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Attitudes to risk.

Canada versus U.S. Canada has lots of ideas but is very unsuccessful at commercialisation whereas the U.S. is very successful at both? Data from the on-line lab sheds light on each country's attitude to risk?

November 15, 2017

CIO's on-line lab; its use

How it's done

Registrants' to our on-line lab¹ provide interesting insights into attitudes concerning risk taking when it comes to innovation. While the information is preliminary, the conclusions go some way toward confirming that there are significant differences between among U.S. and Canadian business managers.

Our registrants are asked to provide their opinion on twenty-five Factors. Four of these Factors relate specifically to risk taking and innovation.

- Factor #2; whether management is *explicit* about calling for innovation in the organization, or not.
- Factor #4; whether management emphasizes seeking opportunities in their planning and management style or whether the focus is much more on cost reduction.
- Factor #5; the tolerance for failure within the organization; often arising from how failure is treated in the organization?
- Factor #9; whether management has a tolerance for uncertainty (as distinct from risk) as demonstrated in the planning process.

Registrants are asked to calibrate or measure what they perceive as the 'Ideal' situation for each Factor and to note the 'Reality' within their organization. The difference between their 'Ideal' and their 'Reality' is a measure of their dissatisfaction with their situation. How important each Factor is to the registrant is measured by the scale of their calibration.

¹ At <http://www.corporateinnovationonline.com>



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Quick Summary

On-line lab results suggest that U.S. registrants have a higher tolerance for failure than do Canadian registrants. Similarly, U.S. registrants have a higher tolerance for uncertainty in the planning process.

This attitude, deeply-rooted in each country, is a major contributor to the difficulties in commercializing good ideas in Canada.

Canada's international reputation for innovation has some bright spots. Canada's overall standing is 14th according to the latest WEF report.

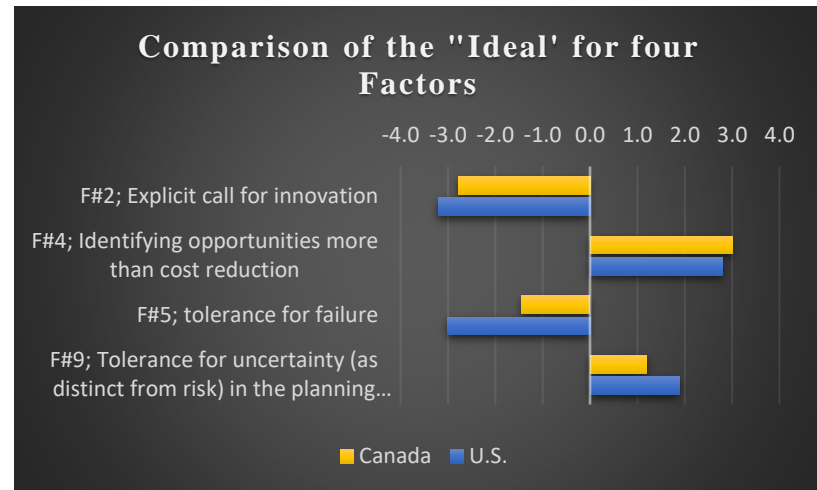
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Our research into highly-innovative companies indicates that these management practices encourage, but in their absence may discourage, innovation. The four Factors are part of a set of 25 Factors.

In this report we have selected registrants from Canada and the U.S. but only from manufacturing and process industries (those industries making something), and only those registrants who indicated that their 'Ideal' situation was to have an **explicit** call from management to be innovative. Innovation of whatever kind implicitly involves risk taking.

