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Thailand's Investment in the Post-Crisis Era: Issues and Challenges

By

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Thailand's Investment in the Post-Crisis Era: Issues and Challenges

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1. Introduction

The 1997 economic crisis was undeniably one of the most severe times for the affected countries and it left behind many lessons and implications for generations to come. Before the financial turmoil took place, Thailand was a fast-rising economy, enjoying the dubbed miraculous economic growth and development. Leading the way was the investment component, which was then a major growth contributor. However, the promising future of reaching a developed country status came to an abrupt detour in the wake of the crisis. During the first two years of post-crisis era, the economy registered negative expansions in line with contractions of growth engines. In the subsequent years, the restructuring and reform process were carried out in Thailand. Recovery took place and was reflected in most major GDP components.

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Yet a full decade has passed and investment remained mostly subdued, still performing less strongly compared to the pre-crisis record. This was evident in a reduction of investment's contribution to GDP growth from the peak of 8.3% in 1990 to the range of 2.5% and below from 1999 onwards. Other affected countries (such as the Philippines, Malaysia and Indonesia) also encountered similar circumstances and thus this has been in focus of a number of studies (see IMF (2007), Bocchi (2008) and Jongvanich and Kohpaiboon (2008)). IMF (2007) examines reasons that might account for the slow investment recovery. The explanations include a riskier investment environment, weaknesses in the financial and corporate sectors, and sluggish nontradable sectors. These illustrations are loosely consistent with the observed patterns of investment, though none of them are strong enough to fully explain the slow investment recovery on their own.

As one of the countries that were hit the hardest by the crisis, Thailand offers a lead to the explanation and policy recommendations for the inert investment in other affected countries. This paper therefore intends to identify the trend of private investment since 1980 and its major policies in Thailand. We also undertake a time-series data estimation to investigate determinants of the investment. Our findings suggest that Thailand's investment is affected by economic growth, returns on investment, corporate leverage, exchange rate, and public investment. In addition, the investment negatively responds to cost of capital, exchange rate volatility, the crisis, and political instability. Credit availability however fails to exhibit significant influence on the investment. From a policy perspective, these suggest that apart from sound macroeconomic environment, the government should provide good governance and institutions to secure greater amounts of private investment.

The rest of the paper is organized as follows. Section 2 illustrates the trend of both domestic and foreign investments in Thailand from 1980 onwards, with a highlight on differences between before and after the crisis. Section 3 provides a brief examination of Thailand's major investment policies, which partly explained such investment development. Section 4 investigates determinants of private investment, and Section 5 lays out current issues and challenges facing investment in Thailand. The last section concludes and offers some policy recommendations.

2. Trend of Investment in Thailand

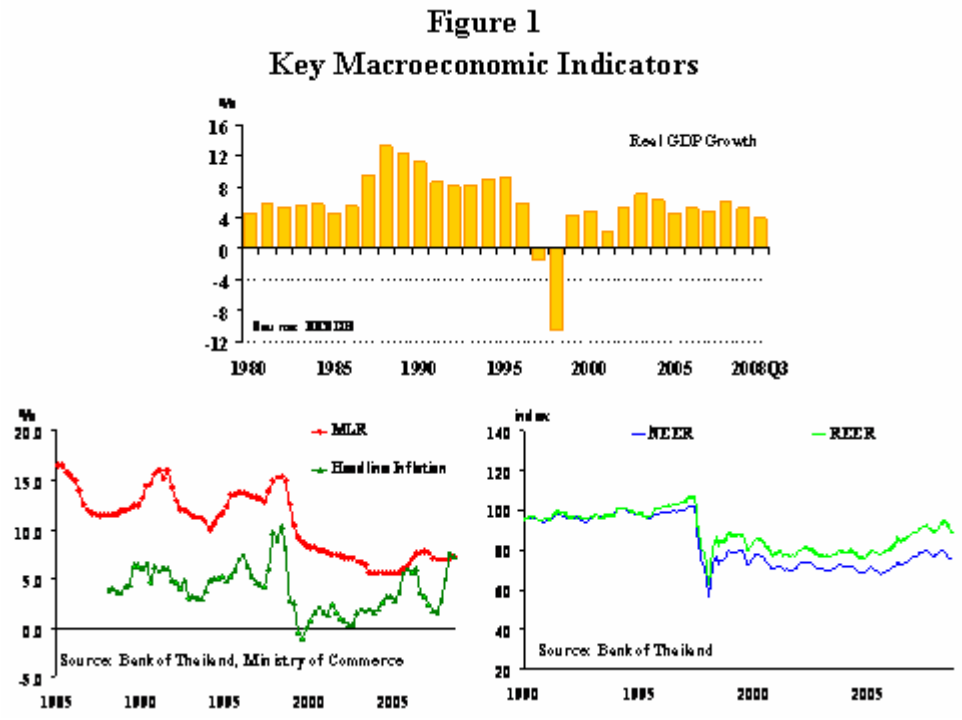
Thailand's investment has been closely evolved with economic development since 1980. With an emphasis on pre-crisis and post-crisis development, this section provides a brief summary of key macroeconomic conditions, trend of domestic private investment, and patterns of foreign direct investment (FDI) in Thailand.

Macroeconomic Conditions

Thailand's economic conditions have undergone a structural change over the past few decades. From the late 1980s to the early 1990s, Thailand experienced a period of high economic growth as a result of the shift in aggregate output production from agricultural sector to manufacturing sector, the export promotion policy, and direct investment by multinational corporations (MNCs).

Average annual GDP growth rose sharply from 5.3% in 1980-86 to 9.5% in 1987-96, which was the period of economic boom (Figure 1). Private consumption, accounted for more than 50% of GDP, had a relatively large contribution to growth expansion in the pre-crisis years. Under the export promotion policy, export sector appeared to be a major driver of economic growth, and its role has strengthened since 1997. For domestic investment, although it was also a main contributor to GDP growth before the crisis, its contribution turned to be negative during that time.

Figure 1
Key Macroeconomic Indicators



Turning to other key macroeconomic factors (such as interest rate, inflation and exchange rate), minimum loan rate (MLR) on average was 12.9% from 1985 to 1996. The sharp rises of MLR over some periods were a result of the abolition of interest rate ceilings in 1989 and 1992. Average pre-crisis inflation rate was 5%, which was rather high partly due to rapid economic expansion. Before the crisis, the pegged exchange rate regime made nominal exchange rate relatively stable as real exchange rates were appreciated against US$.

Following the crisis, domestic interest rate skyrocketed as domestic commercial banks attempted to keep their deposit liabilities and liquidity in the country, but it was subsequently brought down to boost economic recovery. The inflation rate increased dramatically in line with sudden devaluation of the Baht (currency of Thailand). Yet, after the adoption of Inflation-targeting framework, the rate subsequently became rather low over the period of 2000 to 2004. In the middle of this year, inflation rate significantly increased from the effect of high food and energy prices; nonetheless, the impact has disappeared in the last quarter of 2008.

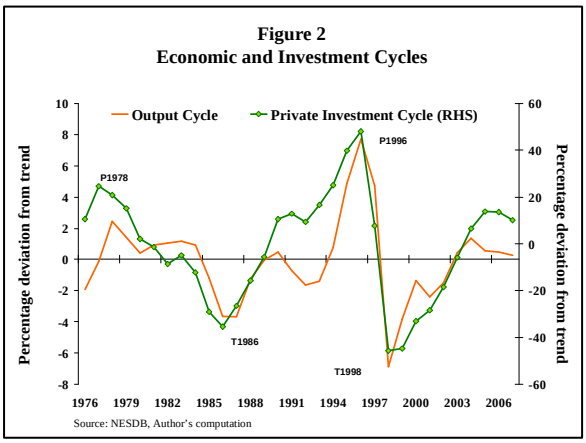
In conclusion, strong economic growth before the crisis was mainly owing to export expansion and sound macroeconomic condition. In addition, good governance and institutions provided favorable economic environment for investment in Thailand (Kohpaiboon (2005)). Nevertheless, lower growth path in the present is a result of shrinking domestic demand mainly from sluggish growth of private investment and political instability making a reduction in business and consumer confidences.

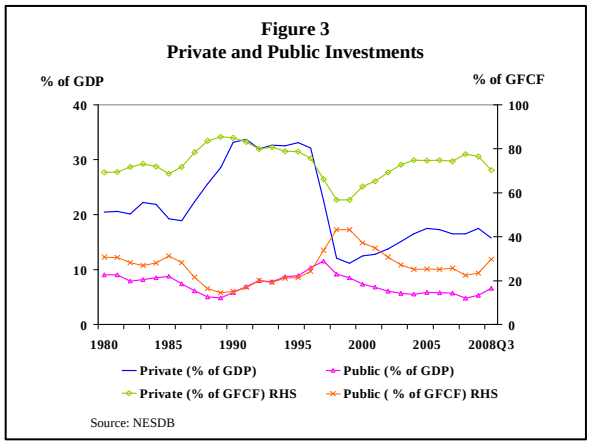
Domestic Investment

Despite its smaller proportion to GDP than consumption, investment is closely related to economic boom and bust cycles over the past three decades. As shown in Figure 2, private investment cycles have shared same major turning points with economic cycles (output peaks (P) and troughs (T)). Higher pre-crisis growth of private investment cycles than that of output cycles pointed out that over-investment prevailed in Thailand before 1997. After the crisis, output and investment cycles recovered with a positive growth in 2003 and 2004, respectively. However, slow pace of recovery in private investment could be observed since 2006 whilst the output cycles continue to show an upward trend.

