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Investment of rice mills in Vietnam

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PART THREE

Statistical description and empirical study

Chapter 7

An overall description of the sample

7.1 Introduction

As mentioned in Chapter 1, this dissertation is aimed at studying the effects of financial market imperfections and market uncertainty on firm investment. The literature reviewed in Chapters 5 and 6 indicates that studying these issues requires the availability of several variables at the firm level. Most of the studies addressing these issues have made use of the data provided by specialised agencies.¹²² In Vietnam, such data are either absent or incomplete. Therefore, the empirical study of this dissertation had to create and use its own data set.

In 2000 we conducted a survey among 210 private RMs in eight provinces of the MRD. This survey assists in creating a set of firm-level data that covers the variables indicated in the literature as important to studying the above-mentioned issues. These variables include the value of total fixed assets, age, profit, borrowing activities, investment outlays and projections, sales, the expected growth rate of future sales, *etc.* The data set also reveals the degree of physical capital irreversibility and the degree of competition that are hypothesised to affect the uncertainty-investment relationship (see Chapter 6). The availability of these variables enables us to carry out our empirical study on the effects of financial market imperfections and uncertainty on investment of private RMs in the MRD. This chapter serves to describe the data set used to carry out the empirical study in Chapters 8 and 9. In addition, it may also provide an in-depth picture of the rice-milling industry in the MRD.

¹²² For instance, COMPUSTAT has been used extensively in many studies of U.S. firms (see, *e.g.*, Fazzari *et al.*, 1988; Kaplan and Zingales, 1997; Lamont, 1997).

The remainder of this chapter is structured as follows. The survey that we conducted in 2000 is described in Section 7.2. Section 7.3 gives a general statistical description of the sample; this section plays a central role in the chapter. Section 7.4 analyses the factors perceived by private rice millers as important to their investment decisions. Section 7.5 concludes this chapter.

7.2 The survey

7.2.1 Preparing the questionnaire

We build our empirical study upon a survey of 210 private RMs in the MRD conducted in 2000. The survey's backbone is an extensive questionnaire.¹²³ In order to develop the questionnaire, we conducted several pilot surveys. The pilot surveys helped to select relevant questions and eliminate irrelevant ones.

We first talked with some private rice millers with whom we have had relatively long and good personal relationships in order to check if the questions formulated were proper to be asked and, moreover, to get an overview of the activities of rice millers. Irrelevant questions were eliminated or modified after the talks, and at the same time several new and relevant questions were added. Afterwards, we conducted a pilot survey of 27 RMs to see what kind of information we would receive. We found that the information was not as good as we expected. Therefore, we revised the questionnaire again and used this revised questionnaire to carry out the last round of the survey, which served to obtain the data set that we use in the empirical study in Chapters 8 and 9.

The survey was aimed at RMs' owners; the questionnaire was conducted only if the owners were available to answer; we did not accept anyone else other than the owners. Where possible, numerical cardinal estimates of the addressed issues were used (such as the value of fixed assets, profit, investment outlays and projections, the amount of money borrowed, *etc.*) In the questionnaire, numerical ordinal estimates were also used (such as ranking of importance, anticipations about the future, *etc.*).

7.2.2 Sample selection

The sample was selected randomly. In particular, we went to the sites selected beforehand and approached all private RMs we caught by sight and asked if their owners were willing to co-operate. If the reply was "yes", we started conducting the questionnaire. If they said "no", we excused ourselves and proceeded to the next one.

¹²³ The questionnaire is attached at the end of this dissertation.

Some of the approached rice millers did not accept us. Common reasons why the approached rice millers did not accept us were that they wanted to keep information undisclosed, or they were busy, or they did not feel comfortable being asked about their business.¹²⁴

Eight out of twelve provinces in the MRD were selected (see the maps at the end of Chapter 1). Among the four provinces that were not included in the survey, three, *i.e.*, Bentre, Travinh, and Camau, are coastal provinces, which are less involved in the rice business. In addition, the number of private RMs in these provinces is limited, so it was difficult and costly to find them. Therefore, we left these provinces out because of cost efficiency. The last one, namely Longan province, has a market more unified with that of Ho Chi Minh City than with the MRD.

