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The Relationship between Competition and Innovation – Note by France

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More documents related to this discussion can be found at
https://www.oecd.org/competition/the-relationship-between-competition-and-innovation.htm

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France

1. After ranking 16th globally in 2019, France continues to be among world's most innovative countries by reaching world's 12th place in 2022, according to the Global Innovation Index 2022 ("GII"), a ranking conducted by the World Intellectual Property Organization ("WIPO")[1]. France stands out particularly in terms of creativity with a very strong progression driven by intangible assets (3rd place and patents (maintaining the 2nd place of European applicant according to the European Patent Office[2]).

2. However, France's performance in terms of innovation still has a room of manoeuvre as highlighted by the OECD in a study targeting the French economy in November 2021[3].

3. Improvements can be found into two policies. On the one hand, France can support a renewal of the fabric of companies by following a more "creative destruction" approach, as defined by J. Schumpeter. Indeed, the dynamism of an economy is determined by its ability to generate a "sufficient flow of efficient innovations", i.e. its ability to produce innovations at a sustained pace and select the best in a timely manner. In addition, OECD's work highlights that France needs to focus more on young people and small and medium-sized enterprises, which tend to be the most innovative. On the other hand, France should simplify and lighten market regulation in order to support competition's intensity and the incentive for firms to achieve productivity gains to resist their rivals. Indeed, reforms, lowering barriers to entry and easing regulations are prooven to have a positive effect on investment in research and development ("R&D")[4][5].

4. In this respect, the French competition authorities, namely the Directorate-General for Competition, Consumer Affairs and Fraud Prevention ("DGCCRF") and the Autorité de la concurrence, have already been able to quickly adapt their analyses and tools to the new challenges of innovation.

1. Competition policy as an instrument to promote innovation

1.1. Competition as an instrument to promote innovation

5. Defined by the INSEE as "the introduction on the market of a new or significantly improved product or process compared to those previously developed by the legal unit"[6], competition can boost an economy and stimulate innovation. Based on a statical approach, innovation's intensity can be measured by the number of firms on the market: the higher

[1] World Intellectual Property Organization, "Global Innovation Index 2022, What is the future of innovation-driven growth?", 2022.

[2] European Patent Office, "Patent Index 2022", 2023.

[3] OECD, "OECD Economic Surveys: France", 2021.

[4] Phelps E.S., "The Continent's High Unemployment: Possible Institutional Causes and Some Evidence", 2002.

[5] Griffith R., Harrison R., Simpson H., "The link between product market reform, innovation and EU macroeconomic performance", 2006.

[6] National Institute of Statistics and Economic Studies, "Definitions, Methods and Quality", 2020.

the number of competitors in the market, the greater the probability of firms engaging in R&D, and the higher the probability of successful innovation. Second, in a dynamic approach, the intensity of innovation can be measured by the rate of entry and exit of firms into the market: the higher the number of firms entering the market and bringing new ideas, the greater the incentive for existing firms to innovate.

6. Two incentive effects for innovation operate depending on the degree of market competition. On the one hand, we find an effect, highlighted by J. Schumpeter, which plays on the most concentrated markets: companies in a monopoly situation are encouraged to innovate to strengthen their position and prevent competitors' potential arrival. On the other hand, an effect observed by Kenneth Arrow is at play on the most competitive markets: each company has an interest in innovating more in order to free itself from the competition. In other words, a monopoly, not threatened by competitors, has less incentive to innovate. This phenomenon is known as the Arrow's "laurel effect"[7].

7. Competition policy supports innovation by removing barriers to entry and opening up markets. The economic literature has highlighted that market access naturally increases the size of the market available to a firm and that "*larger markets will encourage innovation"* (Griffith, 2021)[8] to the extent that a larger market allows firms' fixed costs to be spread over a larger number of units. Protectionism could thus undermine trade, the functioning of markets and, ultimately, the speed of innovation. In addition to the effect on prices that can be induced by the increase in supply, the opening of markets is also a gateway for new players who may present different, sometimes more efficient business models. Competition is a real lever to help firms who are forward-looking and take risks, and thus paves the way for the birth of new ideas, new formats and innovative production processes that promote growth.

1.2. Competition policy, support for innovation-oriented industrial policy

8. Competition policy also supports innovation through its role in accompanying industrial policy[9].

9. First, competition policy is committed to limit anti-competitive practices between companies (cartels and abuses of dominant positions). By sanctioning and excluding practices which aim is to hinder the entry of new competitors into the market, competition policy contributes to the entry of new potentially innovative market players.

