Guest editorial

Firm's innovation in Latin America: between persistent features and new challenges

Firm's innovative behavior and performance have become a central topic in economics and management research. Several academic streams have shed light on the theoretical foundations of innovation processes, its drivers and constraints, showing the crucial role of firm behavior for the performance of the firms themselves but also for their impact in the economic growth and social welfare at country and regional level (Le Bas and Scellato, 2014; Fagerberg and Verspagen, 2009; Chandler *et al.*, 1999; Nelson, 1991).

Latin America has a long tradition on the study of firms' technological behavior, from both the studies of the industrial and developmental economics (Katz, 2001; Perez, 1983) and from themanagement studies (Malaver, 1999; Olavarrieta and Villena, 2014). Moreover, many research studies have recently illustrated some particular features that affect innovation in Latin-American firms, indicating some persistent difficulties related with innovation activity: firm's low productivity (Aboal and Tacsir, 2018; Grazzi and Pietrobelli, 2016); weak systemic linkages (De Fuentes and Dutrenit, 2012; Erbes *et al.*, 2010; Rapini *et al.*, 2009); small critical mass of innovative firms, which focuses on innovation strategies based on the acquisition of machinery and equipment (Frank *et al.*, 2016; Barletta *et al.*, 2016); and lack of human capital to achieve radical innovations (Grazzi and Jung, 2016; Bello-Pintado and Bianchi, 2018).

These persistent problems are in turn related with new challenges that have also been discussed in recent research works. For example, the emergence of new challenges related to the skill-biased effect of innovation in the formal employment (Zuniga and Crespi, 2013; Pereira and Tacsir, 2019), and how it affects the self-employment opportunities by entrepreneurship in a region characterized by a large informal sector (Lederman *et al.*, 2013; Hall *et al.*, 2012). On other hand, recent studies have payed attention to the relevance of nonfinancial constraints to innovate and the complementary effects of diverse innovation constraints (Santiago, De Fuentes and Gras 2017). In addition, several case studies have contributed to understand the firms' innovation patterns in the region (Gutman and Lavarello, 2014; Figueiredo, 2010).

With this regard, one of the main challenges for research on firms' innovation still indicated in these studies is on what are the drivers of firm innovation in the region. Particularly, researchers call for more evidence to shed light on the disconnection between innovation and the firms' financial performance in Latin America (Santos *et al.*, 2014; Cassoni and Ramada-Sarasola, 2012) and to what extent the recent policy efforts have been impacted in the firm's innovation patterns (Berrutti and Bianchi, 2019; Rocha, 2015).

This special issue responds to the need of building a robust shared understanding of the innovation process in Latin America. The aim is to contribute in that research collective endeavor by offering an updated compilation of works on the persistent and new challenges that innovative firms are facing in Latin-American countries using different theoretical perspectives and sophisticated methodological approaches from both quantitative and qualitative research designs studies.

The studies compiled in this special issue present evidence from eight countries (Brazil, Argentina, Mexico, Colombia, Chile, Ecuador, Peru and Uruguay), covering both the larger and more diversified economies and small countries with different levels of development. Moreover, they offer original knowledge in the field, around several hot topics: absorptive

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capacity; networks, obstacles to innovation; competition and innovation input-output; high-tech industries; innovation patterns among others.

The findings from a multiple case study on the Peruvian manufacturing industry (Cabrera and González, 2019 in this issue) and from network analysis applied to analyze innovation strategies in a traditional sector of the Uruguayan industry (Galaso *et al.*, 2019 in this issue) as well as from econometric estimates on the Ecuadorian manufacturing firms (Rodriguez and Rochina, 2019 in this issue) show that innovative activities are persistently focused on external acquisition of knowledge embedded in machinery and equipment. On the contrary, in a traditional but science-based sector, Paranhos *et al.* (2019 in this issue) offer a novel analysis on the relevance of the formalization of R&D activities in the innovation path of the Brazilian large pharmaceutical firms. Using a multiple case study, these authors analyze the linkage between Brazilian large pharma and the universities, stressing how different political events, from the changes on the intellectual property regulation to vertical health industrial policies, have signed the recent development path.

Considering knowledge-intensive activities in the bigger Latin-American countries, Stezano and Oliver Espinoza (2019 in this issue) conduct a comprehensive analysis of the innovation performance of the Mexican biotechnology firms. This article not only confirms the theoretical consensus on the relevance of innovative capacities and experience to achieve new marketable biotech products but also shows unexpected findings, which suppose a new challenge for Latin-American firms in science-based sectors. These authors show the clear positive effect of the scientific knowledge base of the firm but the weak and unclear effect of management capacities related to market strategies and organizational strategies in the innovation performance. These findings suggest that science-based sectors in the regions are based on the science-driven innovation but still face regular relevant constraints in the business model development.