Similarities and differences

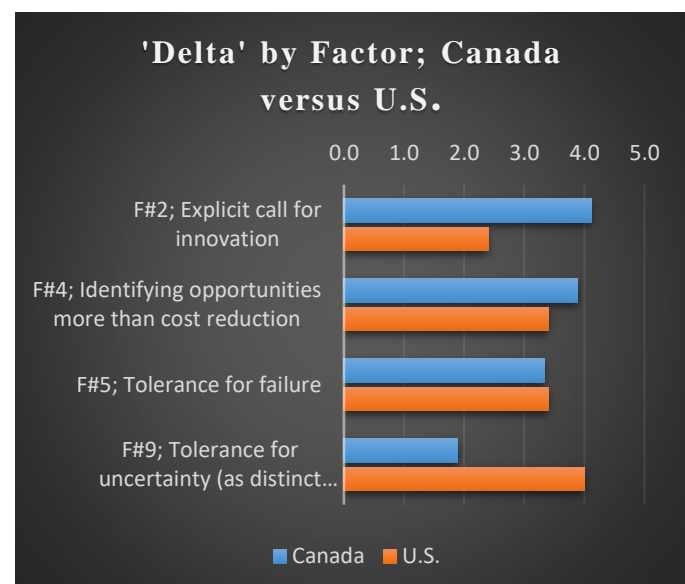
U.S. registrants have a higher tolerance for failure than Canadian registrants and a higher tolerance for uncertainty in the planning process. Together these characteristics suggest U.S. management's willingness to adopt a higher risk profile as compared to Canadians; a key to understanding why Canada lags in the successful commercialization of ideas. This is not an entirely new notion but our data provides measurable evidence to back up anecdotal opinion.



There is close alignment on two Factors, #2 and #4 and less so on #9, but there is a discontinuity on #5. One can therefore conclude that there is a similarity of opinion from all registrants on what the 'Ideal' should be in terms of management making an 'explicit' call for innovation (F#2) and the need to focus on identifying opportunities (F#4) rather than seeking cost reductions.

The attitude to 'failure' is addressed by Factor #5 and the question is whether management is tolerant of failure or not. Most innovative companies which CIO has researched treat failure as a 'learning experience' – to a point. U.S. registrants believe that this is more important than do registrants from Canada. Similarly, for Factor #9, U.S. registrants have a higher tolerance for uncertainty.

The level of dissatisfaction (the 'Delta') is similar for Factors #4 and #5 but there is a greater dissatisfaction registered by Canadian respondents around the call for innovation from management i.e. Canadian registrants would wish more leadership from management when it



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comes to demanding innovation. U.S. registrants have a higher tolerance for uncertainty when it comes to planning for the business

The ‘Delta’ provides an indication of the degree of satisfaction concerning each Factor. For Factor #2, there is a higher level of dissatisfaction amongst Canadian registrants than amongst those from the U.S. U.S. Registrants are, while not totally happy with their situation, more satisfied with their situation than those in Canada.

The story is similar but less of a difference when it comes to managements’ focus on identifying opportunities (F#4) versus seeking cost reductions. The level of dissatisfaction is similar.

The tolerance for failure, Factor #5, shows that registrants in total are not satisfied with their situation – i.e. management should exhibit a higher tolerance for failure – but this is impacted by the point made above that the U.S. registrants already have a higher ‘Ideal’ for the tolerance for failure.

Results for Factor #9, tolerance for uncertainty in the planning process, suggests that U.S. registrant have a much higher threshold than do Canadian registrants.

There is every indication from this preliminary data that attitudes to risk are deeply-rooted in the psyche of corporate Canada and this may well extend to entrepreneurs, venture capitalists, and angel investors as well as established enterprises. In most respects, this confirms anecdotal opinion. If these views are deeply-rooted, remedies may be difficult to develop and will take a concerted effort over the long term by both the public and the private sector. The first step, however, is to recognize and admit that there is a problem and understand its magnitude.

A recent Conference Board of Canada study² does make reference to the lack of evidence to support ‘management’s reluctance to take risks’.

‘Others have looked at firm and entrepreneurial behaviour, such as management reluctance to take risks or to build globally competitive large corporations. But these studies have been limited by a lack of sufficient data and information. Consequently, more conclusions have been reached based on beliefs and opinions than on actual evidence’.

‘So far, there are no conclusive answers—or solutions—to these firm-level issues. A major roadblock for business and government is the lack of comprehensive data and information for diagnosing the problem’.

This report sets out supportive evidence to further identify the problem and provides some insight into the magnitude of the challenge facing Canadian entrepreneurs, angel investors, venture capitalists and those within corporations who desire to be more innovative.

