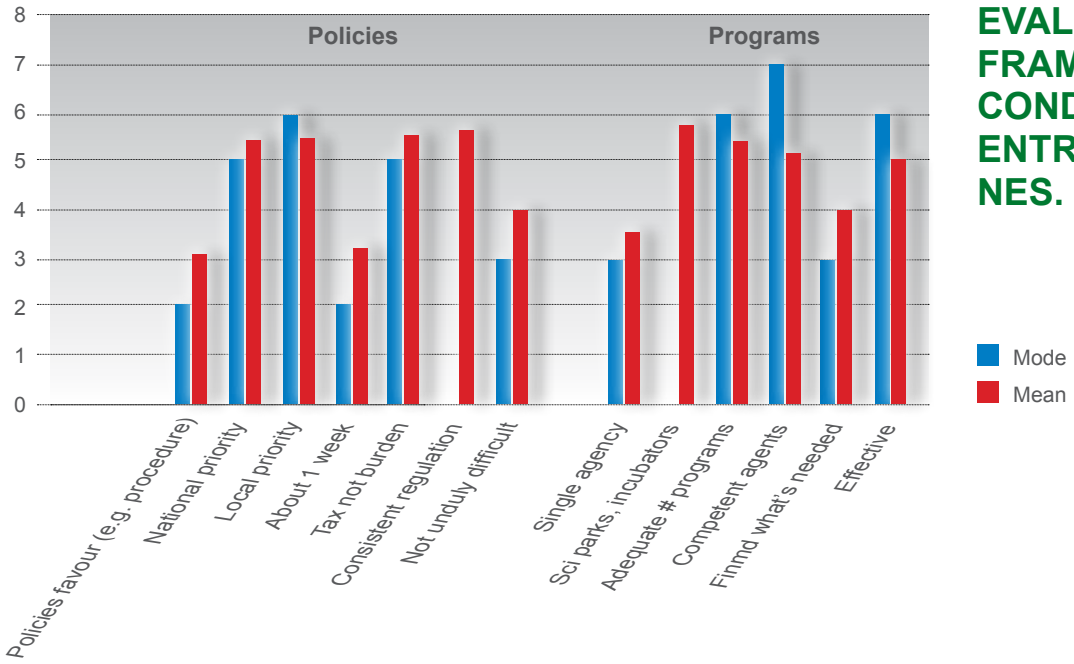
Government policies were probed on seven aspects:

- that government policies (e.g., procurement) consistently *favour new* firms,
- that the *support* of new and growing firms is a national, (i.e., federal) government, high priority,
- that *support* for new and growing firms is a high priority for *local governments* (provincial, local),
- that new firms can get required permits and licences in about a week,
- that the amount of *taxes* is NOT a burden for new and growing firms,
- taxes and other regulations are applied in a predictable and *consistent* fashion,
- regulations, and licensing requirements are fair and *consistent*,
- coping with bureaucracy, regulations, and licensing requirements is not unduly difficult for new and growing firms.

Means and modes on the 1 to 9 scale are shown in Figure 7.2 along with data evaluating government programs. In the policy set, modes for two statements are not reported. This reflects that the distributions were at least bimodal. In the case of the suggestion that taxes are not burdensome, three evaluations: 'completely false,' 'somewhat false,' and 'somewhat true' received an equal number of expert selections.

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

Figure 6.2: Policies and Programs of Governments



Keep in mind all items for evaluation specify small 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. Small and growing firms are not thought to be favoured by this and related policies. In contrast small and growing firms are seen to be given a degree of priority by government policy, perhaps more so, at the local level where the mode is above neutral. Issuing permits and licenses is definitely not seen as achievable 'within a week.' The rating of 'burdens' of regulation connects to an ongoing government conversation in Canada about reduction of 'red tape.' Experts don't rate reduction as an urgent issue. The consistency of application of regulations rated at neutral. Lacks of report of a mode is because the responses were bimodal, leaning to neutral and slightly false on one side and somewhat positive on the other.

These weak points relate to the observation about government policy that priority does not attach to new and growing firms in matters such as procurement. Criticism is not directed specifically at the

existing government programs such as the Business Development Bank or Western Economic Diversification, but that many activities of government, procurement being an obvious example, do not give specific attention to the needs of new and growing firms. An example of specific priority can be seen in the way the US governments specifically identifies the role of smaller firms in R&D expenditures. Agencies responsible for promotion of growth of young firms need to draw other departments (e.g., defense, health) into their activities.