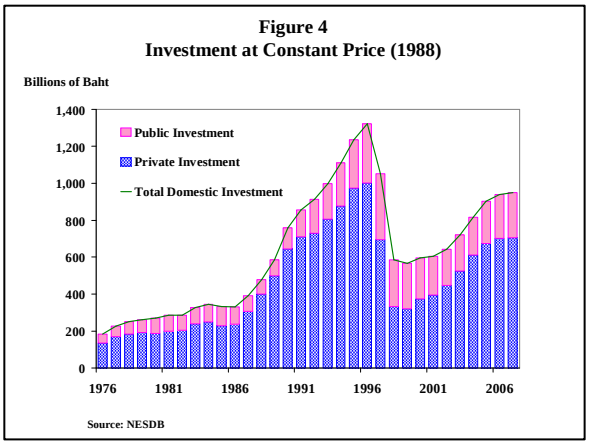
During the boom, domestic investment grew drastically, representing almost 40% of GDP (Figure 3). The investment ratio however reduced to 28% of GDP, after sudden investment slowdown caused by the crisis. Classified by sector, private investment has played a significant role in explaining investment patterns in Thailand. Private investment represented approximately 30% of GDP in the expansion period. Afterwards, although Thailand gradually tracked a recovery trend, private investment

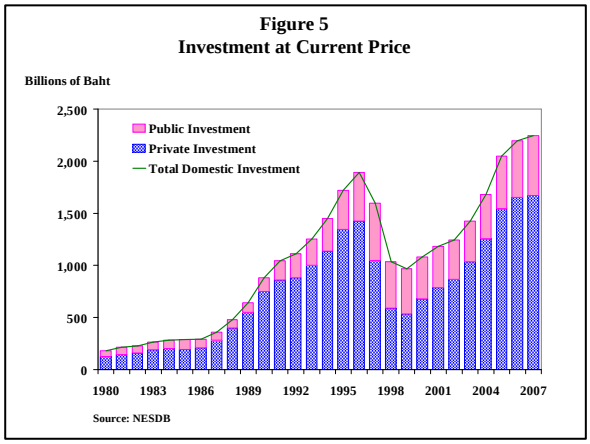
(as a proportion of GDP) was still below the pre-crisis level, lingering around 17% from 2004 to 2007.[1]





In Thailand, public investment has accounted for a much smaller share than private investment. Since 1980, the investment mostly remained well below 10% of GDP. It has mostly concentrated on infrastructure, and has been used as an instrument to counter business cycles (Jongvanich and Kohpaiboon (2008)).





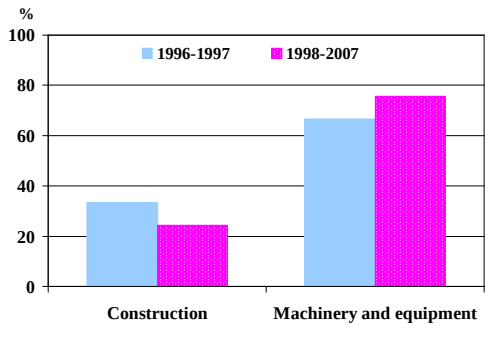
As presented in Figure 4, real private investment started to grow rapidly since 1986, and reached a peak of Baht 1,000 billion (or approximately US$ 30 billion) in 1996. During the years, investment grew at around 15%, mostly in the form of greenfield investment (FDI) originated by multinational enterprises (MNEs). The crisis however brought down the investment by -30% and -52% in 1997 and 1998, respectively. On the other hand, public investment was rather low relative to private investment. Also similar patterns were observed in nominal private investment

[1] Compared to gross fixed capital formation (GFCF), private investment took a major share of 80% on average in 1988-96 whilst its share after 1997 is below the pre-crisis level.

(Figure 5). Sharp decrease of the investment was a result of the collapse of Thai economy, particularly in the real estate and banking sectors.

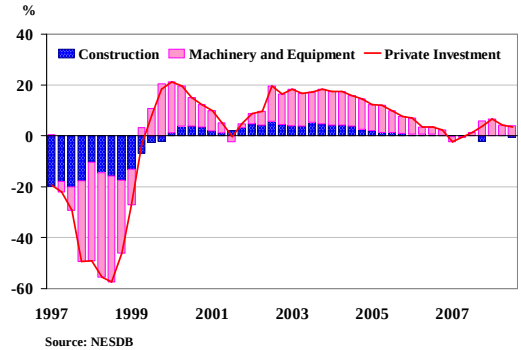
Moreover, there was a structural change in sector-level private investment following the crisis. With NESDB (National Economics and Social Development Board, Thailand) data, private investment could be classified into two broad categories, namely construction and machinery and equipment sectors (Figure 6). Prior to the crisis, the construction sector represented approximately 40% of total private investment as private investment in machinery and equipment made up the remainder 60%.

Figure 6
Private Investment by Sector



Source: NESDB

Figure 7
Contribution to Private Investment Growth

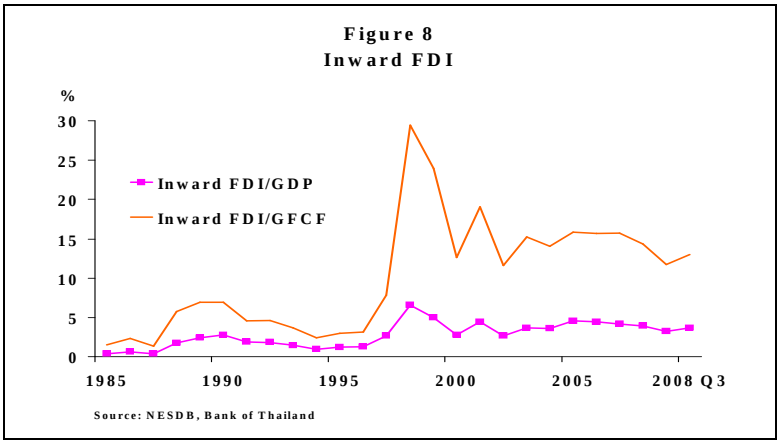


Source: NESDB

After the crisis, the structure of investment was changed partly because of the real estate collapse and over-investment phenomenon. The share of construction sector fell drastically to 30% approximately in 1997-98; it has remained below 25% until now. By contrast, the machinery and equipment sector gains more importance in (total) private investment after the crisis (Figure 7). Its share stood at 70% of the investment in 1997-98, and has remained above 75% since. As a consequence, this investment is a main driver of private investment in the post-crisis era. Yet, the fall in both investments from 2005 onwards results in a slowdown of private investment.

Foreign Direct Investment (FDI)

As a source for technology transfer, employment and growth, FDI is the most important capital flows in Thailand. However, compared to GDP inward FDI has been rather low, sitting under 7%, since 1985. Before the crisis, inward FDI averaged at US$ 1.9 billion per annum or approximately 1.8% of GDP. As compared to total investment (GFCF), the inward FDI to GFCF ratio rose sharply from 5% before 1997 to 27% afterwards due to surge in FDI inflows in 1998-99. Since 2003 it has well remained in the range of 10-17% (Figure 8).



Before 1997, a significant increase in FDI was caused by East Asian MNEs taken place mostly in the labor-intensive industry. The consequence of Plaza Accord Agreement in 1985 led to an appreciation in various currencies in East Asia including Japanese Yen, Taiwanese Dollar, and Korean Won, resulting in their country competitiveness reduction. The MNEs, especially from Japan, then decided to undertake direct investment abroad, for example countries in South-east Asia including Thailand.

During the crisis, inward FDI remained at higher level partly owing to the Baht devaluation, averaging at US$ 4.9 billion per annum or 4.3% of GDP. More inflows went to the banking sector as foreign ownership limitation was expanded to more than 49%. This made foreign investors undertook FDI, merger and acquisitions (M&A) in particular, in Thai banks. Direct loans also played a more important role in that time as a source of funding for Thai subsidiaries suffering from the devaluation and liquidity crunch.

In 2002, inward FDI however fell sharply partly because of M&A activity reduction and excess capacity in some industries, for example electrical appliances and machinery and transportation equipments. Afterwards, inward FDI has resumed an expansion path and continued to have a positive growth since then.

Table 1

Net Inflows of FDI to Thailand Classified by Country

(average % share to total)

Country	**1980-86**	**1987-1996**	**1997-1998**	**1999-2007**
Japan	29.3	29.7	33.0	38.1
United States of America	29.0	14.6	23.2	10.3
EU 15	16.1	9.6	13.8	13.5
ASEAN	2.9	9.6	9.7	23.7
of which: Malaysia	1.0	0.2	0.3	1.3
Singapore	1.6	8.9	9.0	21.8
Hong Kong	12.9	15.0	9.9	4.9
Taiwan	1.0	7.0	2.9	2.2
Korea, South	0.1	0.7	1.1	0.8
Others	8.8	13.8	6.3	6.3
Total	**100.0**	**100.0**	**100.0**	**100.0**

Note: Disaggregated FDI data cover investment in non - bank sector only.

Looking deeply in inflows of FDI, Japan is a major source of FDI inflows to Thailand, particularly doing FDI in automobile and parts industry (Table 1). FDI from the United States (US) and the European Union (EU) is mostly concentrated on trading industry (i.e. wholesaling and retailing businesses). Asian FDI has a relatively greater proportion in recent years, compared to those from developed countries. Since 1999, FDI inflows from ASEAN have constituted around 24%, which were mainly dominated by investment from Singapore in trading and telecommunication industry.

