

## 2. PROJECTION RESULTS

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The projection results are presented in summary form in Table 2.1.

Analysis proceeds by first reviewing analyses of the current economic situation. The next section looks at the projections for the remaining years of the Sixth Plan. In the context of the expectation that the current growth trend will continue, constraints on the realization of it are discussed. The final section considers the long term outlook.

### 2.1 Current Economic Situation

At the start of the Sixth Plan, the economic outlook was conditioned by the difficulties faced by the country in the final years of the Fifth Plan. The year 1986, the last year of the Fifth Plan, saw the economy growing at only 4.5 percent, only a small improvement over the 3.5 percent growth in 1985, and low by the standard of 6 percent average annual growth over the 1970s and early 1980s.

The projections for the Sixth Plan prepared by NESDB reflected the growth pessimism of the planners. The Sixth Plan' strategy concentrated on achieving a growth rate of not less than 5 percent per annum, and concentrated on achieving greater efficiency in the use of resources within the limits set by the overall growth.

The cautious outlook was also shared by the analysts at the Thailand Development Research Institute (TDRI, 1986), who forecasted a growth rate of 3.9 percent for 1986, 5.4 percent for 1987 and annual growth of GDP for 1988-1991 of between 4.2 to 4.8 percent.

**Table 2.1 Summary Results of Projections**

Item	Source	Year								
		1986	1987	1988	1989	1990	1991	1992	1993	1994
Gross Domestic Product (1,000 million baht current prices)	NESDB(1)			1,466						
	NESDB(2)									
	W889									
	SCB			1,414	1,606	1,798	2,018	2,291	2,607	2,978
	TORI(86)									
	TORI(88)									
	Actual									
GDP Growth (% annual)	NESDB(1)		5.0	5.0	5.0	5.0	5.0			
	NESDB(2)				8.5	7.0	7.0			
	W889				7.7	7.7	7.7	6.3	6.3	6.3
	SCB			10.9	9.6	7.4	7.0	7.9	7.5	8.1
	TORI(86)	3.9	5.4	4.5	4.3	4.2	4.8			
	TORI(88)			10.3	8.0	7.6	7.7			
	Actual	4.5	8.4	11.0						
Merchandise Export Growth (% annual)	NESDB(1)		10.7	10.7	10.7	10.7	10.7			
	NESDB(2)				25.6	14.6	14.6			
	W889	9.4	20.1	20.1	10.8	10.8	10.8	8.4	8.4	8.4
	SCB		28.8	35.0	24.9	21.1	22.6	21.5	19.8	18.1
	TORI(86)									
	TORI(88)			34.1	25.7	20.1	17.2			
	Actual	20.7	28.8	35.9						
Merchandise Import Growth (% annual)	NESDB(1)	2.9	9.5	9.5	9.5	9.5	9.5			
	NESDB(2)				26.0	11.2	13.7			
	W889									
	SCB	-3.0	39.2	45.0	34.9	22.7	16.4	14.0	9.8	11.7
	TORI(86)									
	TORI(88)			43.9	29.5	23.2	15.1			
	Actual	2.9	39.3	46.4						
Trade Deficit (million baht)	NESDB(1)	55,600	35,900		124,049					
	NESDB(2)				122,904	119,199	130,045			
	W889									
	SCB		44,077	93,722	166,468	212,786	210,125	183,733	110,180	53,580
	TORI(86)									
	TORI(88)			92,935	135,296	182,224	196,956			
	Actual		44,078	96,000						
Current Account Deficit (million baht) (surplus = (x))	NESDB(1)	36,000	11,800							
	NESDB(2)				75,938	71,371	79,178			
	W889									
	SCB	(6,497)	13,620	47,293	114,252	149,366	147,366	119,179	38,977	(34,328)
	TORI(86)	1,438	12,653	18,869	23,599	25,547	28,926			
	TORI(88)			47,358	85,921	127,934	137,024			
	Actual		13,620	44,500						

