

# The choice between standard and non-standard FDI production strategies for Taiwanese multinationals

Most of the existing literature on FDI roughly divides multinational activities into two broad forms: standard vertical integration and horizontal integration. However, the production strategy of MNEs is more complex in practice. This study further classifies the production strategies of MNEs into five types (i.e., two standard and three non-standard FDI production strategies): standard vertical integration (V1), foreign concentration (V2), home concentration (V3), standard horizontal integration (H1), and heterogeneous horizontal integration (H2). This division provides more insightful implications for decisions based on the production strategies of MNEs in FDI. We then propose hypotheses addressing the role of country-level, industry-level and firm-level variables in affecting the choices between various FDI strategies.

Based on a firm-level data set of Taiwanese MNEs during the 2004–2007 period, the three sets of proposed hypotheses are, in general, supported. The main findings can be summarized as follows. First, comparing typical vertical integration (V1) with horizontal integration (H1), we find that foreign market size has a positive effect on the probability of adopting the H1 FDI strategy. This finding is consistent with most of the existing literature. In addition, we also find that the length of the overseas investment positively affects the prob-

ability of engaging in strategy H1 because “localization” enables foreign subsidiaries to be independent of their parent firms and then to produce and sell overseas. The study confirms that firm size, R&D intensity, and the export ratio have significantly positive effects on the probability of adopting V1. Our empirical results, however, show that the length of the overseas investment has a negative but insignificant effect on the probability of adopting strategy H1.

Second, we conduct a comparison between three pairs of vertical multinational strategies, i.e., vertical integration (V1) vs. foreign concentration (V2), vertical integration (V1) vs. home concentration (V3), and foreign concentration (V2) vs. home concentration (V3). The years of overseas investment experience were found to have a negative impact on the probability of engaging in V3 rather than either V1 or V2 and to have a positive impact on the probability of undertaking V2 compared with V3. This finding implies that years of overseas experience helps the formation of multinational activity V2. In addition, firm size exhibits a negative impact on the probability of undertaking V3, while R&D intensity exerts a positive impact on the selection of V3. It is intuitive to confirm that the foreign wage rate positively affects the probability of engaging in V3 compared to either V1 or V2.

Finally, this study investigates the choice between horizontal integration (H1) and heterogeneous horizontal integration (H2). Firm size is important when economies of scale can be achieved by engaging in product differentiation (Cooper and Kaplan, 1991). We argue that a larger sized firm will have a higher probability of adopting FDI strategy H2, and the empirical results support this argument. We also observe that high-tech firms tend to have a higher probability of choosing H1 over H2, confirming that firms with a specific asset, attribute or intellectual property right tend to produce some sort of exclusive products. However, foreign market size was found to have a negative impact on the probability of choosing H2. Since both strategies involve selling and producing overseas, the foreign market size and wage rate may have no crucial impact on the decision between H1 and H2 in the case of a multinational firm.

Note that the classified vertical production strategies, V1 (typical vertical integration), V2 (foreign concentration) and V3 (home concentration), implicitly indicate different stages of production and different locations. The production stages are dynamic across the three product stages: new product, maturing product and standardized product (Vernon, 1966 and Vernon, 1979). During the new product stage, production activities are

concentrated in the home country (i.e., V3, home concentration), as at this point, the producer needs more flexibility to handle the considerable amount of uncertainty in producing the new product. Production at home can offer the producer higher flexibility. Such a decision is beyond the simple factor cost plus transportation cost. In the maturing product stage, the factor cost is taken into account. To efficiently utilize and allocate resources, the producer will move the production stage that offers a lower comparative advantage in the process (e.g., the labor-intensive activity) to other countries (i.e., V1, vertical integration). As the product is standardized, the producer might move all of the production activities out of the home country (i.e., V2, foreign concentration).

As far as the governmental authority of the home country is concerned, the least desirable scenario might be concentrated foreign production, as it implies the “hollowing out” of the industry or “deindustrialization”. To retain core and value-added production activities in the home country, our study suggests that instead of prohibiting or regulating outward capital movement, the governmental authority should encourage domestic firms to dedicate more resources to innovation activities, which can help them to level up technology, differentiate products and hence maintain their competitive advantage.

#### Reference

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