Based on sector analysis, around 53% of FDI is in electrical appliances, chemical, and machinery and transportation equipment industries (Table 2). On the other hand, FDI in real estate industry fell sharply after 1997. This partly shifted to automobile and parts and metal and non-metallic industries as well as investment and holding companies.

Table 2

Net Flows of Inward FDI to Thailand Classified by Sector
(average % share to total)

Sector	1980-1986	1987-1996	1997-1998	1999-2007
Industry	31.4	39.4	46.5	53.0
of which: Electrical appliances	9.7	13.4	10.9	13.5
Machinery and Transport equipment	2.4	3.3	11.9	16.7
Chemicals	5.1	6.4	4.5	5.3
Financial institutions	-2.0	6.3	9.7	7.1
Trade	19.1	17.1	24.5	12.3
Construction	18.8	8.7	4.1	0.0
Services	8.5	4.1	6.7	10.1
Real estate	4.3	21.5	1.8	2.8
Others	20.0	2.9	6.6	14.8
Total	**100.0**	**100.0**	**100.0**	**100.0**

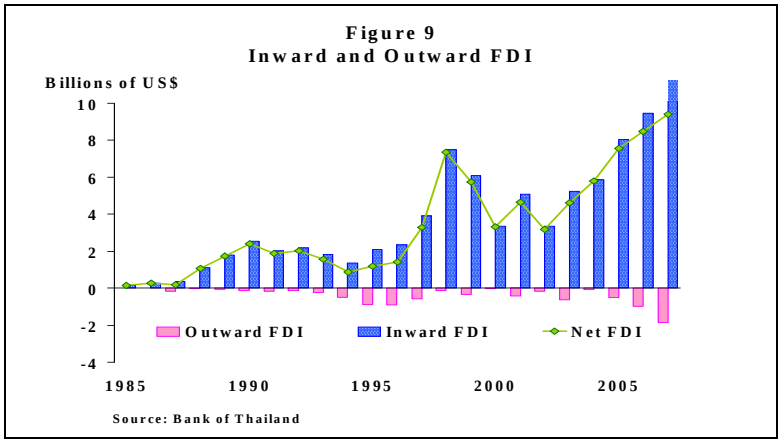
Note: Disaggregated FDI data cover investment in non - bank sector only.

Turning to outward FDI, before the first half of 1980s outward investment by Thai MNEs was limited in early stage mainly due to outward FDI restriction policy and limited number of Thai MNEs with capability to internationalize (Figure 9)[2]. From 1986 and 1996, outward FDI increased rapidly as a result of the financial liberalization policy in early 1990s (e.g. relaxation of foreign exchange controls and establishment of Bangkok International Banking Facilities (BIBF)). ASEAN region was a primary destination for Thai outward FDI.

However, the crisis had a negative effect on the ability of Thai MNEs in undertaking or maintaining investment overseas. Over the period, corporate extensive liquidations of Thai assets abroad were essential for parent enterprises to ensure survival in domestic market (Thailand). Hence, outward FDI fell sharply.

Since 2005, the outward investment has been recovered significantly. Recently, Thai authorities (e.g. Board of Investment (BOI), Thailand) have launched the Thai direct investment (TDI) policy to promote cross-border operations and return-seeking opportunities. Examples of the policy include relaxation of capital outflow measures, capital flow liberalization road-map, and several tax incentives. With the attempt of such authorities, the rising trend of outward FDI would appear in the near future.

[2] Note that before 1993 Thai outward FDI covered only investment in equity.



3. Major Policies related to Foreign Direct Investment and Domestic Investment

After reviewing the investment trends in Thailand, this section further explores one of the key forces that helped shape such development: major investment policies. The evolution of these policies as well as the incentives they created towards both domestic and foreign investment were aligned to complement for the state of economic development and trade regime. After a gradual decline of state capitalism, the investment policies were directed towards import substitution and then in later years, to export promotion. However, the contrast in policy orientation was most distinct before and after the crisis. For more than a half century, from 1940 to 1996, there was high level of government involvement in terms of both conducting investment and international trade *per se* and, later on, setting relevant policies regarding investment promotions and restrictions. However, higher degree of liberalization was observed after the crisis, where both current and capital accounts were more open as a result of IMF's requisite and commitments Thailand made in bilateral and multilateral agreements.

State Capitalism (1940 – 1958)

Prior to Thailand's modern economic development, Thai economy was best characterized as a state capitalism. The majority of the society depended heavily on agriculture. Local private manufacturing investment and production were limited as education and entrepreneurship were scantly prevalent among population. Therefore, a strong governmental institution was most needed. This called for the state monopolization of investment activities in various industries. Public investment during this period focused mainly on building infrastructure, as well as starting public manufacturing of basic industries such as textiles, glass, and paper. On international trade front, imports and exports were also carried out mainly by the state. In terms of openness, tariff system was set up with a goal to boost central government revenue, rather than to make a protectionist effort (Kohpaiboon (2005)).

Import Substitution (1959 – 1971)

In the second phase of investment policy development, the earlier form of government domination began to subside. This was marked by the advent of the first National Economic and Social Development Plan in 1961, the milestone of Thailand's modern economic development. Laying out the broad guideline for economic development for the next five years, this first plan indicated an attempt towards a reduction of direct government involvement and a promotion of private sector's participation, particularly in the import-substituting productions.

Following this guideline, Investment Promotion Act, was passed in 1960. This law aimed to encourage local manufacturing investment and activities. Investment incentives, such as business tax holidays and tariff exemptions on required inputs, namely machinery and equipment, as well as intermediate goods were used. The Board of Investment (BOI), established in 1959, was a main channel through which these promotion privileges were granted to investment projects meeting the criteria. The promotion scheme categorized businesses into three main groups, which entitled to varied degree of incentives. The emphasis was put most on the capital intensive industries. Correspondingly, during this period, a rapid expansion was observed in many local manufacturing industries; for instances, textiles and clothing, transport equipment, basic metal, and chemical products (Kohpaiboon (2005)).

At the same time, to support the development of these new local industries, the economy remained protected on international trade front. Tariff barriers were heavily put in place, especially on the capital intensive and consumer product industries (Nikomborirak (2004)). These barriers had an escalating characteristic in that the tariffs increased along the value chain, with final goods subject to highest import duty. This protection allowed the import-substitution industries, including both local and foreign investors, to flourish amidst international competition.

However, such tariff scheme was myopic to the underdevelopment of supporting industries in Thailand. With inadequate supply of local raw materials and inputs to fill the assembly line, the manufacturers were required to seek solution in importation. It should also be noted that intermediate goods were exposed to lower tariffs as implied by the escalating structure. Unsurprisingly, large intermediate goods imports were observed during the period. This, accompanied by the first oil price shock during 1970, led to the problem of hefty balance of payments deficits. Inquiries with regards to appropriateness of import substitution policy over a long time horizon were thus raised. And this landed Thailand to the next phase of investment development: export orientation.

Export Promotion (1972 – 1996)

The export promotion policy governed the general investment development in Thailand from 1972 to 1996. Drawing lessons from the shortcomings of the import-substitution policy, the third National Economic and Social Development Plan (1972-1976) introduced a policy alternative with a highlight on the encouragement of export-oriented industries (Nikomborirak (2004)). The effects of this key policy change spanned more than the plan's five year period, stretching over two decades, just until the hit of 1997 crisis.

It was notable that the shift away from import substitution and towards export promotion was gradual. Therefore, the import substitution policy remained intact until as late as 1985. Under the Investment Promotion Act, amended in 1972 and 1977, BOI received greater authority and discretion in determining investment promotion. Through BOI, both fiscal and non-fiscal incentives were granted to the approved applicants, such as corporate income tax holidays for upto 8 years and a reduction in import duties on machinery and raw materials. Promotion measures were intensified especially in the late 1970s, when BOI exercised import surcharges in an effort to protect the promoted industries (Kohpaiboon (2005)).

With the shift in policy guideline, both domestic and foreign investments were gradually encouraged to channel towards productions catering for external demand, as opposed to internal demand in the earlier period. In 1983, BOI started granting tariff exemptions on raw material imports for businesses with export to total sale ratio of greater than 30 percent. During the implementation of the export promotion policy, the Baht (Thailand's currency), under the fixed exchange rate regime, was devalued several times. This allowed local export-oriented industries to maintain price competitiveness, even though the weakened currency also made imports of inputs more expensive.

The shift towards export promotion timely coincided with the ratification of the Plaza Accord in 1985. Currencies especially Japanese yen appreciated significantly against the US dollar, undermining the cost and price competitiveness in the world market of Japan as well as other East Asian countries such as Taiwan, Hong Kong, and Korea. The multinational enterprises (MNEs) in these countries were forced to relocate their production bases. East Asian MNE capitals were thus driven towards other country destinations endowed with relatively lower cost. With cheaper wage, economic and political stability, fixed exchange rate regime as well as incentives from investment promotion policies toward exporting industries, Thailand stood out as an attractive choice and subsequently emerged as a recipient of these East Asian direct investments (Nikomborirak (2004)). These were particularly in the forms of greenfield investment in labour intensive productions including processed

food products, garments, footwear, jewels and gems, machinery and transport equipments and electronics.