² See ‘An Op-ed by White & Partners dated November 16, 2013

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Canada's slip/climb on its capacity for innovation

Canada is showing some bright spots; research institutions and the availability of scientists and engineers.

Canada (Canadians i.e. not just the government) have stopped the country's slide in global innovativeness rankings. In 2008 Canada was ranked 18th for its 'capacity for innovation' but in the latest report; 2016-2017, Canada ranked 23rd out of 137 countries, by the WEC³, arguably a totally apolitical organization.

Each year the World Economic Forum publishes a vast – over 500-page report – on the subject of competitiveness in about 140 countries. A multi-factor analysis is the basis for ranking each country and the analysis is a complex mix of hard data and opinion.

In the 2008/2009 report, Canada joined the top 10 group. In the 2013/2014 Canada ranked 14th overall and remains at that ranking.

Overall ratings are important but our examination deals primarily with the issue of innovativeness, one of the reports twelve 'pillars' used in their evaluation process. It is in this 'pillar' that Canada is viewed as both slipping and climbing the ranks. The data from the WEC report provides insight into why the slide is taking place.

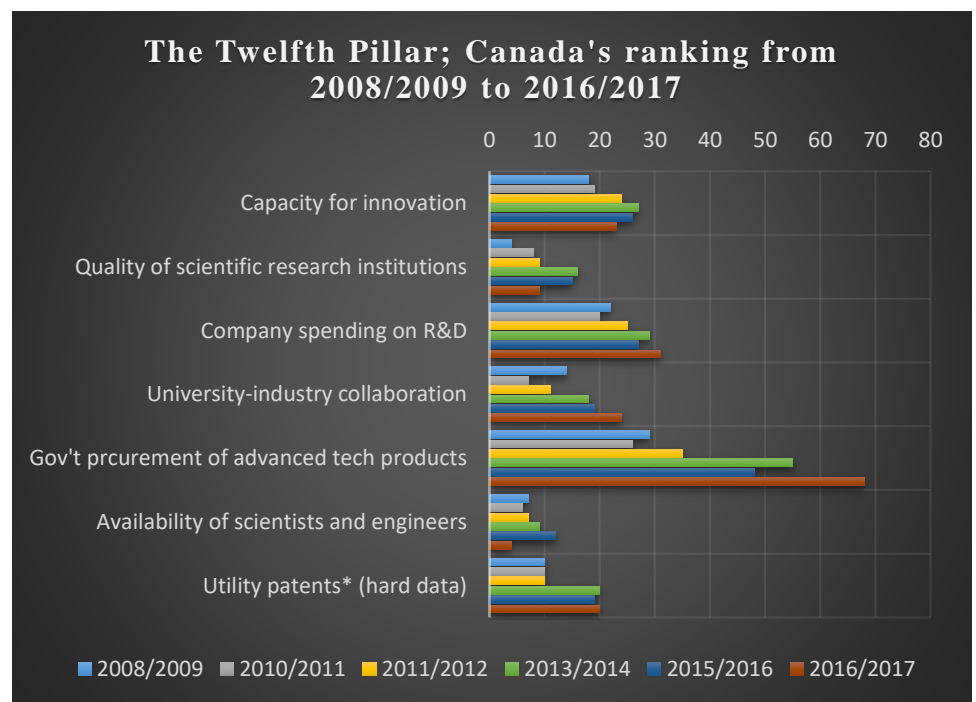
The trend is clear. There is a shift in Canada's ranking.

For example, for the factor 'capacity for innovation', the shift is from a ranking 18th in the first report (2008/2009) to 23th in the most recent report.

From a relatively high ranking in the period 2008/2009 all but four of the criteria have seen Canada decline relative to other nations. Improvements lie in the availability of scientists and engineers – from 7th to 4th place, and in the quality

Slip/climb

According to the latest WEF report on competitiveness, Canada's overall ranking in innovation has declined since 2008. We now rank 14th overall in this latest report but rankings for *innovation* place us closer to 23rd; not good for an 'innovation-driven' economy seeking to maintain or enhance its standard of living.



