# Networking, Market Transition and Barriers to Entry: Export by Vietnam Private Firms

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Abstract: Ethnic networks are important for cross-border economic activities. Ethnic Chinese are well known for their active participation in international trade, particularly in Southeast Asia. Our empirical study of Vietnam private firms show that Chinese businesses have played important role in Vietnam's export growth after economic reform started in the country more than a decade ago. In addition, we find that, private firms with strong ties with state owned enterprises are in a better position in going abroad. This is because the reform in Vietnam has not substantially weakened the dominance of the state sector in the economy. Finally, our analysis identifies some elements that demonstrate higher initial cost for export. This suggests that there is substantial entry cost in export market. The firms' export behaviors are consistent with the assumption of entry barrier to export.

## 1. Introduction

Export success is important for poor countries pursuing growth and development. Export can earns foreign currency to pay for importing new and advanced machines, as well as other important intermediate goods. Export also brings about other dynamic gains. Trade promotes competition among domestic companies as well as between domestic and foreign producers. Intense market competition will in turn encourage high efficiency and more technology transfer, which will benefit the economy's long-term performance.

Studies have suggested that there are significant barriers to entering export market. The reason is that firms have much less information regarding foreign market relative to domestic market, such as consumer preferences, regulatory environment, and the location of potential buyers. To export, firms must incur initial expenditure to familiarize themselves with the new market. They may also need to alter their product to meet specific consumer preferences. These investments, once committed, may not be readily useful for domestic market if the firm exit export market. The existence of entry barrier suggests that firms with

past export experience or those currently exporting are much more likely to export in the following period.

The problem of entry barrier to export is particularly serious for a transitional economy like Vietnam. First, the country has long been isolated from international commercial trade for years. Second, the economy has been under years of Soviet-style central planning system, more than 30 years in the North and more than 10 years in the South. As a result, businesses and other economic institutions lack experience in a market oriented economic environment. There was also little room for entrepreneurship under the central planning regime. In addition, the economic relations with the US, which has the largest export market for many low-income developing countries, only began to improve recently.

Although facing various obstacles, Vietnam has achieved remarkable growth in export since the economic reform started in the late 1980s. A general question is how Vietnam accomplishes its export success. Our empirical analysis in this paper intends to shed some light on the question. We ask three relevant questions regarding export activities of Vietnam private firms. First, assuming there are substantial entry costs for export, the most important question is what factors help private firms in Vietnam to export. Then, we examine firm activities to see if they are consistent with the assumption that substantial entry costs exist for export. Finally, we identify some elements that demonstrate the existence of export entry barriers for Vietnam firms.

Our study analyzes the export behavior of some 250 private firms in the two largest Vietnamese cities, Hanoi in the North and Ho Chi Mihn City (HCM City) in the South. Our investigation suggests that two factors are important for private firms to penetrate international markets: ethnic based networking and a strong connection with the dominant state. Our survey also indicates that there are substantial entry costs for export and we further identify some elements supporting the assumption of entry barriers for export.

In the next section, we briefly introduce the economic reform and export growth in Vietnam. In section 3, we empirically analyze the export activities of Vietnam private firms. Section 4 provides some concluding remarks.

## 2. Economic reform and export in Vietnam

Vietnam is one of the poorest countries in the world. In 1999, Vietnam's gross national income per capita is US$ 370, ranked 170th in the world (World Bank, 2001)[1]. After Ho Chi Mihn proclaimed Vietnam an independent nation in 1954, North Vietnam followed an orthodox Soviet style industrialization strategy. When the country was finally united in 1975, the market economy of the south was also subordinated to the socialist planned economy of the north. The command-style economy allows very limited private sector activity and isolates the country from the high-growth East Asian economies. The disappointing results of this strategy gradually provoked a rethink and formally set the country on the course of *doi moi* (reform) in 1986. The economic reform involves a shift from a centrally planned to a market economy, and subsequently opening the economy to international trade and investment.

Since the early 1980s, especially after the reform, Vietnam has made impressive progress in trade. Table 1 summarizes Vietnam's figures in trade and inward foreign direct investment. In 1980, Vietnam exports little to the outside, 340 million dollars in total. It represent about 0.02% of the world's total export and 0.11% of export from Asia. In 1995, the total export amount to 5.45 billion dollars, an increase of more than 15 times from a very low base. That amount represents 0.11% and 0.42% of world and the Asian total export, respectively. We should note that during the same period, export from Asia has also increased dramatically. Vietnam has also attracted an increasing amount of foreign direct investment in the period. The stock of inward FDI in Vietnam increased from 7 million in 1980 to 15 billion in 1999. Its share in the world total FDI increase from close to zero to 0.31% and its share in the total FDI in the Asia increases from a 0.01% to 1.8%.

Vietnam's growing integration with the rest of the world has been achieved through more intensive economic relations with the neighboring economies, including ASEAN countries and the three Chinese economies, mainland China, Hong Kong and Taiwan. Before the 1990s, Vietnam's external economic relations were predominantly with members of CMEA. Japan, Singapore, Hong Kong, France, and the Korea had been Vietnam's largest trading partners outside the CMEA. Since the late 1990s, a number of other ASEAN countries, including Indonesia, Thailand, and Malaysia, have stepped up their trade relations with Vietnam. In July 1995, Vietnam became a full member of Association of South-east

[1] When PPP (purchasing power parity) gross national income per capita is used for comparison, Vietnam is ranked number 159.

Asian Nations (ASEAN). Official trade relations with the People's Republic of China, cut off in 1979, have also been resumed. In additional, Taiwan has played an important role in Vietnam's efforts of developing more external economic relations.

Table 2 summarizes Vietnam's trade relations with its major trading partners. In 1980, the five largest markets for Vietnam's export are Japan, Hong Kong, Singapore, Poland and Former Czechoslovak. In 1995, Japan, Hong Kong and Singapore are still among the top five. Poland and Former Czechoslovak are replaced by Taiwan and mainland China. There is a similar pattern for the import side. In 1980, the top five original countries for Vietnam's import are Japan, India, United Kingdom, France, and Singapore. In 1995, only Japan and Singapore stay among the top five, the other three are Korea, Taiwan and Thailand. The figures show that Vietnam's trade expansion is coupled with its closer economic relation with some Asian and Southeast Asian economies, especially with some Chinese economies. This suggests that Chinese and Chinese businesses have played an important role in Vietnam's increasing interactions with the outside world.

One distinct feature in Vietnam's economic transition is that, during the reform, the dominance of the state sector has been maintained and even strengthened. State enterprises still control key industries. According to the Economic Intelligence Unit (EIU), until 1993 the state-owned sector was the fastest-growing part of industry, and then accounted for 72% of industrial output. State-owned enterprises have a number of advantages over non-state enterprises, even after the economic reform started. For example, most state enterprises have easier access to credit, often without collateral. They can easily obtain land-use rights, which are among the most valued contributions that a Vietnamese partner can provide to a joint venture. State-owned firms are favored for government contracts, and for trade and other licenses. On the other hand, the non-state manufacturing sector is very important in total employment, four times as many as the state sector, despite its smaller contribution to GDP.

The number of state owned enterprises is quite small. In the 1990, there are more than only 500 centrally run state enterprises but they account for more than half of the country's total industrial output. There are additionally 2000 or so locally managed state enterprises, account for another 25% of total industrial output (EIU 1996). Table 3 summarizes the position of state enterprises state in various industries. In electricity and fuel industries, the shares of state sector are close to 100%. In ferrous metallurgy and non-ferrous metallurgy, the shares of the state industry are 92% and 87% respectively. State enterprises also play dominant roles in many other important industries such as electric and electronic products,

chemical products, fertilizers and rubber, cellulose and paper, textile, and printing. In addition, the table also suggests that the position of state enterprises has actually been strengthened between 1990 and 1995.

In external sector, the state trading companies controls most of the country's trade. In 1990, state trading companies subordinating to central government manage more than 70% of total export and 80% of total import[2] (Table 4). The rest are managed through local trading companies, most of which are probably also owned by the state. In 1994, the importance of central trading companies falls to about 50% in export management and 60% in import management. Nevertheless, the role of state trading companies is still dominant in the economy.

While the state sector has a leading in the national economy, its importance varies in different parts of the country. The basic reason is the different economic dynamics that the north and the south have experienced over the years. In the capital city of Hanoi, state enterprises have a much larger presence as the economy had been under the state planning system for much longer period. In the south on the other hand, HCM city had only been subject to the central planning for about one dozen years. Therefore there are much less presence of the state sector. In addition, market-oriented business activities have never been totally driven out during the short period of government control. Therefore, there are relatively more market activities on the go and the economic institutions are more business friendly.

