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Investment of rice mills in Vietnam

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PART ONE

Introduction and background

Chapter 1

Introduction

1.1 Introduction

In 1986 Vietnam started a transition process from a centrally-planned economy to a market-oriented one with the launching of a programme of economic reform (*doi moi*). One of the aims of this transition process was to promote the private sector. The motivation underlying this aim was the recognition that central planning fostering only state and collective ownerships failed to work and that the private sector may play an important role in boosting investment and spurring economic growth.

Doi moi, which allows private ownership and activity, among other things, led to a surge of the share of the private sector in Vietnam's GDP. Starting from a nearly zero base at the outset of *doi moi*, in 1997 the private sector accounted for 37.7 per cent of Vietnam's GDP (Vietnam Statistical Yearbook 2001). However, the share of the private sector started to fall as *doi moi* became stalled. In 2000 the private sector made up just 35.7 per cent of Vietnam's GDP (Vietnam Statistical Yearbook 2001), decreasing by two per cent as compared to 1997.

The drop of the share of the private sector in Vietnam's GDP may result from inadequate private-sector investment. Table 1.1 reveals that private-sector investment in Vietnam made up a relatively small portion of total investment outlays compared to state-sector investment. Moreover, this portion tends to decline. If private-sector investment continues to be inadequate, Vietnam's economy will remain dominated by inefficient state-owned enterprises (SOEs). As a result, economic growth will be hampered. This poses an important question: what is the cause the inadequacy of private-sector investment in Vietnam?

Table 1.1 Vietnam: investment share by ownership, 1995-2001 (in per cent)

<i>Ownership</i>	1995	1996	1997	1998	1999	2000	2001
State	42.0	49.1	49.4	55.5	58.7	57.5	58.1
Private	27.6	24.9	22.6	23.7	24.0	23.8	23.6
Foreign	30.4	26.0	28.0	20.8	17.3	18.7	18.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Vietnam Statistical Yearbook 2001.

This dissertation aims to contribute to answering this question by studying the factors that affect investment of Vietnamese private enterprises. It will focus on a particular industry, *i.e.*, the rice-milling industry, which serves to convert paddy into rice. This industry is selected for two reasons. First, it plays a key role in the production process of one of the most important commodities in Vietnam, *i.e.*, rice – the principal staple of more than 75 million Vietnamese; furthermore, rice is among the top export items of Vietnam. Second, it is widely observed that in Vietnam rice milling is done by a large number of small rice mills (RMs) using obsolete, inefficient machinery. This indicates that firm investment in this industry may have been inadequate. IFPRI (1996), a comprehensive study of the Vietnamese rice market, finds that investment in the rice-milling industry in Vietnam was remarkable in some first years of the 1990s, but this has declined later on.

What is the cause of the inadequacy of firm investment in the rice-milling industry in Vietnam? Answers to this question are still unknown because relevant information seems to be scarce. According to the literature, among the factors affecting firm investment financial market imperfections and uncertainty emerge as the most important ones. These factors appear to be relevant in the context of Vietnamese private enterprises, as will be discussed briefly below and more carefully later in this dissertation.

Financial imperfections. In Vietnam financial imperfections result from the underdevelopment of the financial system. The Vietnamese formal financial system has been dominated by a few large state-owned commercial banks. These banks have given SOEs privileged access to their credit according to directives of the government. In addition, due to poor experiences with market-based financial transactions and insufficient information about private enterprises, they tend to impose credit rationing upon private enterprises and/or to maintain stringent collateral requirements, which are difficult for private enterprises to fulfil, in order to secure their loans. Other actors of the Vietnamese formal financial system are either weak (like domestic joint-stock commercial banks) or unfamiliar with private domestic enterprises (like foreign banks). Informal financial agents and mechanisms (such as moneylenders, rotating savings and credit associations, *etc.*) face resource con-

straints, *i.e.*, they do not have much money to offer, thus being less able to finance investment. All this is believed to lead to limited access to credit for Vietnamese private enterprises in general and for private RMs in particular.

