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The social and political challenges of open innovation

Thierry Isckia and Xavier Parisot²

Introduction

Since the emergence of the Open Innovation (OI) concept in 2003, some scholars criticized its opposition with in-house R&D / closed innovation (CI) and debated its contributions (Trott & Hartmann, 2009). Despite its numerous detractors, its theoretical and practical weaknesses, the OI perspective has been applied by many scholars, companies and even states in various national policies. In a context where digitalization, globalization, and the fast raise of the knowledge economy complexity business, increase competition, and generate turbulences, this perspective presents simple linear solutions favoring corporate innovations.

This simplicity in a complex economic background explains, at least partially, the large adoption of OI practices at the global scale. However, if the successes of OI implementations are well documented, the failures remains poorly studied and reported and the dangers of OI applications have only recently begun to be studied (Audretsch, & Belitski, 2023; Madanaguli *et al.*, 2023). This article briefly examines the fragility of the relationships between OI, national policies and societal aspects based on the conceptual and practical weaknesses of that perspective.

Keywords: open innovation; challenges; social; political

Open Innovation ontological weaknesses

The OI view is the antithesis of the “*not invented here*” syndrome that still pervades many organizations and which characterize in-house R&D qualified as CI. OI opposes to CI all practices extending the innovation process beyond the boundaries of the firm, drawing on internal and external contributions to generate new ideas, develop new products or services, and solve complex innovation problems. Openness to various external sources of IP, technologies, and expertise from partners, universities, start-ups, customers, and even the civil society or crowds is the basic requirement.

This initial dichotomy between OI and CI is the first weakness of the OI concept (Isckia & Lescop, 2011). This pseudo-dichotomy does not stand up to a historical re-reading of innovation. Indeed, since Schumpeter (1935), it is clear that entrepreneurs rely on the sensing of external profit opportunities, the seizing of the best of them and on the organizational transformation required to implement the chosen opportunities and achieve their strategic innovative visions. Therefore, can any in-house innovation processes be qualified as closed?

The second weakness concerns the OI funnel presenting a linear innovation process which follows the stage gate view. Innovation is inherently a cyclic process where new innovations are built upon previous ones. In addition, that process involves feedback and feed-forward mechanisms e.g. to measure the balance between the perceived profit and the risk (market test), assess the market readiness (market study), etc. These loops between the strategic, managerial and operational levels mobilize absorptive and desorptive capacities (Lichtenthaler, & Lichtenthaler, 2010) which constitute generic dynamic capabilities – DCs (Lichtenthaler & Lichtenthaler, 2009; Parisot & Isckia, 2022) allowing information, knowledge, IP, and expertise to flow within and across the boundaries of the firm. Consequently, can any IO process be presented as linear?

In spite of these drawbacks, the success and rapid evolution of the OI concept can be largely attributed to its simplicity, if not outright simplistic nature. This success is underscored by the recognition that OI extends beyond a firm-centric approach (Chesbrough & Bogers, 2014). It embraces the involvement of creative customers (Berthon *et al.*, 2007), communities of innovative users (West & Lakhani, 2008), and has demonstrated its supportive role in fostering inter-organizational innovation developments (Chesbrough & Appleyard, 2007; Chesbrough *et al.*, 2014).

The remarkable success of OI, not to say OI mania, is all the more remarkable given that another concept, introduced ten years earlier, had already interconnected these elements in a much more comprehensive way: the business ecosystem (Moore, 1993). Since its initial conceptualization, Moore (1996) integrates OI logics as causal powers of collective strategies. However, his understanding goes far beyond as he connects inter-organizational innovation to the co-evolution of firm's capabilities and therefore prefigures the enabling role of internal and external DCs in feedback and feed-forward mechanisms (Parisot & Isckia, 2022).

The Importance of Open Innovation in the Current Context

OI has become crucial in today's economy for a number of well-known reasons:

- *Complexity of problems:* Current technological, economic and societal challenges are increasingly complex. Solutions often cannot be found internally, making it imperative to seek outside skills and perspectives.
- *Access to information:* The digital age has significantly improved access to information and enabled rapid

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dissemination of knowledge. OI leverages this connectivity to facilitate the exchange of ideas and data.

- *Value Creation*: OI partnerships, such as collaborations with start-ups or universities, create value for all stakeholders. This can foster broader economic growth and strengthen innovation ecosystems.
- *Adapting to technological trends*: OI facilitates the adoption of the latest technologies and innovative practices. This allows businesses to stay up to date in a world where technology is booming.
- *Citizen participation*: In the public sector, OI promotes citizen participation in decision-making and problem solving by crowds or communities, thereby strengthening participatory democracy and the legitimacy of public policies.
- *Improved societal impact*: OI can help solve complex societal problems, such as environmental, health, or educational challenges. OI initiatives in these areas can have a profound impact on society.
- *Evolving business models*: OI has given rise to new business models, such as platforms and online marketplaces, which are changing the way companies interact with their environment and create value.