**Table 2.1 Summary Results of Projections (Cont.)**

Current Account Deficit As % GDP	NESDB(1)	3.8	0.9							
	NESDB(2)				4.5	3.8	3.7			
	W889	3.7	2.2	2.2	5.0	5.0	5.0	3.5	3.5	3.5
	SCB	-0.6	1.1	3.3	7.1	8.3	7.3	5.2	1.5	-1.2
	TDRI(86)									
	TDRI(88)			3.2	5.0	6.5	6.2			
	Actual		1.1	3.0						
Per capita Income (baht)	NESDB(1)	21,395	27,783							
	NESDB(2)				29,032	31,817	34,986			
	W889									
	SCB		22,332	25,361	28,176	30,990	34,030	37,876	42,354	47,711
	TDRI(86)									
	TDRI(88)									
	Actual	20,438	22,599	26,412						
Growth of Agriculture (% annual)	NESDB(1)	4.1	2.9							
	NESDB(2)				1.0	1.5	1.6			
	W889									
	SCB	1.4	-2.5	8.5	2.9	2.9	2.9			
	TDRI(86)	0.2	2.4	1.7	1.3	1.7	2.2			
	TDRI(88)			8.8	1.9	2.6	1.9			
	Actual	4.1	-2.0	8.6						
Share of Agriculture in GDP (%)	NESDB(1)									
	NESDB(2)									
	W889									
	SCB									
	TDRI(86)									
	TDRI(88)			15.6	14.7	14.0	13.2			
	Actual	16.5	16.1	16.9						
Investment:Private (% annual growth, constant prices)	NESDB(1)		8.7							
	NESDB(2)				15.8	8.1	7.2			
	W889			7.5	7.5	7.5				
	SCB	-2.0	17.2	35.0	31.1	10.8	4.6	7.9	3.2	7.1
	TDRI(86)									
	TDRI(88)									
	Actual	-0.8	26.2	23.4						
Investment:Public (% annual growth, constant prices)	NESDB(1)		1.0							
	NESDB(2)			11.5	12.5	11.3				
	W889									
	SCB	-3.6	1.9	6.0	8.7	8.2	3.4	1.8	-0.4	3.7
	TDRI(86)									
	TDRI(88)									
	Actual	1.8	-13.3	0.3						

**Table 2.1 Summary Results of Projections (Cont.)**

Inflation (GDP Deflator) (% annual)	NESDB(1)									
	NESDB(2)									
	W889									
	SCB	1.9	2.5	4.2	5.0	5.0	5.0	5.0	5.0	5.0
	TDRI(86)									
	TDRI(88)									
	Actual	3.3	4.0	7.0	4.5	4.3	3.4	3.9		

Sources are as listed in the References.

NESDB(1) : Original Sixth Plan  
 NESDB(2) : Revised Sixth Plan  
 W889 : World Bank Report, 1989  
 SCB : Siam Commercial Bank Report  
 TDRI(86) : TDRI 1986 Year-end Conference Paper  
 TDRI(88) : TDRI 1988 Year-end Conference Paper  
 Actual : from Bank of Thailand Monthly Bulletin December 1988

Contrary to the prevailing pessimism, in 1987, the economy expanded at the rate of 8.7 percent in real terms. The growth momentum was maintained into 1988, which saw the economy grow at 11 percent, the highest growth in a single year since 1971, surpassing the previous record of 10.4 percent growth in 1978.

Writing in 1987, the TDRI analysts said, rather modestly of their 1986 projection, that

"While it is always unwise in a forecasting exercise of this sort to look back at last year's forecasts, it was clear that we underestimated the growth potential for manufactured exports, and the strength of the boom that it therefore generated." (TDRI, 1987).

By 1988, the growth performance of the economy has become an established fact, and the comment by TDRI on the macroeconomic situation in 1988 rings of déjà vu,

"Thailand's economic success in 1988 is a continuation of 1987's forward momentum. The mechanisms of growth for both of these years were quite similar, being led by a dramatic increase in manufactured exports and

reinforced by a large net inflow of foreign capital through direct and portfolio investment.

Rather than erring on the side of caution, TDRI now allows itself to be optimistic, considering 1988 as "an important milestone in Thailand's economic development and movement toward becoming a more industrialized country."

To account for the growth trend of the 1987-1988, TDRI identifies four factors contributing to the economic expansion:

- 1) the "excellent" performance of Thai manufactured exports is more secure,
- 2) the "superior" investment atmosphere in Thailand attracted much more (mostly export-related) domestic and foreign investment,
- 3) the growth of service receipts was higher than expected and, if the trend continued, would help provide resource for long-term development, and
- 4) the sharp increase in agricultural prices help reduce the "usual" anxiety (sic) that past development efforts were biased against the agricultural sector.

Undoubtedly the turn of events had surprised most observers. The Bank of Thailand, looking ahead to 1987, was anticipating growth of 5 %, an improvement over 1986. The growth of exports was expected to be 10-11 per cent due to the poor production of agriculture in 1986. (BOT, 1986) Writing at the end of 1987, which had seen exports grow at 28.8 percent and GDP growth of 8.4 percent, the Bank continued its cautious stance:

"The overall economic growth rate will lie between 5.8 - 6.3 percent, representing a decline from 1987 . The overall growth of manufacturing production will fall slightly because the world economy is predicted to expand at a slower pace, while some industries will also face production capacity constraints and higher prices of raw materials exports are expected to expand by about 11 - 13 percent." (BOT, 1987)

The Bank must have been pleasantly surprised when the final figures for 1988 showed that merchandise exports grew at 35.9 per cent in value terms.