Table 5 compares the composition of the state and non-state industrial output in the country and in the two cities. As we stated earlier, state enterprises maintained their dominance during the reform. Their share in total industrial output increased from 69% in 1991 to 72% in 1994. In Hanoi, the share of state enterprises is much higher than the national average, though it has decreased slightly. In 1991 and 1994, the state enterprises account for 85% and 84% of the city's total industrial output. Compared to Hanoi, HCM city is a much bigger industrial city, account for more than a quarter of Vietnam's total industrial output. The share of state enterprises in industrial output in HCM city is much smaller than that in Hanoi. It is nevertheless a main force in industry. In 1991 and in 1994, state enterprises account for 68% and 67% of the city's total industrial output.

[2] Excluding businesses with foreign direct investment.

We mentioned earlier that Vietnam's export expansion is coupled with its closer economic relations with neighboring countries and other primarily Chinese economies. We know that Chinese and Chinese businesses are active players in the region's economy. In Vietnam, as in many other Southeast Asian economies, Chinese and Chinese businesses have played an important role in the economy and in its external economic relations. Chinese business is an important element in the economy, particularly in the south. However, as the country going through years of wars, Chinese businesses have experienced many ups and downs.

Even before the French colony, Chinese have been working in mining in Vietnam, paying rent to the Vietnamese Kingdom. During the French colonial, Chinese were banned from certain industries such as mining. They nevertheless become important traders of coal, rubber and rice for both domestic and foreign market. For example, one district in the suburb of Saigon (HCM city) was the center for the trade and process of rice and Chinese owns 2/3 of all the rice mills before World War II. After World War II, Vietnam was separated into two parts, the North and the South. On the other hand, there is few Chinese in the north and after the war, many Chinese went to the South. As a result, there are not many Chinese businesses in the North. In the South, although the government once banned Chinese from certain businesses[3], Chinese business have developed and become an important part of the economy.

After 1975 when the North unified Vietnam and started economic transformation in the South into a central planning system. Chinese lost their businesses and many had left Vietnam. Before 1975, Chinese made up about 0.4% of total population in the north and 6.2% in the south. In 1992, there are about 1.9 million Chinese in Vietnam, accounting for about 2.7% of total population (Nyaw 1993). Chinese businesses began to recover after the economic reform started in late 1986. One survey conducted in early 90s suggested that Chinese businesses account for 2/3 of small industrial enterprises and 1/3 of small retailers in HCM city. Chinese who left the country also sent into large amount of remittances. The estimated about $500 million or more annually are mainly originated with the overseas Chinese.

[3] The 53 decree by the Southern government in 1956 ban foreigners from 11 businesses such as fish and meat trade, rice mills, transportation, and so on.

## 3. Empirical analysis of export behavior

In this section, we will empirically examine firms' export behavior in Vietnam. First, we give a brief description of the firms under discussion. Then, we use multivariate analysis to study the relevance of some factors related to firms' export. Such factors include firms' ethnic networking and connection with the state sector. We will also examine firms' export activity to see if they are consistent with the assumption that firms have to overcome substantial entry barrier before they start export and to identify some elements that demonstrate their existence of these entry costs.

### 3.1. Data description

The sample used in this study includes 249 private industrial establishments in Hanoi and in HCM city[4]. Private sector is in general rather young. The majority of the firms (close to 80%) started private operation after 1986 and more than half were set up during the 1992-1994 period. The firms are categorized into 9 industry groups[5]. More than one fifth of the firms are under the category "chemical products and other miscellaneous". The next three industries that have the most firms are (See Table 6): 1. Clothes, garments, footwear, and leather goods (18%); 2. Wood products and parts (13%); and 3. Metal products and parts (12%). Table 6 also indicates that more than a quarter of the samples firms are involved in export activities. In particular, firms in highly labor-intensive industries, such as handicrafts and art, wood products and parts, and clothes, garments, footwear, and leather goods, are the most export-oriented.

The survey includes a firm's basic operational variables such as its ownership composition, its business relations with state enterprises, its total sales and so on. In addition, the surveys also include specific questions regarding a firm's business dealings with its first and newest customer. We know, for example, whether a firm's first customer (or newest) is a foreign buyer or a domestic buyer.[6] Table 7 summarizes some basic characteristics of the sample firms. First, the sample consists of a large number of small firms[7]. Although the average number of employees is 52, about half of the firms have less than 30 employees. Second, while firms in the two cites have about the same number of employees, those in

[4] The sample includes 149 firms are in Hanoi and 110 are in HCM city.
[5] A more detailed description of the survey can be found in the appendix.
[6] A more detailed description of the survey and the relevant questions used in compiling the data set for empirical analysis can be found in the appendix.
[7] There are a few firms significantly larger than the rest of the sample. For example, there are 10 firms that each has 200 or more employees. For the rest of the firms, the average employment is only 44.

HCM city seem to have larger sales on average. Statistical test suggests that the difference between the two groups is not significant as there are large variations within each group. The large variations probably resulted from the differences between the two cities in industry composition. For example, in HCM city, there are relatively more firms in electrical machinery, chemical products and other miscellaneous. Third, Vietnam's private firms are mostly family owned business. This is particularly true for those in HCM city. Over 40 per cent of all sample firms are wholly family owned, the figures for Hanoi and HCM city are 37 per cent and 45 per cent respectively.

Though mostly small family owned businesses, a substantial portion of the private firms in the sample is involved in trade activities. As mentioned earlier, more than a quarter of the firms export at least part of their output. In addition, over one fifth of the firms use import materials. There is again difference between firms in the two cities. Firms in HCM city are more likely to participate in import and export than those in Hanoi. In HCM city, nearly a third of all the firms export and more than 40 per cent of the firms import. In Hanoi, on the other hand, about one quarter of the all the firms export, but only about 5 per cent of them import.

Table 7 also suggests that private firms in Vietnam have extensive business associations with the state industrial sector, especially for firms in Hanoi. For example, a third of the private firms in Hanoi have bought equipment formerly owned by state-owned enterprises and two-third of them have some equipment formerly owned by state-owned enterprises. In HCM city, the figures are much lower, 14 per cent for both statistics. State owned enterprises are also important buyers for private firms. In Hanoi, nearly two third of the firms sell at least part of their output to SOE customers. The average share SOE sale is 40 per cent. In HCM city, the figures are 27% and 11% respectively, much smaller than firms in Hanoi but still quite substantial. The table also shows that some of the firms' SOE customers are state trading companies. In Hanoi, 28% of the firms sell their product to these trading companies. In HCM city, on the other hand, only 6% of the firms sell through state trading companies. This is consistent with the overall national picture that state enterprises play a dominant role in external trade, especially in the North.

The survey also provides information regarding a firm's top manager, including his/her education level, work experience, and possibly ethnic background. First, the state sector is the primary source for the managers in private businesses. For example, more than half of the managers worked in a state owned enterprises before. The percentage is higher in

Hanoi (62%) than in HCM city (44%). The managers also have rather high level of education. About 69 per cent of all the managers have college education or higher and 43 percent speak English[8]. On average, the managers are about 47 years of age. Between the two cities, managers in HCM city are more likely to have higher education and much more likely to speak English or some other foreign languages. Managers in HCM city are also slightly younger, on average. In addition, about 18 per cent of all the managers speak Chinese.[9] There is again a significant difference between the two cites. In HCM city, more than a third of the managers in the sample firms speak Chinese. In Hanoi, on the other hand, only 5% of the managers do so. This is again consistent with the fact that ethnic Chinese in Vietnam are most concentrated in the South, especially in HCM city.

The overall sample description is consistent with our early discussions regarding economic transition in Vietnam. Private firms are actively involved in international trade, they depend heavily on state enterprises, especially in Hanoi, and ethnic Chinese are active market participants, especially in HCM city. In the next section, we will relate the firms' export activities to the firms' various characteristics. In particular, we study the importance of two factors in relation to a firm's export behavior, ethnic Chinese networking and connections to the state sector.

3.2. Ethnic Chinese networking and SOE connection

Studies have indicated that there are considerable entry costs associated with export. Firms in Vietnam, like in other countries, will face entry barriers in their effort to export. In addition, private businesses in Vietnam will encounter various additional obstacles in their pursuit to export. For example, external trade is traditionally and still dominated by the state sector. Export licenses are tightly controlled by state agencies and are only open to private businesses recently. An alternative to trade through state trading companies is by forming joint ventures with foreign entities. This has been successfully used by many firms in the Southeast region of China. However, private firms in Vietnam are in disadvantage in forming joint ventures with foreign firms relative to state owned enterprises. One of the important

[8] 50 per cent of the managers speak some foreign language such as English, French, German, Japanese, Korean, and Russian. For the purpose of this study, we treat a manager's ability to speak Chinese as an indication of his/her ethnic group, but not a signal of language skill. It is possible that a non-Chinese would learn to speak Chinese as a mean to facilitate businesses. We assume that this is not a common occurrence.

