Organisation for Economic Co-operation and Development

DAF/COMP/WD(2019)2

Unclassified

English - Or. English

29 May 2019

DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
COMPETITION COMMITTEE

# Licensing of IP rights and competition law – Note by Colombia

**6 June 2019**

This document reproduces a written contribution from Colombia submitted for Item 6 of the 131st OECD Competition committee meeting on 5-7 June 2019.

More documents related to this discussion can be found at

http://www.oecd.org/daf/competition/licensing-of-ip-rights-and-competition-law.htm

Please contact Mr. Antonio Capobianco if you have any questions about this document
[E-mail: Antonio.Capobianco@oecd.org]

**JT03448179**

# *Colombia*

## 1. Introduction

1. Free competition is one of the main factors that contribute to a country's economic growth. In fact, several studies have shown that the higher the competition the higher the GDP, and thereby, the higher the positive effects on economic growth (Dutz y Hayri, 2000) (Van Sinderen y Kemp, 2008). Moreover, it has been proven that innovation increases enterprise productivity, which in turn, favors higher GDP levels (Park y Ginarte, 1997). In such manner, it might be useful or else pertinent to analyze the relationship between innovation and competition (Aghion, Bloom, Blundell, Griffith, & Howitt, 2005).

2. The abovementioned relationship, has been considered as an overarching topic for competition debates that have recently been held around the globe due to the continuous evolution of technological developments within the framework of the Fourth Industrial Revolution. This has influenced directly the design of new policies regarding competition and also the enforcement of traditional ones. Particularly, rules in respect to intellectual property and the rights that result from its application when it comes to prices and licensing terms within bilateral or multilateral trade agreements.

3. In this context, we propose to analyze the relationship between Intellectual Property and Competition in a data panel framework through both an empirical and a theoretical approach to licensing, and under the lens of an economic growth study, so as to pose challenges and new perspectives for competition authorities when issues regarding innovation, licensing and the granting of patents arise.

## 2. Industrial Property and Economic Growth

4. There's enough empirical and theoretical evidence that show the close relationship between Industrial Property and economic growth. Even so, it is possible to group the findings in this regard into, on the one hand, the studies that argue on the direct effect of the increase of patents concession over economic growth; and, on the other, the studies that find the relationship mentioned above in an indirect way, meaning that economic growth is affected first by the increase of the quality of productive factors such as capital and labor, which have been previously affected by patent activity.

5. Accordingly, Solow (1956) recognized that when determining the sources of economic growth, other aspects, different from capital and labor, are as decisive as the latter and work as complementary variables to the analysis. As a matter of fact, this author argues that institutional efficiency, technological innovation, industrial property and the use of energy resources factor the subject. In addition, Barro (1991), Mankiw, Romer y Weil (1992) y Romer (1993), concluded that human capital bound to innovation plays a fundamental role in the determination of economic growth given the limits posed by the scarcity of the traditional factors.

6. In such manner, it's been stressed that innovation measured through the current amount of patents granted by a certain jurisdiction, has a positive effect on economic growth. Thus, several academics and researchers have proposed novel methodologies and tools for an analysis that allows to state that industrial property is in fact a source of

