

CHAPTER 5

CONCLUSION

5.1 Summary of the study

This study aims to investigate the impact of exchange rate changes on manufacturing firm's investment by using the firm-level panel industrial survey data collected from Ministry of Industry during 2001-2005. We employ the pooled panel regression model by using the generalized least square estimator to estimate coefficients in the model.

Theoretically, exchange rate changes will pass-through its effect to domestic market prices, export prices, and imported input prices. In this study, we explicitly separate the channel that exchange rates would link to cause the impact on investment. The channels of exchange rate exposure are domestic channel, export channel, and imported input channel. In general, home currency depreciation would have negative impact on investment through the domestic market (wealth effect channel). A depreciation lowers the purchasing power of producers, and results in a decrease in investment. On the contrary, depreciation of exchange rates has a positive impact on investment through the export exposure channel. Currency depreciation enhances the international competitiveness which helps increase export revenue, the marginal profitability, and the firm's investment. However, a depreciation of exchange rates has a negative impact on investment through the imported input price. A rise in imported cost induced by home currency depreciation decreases the marginal profitability and investment.

The responsiveness of investment to exchange rates is a country-specific phenomenon. The result that we found for the manufacturing firms in Thailand is that a depreciation in exchange rates has a negative effect on investment through the wealth effect of exchange rates, and a positive effect through the export exposure and imported input exposure. The positive effect through imported input channel suggests that a depreciation does not decrease a firm's investment through this channel.

Instead, investment is stimulated by an increase in imported input cost induced by a depreciation. This phenomenon is inferred to the characteristic of Thai manufacturing firms that is export-led growth with reliance more on imported input in the production. Once investment is stimulated by export expansion induced by exchange rate depreciation, the imported inputs are utilized more in the production. However, the effect of exchange rates on investment is found to decrease with the degree of markup. Firms with high markup will absorb much of the effect of exchange rate movement in the markup, and pass little effect to investment.

The estimation in this study suggests that the most important channel for exchange rate effects is the domestic channel since the coefficient of the wealth effect of exchange rates is statistically significant in all regressions. This finding is consistent with the sample data where domestic market is overwhelmingly oriented. Moreover, the negative effect from this channel overcomes the positive effect from the trade exposure. On average, the impact of a 10 percent depreciation lowers investment by 0.5 percent. Furthermore, we found that the effect of exchange rate changes on firm's investment is small since the absolute size of exchange rate coefficients is obviously trivial. This implies the small contribution of exchange rates on investment. This is consistent with the suggestion that in many developing countries, the pass-through effect of exchange rates is small. Evidence from, for example, Chitpokasem (2007), found the exchange rates pass-through into consumer price index in Thailand. He found that the pass-through in domestic prices is incomplete and pretty low. Chantasakda (2008) found that the exchange rate of THB/USD has limited impact on export prices. Export prices are likely to be stable in foreign currency when exchange rates vary. Exporters, however, have to experience varying markups when the exchange rates fluctuate. If this is the case, a firm's profit and investment are considered to have less impact from exchange rates.

Consistent with the theoretical framework, we empirically found that the effect of exchange rate changes on firm's investment is stronger for firms with low markup price. Investment in industries with high markup, namely, non-metallic industry, metal industry, and machinery and equipment industry, is also insignificant with exchange rate changes. Industries with high export share, namely, food industry,

textile industry, wood and furniture industry, and machinery and equipment industry, show positive significant effect of exchange rates on investment. The lack of variability of imported input data, the effect of exchange rates on investment through imported input channel is insignificant in most of every industry. However, the negative from wealth effect seems to dominate other two positive effects. We thereby found the negative effect of exchange rate on investment in every industry.

There is important difference investment behavior in response to exchange rate changes across firms' ownership and firm's size. The result reveals that the effect of exchange rate changes on firm's investment is intensified in small-sized Thai firms.

5.2 Policy implication

Exchange rate policy seems to have costs and benefits to all manufacturing firms. Exchange rate depreciation has benefits for exporters but drawbacks for importers. There is always a situation where there is a winner or loser from movement in exchange rates. On one hand, it stimulates investment in export-oriented industry. On the other hand, it might reduce investment in domestic-oriented one. Therefore, exchange rate policy should be neutral. In addition, since the transmission of exchange rate to investment is weak, exchange rates might not be the best tool in determining investment.

Moreover, government should give more attention to a firm with low price-cost markup, small-size, and Thai-owned, because investment of these firms are more affected by exchange rate changes, especially for the case that the negative effect on investment induced by a depreciation is significant. Exchange rate depreciation may reduce the potential investment growth for these firms.

The other attention could be on a promotion for the use of financial derivatives to help against exchange rate risks. Firms themselves should diversify exchange rate risks by, for example, importing input from a number of suppliers, and selling in dispersed consumer market. Moreover, exchange rate changes hinder the availability of internal funds as the firm's profit depends on the movement in

exchange rates. The accessibility of external fund, which compensates for the reliance on internal funds, becomes the factor to encourage the investment expansion. Government should facilitate firms to easily acquire external finance in order to promote investment. Moreover, our result shows that depreciation is likely to decrease manufacturing investment activity by lowering income and wealth of an investor. Therefore, government should have an eye for exchange rates not to over-depreciate to discourage investment.

5.3 Limitation and suggestion

The major limitation of this study is the industrial survey by Ministry of Industry. As it is an annual survey, not forced by law, asking firms to answer the questionnaire without the requirement of any evidence, the accuracy of the data is of concerned. However, this survey is at least the best available for an annual industrial data in firm-level that we could get. Beside, the data we have acquired lasted only 5 years which might be too short to investigate the exchange rates' effect. More data with longer time period is required so as to inspect the relationship of exchange rate changes on firm's investment in the long run.

Due to the ownership classification, the survey does not provide information that conveys the corporate control of each firm so the study on ownership is still unclear. In addition, the effect of exchange rates on investment through export and imported input channels may underestimate. Lacking the data of activities that concern with the indirect export and imported input involvement, we reckon only the effect by examining the direct export sales and imported input cost. However, the observation in our sample data may not be good representatives of the firms in the whole manufacturing sector. The implication on our estimated results to the whole sector is restricted.

Moreover, the results of the effect of exchange rates on firm's investment are studied under the period of baht appreciation over the year of 2001-2005; the response of investors in the period of depreciation might not be perfectly similar to

the period of appreciation. Therefore interpretation of the effect of exchange on investment should be awareness under two circumstances.

With these limitations, this study may be treated as the beginning stage to investigate the impact of exchange rate changes on firm's investment. The mistake of this study is hoped to be corrected and taken as a lesson in further study to help generate the right contribution of the relationship of exchange rates and investment.