In the same vein, Lachman and López (2019 in this issue) show how cost and budget constraints affect the firm's growth in the Argentinean suppliers for precision agriculture activities. This article reveals the recent development of a high-tech emergent sector strongly related to the traditional and more competitive activities in this country. Moreover, the authors explain how knowledge barriers, mostly related to scant diffusion of technical basis and potential benefits of precision agriculture, affect the adoption of these technologies. In particular, distinguishing user based from supplier-based obstacles to innovate, this paper offers novel insight for public policies.

In addition, these papers (Stezano and Oliver Espinoza, 2019; Lachman and López, 2019 in this issue) contribute by adapting suitable methodological designs to deal with "small n" firms samples, which has been one of the most frequent challenges for quantitative empirical studies in high-tech sectors in Latin America.

On another side, analyzing Colombian firms, Vega-Jurado *et al.* (2019 in this issue) theoretically discuss the concept of absorptive capacities following a novel approach for Latin-American firms. These authors use a structural model to apply a methodological approach that consider top management team features – diversity and coordination – showing that while the former attribute does not have significant incidence in the firms' absorptive capacity, team management coordination positively affects absorptive capacities. In doing so, these authors introduce the analysis of socialization capabilities as moderator between management coordination and the absorptive capacities of the firm. This article sheds light on a hot topic that has received relatively less research attention in Latin America, as the human side of absorptive capacities, specifically on how individual-based resources can be transformed in systematic knowledge capabilities.

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Following with the analysis based on national innovation surveys, Montégu *et al.* (2019 in this issue) address a classic question in the innovation literature, which has also received relatively little attention in Latin-American economies. These authors conducted an econometric estimation of the effects of competition intensity on innovation effort and innovation performance in Chilean firms. Their findings show an inverted U-shape relationship between these variables, but a positive effect of competition on innovation propensity rather than on innovation results is also observed. These results are particularly relevant for the region because of the insufficient evidence on the link between innovation market incentives and innovation behavior has been recognized as bottle neck for the design of innovation policy mixes that addresses the articulation between innovation policy and competition regulation.

On other hand, using social network analysis, Galaso *et al.* (2019 in this issue) revisit the question on innovation strategies of the firm, distinguishing between make or buy strategies in the rubber and plastic sector of Uruguay. The article shows how the agents that have more direct linkages in the network are more likely to follow an innovation strategy based on buying external knowledge. On the contrary, it is more likely that agents who are in a noncentral but intermediary position in the sectoral network follow an innovation strategy based on make innovation. These results contribute filling the knowledge gap on the effects of the collaborative external linkages on the innovation process in traditional sectors. Showing how the place that the agent holds in the network captures the determinants of a typical crucial but hardly an observable concept is the firm's innovation strategy. In addition, these authors analyze a novel question for the region, showing the critical role of the industrial chambers in the innovation fluxes within the sectoral network.

This brief summary shows that the set of researches compiled in this issue offers a comprehensive landscape of firm's innovation in Latin America. Moreover, these works give empirical and theoretical support for further research.

First, although the critical mass of Latin-American firms involved in innovation activities is small, there is a rich variety of agent engaged in innovation process in both high tech and traditional sectors.

Moreover, these papers show that the innovation activity in the region is affected for a number of factors, internal and external to the firm. Innovation is determinant for firms and economic growth in Latin America; however, its effects are the consequence of multiple factors, internal and external factors. For instance, these research studies stress the importance of firm's human capital and skills, R&D investment and technology acquisition strategy. However, we observed that firms are very sensitive to the dynamics of sectors (traditional vs high tech) and innovation system where companies are located.

Firm's innovation in Latin-American countries roughly show two faces. First, the whole economy mostly concentrated in traditional sectors where innovation activities are oriented to enhance competitiveness through modernization. Second, the emergence of knowledge-based activities that have shown a growing path as a business sector themselves (i.e. biotechnology and agriculture precision based on ICT) but mostly pervading traditional productive fabric. Therefore, the articulation of national effort to promote the convergence between traditional and new activities appears a critical strategic goal.