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reasons is that it is much harder for private firm to acquire land use permit that is the most important input in forming foreign joint ventures.

Despite the difficulties faced by the private firms, export from Vietnam has grown impressively in recent years. This is also evident among our sample firms as more than a quarter of them export at least part of their output. The question now is how these firms succeed in breaking into the global market. Traditional trade theories suggest various factors associated with export. For example, exporting firms tend to be larger and more productive. In this study, we focus on two factors that we believe to have played important roles in lowering the entry barriers to export for Vietnam's private firms. First, we believe that ethnic connection with oversea Chinese networks facilitates export from Vietnam private firms. Second, having a strong connection with the state sector is also thought to help firms to export.

Theoretical as well as empirical studies suggest that ethnic networking, as one form of business networking activities, are important in facilitating international trade and investment. The underlining rational is that networking helps lower transaction cost and alleviate the incomplete information problem in international trade. Among various ethnic groups, ethnic Chinese is well known for their active participation in cross border businesses. This is especially true in Southeast Asia. In addition, Chinese and Chinese businesses have also played important roles in the economies of their resident counties. Empirical studies have demonstrated that ethnic Chinese networking is important in facilitating trade and foreign direct investment between countries (e.g. Rauch 1999, Tong 2001).

Based on the above discussion, we would like to see if ethnic Chinese in Vietnam has play any significant role in the country's export success. In particular, we want to examine whether ethnic Chinese businesses are more likely to be involved in export than other private firms. Connections with oversea Chinese businesses may help Chinese businesses in Vietnam to export. Oversea Chinese can provide information regarding potential export opportunities to Chinese businesses in Vietnam. They can also act as traders or buyers themselves. The question we use to construct a variable for ethnic Chinese networking is "whether a firm's top manager speaks Chinese". Here we made two underlining assumptions. First, we assume that a firm is a Chinese business when the top manager speaks Chinese. Given that the majority of the sample firms are small family owned businesses, we think the assumption is relatively suitable. The second assumption is that a Chinese business is on average more likely to be involved in networking activities. Compared to other ethnic groups, ethnic

Chinese networks in Southeast Asia are more intense and more active. Therefore, we believe the second assumption is also reasonable.

Another factor we will examine is a firm's relationship with state enterprises. This is based on the consideration that the state sector in Vietnam is the dominant force in trade. Therefore, a strong tie with the state sector can serve to lower the entry barrier in export. For example, a good connection with the state sector may make it easier for the firm to acquire export quota and other required government licenses. The question we use to construct a variable for "strong SOE tie" is whether a firm's top manager has management experience in a state owned enterprise. The underlining assumption is that one such person would have built some business relations and personal friendship with government officials as well as managers in other state owned enterprises.

In addition to the two aspects we just discussed, there are a school of other factors that might be relevant to a firm's export. Unfortunately, we are only able to examine a few other elements that might be important for export. These factors include the top manager's age, education level, language skill, etc. Next, we will construct an empirical model and use multivariate regressions to estimate the equation. In particular, we will test two hypotheses. The first hypothesis is that Chinese businesses are more likely to export, as they are more likely to be involved in networking activities. The second hypothesis is that firms with strong SOE ties are more likely to export. The empirical equation is represented as the following:

$$Y_i = \alpha + \beta_1 CHINESE_i + \beta_2 SOE_i + \boldsymbol{\gamma}\mathbf{X}_i + \varepsilon_i \qquad (1)$$

Where Y is one of the five measures of a firm's export activity: FC, FFC, FNC, EXPORTER, and %EXPORT (please see box 1 for explanations of the variables). X is a set of control variables and some additional characteristics that may related to a firm's export. Box 1 lists all the variables and their explanations. The null hypothesis is that either $\beta_1$ or $\beta_2$ (or both) is zero.

The regression results are summarized in two tables. In Table 8, the dependent variables are dummy variables indicating whether a customer is foreign or domestic. In Table 9, the dependent variable is either a dummy variable of whether a firm exports or a percentage of a firm's export in total sale. We will first examine the results in Table 8. In the first set of regressions, the dependent variable is a binary variable corresponding to the questions "whether a customer is foreign". In these regressions, a firm's first and newest

customer enters the regression separately (as two observations). The first column includes firms from both cities and the next two columns are results from using firms in the two cities separately. In all three columns, the coefficients on CHINESE are positive and significant at 5% level. This result is consistent with our hypothesis that Chinese businesses may utilize the existing ethnic networks in the region and therefore are more likely to export.

**Box 1: Descriptions of the variables used in Section 3.2.**

| | |
|---|---|
| Dependent variables_Y | |
| FC | a dummy variable taking the value of 1 if a customer is foreign and 0 otherwise. |
| FFC | a dummy variable taking the value of 1 if a firm's first customer is foreign and 0 otherwise. |
| FNC | a dummy variable taking the value of 1 if a firm's newest customer is foreign and 0 otherwise. |
| EXPORTER | a dummy variable taking the value of 1 if a firm exports and 0 if not. |
| %EXPORT | the percent of a firm's export in total sale. |
| Independent variables_X | |
| CHINESE | a dummy variable taking the value of 1 if a firm's top manager speaks Chinese and 0 otherwise. |
| SOE | a dummy variable taking the value of 1 if a firm's top manager used to work in an SOE as a manager and 0 otherwise. |
| ELEMENTARY | a dummy variable taking the value of 1 if a firm's top manager has only elementary education or below and 0 if a firm's top manager has secondary or higher education. |
| SECONDARY | a dummy variable taking the value of 1 if a firm's top manager has secondary education or below and 0 if a firm's top manager has college education or beyond. |
| ENGLISH | a dummy variable taking the value of 1 if a firm's top manager speaks English and 0 otherwise. |
| FRENCH | a dummy variable taking the value of 1 if a firm's top manager speaks French and 0 otherwise. |
| KOREAN | a dummy variable taking the value of 1 if a firm's top manager speaks Korean and 0 otherwise. |
| RUSSIAN | a dummy variable taking the value of 1 if a firm's top manager speaks Russian and 0 otherwise. |
| MNGRAGE | the age of a firm's top manager. |
| INDUSTRY | 9 dummy variables indicating the line of business the firm is in (8 dummies are used in the regressions). The industries are 1. Metal products and parts; 2. Wood products and parts; 3. Food products and beverages; 4. Clothes, garments, footwear, and leather goods; 5. Construction materials (including wire and cable); 6. Paper and packaging; 7. Handicrafts and art; 8. Chemical products and other miscellaneous; and 9. Electrical machinery. |

The coefficients on SOE are also positive and significant when firms in both cities are used and when only firms in HCM city are included in the regression. This is again consistent with our hypothesis that prior management experience in a state firm increases the chance of

locating a foreign customer[10]. When the regression includes only firm in Hanoi, the coefficient is not significant[11]. One possible reason is that in Hanoi, many of the businessmen have management experience in SOEs and therefore a strong tie with the state sector does not give one much advantage in locating foreign customers.

In addition, the results show that some other characteristics may also be associated with the firms' export. For example, the manager's ability to speak foreign languages is sometimes related to export. For the regression including only firms in Hanoi, the coefficient on ENGLISH, a binary variable on whether the manager speaks English, is positive and significant at 10% level. For the regression including only firms in HCM city, the coefficients on FRENCH and KOREAN are both positive and significant at 5% and 10% level, respectively. The manager's ability to speak foreign languages can serve to improve communication with foreign businesses and lower the entry barriers to export.

The regression coefficients on the top manager's age are negative for all three specifications. For the estimates using the full sample and the firms in Hanoi, the coefficients are significant at 5% level. It is reasonable as we would think younger people are more willing to take risk and less likely to have established a stable domestic customers base. The coefficient on the age factor for HCM city is not significant.

Finally, we find that manager's education level also seem to be related to whether a firm has foreign customers. In the equation for Hanoi, the coefficient on ELEMENTARY, which indicates whether the manager has only primary education or below, is negative and significant at 10% level. In the equation for HCM city, the coefficient on SECONDARY, which indicates whether the manager has only secondary education or below is negative and significant at 5% level.[12]

In the next column, the regression only includes the firms' first customers in the dependent variables. As entry barrier plays an important role in a firms' export, locating a foreign customer at the beginning of a business is crucial. The results are qualitatively similar to those in the first column. First, the coefficients on CHINESE and SOE are positive and significant at 5% and 10% level, respectively. Secondly, the coefficients on ENGLISH and

[10] Prior management experience may indicate higher ability to explore new business opportunities. It does not, however, imply more foreign contact relative to more domestic business success.
[11] If we do a one-tail test, then the significance level is within 10%.
[12] In HCM city, all top managers have at least secondary education.

