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## External knowledge absorption in Chinese SMEs

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## Summary

Today, knowledge is the most crucial element to stimulate organizational competitiveness and economic development. The ability of a firm to quickly recognize, assimilate, and utilize external knowledge is one of the core capabilities that bring organizational competitive advantages. The seminal publication by Cohen and Levinthal (1990) coined such an ability as absorptive capacity (AC). Our study focuses on AC-related topics in the context of Chinese SMEs.

In Chapter 1, we observe that SMEs operate differently from large enterprises, particularly in the way they collaborate with external partners for innovation. Our current knowledge of how SMEs deal with external knowledge in each of the AC phases is certainly not complete. The AC of SMEs deserves much more attention. Based on a provisional analysis, we formulate the following problem statement (PS).

**PS:** *How do SMEs deal with external knowledge in order to improve firm performance?*

In order to answer the PS, three research questions are raised.

**RQ 1:** *How do SMEs absorb external knowledge?*

**RQ 2:** *What challenges do SMEs face when absorbing external knowledge?*

**RQ 3:** *Which external knowledge assimilation mechanisms do have an impact on the performance of SMEs?*

Chapter 2 reviews the literature related to the concept of AC. It specifies relations between AC and four theories. By doing so, we give AC and our study a broad and solid theoretical base. The four most closely related theories are: (1) the resource-based view, (2) the knowledge-based view of firms, (3) organizational learning, and (4) dynamic capabilities. Four vital topics within previous AC studies, including (1) its conceptualization, (2) sources of AC, (3) its measurement, and (4) AC studies focusing on SMEs, are reviewed.

Chapter 3 addresses RQ 1 regarding how SMEs absorb external knowledge. The investigation is divided into examining three sub-RQs, formulated as follows.

**RQ 1a:** *How do SMEs recognize external knowledge?*

**RQ 1b:** *How do SMEs assimilate external knowledge?*

**RQ 1c:** *How do SMEs utilize external knowledge?*

To address them, we conducted 16 in-depth interviews with owner-managers of Chinese SMEs in different industries.

Regarding external knowledge recognition (EKR), we find that SMEs often recognize the value of potential external knowledge based on three criteria, viz.

- (A) the potential of external knowledge to meet internal needs,
- (B) expected costs involved in the knowledge absorption processes, and
- (C) accessibility to the knowledge sources.

Regarding external knowledge assimilation (EKA), the study identifies five EKA mechanisms used frequently by SMEs, including

- (A) consulting personal networks,
- (B) purchasing products or services,
- (C) referring to free sources,
- (D) recruiting new talents, and
- (E) collaborating with value-chain partners.

Finally, regarding external knowledge utilization (EKU), we find that Chinese SMEs mainly use external knowledge for the following five purposes:

- (A) improve an existing product or service,
- (B) solve urgent problems that existing internal knowledge cannot solve,
- (C) reduce internal time costs,
- (D) reduce internal financial costs, and

(E) concentrate internal resources and expertise on core business areas.

Chapter 4 explores RQ 2: *What challenges do SMEs face when absorbing external knowledge?* Through the 16 in-depth interviews, the study identifies seven main challenges that SMEs may face when absorbing external knowledge. We categorize them into two groups: (1) internal challenges and (2) external challenges. Five internal challenges are listed as

(A) lack of resources,

(B) limited internal expertise and competencies,

(C) lack of social capital,

(D) lack of reputation,

(E) negative attitudes towards external knowledge.

Two external challenges are identified as

(A) issues with contracts and

(B) weak appropriability regime.

Chapter 5 addresses RQ 3: *Which EKA mechanisms do have an impact on the performance of SMEs?* Based on a survey collected from 221 SMEs in different industries and areas in China, we adopted a quantitative research method to test the potential effects of five EKA mechanisms on the performance of SMEs. The results of our linear regression analysis on our hypotheses have as results that (C) referring to free sources and (D) recruiting new talents for new knowledge cannot be rejected on both the financial performance and growth of SMEs. The hypotheses on the effects of utilizing the other three EKA mechanisms, viz. (A) consulting personal networks, (B) purchasing products or services, and (E) collaborating with value-chain partners, on SME performance must be rejected.

In chapter 6, the conclusion and discussion of the study are provided. Based on the findings of previous chapters, it summarizes and provides answers to the three RQs and to the PS. The two major *theoretical implications* of the study are as follows. *First*, the study unveils specific routines or practices under each dimension of AC. *Second*, the study highlights interrelated relations between different dimensions of AC.

The study has also two *managerial implications*. *First*, the findings of our study may help policymakers understand how SMEs deal with external knowledge and the challenges they may face, which provides fundamental knowledge for them to design policies to support SMEs' growth. *Second*, the results of our study help managers in SMEs to better deploy their AC strategy by indicating which EKA mechanisms can have positive effects on their firm performance. Potential limitations and constraints of our study are also discussed in the chapter.

Finally, chapter 6 provides three possible avenues for future studies, viz. (1) similar research could be conducted in the future by considering the limitations of this study and taking more measures to remedy them; (2) it would be interesting (2a) to investigate the same RQs, (2b) apply the same theoretical framework, and (2c) use the same research methodology to BIG firms in the future in order to be able to make comparisons between big firms and SMEs; (3) Future work can also investigate testing the impacts of other AC dimensions, such as knowledge recognition and knowledge utilization on SME performance.