7.2.3 Interviewers

We sent interviewers to RMs to ask them directly for information. The interviewers were selected among students at the School of Economics and Business Administration of Cantho University, Vietnam. An important criterion for students to be selected is that they had knowledge of rice-milling operations. Moreover, they should have done surveys previously.

We trained the selected students prior to conducting the questionnaire. Since conducting the questionnaire was difficult and called for patience, unmotivated interviewers spontaneously dropped out from the very first round of the surveying process. Thus, only motivated and properly trained interviewers remained. The selected students also felt responsible for data quality because we informed them about the importance of the data to be collected. All this appeared to be important in improving the data quality.

While interviewing, we used daily-spoken language that is understandable to the respondents. In the case that respondents had to choose among different possibilities, we used show cards in order to help them to better perceive the issues under consideration, thereby making the responses more precise.

7.2.4 Respondents' perception bias

Although we prepared the questionnaire carefully, the data collected can be affected by some perception bias of the respondents. First, private rice millers usually do not keep standard accounting books and good business records. Therefore, when asked for

¹²⁴ One may think that, due to this fact, the sample is biased in the sense that it includes only successful rice millers because those rice millers who refused to cooperate might not do well. However, there is no indication that it is the case.

information about past activities they had to recall what already happened; thus, the estimates or figures they provided may not perfectly reflect the actual activities. They also had a tendency to repeat the phrase “*more or less the same as this (or a certain) year*” to the questions that asked for cardinal numbers like past profits, the amount and price of paddy or brown rice bought or sold, *etc.* Second, private rice millers generally have poor access to market information, making forecasting the future more difficult for them. Thus, the respondents tended to provide approximate values. In order to make it easier for the respondents, in the questions asking for future forecasts we set up categories (such as from 1 to 5 per cent, 6 to 10 per cent, *etc.*). They could then indicate the category they thought to be most suitable.

In summary, we realise that the information collected using the questionnaire may at times not be precise. This should be taken into account while interpreting the empirical results. However, at the same time we feel confident that the answers of the respondents do reflect the characteristics of RMs in a sufficient way that warrants us to do empirical analyses because cross-checking the data during and after the survey did not reveal any extremely incorrect or impossible answers.

7.3 A statistical description of the sample

This section describes the sample with respect to such aspects as age, size, location, sales, profit, borrowing, and investment. Table 7.1 provides general information about these variables.

Table 7.1 A statistical description of the sample

<i>Variables</i>	<i>Min.</i>	<i>Mean</i>	<i>Median</i>	<i>Max.</i>	<i>St. dev.</i>	<i>Obs.</i>
Age*	0.0	8.7	8.0	29	6.2	210
Size*	40	447	350	2,100	356	210
Location*	0.0	0.6	1	1	0.5	210
Sales per <i>FA</i> in 1998**	0.120	0.770	0.557	2.317	0.623	203
Sales per <i>FA</i> in 1999	0.07	1.054	0.94	3.297	0.733	210
Profit per <i>FA</i> in 1998	-0.03	0.182	0.142	0.750	0.152	210
Profit per <i>FA</i> in 1999	-0.26	0.143	0.113	0.700	0.128	210
Borrowing per <i>FA</i> in 1998	0.0	0.130	0.0	0.769	0.214	208
Borrowing per <i>FA</i> in 1999	0.0	0.112	0.0	1.818	0.212	210
Investment per <i>FA</i> in 1998	0.0	0.138	0.047	0.923	0.197	210
Investment per <i>FA</i> in 1999	0.0	0.139	0.063	1.528	0.218	210
Planned investment per 1999 <i>FA</i>	0.0	0.078	0.04	0.600	0.118	210

Source: Own survey in 2000.

