

**Student Name:
Moncef Salmi**

**Student ID:
17427019**

**MBA
STRM-042**

**Critical Issues in Business
Innovation & Competitiveness**

Assignment 1: Critical Issues in Business

Assignment word count: 2527

Lecturer Name: Dr Deniz Meric

Submission Date: 13/07/2018

Executive summary

The main purpose of the current literature review is to analyze strategic development at the age of uncertainty in general, and focus on innovation and competitiveness in particular. Innovation is a buzz word in today's corporate vernacular. In fact, it's a notion that is deeply correlated with uncertainty and competitiveness. Consequently, it deals with company's sustainability and success. In this framework, the current critical literature review focuses on the several references speaking about the definition of innovation and why is it an important ingredient in today's executive strategies. The literature review shows that innovation helps corporations in creating cutting edge products that provide the market with a new or deeply improved added value, hence raising the competitiveness of the company. In addition, innovation is an efficient mitigation regarding today's market uncertainty. In fact, it helps corporations at being flexible and provide adapted products in a very dynamic and volatile market. The current literature research reports also the major methodologies exposed in the literature that explain how to deploy efficiently innovation in corporations. The major ideas exposed in the literature regarding the main hurdles that may encounter innovative executives are also analyzed. For example, executives should be care of today's political global tendencies such as nationalism that is threatening open international exchange which is a major corner stone for an effective innovation process. Furthermore, executives in big sized companies may be opposed to strong internal opposition from stakeholders that are not eager to change. Literature shows also that innovation deployment is deeply correlated with uncertainty at different stages since by definition it's not a guaranteed process. The final section of the current literature research focuses on the major pitfalls that should be avoided by executives when they deploy innovation in their corporations. For example, using an excessive creative mindset can be harmful since a rational mindset is also vital in order to take the innovation process to the market. In addition, innovation should be a culture that is followed by all the internal and external stakeholders of the corporation and can't be solely an internal corporate culture. In fact, in the latter case it results often in failure and a tremendous loss of energy, time and resources for the company.

Table of Contents

Executive summary.....	1
1. Introduction.....	3
2. What is innovation and why is it important.....	3
3. How to deploy innovation.....	4
4. Key issues.....	4
5. Major pitfalls when deploying innovation.....	5
6. Conclusion.....	6
References.....	8

1) Introduction :

Strategic development at the age of uncertainty is the main focus of the current critical literature review. A special attention will be given in particular to innovation as a corporate strategic tool. In fact, some of the major characteristics of today's market are uncertainty and volatility. This tendency makes the competitiveness and the sustainability of a given company a major pain point for corporate executives in the modern market. In this framework, innovation is one of the most popular remedies adopted by executive as a strategy to strengthen their ships against the unending market storms. In this framework, the current literature research aims at gathering and analyzing the different concepts dealing with innovation as well as the key success factors facilitating it. The current report exposes also the major quantitative tools found in the literature aiming at measuring innovation efficiency in a given company. The current paper aims also at critically evaluating the correlation between innovation, uncertainty and competitiveness in the modern market.

In order to cover these objectives and answer to the exposed pain points, the current report is divided into four major parts : First the different definitions of innovation and why is it important in today's market are gathered from the literature and critically analyzed. Secondly, the major methodologies outlined in the literature aiming at deploying effectively innovation are exposed and compared. Then, the major hurdles that may encounter innovation deployment at the corporate level are listed and evaluated. Finally, the major pitfalls that executives should avoid when deploying innovation within their corporations are collected from different literature resources, exposed and critically analyzed.

2) What is innovation and why is it important

A major notion of the current critical literature review is innovation. Hence, let's begin by taking a look at its different definitions in the literature. Malinosky and Perry (2000) defines innovation as the a process composed by five major elements : Ideation, evaluation, selection, development and implementation of new or improved products or services. OECD (2005) emphasizes on the newness aspect brought by innovation by introducing the latter as the implementation of a new or significantly improved product, process or business practice. In addition to this particular aspect of innovation, Council on Competitiveness (2005) defines innovation as a holistic process that is deeply related to its environment. In fact, the author defines innovation as a process that links together regional knowledge, assets and network to transform ideas, insights and inventions into new processes, products and services.