FRENCH are also positive and (marginally) significant. Finally, the coefficient on the log of the top manager's age is positively and significant at 5%.

The estimation results in the last column are obtained by using only the firms' newest customers in as dependent variable. The model also includes an additional variable to control for the firms' initial export condition. FNC is a binary variable indicating whether a firm's newest variable is foreign. FFC, the control variable, is a binary variable indicting whether a firm's first variable is foreign. The coefficient on FFC is positive and significant at 1% level. This suggests that having a foreign customer at the beginning of the business is very important for export, again consistent with the assumption that there is substantial entry barrier to export. In addition the coefficient on RUSSIAN is positive and significant at 10% level. This indicates that, for firms that already operate in domestic market, the top manager's ability to speak Russian is helpful in locating foreign businesses.

The above regressions provide support to our two basic hypotheses. First, Chinese businesses are more likely to have foreign buyers. Second, firms with strong SOE ties are also more likely to have foreign buyers. In Table 9, we estimate the equation (1) using two different dependent variables. In the left panel, the dependent variable is EXPORTER, a binary variable takes the value of 1 if a firm has positive export in the previous year and 0 otherwise. This analysis corresponds to the question "what type of firms are more likely to export". The figures in the first column are estimation results including firms in both cities. We also calculate the coefficients separately for the two cities and list the results in the new two columns.

The results are consistent to those listed in Table 8. First, the coefficients on CHINESE are positive for all three estimates and marginally significant in the first two cases (for the pooled sample case and for the case of firms in Hanoi). Second, the coefficients on SOE are positive and (marginally) significant for all three specifications. Third, the coefficients on the language variables, ENGLISH and FRENCH, are still positive but not significant. Fourth, the coefficients on the log of the top manager's age are negative for all three cases and marginally significant for the pooled sample estimates. Fifth, the coefficients on education variables, ELEMENTARY and SECONDARY, are negative and significant for the case of HCM city.

The analyses above address the question "what type of firms are more likely to have foreign buyers and export". In the following regressions, we ask a slightly different question

which is "what firms are more export dependent." In another word, what firms are more export oriented. The dependent variable, %EXPORT, is the percentage of a firm's total sales that is exported. In the analysis, we only include firms that have positive export. Again, we first estimate the full sample and then estimate the firms in each of the two cities separately. The results are presented on the right panel of Table 9. Another note on the estimation is that we use a censored Tobit model to obtain the coefficients since the dependent is censored at the right.

There are a few points that worth mentioning. First, we notice, from the full sample estimation, that exporting firms in Hanoi sell more to foreign market as a percentage of their total sales. The share of total sale that is sole to foreigners by exporting firms in Hanoi is on average 27 percent point higher than their counterparts in HCM city. It is possible that exporting firms in Hanoi are more often joint ventures with foreign businesses. Unfortunately, our surveys do not contain that information.

Second, the share export in total sales for exporting Chinese businesses in HCM is nearly 40 percent point higher than non-Chinese exporting businesses in the city. Third, the coefficient on FRENCH is also positive and marginally significant for the full sample case. Fourth, the coefficient on the education variable, ELEMENTARY, is negative and significant for the full sample. The results suggest that language skill and education level both promote closer cooperation between Vietnam private firms and foreign businesses. Finally, the coefficient for FAM_BUS is negative and significant. This indicates that export firms that are wholly owned by the top manager's family export less as a percent of total sale. One explanation is that, when a firm is 100% by the manager's family, it leaves no chance for being a joint venture with a foreign party. In that case, the firm's association with foreign buyers is relatively weaker and therefore the firm has to depend on both domestic and foreign markets for survival.

Both theoretical and empirical studies have suggested that there are substantial entry barriers for export. The implication is that domestic firms tend to sell exclusively to domestic buyers and exporters tent to continue export. Regression results in the fifth column of Table 8 confirm that having a foreign first customer is a good predictor that a firm's newest customer is also foreign. The coefficient on FFC, a variable indicating whether a firm's first customer is foreign, is positive and significant. There are, however, occurrences of entry and exist between domestic and foreign market. In particular, we are interested in the firms that started

with domestic customers but later on began export. The following analysis is intended to identify factors that might be attributive to export entry of initial domestic firms.

We apply the same basic analytical framework and examine the two factors we discussed earlier, ethnic Chinese networking and SOE ties. Two dependent variables are used for the estimation. FNC is a variable indicating whether a firm's newest customer is foreign. EXPORTER is a variable indicating whether a firm has positive export in the previous year. Both variables are similar in that they are both indicates of whether a firm is currently involved in export activities. However, they are not always the same. For example, a firm may not have positive foreign sale in the previous year (EXPORTER=0) but have just located a foreign customer (FFC=1). Similarly, a firm may have positive export in the previous year (EXPORTER=1) but its newest customer is domestic (FFC=0). Our estimations include only firms whose first customer is domestic and the results are included in Table 10.

First, we notice from both regressions that domestic firms in Hanoi are significantly less likely to start export compared to their counterpart in HCM city. The reason could be that there are less non-state market activities in Hanoi and it is harder for domestic firms to make contact with foreign businesses. Second, the coefficients on CHINESE are negative and not significant. This suggests that there are two types of Chinese, those with oversea connections and those without. Chinese with oversea ties use their connection to locate foreign customers and establish a business. Those without oversea ties establish domestic businesses and do not have advantage in entering foreign market. Third, coefficients on SOE are positive but only significant in the estimation for EXPORTER. This shows the importance of a strong SOE ties. Although the probability is not significantly higher that the firm's newest customer is foreign, domestic firms with a strong SOE connection is significantly more likely to enter export market. Fourth, the coefficient on RUSSIAN is positively and significant in the estimation for FFC. We see from the previous analyses that the manager's language skills tend to increase the probability that a firm export. What is different about RUSSIAN might be that it indicates a manager's closer connection with the traditional central planning economy, given the historical ties between Vietnam and the former Soviet Union. It again suggests that strong ties with the state sector may help domestic firms to enter export market. Finally, the coefficients on the age factor are negative and significant in the estimation for FNC. This is consistent with our earlier results.

In this section, we use multivariate analysis to study the export activities of private firms in two Vietnam cities. The results provide strong evidence supporting our two basic

hypotheses. First, ethnic Chinese are more likely to be involved in export activities. In particularly, Chinese exporting firms often began export at the time of their establishment. Second, firms with strong SOE ties are also more likely to export. This is not only true for new businesses but for established domestic firms as well.

The analyses in this section are based on the assumption that there are substantial entry barriers in the export market. The implication of this assumption is that exporting firms tend to continue export and domestic firms tend to sell exclusively in domestic market. This assumption is also supported by the regression results in the last column of Table 8. In the next section, we will examine the further examine some aspects of the firms' production and sales activities and see if they support the assumption that there are substantial entry barriers in the export market.

### 3.3 Entry barriers to export

Studies suggest that there are entry barriers associated with export. The implication is that, in the presence of barriers to entry, export from firms is affected by prior experience. Recent empirical studies indicated that prior experience increase the probability that a firm will export (Roberts and Tybout, 1997; Bernard and Wagner, 1998).

The above studies examine existing firms' entry or exit decision in export. We could examine the question by looking at new businesses. Under the existence of substantial entry barriers to export, a new firm will normally enter domestic unless it has special advantage in lowering the barrier to export. In addition, once a firm started operating, it tends to stay in the same market. We have found in the previous section that ethnic Chinese networking and strong SOE ties help private firms in Vietnam to enter export market. In this section, we will first relate the firms' initial export condition with their current export activities and see if they are consistent with the existence of substantial entry barrier. Second, we will examine the firms' business interactions with their customers and see if there are significant differences between the two kinds of customers, foreign or domestic. These differences, if exist, may reflect the presence of entry barriers to export for Vietnam private firms.

We use two comparisons to examine the relations between the firms' initial and current export status. First, we relate the firms' first customers to their newest customers. Under the existence of substantial entry barrier, we should find that a firm's first and newest customer should often come from the same market, domestic or foreign. Second, we relate

the firms' initial export condition (based on the location of their first customers) to the firms' current export status. The results of our comparisons are summarized in Table 11.

