

SIRIUS snapshot: What hinders innovation in France?

Article based on study by Victor Dos Santos Paulino, manager of the SIRIUS chair and Najoua Tahri*

June 2018

Innovation was established by the European Union as the key driver of economic growth in Europe. However, Europe's determination to make its economies more innovative has been hampered, and Europe continues to face significant difficulties in maintaining its comparative advantage over rival regions. Identifying and understanding key obstacles to innovation as a first step is crucial to stimulating innovation. In the case of France, we find that the biggest barriers to innovation are financial or market-related, rather than technological. This builds a strong case for introducing commercial know-how in the innovation process.

We investigate why firms in France lag in innovation, considering the features of the innovation process, the nature of firms and the sector of activity. Our findings show that the biggest barriers to innovation faced by French firms are non-technological, with financial constraints on top of the list. The perceived futility of innovating comes in second place, followed by the lack of qualified personnel to drive the innovation process. Interestingly, very few French firms cited technological obstacles, and similar results have been observed in other parts of the world.

Lack of qualified personnel with the right mix of skills

Taking a closer look at each of the main obstacles identified, we observe that many of the obstacles can be traced back to a lack of specific competencies in the firm. Various innovation studies point out that innovation success requires the effective combination of different competencies, both technical and commercial. However, managers with both attributes are rare, especially in France. And the absence of versatile managers can result in conflicting viewpoints between technical managers who tend to be preoccupied with technological performances and commercial managers who tend to be focused on

market concerns. This in turn can lead to a communication breakdown and cooperation failure, impeding the innovation process.

Add to this, the prevalent culture of “technology push” innovation in France, where by innovation processes are spearheaded by R&D in new technologies but are plagued by a poor understanding of the market. This not only reinforces market barriers to innovation but also leads to financial constraints. Substantial resources end up being pumped into and prolonging the R&D phase, blurring the distinction between inventing something, innovation and achieving innovation success. The development of the Concorde is a good illustration of this. To date there are ongoing debates on whether the supersonic airliner was an innovation success or not. For some, the technological breakthroughs overshadow the fact that only 14 units were sold to two clients. In short, firms are discouraged from innovating because innovation, from their perspective, necessitates considerable resources to cover the excessive costs of invention.

Impact of government support

In Europe and notably in France, public authorities are wrapped up with technological progress leaving little room for commercial expertise in the innovation process. Inventions and discontinuous technologies are favored, often out of sync with market dynamics, and very costly. Too often public funding programs, for instance in the aerospace sector, push firms to undertake projects that are not always economically viable. Thus, firms tend to orientate their strategies on technological advances, to the detriment of market objectives, essential for anticipating returns on investment.

Contextual factors

Breaking down the obstacles by industry, the aerospace industry faces the highest obstacles, followed by the manufacturing and service industries. This is expected as aerospace companies are more likely to be innovative, face high productions costs and heavily rely on public investment. In contrast, firms in the service industry experience the fewest obstacles. The development of new-to-world products is rare in the service industry, where the intangibility of products allows for easy imitation by rival firms and

thus raises a serious problem in convincing investors to fund new ventures. As a result, service orientated firms tend to adopt a market pull strategy with focus on continuous innovations, marginally changing the service offering, and at a much lower cost. It is therefore not surprising that firms in this sector face the lowest financial barriers to innovation.

Overcoming barriers to innovation

As a starting point, firms should accommodate market research in their innovation processes. This is easier said than done as technical managers sometimes first need to move away from the idea that if you don't know how to make a product, you won't know how to sell it. Technical managers need to recognize the importance of bringing in the market perspective on board the innovation process. To combat the shortage of managers with both technical and business skills, firms could offer on-the-job training to develop deficient competencies (e.g. granting MBA opportunities to technical managers). Moreover, to tackle the root of the problem, higher learning institutions offering scientific degrees should integrate a strong element of social sciences in their programs. This would not only ensure a commercial dimension in the innovation process but may also go a long way to solving communication issues between technical and commercial teams, and add legitimacy to marketing insights.

However, this is not a substitute for involving commercial managers directly in the innovation process. Ideally, firms should go a step further and create a business intelligence unit to provide information on the market, to work side by side and complement the work of the technological team. The weight accorded to commercial competencies in the innovation process will vary according to the characteristics of the activity sector.

A fundamental change will also have to come from the public authorities who need to redirect their funding to support successful innovations rather than novel technologies, and allow firms to focus on continuous innovation - the natural course for most. By prioritizing downstream innovation processes, such as innovation commercialization, firms will face lower market barriers and innovation costs. To this end, public authorities need to make more room for firms in defining the strategic orientation of public support policies.

Innovation is a powerful means by which to ensure long-term survival. Without innovation, it is extremely difficult to adapt to a changing environment. Although new product failure is high, innovation without any failure is impossible. In a nutshell, successful innovation requires not only a change in the mindset and innovation culture of firms but also shifts in the public institutional framework to be more in favor of continuous innovation. Firms, government agencies, higher education institutions all have a role to play in overcoming barriers to innovation and creating an enabling environment for innovation.

+ Methodology

The study, conducted in 2014, is based on the results from the [4th Community Innovation Survey \(CIS 4\)](#) carried out in France between 2002 and 2004 and published by Eurostat. 175,533 firms in France participated in the survey, indicating if they have experienced any of 11 obstacles to innovation. For the purposes of our study, we then divided the obstacles into four categories: knowledge, market, financial and external obstacles, and analyzed the obstacles by nature of the firm and by sector (manufacturing, services and aerospace, the latter being a key industry in France).

*About the SIRIUS chair

SIRIUS is a business chair dedicated to the management and the law of space activities. Based on an original partnership between three leading operators in the space sector ([Airbus Defence & Space](#), [CNES](#) and [Thales Alenia Space](#)), the chair's research activities are led jointly by [Toulouse Business School](#) and [Toulouse Capitole 1 University](#).

About the study authors

Dr. Victor Dos Santos Paulino has been Associate Professor of Management of Innovation and Strategy at the [Toulouse Business School](#) since September 2008. With a doctorate in economics from the University of Nice Sophia-Antipolis, his research focuses on strategy and innovation. His work has been regularly published in scientific journals such as the European Journal of Innovation Management, Supply Chain Management: An International Journal, and Journal of Innovation Economics and Management. Victor Dos Santos Paulino is also responsible for research activities related to management and economic aspects of the space sector under the framework of the [SIRIUS Chair](#).

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Reference: This article is based on the study entitled, “Les obstacles à l’innovation en France : analyse et recommandations”, co-authored by Victor Dos Santos Paulino and Najoua Tahri, published in the Management & Avenir Journal, 2014/3, no. 69, p. 70 – 88, available here: <http://www.cairn.info/revue-management-et-avenir-2014-3-page-70.htm>.