Innovation is deeply related to two other major notions : competitiveness and uncertainty. An article published by Goldman Sachs (2015) reports that there is a positive relationship between innovation and firm performance. In all sectors, innovation leads to improved productivity hence a better competitive situation in the market. Innovation is even deeply related to the firm's sustainability and survival. In this framework, Gruver et al. (2009, p1) reported that innovation is « both a vaccine against market slowdowns and an elixir that rejuvenates growth ». Innovation and uncertainty is also analyzed by Freel (2005). The author focused on small firms since they are generally the major source of innovation in the market. The author reports how innovators mitigate the market uncertainty through innovation. The paper also outlines that the type of the perceived uncertainty depends on the firm type. In fact, manufacturing firms are associated with supplier uncertainty whereas service firms are

associated with human resource uncertainty.

To summarize, innovation is deeply related to the notions of newness and creativity. It's important in today's market for two main reasons : improve firm's competitiveness and mitigate the environment uncertainty. Hence, innovation provides executives with a powerful strategic tool for corporate development at the age of uncertainty.

3) How to deploy innovation

The current section is focusing on how to deploy it from an executive point of view. According to Almquist et al. (2013), deploying innovation can be performed by respecting an innovation grid composed by five major steps that are : strategy, organization, idea generation and development, portfolio management and scaling. Malinosky and Perry (2000) provided a quantification tool of innovation performance which is called RoPDE or Return on Product Development Expense. This metric has the advantage of aiming at summarizing innovation efficiency in a one single number. Ishak (2017) focuses on the importance of creating an innovation culture at the corporate level. According to the author, the firm should focus on tools such as innovation parenting, bust hierarchy, encourage the unreasonable, cultivate external relationships and hire the best and fast. Allas and Hunt (2018) prove the deep correlation between innovation deployment and the diffusion of technology enabled business practices. In this framework, the authors define a checklist composed by six major levers for accelerating the technology hence the innovation diffusion. In this same framework, Catlin et al. (2015) define and focus on an interesting notion that improves the innovation deployment along the corporations which they call the Digital Quotient or DA. The authors define this notion as the digital maturity of a company and set up metrics for evaluating and optimizing it.

Several articles in the literature focus on the innovation deployment from a geopolitical point of view. Veugelers (2017) outlines then the high speed catch up performed by Asia in general and China in particular in the past few years. The author shows then that innovation performance is deeply correlated to openness to the external environment and to the richness of the collaborators network.

Mount and Martinez (2014) focus on a creative tool for boosting innovation in corporations which is social media. In fact, by definition, social media provide a direct link between corporations and customers. According to the authors, social media can intervene at the different steps of the innovation process : Ideation, R&D and commercialization.

4) Key issues

The current section is focusing on the key issues or hurdles that are facing innovation deployment in today's market. One of the most threats facing innovation that can be found amply in the literature is the new global political tendencies and particularly nationalism and stronger borders. According to Jaruzelky et al. (2017), stronger borders weaken innovation. In fact, the authors report that in 2015, global innovation study showed that leading innovation companies are looking for talents outside of their headquarters country. In addition, they set up R&D centers close to their target markets. Since that year, companies are following carefully nationalism that is raising in key countries and that is forcing companies to be skeptic regarding the sustainability of their global innovation networks. This tendency is pushing business leaders for preparing contingency plans and making their innovation centers more autonomous. Based on the previous section that outlined the importance of open innovation network for an

effective innovation process, nationalism and protectionism can only have a negative effect on global innovation worldwide.

Another major hurdle that may face innovation in a given company is the size of the latter. In fact big companies are less eager to innovate than smaller ones. In fact, according to De Jong et al. (2015), innovation is a uphill process for big corporations. In fact, the latter have generally products that are fitting well the market and that already generate comfortable incomes. Hence the forces opposing the development of new products are naturally important because they tend to eliminate new risks and tend to apply well established historical procedures. Consequently the authors report that big companies are more executors than innovators and they succeed more in optimizing their already existing products than in providing cutting edge value to the market.

When deploying an innovation strategy, the whole stakeholders and environment of the company should be adapted and stick to it. Lee and Veloso (2008), emphasize on this hurdle for innovation deployment by outlining the uncertainty that may be related to inter-firm innovation. In fact, the paper reports how the knowledge boundary between the different stakeholders in general, and between assemblers and suppliers in particular, may play a major role in inter-firm product development. The authors take the particular example of the automotive industry. They report that suppliers dominate component innovation whereas assemblers dominate architectural innovation. A major outcome of the paper is the importance of overlapping knowledge domains between assemblers and suppliers. This aims at building a consistent innovative product that takes into account the requirements of each stakeholder at its different stages.

The process of innovation is composed by different steps as reported in the previous section. Hurdles may intervene at each one of these steps through the uncertainty that is related to it. Jalonen (2012) identified eight major factors that create uncertainty during the innovation process. These may be summarized in the following points: technological uncertainty, market uncertainty, regulatory uncertainty, social and political uncertainty, acceptance and legitimacy uncertainty, managerial uncertainty, timing uncertainty, and consequence uncertainty.