Government programs were probed for six characteristics:

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

Last year (2015), with the exception of the statement: 'science parks and incubators provide effective support,' mean ratings were in the 'mildly false' (4) region. This year, the statements about: 'workers in government agencies being effective in provision of support'; and 'government programs being effective for new and growing firms,' join the rating of science parks and incubators with a mode of 'somewhat true' (6) or better. The weaknesses are identified as: 'a wide range of services for new and growing firms can be obtained through a single agency,' 'those needing government can find what they need' and the related issue of an adequate number of programs. Overall, this is a more positive read, but without any strong endorsements.

Agencies responsible for promotion of growth of young firms need to draw other departments (e.g., defense, health) into their activities.

6.3 Education and Training

The statements presented to experts look to issues about education and training as appropriate to different levels. At the left of Figure 6.3 are three dealing with primary and secondary education with relevance to business and start-up.

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

These characteristics are widely recognized as a commitment of school systems beyond their relevance to entrepreneurship.

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

The ratings are negative for these three goals for the primary and secondary system with modes of 'moderately false' (3). Means are only 'somewhat false' for 'creativity and initiative,' but 'moderately false' for 'market economics and entrepreneurship' at the secondary school level. *Clearly, Canadian school systems are not meeting the expectations GEM proposes in any area with a bit of appreciation of education for basic creative attitudes, self-sufficiency, and initiative*. However, this last basic area is central to personal development and may merit more early and continuing attention than do the specific skills. Certainly expert professionals in education would recognize creative attitudes and initiative as goals in primary schools and perhaps disagree with the experts in entrepreneurship. Nevertheless, there is a clear call here for enhancements at the secondary level.

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

- college and university programs in general, and
- business and management education.

In the general post-secondary domain the statement evaluated is that preparation is *adequate for starting up and growing new firms*. The mean and mode scores are 'somewhat false' (4.4 and (4) and the distribution has a significant tail into positive rating. A similar statement directed to business and management education receives a similar mean score (4.5), but a mode of 'somewhat true' (6).

Finally, a similar statement was directed toward:

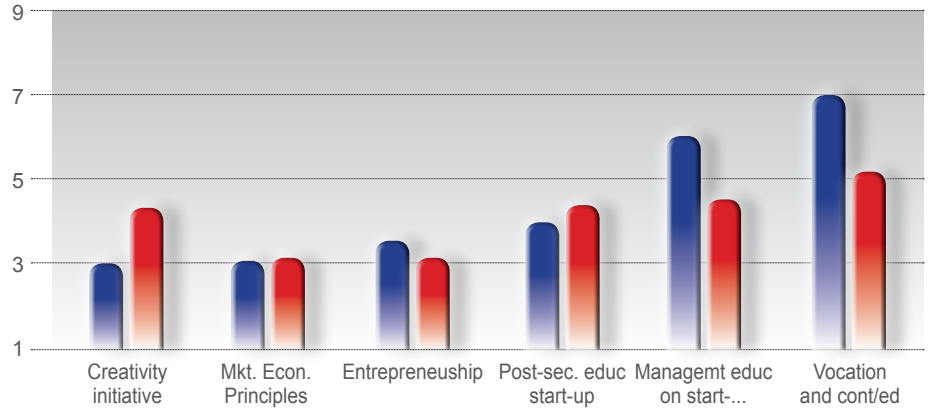
- professional, continuing and vocational education.

This draws a mean score of 'somewhat true' (5.1), but with the mode at 'moderately true' (7).

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

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

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 include 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.)

6.4 R&D Transfer

R&D transfer policies, those affecting timely availability of R&D results to small and growing firms, were probed with respect to five dimensions using six statements:

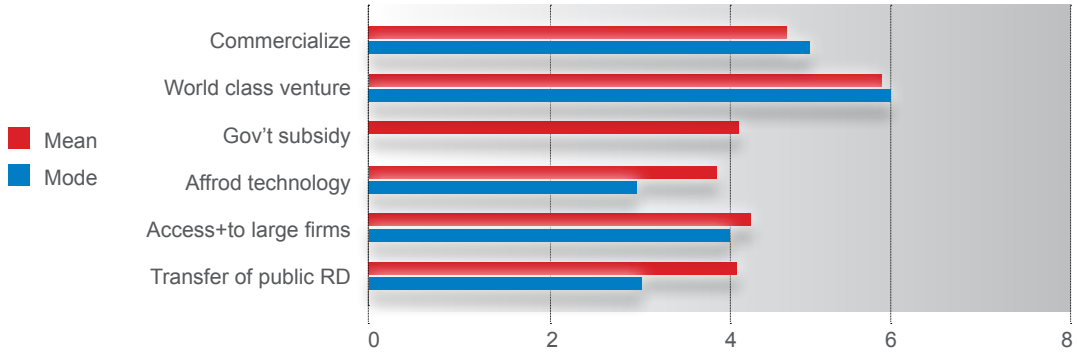
- New Science &Technology (S&T) and other knowledge are efficiently transferred from universities and public research centres to new and growing firms,
- Growing firms have just as much access to new research and technology as large established firms,
- New and growing firms can afford the latest technology,
- There are adequate government subsidies for new and growing firms to acquire technology,
- The S&T base efficiently supports the creation of world-class new technology based ventures in at least one area,
- There is good support available for engineers and scientists to have their ideas commercialized.