10. Second, competition policy encourages business productivity and innovation. It also facilitates the development of new industrial leaders, a vector of tomorrow's growth: in this sense, *"competition policy is similar to a policy of supply and competitiveness"*[10].

11. Third, far from being an obstacle to the competitiveness of firms, competition policy makes it possible to support it *"by stimulating supply, innovation, productivity and, ultimately, employment"*[11]. It contributes to the innovation of companies by constantly encouraging them to renew themselves. It fully recognises the role of innovation, in

[7] Arrow K., Economic Welfare and the Allocation of Resources for Invention, 1962.

[8] Griffith, R., "Product market competition, creative destruction and innovation", 2021.

[9] O. Guersent, Conference "Articulation between competition law and policy and industrial policy: what perspectives?", Concurrences, Paris, 2023.

[10] Emmanuel Combe, "Competition policy: an asset for our industry", Fondapol, 2014.

[11] Emmanuel Combe, "Competition policy: an asset for our industry", *op cit*.

particular by exempting, under certain conditions, research and development agreements between competitors. Moreover, competition policy does not preclude the implementation of ambitious technology policies.

12. However, competition and innovation do not have a direct and stable link, so that their analysis must be contextualized to assess their effects (Miotti and Sachwald, 2005). Indeed, competition is likely[12] *to "have conflicting effects, beneficial or negative, on innovation depending on the circumstances"*[13]. In this respect, the French competition authorities have started to assess the effects of mergers, cartels and abuses of dominant positions on innovation.

1.3. Competition policy enforcement as a gateway for innovation

13. **Concentrations** between firms can promote innovation by pooling complementary assets that increase the innovation capacity of the concerned firms (diffusion of innovation efforts between the firms, increase in market size due to the growing demand for their products). However, some mergers may reduce incentives to innovate when there are only a small number of firms competing to innovate, and when there is a "cannibalisation effect" for at least one of the firms' existing sources of profit[14]. In this context, the OECD observes an increase in the importance given by competition authorities to theories of harm to innovation in merger control. Finally, incentives to innovate may be reduced when complementary assets or spillover effects that benefit the merged entity are not significant (Gilbert and Melamed, 2022)[15].

14. In the case of concentration, firms have less incentive to innovate, to improve productivity and to lower prices in the absence of competition (Arrow, 1962). Especially, [16]market-dominant firms may use defensive strategies such as acquiring new players or start-ups that have developed new technologies (mergers called "predatory acquisitions"). Mergers therefore reduce the need for the dominant firm to develop rival technologies or products, or to limit the speed of deployment of new technologies (cf. infra II -2). By taking part in merger control, competition authorities thus make it possible to protect incentives for innovation.

15. **Regarding abuses of dominant positions**, dominant undertakings may use anticompetitive behaviour aimed at excluding competitors. Such practices can therefore have negative effects on innovation by hindering the development of innovative competitors. Exclusionary practices can restrict the scale of new innovative rivals and therefore limit their ability to develop and compete effectively, thus hindering innovation. The negative effects of abuse of dominance on innovation have been revealed in particular

[12] Miotti L., Sachwald F., « La Croissance française 1950-2030 : le défi de l'innovation », Ifri, 2004.

[13] France Strategy, "Competition, Market Regulation and Innovation: Competition Policy and Innovation Policy in Europe", Seminar No. 2 "Lisbon Strategy", 20 November 2006.

[14] The introduction of innovative new products into a market can have the effect of diverting sales of existing products. When an innovative company merges with a rival, it can internalize the effects of this sales diversion on its rival (cannibalization of its own sales).

[15] Actions in which the rate of product growth or productivity of a single or complex unit A Causes the increase in the growth rate of the product or the productivity of another single or complex unit B.

[16]Arrow K., "The economic implications of learning by doing," Review of economic studies, 1962.

in the digital sector (United States, et al. / Google LLC, 2020)[17] as well as in the green technology sector (Competition and Markets Authority, 2022)[18].

16. **When it comes to cooperation agreements** between competitors, they can produce substantial economic benefits, particularly in terms of innovation. However, these agreements are also likely to give rise to restrictions of competition. Competition authorities must examine the compliance of such agreements with competition law, in particular on the basis of the Exemption Regulation for research and development agreements and in the light of the Guidelines on the applicability of Article 101 to horizontal cooperation agreements, which includes a section dedicated to R&D agreements. The exemption regulation and guidelines were revised on June 1st 2023. In this respect, the French competition authorities must ensure that the strategies of incumbents do not delay the entry of new technologies or new companies, and prohibit agreements in which companies refrain from competing on innovation. Such "innovation glacis" agreements can "sterilize" innovation[19].