Another important aspect of investment promotion policy during this period was the industrial decentralization. This can be observed in the promotion of investment projects according to their locations. Industrial Estate Authority of Thailand Act, passed in 1979, encouraged decentralization of industry away from Bangkok area. The country was divided into three industrial zones; with investment projects in the furthest zone from Bangkok granted the largest set of incentives. The promoted investment projects in these industrial estates were provided with incentives additional to BOI grants; for instance, the right to own land and work permit for foreign experts.

With fast local market development and strong economic fundamentals, Thailand attracted not only high level of foreign direct investment but also a large influx of portfolio investment. Inflow of short-term capitals and their subsequently rapid outflows was one of the key triggers of the Asian financial crisis in 1997. This possessed an important implication as we embarked on the new era of investment development in Thailand.

Liberalization (1997 – present)

The economic turmoil during the financial crisis in 1997 compelled Thailand to seek IMF aids and advice. As part of the IMF package requisites, Thai economy was directed more towards liberalization of both trade and investment regimes. Thailand adopted the managed float exchange rate system. Both current and capital accounts were more open.

With respects to the current account, despite a short period of tariff increases during the crisis due to the need to raise tax revenues and to slow down imports, tariff restructuring after 1999 resumed the focus on tariff reductions. Since then and scheduled till 2008, a series of tariff cuts continued on both manufacturing and intermediate products (Kohpaiboon (2005)).

Regarding capital account, Thailand has maintained a free exchange control practice since the early 1990s, in line with the IMF's Article VIII (Subhanij (2000)). However, as seen in Section 2, FDI as well as cross-border merger and acquisition activities increased substantially after the crisis. In addition to the currency devaluation which made investment less expensive in terms of foreign currencies, this was also attributed to the policy to attract inward FDI. Foreign Business Act (FBA), enacted in 1999, granted foreign investors with most favored nation (MFN) treatment. The act, a surrogate of the Alien Business Law (1972), allowed full foreign ownership

in most businesses except three categories which the authority viewed that were not ready for external competition or closely related to national security. Compared to the Alien Business Law, the FBA is less restrictive in terms of types of businesses which foreign ownership was allowed. However, there still existed capital requirements for foreign investors and punishments for violation of prohibited industries (Nikomborirak (2004)).

Apart from inward FDI, Thai authorities also encouraged investment abroad by Thai residents. Since 2005, Thai outward FDI drove up as a result of restriction relaxation such as an increase in amount of investment or lending allowed for a Thai company to its affiliate abroad per year. Moreover, the government through institutions such as BOI and EXIM bank also provided Thai investors with support and services including guidance, business matchmaking, and financial facilities (Wee (2007)).

In addition to the aforementioned efforts and policies, Thailand also entered into a number of international agreements, from multilateral and regional to bilateral levels, all seeking to liberalize its trade and investment regimes as well. First, the GATT's trade-related investment measures (TRIMs) Agreement required that Thailand, as a member country, remove its biased restrictions on foreign investment which were intentionally designed to promote export-oriented industries such as local content and export performance requirements (Ponjan (2001)). The removal of export performance requirements was completed in 2000, while local content requirements were abolished in 2003. Restriction on foreign ownership was also lifted to 49 percent. This aimed to help attract more capital inflows in equity investment, especially FDI.

Second, Thailand's investment liberalization also obliged to regional agreements. A prominent example was the Association of Southeast Asian Nations (ASEAN) Investment Area. The framework, concluded in 1998, set out that, by 2010, which later expedited to 2003, member countries must provide ASEAN investors with national treatment. The other provisions also covered Most Favored Nation (MFN) treatment, free transfer of funds and repatriation, as well as dispute settlement mechanism.

Third, another effort to pursue liberalization also reflected in bilateral investment agreements. Since mid 1950s, Thailand has signed 34 bilateral investment treaties (BITs). Moreover, bilateral free trade agreements (FTAs) were also carried out between Thailand and, for instances India and Japan. The coverage of investment chapter, included in these FTAs, was not only FDIs, but stretched to other forms of investments such as portfolio investment as well (Nikomborirak (2004)).

Key policies adopted by Thai authorities in guiding both domestic and foreign investment were illustrated in brief. Government involvement was strong before the crisis. This can be first seen in the form of state capitalism, during the 1940s and 1950s, where major investment and trade activities in the economy were organised by the state. With the progress of economic development, import substitution policy was implemented, aiming to promote investment and productions to accommodate for growing local demand. Restrictions, mainly focusing on tariff measures, on imports of final goods as well as exemptions on import duty for intermediate goods were jointly used to protect and promote local manufacturing businesses. However, the sustainability of this policy was questioned and led to the embracing of export promotion policy. This shift was directed towards encouraging export-oriented industries by extending tariff exemptions on imports of necessary inputs for these productions. Nonetheless, the restrictions and biased promotion by governments began to drop after the crisis. This was primarily shaped by the liberalization regime set out by the IMF package as well as international agreements.

Table 3

Summary of Major Policies and Issues related to Investment in Thailand

Period	Policy	Development
1940 -1958	State capitalism	▪ Agriculture society ▪ State monopolization in various industries
1958 - 1971	Import substitution	▪ 1st economic development plan (1961-1966) to reduce direct government involvement and encourage private investment in Thai economy ▪ Thailand's board of investment was established in 1959 ▪ High level of protection on capital intensive industry (e.g. automobiles) and consumer products ▪ Rapid local manufacturing expansion in textiles and clothing, transport equipment, basic metal and chemical products ▪ Balance of payments deficits due to import of parts and components and the world oil price hike
1972 - 1996	Export promotion	▪ Plaza Accord in 1985 ▪ Baht devaluations (1973, 1981 and 1984) ▪ Direct investment in labour intensive export products by East Asian MNEs, especially Japan ▪ FDI in processed food products, garments, footwear, jewels and gems, machinery and transport equipments, electronics, etc. ▪ Portfolio investment influx ▪ The 1997 economic crisis
1997 - present	Liberalization	▪ Liberalization extended as part of the IMF-led reform package ▪ Baht floatation and M&A ▪ Foreign Business Act of 1999 enacted ▪ ASEAN Investment Agreement adopted in 1998

Sources: Nikomborirak (2004) and Kohpaiboon (2005)

4. Determinants of Private Investment in Thailand

4.1 Empirical Method

So as to investigate determinants of private investment in Thailand, this study is based on Servén (2003) model with modifications, in which relevant structural features of Thailand are taken into consideration. Servén (2003) suggests the model to be estimated is of the form:

private investment = f (private investment determinants) + random disturbance **(ε)**

As argued in previous studies, private investment determinants depend on economic and institutional factors. In the context of developing countries, these factors are as follows:

Market Size/Potential

According to Cardoso (1993), Oshikoya (1994) and Agosin and Machado (2005), market size (domestic demand) or market potential would be a key factor influencing private investment in developing countries. Its effect on private investment is expected to be positive. When actual output increases, this would indicate growing demand and encourage firms to expand their capacity so as to capture the increased demand. The opposite happens in case of the decreased domestic demand. Cardoso (1993) documents that the growth of real output encourages private investment in Latin America over the period 1970-85, using a panel data analysis. In addition to Cardoso (1993), using OLS estimation Oshikoya (1994) shows that private investment is stimulated by the growth of real output in Africa over the period 1970-88.

Exchange Rate

In previous literature on private investment determination, many scholars (such as Agénor (2001), Bleaney and Greenaway (2001) and Jongwanich and Kohpaiboon (2008)) suggest that (real) exchange rate influences investment behavior of entrepreneurs. Its impact can either promote or retard private investment. Its devaluation could lower the real income and wealth of private sector, thereby lowering aggregate demand. A fall in domestic income and wealth could induce firms to revise their expectations of future demand and postpone their investment plan (Jongwanich and Kohpaiboon (2008)). Moreover, the depreciation could raise the real cost of imported capital goods, and then adversely affect private investment. However, the devaluation raises the price of tradable goods relative to the price of non-tradable ones. Hence, this would help to stimulate investment in the tradable sector, and if the

positive impact on this sector outweighs the negative impact that could emerge in the non-tradable sector, private investment could increase (Agénor (2001)). Jongwanich and Kohpaiboon (2008) suggest that in the long run real exchange rates are statistically significant. A 1% depreciation of real exchange rate leads to an increase in private investment (in the long run) by 5%.

Rate of Return on Investment and Corporate Leverage

Rate of return on investment could have an effect on the desired investment. Theoretically, *ceteris paribus*, a higher rate of return – which is equivalent to higher *marginal* productivity of capital – means that it is more profitable to invest and thus firms should be more eager to acquire new capital at the margin (Mallikamas *et al* (2003)). According to the previous study, the marginal rate of return on investment is not directly observable. In all likelihood, however, it should be positively correlated with capacity utilization for when capacity utilization is low the payoff to adding new capacity also be low, and vice versa. Mallikamas *et al* (2003) demonstrate that higher growth rate of capacity utilization leads to higher growth of private investment rate in subsequent quarters in Thailand.

In addition to rate of return on investment, investment decision also depends on corporate leverage, given that firms' investment spending may have been limited by the availability of internal cash flow. To capture the degree to which the excessive leverage position constrains firms' new investment, Mallikamas *et al* (2003) utilize the ratio of total liabilities to total equity (the leverage ratio of non-financial SET-listed firms)[3] as an indicator of corporate leverage, and discover that higher growth of corporate leverage ratio deter growth of private investment rate in Thailand.

