

## Internet Appendix A137: SMEs

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<b>(A) Working Title</b>	Developing capabilities for innovation in small and medium enterprises		
<b>(B) Basic Research Question</b>	How do firms support innovation in an emerging economy setting through a set of connected capabilities?		
<b>(C) Key paper(s)</b>	<p>Helfat, C. E. &amp; Winter, S. G. 2011. Untangling Dynamic and Operational Capabilities: Strategy for the (N)ever-Changing World. <i>Strategic Management Journal</i>, 32(11): 1243-1250.</p> <p>Laursen, K. &amp; Foss, N. J. 2003. New HRM Practices, Complementarities, and the Impact on Innovation Performance. <i>Cambridge Journal of Economics</i>, 27(2): 243-263.</p>		
<b>(D) Motivation/Puzzle</b>	SMEs struggle with innovation, especially in emerging markets, due to both internal and external constraints. Developing capabilities can provide an important mechanism to overcome these challenges and ensure sustainability and growth by not only facilitating SMEs' ability to adapt to change within markets, but also by continuously improving innovation outputs. However, current scholars focus on the role of dynamic capabilities rather than operational capabilities such as HR practices in supporting innovation. This may be because the overall influence of HR practices on innovation output depends on a set of connected capabilities rather than a single capability, which this paper investigates.		
<b>THREE</b>			
<b>(E) Idea?</b>	<p><b>Core idea 1:</b> HR practices may help SMEs to enhance innovation performance. This is important because from a capabilities perspective, firms need to combine innovation supporting capabilities to enhance innovation performance. It is through the human capital of a firm that this combination becomes possible. Capabilities comprise of complex, distinctive and interrelated routines developed over time and are the result of past learning efforts and experiences that form the organisational memory. HR practices can improve a range of firm capabilities (especially dynamic capabilities) that contribute to overall innovation performance.</p> <p><b>Core idea 2:</b> Dynamic capabilities enable firms to change the way they do business, resulting in the introduction of innovation. However, dynamic capabilities do not work in isolation. These type of capabilities also need operational capabilities to contribute to the transformation of innovative ideas to innovation output (of which operational capabilities are both mediators and moderators). Firstly, firms require operational capabilities to transform all their ideas in connection with dynamic capabilities during the innovation process into real innovation outputs. Operational capabilities enable firms to produce goods or services with certain specifications meeting the preferences of customers, contributing to the success of innovation introduction. Secondly, acquiring strong operational capabilities assists firms to increase the impact of dynamic capabilities on innovation. Dynamic capabilities allow firms to have capacity to sense, seize and transform business opportunities. Strong operational capabilities contribute to the improvement of current products through facilitating the design, trial and production and delivery of the new improved product.</p>		
<b>(F) Data?</b>	<p>(1) Data of manufacturing SMEs in Vietnam. (2) Around 2500 firms participated in 5 survey rounds, conducted biannually between 2005 and 2013. (3) It is a panel dataset. (4) The dataset is now available. (5) The dataset is now clean and ready to use. (6) The variables are meaningful and reliable. (7) There are not any obstacles with the dataset and access has been granted</p>		
<b>(G) Tools?</b>	<p>A number of logistic and linear regressions will be used. The STATA software is used to run these models. HR practices could improve a range of capabilities that may not be observable in the analysis. If these firms were initially better endowed with innovation capabilities, the effect of HR practices would be overstated, thus, raising concerns about endogeneity. Therefore, a number of control variables that potentially affect innovation are included in the analysis. In addition, as the development of innovation capabilities is assessed across years and industries, time - fixed effect and cross-sectional fixed effect are applied. Additionally, environmental uncertainty is calculated to avert common source bias.</p>		

<b>TWO</b>	
<b>(H) What's New?</b>	The research desires to explore the moderation role of operational capabilities in supporting innovation by investigating a unique panel dataset, which allows testing of how capabilities are developed across time to support innovation.
<b>(I) So What?</b>	In emerging economy SMEs, a lack of capital and skilled workers may result in weak operational capabilities. Thus, firms may prefer to invest in operational capabilities to quickly obtain their business targets. Additionally, HR practices could improve the range of firm capabilities (especially dynamic capabilities) that contribute to overall innovation performance. Thus, it is important to fully understand the relationship between operational capabilities (e.g. HR practices), dynamic capabilities, and innovation. By investigating the model, the research is expected to deliver recommendations for firms to choose the most relevant types of HR practices in developing innovation supporting capabilities. Moreover, it proposes capabilities that should be present to cooperate with HR practices to improve innovation.
<b>ONE</b>	
<b>(J) Contribution?</b>	<p><b><i>Theoretical contribution:</i></b></p> <ul style="list-style-type: none"> <li>– Extend innovation theory to show the connected capabilities through which innovation is supported. There are not only operational, but also dynamic capabilities that contribute to the innovation outcomes. Thus propose a new staged approach to innovation theory, indicating that the support of capabilities to innovation is dynamic over time.</li> <li>– Extend capability theory by introducing a capability staircase approach. The staircase of capabilities shows how dynamic capabilities modify and interact with operational capabilities to support innovation.</li> <li>– Develop an innovation-supporting model for SMEs in emerging economies demonstrating how capabilities contribute to innovation and the interactions between HR development practices and capabilities.</li> </ul> <p><b><i>Methodological/Empirical contribution:</i></b></p> <ul style="list-style-type: none"> <li>– Propose a longitudinal perspective facilitating a staged understanding of the influence of capability development on the innovation outcomes.</li> <li>– A longitudinal dataset of SMEs in Vietnam will supplement empirical evidence about innovation study in emerging economies.</li> </ul>
<b>(K) Other Considerations</b>	It is important to collaborate and receive feedback from academic staff at UQ Business School about the idea of new model. Collaboration with expertise and local authorities in Vietnam to review the research results to sharpen the policy implications. The research outcomes are expected to be published on top tier journals such as Industrial Marketing Management, Research Policy, Journal of Business Research, Small Business Economics, Journal of Small Business Management. Risk assessment: The generalisability of the findings (or lack thereof) is an important issue to address.