With this regard, the question about resource allocation, priority setting and oriented policies is open. Several countries in Latin America have promoted a wide range of innovation policies in the past years with nonconclusive results (López, 2009). In this special issue, we observed robust evidence on firms' determinant of competitiveness, R&D investment and developing capabilities around new organizational forms and production systems that may report on a new and more accurate policy design.

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Finally, the special issue points to further research in several areas that should be analyzed in Latin-American countries. Research in the region is largely focused in the manufacturing industry but less in services sector. Specialized services but also traditional ones must be deeply analyzed from the innovation–value creation perspective. In the same vein, research studies have paid more attention to input-output analysis, but, as some articles in this issue have shown, the human side of innovation and the challenge of firms around strategies of make–buy require more attention. In particular, addressing the challenges of adopting open and collaborative innovation strategies in a context with highly heterogeneous agents.

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References

Aboal, D. and Tacsir, E. (2018), "Innovation and productivity in services and manufacturing: the role of ICT", *Industrial and Corporate Change*, Vol. 27 No. 2, pp. 221-241.

Barletta, F., Pereira, M., Suárez, D. and Yoguel, G. (2016), "Construcción de capacidades en las firmas argentinas. Más allá de los laboratorios de I+ D", *Pymes, Innovación y Desarrollo*, Vol. 4 No. 3, pp. 39-56.

Berrutti, F. and Bianchi, C. (2019), "Effects of public funding on firm innovation: transforming or reinforcing a weak innovation pattern?", *Economics of Innovation and New Technology*, doi: 10.1080/10438599.2019.1636452.

Cabrera, R. and González, D. (2019), "Influences of technological attributes on sourcing of manufacturing technologies in developing countries: the case of Peru", *Management Research Journal of the Iberoamerican Academy of Management*, Vol. 20 No. 10.

Cassoni, A. and Ramada-Sarasola, M. (2012), "The returns to innovation in Latin America: inexistent or mismeasured?", *Latin American Business Review*, Vol. 13 No. 2, pp. 141-169.

De Fuentes, C. and Dutrenit, G. (2012), "Best channels of academia–industry interaction for long-term benefit", *Research Policy*, Vol. 41 No. 9, pp. 1666-1682.

Erbes, A., Robert, V. and Yoguel, G. (2010), "Capacities, innovation and feedbacks in production networks in Argentina", *Economics of Innovation and New Technology*, Vol. 19 No. 8, pp. 719-741.

Fagerberg, J. and Verspagen, B. (2009), "Innovation studies. The emerging structure of a new scientific field", *Research Policy*, Vol. 38 No. 2, pp. 218-233.

Figueiredo, P.N. (2010), "Discontinuous innovation capability accumulation in latecomer natural resource-processing firms", *Technological Forecasting and Social Change*, Vol. 77 No. 7, pp. 1090-1108.

Frank, A., Cortimiglia, M., Ribeiro, J. and de Oliveira, L. (2016), "The effect of innovation activities on innovation outputs in the Brazilian industry: market-orientation vs. technology-acquisition strategies", *Research Policy*, Vol. 45 No. 3, pp. 577-592.

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Galaso, P., Rodríguez, M.A. and Picasso, S. (2019), "Inter-firm collaboration to make or to buy innovation. Evidence from the rubber and plastic cluster in Uruguay", *Management Research*, Vol. 20 No. 10.

Grazzi, M. and Jung, J. (2016), "Information and communication technologies, innovation, and productivity: evidence from firms in Latin America and the Caribbean", *En Firm Innovation and Productivity in Latin America and the Caribbean*, Palgrave Macmillan, New York, NY, pp. 103-135.

Grazzi, M. and Pietrobelli, C. (Coord) (2016), *Firm Innovation and Productivity in Latin America and the Caribbean. IADB*, Palgrave Macmillan, New York, NY.

Katz, J. (2001), "Structural reforms and technological behaviour: the sources and nature of technological change in Latin America in the 1990s", *Research Policy*, Vol. 30 No. 1, pp. 1-19.

Lachman, J. and López, A. (2019), "Innovation obstacles in an emerging high tech sector: the case of precision agriculture in Argentina", *Management Research*, Vol. 20 No. 10.

Le Bas, C. and Scellato, G. (2014), "Firm innovation persistence: a fresh look at the frameworks of analysis", *Economics of Innovation and New Technology*, Vol. 23 Nos 5/6, pp. 423-446.

López, A. (2009), "Las evaluaciones de programas públicos de apoyo al fomento y desarrollo de la tecnología y la innovación en el sector productivo en américa latina. Una revisión crítica", Nota Técnica. Red de Innovación, Ciencia y Tecnología Del Diálogo Regional de Política, IDB.