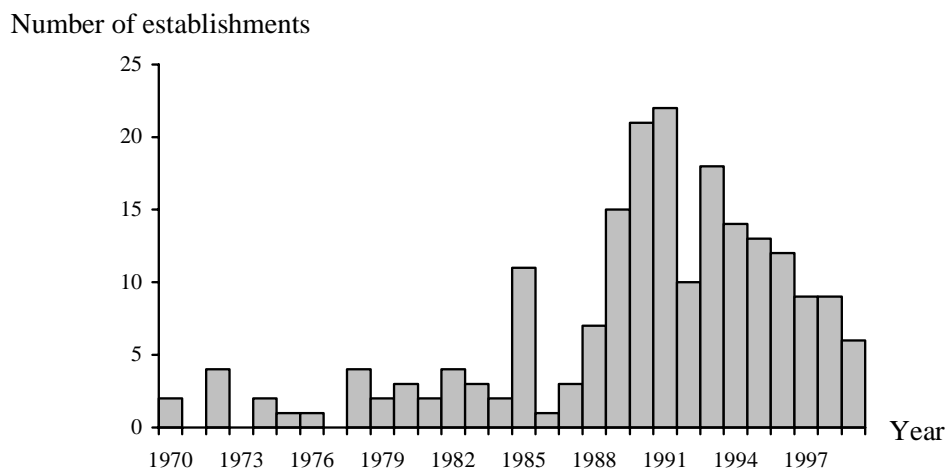
Note: * Definitions of age, size, and location are given in Subsections 7.3.1, 7.3.2, and 7.3.3, respectively; ** *FA* stands for total fixed assets.

7.3.1 Age

We define age of a RM as the number of years counting from the year of its establishment up to 1999. According to Table 7.1, the sample's average age is 8.7 years (standard deviation: 6.2). The oldest RM was established in 1970 (*i.e.*, 29 years old), and the youngest RMs were established in 1999.

Figure 7.1 plots the distribution of private RM establishments by year. According to this figure, a number of private RMs were established and operated before *doi moi* was implemented in 1986. This finding points out a deviation of Vietnam from other transition countries, particularly those in Eastern Europe, where private enterprises started to develop only after these countries adopted market mechanism (see, *e.g.*, Budina *et al.*, 2000). It also reflects the fact that Vietnam did not strictly apply the Soviet model, which absolutely rules out the private sector (see Chapter 2) and supports the argument in Chapter 4 that before *doi moi* being unable to supply food to everybody the government allowed private RMs to mill rice for home consumption.

Figure 7.1 Distribution of private RM establishments by year



Source: Own survey in 2000.

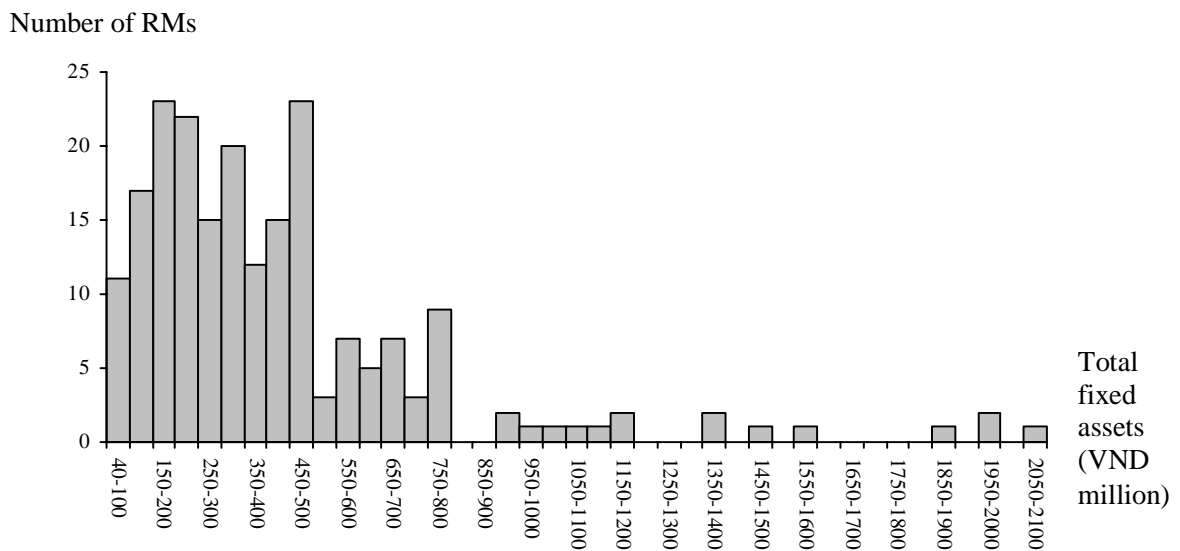
According to Figure 7.1, private RMs in the MRD are relatively young; the data set reveals that around 74.8 per cent of the sample's population was established between 1989 and 1999. The number of private RM establishments reached its peak in 1990-1991 and started to decrease afterwards. The substantial increase in the number of private RM establishments in 1990-1991 might be a result of the government's