In summary, OI is relevant and influential because it can provide substantial benefits to businesses, society and the economy as a whole. It promotes collaboration, efficiency, and adaptability, and offers an innovative perspective on how organizations can thrive and solve complex problems in a world that is changing more and more quickly. Its influence continues to grow as new technologies (AI, Blockchain, APIs, AR...) and innovation practices emerge (corporate incubator, open data hackathon, crowdsourcing-based open innovation, innovation contest, citizen-sourcing...) and as it extends beyond business to the public sector and civil society.

Open Innovation, Political and social dimensions

OI influence continues to grow as new technologies and innovation practices emerge, and as it extends beyond the business domain to encompass the public sector and civil society. Examining the relationship between OI and political and societal aspects reveals a series of complex dynamics that deserve careful consideration.

Some studies highlight that economic, political and social interests are closely intertwined and can collide, creating underlying tensions (Beck et al. 2022; Mergel, 2021). Researchers need to explore these tensions to understand how they influence open innovation decisions (Chesbrough, 2019). In what follows, we briefly analyze the interactions between OI and these dimensions, underlying the associated benefits and challenges.

Open Innovation Policies benefits and challenges

National Innovation policies can benefit from OI (Patrucco *et al.*, 2022) as it facilitate cooperation between the public and private sectors to solve complex social problems, e.g. the creation of competitiveness clusters in France in 2005. Various governments encourage OI logics adoption to foster economic growth and boost national competitiveness thus stimulating national innovation. To achieve such a goal, supportive regulations are needed.

Pro-openness policies, such as data protection laws, can create an environment conducive to collaboration and innovation, e.g. the creation by the European Commission of the Open Innovation Strategy and Policy Group in 2010.

However, these potential benefits do not come without challenges. Structural and cultural corporate prerequisites needed to implement OI logics have often been underestimated. Moreover, intellectual property (IP) protection policies can hinder the free flow of ideas and technologies. Furthermore, opening up to external players can raise concerns about cyber security and confidentiality. Finally, lobbies that seek to shape OI policies in their favor may influence political actors without considering the lack of readiness of other industries.

National firm's adaptation to OI takes time. It implies the development of generic and specific DCs enabling a cultural switch from cooperation to collaboration to co-evolution and allowing the transformation of clusters and networks into business and innovation ecosystems. The refocus of the European innovation policy in 2022, putting aside the Open Innovation 2.0's view proposed in 2013, for a more ecosystemic developmental approach finally starts to answer firm's practical needs to develop the DCs required for that cultural switch to happen.

Societal benefits and challenges

OI can expand access to knowledge and education, thereby promoting inclusion and social mobility. It allows citizens to participate in decision-making and contribute to the resolution of social problems. OI practices can also be useful to solve societal problems such as health (e.g. COVID-19), education, and the environment but also crises and natural disasters.

Once again, these societal benefits do not come without challenges. Indeed, the benefits of OI are not always distributed equitably, creating inequalities in access to information and innovation opportunities. In addition, openness of data and technologies can raise concerns about privacy and the collection of personal data. OI can also amplify social polarization by strengthening

information bubbles and fostering the formation of exclusive communities.

Therefore, it is essential to question the benefits of OI and recognize these potential challenges. Relationships with political and societal aspects reveal complex dynamics, and it is crucial to weigh the benefits against the risks. Critical reflection can help identify best practices for fostering ethical, inclusive and balanced OI.

Ultimately, OI can have a significant impact on policy and society, but it is essential to remain vigilant to ensure that the benefits reach as many people as possible and that the challenges are managed responsibly. Appropriate regulation, cybersecurity awareness, and privacy protection are all key elements in guiding open innovation towards a future that benefits everyone.

Potential conflicts related to open innovation and political aspects

The complex interplay between OI, the political and societal dimensions can give rise to potential conflicts and dilemmas of great importance:

- *Regulatory conflicts*: OI may come into conflict with existing regulations on the protection of IP. Indeed, the opening up of ideas and technologies can contradict patent and copyright laws, creating tensions between the interests of OI and the protection of intellectual property rights.
- *Economic interests and lobbying*: Political actors can be influenced by industrial or commercial lobbies, which can lead to OI policies biased in favor of certain sectors and players, to the detriment of broader innovation and the public interest. This phenomenon is akin to the appropriation of public goods or commons (Vallat, 2023).
- *National sovereignty*: In a globalized context, opening up to foreign players may raise concerns relating to national sovereignty, particularly in the field of cyber security and defense.