In Table 11, all firms are categorized into two groups according to the location of their first customers. Firms on the top half are those whose first customers are located in Vietnam. Firms on the bottom half are those whose first customers are located outside Vietnam. First of all, we will relate the location of the firms' newest customers to those of their first customers (see the left panel of Table 11). First, majority of the firms started their businesses by selling to domestic customers. Table 11 shows that more than 80 percent of the firms started their business by selling to a domestic customer. This suggests that there are higher entry barrier for export than for domestic market. Second, firms tend to find customers in the same geographic location. For example, among all firms that started businesses by selling to domestic customers, almost 90 percent find their newest customers in domestic market. Similarly, among firms that started businesses by export, nearly 80% find their newest customers outside Vietnam. Third, the tendency that firms stay in the same market seems stronger for those in Hanoi. For example, in Hanoi, among firms that started business by export, 90 percent find their newest customers outside Vietnam (compared to 59 percent in HCM city). Similarly, 94 percent of the domestic firms in Hanoi find their newest customers in the domestic market (compared to 82 percent in HCM city). The reason might be that there are more dynamic market activities in the south than in the north.[13]

Next, we will compare the firms' initial and current export status (see the right panel in Table 11). Notice that when a firm's first customer, we would label the firm as an initial exporter. From the results in the table, we draw very similar conclusions to those above. First, firms tend continue their sales in the same market. Among all the initial exporters, 87 percent sell to foreign market during the previous year. Among all initial domestic firms, 88 percent do not export during the previous year. Second, the tendency that a firm will stay in its initial market is stronger for firms in Hanoi than in HCM city. In Hanoi, 94 percent of the initial exporters export during the previous year (compare to 78 percent in HCM city). Similar, 95 percent of the initial domestic firms sell exclusively to the domestic market during the previous year (compare to 79 percent in HCM city). [14]

[13] The fact that the survey in HCM city was conducted one and a half years late may also have affected the outcome.

[14] Total number of firms in the left panel differs from those in the right. The reason is that for the left panel, we eliminate firms for which the first and the newest buyers seem to be the same customer based on their responses to the survey questions.

Our examination of firms initial and current export behavior indicate that domestic firms sell exclusively in domestic market while initial exporters tend to continue export. This is consistent with the hypothesis that there are significant entry barriers to export market. In the following analysis, we explore the firms' responses regarding their customers more closely to identify additional cost associated with foreign customers. We examine the firms' responses to four specific questions regarding their customers, including the firms' first customers and newest customers. Four variables are constructed based on the firms' answers to the questions. The definitions of the variables are in Box 2[15].

**Box 2: Descriptions of the variables used in Section 3.3.**

| | |
|---|---|
| Dependent variables_Y | |
| FILL_ORDER | A dummy variable takes the value of 1 when a firm produces to fill a order and 0 if a firm keeps inventory for the customer. |
| WRITTEN_ORDER | A dummy variable takes the value of 1 if the purchasing order is in written form and 0 if it is expressed orally. |
| WRITTEN_QUALITY | A dummy variable takes the value of 1 if the quality specificatio is in written form and 0 if it is expressed orally. |
| REPLACE | An ordered variable corresponding to the time it takes to replace a customer: 1. A day or less, 2. Two days to a week, 3. More than a week and less than a month, 4. More than a month, 5. Imposible. |
| Independent variables_X | |
| FC | a dummy variable taking the value of 1 if a customer is foreign and 0 otherwise. |
| INDUSTRY | 9 dummy variables indicating the line of business the firm is in (See definition in Box 1). |

Based on the firms' responses to the questions, we construct five variables for analysis. The goal is to see if the business relationship between Vietnam firms and their customers differ significantly depending on the location of the customers. For example, it is possible that Vietnam firms are more likely to have written quality specifications when the customers is foreign then when the customer is domestic. If that is the case, we might think that associations with foreign businesses do entail extra cost for Vietnam firm, such as higher quality standard. The analysis here is based on the following equation. The dependent variables are one of the five variables constructed based on the questions in Box 2. The dependent variables include FC, HANOI, the location dummy and 8 industry dummy variables. We are interested in the coefficient $\beta$ . The null hypothesis is that $\beta$ is not significantly different from 0. Table 12 summarizes the results of our analysis.

[15] More detailed description on the survey and the list of questions used in the survey can be found in the Appendix.

$$Y_i = \alpha + \beta FC_i + \gamma HANOI_i + \theta \mathbf{IND}_i + \varepsilon_i \qquad (2)$$

$Y_i$ is one of the four variables explained in Box 2. The numbers in the table are estimated $\beta$. A firm's first and newest customers enter the regression separately as two observations. The results in the first column are those using the full sample and those in the next two columns are results for the two cities separately.

In the first three sets of regressions, we investigate if there is additional cost associated with foreign customers in production. In the first row, the dependent variable is a dummy variable takes the value of one if a firm produces to fill specific orders and zero if the firm have the product in store for the customer. If we find that firms are more likely to produce to fill specific orders for their foreign customers, then we might say it is more costly to produce for foreign customers. The underlying assumption is that firms have to incur additional cost if they produce to specific orders. The estimation results strongly support our conjecture. Firms are indeed more likely to produce to fill orders for their foreign customers than for their domestic customers. The regression coefficients are positive in all three cases and significant for the full sample case and for firms in HCM city.

In the second regression, we estimate the likelihood that a purchasing order is in written form relative to in oral agreement. We assume that written form orders require higher precision in job description and in production. If written orders are more likely for foreign customers, we would consider it another indication that higher production costs are associated with foreign customers. The regression results show that firms are significantly more likely to receive written orders from their foreign customers than their domestic customers. The coefficients are positive and significant in all three regressions.

In the next analysis, we examine the likelihood that the quality specification of a customer order is in written form from foreign customers. We assume that written quality specification is associated with higher quality requirement and therefore higher cost in production and in quality control. If written quality specification is more likely for foreign customers, it is anther indication that higher cost is associated with export. The regression results in the third row suggested that indeed, written quality specifications are significantly more likely when Vietnam firms deal with foreign customers. The coefficients on FC are positively and significant for all three specializations.

The above discussions suggest that exporting firms might incur higher cost regarding production and quality control. The following discussion concerns the difficulty to replace a

customer. This indirectly relates to higher costs in export. If Vietnam firms find it significantly harder to replace their foreign customers than their domestic customers, we would think that the cost of locating a foreign customer is significantly higher. The dependent variable is a rank firms place on the difficulty of replacing their customers and we estimate an ordered probit model. The results of the last row in Table 12 indicate that firms rated the difficulties significantly higher in replacing foreign customers than replacing domestic customers. This is again consistent with our assumption that it is more costly to export.

Our discussion in this section on entry barriers to export is two folded. First we study the firms' export activities and sales and find that they are consistent with the assumption that there are substantial entry barriers to export. Second, we examine the firms' relations with their customers and identify some elements suggesting that there is higher (initial) cost associated with export.

## 4. Conclusion

Vietnam has been a latecomer in economic reform and global market participation. Nevertheless, private firms have achieved impressive progress in both domestic economic and in export. This study is an attempt to get the basis behind the export success. We examine two factors that are relevant for the study undertaken, ethnic Chinese networking and strong ties with the state sector.

The empirical analysis provides strong support to our hypothesis. Ethnic Chinese networking seems to be important in facilitating business co-operations between Vietnam firms and foreign businesses. This is sensible given the active role Chinese businesses play in the region. We also find that strong ties with the state sector are also important for firms pursuing export. This is realistic given that Vietnam's reform is still far from complete and the state sector is still the dominant force in the economy. We find some additional factors that are important in export, such as education and the ability to speak foreign languages.

The reason that such factors as ethnic networking, SOE ties are important for export is they help Vietnam firms to overcome the entry barriers to export. The firms' export behaviors do show that there are substantial entry costs in export. Large majority of firms will stay in the same market where they began their businesses. We also find that export incur higher initial cost such as harder to locate foreign customers, higher quality standard and so on.

**Appendix: Data source and description**

The data used in this study comes from two surveys conducted in Vietnam. One survey is conducted in Hanoi in July/August 1995 and in June/July 1996. The other survey is in Ho Chi Mihn City (HCM City) conducted during February/March 1997. About 150 private firms in Hanoi and 110 private firms in HCM City are included in the survey. The sample was drawn from a list of members of the Vietnam Chamber of Commerce and Industry. Both surveys are conducted based on the same questionnaire.

The data collection was supported by the Vietnam Pacific Program and the academic Senate of the University of California, San Diego, the project on Institutional Reform and the Informal Sector, and the William Davidson Center. The data are available at http://WWW-IRPS.UCSD.EDU/faculty/cwoodruff. The data are also used in "Interfirm Relationships and Informal Credit in Vietnam" (John McMillan and Chris Woodruff, Quarterly Journal of Economics, November 1999) and in "Dispute Prevention without Courts in Vietnam" (John McMillan and Chris Woodruff, Journal of Law Economics and Organization, October 1999). The survey is described in some detail in the appendix to "Dispute prevention without Counts in Vietnam".