recognition of the role of the private sector and of the Company Law issued in 1990, as we discussed in Chapter 2 (Subsection 2.5.2). This increase might also be due to the fact that in 1989 Vietnam started to export rice, therefore pushing up the demand for and the price of milled rice and encouraging the establishment of private RMs.

7.3.2 Size

In this dissertation, we use the value of total fixed assets in 1999 of a RM as the measure of its size.¹²⁵ As presented in Table 7.1, the average value of total fixed assets in 1999 of the sample is VND 447 million (standard deviation: 356), equivalent to USD 30,658.¹²⁶ The largest RM in the sample has a value of total fixed assets of VND 2,100 million (USD144,033) and the smallest of VND 40 million (USD2,744). Figure 7.2 depicts the distribution of the sample by size. This figure illustrates that the sample is dominated by small RMs because the distribution has a relatively long right tail.

Figure 7.2 Distribution of the sample by size



Source: Own survey in 2000.

¹²⁵ Since RMs in the MRD have a large number of seasonal (temporary) workers, the number of workers may not be a proper indicator of their size.

¹²⁶ According to <http://www.laodong.com.vn>, as of December 2000 the exchange rate between VND and USD was 14,580 VND/USD.

7.3.3 Location

The sample was drawn randomly from private RMs operating in eight provinces of the MRD. This sample's distribution over provinces is as follows: 29 RMs in Angiang province (13.8 per cent of the sample's population), 31 in Baclieu (14.8), 22 in Cantho (10.5), 30 in Dongthap (14.3), 15 in Kiengiang (7.2), 21 in Soctrang (10.0), 50 in Tiengiang (24.3), and 12 in Vinhlong (5.1).¹²⁷

In the MRD, there are four rice-milling centres: Thotnot district (located in Cantho province), Chomoi district (Angiang province), Sadec town (Dongthap province), and Caibe district (Tiengiang province). These provinces are located nearby either Cantho or Saigon seaport, giving private RMs in these districts an advantage in terms of shorter distances to the seaports and of lower transportation costs. Moreover, private RMs in these provinces may receive a stronger demand for their output compared to those in the other provinces because these provinces have attracted state-owned food companies.¹²⁸ A quote from Cantho News (March 5th, 1999) may provide an idea about the attraction of one of these centres: "... all the state-owned food companies in the South are present in Thotnot to prepare themselves for signing contracts with private RMs ...".¹²⁹ In contrast, those RMs located in the other provinces (*i.e.*, Baclieu, Soctrang, Kiengiang, and Vinhlong) may face a disadvantage as compared to the former.