The data in Figure 6.4 show significantly negative reactions with respect to the first, second and third of these propositions where modes don't exceed 'moderately false' (4) and mean values cluster around the same evaluation (4) 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 adequately 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, if somewhat restrained, about Canada's capacity to support a world class technology firm in some area. (Indeed, there are already examples!) The statement on support for Canadian scientists and engineers to commercialize draws neutral judgements of 'neither true nor false' (5).

The expert opinion in 2016 is similar to that expressed last year.

There is more optimism, if somewhat restrained, about Canada's capacity to support a world class technology firm in some area. (Indeed, there are already examples!)

Figure 6.4: R & D Transfer



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

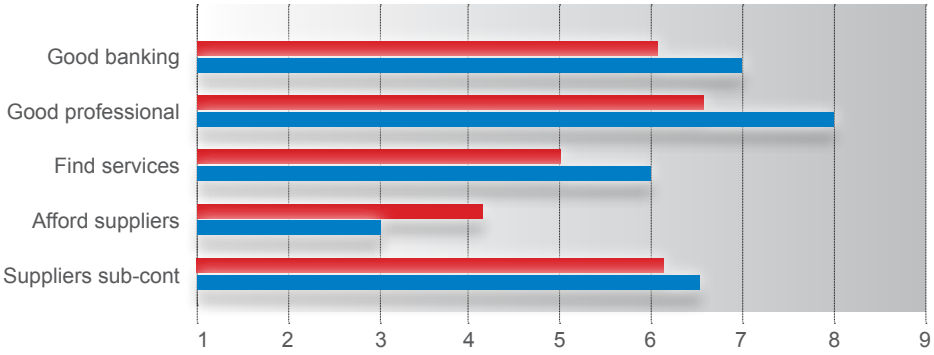
6.5 Commercial and Service Infrastructure, Market Operation

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

- Subcontractors, suppliers, consultants:
  - There are enough (suppliers and sub-contractor)
  - Small and growing firms can afford them (afford)
  - It is easy for small and growing firms to get these support services (Find services),
- 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).

Experts give positive responses ranging from 'somewhat true' (6) to a mode as high as 'true' (8) for availability of good professional services (legal and accounting). Scores on the positive side apply to the supply of subcontractors, etc., to the ease of access to subcontractors, and to banking services. The affordability of subcontractors, suppliers, and consultants is seen as the problem area. As in other areas the experts are cautious about the resources of young and growing firms. Expert opinion on affordability yields a mode of 'moderately false' (3) with a mean of 'somewhat false' (4.2). This probably reflects the common lack of resources facing a start-up, and whether or not this lack affects the affordability of sub-contractors, suppliers and consultants.

Figure 6.5: Access to Commercial Services



6.6 Market Dynamics

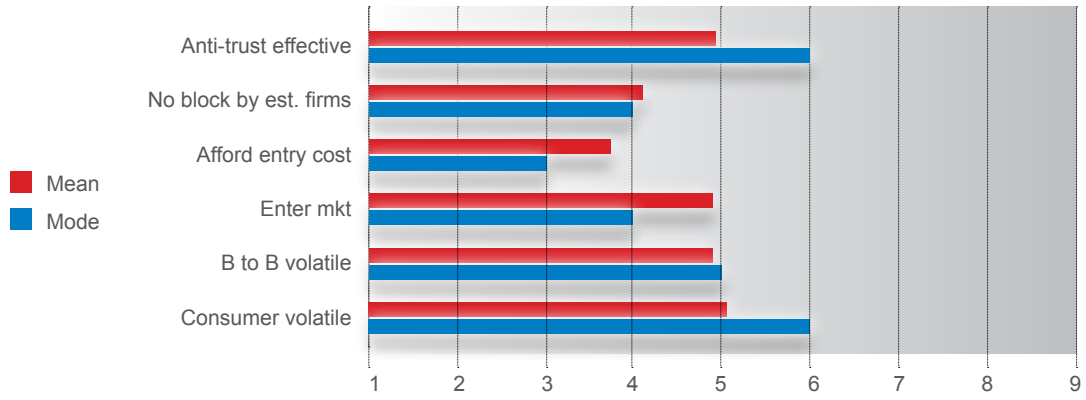
Market structures and market access are major framework factors influencing new firms. These factors include:

- Consumer market year to year volatility (Cons volatile)
- Business market year to year volatility (B to B volatile),
- Ease of entry to new markets (Enter markets),
- Can afford entry (Afford entry cost),
- Not unfairly blocked by established firms (No block by est. firms),
- Effective and enforced anti-trust (competition) legislation (Anti-trust).

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. Absence of unfair resistance by established firm is seen as a problem with a mode of 'somewhat false' (4) and a similar mean (4.2) with many more experts appraising negatively than positively. This suggests that there are conditions that need further investigation because the form of the barriers is not clear. Competition legislation is seen as neutral (mean = 4.9) to 'somewhat' effective (mode 6).

The affordability ratings (mode: 'moderately false' – 3, mean 'somewhat false' – 3.7) are again in interesting disagreement with data from the EY G20 Entrepreneurship Barometer[25] that found Canadian cost of entry low and reported a recent sharp decline.

Figure 6.6: Market Dynamics for New and Growing Firms



6.7 Physical Infrastructure

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

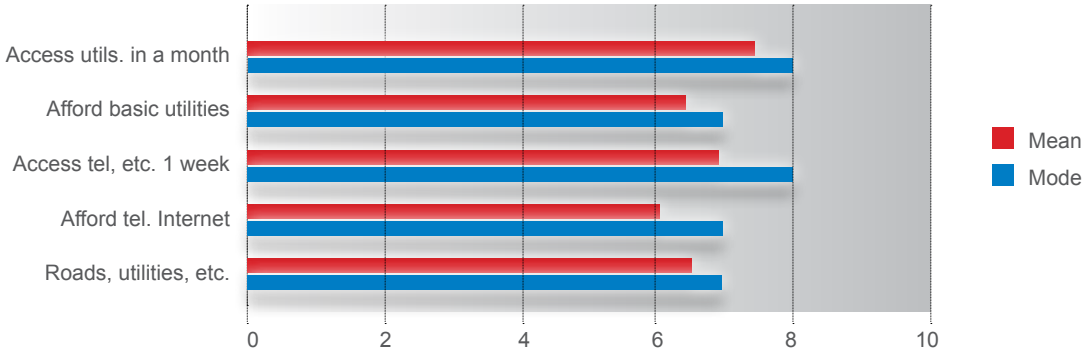
- Physical infrastructures (e.g., roads, utilities, etc.) provides good support (Roads, utilities, etc.),
- It is not too expensive to access good communication (Afford basic utilities),
- Good access to communication is available to new firms (Afford tel., Internet),
- A new firm can get prompt access to communication (Phone, etc.) (Access tel., etc. 1 week),
- New and growing firms can afford basic utilities such as gas, water, electricity, etc. (Afford basic utilities),
- New and growing firms can get good, timely access to basic utilities (Access utils. in a month).

In parallel to the last two years, this is a most favourably rated area. All of these were found moderately true or true in the Canadian environment. Modes for all were 8 ('true') or 7 ('moderately true'). Means remained at 7 ('moderately true'), except for the two involving

cost which dropped to 6 ('somewhat true'). Here there is more involved than just concern for firms' limited resources. Much of the Canadian communication system is high cost.

It is puzzling that this rating of physical infrastructure as the most favourable in the set evaluated by the Canadian experts does not rank high in international comparison (see: 2016 – 2017 Global Reports). The physical infrastructure ratings for Canada were low related to the international means.

