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Strategies to boost innovation performance: A study of New Zealand SMEs

Research by Hugh Whittaker, Benjamin Fath and Antje Fiedler has examined the innovation performance of New Zealand small and medium sized businesses (SMEs).** By exploring the relationship between training, collaboration and innovation performance, the researchers ask whether strategies of *training-only*, *collaboration-only*, or *combined collaboration-and-training*, lead to successful innovation performance. They defined training as formal training, as opposed to on the job learning, and collaboration as “collaboration with other organisations; including suppliers, customers, competitors, higher education or research institutes, or private research institutes/consultants”. The data came from surveys of New Zealand SMEs.

The study suggests that policy makers and businesses should look beyond traditional innovation strategies, such as R&D, and consider strategies that focus on collaboration or training, or a combination of both. The effectiveness of these strategies changes in relation to the age of the SME. For young SMEs (no more than 15 years old), *collaboration-only* strategies lead to a positive impact on innovation performance. For mature SMEs (over 15 years old), both training and collaboration strategies were important antecedents of success, suggesting a combined *training-and-collaboration* strategy should be pursued. Irrespective of SME age, no benefits were found from implementing a *training-only* strategy in isolation.

The nature of the business environment, including how dynamic and uncertain it is, has an impact on the level of innovation performance. The business environment also influences strategy choices considered by the owner-manager. More dynamic and uncertain business environments lead to higher rates of innovation. The

authors found that for high-tech SMEs collaboration-only strategies have a positive effect on their innovation performance. For non-high-tech companies, incremental innovation is more common, and therefore a combined *collaboration-and-training* strategy is the most effective pathway to successful innovation.

The characteristics of the owner-manager are also a key element in innovation performance. The professional experience and the education level of the owner-manager affected the type of innovation strategy chosen. Owner-managers with a tertiary-level education placed higher value upon formal training and were also more likely to pursue a combined *collaboration-and-training* strategy. Additionally, in young SMEs especially, previous start-up experience (involvement in two or more start-ups) of the owner-manager strongly influenced whether a *collaboration-only* strategy (the most beneficial strategy for young SMEs) was implemented.

The key take-away for SME owner-managers is to look beyond traditional strategies of innovation, such as R&D and formal training, and to consider innovation strategies based around collaboration.

**The full study results are available in an article authored by Hugh Whittaker, Benjamin Fath & Antje Fiedler: “Assembling capabilities for innovation: Evidence from New Zealand SMEs”, International Small Business Journal. Vol. 34(1), pp. 123-143. (2016)



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Collaboration only

- Most effective strategy for young SMEs (15 years and under)
- Need to raise awareness about benefits of collaboration for young SMEs (to offset misperceptions about risk of collaboration in protecting innovation)
- High-tech SMEs benefit more from collaboration than non-high-tech SMEs

Training only

- No positive effect on innovation, irrespective of SME age
- Training only contributes to innovation when it is part of a more comprehensive approach to capability development
- Training as part of a more holistic strategy is contingent on the owner-manager's level of education

Collaboration and training (combined strategy)

- Most effective strategy for mature SMEs (over 15 years)
- Combined strategy has no positive effect on young firms



Environment/industry characteristics (high-tech v non-high tech)

- Due to incremental innovation in non-high-tech industries, input of trained shop floor employees is important
- SMEs in high-tech industries often need to carry out radical innovation, therefore training not as effective

Owner-manager characteristics

- Professional background and education level of owner-manager influences strategic choices
- Owner-managers with tertiary education are more likely to pursue a training strategy
- Mature SME owner-managers with a tertiary education are more likely to engage in a combined strategy
- Young SME owner-managers with previous start-up experience are more likely to engage in a collaboration-only