Malaver, F. (1999), "La investigación en gestión empresarial", *Academia. Revista Latinoamericana de Administración*, Vol. 23.

Montégu, J.P., Calvo, C. and Pertuze, J. (2019), "Competition, R&D and innovation in Chilean firms", *Management Research*, Vol. 20 No. 10.

Nelson, R. (1991), "Why do firms differ, and how does it matter?", *Strategic Management Journal*, Vol. 12 No. S2, pp. 61-74.

Olavarrieta, S. and Villena, M.G. (2014), "Innovation and business research in Latin America: an overview", *Journal of Business Research*, Vol. 67 No. 4, pp. 489-497.

Paranhos, J., Perin, F., Mercadante, E. and Soares, C. (2019), "Industry-university interaction strategies of large Brazilian pharmaceutical companies", *Management Research*, Vol. 20 No. 10.

Pereira, M. and Tacsir, E. (2019), "¿Quién impulsó la generación de empleo industrial en la Argentina? Un análisis sobre el rol de la innovación", *Revista CEPAL*, Vol. 127, pp. 195-216.

Perez, C. (1983), "Structural change and assimilation of new technologies in the economic and social systems", *Futures*, Vol. 15 No. 5, pp. 357-375.

Rapini, M., Chaves, C., Albuquerque, E., Silva, L., Souza, S., Righi, H. and Cruz, W. (2009), "University-industry interactions in an immature system of innovation: evidence from Minas Gerais, Brazil", *Science and Public Policy*, Vol. 36 No. 5, pp. 373-386.

Rocha, F. (2015), "Does governmental support to innovation have positive effect on R&D investments? Evidence from Brazil", *Revista Brasileira de Inovação*, Vol. 14, pp. 37-60.

Rodriguez, J. and Rochina, B.M. (2019), "Innovation drivers in Ecuadorian manufacturing", *Management Research*, Vol. 20 No. 10.

Santos, D., Basso, L., Kimura, H. and Kayo, E. (2014), "Innovation efforts and performances of Brazilian firms", *Journal of Business Research*, Vol. 67 No. 4, pp. 527-535.

Stezano, F. and Oliver Espinoza, R. (2019), "Innovation capabilities and performance of biotechnology firms: some insights from a national survey in Mexico", *Management Research*, Vol. 20 No. 10.

Vega-Jurado, J., Schmutzler, J., Manjarrés-Henríquez, L. and Vega-Cárcamo, J. (2019), "Orchestrating absorptive capacity: organizational catalysts of TMT's influence", *Management Research*, Vol. 20 No. 10.

Zuniga, P. and Crespi, G. (2013), "Innovation strategies and employment in Latin American firms", *Structural Change and Economic Dynamics*, Vol. 24, pp. 1-17.

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Further reading

Crespi, G. and Dutrénit, G. (Eds), (2014), *Science, Technology and Innovation Policies for Development: The Latin American Experience*, Springer Science and Business Media.

Crespi, G. and Zuniga, P. (2012), "Innovation and productivity: evidence from six Latin American countries", *World Development*, Vol. 40 No. 2, pp. 273-290.

Demmel, M., Máñez, J., Rochina, Barrachina, M., Sanchis and Llopis, J. (2017), "Product and process innovation and total factor productivity: evidence for manufacturing in four Latin American countries", *Review of Development Economics*, Vol. 21 No. 4, pp. 1341-1363.

Kannebley, S. and De Prince, D. (2015), "Restrição financeira e financiamento público à inovação no Brasil: uma análise com base em microdados da PINTEC", *Nova Economia*, Vol. 25 No. 3, pp. 553-574.

Navarro, J.C. and Olivari, J. (2016), *La Política de Innovación en América Latina y el Caribe: nuevos Caminos*, BID, Washington, DC.

Padilla-Pérez, R. and Gaudin, Y. (2014), "Science, technology and innovation policies in small and developing economies: the case of Central America", *Research Policy*, Vol. 43 No. 4, pp. 749-759.

Robert, V., Yoguel, G., Cohan, L. and Trajtenberg, L. (2010), "Estrategias de innovación y dinámica del empleo en ramas productivas argentinas", *Economía: teoría y Práctica*, Vol. 32, pp. 113-158.

Yoguel, G. and Robert, V. (2010), "Capacities, processes, and feedbacks: the complex dynamics of development", *Seoul Journal of Economics*, Vol. 23 No. 2, pp. 187-237.

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