The following are the survey questions used in the current study.

Survey questions used in the analysis[16]:

***General questions:***

1. What is your line of business?
2. How many employees do you have at the end of 1994 (for firms in Hanoi)/1996 (for firms in HCM city)?
3. What is the value of your sales in 1994 (for firms in Hanoi)/1996 (for firms in HCM city)?
4. When did your firm start to operate as a private firm?
5. What percentage of your firm is owned by:
   (a). The top manager or his family?
   (b). Other private individuals?
   (c). Other private firms?
   (d). Collectively owned?
   (e). State firms?
   (f). Other?
6. Did your firm buy equipment which was formerly owned by SOEs?

[16] The numbering of the questions is different from that in the original survey.

7. How much of your capital equipment was formerly owned by a SOE or other state enterprise?
   (a). Between 50 and 100%
   (b). Some, but less than 50%
   (c). None
8. Did the top manager formerly work in an SOE or other state enterprise?
   (a). No
   (b). As an ordinary worker
   (c). As a technician, engineer or other skilled worker
   (d). As a marketing or sales worker
   (e). As a manager
9. What percentage of your 1994 (for firms in Hanoi)/1996 (for firms in HCM city) sales were made to customers who are:
   (a). SOEs
   (b). Individual customers
   (c). Private firms which are final consumers
   (d). Retailers or retail stores
   (e). Other middlemen who resell the good unaltered to other firms
   (f). Firms which have foreign investment
   (g). Oversea firms
   (h). Other (specify)
10. What portion of your 1994 (for firms in Hanoi)/1996 (for firms in HCM city) sales were made to firms located:
   (a). Within 1 km of your factory
   (b). Further than 1 km, but within your own city/village
   (c). Outside your province but within Northern Vietnam
   (d). Outside your province but within Central Vietnam
   (e). Outside your province but within Southern Vietnam
   (f). Outside of Vietnam (export)
11. What portion of your supplies in 1994 (for firms in Hanoi)/1996 (for firms in HCM city) were purchased from firms located:
   (a). Within 1 km of your factory
   (b). Further than 1 km, but within your own city/village
   (c). Outside your province but within Northern Vietnam
   (d). Outside your province but within Central Vietnam
   (e). Outside your province but within Southern Vietnam
   (f). Outside of Vietnam (import)
12. Personal questions about the top manager:
   (a). Age
   (b). Years of schooling
   (c). Language spoken

***Question regarding customers:***

| | First Customer | Newest Customer |
|---|---|---|
| 1. What good do you sell to this customer? | _____ | _____ |
| 2. Are the customer orders | (a) written (b) oral | (a) written (b) oral |
| 3. Do you maintain inventories of this good or do you produce it only to fill orders? | (a) yes (b) no | (a) yes (b) no |
| 4. What percentage of your sales to this customer? | _____ | _____ |
| 5. Is this customer domestic or foreign? | (a) foreign (b) domestic | (a) foreign (b) domestic |
| 6. Is this customer | (a) a state enterprise<br>▪ A state trading company<br>(b) a private enterprise | (a) a state enterprise<br>▪ A state trading company<br>(b) a private enterprise |
| 7. If this customer refused to accept delivery of an order, how long would it take you to find another customer for these goods? | (a) a day or less<br>(b) more than a day, less than a week<br>(c) more than a week, less than a month<br>(d) more than a month,<br>(e) would be impossible | (a) a day or less<br>(b) more than a day, less than a week<br>(c) more than a week, less than a month<br>(d) more than a month,<br>(e) would be impossible |
| 8. Are quality specifications | (a) written (b) oral | (a) written (b) oral |

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**Table 1: Trade and Foreign Direct Investment in Vietnam**

| | Unit | 1980 | 1985 | 1990 | 1995 | 1999 |
|---|---|---|---|---|---|---|
| Trade | | | | | | |
| Export | | | | | | |
| Value | Bil. $ | 0.34 | 0.7 | 2.4 | 5.45 | 11.52 |
| share of the world total | % | 0.02% | 0.04% | 0.07% | 0.11% | 0.21% |
| share of the Asian total | % | 0.11% | 0.17% | 0.32% | 0.42% | 0.83% |
| Import | | | | | | |
| Value | Bil. $ | 1.31 | 1.86 | 2.75 | 7.50 | 11.60 |
| share of the world total | % | 0.06% | 0.09% | 0.08% | 0.15% | 0.20% |
| share of the Asian total | % | 0.38% | 0.50% | 0.39% | 0.60% | 0.97% |
| Inword FDI Stock | | | | | | |
| Value | | 7 | 38 | 294 | 6238 | 15019 |
| share of the world total | % | 0.00% | 0.00% | 0.02% | 0.23% | 0.31% |
| share of the Asian total | % | 0.01% | 0.03% | 0.14% | 1.35% | 1.77% |

*Sources: World Bank: World Development indicators; WTO: World merchandise exports by region and selected economy, 1980, 1985, 1990 and 1995-2000. UNCTAD: World Investment Report 2000; World Investment Directory VII.*

**Table 2: Vietnam's Trade Relation with the Rest of the World**

| | 1980 | | 1985 | | 1990 | | 1995 | |
|---|---|---|---|---|---|---|---|---|
| | Export | | | | | | | |
| 1 | Japan | 26.75% | Hong kong | 27.52% | Japan | 42.55% | Japan | 26.81% |
| 2 | Hong kong | 12.19% | Japan | 18.00% | Hong kong | 11.54% | Singapore | 12.66% |
| 3 | Singapore | 9.93% | Singapore | 17.15% | Philippines | 8.04% | Taiwan | 8.06% |
| 4 | Poland | 6.89% | Fm Czechoslovak | 5.52% | Thailand | 6.71% | China | 6.64% |
| 5 | Fm Czechoslovak | 5.29% | Poland | 3.81% | India | 4.09% | Hong kong | 4.72% |
| | Import | | | | | | | |
| 1 | Japan | 14.54% | Japan | 27.91% | Japan | 30.37% | Singapore | 17.47% |
| 2 | India | 8.32% | Singapore | 24.23% | Hong kong | 19.42% | Korea Rp | 15.38% |
| 3 | UK | 7.96% | Hong kong | 10.44% | France | 12.83% | Japan | 11.23% |
| 4 | France | 7.15% | Fm Czechoslovak | 8.64% | Indonesia | 5.37% | Taiwan | 11.05% |
| 5 | Singaport | 6.37% | France | 4.28% | Germany | 3.23% | Thailand | 5.40% |

*Source: World Import and Export Data, Center for International Data at UC Davis (http://data.econ.ucdavis.edu/international/). Vietnam Data Bank 1976-1991.*

**Table 3: The role of state owned enterprises (SOEs) in Vietnam industry.**

Billion Veitnam Dongs (1989 constant price)

| | 1990 | | | | 1995 | | | |
|---|---|---|---|---|---|---|---|---|
| | Total | | State | | Total | | State | |
| | Value | % in Total | Value | % in the industry | Value | % in Total | Value | % in the industry |
| Total | 140111 | | 94758 | 67.63% | 264630 | | 191460 | 72.35% |
| Electricity | 10462 | 7.47% | 10460 | 99.98% | 18400 | 6.95% | 18390 | 99.95% |
| Fuels | 15513 | 11.07% | 15492 | 99.86% | 42930 | 16.22% | 42870 | 99.86% |
| Ferrous matallurgy | 1196 | 0.85% | 1106 | 92.47% | 3760 | 1.42% | 3410 | 90.69% |
| Non-ferrous metallurgy | 991 | 0.71% | 858 | 86.58% | 1800 | 0.68% | 1440 | 80.00% |
| Equaiment and machinery | 5977 | 4.27% | 3218 | 53.84% | 9730 | 3.68% | 5780 | 59.40% |
| Electric and electronic products | 2723 | 1.94% | 2081 | 76.42% | 5140 | 1.94% | 4040 | 78.60% |
| Other metallic products | 3248 | 2.32% | 795 | 24.48% | 4380 | 1.66% | 850 | 19.41% |
| Chemical products, fertilizers and rubber | 9025 | 6.44% | 6586 | 72.98% | 22990 | 8.69% | 17410 | 75.73% |
| Construction materials | 10002 | 7.14% | 6089 | 60.88% | 21430 | 8.10% | 14410 | 67.24% |
| Wood and wood product | 5727 | 4.09% | 1455 | 25.41% | 8990 | 3.40% | 1350 | 15.02% |
| Cellulose and paper | 3115 | 2.22% | 2582 | 82.89% | 5720 | 2.16% | 3330 | 58.22% |
| Glass, earth ware and porcelain | 1461 | 1.04% | 617 | 42.23% | 2910 | 1.10% | 1420 | 48.80% |
| Food | 4692 | 3.35% | 1184 | 25.23% | 8880 | 3.36% | 2030 | 22.86% |
| Foodstuffs | 45711 | 32.62% | 29694 | 64.96% | 73310 | 27.70% | 54690 | 74.60% |
| Textile product | 12586 | 8.98% | 8500 | 67.54% | 17730 | 6.70% | 10630 | 59.95% |
| Sewing products | 2025 | 1.45% | 1241 | 61.28% | 6460 | 2.44% | 3750 | 58.05% |
| Tanning and manaufactures of leather products | 937 | 0.67% | 572 | 61.05% | 2540 | 0.96% | 1000 | 39.37% |
| Printing | 973 | 0.69% | 790 | 81.19% | 2780 | 1.05% | 2560 | 92.09% |
| Others | 3567 | 2.55% | 1438 | 40.31% | 4750 | 1.79% | 2100 | 44.21% |