Political Instability

In the context of developing countries, it is significant to consider the impact of political instability on private investment. Previous literature (see Svensson (1998), Gyimah-Brempong and Traynor (1999), Rogoff and Reinhart (2003) and Bocchi (2008)) documents that political instability has a negative and (statistically) significant impact on private investment in developing countries. Using a sample of 101 developing countries for the period 1960-85, Svensson (1998) suggests that government in unstable and polarized political system tends to invest little in infrastructure, resulting in lower level of private investment. Gyimah-Brempong and Traynor (1999) also affirm the negative and significant impact of political instability on domestic demand. This paper explores the relationship between political instability and economic growth in Sub-Saharan African countries, utilizing a simultaneous

[3] SET represents the Stock Exchange of Thailand.

equations model and dynamic panel estimation approach. The findings show that in addition to the direct impact that political instability has upon growth, political instability indirectly lowers the growth by reducing (long-run) capital accumulation.

By and large, the discussion so far implies that the empirical model of private investment is the following.

$$\boldsymbol{I = f\,(GDP,\ RER,\ GDE,\ CAPU,\ CRISIS,\ POL) + random\ disturbance\ (\varepsilon)}$$

where ***I*** is real private investment, ***GDP*** is real Gross Domestic Product, ***RER*** is real exchange rate, ***GDE*** is growth of debt to equity ratio, ***CAPU*** is capacity utilization rate, ***POL*** is a dummy variable capturing political instability in Thailand, which equals to one if the period is quarter 3 2005 to quarter 2 2008 and zero otherwise[4], and ***CRISIS*** is a time dummy variable, which is one if the period is quarter 2 1997 to quarter 1 1999 and zero otherwise[5] to account for a structural break in private investment owing to the crisis (Mallikamas *et al* (2003)).

4.2 Data

To examine the determinants of private investment in Thailand, we collect quarterly data representing those variables during quarter 1 1996 to quarter 2 2008[6] from National Economics and Social Development Board (Thailand), Bank of Thailand and Stock Exchange of Thailand. In selection and transformation of the data, we follow established practice in the field of research. The variables are measured as:

- Private investment (constant 1988, Millions of Baht) is from National Economics and Social Development Board, Thailand (see Mallikamas *et al* (2003) and Jongwanich and Kohpaiboon (2008))
- Gross domestic product (constant 1988, Millions of Baht) is from National Economics and Social Development Board, Thailand, as a proxy of domestic demand (see Agosin and Machado (2005)).
- Real effective exchange rate indices (REER, 1994=100) are from Bank of Thailand, as a proxy of real exchange rate (see Bleaney and Greenaway (2001)).

[4] The current political instability appears to be an obstacle to economic growth and private investment in Thailand since quarter 3 2005.
[5] The crisis caused a recession in Thailand from quarter 2 1997 to quarter 1 1999.
[6] Quarterly private investment data from NESDB are available from 1996 to present.

- As a proxy of corporate leverage, the debt to equity (ratio of total liabilities over total equity of non-financial listed companies) data are from Stock Exchange of Thailand (see Mallikamas *et al* (2003)).
- Industrial capacity utilization rate (quarterly average) is from Bank of Thailand, albeit imperfectly, as a proxy of *marginal* rate of return on investment (see Mallikamas *et al* (2003)).

Tables A1 and A2 in Appendix provide descriptive statistics for and correlations between these variables.

4.3 Econometric Analysis and Results

In line with the standard practice in time series econometrics, the time series properties of data are tested at the outset using the Augmented Dickey-Fuller (ADF) test. The test results are reported in Table A3 (see Appendix). According to the results, the variables under consideration all are non-stationary ($I(1)$). The two-step residual-based procedure adopted by Engle and Granger (1987) however are not applicable in our case. Therefore, we convert the non-stationary variables into first difference form by calculating the quarter on quarter growth rates of the seasonally adjusted series. Subsequent ADF tests indicate that the variables exhibit stationary property once in first difference form[7].

After taking into account the unit root problem, the base model to be estimated is the following.

$$\Delta \boldsymbol{I}_t = c + \Delta \boldsymbol{GDP}_{t-1} + \Delta \boldsymbol{REER}_{t-1} + \Delta \boldsymbol{GDE}_{t-1} + \Delta \boldsymbol{CAPU}_{t-2} + \boldsymbol{CRISIS} + \boldsymbol{POL} + \varepsilon_t$$

Only ***I*** and ***GDP*** are in log form. All explanatory variables are lagged by at least one period to partially account for endogeneity problem and allow for the independent variables taking time to influence private investment (behavior).

In estimating the equation, we expect positive coefficients on real GDP growth and change in return on investment, based on the previous discussion. The exchange rate effect, on a *priori basis*, is inclusive because its coefficient can be either positive or negative. We are also interested in the estimated coefficients on ***GDE***, ***CRISIS*** and ***POL***, which would be negative. Our basic regression results are reported in Table 4.

[7] We also test for the presence of unit roots utilizing the Phillips-Perron (PP) test. Results are similar to the ones reported here.

Table 4
Regression Results for Private Investment Determinant Equations

Dependent variable: ΔI **Sample:** 1997:3 – 2008:2 **Independent variables**	**1**	**2**	**3**	**4**	**5**	**6**
Constant	0.02***	0.01***	0.03***	0.01**	0.01***	0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Δ***GDP(-1)***	1.57***	1.57***		2.02***	1.54***	2.57***
	(0.23)	(0.24)		(0.34)	(0.34)	(0.43)
Δ***REER(-1)***	0.01***	0.01***	0.01***	0.01***	0.01***	
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	
Δ***GDE(-1)***	-0.01***	-0.01***	-0.01*	-0.01*		-0.01***
	(0.01)	(0.01)	(0.01)	(0.01)		(0.01)
Δ***CAPU(-2)***	0.01**	0.01**	0.01**	0.01**	0.01*	0.01**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CRISIS	-0.10***	-0.10***	-0.13***			
	(0.01)	(0.01)	(0.02)			
POL	-0.04***	-0.04***	-0.04***			
	(0.01)	(0.01)	(0.01)			
Δ***GCRE(-1)***		0.01				
		(0.01)				
Δ***PUB(-1)***			0.09**			
			(0.04)			
GTOB(-2)				0.01***	0.01**	
				(0.01)	(0.01)	
Δ***INT(-1)***					-0.06***	
					(0.02)	
Δ***VOL(-2)***						-0.01**
						(0.01)
N	44	44	44	44	44	44
Adjusted R^2	0.92	0.92	0.83	0.79	0.83	0.66
LM (2)	0.35	0.34	1.51	1.30	0.72	1.47
	(0.71)	(0.71)	(0.23)	(0.28)	(0.49)	(0.24)

Notes: Numbers in parentheses are standard errors. ***, ** and * denote statistical significance at 1, 5 and 10 percent, respectively. LM(2) is the test for second-order serial correlation in the residuals (with *p*-value in parentheses).

Column 1 of Table 4 exhibits the results (44 observations) from our base specification. Most significantly, the empirical measures of investment determinants seem to influence private investment over the period, as suggested by previous studies. The estimated coefficients for all six explanatory variables take their expected signs and are statistically significant. All else equal, higher growth rates of GDP and capacity utilization as well as Baht appreciation lead to higher growth of private investment in subsequent quarters. On the other hand, higher growth of corporate leverage deters growth of private investment. In addition to corporate leverage, our findings suggest that the crisis and political instability lower private investment. We undertake the LM test to check for the presence of (second-order) serial correlation; and, the test indicates residuals are independent and identically distributed.

To capture the additional effect through credit availability (Jongwanich and Kohpaiboon (2008)), as presented in column 2 we include lagged real private credit growth[8] (***GCRE***) to the model. The estimated coefficient is not statistically significant but the impacts of explanatory variables in the base model are similar to those obtained before. This implies that credit availability may not lead private investment. The finding however is not entirely surprising given that the post-crisis corporate sector, in an attempt to minimize their financial risks, has been depending more on FDI and equity financings as well as internal funds rather than external borrowing to finance its capital spending (Schnitzer (2002)).

Previous literature (e.g. Cardoso (1993), Oshikoya (1994) and Jongwanich and Kohpaiboon (2008)) also suggests that the private and public investment relationship can be either positive or negative (crowding-in or crowding-out effects), depending on public investment nature. On one hand, public-sector investment, which results in large fiscal deficits, may crowd out private investment through high interest rates, credit rationing, and a higher current of future tax burden on the household (Oshikoya (1994)). On the other hand, most developing countries have a large component of government investment concentrated on infrastructure projects (e.g transport, communications and irrigation); public and private investments are able to complement each other (Jongwanich and Kohpaiboon (2008)).

With the significance of public investment, we include lagged public investment (***PUB***) to the basic model[9] (column 3). The estimated coefficient of public investment is positive and statistically significant. This implies that an increase in public investment can encourage domestic demand expansion, inducing an expansion of private investment, as found in Jongwanich and Kohpaiboon (2008).

[8] Real private credit is available from Bank of Thailand; public investment is from NESDB.
[9] Lagged GDP growth is dropped to avoid multicollinearity problem.

In column 4, we test whether investment decision depends on expectations of future returns relative to current actual returns. In this paper, we measure the gap between expected and actual returns by Tobin's q – the market value of firm's capital relative to its replacement cost[10]. The rationale is that a firm will increase (reduce) its capital stock if the market value of capital exceeds (falls below) the cost of acquiring it (Mallikamas *et al* (2003)). Hence, we add lagged growth of Tobin's q (***GTOB***) to our base model. Once we drop the dummy variables, which in part influence market expectations and sentiment, its coefficient is demonstrated to have positive sign and statistically significant. In line with our hypothesis, therefore investment decision also relies on expectations of future returns.

