

CIO – Innovation management best practices Innovation management practices lab

Canadian registrants are more risk averse than those in the U.S.

Canadian companies and institutions evidently have lots of ideas but are very unsuccessful at their commercialisation whereas the U.S. is very successful at both? Why?

Using data from the on-line survey, we shed some light on whether or not there are differences in innovation management practices between Canadian and U.S. registrants; particularly in their tolerance for risk. Risk is associated with all innovation.

Similarities and differences

U.S. registrants have a higher tolerance for both failure as well as uncertainty in the planning process when compared to Canadian registrants. 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 analysis provides measurable evidence that the tolerance for risk and uncertainty is less amongst Canadian registrants than with their US counterparts.

The on-line survey¹ comprises four Factors – out of a total of twenty-five - which are particularly related to the subject of risk taking. Registrants to the survey are asked to identify their 'Ideal' practice and also their current 'Reality'.

The extent to which registrants believe a Factor is important is measured by the registrant's emphasis by way of their weighting. The difference between their 'Ideal' and their 'Reality' provides a measure of their level of satisfaction or dissatisfaction for each Factor.

¹ Appendix B provides background on the survey

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Quick Summary

On-line survey 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; both of which impact the assumption of risk at the point of commercialization.

On many Factors there is little difference among registrants but when it comes to what is referred to as the 'organization and management of day-to-day affairs' differences of opinion surface.

Canada's international reputation for innovation has been declining since 2008. By most accounts the problem is not ideas but rather their commercialization. Risk taking peaks at the time of taking an idea forward, scaling up, and the attitudes to risk amongst Canadian registrants may well contribute to business success. Knowing that there is a difference should assist those setting policies and priorities in both the public and private sectors.

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Through this analysis, one has a sense of which Factors are important as well as an understanding of their current situation.

While twenty-five Factors make up the survey, three of the Factors have to do with measuring the impact – output - of current practices rather than with the ‘input’ as represented by effective management practices. The three ‘output’ Factors relate to whether

- the organization has a reputation for being innovative or not
- innovation is growing or declining and
- innovators leave or stay with the organization.

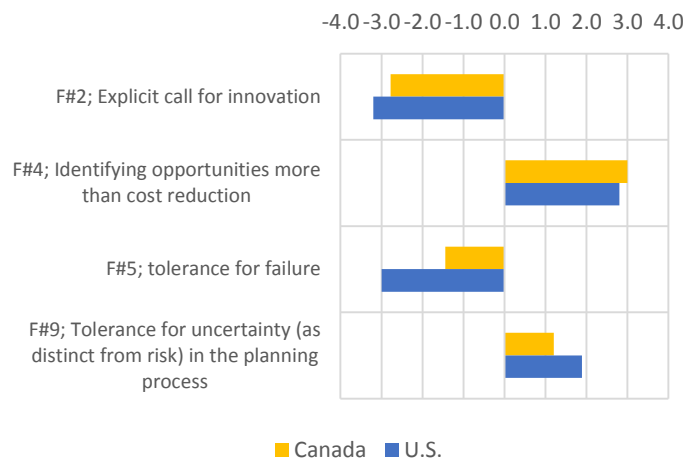
Innovators, as a class, are not likely to stay with an organization which is not innovating and, indeed, do not want to join such an organization.

Innovation Factors – alignment of opinion

Four Factors – see chart - are particularly relevant to innovation. The level of importance of all four Factors is high; as evidenced by the weighting given each Factor.

- There is close alignment between Canada and US registrants on two Factors, #2 – which deals with whether or not management is explicit in their call for innovation - and #4 – whether management emphasizes looking for opportunities versus focussing on cost reductions.
- There is slightly less correlation on the other two Factors; #9 – dealing with the tolerance for uncertainty in the planning process and for Factor #5 – tolerance for failure.

Comparison of the "Ideal" for four Factors



One conclusion is that there is a similarity of opinion from all registrants on Factor#2; i.e. management needs to be explicit about their goals for the organization to be innovative. A call for the organization to be innovative is important and should be led by the CEO with the backing of the Board.

Registrants have stated that it is important for the organization to focus on identifying opportunities (F#4) rather than providing untoward emphasis on cost reductions. Style and communication of these ideas obviously becomes important. For management, this is a matter of achieving a balance in the communication of corporate vision, information and materials.

