

Industry Summary: How Organizational Structure Shapes Open Innovation in SMEs

Gentile-Lüdecke, Simona, Torres de Oliveira, Rui, and Paul, Justin (2020). *Does organizational structure facilitate inbound and outbound open innovation in SMEs?* *Small Business Economics* 55 (4) 1091-1112. <https://doi.org/10.1007/s11187-019-00175-4>

In this study we examined how the internal organizational structure of small and medium-sized enterprises affects their ability to adopt open innovation, both in terms of bringing ideas in from outside (inbound open innovation) and commercializing internal technologies externally (outbound open innovation). The results provide clear guidance to business leaders seeking to improve their innovation processes.

Background

Open innovation has become increasingly important for SMEs because relying only on internal research and development is no longer enough to remain competitive. Firms need to access external knowledge, collaborate more broadly, and find new ways to commercialize their technologies. However, SMEs often face internal challenges such as limited resources, informal routines, and dependence on a small group of decision-makers. The study shows that the way an SME structures its internal work and decision-making has a strong effect on how well it can use external ideas or sell or license its own innovations.

The research uses data from Chinese SMEs and focuses on three core structural dimensions: **specialization, formalization, and centralization**. Specialization refers to how clearly tasks and responsibilities are divided into distinct areas. Formalization refers to how much work is guided by rules, procedures, and written routines. Centralization refers to how much decision-making authority is concentrated at the top of the organization. The findings show that each of these dimensions affects open innovation differently, and together they offer a clear picture of how structural choices influence innovation performance in SMEs.

Findings

The first major finding is that specialization strongly supports both inbound and outbound open innovation. SMEs with more specialized roles and clearer divisions of tasks are better able to search for external knowledge and absorb it into the business. Specialization deepens expertise and creates shared understanding within functional areas, which makes it easier to evaluate and integrate external ideas. The study also finds that specialization helps SMEs engage in outbound innovation, such as licensing their own technologies. Deep expertise equips employees to navigate the risks of knowledge transfer and manage negotiations with external partners. For industry, this means that developing focused technical roles and strengthening internal expertise can improve both the ability to learn from the outside and the ability to commercialize internal technologies.

The second finding concerns formalization. The study reports that formalization has opposite effects on inbound and outbound open innovation. When it comes to acquiring ideas from outside, a certain level of formalization is helpful. Clear routines, defined processes, and documented procedures make external search more systematic and ensure that firms know what information they need to look for and how to interpret it. This prevents external search efforts from becoming disorganized or ineffective. However, the same formalization that helps inbound innovation becomes a barrier for outbound innovation. Outbound open innovation requires agility, flexible decision-making, and the ability to adapt quickly to opportunities in technology markets. Highly formalized firms struggle with this flexibility. As a result, strong procedural rules can slow down the commercialization of internal technologies and hinder the identification of suitable partners. For industry, the implication is that SMEs should formalize their knowledge-search activities but keep commercialization processes more flexible.

The third finding is that centralization has a positive impact on both inbound and outbound open innovation. This result contrasts with research on large firms, where decentralization often improves innovation. In SMEs, however, decision-making is naturally concentrated in the hands of the owner or CEO, and this structure can actually strengthen open innovation. When leaders are directly involved in innovation decisions, they can champion external knowledge search, reduce internal resistance, and act quickly on partnership or licensing opportunities. Centralized leadership in an SME is closely connected to the business's technical capabilities and market needs, which enables faster and more informed decisions. For business leaders, this means that active top-level involvement is a key driver of open innovation success. Strong leadership support encourages employees to explore external sources of information and enables the firm to move quickly in negotiations with external partners.

Taken together, these findings show that organizational structure is not a background issue but a central determinant of innovation success in SMEs. Specialization, formalization, and centralization each play a role, but the most effective approach combines the strengths of each. Specialization builds the expertise needed to absorb and commercialize knowledge. Selective formalization supports disciplined external search without constraining commercialization. Centralized decision-making enables leaders to drive innovation, reduce internal hesitation, and respond quickly to opportunities. For industries that depend on rapid innovation cycles, partnerships, and technology commercialization, this research offers a clear roadmap for building an internal structure that supports long-term competitiveness.

For SMEs that seek practical guidance, the message is clear. Structure matters. Investments in building specialized expertise, defining outward-looking search routines, and maintaining strong, engaged leadership can significantly enhance the capacity to innovate. This aligns with the reality of emerging markets, where the speed of adaptation and responsiveness often determine success. In short, SMEs that intentionally design their internal structures to support open innovation will be better positioned to access external opportunities, leverage partnerships, and convert internal innovations into new revenue streams.