To see if a measure of cost of capital (***INT)*** would help explain the patterns of private investment, we include lagged average cost of borrowing[11] to previous specification. To avoid multicollinearity problem, we also drop change in growth of debt to equity ratio (***GDE)***. Once we do so, ***INT*** becomes statistically significant and shows negative sign as expected. In addition, other independent variables are statistically significant and show the expected signs. The finding thus supports the argument of previous studies, indicating that all else equal the greater is cost of capital the greater the extent to which private investment is discouraged.

In the last column, to test for the importance of economic uncertainties (Bleaney and Greenaway (2001)), we add REER volatility[12] (***VOL***) to our base model. At the same time, we drop real exchange rates (***REER***) to avoid multicollinearity problem, and the dummy variables that seem to be associated with erratic swings in the exchange rates. When included to our model, ***VOL*** is shown to have a negative coefficient and statistically significant, suggesting that entrepreneurs do respond to exchange rates: an appreciation encourages private investment and the variability discourages it. Perhaps it is because this is correlated with economic and political uncertainties, which appear to reduce private investment.

[10] We approximate Tobin's q for non-financial SET-listed firms by dividing the sum of total liabilities and market capitalization of firm's equities by total asset value. Admittedly, this is only an approximation of the true q measures as we lack data on the market value of debt as well as the actual replacement cost of capital. However, this proxy should still give a relatively reasonable benchmark for the assessment of market sentiments over time (Mallikamas *et al* (2003)).

[11] Average cost of borrowing is measured as interest expense over interest-bearing debt. The raw data are from non-financial SET-listed firms.

[12] It is the conditional variance of REER, using GARCH (1,1) model with AR(1).

5. Issues and Challenges regarding FDI and Private Investment

After examining determinants of private investment in Thailand, this section, in a forward looking manner, further identifies key concerns expected to face both FDI and private investment in Thailand over the coming years. As shown earlier, the post-crisis era witnessed the private investment performing less strongly compared to the pre-crisis record. This was in spite of the presence of several positive factors conducive for the recovery process. Regardless of pain and casualty, the restructuring taken place after the crisis fortified both banking and business sectors. At the same time, saving is not a constraint to investment recovery because the saving-investment gap has always been positive. Nonetheless, private investment continued to be subdued as a set of negative factors from both external and internal sources continued to depress the overall investment climate. These major challenges include global financial turmoil, global economic downturn, and lower domestic business sentiment and political stability and they are likely to remain testing challenges to the government as well as other stakeholders – financiers and investors –alike.

Global Financial Turmoil

It is inevitable that as Thailand has become more integrated to the international trade and investment, after the adoption of liberalization policy in 1993, the economy has been subject to greater external risks. The current sub-prime loan problem in the US housing market as well as the ensuing losses and turbulent conditions in the financial market have posed a severe risk to global liquidity shortage and its impact has spread to financial institutions, insurance companies, and business sector. Funding costs for households and businesses in the major economies (e.g. the United States, the United Kingdom) have risen as banks continue to tighten credit standards. Although Thai financial system is currently strong, the impact from the US housing downturn and the sub-prime loan crisis remains highly uncertain. Multinational corporations (MNCs) are at vulnerable positions. They might be suffered from declining profitability and need some liquidity support from subsidiaries, including those in Thailand. As FDI is generally of long-term nature, the risk of divestment is expected to be low. However, if the loan crisis was prolonged, FDI prospects would be highly affected.

Global Economic Slowdown

On the other hand, the current round of financial crisis also unavoidably resulted in a dip in global economic development. This plays an important role, through both direct and indirect channels, in further damping Thailand's investment prospect. In addition to the financial turmoil, the sub-prime problem has spawned economic downturns and crestfallen sentiment throughout the world. The

repercussions were felt in the real sector, reflecting in soaring unemployment rate as well as declining productions, consumer income and spending. For the US economy, the NBER recently, on 1 December 2008, announced a recession beginning since December 2007. In the third quarter of 2008, the US GDP growth lingered around 0.7% (Figure 10), while other advanced economies, Euro area and Japan, also experienced major slowdowns (Figures 11-12). It was shown that these economic powerhouses have been among the major sources of Thailand's inward FDIs. It should also be noted that after the crisis, Thai economy has relied more on FDI as a foreign source of funds, accounting around 80% of gross capital inflows over the last five years. Therefore, their economic decline, accompanied by slowdowns in other emerging markets, is expected to lower FDI inflows into Thailand.

Figure 10
US GDP Growth

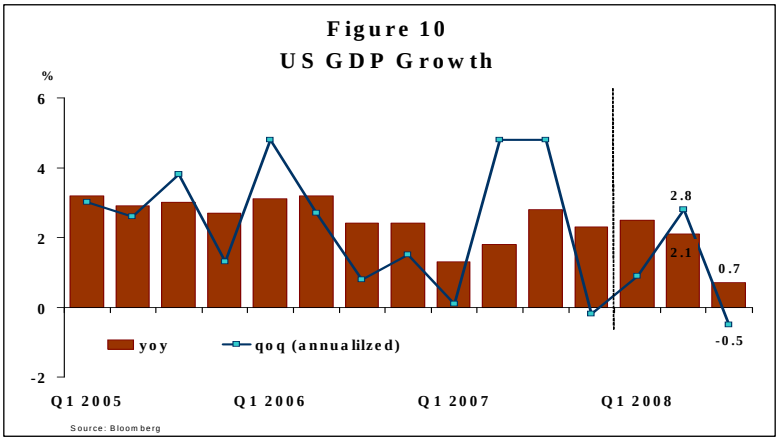


Figure 11
EU GDP Growth

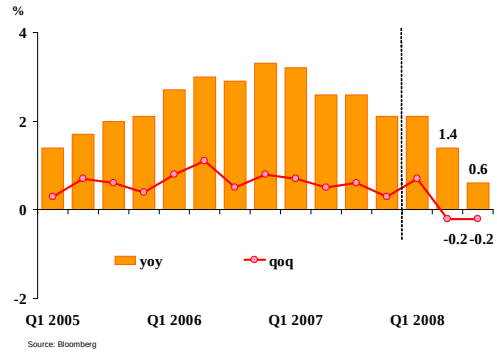
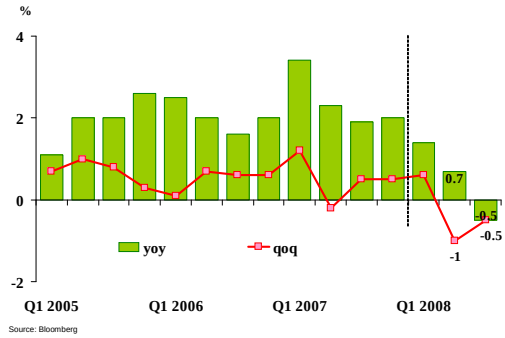


Figure 12
Japan GDP Growth



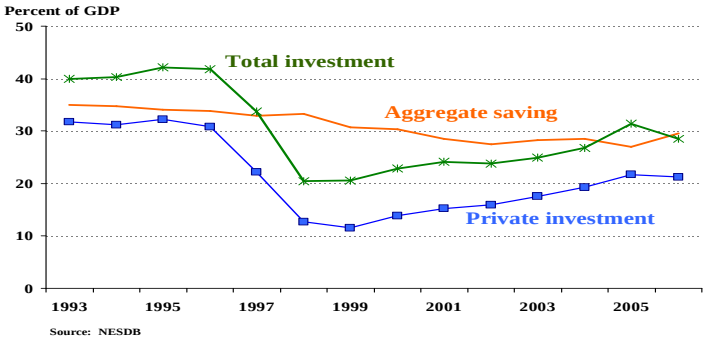
In addition to the direct impact on FDI outlook, such a global economic downward trend would also negatively affect Thailand's export expansion as well as overall economic growth. According to World Bank's forecast in December 2008, Thailand is expected to grow around 2% in 2009, drastically declining from the April forecast mostly following from both increased internal political uncertainty and grim outlook for exports, the major growth driver of Thailand for the past several years, as a result of global recession.

As illustrated earlier, GDP growth is a key factor of private investment in Thailand. Consequently, the global economic slowdown and its implications on Thai exports and economy are also expected to discourage investment decisions in Thailand. Going forward, this is likely to become a significant downside risk to private investment, even though Thai economic fundamentals remain quite strong.

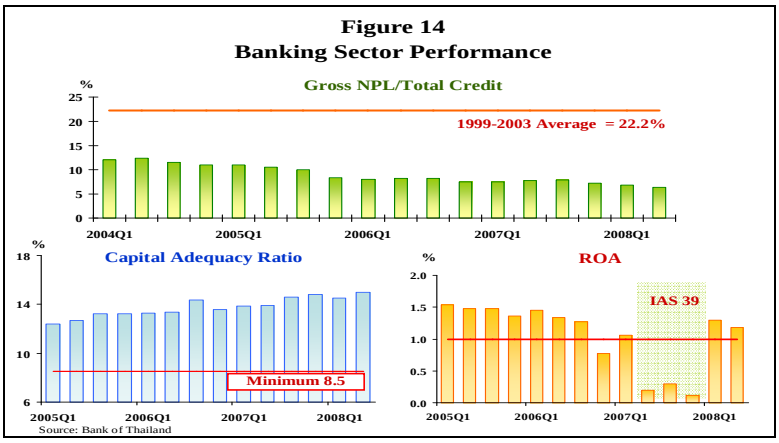
Domestic Financial Conditions

It is noteworthy that in the post-crisis era a number of factors have been in favor of the recovery process of Thailand's private investment. In terms of financing (Figure 13), the pre-crisis pattern of domestic savings shows that it narrowly sufficed to fulfill expansion of private investment and not covered the funding of total investment. Following the onset of the crisis, the positive S-I gap was much widened due to the slowdown in investment. During 1999-2005, private investment picked up pace and the S-I gap narrowed down once again. However, the recent trend indicated that the economy now enjoys higher level of domestic savings, while private investment slightly decline. Thus, it is apparent that the domestic saving, as a source of financing, is not a constraint for private investment growth, at least, in the near term.