Consequently, the exposed literature review shows that at the age of uncertainty, innovation is an interesting remedy but it's also exposed to uncertainty itself. In fact, when deploying innovation, uncertainty may intervene at different steps. The current political tendency with nationalism and protectionism makes also the global innovation environment very uncertain.

5) Major pitfalls when deploying innovation

After defining what is innovation, why is it important, how to deploy it and the major hurdles that may face executives in implementing it, the current section will focus on the major pitfalls that should be avoided based on the literature when dealing with innovation.

Almquist et al. (2013) report that the majority of high performance innovators relies on one major ingredient that allows the implementation of innovation and they refer to it by Both Brain approach. The authors define this approach as the duality between having the ability of creating cutting edge products and having the ability of commercializing them. They remind that the naming of this approach refers to the right brain that is generally associated to imagination and intuition, and to the left brain that is generally associated to rationality and logic. Consequently, the innovation process should rely on both these aspects in order to be balanced and efficient. This is why Both Brain

approach is recommended in order to avoid the pitfall of forgetting reality and basing the innovation process excessively on creativity and forgetting objectivity. In this framework, Titikonda and Rosenthal (2000) report that when dealing with innovation, the implementation of a new product technology is less problematic than the process technology novelty. In other terms, the real difficulty is not to set up new products but it's in setting up the whole processes that will bring the new product to the market. Hence, corporations should take into account carefully all these aspects among their product management strategy. Capozzi et al. (2012) remind that during the innovation process, corporations should also focus on competition. Hence, developing innovative products without taking into account what is happening in the market can be a vicious pitfall that may make the corporation losing precious time, resources and energy.

In addition, the innovation process has generally a low productivity rate. In fact, a great amount of ideas would end up with only few that will be selected. In this framework, Adams (2004) reports that among the generated innovative ideas 68% passed idea screening, 47% passed business analysis, 33% passed developed, 24% were commercialized and only 14% resulted in successful products. Yet, almost 7 out of 8 new ideas fail and only one succeeds. Hence, innovation should not be considered as a one shot process and executives should provide enough budget that mitigates the risk of the high probability related to the failure of a given creative idea. Consequently, executives should take into account this order of magnitudes when setting up the budget for developing a new innovative products.

Finally the literature focuses on how to animate effectively innovation contests by avoiding the major pitfalls that reduce their efficiency. In this framework, Boudreau et al. (2011) study the correlation between different dimensions when animating innovation contests such as : contest size, incentives and problem uncertainty. Based on a data set of more than 9000 software contests, the following major outcomes are reported by the authors: Contests containing a high number of competitors reduce the incentives of all competitors to exert effort. On the other hand, a high number of competitors raises the probability that at least one of them finds an efficient innovative solution. To the contrary, higher uncertainty corresponding to more complex problems to resolve reduces the negative effect of a high number of competitors.

Consequently, at the age of uncertainty, innovation can be an uncertain process itself. In fact, its low productivity rate should make executives aware when deploying it in order to be able to optimize its efficiency.

6) Conclusion

The performed research showed that innovation is vital for modern corporations for several reasons : First, it allows corporations to have a better competitive advantage in the market by creating new added value for the customers. Secondly, it allows corporations to be more flexible and to be better armed against today's market uncertainty and volatility.

The provided literature research listed also the major methodologies that can be used by executives in order to deploy innovation as well as quantitative tools to evaluate the efficiency of the innovation process. The major outcomes of this section are : Deploying innovation should be a methodical process that should be performed in several steps and should affect all the departments of a given company. In addition, innovation and digital culture are deeply correlated. Several literature resources speak about Digital quotient and link directly innovation to technology. Finally, different resources focus on the

geopolitical aspect of innovation deployment. These references outline the importance of China as a new worldwide innovation leader.

The current report focused on the major hurdles that may face an executive when deploying innovation. The major outcomes of this section are : First, innovation needs by definition an open world in order to be efficient. On the other hand, today's world is tending towards borders closure which is very harmful for innovation worldwide. In addition, uncertainty should be taken into account when deploying innovation. In fact, innovation is by definition correlated to newness and unknown hence to uncertainty.

The last section of the current critical literature review focused on the major pitfalls to be avoided by executives when dealing with innovation. The major outcomes of the section are the following : First, innovators should be at the same time creative and rational and use both the parts of their brains. This is referred in the literature to Both Brain approach. Secondly, the innovation process should be deployed by internal and external stakeholders that share the same innovation culture. Finally, innovators should keep an eye on the market competition and should not be exclusively focused on their new creations.