The attitude to ‘failure’ is addressed by Factor #5 and the question is whether management is tolerant of failure or not. Most innovative companies we have researched treat failure as a ‘learning experience’ – to a point. U.S. registrants, by their response, believe this is an important

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Factor and that there should be, as an ‘Ideal’, a higher tolerance for failure than do registrants from Canada. Similarly, for Factor #9, U.S. registrants have a higher tolerance for uncertainty when undertaking planning and setting priorities.

Innovation Factors - dissatisfaction

Dissatisfaction with the current situation in a registrant’s organization is measured by the difference between their ‘Ideal’ and their ‘Reality’.

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 comes to providing leadership for innovation.

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.

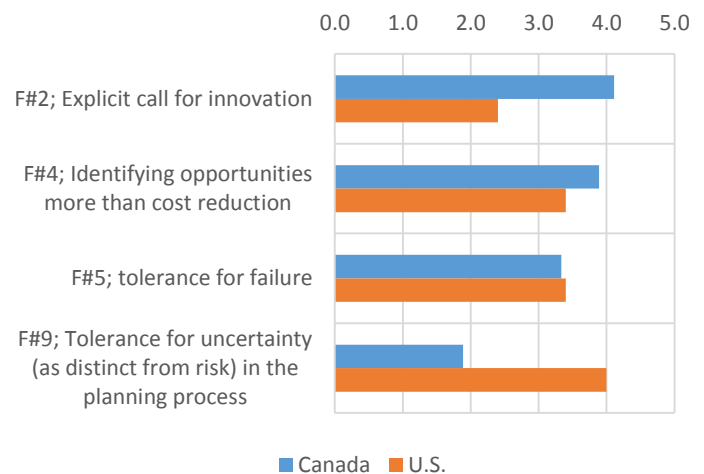
Results for Factor #9, tolerance for uncertainty in the planning process, suggests that U.S. registrants have a much higher threshold than do Canadian registrants.

Significance of the measurements

Attitudes to risk are deeply-rooted in the psyche of corporate Canada. This attitude may well extend to entrepreneurs, venture capitalists, and angel investors as well as established enterprises; the enterprises which dominate our sample of on-line registrants.

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 private sector. The first step, however, is to recognize and admit that there is a problem and understand its magnitude.

‘Delta’ by Factor; Canada versus U.S.



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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 analysis makes a contribution to this debate.

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. Recognizing the problem can act as a motivator to coming up with a solution, in this case solutions, which are probably different in form and degree than those which are applied south of the border.

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 WEC³; 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.

Canada has dropped out of the top ten countries 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 nearly so much at the idea stage. It is the investment in making ideas into marketable products and then investing to 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.

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

³ © 2014 World Economic Forum. The Global Competitiveness Report 2014–2015.

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‘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 useful⁴

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.

Canada versus US registrants’ opinions overall

Registrants, overall, are clear that leadership and having a set of management practices which encourage the generation of ideas are important. Registrants are less consistent about which day-to-day management and organizational practices make for effective management of innovation.

Our analysis into differences of viewpoint among Canadian and US registrants provides further insight into the management of innovation on both sides of the border.

⁴ © 2014 World Economic Forum. The Global Competitiveness Report 2014–2015.

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Appendix A sets out the comparison for all twenty-two Factors. For many of the Factors which make up the on-line survey, there is very little significant difference among registrants.

To facilitate a better understanding of the differences this further analysis breaks registrant's opinions into three main themes;

- Leadership
- Idea generation and realization
- Organization and management of day-to-day affairs

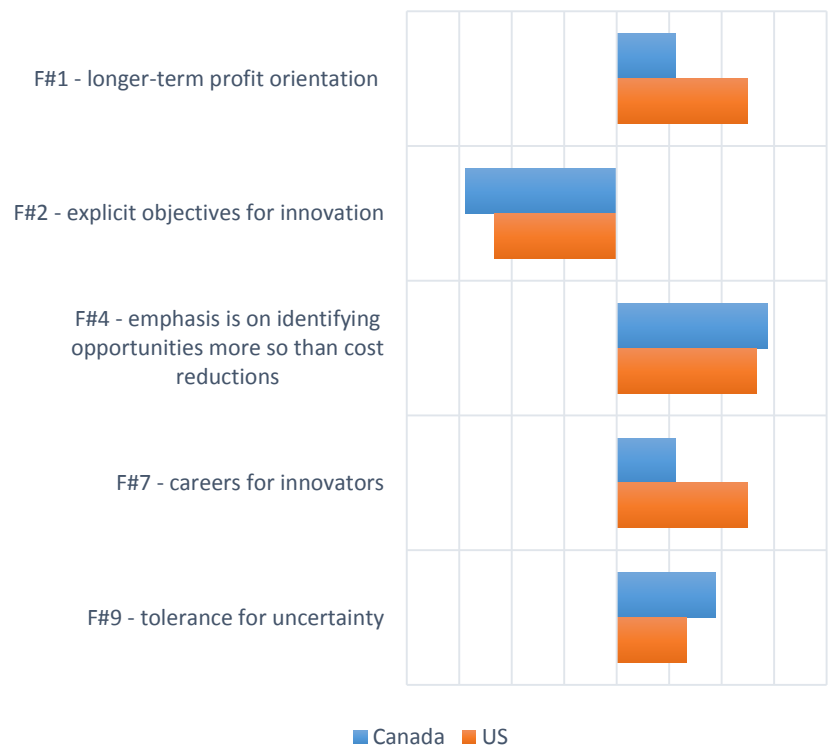
There is close alignment in opinions for the first two themes and less so for the third theme.