17. **In the digital economy** sector, the Digital Markets Act ("DMA"), adopted in September 2022, [20] introduces an *ex ante* regulation tool allowing to rebalance relations between the various digital players, in particular to the benefit of small and medium-sized enterprises, and to stimulate innovation, growth and competitiveness in the digital market.

18. Indeed, competition is likely to have effects that may be more or less beneficial to innovation depending on the circumstances. In this respect, the question of the relationship between competition policy and innovation policy raises less a problem of compatibility than a difficulty of balance. While the competitive organization of markets must have good static efficiency, in the sense of a general market equilibrium, it must also have satisfactory dynamic efficiency[21], i.e. innovation, the entry of new firms and the creation of new markets (Aghion, Cohen and Pisani-Ferry, 2006)[22].

2. The role of French competition authorities in promoting innovation

2.1. Competition authorities' search for a relevant balance between competition and innovation

19. The relevant balance between competition and innovation is undoubtedly to be found between Kenneth Arrow's approach[23], considering competition as conducive to

[17] DOJ to the District Court for the District of Columbia, United States, et al./Google LLC, 2020.

[18] Competition and Markets Authority, Decision to accept binding commitments in relation to certain exclusive arrangements for the supply of electric vehicle chargepoints, 2022.

[19] O. Guersent, Conference "Articulation between competition law and policy and industrial policy: what perspectives?", Concurrences, Paris, 2023.

[20] Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act).

[21] France Strategy, "Competition, Market Regulation and Innovation: Competition Policy and Innovation Policy in Europe", *Op. Cit*.

[22] Aghion P., Pisani-Ferry J., Cohen E., "Economic Policy and Growth in Europe", Conseil d'Analyse Économique, 2006.

[23] Arrow K., "The economic implications of learning by doing", *Op. Cit*.

innovation, and Joseph Schumpeter's approach[24], defining monopoly situations and market power as favourable to innovation. In this respect, the intensity of competition has contrasting effects on firms' behaviour, depending on their position in relation to the so-called "technological frontier", i.e. their ability to access the most efficient technologies[25].

20. In sectors where firms are dominated by a leading innovator, increased competition has little effect on innovation. Indeed, non-leading companies, far from the technological frontier, are not encouraged to innovate since the reward they receive is low (investment too heavy to catch up). In sectors without leading firms, composed of identical firms, increasing competition is beneficial since it reduces the profits received by each firm and encourages the latter, similar to each other, to innovate in order to escape price competition (escape competition effect). Thus, companies already present in the market are encouraged to innovate not only to thwart the arrival of new entrants but also to differentiate themselves from their competitors, gain market share and become the market leader.

21. The relevant balance was developed by Philippe Aghion (Aghion et al., 2005)[26], highlighting an "inverted U" relationship between innovation and degree of competition. The dynamism of innovation (measured by the number of patents filed) and the intensity of competition in the product market (measured by the margin rate of firms) are positively related to each other only up to a certain threshold, beyond which the relationship becomes negative. There is thus "*a kind of 'optimum competition' from the point of view of the incentive to innovate*"[27]. In addition, the degree of innovation has also a role to play. Major or drastic innovation, like disruptive innovation, would be more likely in a competitive market, while incremental or minor innovation would be more likely in a concentrated market. Indeed, the profit generated by technical progress is all the more beneficial for the innovative firms the lower its initial profit (the greater the gap between the final profit, a profit close to that of the monopoly, and its initial profit in a competitive situation, the higher the gain for the firm and the greater the incentive to innovate). In fact, a highly competitive firm would have a greater incentive to innovate than an existing monopoly or dominant firm, since its gain will be greater (Arrow's replacement effect).

22. It is therefore a question of determining the equilibrium position. Richard Gilbert[28] proposed to adapt the use of competition policy to foster "dynamic competition", that is, innovation, the entry of new firms and the creation of new markets. In this context, the role of the competition authorities is decisive.

2.2. The decisive role of competition authorities and their ability to develop their competition policy

23. First, in order to better understand the challenges of certain practices or mergers in terms of innovation, competition authorities adapt their competitive analysis, in particular by taking account of potential competition, analysing conglomerate effects and adapting the time horizon used in their analyses. In this respect, a merger between two companies

[24] Schumpeter, J., Capitalism, socialism and democracyPayot, 1942.

