

INNOVATION PATTERNS IN SMEs AND ITS IMPLICATIONS TO THE INNOVATIVE AND ORGANIZATIONAL PERFORMANCE

Diego Maradona L. Nunes (IC), Edmundo Inácio Júnior (PQ).

Abstract

This paper aim to analyses the association between innovative and organizational performance of small and medium industrial enterprises (SMEs) in a national level. To do so, we developed a typology of innovative SMEs and a set of indicators that captured the value of innovative activities in inputs and outputs dimensions and about organizational performance. The sample comprises all SMEs from 10 to 249 employees from our national survey on innovation of 2005 called "PINTEC", held by Brazilian Institute of Geography and Statistics (IBGE). The outcomes suggested an existence of different patterns between analyzed groups of typology, where the innovative one tends to present a superior organizational performance.

Key words: Small and medium enterprises, innovative performance, organizational performance.

Introduction

The constant searches for innovation in the last two decades has intensified as a way of ensure the competitive advantage. This necessity has taken the SMEs for a higher level of progress and management of its ideas, in order to neutralize the stagnation and encourage the advances of innovative progress. Divided in two groups, the sample of Brazilians SMEs of PINTEC 2005 has been studied for the purpose of identify the patterns of innovation and how they are related with the organizational performance indicators. In Brazil, the SMEs is very important in economics terms – in number of enterprises and workers allocated, but still have a long road to increase their participation on the GDP.

Results and Discussion

We developed a typology with two dimensions – inputs and outputs – of innovation. We chose the polar extremes quadrants (+Inputs +Outputs = NI versus -Inputs -Outputs = ni) for comparison by an bulk of indicators. The finds reveal that between these groups (NI and ni) the SMEs have distinct patterns. The first group of macro innovative (NI) has presented characteristics as focus on R&D, investments on human capital, absorption capacity from others, a higher number of patents and more innovative impact in the market. All this features inverts when the analyze the group of micro innovative enterprises (ni).

Concern with the organizational performance, we conclude that when an enterprise innovates, either macro or micro innovative, their organizational performances diffuses and generates a positive impact, but in especial the macro innovative companies.

Chart 1. Selected indicators

Innovative performance (outputs)	MACRO (NI)	MICRO (ni)
Degree of novelty of TPP	●	△
Impact of TPP on sales	●	△
Innovative strategies (Inputs)		
Personnel occupied in R&D	●	△
Cooperation with universities	●	△
Organizational performance		
Labor productivity	●	△
Exports	●	○
Return on Assets (ROA)	●	○
Notes: ● Higher ○ Medium △ Weak association		

Conclusions

These finds are in line with our hypothesis that the innovative efforts have strong association with the innovative results that these enterprises got. To develop this process, it would be important the increase public policies towards development of innovative ecosystems. Despite that, it's really import that this enterprises have a qualified human capital and a constant searching for a continuous improvement.

Acknowledgement

I'd like to say thankful to Prof. Edmundo for the assistance in my project. In addition, I grateful too to my friends by debates and constant support.

¹ de JONG, J.P.J.; MARSILI, O., The fruit flies of innovations: A taxonomy of innovative small firms. *Research Policy* **2006**, 35 (2), 213-229.

² HOLLENSTEIN, H., Innovation modes in the Swiss service sector: a cluster analysis based on firm-level data. *Research Policy* **2003**, 32 (5), 845-863.

³ INÁCIO JR, E.; MACHADO, H.P.V.; GIMENEZ, F.A.P.; MORINI, C. From 1980 to 2010: An overview about the Brazilian scientific production in entrepreneurship. *International Journal of Entrepreneurship*, **2014**, 18, 129-141.