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The Effectiveness of Virtual R&D Teams in SMEs: Experiences of Malaysian SMEs

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Abstract. The number of small and medium enterprises (SMEs), especially those involved with research and development (R&D) programs and employed virtual teams to create the greatest competitive advantage from limited labor are increasing. Global and localized virtual R&D teams are believed to have high potential for the growth of SMEs. Due to the fast-growing complexity of new products coupled with new emerging opportunities of virtual teams, a collaborative approach is believed to be the future trend. This research explores the effectiveness of virtuality in SMEs' virtual R&D teams. Online questionnaires were emailed to Malaysian manufacturing SMEs and 74 usable questionnaires were received, representing a 20.8 percent return rate. In order to avoid biases which may result from pre-suggested answers, a series of open-ended questions were retrieved from the experts. This study was focused on analyzing an open-ended question, whereby four main themes were extracted from the experts' recommendations regarding the effectiveness of virtual teams for the growth and performance of SMEs. The findings of this study would be useful to product design managers of SMEs in order to realize the key advantages and significance of virtual R&D teams during the new product development (NPD) process. This is turn, leads to increased effectiveness in new product development's procedure.

Keywords: Virtual Teams, New Product Development, Survey Finding, Small and Medium Enterprises.

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Small and medium-sized enterprises (SMEs) are major contributors for industrial economies (Eikebrokk and Olsen, 2007). The significance of SMEs in economic growth has rendered SMEs a central element in much recent policymaking (Hoffman *et al*., 1998). SMEs appear to be appropriate units as network nodes due to their lean structures, adaptability to market evolution, active involvement of versatile human resources, ability to establish subcontracting relations and good technological level of their products (Mezgar *et al*., 2000). SMEs possess advantages with regards to flexibility, reaction time and innovation capacity, and therefore SMEs play a major role in the new economy (Raymond and Croteau, 2006). Gassmann and Keupp (2007) found that managers of SMEs should invest less in tangible assets and more in areas which would directly enhance their future competitive advantage such as R&D, which would generate knowledge, as well as in their employees' creativity to stimulate incremental innovations in existing technologies. A crucial trend for enabling the creation and transfer of new

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