Dilemmas linked to open innovation and societal aspects

OI, while offering tremendous potential for economic growth and technological advancement, is not without its dilemmas, particularly when examined through the lens of societal considerations:

- *Privacy vs. transparency*: OI can promote the transparency of data and information, but it can also compromise the privacy of individuals. This dilemma raises ethical questions about how to strike a balance between the need for openness and the protection of personal data.
- *Inclusion vs polarization*: OI can promote inclusion by giving access to knowledge and innovation to a wide audience. However, it can also lead to polarization by

encouraging the formation of information bubbles and exclusive communities that only share similar points of view.

- *Equity vs inequality*: While OI has the potential to reduce inequality by making innovation accessible to a wider audience, it can also create inequalities of access if certain communities or groups are excluded from the process.
- *Ethics in Innovation*: The ethical dimensions of OI require careful consideration. Collaborative efforts may involve diverse stakeholders with varying ethical standards. Determining universally accepted ethical guidelines for OI becomes a complex dilemma. Questions about data privacy, transparency, and the responsible use of emerging technologies need to be addressed.
- *Digital Inclusion and the Digital Divide*: In a world where digital technologies have become ubiquitous much of OI is facilitated through digital platforms, a dilemma emerges concerning digital inclusion. The risk of widening the digital divide raises questions about ensuring equitable access to the benefits of OI. How can society ensure that advancements in technology are inclusive and don't inadvertently leave certain populations behind?

In navigating these dilemmas, it becomes evident that OI cannot be divorced from its societal implications. Striking a balance between fostering a collaborative and innovative environment and addressing the societal challenges it may generate is crucial for realizing the full potential of open innovation.

However, the presence of potential conflicts and dilemmas linked to the interaction between OI innovation, political and societal dimensions does not necessarily call into question the notion of openness *per se*. Rather, it highlights the importance of carefully managing and regulating openness to maximize its benefits while minimizing its downsides.

Towards “sustainable” open innovation

Openness is a fundamental principle of OI, which is based on collaboration, the sharing of ideas and the diversity of sources of innovation. It has the potential to stimulate creativity, improve the quality of products and services, encourage citizen participation and address complex societal problems. Nevertheless, for openness to be beneficial, it must be managed responsibly.

When considering conflicts and dilemmas, it is essential to strike a balance between openness and the protection of legitimate interests, such as IP, privacy, national security and countering polarization. This requires critical thinking and appropriate regulation. The aim is to find a

balance that maximizes the benefits of OI while mitigating the potential risks to society and politics.

From this point of view, the notion of “sustainable” openness makes perfect sense in the context of OI. It involves applying principles of sustainability and accountability in the implementation of OI, recognizing limits and seeking a balance between openness and the protection of long-term interests, both political and societal. Here is why this notion is relevant:

- *Societal sustainability*: A “sustainable” approach to OI emphasizes the creation of long-term value for society. This involves considering the long-term social impacts of OI practices, ensuring that the benefits are fairly distributed.
- *Environmental sustainability*: In the context of OI, sustainability can also include consideration of environmental consequences. Openness must be carried out in such a way as to minimize negative externalities on the environment.
- *Economic sustainability*: OI must contribute to the long-term economic viability of companies and innovation ecosystems. This means that it must not compromise financial stability, intellectual property protection or competitiveness.
- *Ethical responsibility*: The notion of “sustainable” openness also involves making ethical decisions, taking into account societal values and the protection of individual rights, such as privacy.
- *Balance between openness and protection*: “Sustainable” openness recognizes that there is a balance to be struck between openness and protection, and that this balance may vary depending on the context and specific objectives.
- *Regulation and governance*: To promote “sustainable” openness, it may be necessary to put in place regulations, standards and governance practices that guide how OI is implemented and managed.

Conclusion

In brief, the notion of “sustainable” openness recognizes that OI must be guided by overarching principles of sustainability, responsibility and equity to maximize its long-term benefits while minimizing its risks and drawbacks. It helps ensure that OI benefits not only immediate stakeholders, but also society as a whole, aligning with economic, social and environmental sustainability goals.

Researchers need to explore these complex issues in order to propose balanced solutions and regulatory frameworks that maximize the benefits of OI while minimizing the risks to society and politics. Empirical studies, conceptual models, and ethical analyses are essential to inform the

debate on OI in a constantly evolving political and societal context.

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