Figure 6.7: Physical Infrastructure



6.8 Cultural and Social Norms

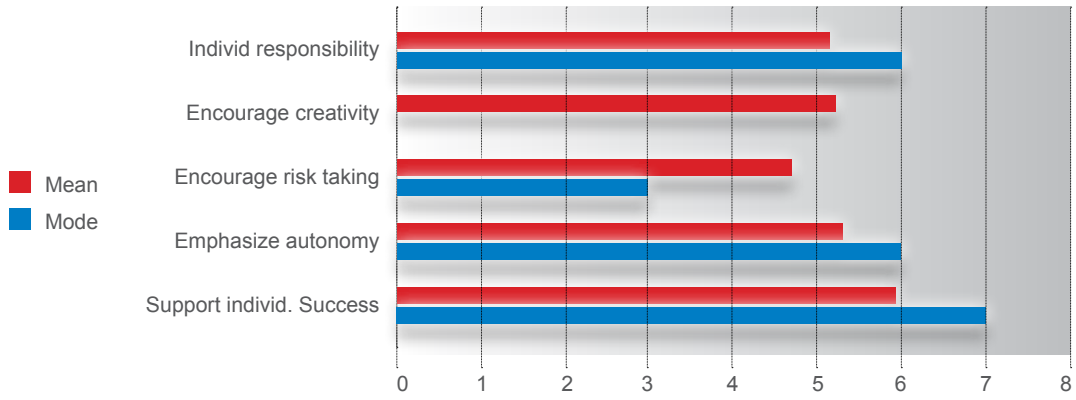
The fundamentals of Canadian national culture are regarded as reasonably favourable for entrepreneurship. The opinions of respondents to the Adult Population Survey above are perhaps more positive than the view of the experts. Three statements command a reasonable degree of assent:

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

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

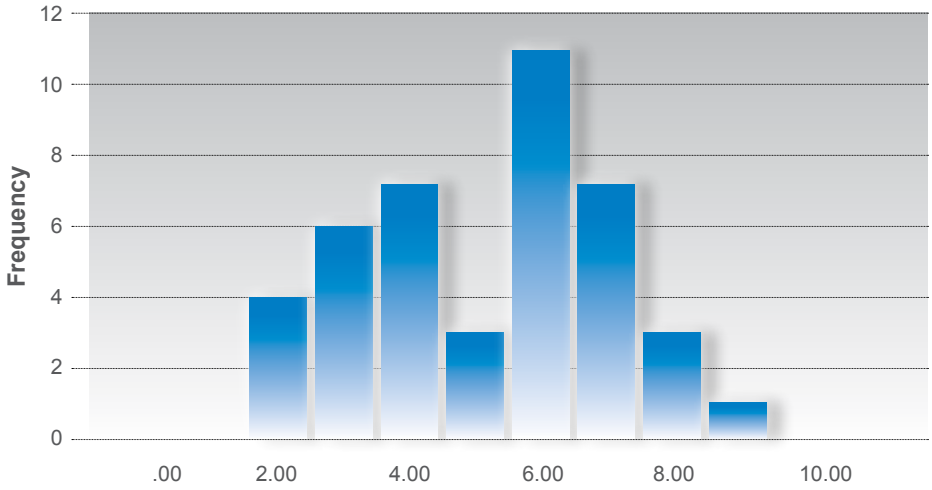
Last year the expert panel are reported modes of 7 ('moderately true') for all of these cultural aspects except the last. However, there was an interesting split in the evaluation with a significant number of firmly negative responses. These negative evaluations have become prominent in the current responses. Only support for individual success and emphasis on autonomy modes retain modes of 7 ('moderately true') and 6 ('somewhat true') the mean evaluations drop to 5.9 ('somewhat true') and 5.3 (neutral) respectively. The encouragement of risk taking is bimodal with a mean of 4.7 (neutral) and encouragement of creativity and innovativeness receives a modal value of 3 ('moderately false') accompanied by a mean of 5.9 ('somewhat true'). These discrepancies point to a bimodal distribution for more than the risk taking issue. Some definitely negative evaluation is balanced by a more measured positive evaluation. The overall impression is of a bimodal distribution which may divide along political lines involving support for neo-liberal economic policy.

Figure 6.8: Social and Cultural Norms



To illustrate the distribution in several of these five issues Figure 6.8 shows the complete histogram of responses to the individual responsibility statement along with the exact wording from the survey.

Figure 6.9: Histogram of Responses to the Last Social and Cultural Feature



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

Mean = 5.17
Std. Dev. = 1.899
N = 42

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 with a goal of solving social and environmental problems? There were special questions last year addressed to this issue. The 2015 results are repeated here to offer completeness to this report.

Some of the questions were directed more at states and economies 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 four (somewhat false).
- In Canada, consumers are putting pressure on businesses to address social and environmental needs. Mean 6.2, mode 7 (moderately true).

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

- In Canada, there are sufficient private and public funds available for new and growing firms that aim at solving social and environmental problems. Mean 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 optimists about sustainable development recommend, nor is it easy for social and environmental initiatives to raise the required funds. It is, however, recognized that some significant consumer interests are promoting socially 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 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 represent 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,*

It is recognized that some significant consumer interests are promoting socially and environmentally valuable ventures. There is probably room for entrepreneurship policy to influence this balance.