Figure 13
Saving and Investment

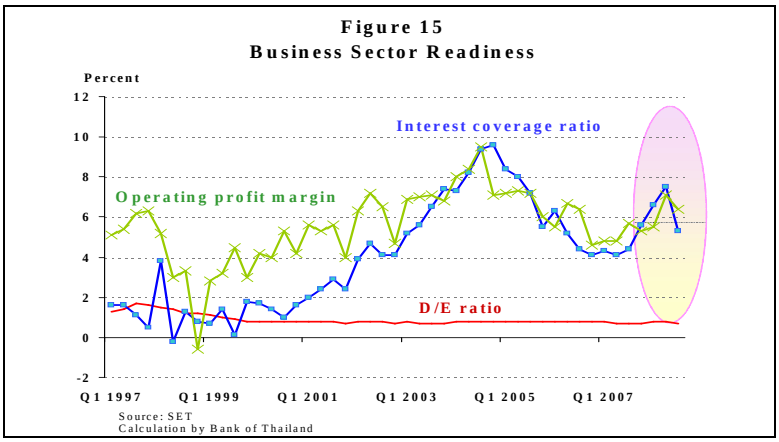


Meanwhile, banking sector also readily strengthened. This mirrored in their reinforced financial positions in the post-crisis era with healthy debt conditions, increased capital accumulation, as well as continual positive returns (Figure 14). The ratio of Thai banking's gross non-performing loans (gross NPLs) to total credit remained very low, less than half of the average of 22.2 % during 1999-2003. Capital adequacy ratio, on the other hand, rose constantly and stood well above the official minimum standard of 8.5%, signifying a strong financial buildup. As for the sector's profitability, returns on asset ratio also shows positive figures for all quarters, even during the last three quarters of 2007 where all banks were required to comply with IAS 39 reserve requirements.



Domestic Business Conditions

From the business sector's perspective, evidently as its financials has grown more solid in the post-crisis era, it also stood ready to make investment (Figure 15). Since the crisis, businesses, as represented by listed-companies in the Stock Exchange of Thailand, witnessed a steady improvement in their operating profit margin as well as interest coverage ratio from the sharp drops after the crisis. This was in line with a declining debt to equity (D/E) ratio. The better leverage condition and profitability allows plenty of room for business to make investment with less risk, compared to the pre-crisis era.



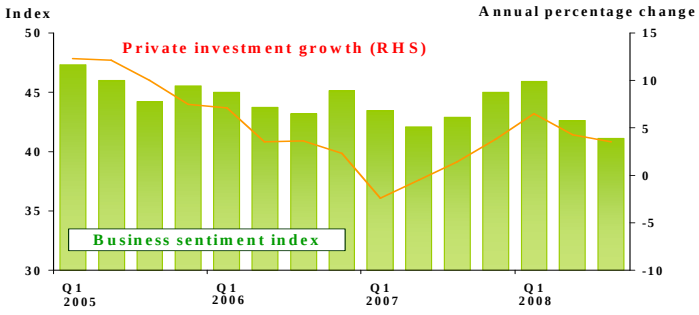
In addition, according to the World Bank "*Doing Business 2009*" survey during April 2007 to June 2008, Thailand improved by 6 rankings to the 13th out of 181 countries in terms of ensuring foreign investors with ease of doing business (see Appendix). The survey collected data on the regulations applied to different stages of business's life cycle, such as starting a business, employing workers, paying taxes, and closing a business in a particular country. Thailand made major improvements in

the areas of registering property, protecting investors, and trading across borders. This reflected Thailand's commitment made, in an attempt to become an investment hub and to boost private investment through inward FDI. Yet the private investment, albeit these positive factors, still underperforms its own record.

Domestic Business Confidence

Both Thailand's private investment and inward FDI still appeared downcast could be partly explained by the overall business sentiment which remained mostly dim in the past four years. The Business Sentiment Index (BSI)[13], compiled by the Bank of Thailand (BoT), fluctuated below the benchmark of 50 since 2004 (Figure 16), indicating weakened confidence of business sector. This had a strong implication for investment. As argued in a BoT analysis, the investor confidence (as measured by BSI) leads private investment by one quarter, and has a co-movement with private investment in the long-run. Given the reflection of sluggish confidence from the index, thus the challenge lies in how our government rebuilds and restores confidences in both domestic and foreign investors.

Figure 16
Business sentiment index and private investment growth



Source: Bank of Thailand and National Economic and Social Development Board

Role of Government

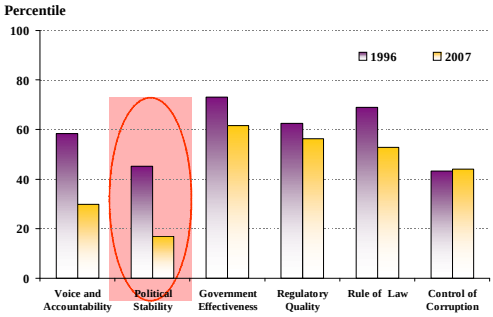
With the significance of business confidences, the government thus plays a vital role in the recovery process of Thailand's private investment and in attracting FDI inflows to the country. This could be attributed to the positive impact of clear and transparent investment policy direction and necessary infrastructure in improving investment efficiency and lowering investment risks and costs. Public sector can also

[13] The monthly survey is sent to 865 medium and large sized businesses for information regarding to business performances and confidences. Its results are presented in the form of diffusion indexes, varying from 0 to 100. For interpretation, the index above 50 suggests business sentiment is improved; otherwise, the sentiment is worsened.

indirectly induce a crowding-in effect by spearheading investment projects and spending to boost private sentiment and investment.

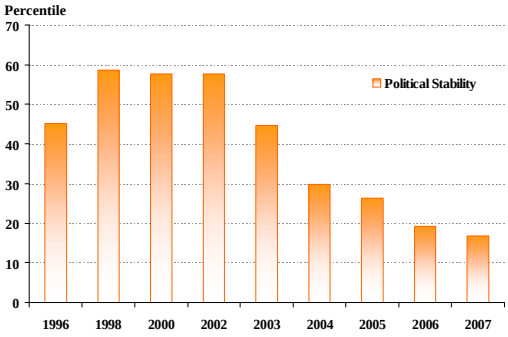
Nonetheless, during the second half of this decade we have encountered an incessant series of political challenges. The adverse political atmosphere as well as the uncertainty it engendered have exacerbated investment sentiment, which has led investment projects to be deferred. More specifically, since 2006 prolonged political tension has put the government's investment expenditures on mega projects on high uncertainty, and till recently they are still subject to postponement. The volatile and shaky balance of political conditions was captured and reflected in the World Bank's Governance surveys. Compared to the pre-crisis year 1996, Thailand in 2007 worsened in most governance indicators, including voice and accountability, government effectiveness, regulatory quality, rule of law, and political stability (Figure 17). The most severe issue was the political instability which declined constantly throughout the five year period between 2002 and 2007 (Figure 18).

Figure 17
Thailand's Governance Indicators



Source: World Bank

Figure 18
Thailand's Political Stability



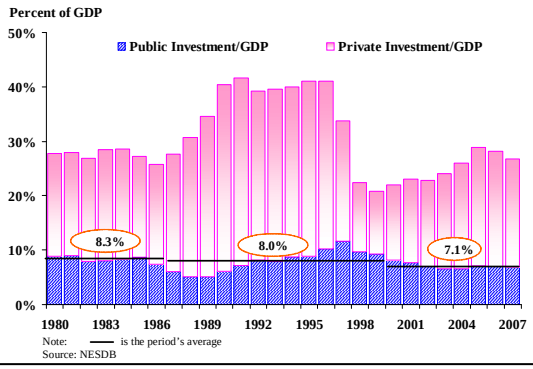
Source: World Bank

Therefore, in the time where no one could predict with certainty how and when the current series of political instability is to dissolve, it is imperative that in order to promote investment in the longer terms, the government should take necessary steps to boost both domestic and foreign investors' confidence. To do so, the government should focus on creating conducive investment climate such as enhancing transparency of investment policies, which are likely to reduce economic uncertainty burdened by investors. To this end, the private and foreign investors would attain greater comfort in making investment decisions.