Our sample includes 131 private RMs located in Cantho, Angiang, Dongthap, and Tiengiang provinces, accounting for 62.4 per cent of the sample's population. Based on the discussion given in the previous paragraph, we consider these RMs as having an advantageous location. Thus, these RMs are assigned a dummy location variable taking a value of one. In the sample, the number of private RMs located in Baclieu, Soctrang, Kiengiang, and Vinhlong provinces, which have a disadvantageous location, is 79 and make up the remaining 37.6 per cent of the sample's population. These RMs are assigned a dummy location variable taking a value of zero. This location variable will be used later in Chapter 8 as a proxy for the investment opportunity of private rice millers.

¹²⁷ The distribution of the sample over the provinces is not even because it depends on the possibility to find and get RMs to answer the questionnaire.

¹²⁸ As discussed in Chapter 4, the link between state-owned food companies and private RMs is important for both state-owned food companies and private RMs.

¹²⁹ Also according this source of information, Thonot district has 35 private RMs supplying rice to state-owned food companies and traders all over the MRD. In 1995, the district produced around 300.000 tons of export-qualified rice, representing around 15 per cent of total amount of rice exported by the country in that year. In 1996, it produced around 400.000 tons of rice and in 1997 more than 500.000 tons.

7.3.4 *Sales*

Sales of a RM is defined as the income from the sale of milled rice and by-products processed by the RM itself and/or from milling services it provides. Information about sales of RMs was collected through Question 8 of the questionnaire, which asked the respondents to give values of sales in 1998 and 1999 regarding every activity (*i.e.*, milling, polishing, own milled rice trading, and own by-products trading).

Table 7.1 reveals that the average sales per unit of fixed assets in 1998 of the sample is 0.770 (standard deviation: 0.623). The average sales per unit of fixed assets in 1999 is 1.054 (standard deviation: 0.733). This information implies that the average sales of private RMs significantly increased from 1998 to 1999.¹³⁰ Table 2.5 of Chapter 2 shows a substantial increase in the quantity of rice exported from 1998 to 1999, *i.e.*, from 3,793 thousand tons to 4,550 thousand tons, because of a substantial increase in the demand for Vietnam's rice from Indonesia due to a bad harvest (World Bank, 2000b); this may help to explain the increase in the average sales of private RMs.

7.3.5 *Profit*

Profit of a RM (in a given year) is its sales (defined above) minus the costs involved. Profits in 1998 and 1999 of every RM were recorded in Question 13. Since profit is a sensitive issue and is an important information to our empirical study, we have Question 14, which asked the respondents to specify profit expressed as a percentage of sales, in order to cross-check the information obtained using Question 13. The information collected using these two questions appears to be consistent.

Table 7.1 shows that the average value of profit per unit of fixed assets of the sample in 1998 is 0.182 (standard deviation: 0.152); the corresponding figure in 1999 is 0.143 (standard deviation: 0.128). The average value of profit of the sample significantly decreased from 1998 to 1999.¹³¹ This decrease in the average profit of the sample may be due to a drop of rice prices in Vietnam, from VND 3,411 per kilogram on average in 1998 to VND 3,162 per kilogram in 1999, *i.e.*, by 7.3 per cent.¹³²

7.3.6 *Borrowing*

As shown in Table 7.1, the average amount of money that a RM borrowed in 1998

¹³⁰ t -value = 4.27.

¹³¹ t -value = -2.84.

¹³² We obtained this information from the Vietnamese Government Committee for Pricing.

divided by the total fixed assets in 1998 is 0.130 (standard deviation: 0.214). This figure in 1999 is 0.112 (standard deviation: 0.212). In 1998 there were 76 RMs that borrowed, accounting for around 36.2 per cent of the sample's population, and as many as 134 RMs (63.8 per cent) did not borrow at all. In 1999 the number of RMs that borrowed is 84, *i.e.*, increasing by 10.5 per cent as compared to 1998 and accounting for around 40 per cent of the total sample; the number of RMs that did not to borrow remained high with 126 RMs, accounting for 60 per cent of the sample's population. Such a large number of RMs that did not borrow may indicate their difficulty in access to credit.

