

Acquiring and Applying Knowledge for Innovation and Financial Purposes

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In the contemporary knowledge-intensive business environment, firms increasingly depend upon external sources of information to promote innovation and improve their performance. Many of them, however, confront strong difficulties in benefiting from external knowledge flows, even in industries of easy-to-access sources of information. To outweigh such deficiencies, enterprises need to develop their absorptive capacity, that is, the "ability to recognize the value of new information, assimilate it, and apply it to commercial ends" (Cohen and Levinthal, 1990: 128). The concept of absorptive capacity (ACAP) is a prominent topic of scientific inquiry (e.g., Jansen et al., 2005; Zahra and George, 2002), gradually gaining recognition as a key driver of a firm's competitive advantage (Lichtenthaler, 2009).

Using path analysis in a sample of 461 Greek enterprises participating in the third Community Innovation Survey (CIS), this study demonstrates that external knowledge inflows are directly related to absorptive capacity and indirectly related to innovation. Absorptive capacity contributes, directly and indirectly, to innovation and financial performance but in different time spans. This study, therefore, contributes to the understanding of absorptive capacity's antecedents and outcomes by providing empirical evidence of longitudinal form that offers important research and practical implications.

Primarily, the findings of the study indicate that firms' involvement in innovation collaborations with various outside parties (e.g., suppliers, clients, competitors, research institutions) enriches their knowledge base and develops a better ability to assimilate and exploit (related and diverse) external knowledge. Having access to complementary knowledge allows firms to simultaneously take advantage of two critical learning opportunities: gain access to a diverse array of novel knowledge and skills, and develop the abilities to interpret and apply this diverse input via identifying similarities and overlaps with existing knowledge bases.

More importantly, and in relation to the previous point, this study offers first empirical evidence that demonstrate the mediating role of absorptive capacity in the relationship between external knowledge flows and innovation. The results of the empirical analysis clearly suggest that external knowledge inflows advance innovation performance exclusively through ACAP (i.e., a full mediation). This finding refines previous research (e.g., Escribano et al., 2009; Fosfuri and Tribó, 2008) and provides empirical support to one of the key theoretical assumptions of ACAP theory: firms are to derive innovation benefits from new external knowledge only if they will recognize the value of this knowledge, internalize and exploit it.

Furthermore, the present work offers a combined examination of innovation as well as financial performance outcomes of ACAP within a longitudinal-type research design. This study demonstrates that ACAP contributes directly to innovation and indirectly (i.e., via innovation) to subsequent financial performance. This result confirms the general research consensus that ACAP leads to innovation but, more importantly, further suggests that absorptive capacity can be a source of financial advantage by stimulating innovation benefits over time. With the use of time-lagged financial indicators, this study adds validity to this finding and shows that the outcomes of absorptive capacity materialize not only as a straightforward improvement in innovation but also seem to diffuse and develop into a valuable source of economic advantage over time.

The work at hand also extends the use of the ACAP construct in national contexts characterized as "catching up" in terms of economic growth, technology usage, and overall innovativeness. By utilizing a sample of Greek manufacturing and services firms participating in the third CIS exercise, this study is able to propose alternative modes of improving innovation as well as financial performance, hence informing practitioners and policy makers. Specifically, and since firms' absorptive capacity relates to a country's absorptive capacity, a policy planned to develop firms' ACAP may be "very effective in making the country more receptive to international knowledge flows" (Escribano et al., 2009: 104). This is especially the case for Greece that presents, compared to other EU member states, certain inadequacies regarding technology production and access to resources critical for generating innovation (e.g., technology infrastructure, effective networking with state-of-the-art suppliers or research institutions worldwide).

Formulating policies that aim at stimulating firms' absorptive capacity (e.g., facilitating the mobility of scientists, promoting the linkages between producers, suppliers, clients, and research organizations, enhancing the technological skills of employees) can prove an effective means of establishing a cross-industry channel for transferring, diffusing and exploiting external knowledge that, in turn, create conditions for increasing innovation at the national level. If this is further combined with the time-lagged indirect effects of ACAP on financial performance, as evidenced in this study, then such policies may even produce, over time, the necessary economic resources that could finance future knowledge inflows and innovation activities. Consequently, absorptive capacity can act as a valuable complement to the traditional array of policy interventions aiming at enhancing the innovation performance of catching up economies such as Greece.

In conclusion, this study demonstrates the value of absorptive capacity as a means of attaining superior innovation and financial performance, and transforming external knowledge inflows into related performance gains.

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References

- Cohen, WM, Levinthal, DA. Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly* 1990; 35: 128-152.
- Escribano, A, Fosfuri, A, Tribó, JA. Managing external knowledge flows: The moderating role of absorptive capacity. *Research Policy* 2009; 39: 96-105.
- Fosfuri, A, Tribó, JA. Exploring the antecedents of potential absorptive capacity and its impact on innovation performance. *Omega* 2008; 36: 173-187.
- Jansen, JJP, Van Den Bosch, FAJ, Volberda, HW. Managing potential and realized absorptive capacity: How do organizational antecedents matter? *Academy of Management Journal* 2005; 48 (6): 999-1015.
- Lichtenthaler, U. Absorptive capacity, environmental turbulence, and the complementarity of organizational learning processes. *Academy of Management Journal* 2009; 52 (4): 822-846.
- Zahra, SA, George, G. Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review* 2002; 27 (2): 185-203.