Leadership Factors

Leadership Factors, comprising five Factors, suggest a relatively common view amongst all registrants. US registrants take a longer-term view on profits and provide careers for innovators, but overall there is a consistency of view point on what the 'Ideal' situation should be.

Further insight is provided by comparing the composite – weighted average from both Canada and the US registrants – of all registrants, when compared to one of our benchmarks; in this case with results from an analysis of 3M's innovation management practices; our choice of the company which has the best practices.

Leadership - comparison of 'Ideals'



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While the information is not totally complete for all five Factors, a review of three Factors notes that registrants 'Ideal' is not up to the benchmark set by 3M.

3M excels at being seen to take a longer-term view on profits, explicitly calls for innovation (and have done so for decades) and provides careers for innovators – e.g. if one has a good idea there may be an opportunity to establish a new business venture.

Idea generation and realization Factors

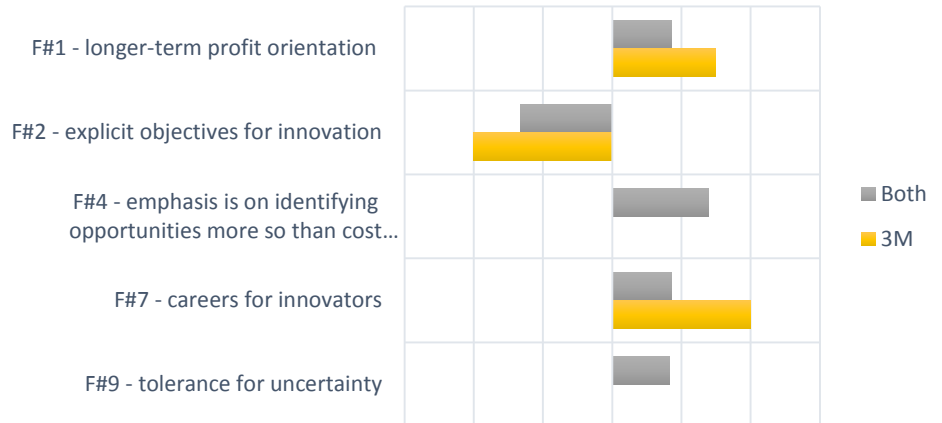
Analyzing the Factors which impact idea generation and realization provide a similar result to those for leadership.

There is a consistency among all registrants. The conclusion has to be that these six Factors are key to having an organization which is innovative. Tolerance for mavericks, for failure and for encouraging thinking 'out of the norm' or 'out of the box' are important attributes of such an organization.

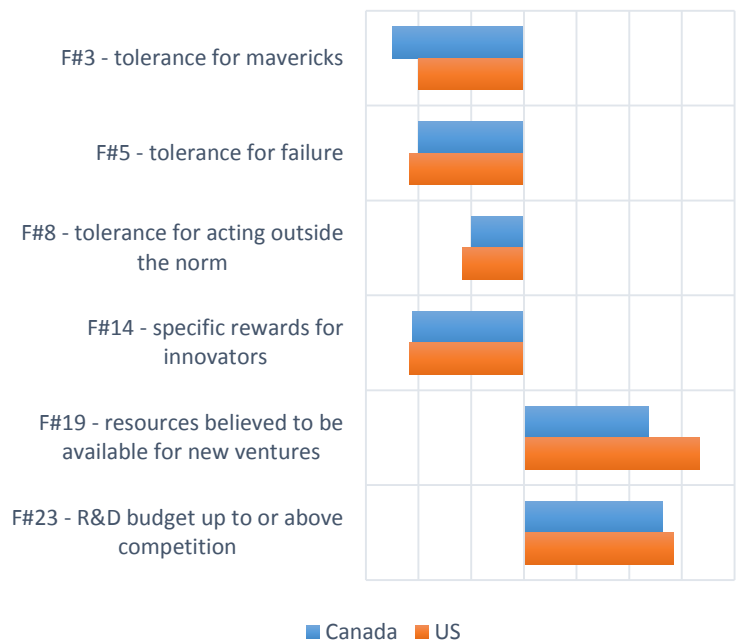
Factor #9, is important. Stakeholders – particularly employees at all levels - have to believe that if there is a good idea under consideration, funds will be made available for its verification and its continuation in the pipeline of good ideas.

