

and Goldmark (2009) consider SMEs in less developed countries with the characteristics of owners, such as an education level, prior work experience, and gender as critical aspects in their management decision as well as firm characteristics, such as size, age, and formality. Sector and location matter for local SMEs because the physical distance to customers influences their operations. For the third issue, strategy, Schmitz (1982) focuses on the technology gap between large enterprises and local SMEs. Tybout (2000) and Wolff and Pett (2006) further study the positive influence of product development and process improvement.

To examine the impacts of the above variables, I used data of the Indonesian local SMEs from a survey to collect data on sales revenue by product item and costs. Gross profit was calculated from the above data. In addition, questions related to firm characteristics were posed to the respondents. The enterprises targeted by our survey are those that participated in the management skill and production technology training.

3. Discussions

In Chapter III, I discussed critical factors for the profit growth of low-technology SMEs. Based on the results of a linear regression estimation, operations aimed at the quality improvement of existing products and reductions in unit raw material costs had significant effects on gross profit growth. The estimation results did not show the effects of firm characteristics. However, the results confirm the influence of SME operations. For SMEs with relatively low-technologies, efforts to develop products had positive results. Such actions induced the modification of production processes that eventually led to reductions in unit raw material costs.

In Chapter IV, I discussed the expansion of sales markets by SMEs. The study considers different stages of domestic and foreign markets. As a result of a multinomial logistic estimation, the critical factors required to enter new markets differ based on the geographical distance between existing and new markets. A factor that has an effect is the productivity needed to reach the markets within a home province when an SME sells its products only in the home region or city where it is located. Firms that are able to achieve such a productivity level can pursue further market levels, country-wide markets and foreign markets. The existence of business partners that understand new markets is also important to the pursuit of wider markets according to the results of an ordered logistic estimation, although the effect of business partners is not consistently significant based on the results of a multinomial logistic estimation. Moreover, the penetration of markets beyond the home province requires a firm to have a certain size because greater resources are necessary to distribute products over a long distance and to conduct other operations.

In Chapter V, I discussed the characteristics and operations of SMEs that were able to

increase their net sales during the global economic crisis of 2008-2009. The results from a probit estimation indicate that the Java firms were more disadvantaged; this trend did not change even when they had diversified their domestic markets by entering markets on islands other than Java. Increases in revenue were facilitated by improving the quality of existing products, but not by selling products at lower prices. Cheaper, lower-quality products were not demanded by the majority of consumers in Indonesia during the economic turbulence of 2008. Consumers demanded better-quality domestic products when substituting imported goods during the global economic crisis. This new type of consumer import substitution was induced because foreign enterprises could not continue exporting their products to Indonesia. Moreover, successful exporters attempted to develop new products with new investments in facilities or equipment, even during the period in which exporting was not advisable. However, such risky decisions did not always work well for exporters.

In Chapter VI, I discussed the factors underlying revenue increases by SMEs in another middle-income ASEAN country, Vietnam. The critical factor was determined to be new product development for domestic market customers. New production machines with higher specifications assumed an essential role in such operations. Owners' prior experience in similar fields also positively contributed to reducing the risks of investing in new production machines. A common finding in comparing Indonesia with Vietnam is that local markets have not been sufficiently penetrated in either country. Thus, SMEs still have opportunities in local markets. Product development-related operations also have positive effects in both countries. However, a difference was observed in the estimation results of the two countries in terms of introducing new production machines. Indonesian firms did not require substantial investment in new machines, as it was possible for them to develop products without large new investment. Even in the case of Vietnamese SMEs, successful firms operate in domestic markets; however, investments in new production machines were important for Vietnamese SMEs.

The results of this study indicate that the conditions under which low-technology SMEs may have an advantage in developing their businesses include strategies according to the classic management theory frameworks by Ansoff (1965) and Porter (1980).

4. Policy recommendation and conclusion

For relatively low-technology SMEs in Indonesia, product development efforts have positive outcomes for growth. Such actions also induce the modification of production processes that eventually lead to reductions in unit raw material costs. The results of this study also imply that the target of support measures can be decided based not only on firm size but on the markets SMEs already reached. The existence of business partners that understand new markets is

important to the pursuit of wider markets beyond a firm's home provinces. Business matching opportunities that connect firms in different areas are effective. However, the selection of participants for such a matching programme should be conducted cautiously because positive results are expected only for firms that operate beyond their local district-level markets. The penetration of markets beyond an SME's home province also requires a firm to have a certain size because greater resources are necessary for operations in distant markets. It is not easy for small, low-technology firms to expand their size and capacity within a short period. Therefore, the promotion of clustering with other firms is a possible support measure.

Finally, I have to admit that this dissertation has limitations. The results are also conditional on the extent to which the sample reflects the characteristics of the Indonesian and Vietnamese SMEs. Thus, the results should be interpreted with caution.

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