*Source: Vietnam Statistical Yearbook 1992, 1995.*

**Table 4: Vietnam Export and Import by Type of Management*:**

Million US$/%

| | 1985 | | 1990 | | 1994 | |
|---|---|---|---|---|---|---|
| | Total | % | Total | % | Total | % |
| Export | | | | | | |
| Total | 6985 | | 24040 | | 38932 | |
| Central | 5943 | 85.08% | 17004 | 70.73% | 19458 | 49.98% |
| Local | 1042 | 14.92% | 7036 | 29.27% | 19474 | 50.02% |
| Import | | | | | | |
| Total | 18574 | | 27524 | | 52253 | |
| Central | 17354 | 93.43% | 21946 | 79.73% | 31110 | 59.54% |
| Local | 1220 | 6.57% | 5578 | 20.27% | 21143 | 40.46% |

*Note: *: excluding businesses having foreign direct investment.*
*Source: (Vietnam) Statitstical Yearbook 1992, 1995.*

## Table 5: Composition of Vietanm Gross Industrial Output

Bilion Vietnam Dong/%

| | 1991 | | 1994 | |
|---|---|---|---|---|
| | Value | % | Value | % |
| Total | 15471.1 | | 23214.2 | |
| State sector | 10699.5 | 69.16% | 16796.7 | 72.36% |
| Central | 7535.4 | 48.71% | 12128 | 52.24% |
| Local | 3164.1 | 20.45% | 4668.7 | 20.11% |
| Non-state sector | 4871.6 | 31.49% | 6417.5 | 27.64% |
| Hanoi | 940.4 | 6.08% | 1706.7 | 7.35% |
| State sector | 800.1 | 85.08% | 1432.0 | 83.90% |
| Central | 613.3 | 65.22% | 1026.9 | 60.17% |
| Local | 186.8 | 19.86% | 405.1 | 23.74% |
| Non-state sector | 140.2 | 14.91% | 274.7 | 16.10% |
| HCM City | 4298.6 | 27.78% | 6539.3 | 28.17% |
| State sector | 2933.4 | 68.24% | 4355.3 | 66.60% |
| Central | 2010.7 | 46.78% | 3153.8 | 48.23% |
| Local | 922.7 | 21.46% | 1201.5 | 18.37% |
| Non-state sector | 1365.3 | 31.76% | 2184.0 | 33.40% |

*Source: (Vietnam) Statistics Yearbook 1992, 1995.*

**Table 6: Number and the Share of Exporting Firms in the Sample by Industry**

| | Industry | Hanoi | | | HCM city | | | All | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Metal products and parts | 25 | 17% | 0% | 6 | 5% | 17% | 31 | 12% | 3% |
| 2 | Wood products and parts | 17 | 11% | 59% | 15 | 14% | 47% | 32 | 12% | 53% |
| 3 | Food products and veverages | 11 | 7% | 9% | 15 | 14% | 20% | 26 | 10% | 15% |
| 4 | Colthes, garments, foodwear, and leather goods | 28 | 19% | 36% | 17 | 15% | 71% | 45 | 17% | 49% |
| 5 | Construction materials (including wire and cable) | 14 | 9% | 0% | 9 | 8% | 22% | 23 | 9% | 9% |
| 6 | Paper and packaging | 10 | 7% | 10% | 11 | 10% | 18% | 21 | 8% | 14% |
| 7 | Handicrafts and art | 12 | 8% | 67% | 1 | 1% | 100% | 13 | 5% | 69% |
| 8 | Chemical products and other miscellaneous | 25 | 17% | 16% | 29 | 26% | 24% | 54 | 21% | 20% |
| 9 | Electrical machinery | 4 | 3% | 0% | 7 | 6% | 14% | 11 | 4% | 9% |
| | Missing | 3 | 2% | 33% | 0 | 0% | 0% | 3 | 1% | 33% |
| | Total | 149 | 100% | 23% | 110 | 100% | 33% | 259 | 100% | 27% |

**Table 7: Sample Description**

| | Total | | Hanoi | | HCM city | |
|---|---|---|---|---|---|---|
| | mean | # of obs | mean | # of obs | mean | # of obs |
| Employment | 52.2 | 259 | 52.8 | 149 | 51.5 | 110 |
| Total sale (dong) | | | | | | |
| 1994 | 2.70E+09 | 241 | 1.87E+09 | 147 | 3.98E+09 | 94 |
| 1996 | | | | | 6.11E+09 | 110 |
| Wholly family owned | 40.2% | 259 | 36.9% | 149 | 44.5% | 110 |
| Being an exporter | 27.5% | 258 | 23.6% | 148 | 32.7% | 110 |
| Being an importer | 21.4% | 257 | 5.4% | 147 | 42.7% | 110 |
| Having bought equipment formerly owned by SOE | 25.1% | 259 | 33.6% | 149 | 13.6% | 110 |
| Own equipment formerly owned by SOE | 34.4% | 180 | 67.1% | 70 | 13.6% | 110 |
| Having SOE customers | 48.4% | 258 | 64.2% | 148 | 27.3% | 110 |
| Share of sales to SOEs | 26.9% | 258 | 39.2% | 148 | 10.5% | 110 |
| Having sold through state trading companies | 18.5% | 259 | 28.2% | 149 | 5.5% | 110 |
| Manager having work experience in SOEs | 54.0% | 257 | 62.0% | 147 | 44.0% | 110 |
| Age of the managers | 47.3 | 259 | 48.1 | 149 | 46.3 | 110 |
| Manager having college eduction or above | 69.4% | 245 | 62.7% | 142 | 78.6% | 103 |
| Manager speaking English | 42.5% | 259 | 26.8% | 149 | 63.6% | 110 |
| Manager speaking Chinese | 18.3% | 251 | 5.0% | 141 | 35.5% | 110 |

*Source: calculated from the sample*

## Table 8: Regression results

Dependent variables: The Customer is a Foreign Firm (FC, FFC and FNC)
Estimation method: binary logit

| | FC | | | FFC | FNC |
|---|---|---|---|---|---|
| | ALL | HANOI | HCM CITY | | |
| CHINESE | 0.9496** | 2.7547** | 0.9728** | 0.6470** | -0.4745 |
| | 2.4929 | 2.3988 | 1.9458 | 2.0848 | -0.7133 |
| SOE | 0.7903*** | 0.7214 | 1.0600** | 0.4555* | 0.0276 |
| | 2.4445 | 1.3674 | 2.0255 | 1.7772 | 0.0507 |
| ENGLISH | 0.4382 | 0.8195* | 0.2790 | 0.4556* | 0.0581 |
| | 1.4371 | 1.7038 | 0.4917 | 1.8291 | 0.1157 |
| FRENCH | 1.1039** | -0.6553 | 1.2514** | 0.7442** | 0.2641 |
| | 2.3325 | -0.5263 | 1.9997 | 1.9319 | 0.3614 |
| KOREAN | 2.7938* | | 2.9531* | | |
| | 1.8658 | | 1.8602 | | |
| RUSSIAN | 0.5767 | -0.1411 | | -0.2801 | 1.7085* |
| | 0.8030 | -0.1621 | | -0.4173 | 1.6959 |
| LOG(MNGR_AGE) | -1.7595** | -2.1546** | -1.7659 | -1.4246** | -0.8820 |
| | -2.3222 | -1.9388 | -1.3446 | -2.1918 | -0.7186 |
| ELEMENTARY | -0.8294 | -1.0836* | | -0.1904 | -1.0751 |
| | -1.3735 | -1.7254 | | -0.4570 | -1.0740 |
| SECONDARY | | | -1.5328** | | |
| | | | -1.9930 | | |
| FAM_BUS | 0.0732 | 0.6275 | -0.1703 | -0.0024 | 0.5145 |
| | 0.2622 | 1.5544 | -0.3518 | -0.0111 | 1.1328 |
| HANOI | 0.4243 | | | 0.2871 | -0.3892 |
| | 1.2397 | | | 1.0658 | -0.7133 |
| CONSTANT | 3.3106 | 2.9638 | 3.1150 | 3.2737 | -0.0981 |
| | 1.0932 | 0.7054 | 0.5908 | 1.3354 | -0.0199 |
| FFC | | | | | 3.3715*** |
| | | | | | 5.9124 |
| Industry dummies inc. | YES | YES | YES | YES | YES |
| LR statistic (df) | 124.89 (18) | 115.99 (13) | 50.54 (15) | 80.20 (15) | 98.87 (18) |
| | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| McFadden R-squared | 0.2514 | 0.3999 | 0.2444 | 0.3247 | 0.3969 |
| Obs with Dep=0 | 366 | 212 | 154 | 193 | 173 |
| Obs with Dep=1 | 104 | 61 | 43 | 50 | 54 |
| Total obs | 470 | 273 | 197 | 243 | 227 |