The data set reveals that, in 1999, 112 out of the 210 surveyed RMs (53.3 per cent) applied for credit; the number of RMs that did not apply for credit was 98, accounting for the remaining 46.7 per cent of the sample's population. Our survey does not report the reasons why several RMs of the sample did not apply for loans. Yet, according to our observation during the survey one of the reasons for not applying for loans is that private RMs, especially those having no or small collateral, might expect low chances of getting loans while the application procedure was costly (see Subsection 3.2.2 of Chapter 3). Of course, it may also be because they did not need external funds.

As described in Chapter 3, in Vietnam formal and informal financial markets coexist and charge different interest rates. The data set reveals that the average interest rate charged by the commercial banks was 1.2 per cent per month whereas the average interest rate charged by the informal lenders was around 2.8 per cent per month. This finding is in line with those of the studies mentioned in Chapter 3.

As shown in Table 7.2, private RMs borrowed from both banks and informal lenders. Banks appear to be more important to RMs as compared to moneylenders. In 1998, 58 out of 76 borrowers (76.3 per cent) resorted only to commercial banks for credit; five RMs (6.6 per cent) relied only on informal lenders; and 13 RMs (17.1 per cent) borrowed from both commercial banks and informal lenders. The borrowing picture changed a bit from 1998 to 1999; yet, the nature of RMs' borrowing remains the same. In 1999, 67 out of 84 borrowers (79.8 per cent) only borrowed from commercial banks; six RMs (7.1 per cent) chose only informal lenders; and 11 RMs resorted to both commercial banks and informal lenders.

In sum, the overview in this subsection reveals that commercial banks are more important than informal lenders in terms of financing private RMs. It also shows that a large portion of the sample did not apply for loans or did not have access to external funds. This finding lends support to the argument in Chapter 3 that access to external funds for private firms in Vietnam is limited.

Table 7.2 Actual borrowing of private RMs

Category	1998		1999	
	Number of RMs observed	Per cent of the sample's population	Number of RMs observed	Per cent of the sample's population
Non-borrowers	134	63.8	126	60.0
Borrowers	76	36.2	84	40.0
Banks only	58	27.6	67	31.9
Informal lenders only	5	2.4	6	2.9
Banks and informal lenders	13	6.2	11	5.2
<i>Total</i>	210	100.0	210	100.0

Source: Own survey in 2000.

7.3.7 Investment

In this dissertation, (fixed) investment of a RM is defined to include all of its expenditures amounting to VND5 million or more spent on its rice-milling factory that includes six categories, *i.e.*, milling machine, polisher, dryer, building, warehouses, and transportation means. This definition is in accordance with the accounting rule in Vietnam, which considers an asset having a value of VND 5 million or higher and lasting longer than one year as a fixed asset. The data set reveals that around 78 per cent of the investment expenditure in 1999 was spent on milling and polishing machinery. The data set does not include inventories because the respondents failed to report information about the expenditures on inventories.

Past investment

Investments in 1998 and 1999 decomposed into six investment categories were collected using Questions 9 and 10, respectively. Table 7.1 shows that the average investment per unit of total fixed assets in 1998 of the sample was 0.138 (standard deviation: 0.197). There were 102 RMs, accounting for around 48.6 per cent of the sample's population, that did not invest at all and 108 RMs that invested (52.4 per cent). As presented in Table 7.3, the average investment per unit of fixed assets in 1998 for the investors, *i.e.*, those RMs who invested, was 0.359 (standard deviation: 0.508).

In 1999 the average investment per unit of fixed assets of the sample was 0.139 (standard deviation: 0.218). In 1999 there were 83 RMs (39.5 per cent of the sample's population) that did not invest at all and 127 RMs that invested, accounting for the remaining 60.5 per cent of the sample. The average investment per unit of fixed assets in 1999 for the investors was 0.230 (standard deviation: 0.241).