³ World Economic Forum Global Competitiveness Report for 2016/2017

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of scientific research institutions – from 4th to 9th ranking albeit up from the prior two years which were 16th and 15th respectively. Utility patents went from 10th to 20th ranking.

The latest rankings compare Canada to 137 other countries. One might argue that Canada's performance is not bad considering the total number of countries involved but typically Canadians measure their economic performance against a set of countries which have similar life styles and economic wellbeing. Most often in the top ten are; Switzerland, Sweden, Finland, the U.S.A., Japan, Germany, the U.K., Denmark, Norway and the Netherlands. More recently, and creeping higher in the rankings, are Singapore, Hong Kong, and Taiwan.

The opinion-based research methodology, is particularly relevant to Canada, even though the comments on innovation are subjective. Opinions matter and in this case, those relating to innovation, provide the basis for the results which are set out here. In this sense it is the 'global opinion' of executives which matters and this is important since such a perception can impact future global investment decisions.

For example, the recent establishment of R&D centers around the world by companies such as GE⁴, Deere, and 3M⁵ to not advance research in Canada to the same degree is a contributing factor to Canada's decline in importance on the world stage. On a global basis it is somewhat easy for executives to forget a market of 36 million people when billion-people markets beckon. Canada's traditional linkage and empathy with the U.S. business community is changing!

The WEC report provides a context for what to do about innovation in Canada. Canada has most of the infrastructure in place it seems but lacks the best practices at the macro level to be a real performer in the global economy.

Innovation and risk taking

Innovation in products/services is vitally important to Canada's well-being. The Conference Board of Canada says so!

Canada is characterized as an 'innovation-driven' economy by the WEC; the most developed level out of five levels used in this multi-country study of competitiveness, including innovativeness. Canada needs to compete in this ultimate tier but results so far suggest that Canada's performance is weakening. We have dropped out of the top ten over the past decade. Most would agree that the fundamental problem is not so much based on a lack of good ideas, nor a lack of spending on research and development, but rather the problem is the approach taken by public and private sector investors at the point of commercializing ideas; the stage of highest risk.

Ideas abound but this is the least investment-intensive end of the business process leading to commercial success. Significant investment starts at the commercialization stage not at the idea stage. It is the investment in making ideas into marketable products and then investing to

⁵ Companies researched by CIO

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commercialize and market the product which is the challenge, particularly since export markets are critical to scaling the opportunity. This is the stage of innovation at which risk assumption is highest. The psyche of venture capital funds, angel investors, entrepreneurs and those in management of established but innovation-oriented organizations are the key to this critical stage.

‘Innovation-driven’ countries are those that are successful at the business of adding-value to their resource base, whether that resource base is in the ground or in its human capacity. Whether it’s adding value to raw bitumen or developing the next high-tech product, the challenge is to take an idea and commercialize it for global distribution – in other words for value-added export.

A bit of background is useful⁶

Although less-advanced countries can still improve their productivity by adopting existing technologies or making incremental improvements in other areas, for those that have reached the innovation stage of development this is no longer sufficient for increasing productivity. Firms in these countries must design and develop cutting-edge products and processes to maintain a competitive edge and move toward even higher value-added activities. This progression requires an environment that is conducive to innovative activity and supported by both the public and the private sector.

The warnings are everywhere but it would seem that Canada has been unable to come to grips with the issue of declining innovation capacity. The Conference Board has gone further to identify the problem.

But, with some exceptions, Canada does not take the steps that other countries take to ensure research can be successfully commercialized and used as a source of advantage for innovative companies seeking global market share. Canadian companies are thus rarely at the leading edge of new technology and too often find themselves a generation or more behind the productivity growth achieved by global industry leaders’.

Canada has been slow to adopt leading-edge technologies. This is problematic, since innovative products have increasingly short cycles. Often within a couple of years of introduction, products are upgraded or must be replaced. In these circumstances, slow adopters never catch up; they are always at least one generation behind the advancing frontier of possibilities that new technology represents. That is not a winning formula, and Canada finds itself playing catch-up on too many technologies’.