The changed fortune of the economy, with strong growth continuing over the first two years of the Sixth Plan at the rate well above the Plan targets, coupled with the change of government following a general election in July 1988, prompted the government to order a revision of the Plan for the remaining plan period (up to 1991). The direction of the plan revision was set in late 1988, and the revised plan was approved in outline in early 1989.

Forecasters and analysts have also revised their projections in the light of the strong growth prospects. The following section considers the current available forecasts.

## **2.2 Outlook to the End of the Sixth Plan**

### **2.2.1 The Overall Economy**

The revised growth target for the remaining years of the Sixth Plan is now 7.5 percent per annum (NESDB, 1989). A comprehensive policy package was outlined, with the aim of maintaining the growth momentum: the current account deficit was set to be within 4 percent of GDP, as was the saving-investment gap, and the budget deficit was set to be within 1 percent of GDP. Within this constraint, government investment expenditure was expected to grow 20.6 percent annually while the foreign debt ceiling, the limit to total foreign borrowing by the public sector, was increased to 1,200 million US\$ annually. Private investment was to be encouraged.

For the period 1989-1991, there appears to be a consensus on the growth of the economy. Forecasts by the TDRI and the Siam Commercial Bank Research Division are in agreement on the growth for 1990 and 1991 at about 7.4 to 7.6 percent per annum. For 1989, there are some differences in viewpoints. NESDB foresees growth of 8.5 percent, slightly higher than the TDRI (1988) forecast of 8 percent, but lower than the SCB forecasts of 9.6 percent per annum. However, the views on growth over the whole period are remarkably similar for analysts at NESDB, TDRI and the Siam Commercial Bank, representing the official view, the independent researcher's viewpoints and the view of private business. The surprise lies in the fact that the convergence is achieved even with quite diverse assumptions about the main growth factors of the economy: exports and investments.

## 2.2.2 Sectoral Trends

### 1) Exports

There is no doubt that the current boom is led by the growth of manufactured exports. From a 10.3 percent annual growth in export (FOB) in 1985, the export boom began in 1986 with a growth of 20 percent in 1986, and accelerating to 28.8 percent in 1987 and 35.9 percent in 1988. As already mentioned, growth of this magnitude was not anticipated in 1988. But for the future, analysts appear to accept that vigorous growth will continue. With the exception of the World Bank, who foresees a growth rate of 10.8 percent for merchandise export up to 1991, which is incidentally identical to the original Sixth Plan target, the growth forecasts by others are considerably higher, ranging from the high forecast by the SCB of about 25 percent in 1989, declining to 22 percent in 1991, to TDRI (1988) forecast of a less rapid growth of 17.1 percent by 1991. NESDB (1989) adopts a more cautious view of growth of around 14.6 percent for 1990-1991, though it is in agreement with the others on the forecasts for 1989. In this case, the private sector seems to be the most optimistic, and the government sector the most cautious, with the independent researcher somewhere in between. The difference in the forecasts reflects the different assessments of the world trade situation in the future.

### 2) Investment

#### Public investment

During 1986-1987, public gross fixed capital formation actually fell in real terms, by 12.4 percent in 1986 and 11.3 percent in 1987. In 1988, the increase in public investment was 1.9 percent in real terms. The reduction in public investment was imposed by the slow growth of the overall economy and the tight government budgetary conditions. The result has been the deterioration in the level of public services -- inadequate infrastructure improvement and maintenance, and has led to complaints that inadequate infrastructure is now a constraint on the continued expansion of the economy.

In recognition of this situation, in the revised Sixth Plan, public investment is expected to grow by 11 percent annually until 1991. According to NESDB, 55.5 billion baht will be spent on transport development projects, in addition to the

originally planned budget of 135.9 billion baht. Additional budgets have also been allocated for energy development, communications and public utilities. The revised total budget for the period FY 1987-1991 will be 353.3 billion. The timing of these projects will need to be worked out so as to keep foreign borrowing within the government's overall foreign debt ceiling and the approval through the appropriate channels. These conditions in practice mean that the planned projects are likely to take longer, and actual spending would be less, than anticipated.

### Private investment

In contrast to public investment, private investment has shown vigorous growth in 1987-1988, increasing from 0.4 percent growth in real terms in 1986, to 34.4 percent in 1987 and 30.8 % in 1988. However, the high growth rate of private investment is not considered to be maintained. For the period up to 1991, SCB forecasts the growth of private investment to be at a lower rate of 10.8 percent for 1990 and 4.6 percent in 1991, after a strong year in 1989 with investment growth of 31 percent. NESDB forecasts a more stable pattern of growth, around 15 percent in 1989, dropping to 8 percent in 1990 and 7 percent in 1991. The basis of the estimates are the planned investments which have received investment promotion as well as the estimated investment required to sustain output growth on the basis of the incremental capital output ratio (ICOR). On past records, the ICOR in Thailand ranged from 3 for 1987 to 6.4 in 1985. For the future, with the move to more manufacturing production as well as the accelerated investment in infrastructure, the ICOR is likely to remain high, and therefore a higher level of investment is more likely.