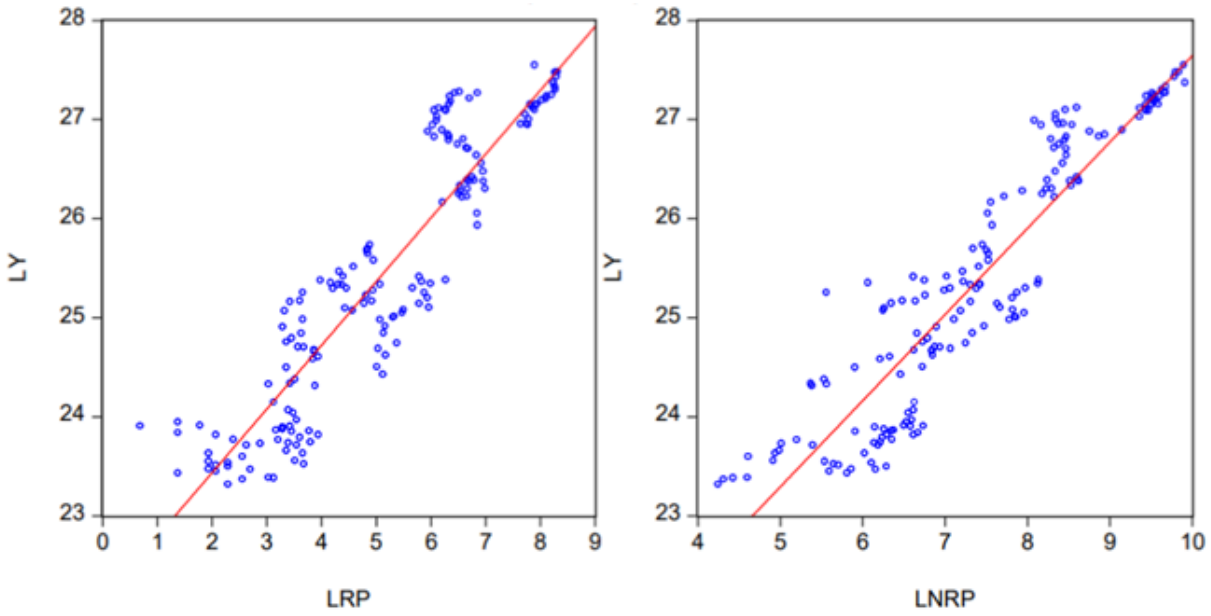
economic growth. For instance, Gould and Gruben (1996) concluded the abovementioned and even more, argued that these effects are higher in countries with greater economic openness. In this respect, Koléda (2004) showed an inverted-U relationship between industrial property activity and economic growth. That also means that there is an optimal level of IP activity that maximizes economic growth levels.

7. In addition, Schneider (2005), using a data panel of 47 heterogeneous countries between 1970 and 1990, resolved from a legal perspective, that stronger patent rights have positive effects on innovation and economic growth when it comes to developed countries solely. Respectively, Chen y Puttitanun (2005), found similar results applied to developing countries using a data panel of 64 countries. Finally, Hu y Png (2012) with a difference – in– difference methodology for a data panel of 54 manufacturing industries from 72 countries between 1981 and 2000, determined that industries that have higher patent activity show higher economic growth rates.

8. Now, over the last decades, little has been written about the effect of patents over economic growth taking into account specifically the origin of the patent, meaning, that the application for its granting might be requested by a resident or by a non-resident entity. In this regard, Jones (2002) claimed that in a long term the United States' economic growth situation might be explained by innovation and the fostering of creative industries. In the same way, Campo (2012) conducted an analysis of the current relationship of innovation, measured by the amount of registered patents and economic growth in Latin America between 1990 and 2010. As a result of using a data panel of 10 countries from which he concluded that an increase of 1% in the number of registered patents resulted, in the long term, in the increase of the GDP increases by a 0,055%. Thus, it is shown that there exists a positive and significant relationship between the identified variables. Nevertheless, it is worth mentioning that even though the contribution is not so high, it can be asserted that prospectively this relationship might be strengthen.

9. Finally, Campo and Herrera (2014) showed empirically the impact of patents over the economic growth of eight Latin American countries (Argentina, Brazil, Chile, Colombia, Ecuador, México, Peru y Uruguay) between 1990 and 2011. To this effect, the authors estimated a Cobb-Douglas production function in order to quantify the effect and the scope of the patents registered by residents and non-resident entities over the GDP, controlling by productive factors (capital and labor). The following graph shows the relationship between the aforementioned variables distinguishing between residents (left) and non-residents (right). So, it is possible to represent this scattered diagram using a positive lineal function.