Research and development – F#23 - continues to be a major driver of innovation for new products/services or for the significant modification of legacy products.

Leadership 3M compared to composite for US and Canada



Idea generation and realization Factors Registrant's 'Ideal'



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Organization and management of day-to-day affairs Factors

Differences among registrants appear under the heading of the ‘organization and management of day-to-day affairs’.

Both US and Canadian registrants agree on the importance of emphasizing people management (F#6) and the use of independent work groups (F#11). Factor #11 is often an indicator of the willingness of management to decentralize and delegate serious decision making down the line as opposed to forcing decisions to the top.

Decentralization specifically (F#18) seems more important to Canadian registrants than to counterparts in the US.

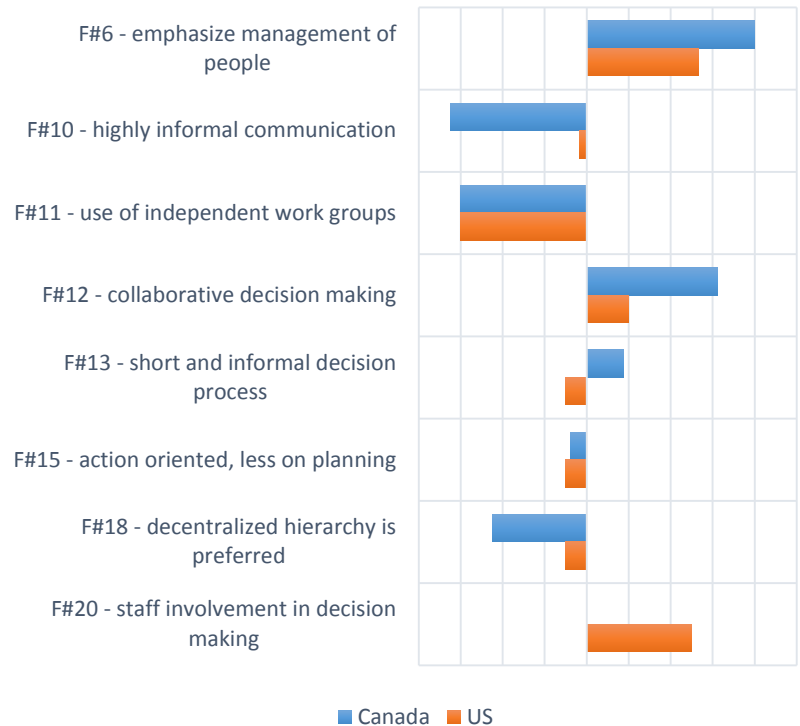
An analysis of the remaining present a confusion of results with little conclusion.

Several Factors elicit a response which suggest that, for these registrants, they are just not important when managing innovation. There is certainly little consistency. Whether the decision process (F#13) is short and informal or whether it is highly formal and takes a lot of time seems inconclusive. Similarly, for Factor #15 – whether the organization is action or planning oriented – seems to be unimportant.

Factors meant to measure the type of communication (F#10), the informality or formality of the decision process (F#13), seem less conclusive. Whether the organization ‘action’ or ‘planning’ oriented, while the results are close seems of less importance to registrants when compared to other Factors.

In summary, management practices which relate to idea generation are important. Leadership plays a key role. Other Factors, as noted here, probably require more research in order to make definitive conclusions.