[25] France Strategy, "Competition, Market Regulation and Innovation: Competition Policy and Innovation Policy in Europe", *Op. Cit*.

[26] Aghion P. et al., "Competition and innovation: an inverted-u relationship", The Quarterly Journal of Economics, 2005.

[27] Combe E., "Competition policy: an asset for our industry", Fondapol, 2014.

[28] Gilbert R., "Innovation Matters: Competition Policy for the High-Technology Economy", 2020.

competing on R&D projects could be considered problematic by the authorities, if it leads to a reduction in the incentive to innovate. Second, in highly competitive markets, there is nothing to prevent firms from merging with each other or cooperating in terms of R&D. In this sense, European texts have a rather favourable position to technological cooperation between competitors, under certain conditions[29]. Regulation No. 2022/2455 of the European Commission of 8 December 2022 perpetuates the logic of the 2010 Regulation on R&D agreements to "*encourage companies, including small and medium-sized enterprises, in their high-quality research and technological development efforts, and to support their cooperation efforts"*[30]. Competition authorities should therefore not prevent agreements between companies to innovate in the context of the digital and low-carbon transition[31]. In this context, competition authorities must allow innovations to emerge, allowing players to invest, without their positions remaining immutable or being used to prevent the innovators of tomorrow. Competition law can contribute effectively to this balance by accompanying market developments.

24. Second, precautionary measures and commitment procedures, ensuring rapid and proportionate intervention, are particularly effective tools for limiting the adverse effects caused by anti-competitive practices in rapidly changing markets where innovation is high. In this regard, the French Competition Authority issued interim measures against Meta in May 2023 in the independent advertising verification sector, considering that by establishing artificial barriers to entry and expansion, the practices implemented by Meta significantly hamper the development of the advertising verification sector as well as the incentives to innovate in these markets.

25. Third, in order to continue to promote innovation, competition authorities have been able to develop their competition policy. For example, in a renewed approach to Article 22 of Regulation No 139/2004 on merger control, which the Competition Authority had called for, the European Commission has opened up to referrals by national merger competition authorities which do not fulfil the criteria of controllability at national level but which could have an adverse effect on competition, thus allowing the takeover of acquisitions of high-value companies in the field of innovation[32] but not yet having developed a turnover significant enough to meet the control thresholds. The Competition Authority was the first to make use of this new approach by referring to the Commission in 2021 for the examination of the acquisition by Illumina of Grail, a company specializing in the early detection of cancer by genomic sequencing, an innovative sector of cancer detection tools. Having identified a risk of foreclosure strategy against Grail's competitors, the Commission prohibited the transaction, by the decision of September 6th, 2022. This decision illustrates the effectiveness of the referral mechanism under thresholds, which, in this case, made it possible to control and prohibit an operation which would have had very detrimental effects on competition in Europe in a rapidly developing market.

26. In addition, with regard to anticompetitive practices, the Competition Authority has initiated an active policy of detecting anticompetitive practices implemented in the digital economy in order to guarantee the capacity for innovation and entry of new competitors. To support these efforts, the Competition Authority has decided to create a dedicated digital service, which will strengthen its expertise and ressources in digital matters. It has thus demonstrated its ability to capture the behaviour of digital players by using innovative

[29] Emmanuel Combe, "Competition policy: an asset for our industry", *Op. Cit*.

[30] Eur. Comm., 14 December 2010, Regulation on research and development agreements.

[31] Bruno Lasserre, "Regulating competition to protect innovation", La Jaune et la Rouge, 2012.

[32] Autorité de la concurrence, Annual Report 2021, July 2022.

reasoning or by applying well-established solutions to new services, particularly in recent cases involving Google[33].

27. In addition to competition law, it can be noted that at the national scale, since the DDADUE law of 2020, the DGCCRF can order, in a graduated manner when it finds manifestly illegal content online and when the professional is not identifiable or does not comply with a first request to cease his practices, the de-referencing or the restriction of access to a site or mobile application. The DGCCRF thus seized its power of "digital injunction" in November 2021, in accordance with the legislative provisions, by delisting the site Wish.com on Google search engines, Bing and Qwant, a first in Europe.

[33] Autorité de la concurrence, Decision No. 21-D-11 of 7 June 2021 on practices implemented in the Internet advertising.