The Conference Board report identified the problem areas for Canada and did this in 2013. Not much has happened since.

⁶ © 2014 World Economic Forum. The Global Competitiveness Report 2014–2015.

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Remedies; public sector

Steps to improve Canada's innovation performance require work at all levels but, currently, initiative lies with leadership at the federal level.

The above-noted comments are not new to those who are familiar with Canada's less than successful results in commercializing products/services, but the evidence presented earlier could be used to spark new and essential initiatives at several levels.

As in any corporate environment, leadership is the key to success. Canada's labour productivity and innovation gap can best be addressed by raising the profile of innovation and its importance to Canada's future standard of living⁷. It is a management issue – a leadership issue! Deep-rooted attitudes do not change without leadership from the top; from both public and private sectors.

There must be renewed effort at the federal level to move innovation to a higher level of importance. Most of this has been stated before! The fact that this has been said before but has not been acted upon is a major problem.

Recommendation One.

Appoint a federal minister in charge of Canada's innovation and, as stated in the 'Jenkins Expert Panel Report', create a Council (a small group) to improve coordination and impact throughout the federal service and amongst the provinces regarding the programs and policies which will encourage innovation. The first step is to appoint a person! Just the point made in the 'Jenkins Expert Panel Report'.

Recommendation Two.

Be prepared, at all public and private-sector levels to make difficult decisions aimed at restructuring the economy by improving the process of allocating scarce R&D and other 'innovation' instruments to foster growth in creative export-oriented industries and companies. Just the point touched on in the 'Red Wilson' Report which, under the heading

Here's what we found out about the state of innovation in Canada*

- Canada's P/I gap is significant and getting worse, particularly when contrasted with the U.S.
- The P/I gap is not as bad as one might think and there are some positive signs.
- Past recommendations impacting innovation and arising from royal commissions and studies are seldom acted upon.
- A recent report, comparing Canada's performance with 16 other countries is not particularly helpful in moving Canada forward.
- The Conference Board, by its own statements, is perplexed as to what to do with SMEs and entrepreneurship – the acknowledged drivers of innovation.
- Current priorities and policies are insufficient to move our rankings.
- Without leadership at the national level, just as in any organization, there will be no progress.
- The focus of any effort to improve innovation, close the P/I gap, and improve ratings should be directed to those SMEs which have a desire to be successful and grow globally.

For the full report, view the W&P Op-Ed, November 16, 2013

⁷ <http://www.corporateinnovationonline.com/wordpress/wp-content/uploads/2014/05/Op-ed-on-Conference-Board-ratings-of-Canada.pdf>

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of Growth Businesses calls for ‘recalibrating government policies for small and medium-sized enterprises to focus on firms that demonstrate the desire and capacity to grow’. There is little point in supporting companies which do not wish to grow and be successful - globally!

So, Canadians have been told what to do to progress, not from just one report, but rather from at least two reports. Time for action is now! The ‘Jenkins Expert Panel Report’ got it right when it entitled its report; A Call to Action.

This must be a new initiative, not a rejigging of existing departments. The initiative should be headed by a person with solid business experience and able to demonstrate leadership qualities – making tough decisions as never before and seeking collaboration as is so necessary in the Canadian context. The fragmentation of Canada’s innovation effort is not helpful in a highly competitive global economy.

Absolutely nothing significant will happen, as evidenced by the litany of past reports and their no-start recommendations, unless leadership is in place and there is constant follow up on outcomes of new initiatives by both the public and private sectors.

A Conference Board of Canada report sets out examples provided by three Nordic countries which could provide ideas for kick starting innovation. The three leaders are Denmark, Sweden, and Finland. Denmark and Finland are singled out by the OECD for their exceptional performance.

- The Danish government’s three-pronged efforts to improve the country’s entrepreneurial climate—via a US\$1-billion growth capital fund, a US\$570-million loan guarantee scheme, and an entrepreneurship education strategy—are cited as examples.
- Third-place Finland also has a growing entrepreneurship culture, a robust venture capital industry, and a high proportion of young patenting firms that have probably benefited from the central government’s shift in focus toward small and medium-sized enterprises (SMEs).