- *Physical infrastructure,*
- *Cultural and social norms (for entrepreneurship).*

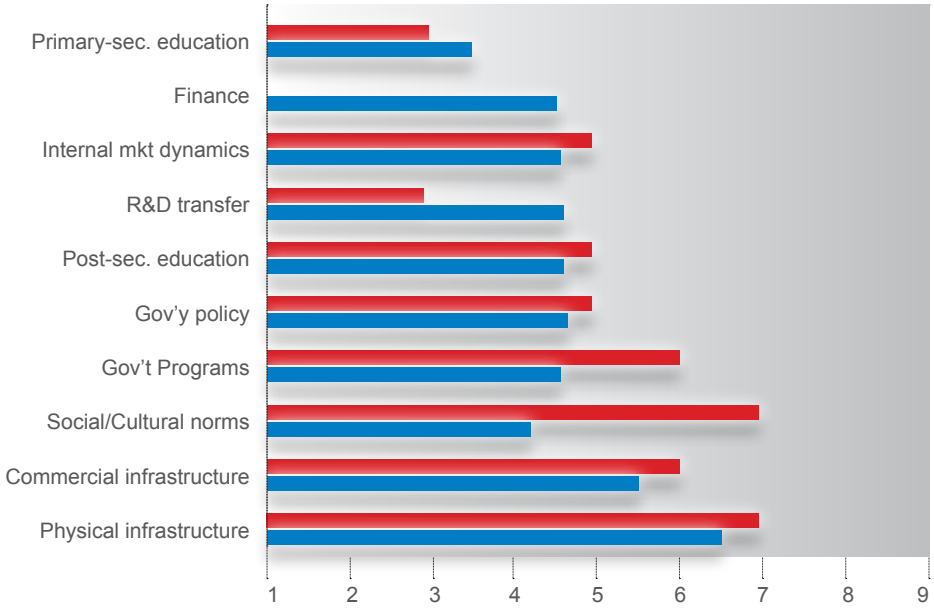
The ordering of modes and means for these grouped variables are shown in Figure 6.7. As has been the case over the last three years, the highest mean framework condition in Canada is physical infrastructure for the young and growing firms. This is followed by professional and commercial services infrastructure, which attains the highest among the innovation economies group. Those two and the Canadian social and cultural norms share favorable global averages (> 5.0) over the aggregated items. Mean scores for the second and third place them near neutral indicating that there are experts who are not satisfied. Internationally, averaging the innovation economy group, only social and cultural norms have an average above 5.2.

Government programs, post-secondary education, finance, and government policy are found, in aggregate, to be more or less satisfactory with means near neutral. The same is true for R&D transfer, however the satisfactory aggregate average masks favourable evaluation of the ability of Canada to develop a world class technology firm, and the ability of scientist and engineers to commercialize. Access to new knowledge by young and growing firms was considered a problem area. Market dynamics is a special case. The first two variables deal with market volatility, which might not be considered desirable. If scoring is split between the first two variables and the last three, it is found that the first two drive a mode of 6 ('somewhat true'), where the last four have a mode of 4 ('somewhat false'). If the negative interpretation of higher scores is assigned to the volatility variables, the interpretation becomes somewhat unfavourable throughout.

The weakest point was primary and secondary education. The issue of supporting the entrepreneurship environment centres on the lack of education to promote knowledge of basic economic principles, business, and start-up. A more positive reading is given to the essential foundations of education for creativity and independence. The low ranking of primary and secondary education might be the subject of controversy around the concept of 'entrepreneurial thinking' (thinking that supports, as well, intrapreneurship or social entrepreneurship), as opposed to the specific question of the study of firm formation.

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

Figure 6.10: Mode and Mean Expert Rankings of Framework Condition Variables



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 comments* in a *priority order* of first in importance to third in importance. A relatively small number of topics dominated these responses. Figure 6.10 shows the leading areas of concern over constraints on the left and the leading areas of factors fostering entrepreneurship on the right. The blue band at the base indicates the highest priority comments and the topic areas are ordered approximately in the order of these high priority issues. Red denotes 2nd level priority and green 3rd level.