Organization and management of day-to-day affairs - comparison of 'Ideals' Factors

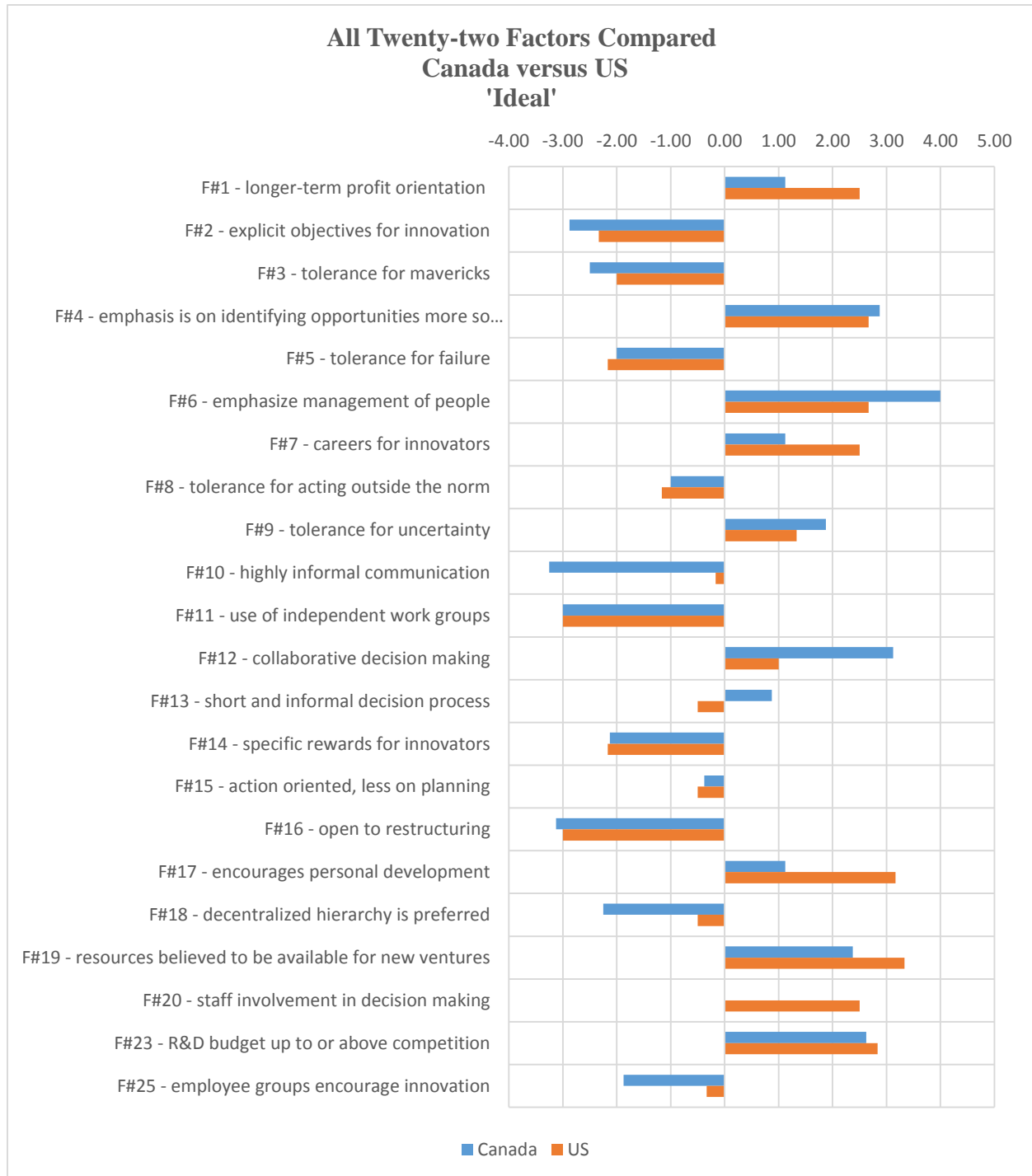


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Appendix A

All Twenty-two Factors compared



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Appendix B

W&P on-line survey⁵

How it's done

Registrants are asked to provide their opinion on twenty-five Factors.

Registrants are asked their opinion on what they would 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 their weighting of the Factor.

Our research into highly-innovative companies indicates that these management practices encourage, but in their absence may discourage, innovation.

As an example; 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 finding cost reductions.
- 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.

Three Factors are measures of the impact of good or ineffective management practices re innovation. These Factors are whether the organization has or has not a solid reputation for innovation, whether innovation is increasing or decreasing and lastly, whether innovators leave or stay with the organization.

For purposes of analysis and understanding, the report breaks out the Factors by three themes; 'Leadership' Factors, 'Idea generation and realization' Factors and 'Organization and management of day-to-day affairs' Factors.

For 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.

⁵ Available at <http://www.corporateinnovationonline.com>