**Figure 1. Relationship between GDP (LY) and patent registry (LRP y LNRP)**




*Source*: Campo y Herrera (2014)

10. Subsequently, Campo and Herrera (2014), based on World Bank and WIPO data, estimated a data panel model. The results indicate that given an increase of 10% in the number of registered patents by residents, in a long run, the GDP increases by 0,25%. Also, that given an increase of 10% in the number of registered patents by non-residents the GDP increases by 0,44%. This shows that in Latin American countries economic growth is explained, in a long run, by the generation of innovative ideas from the rest of the world (Campo y Herrera, 2014).

## 3. Industrial Property and Competition

11. According to Raymond & Plotnikova (2014, 2-3), literature regarding the relationship between competition and innovation dates from Schumpeter (1942), who studied the link between market structure and innovation and concluded that competitive markets not necessarily promote innovation, to Arrow (1962) who argued against this proposal. He found that there are plenty of incentives to innovate in competitive scenarios, for instance, a firm that participates in a market will expect higher profits if only if it innovates as a result of competitive pressure.

12. The theoretical models that were developed to assess this matter, work by predicting a range of results based on the type of innovation (product vs. processes), the innovation strategies (patents vs. licenses) and firm characteristics (quality and aim towards the avoidance of competition). To that effect, Scherer (1967) y Kamien y Schwartz (1976) predicted an inverted-U relationship between competition and innovation. This idea was recaptured by Aghion et al. (2005) who demonstrated that what had been stated by Arrow applies in cases when the intensity of competition is lower as opposed to the cases in which competition levels are higher and Schumpeter's hypothesis is more likely to be applied.

13. Hence, just as Polder & Veldhuizen (2010) as well as Peneder (2012) stated, if competition is intensified from a low starting point, the innovation activity is stimulated. While, from a certain level of competition, innovation activity is undermined by the competition pressure.

14. Now, as Schumpeter[1] stated, innovation may as well refer to: (i) the creation of a new good or the modification of its quality; (ii) the development of a new production methodology; (iii) the definition of new market segments; (iv) the discovery of a new source of input supply; and, (v) the emergence of a new industry or firm. In accordance to Schumpeter, the Superintendence of Industry and Commerce specified in the 2019 ICN Special Project, that new dialectics posed by the interaction between innovation, digital economy and competition policies suggest the way in which competition should be assessed. For instance, through the analysis of the protection and promotion of the values underlying Colombian competition regime (consumer welfare, economic efficiency and freedom of markets) facing current investments in science, technology and innovation by firms that aim towards enhancing their traditional business models in order to consolidate dominance on related markets. (Grupo de Estudios Económicos, 2019).

15. In this regard *SAYCOs* infringement of the paragraph 3rd of article 50 /Decree 2153/1992 illustrates how an abuse of dominance in a creative economy market by and incumbent affects directly the development of such economies under normal conditions. In this case *SAYCO* held with its clients (owners of the property rights) contracts that included not only the management of individual copyrights for specific uses, but also the agency of every use that resulted from further creations. That is to say, that SAYCO demanded from its clients the exclusivity to manage all of the current and future rights product of future creations through the signature of adhesion contracts.

16. The SIC based its conclusion on documents, contracts and testimonies in respect to SAYCOs behavior in the market, all of which contributed to prove the existence of an abuse of dominance and also to highlight the importance of the intervention of competition authorities in order to guarantee healthy market dynamics in scenarios where intellectual property rights play a key role. The total fine awarded to the infringers by the SIC was USD 1,02 millions[2].

17. In order to stress the relationship between innovation and competition, Campo and Herrera (2016) estimated a data panel of 75 countries between 2007 and 2015 which included i) a data base with six variables related to innovation (research and development expenditure as a percentage of the GDP, patent requests per capita, innovation capacity, research and development cooperation between universities and industries, and firms research and development expenditure); ii) two variables that measure competition ( competition in local markets and the effectiveness of competition policies), and, iii) so as to control the relation subject to the studies and capture the effect of technology in the innovative processes it was included GDP per capita and some others trend variables.