The information provided in Table 7.3 also reveals changes in the investment behaviour of the sample. From 1998 to 1999, the number of RMs that invested increased from 108 to 127, *i.e.*, by around 17.6 per cent. As for the whole sample, the average investment per unit of fixed assets remained nearly unchanged from 1998 to 1999, *i.e.*, 0.138 versus 0.139. Yet, as for the investors the investment per unit of fixed assets in 1999, as compared with that in 1998, exhibited a significant drop, from 0.359 to 0.230 or by 36 per cent. One of the reasons for this change may be that the rice market in Vietnam was highly fluctuating in 1998.

Table 7.3 Past investments by private RMs in 1998 and 1999

<i>Variables</i>		1998	1999
1	Total number of RMs surveyed	210	210
a	Number of RMs that invested	108	127
b	Number of RMs that did not invest	102	83
2	Average investment per fixed assets for the sample (standard deviation)	0.138 (0.197)	0.139 (0.218)
3	Average investment per unit of fixed assets for the investors (standard deviation)	0.359 (0.508)	0.230 (0.241)

Source: Own survey in 2000.

Planned investment

The questionnaire has two questions (*i.e.*, Questions 11 and 12) aiming to acquire information about planned investment by the sample in two consecutive years 2000 and 2001.¹³³ For every year, we recorded planned investment for each RM in case it could borrow and in case it could not borrow. In a particular year, planned investment of a certain RM in case it could borrow is expected to be different from that if it could not borrow because of two reasons: (i) the RM can use (part of) the amount of money borrowed to invest, and (ii) lenders are expected to bear part of the risks facing the investment projects, encouraging the RM to invest.

The information shown in Table 7.4 appears to be supportive of the arguments in the previous paragraph. In 2000 the number of RMs that planned to invest was 82 and 62 if RMs are able and not able to borrow, respectively. More interestingly, the average planned investment for 2000 is 0.100 (standard deviation: 0.202) if able to borrow; this figure significantly reduces to 0.058 (standard deviation: 0.125) if not

¹³³ Initially, we aimed to acquire information on planned investment for a longer term. Unfortunately, the respondents were not able to provide this information because they do not seem to have a planning horizon that is longer than two years.

able to borrow.¹³⁴ In 2001 the picture seemed to be similar. The number of RMs that planned to invest falls from 55 (if able to borrow) to 38 (if not able to borrow), *i.e.*, by around 31 per cent. The average planned investment in 2001, if able to borrow, was 0.078 (standard deviation: 0.189); this figure was 0.040, if not able to borrow, exhibiting a significant drop.¹³⁵

A similar result would emerge as for those RMs which planned to invest. In 2000 the average investment per unit of fixed assets (in 1999) changes from 0.255 if able to borrow to 0.195 if not able to borrow. This change amounts to a significant fall.¹³⁶ In 2001, the average investment per unit of fixed assets (in 1999) was 0.297 and 0.223 if able and not able to borrow. The difference between these two figures is significant.¹³⁷ The results shown in Table 7.4 may suggest that access to credit is an important determinant of investment of RMs.

Tables 7.3 and 7.4 also show that planned investment is considerably smaller than past investment. This may be because of risk aversion and/or increasing uncertainty of the RMs, making it difficult to plan investment ahead of time, especially when information is lacking.

Table 7.4 Planned investments for 2000 and 2001

<i>Variables</i>	2000		2001	
	<i>Able to borrow</i>	<i>Unable to borrow</i>	<i>Able to borrow</i>	<i>Unable to borrow</i>
1 Total number of RMs observed	210	210	210	210
2 Number of RMs that planned to invest	82	62	55	38
3 Number of RMs that planned not to invest	128	148	155	172
4 Average planned investment per unit of fixed assets (in 1999) for the entire sample (standard deviation)	0.100 (0.202)	0.058 (0.125)	0.078 (0.189)	0.040 (0.114)
5 Average planned investment per unit of fixed assets (in 1999) for the RMs that planned to invest (standard deviation)	0.255 (0.256)	0.195 (0.165)	0.297 (0.267)	0.223 (0.177)

Source: Own survey in 2000.