Uncertainty. In general, uncertainty is embedded in market volatility. As for Vietnamese private rice millers,¹ the uncertainty stemming from market volatility is exacerbated by the lack of market information that they encounter. In Vietnam information channels are poorly developed. This deficiency limits access of private rice millers to market information. Other barriers restricting their access to market information that is available add to the problem. One of the barriers concerns language; poor capability in terms of using foreign languages may make private rice millers unable to understand information that is not expressed in Vietnamese. Another barrier is related to the cost of using information; in Vietnam the cost of using the information appears to be prohibitively high. Finally, it is likely that private rice millers may neither digest nor effectively use statistical data, if they manage to acquire, because of their insufficient schooling. All this means that private rice millers in the MRD may be faced with severe uncertainty.

Assuming the presence of financial market imperfections and uncertainty, *we hypothesize that financial market imperfections and uncertainty negatively affect investment of private RMs in Vietnam.*

In the empirical part of this dissertation, we will test this hypothesis using firm-level data of private RMs. Private RMs play an overwhelming role in the rice-milling industry terms of production: they processed more than 90 per cent of the amount of milled rice produced in Vietnam (see Table 4.1 of Chapter 4). The private RMs covered in the empirical part of this dissertation were selected from the Mekong River Delta (MRD), the rice bowl of Vietnam. The MRD consists of twelve provinces in the South of Vietnam (see the maps at the end of this chapter). It is endowed with a favourable climate and very fertile soil, which help to sustain its importance in Vietnam's agriculture, especially in rice production (see Table 1.2). Due to this importance, the Delta has attracted a lot of private RMs, making it a proper region for studying the rice-milling industry.²

¹ In this dissertation, the term "rice miller" is used to refer to an individual who own a RM.

² IFPRI (1996) mentions that more than 80 per cent of RMs this study surveyed were located in the MRD.

Table 1.2 The Mekong River Delta, Vietnam

<i>Criteria</i>	<i>MRD</i>	<i>Vietnam</i>	<i>MRD/Vietnam (per cent)</i>
Area (km ²)	39,559	330,991	12
Population (as of April 1 st , 1999)	16,131,984	76,327,900	21
Gross agricultural output in 1999 (VND bill.)	38,700.5	102,932.9	38
Rice production in 1999 (tons)	16,294,700	31,393,800	52

Source: Vietnam Statistical Yearbook 2000.

1.2 Outline of the dissertation

This dissertation continues with Chapter 2, reviewing the changes in the economic system in Vietnam since the reunification of the country in 1976. This chapter starts with an overview of the transition of Vietnam's economic system from central planning to market mechanism, including the economic reforms (*doi moi*) initiated in the late 1980s. It then discusses the agricultural reforms that have unleashed this sector's potential and have thus led to a substantial increase in the supply of paddy, especially in the MRD. This chapter also covers the international trade aspect of *doi moi*, which shapes the link between international and domestic markets. In the case of rice this means, *e.g.*, that increasing openness to the international rice market has led to fluctuations in domestic rice prices that create uncertainty for private rice millers in Vietnam.

Chapter 3 analyses the financial system in Vietnam so as to reveal that access to credit for Vietnamese private enterprises is poor. Several formal financial intermediaries (such as state-owned commercial banks, foreign banks, domestic joint-stock commercial banks, *etc.*) are investigated in this chapter. Vietnam's stock market is also covered. In addition, this chapter analyses the informal financial sector in Vietnam, including moneylenders, rotating savings and credit associations (ROSCAs), *etc.* Finally, it discusses Vietnamese government policies *vis-à-vis* the financial system and characterizes the Vietnamese financial system in a comparative context.

Chapter 4 introduces the rice-milling industry in the MRD. It discusses the emergence of the rice-milling industry in the MRD alongside *doi moi* and the information problem that private rice millers have faced. This chapter is important in terms of helping to draw an overall picture of the industry and giving an insight into the causes and the nature of the uncertainty confronting private rice millers in the MRD.

Chapters 2-4 suggest that the underdevelopment of Vietnam's financial sys-

tem and the uncertainty with respect to output demand and prices may be main obstacles to the development of the rice-milling industry in the MRD. This suggestion serves as a background to Chapters 5-9, which cover the main focus of the dissertation.