18. This estimations demonstrate the existence of an inverted-U relationship between innovation and competition, which means that increases in competition levels foster innovation, but only until certain level, from which the effect of competition over innovation could become negative. This results are in accordance to what was theoretically stated by Aghion et al. (2015).

1 Mentioned by (Lianos y Dreyfuss, 2013).

2 SIC Resolution 76278/2016.

19. As a conclusion, it is safe to say that this discussion goes beyond mere theoretical approaches, just as Colombian experience in taking not only a case that handled the tension between intellectual property rights and competition law but also through the empirical study of the matter as shown before demonstrates.

## References

Aghion, P., Bloom, N., Blundell, R., Griffith, R., & Howitt, P. (2005). Competition and Innovation: An Inverted-U Relationship. The Quarterly Journal of Economics, 701-728.

Arrow, K. (1962). Economic Welfare and the Allocation of Resources for Invention. En The Rate and Direction of Inventive Activity: Economic and Social Factors (págs. 609-626).

Campo, J. (2012). Impacto de las patentes sobre el crecimiento económio: Un modelo panel cointegrado. Documentos de trabajo N°2.

Campo, J., & Herrera, J. (2014). Patentes y Crecimiento Económico: ¿Innovación de Residentes o No Residentes? Documentos de Trabajo N°18.

Campo, J., & Herrera, J. (2016). Competencia y Propiedad Industrial: un ejercicio empírico internacional 2007-2015.

Chen, Y., & Puttitanun, T. (2005). Intellectual property rights and innovation in developing countries. Journal of Development Economics, 78, 474-493.

Dutz, M., & Hayri, A. (2000). Does More Intense Competition Lead to Higher Growth? World Bank, Policy Research Working Paper No. 2320 & CEPR Discussion Paper No. 2249.

Gould, D., & Gruben, W. (1996). The role of intelectual property rights in economic growth. Journal of Development Economics,, 48, 323-350.

Grupo de Estudios Económicos . (2019). Challenges and perspectives for Competition Policy in Creative and Cultural Economy. Obtenido de http://serviciosweb.sic.gov.co/icn-annual-conference-2019/SPECIAL%20PROJECT%20ICN%202019.pdf

Jones, C. (2002). Sources of U.S. economic growth in a world of ideas. American Economic Review, 110(2), 220-239.

Kamien, M., & Schwartz, N. (1976). On the Degree of Rivalry for Maximum Innovative Activity. The Quarterly Journal of Economics, 90, 245-260.

Koléda, G. (2004). Patents novelty requirement and endogenous growth. Revue d'économie politique, 114, 201-221.

Lianos, I., & Dreyfuss, R. (2010). New Challenges in the Intersection of Intellectual Property Rights with Competition Law – A View from Europe and the United States. CLES Working Paper Series 4/2013.

Mankiw, G., Romer, D., & Weil, D. (1992). A Contribution to the Empirics of Economic Growth. The Quarterly Journal of Economic,, 107(2), 407-437.

Park, W., & Ginarte, J. (1997). Determinants of patent rights: A cross-national study. Research Policy, 283-301.

Peneder, M. (2012). Competition and Innovation: Revisiting the Inverted-U Relationship. Journal of Industry, Competition and Trade, 12, 1-5.

Polder, M., & Veldhuizen, .. E. (2010). Innovation and competition in the Netherlands: testing the inverted U for industries and firms.

Scherer, F. (1967). Research and Development Resource Allocation Under Rivalry. The Quarterly Journal of Economics, 81, 359-394.

Schneider, P. (2005). International trade, economic growth and intellectual property rights: A panel data study of developed and developing countries. Journal of Development Economics, 78, 529-547.

Schumpeter, J. (1942). Capitalism, Socialism and Democracy.

Solow, R. (1956). A Contribution to the Theory of Economic Growth. Journal of Economics, 65-94.

Superintendencia de Industria y Comercio. (2016). Resolución 76278.

Van Sinderen, J., & Kemp, R. (2008). The Economic Effect Of Competition Law Enforcement: The Case Of The Netherlands. De Economist, 156, 365-385.