7.4 Factors affecting investment decisions of private rice millers

The effects of financial market imperfections and uncertainty on firm investment, as reviewed in Chapters 5 and 6, have attracted a huge volume of literature. The litera-

¹³⁴ t -value = 2.56.

¹³⁵ t -value = 2.45.

¹³⁶ t -value = -2.85.

¹³⁷ t -value = -3.34.

ture has inspired us to investigate of the effects of these factors on investment in the context of private rice millers in the MRD. Before doing this, we like to reveal the perception of private rice millers towards the importance of financial market imperfections- and uncertainty-related factors to their investment decisions in order to be sure about the relevance of these factors.

We developed a device that helps to grasp the perception of private rice millers towards the importance of these two factors. Question 15 of the questionnaire asked: “Please indicate the importance of the following factors to your investment decisions.” This question lists eleven factors that belong to two categories, *i.e.*, financial market imperfections and market uncertainty. Each factor was assigned importance ranking points formulated as follows: (1) = unimportant, (2) = not so important, and (3) = important.¹³⁸ Almost all the respondents reported their perception of the importance of the listed factors to their investment decisions regarding milling machinery, *i.e.*, the principal element of a RM. We then calculated the average of the ranking points that the respondents assigned to each factor and use them to learn about the importance of the factors. Table 7.5 reveals this information about nine relevant factors that appear to be the most important.

Table 7.5 Importance of the factors affecting investment decisions of rice millers

<i>No.</i>	<i>Factors</i>	<i>Average ranking point</i>
<i>A</i>	<i>Financial market imperfections</i>	
1	Access to bank loans	2.4
2	Interest rate charged by banks	2.0
3	Collateral for bank loans	2.6
<i>B</i>	<i>Uncertainty</i>	
6	Unanticipated changes in output demand	2.9
7	Unanticipated changes in output prices	2.7
8	Unanticipated changes in sales	2.9
9	Unanticipated changes in future prices of milling and polishing	2.8
10	Unanticipated changes in input supply	2.4
11	Unanticipated changes in input price	2.5

Source: Own survey in 2000.

Table 7.6 shows that access to bank loans (Factor 1) appears to be important. Interest rates charged by banks (Factor 2) were perceived as being less important than access to bank loans. The requirement on collateral (Factor 3) was considered by private rice millers as more important than the other two factors. This is understandable

¹³⁸ Since it was difficult for the respondents to differentiate between the qualifications “important” and “very important” that we had used originally (see the questionnaire), we group these two categories into one named “important”.

because, according to the survey, 100 per cent of bank loans to private rice millers have to be secured by collateral.

Table 7.6 suggests that although the factors related to financial market imperfections are perceived relevant for the private rice millers' investment decisions, they seem to be less important than market uncertainty. As for market uncertainty, it is obvious that the effect of uncertainty on investment decisions of rice millers is the important. Since most of the RMs have limited market power, any fluctuation on markets may be perceived to have a strong influence on their investment decisions. Among the uncertainty factors, those related to the demand side, *e.g.*, unanticipated changes in output demand, in output prices, in sales, *etc.*, were perceived as more important than those related to the input side, such as changes in input supply and in input prices.

7.5 Conclusions

This chapter provides a descriptive statistics of the sample, which covers 210 private RMs in the MRD. The chapter helps to reveal the overall picture of the rice-milling industry in the MRD. It was shown that the rice-milling industry responded positively to *doi moi*: a large portion of the sample was established shortly after *doi moi* was launched. The rice-milling industry appears to be dominated by small RMs, which may be a consequence of their poor access to credit and uncertainty. This chapter uncovers that only around half of the sample applied for credit, and a bit more than half of them were successful in getting credit. This means that private RMs have financed most of their investment using internal funds. If internal funds play such an important role in financing investment of private RMs, it should be revealed that their investment is empirically sensitive to internal funds. In addition, the uncertainty with regard to the demand side was also perceived by private RMs as an important factor affecting their investment decisions.