To conclude, at the age of uncertainty, innovation is a powerful strategic tool for mitigating market volatility. On the other hand, innovation as a process is also affected itself by uncertainty at different levels. In fact, uncertainty intervenes at different levels when deploying innovation. In addition, innovation is an uncertain process by definition since it corresponds to a low productivity rate.

References

Adams, M (2004) New product development report of initial findings: Summary of responses. *CPAS PDMA Foundation*. Issue of September 2004, pp.[not found]

Allas, T. and Hunt, V. (2018) Accelerating the diffusion of technology enabled business practices. *McKinsey Quarterly* [online]. Available from <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/accelerating-the-diffusion-of-technology-enabled-business-practices> [Accessed 11/06/2018].

Almquist, E., Leiman, Rigby, D. and Roth, A. (2013) Taking the measure of your innovation performance. *Bain & Company* [online]. Available from http://www.bain.com/Images/BAIN_BRIEF_Taking_the_measure_of_your_innovation_performance.pdf [Accessed 11/06/2018].

Boudreau, K., Lacetera, N. and Lakhani, K. (2011) Incentives and problem uncertainty in innovation contests: An empirical analysis. *Management Science*. **57** (5), pp.843-863.

Cappozi, M., Horn, J. and Kellen, A. (2012) Battle-test your innovation strategy. *McKinsey Quarterly* [online]. Available from <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/battle-test-your-innovation-strategy> [Accessed 15/06/2018].

Catlin, T., Scanlan, J. and Willmott, P. (2015) Raising your digital quotient. *McKinsey Quarterly* [online]. Available from <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/raising-your-digital-quotient> [Accessed 13/06/2018].

Council on Competitiveness USA (2005) Measuring regional innovation: A guidebook for conducting regional innovation assessments. *Report for US Department of Commerce* [online]. Available from https://www.compete.org/storage/images/uploads/File/PDF/%20Files/Regional_Innovation_Guidebook.pdf [Accessed : 12/06/2018].

De Jong, M., Marston, N. and Roth, E. (2015) The eight essentials of innovation. *McKinsey Quarterly* [online]. Available from <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-eight-essentials-of-innovation> [Accessed 14/06/2018].

European Commission OECD (2005) Guidelines for collecting and interpreting innovation data. *The Oslo Manual, 3rd edition*. Paris, London.

Freel, S. (2005) Perceived environmental uncertainty and innovation in small firms. *Small Business Economics*. **25**, pp.49-64.

Goldman Sachs Foundation, British Business Bank and Enterprise research center (2015) Unlocking UK productivity : Internationalisation and innovation in SMEs. *Goldman Sachs* [online]. Available from <http://www.goldmansachs.com/citizenship/10000-small-businesses/UK/news-and-events/gew-2015-f/unlocking-uk-productivity.pdf> [Accessed : 10/06/2018]

- Gruver, K., Allen, J. and Rigby, D. (2009) Innovation in turbulent times. *Harvard Business Review*. From the June 2009 issue, pp.1-14
- Ishak, W. (2017) Creating and innovation culture. *McKinsey Quarterly* [online]. Available from <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/creating-an-innovation-culture> [Accessed 14/06/2018].
- Jalonen, H. (2012) The Uncertainty of Innovation: A Systematic Review of the Literature. *Journal of Management Research*. **4** (1), pp.1-47
- Jaruzelski, B., Staak, V. and Chwalik, R. (2017) Will stronger borders weaken innovation. *Strategy and Business The Global Innovation 1000*. Issue 89, pp.1-18
- Lee, J. and Veloso, F. (2008) Interfirm innovation under uncertainty: Empirical evidence for strategic knowledge partitioning. *Product Innovation Management*. **25**, pp.408-435.
- Malinosky, M. and Perry, G. (2000) How do I measure innovation. *Balanced Scorecard Institute* [online]. Available from : <http://www.balancedscorecard.org/portals/0/pdf/HowToMeasureInnovation.pdf> [Accessed 15/06/2018].
- Mount, M. and Martinez, M. (2014) Social media : A tool for open innovation. *University of California Berkeley*. **56** (4), pp.124-143.
- Tatikonda, M. and Rosenthal, S. (2006) Technology novelty, project complexity, and product development project execution success: A deeper look at task uncertainty in product innovation. *Transactions On Engineering Management*. **47** (1), pp.74-87.
- Veugelers, R. (2017) The challenge of China's rise as a science and technology powerhouse. *Bruegel Policy Contribution*. Issue n°19, pp.1-15