Furthermore, another important role the public sector can play to enhance private investment is through taking a lead in investment projects and activities, particularly in the forms of infrastructure and human capital, which will raise the country's productivity and competitiveness. It is notable that public investment has been mostly passive since 1980 (Figure 19). Taking into account the ratio of public debt to GDP (Figure 20), it is clear that there is ample room, in terms of financing, for

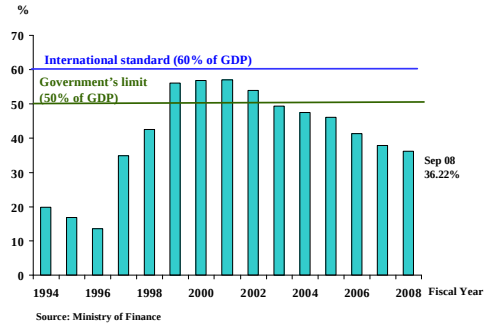
public sector to make more commitment in investment expenditure. This is crucial considering the crowding-in effect of public investment on private investment. Moreover, the increased investment will provide greater capital formation to help boost Thailand's potential output and facilitate long-term productivity growth (see Box 1).

Figure 19
Public and Private Investment



Note: —— is the period's average
Source: NESDB

Figure 20
Ratio of Public Debt to GDP



Source: Ministry of Finance

In summary, this section points out that imminent challenges for private investment in Thailand lie in the impacts of current global financial turmoil, world economic slowdown, weak domestic business confidence, and political instability. Amidst the volatile global factors as well as domestic constraints, Thailand would be able to maintain growth momentum and business prospects partly through the acceleration of private investment recovery and promotion of inward FDI. This calls for a significant provision of public sector commitment as well as the right mix of public policies, which is discussed more in the next section.

The Desired Level of Investment for Thailand's Sustainable Economic Growth

Cheunchoksan and Nakornthab (2008) examine the growth patterns of Thailand, and project the growth path into the future, using the econometric method and growth accounting. Key findings are briefly summarized here.

Going forward, Thailand is set to face a fall in labor force's total hours worked. This stems mainly from the current trend in demographic structural change. The number of elder population, ageing over 60 years old, tends to increase whilst the birth rate declines as a consequence of advancement in medicine and healthcare, accompanied by highly successful government campaigns on family planning. Compared to the middle-age group, the elderly population group probably has low the participation rate in labor market and average hours worked per week.

With the practicability constraints on measures to lift total hours worked, for example promotion of quality labor immigration and extending retirement threshold to the age of 65, Thailand is in need of an increase in labor productivity so as to support a sustainable economic growth in the future. This inevitably calls for an increase in total investment in the present.

This analysis, which sets an assumption that capital stock and GDP expand at the same rate (a balance growth path), suggests that for the economy to grow as such, the ratio of total investment to GDP need to increase from the current level of 22.0% to 28.0-30.0% within 2015. Otherwise, Thailand would have lower-than-expected economic expansion (see below).

The Outlook for Thailand's Potential Output
(based on production function approach)

Average annual growth rate	2000-2007	2008-2015^{E}	2016-2025^{E}	2026-2035^{E}
Total hours worked	1.4	0.5	0.1	-0.2
Productivity*	3.5	5.0-5.6	5.0-5.6	5.0-5.6
Real GDP	5.0	5.5-6.1	5.1-5.7	4.8-5.4

Notes: * denotes balanced growth path scenarios; ^{E} denotes estimates.

Nevertheless, from historical data increasing the total investment is achievable. More particularly, the total investment to GDP ratio rose from 22.0% in 1973 to 30.0% in 1980 and from 20.0% in 2002 to 23.0% in 2005.

Public investment in mega projects (such as infrastructure, irrigation, mass transport and logistics) therefore is essential. The public-sector expenditure will add to total investment, and indirectly induce more private investment through the crowding-in effect. More advantages are also expected in increased productivity and lower production costs, which will, in turn, help contain the cost-push inflation in the longer terms. This, in conjunction with the government's policies to stimulate productivity and labor's quality, is possibly to ensure that Thailand will accomplish the desired level of long-term economic growth.

6. Conclusion and Policy recommendations

The major objective of this paper is to examine the patterns and determinants of private investment in Thailand with a view to understand factors that have hindered its recovery in the post-crisis period. In attempting to clarify the weakness observed in private investment, we apply some standard empirical and econometric methods to estimate an empirical model.

Our regression analysis, which is broadly consistent with prior expectations and previous studies, suggests that Thailand's private investment is influenced by both economic and institutions factors. Higher (real) GDP growth, returns on investment and expectations of future returns, *ceteris paribus*, lead to increase in private investment in subsequent periods. On the other hand, local currency devaluation, corporate leverage and political instability appear to have negative impacts on private investment. In addition to Baht depreciation, volatile exchange rate, capturing economic and political uncertainties, is able to postpone an entrepreneurs' decision to undertake investment in the country. The 1997 financial crisis also reduces private investment during 1997-99.

This paper moreover supports an argument of previous research, indicating that all else equal the greater is cost of capital the greater the extent to which private investment is declined. However, credit availability fails to exhibit significant impact on the investment. Finally, an increase in public investment could encourage domestic demand expansion, inducing an expansion of Thailand's private investment.

These findings suggest several policy implications. Firstly, given that investment itself is a key factor contributing to economic growth, Thailand's government should pursue a policy package in order to help foster balanced growth in both private investment and GDP. Secondly, the significant amount of infrastructure is required so as to help stimulate private investment (the crowding-in effect) in the following years. Nonetheless, future government budgets should accommodate mega projects without putting excessive pressures on public finances and the external balance. As a consequence, it is crucial to implement the projects in a transparent and efficient manner, giving proper consideration to avoiding cost overruns and ensuring rigorous selectivity.

Furthermore, the authorities should provide prudent macroeconomic policies, along with clear communication about the policy framework. These will help to contain any increase in perceived macroeconomic risks. From this standpoint, the recent monetary policy stance of inflation targeting with a flexible exchange rate

seems to be serving Thailand well as it encourages efficient market decisions by bringing private and social costs of investment closer together.

To secure greater amounts of private investment, another policy emphasis should be on promoting a favorable investment climate by removing obstacles to private investment, such as reducing red tape, improving governance, and perhaps most importantly establishing political stability. Going forward, productivity should be raised over the long run (via human capital improvement and higher research and development (R&D) spending) to further boost returns on investment, because this is the only way to maintain steady investment given an increasingly competitive international business environment.

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APPENDIX

Table A1: Descriptive Statistics

Sample: quarter 1 1996 to quarter 2 2008

	I	*GDP*	*REER*	*GDE*	*CAPU*	*INT*	*GCRE*	*VOL*	*GTOB*	*PUB*
Mean	143,094.2	852,759.9	84.9	-1.0	69.3	5.3	2.1	14.0	-0.5	60,632.2
Max	270,719.0	1,128,105.0	106.6	139.6	77.6	10.0	26.2	71.4	50.3	123,607.0
Min	70,875.0	658,899.0	71.3	-40.4	56.1	2.4	-18.9	0.6	-39.5	33,123.0
S.D.	50,053.1	129,416.7	8.7	32.9	5.1	2.4	10.9	19.6	19.8	16,882.6

Sources: National Economics and Social Development Board (Thailand), Bank of Thailand, Stock Exchange of Thailand, and author's computation

Table A2: Correlation Matrix

Sample: quarter 1 1996 to quarter 2 2008

	I	*GDP*	*REER*	*GDE*	*CAPU*	*INT*	*GCRE*	*VOL*	*GTOB*	*PUB*
I	**1**									
GDP	0.81	**1**								
REER	0.42	0.16	**1**							
GDE	-0.08	-0.32	0.00	**1**						
CAPU	0.84	0.82	0.34	-0.24	**1**					
INT	-0.51	-0.71	0.25	0.65	-0.62	**1**				
GCRE	0.54	0.22	0.11	0.42	0.25	0.02	**1**			
VOL	-0.34	-0.53	0.18	0.62	-0.58	0.87	0.30	**1**		
GTOB	-0.27	0.06	-0.22	-0.40	0.03	-0.30	-0.31	-0.31	**1**	
PUB	0.10	-0.20	0.37	0.43	-0.02	0.42	0.33	-0.30	-0.30	**1**

Sources: National Economics and Social Development Board (Thailand), Bank of Thailand, Stock Exchange of Thailand, and author's computation

Table A3: Unit Root Tests

Variable	Test Specification	ADF statistics
I	C,T	-2.89
∆***I***	C,T	-3.45***
GDP	C,T	-1.75
∆***GDP***	C,T	-4.95***
REER	C,T	-2.30
∆***REER***	C,T	-4.73***
GDE	C,T	-3.02
∆***GDE***	C,T	-6.98***
CAPU	C,T	-2.70
∆***CAPU***	C,T	-5.79***
INT	C,T	-1.30
∆***INT***	C,T	-6.86***
GCRE	C,T	-1.77
∆***GCRE***	C,T	-5.85***
VOL	N	-1.64
∆***VOL***	N	-2.95***
GTOB	C,T	-4.01**
PUB	C,T	-2.17
∆***PUB***	C,T	-6.48***

Notes: In the test specification column, the symbol indicates whether a constant (C), a trend term (T) or none of the above (N) is included in the ADF specification; *** and ** denote statistical significance at 1 and 5 percent, respectively.

Table A4: Thailand's Rankings in the World Bank's Doing Business Surveys

	2006/07	2007/08
Overall ranking: Ease of Doing Business	**19**	**13**
Starting a Business	37	44
Dealing with Construction Permits	13	12
Employing Workers	54	56
Registering Property	20	5
Getting Credit	61	68
Protecting Investors	33	11
Paying Taxes	92	82
Trading Across Borders	51	10
Enforcing Contracts	26	25
Closing a Business	46	46

Source: World Bank, Doing Business Surveys 2008 (April 2006-June 2007; 178 countries) and 2009 (April 2007-June 2008; 181 countries)