The focus of this dissertation commences with Chapter 5, which is devoted to a survey of the literature on the link between financial market imperfections and firm investment. This chapter discusses the theoretical literature on financial market imperfections, asymmetric information, and credit rationing. Afterwards, it explains the link between financial market imperfections and firm investment. Finally, this chapter discusses the investment models that have been used to study this link and summarizes the empirical evidence.

Chapter 6 surveys the literature on the relationship between uncertainty and firm investment. This chapter prepares for the empirical study on the investment-uncertainty relationship in the context of private RMs in Chapter 9. The literature on the relationship between uncertainty and firm investment is extensive. This chapter is selective with respect to discussing the literature in the sense that it only contains two relevant elements: the real options approach to investment and the empirical evidence on the relationship between uncertainty and firm investment.

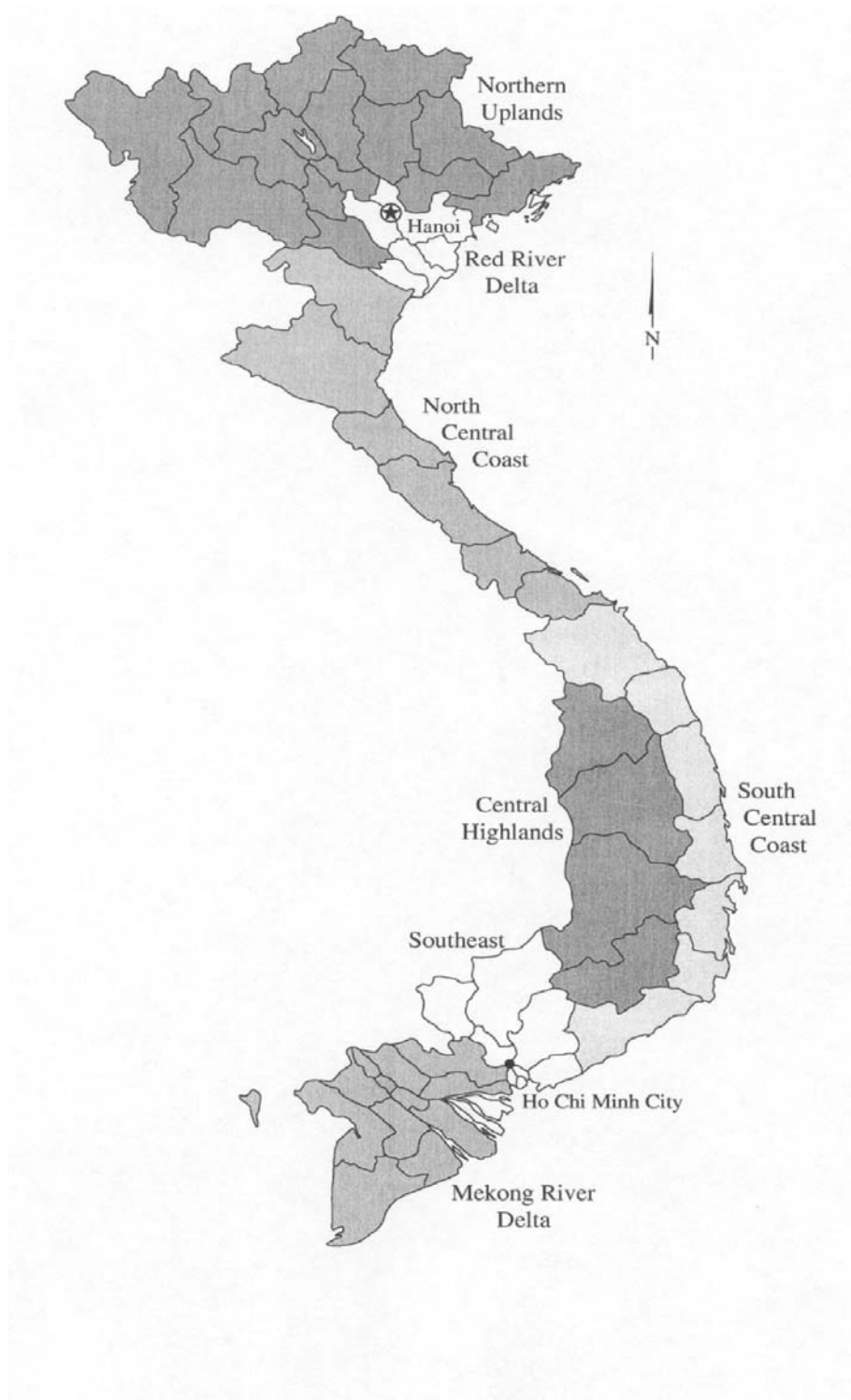
Chapter 7 presents the data set we use in the empirical study of this dissertation. This chapter describes the variables that we use later, such as fixed assets, age, profit, borrowing activities, investment outlays and projections, sales, the expected growth rate of sales, the degree of competition, the degree of physical capital irreversibility, *etc.* By doing so, this chapter may also provide an in-depth picture of the rice-milling industry in the MRD.