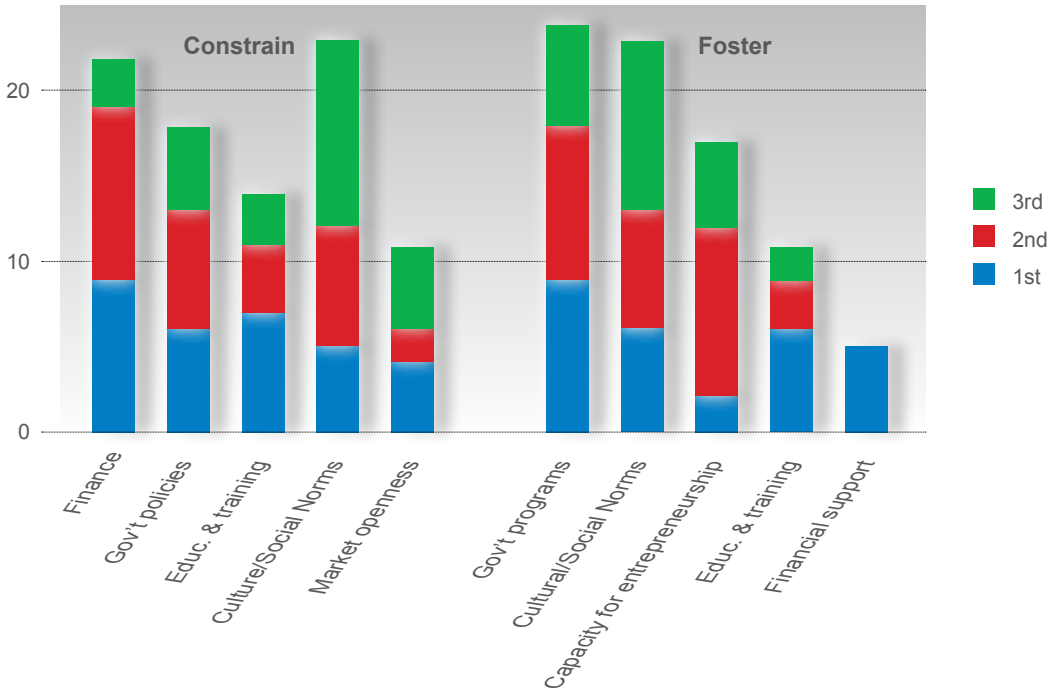
Among constraints on entrepreneurship, the issues of finance and government policy, drew comment over the three levels of priority.

Cultural and social norms, along with finance also drew comments as sources of constraint by over half the respondents, although the comments about cultural and social norms appear at level two or three priority. It is particularly interesting that government policies draw many comments as a constraining factor where government programs are the mentioned among fostering factors listed by more than half of respondents. Comments on cultural and social norms as affecting entrepreneurship as a constraining factor come from over half the respondents, while half the respondents also find fostering factors in the cultural/social environment.

In elaboration of low rating on the scored (1 to 9) responses above in the survey, education and training drew specific comments on the constraining factors, as did market dynamics. Capacity for entrepreneurship draws significant comment for fostering aspects. Government programs seem to mirror government policy. Where programs can be identified for their fostering aspects, more aspects of government policies are seen as constraining.

Figurere 6.11: Important Areas of Constraining Conditions and Fostering Conditions for Canadian Entrepreneurship

(Axis: Number of responses. Priority: 1st in blue, 2nd in red, and lowest in green)



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

To capture the flavor of the open ended comments, two representatives of the finance concerns are:

> *'lack of access to necessary capital - NOT access to venture capital,' and, 'No Community Investment Fund platforms.'*

A characteristic comment about government policies is:

> *"La multitude de réglementation à respecter, permis à demander, interraction avec plusieurs entités/ministères de l'adminnistration pubique."*

Turning to facilitation by government programs a positive comment is,

> *"Both the provincial governments, and the federal government take innovation seriously enough to invest government money into it."*