As if to reinforce the above recommendations, an article by Anthony Lacavera⁸ states unequivocally that the fundamental problem is that Canadians need “acknowledging that governments and investors alike are averse to risk and afraid of failure”. What comment could be more prescient? Lacavera’s article outlines additional initiatives designed to address risk taking in innovation such as shifting the government flow of funds from traditional industries such as automotive to start-ups by way of setting an example and encouragement for private sector investors. Leadership by example!

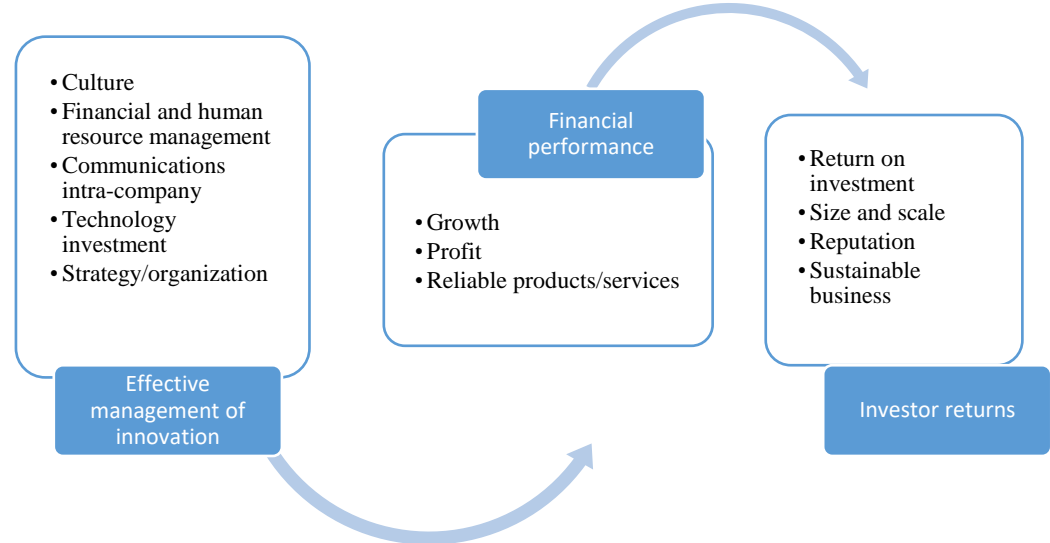
⁸ The Globe and Mail, Comments and Analysis, Friday, September 18, 2015, Federal leaders should lose their timidity and back risk-taking. Anthony Lacavera CEO of Globalive Capital, A Toronto-based venture capital firm.

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Remedies; private sector

For the private sector, the message is somewhat different. Our model for innovation management best practices at the micro level combines a number of important components all of which contribute to encouraging innovation, and therefore risk taking, in an organization.

No one wishes to repeat the failures of several highly-important examples such as RIM (now Blackberry), Nortel, nor – looking a way back – Massey-Ferguson, all companies which we have researched.



Succeeding requires a number of Factors – effective management practices – to be working at the same time.

A Booz & Co. report that the most crucial factors in innovation are strategic alignment and culture⁹; two of the components in our model.

Recent studies on innovation in Canada provide further suggestions for improvement. The Deloitte study¹⁰ points out that while companies believe they are investing in research and development and ICT, they are not. Investments are lower than the competition. Launching new companies is not the problem; sustaining them is. Overconfidence abounds according to this report. Recall that ‘hubris’ was a significant contributing factor to the demise of Nortel¹¹ and to the decline of RIM. A study¹² supported by the Conference Board of Canada, stated that ‘half of Canadian companies surveyed put more emphasis on incremental innovation, while approximately 10 percent show a strong focus on radical revolutionary innovations thus steering away from risk.

Obviously there are challenges at the enterprise as well as the national level.

⁹ Global Innovation 1000 Study, Winter 2011

¹⁰ The future of productivity. A wake-up call for Canadian companies

¹¹ University of Ottawa study of the reasons for Nortel’s failure.

¹² The State of Firm-level Innovation in Canada 2012