*Note: Significance level is denoted by *** (1%), ** (5%), and * (10%) respectively.*

## Table 9: Regression results

Dependent variables: Being an exporter/%of export
Estimation method: binary logit /Censored (Tobit)

| | EXPORTER | | | %EXPORT WHEN EXPORTER=1 | | |
|---|---|---|---|---|---|---|
| | ALL | HANOI | HCM | ALL | HANOI | HCM |
| CHINESE | 0.8687* | 1.9925* | 0.9960 | 0.3197*** | -0.2678 | 0.3936*** |
| | 1.7686 | 1.7512 | 1.5410 | 2.5365 | -1.1651 | 2.4537 |
| SOE | 1.2846*** | 1.0895* | 1.5380** | 0.0753 | 0.2453 | -0.2125 |
| | 2.9128 | 1.6295 | 2.1958 | 0.6235 | 1.3158 | -1.4286 |
| ENGLISH | 0.3463 | 0.1962 | 0.2824 | -0.0295 | 0.1379 | 0.1251 |
| | 0.8601 | 0.3222 | 0.4039 | -0.2336 | 0.7312 | 0.6721 |
| FRENCH | 0.9524 | 0.0011 | 1.0262 | 0.3755* | | 0.2705 |
| | 1.4746 | 0.0009 | 1.2558 | 1.7150 | | 1.1616 |
| LOG(MNGR_AGE) | -1.7395* | -1.8721 | -1.6034 | 0.0317 | 0.3779 | 0.1399 |
| | -1.7225 | -1.3691 | -0.9922 | 0.0926 | 0.6072 | 0.3796 |
| ELEMENTARY | -0.2215 | -0.5393 | | -0.5073** | -0.3157 | |
| | -0.2905 | -0.7077 | | -2.0120 | -1.0412 | |
| SECONDARY | | | -1.9427** | | | |
| | | | -2.0536 | | | |
| FAM_BUS | 0.2164 | 0.5015 | 0.1413 | -0.0645 | -0.1200 | -0.3795*** |
| | 0.5880 | 0.9687 | 0.2401 | -0.5914 | -0.7694 | -2.8291 |
| HANOI | -0.1906 | | | 0.2748** | | |
| | -0.4248 | | | 2.1242 | | |
| C | 3.4167 | 3.6615 | 3.9249 | -0.4208 | -0.5762 | -0.8958 |
| | 0.8463 | 0.4776 | 0.6165 | -0.3055 | -0.2571 | -0.6253 |
| SCALE | | | | 0.3345 | 0.3039 | 0.3032 |
| Industry dummies inc. | YES | YES | YES | YES | YES | YES |
| LR statistic (DF) | 73.88 (16) | 48.32 (12) | 32.21 (14) | | | |
| Probability(LR stat) | 0.0000 | 0.0000 | 0.0037 | | | |
| R2 | | | | 0.4566 | 0.2470 | 0.5624 |
| McFadden R-squared | 0.2637 | 0.3160 | 0.2557 | | | |
| Obs with Dep=0 | 179 | 107 | 72 | | | |
| Obs with Dep=1 | 64 | 33 | 31 | | | |
| Uncensored obs | | | | 42 | 21 | 25 |
| Right censored obs | | | | 22 | 12 | 11 |
| Total obs | 243 | 140 | 103 | 64 | 33 | 36 |

*Note: Significance level is denoted by *** (1%), ** (5%), and * (10%) respectively.*

## Table 10: Regression results

Dependent variables: FNC/EXPORTER
Estimation method: binary logit

| | FNC | | EXPORTER | |
|---|---|---|---|---|
| | Coefficient | z-stat | Coefficient | z-stat |
| CHINESE | -1.2948 | -1.4060 | -0.7006 | -0.8245 |
| SOE_MNG | 0.5172 | 0.7391 | 1.7891*** | 2.6764 |
| ENGLISH | 0.2911 | 0.4675 | 0.0556 | 0.0890 |
| FRENCH | 0.2057 | 0.2221 | 0.9144 | 1.0230 |
| RUSSIAN | 2.8082** | 2.3315 | | |
| LOG(MNGR_AGE) | -2.8184* | -1.8419 | -2.0041 | -1.2984 |
| ELEMENTARY | 0.2237 | 0.1802 | 1.6701 | 1.5585 |
| FAM_BUS | 0.5798 | 1.0478 | 0.6896 | 1.2557 |
| HANOI | -1.9517** | -2.3876 | -2.3928*** | -2.8516 |
| CONSTANT | 8.5850 | 1.4258 | 5.1537 | 0.8449 |
| Industry dummies inc. | YES | | YES | |
| LR statistic (df) | 21.96 (17) | | 28.49 (16) | |
| Probability | 0.1861 | | 0.0276 | |
| McFadden R-squared | 0.2042 | | 0.2146 | |
| Obs with Dep=0 | 165 | | 172 | |
| Obs with Dep=1 | 20 | | 21 | |
| Total obs | 185 | | 193 | |

*Note: Significance level is denoted by *** (1%), ** (5%), and * (10%) respectively.*

**Table 11: Relations between the firms' initial export and current export status**

| First Customer | Newest customer | | | Current export status | | |
|---|---|---|---|---|---|---|
| | Domestic | Foreign | Total | Non-export | Export | Total |
| Domestic | | | | | | |
| Hanoi | 106 | 7 | 113 | 111 | 6 | 117 |
| | 93.81% | 6.19% | 79.58% | 94.87% | 5.13% | 79.05% |
| HCM city | 69 | 15 | 84 | 69 | 18 | 87 |
| | 82.14% | 17.86% | 83.17% | 79.31% | 20.69% | 79.09% |
| Sub_total | 175 | 22 | 197 | 180 | 24 | 204 |
| | 88.83% | 11.17% | 81.07% | 88.24% | 11.76% | 79.07% |
| Foreign | | | | | | |
| Hanoi | 3 | 26 | 29 | 2 | 29 | 31 |
| | 10.34% | 89.66% | 20.42% | 6.45% | 93.55% | 20.95% |
| HCM city | 7 | 10 | 17 | 5 | 18 | 23 |
| | 41.18% | 58.82% | 16.83% | 21.74% | 78.26% | 20.91% |
| Sub_total | 10 | 36 | 46 | 7 | 47 | 54 |
| | 21.74% | 78.26% | 18.93% | 12.96% | 87.04% | 20.93% |
| Total | 185 | 58 | 243 | 187 | 71 | 258 |
| | 76.13% | 23.87% | 100% | 72.48% | 27.52% | 100% |

**Table 12: Costs associated with foreign customers**

| Dependent variables | Independent variable: (FC) the customer is foreign. | | |
|---|---|---|---|
| | ALL | HANOI | HCM |
| FILL_ORDER | 1.3483*** | 0.2636 | 1.6820*** |
| | 4.0900 | 0.4659 | 3.9324 |
| | 500 | 290 | 210 |
| WRITTEN_ORDER | 2.2884*** | 3.1035*** | 1.9768*** |
| | 5.0676 | 2.9052 | 3.7130 |
| | 501 | 290 | 211 |
| WRITTEN_QUALITY | 2.7982*** | 2.0731*** | 3.5455*** |
| | 4.5644 | 2.6449 | 3.4097 |
| | 496 | 285 | 211 |
| REPLACE | 0.5730*** | 0.3937** | 0.3283* |
| | 5.5962 | 2.0606 | 1.7776 |
| | 480 | 269 | 211 |

*Note: Industry dummies are also included in the regressions.*