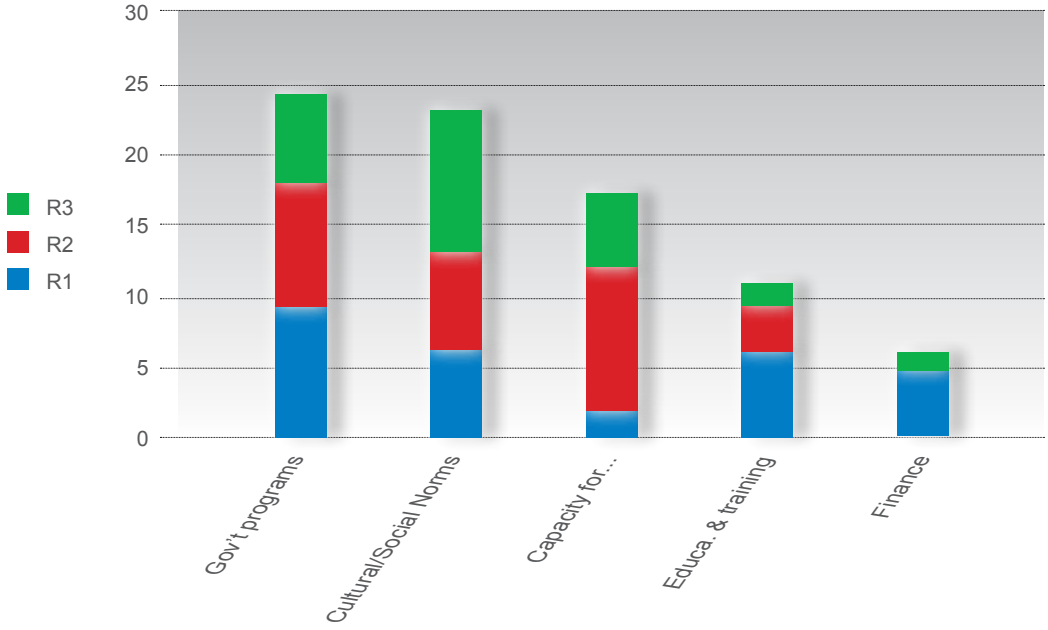
On the culture and social norms for entrepreneurship typical comments are,

> *"excellent universities," and "as strong social ecosystem."*

The final invitation to open ended comment requested the expert panel members to make recommendations for improvement of the environment for entrepreneurship. Once again each expert was asked for three in order of priority. These recommendations were similarly classified into areas of concern. Figure 6.11 indicates the number of recommendations made in the leading areas.

Figure 6.12: Areas of Numerous Expert Recommendations

(Axis is number of responses. Priority: 1st in blue, 2nd in red, and lowest in green.)



While government programs drew the highest number of comments about fostering factors, they were also the area of the most recommendations. Cultural and social norms, which were widely cited as areas of both constraining and fostering factors, were also the area of many recommendations. Capacity for entrepreneurship and education and training each attracted a number of recommendations. These two areas are probably best seen as complimentary.

Some concrete examples of the recommendations follow:

'Établir une stratégie fédérale-provinciales-territoriales avec une vision, des objectifs, des ressources et des cibles de résultats à atteindre avec un suivi rigoureux.'

'Continue to celebrate people who take chances.'

'One of the barriers to entrepreneurial activity not mentioned above is Canada's richness in natural resources. When the global economy is booming, the world wants our resources, the resource companies (which do very little R&D) are hiring and no-one cares.'

'Assure all schooling has an entrepreneurial program at the earliest stages.'

'Make angel investments tax deductible. These generally have much more impact than most charitable contributions to poorly run charities. Capital gains can be taxed if the investment is successful.'

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

'Make angel investments tax deductible. These generally have much more impact than most charitable contributions to poorly run charities. Capital gains can be taxed if the investment is successful.'

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 men's entrepreneurship. Last year women's TEA was over 80% of the men's rate, but it has fallen back to that of other leading countries with women's rates nearer 65% of men's.

The analysis of sectors on a larger sample using three years of data reveals that a significnt 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 degee 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.

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.

FINANCE

Expert opinion suggests that the framework conditions surrounding finance are somewhat improved. However, ratings are not high and expert 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 research16showing 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 emeging 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[19]

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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 recommends 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, with Canada's lesser emphasis on consumer services (the area where counterproductive entrepreneurship is most likely to arise), suggests more activity in areas favourable for innovation, especially including the 'knowledge intensive business services' (KIBS)[26]. sector. Canada's negative aspect is the comparatively low level of entrepreneurial employee activity (EEA).

A key document on innovation in Canada was published in 2013[26] 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:

> *'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*[27], 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 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 firms. One of the most powerful drivers of innovation is 'spillover' of knowledge not used in the core business of mature firms. It can find use to support founding new firms able to exploit the knowledge in support of a new direction.

CULTURE AND SOCIAL NORMS

There is a curious split. The survey of the general population seems quite positive about the opportunities, whether entrepreneurship is

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One of the most powerful drivers of innovation is 'spillover' of knowledge not used in the core business of mature firms. It can find use to support founding new firms able to exploit the knowledge in support of a new direction.

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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[18], that governments sharpen their focus on scalable, growth oriented, initiatives.

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[11] A list of country name abbreviations is found on the introductory page.

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The 2015 GEM Canada report is available at www.gemcanada.org

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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 in due course.

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