Since the empirical literature has shown the relationship between financial market imperfections and firm investment elsewhere, this dissertation will empirically investigate whether or not such a relationship exists for private RMs in the MRD. Chapter 8 is devoted to this purpose.

Chapter 9 empirically studies the investment-uncertainty relationship in the context of RMs in the MRD. This chapter first measures the uncertainty and the irreversibility facing RMs and then discusses our empirical results.

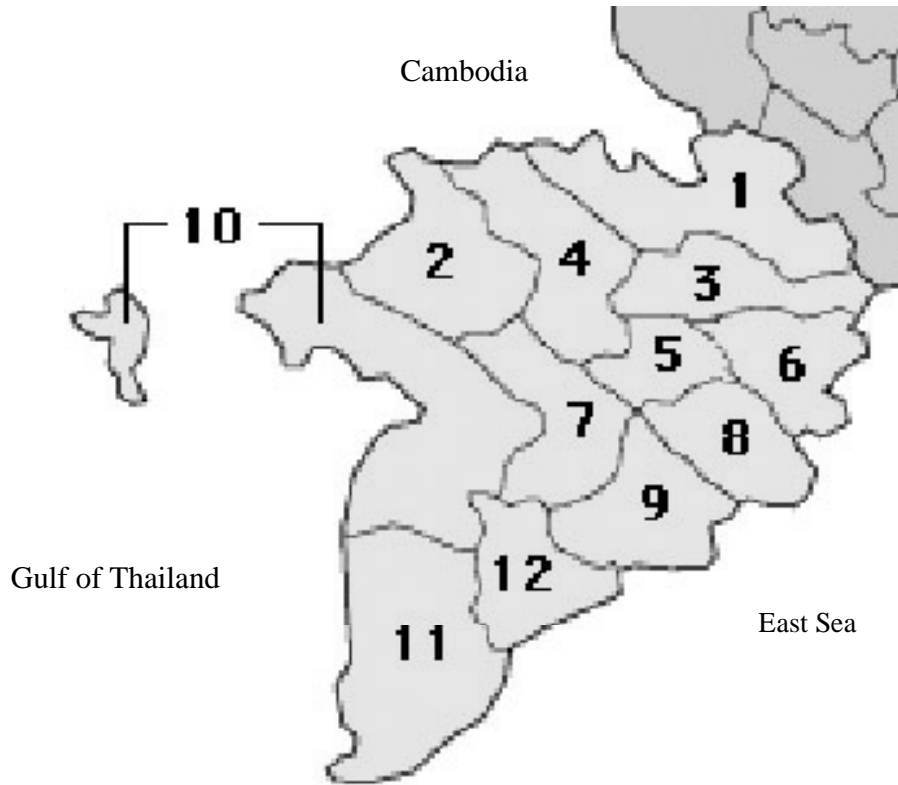
Finally, Chapter 10 draws some conclusions based on the outcomes of the empirical study and presents some recommendations that may help to enhance investment in the rice-milling industry. This chapter also tries to provide some topics for future research.

Map 1.1 Vietnam



Source: Minot and Goletti (2000).

Map 1.2 The Mekong River Delta, Vietnam



1. Longan; 2. Angiang; 3. Tiengiang; 4. Dongthap; 5. Vinhlong; 6. Bentre; 7. Cantho; 8. Travinh; 9. Soctrang; 10. Kiengiang; 11. Camau; and 12. Bacieu.

Source: <http://www.worldbank.org>.