## **2.3 Constraints on Future Growth**

In the context of rapid growth, the analysts have identified a number of constraints that are likely to slow down, if not disrupt, the continuation of the current trends. These can be separately discussed under the headings of internal and external factors.



### **2.3.1 Internal Constraints**

Internal constraints range from physical shortages of various inputs to sustain the rise in output at the micro or enterprise level to the shortfall in domestic savings to sustain the rate of investment already anticipated or required to meet the growth targets.

The shortage of capacities in the supply of infrastructural services is now beginning to be felt nationally. This ranges from the congestion at the Klong Toey Port for shipping out exports and bringing in imports, the lack of telephone lines in the new industrial areas, the lack of suitable sites for locating factories, the shortage of steel rods for construction, to the lack of qualified personnel to staff the new enterprises.

The macro constraint in domestic savings can be highlighted by considering the ratios of gross national savings and of gross domestic investment to GDP. In the slow growth year of 1985, the domestic saving ratio was 20.1 percent, while the gross domestic investment ratio was 24 percent. The ratio of savings to investment was 80.8 percent. By 1988, when GDP growth reached 11 percent, the domestic savings ratio increased to 26.6 percent, while domestic investment ratio was running at 27.5 percent. The ratio of savings to investment was 96.7 percent, or a shortfall of just under 4 percent of investment. The difference was that in 1988, there was little or no slack in the economy to accommodate the increased level of investment. The continuation of the investment boom needs therefore to be sustained by an inflow of foreign capital. In the view of the World Bank, this dependence on foreign capital creates a vulnerability in Thailand in the event that the external conditions become less favorable.

### **2.3.2 External Constraints**

The external constraints can be identified as the elements that together make up the two external balances -- the balance of trade and the balance of payments. To the extent that capital flows are also related to the performance of exports, the two constraints can be combined and considered as one.

#### **1) The trade deficit**

The growth of export has been already discussed. Now we turn to the forecast of imports. In the original Sixth Plan, imports were targeted to grow by 9.5 percent per annum. In fact, for 1987, imports increased by 39 percent, and for 1988, the increase in imports was 46 percent. The trade deficit in 1986 was 14.36 billion baht, as imports were cut back by the sluggish growth of the economy. As the economic upturn was set in motion, and the import bill rose, the trade deficit increased to 43.8 billion baht in 1987 and more than doubled in 1988 to 96 billion baht. Despite the strong growth of exports, imports grew more rapidly. Imports are also expected to grow, albeit a slightly lower rate than exports, up to 1991. But the trade deficit will remain well above 100 billion. Projections range from the low of 130 billion baht as projected by NESDB, to the high of 210 billion baht, as projected by the SCB. The reason for the growth of imports is the import of capital goods required by the increasing investment, and the import of raw materials for increased domestic production.

## 2) The current account deficit

The impact of the trade deficit was reduced to some extent by the inflows due to services earnings and unrequited transfers. Thailand consistently enjoyed a net surplus on the service account, due to income from tourism and the remittances of Thai workers abroad. In 1987, these two inflows accounted for 73 percent of services receipts. The figures from the Bank of Thailand indicated that the net services balance increased from 34.5 billion baht in 1987 to 51.5 billion in 1988 (BOT, 1989). Yet, taken together with the trade deficit, the current account balance (trade+services and transfers) in 1988 was in deficit by 44.5 billion baht, about three times the amount envisaged by the original Sixth Plan.

However, the absolute level of the current account deficit may be less important than the ratio of the deficit to GDP. In this regard, the projections indicate a consistent rise in the ratio for the remaining duration of the Sixth Plan. In quantitative terms, the ratio increases from 1.1 percent in 1987 to 3 percent in 1988. For 1989-1991, a divergence of views can be discerned. For NESDB, the current deficit is projected to be declining from a high of 4.5 percent of GDP in 1989 to 3.7 percent by 1991. Others are less optimistic about the ability of the economy to contain the deficit. The World Bank projects a current account shortfall of 5 percent of GDP until 1991. TDRI (1988) projects a

6 percent current account shortfall, while the SCB forecasts a shortfall of 8.3 percent of GDP in 1990, reducing to 7.3 percent in 1991. The difference clearly reflects the differing assessments of the import propensities by the NESDB and the private sector as represented by the SCB.

### 3) The capital account

The key element in the external sector in the present context, and the most unpredictable, is the capital inflows. Net capital inflow for 1987 was 16 billion, increasing to 68.6 billion in 1988. For this year, TDRI (1988) projects a direct investment inflow of 24.9 billion, and private net borrowing of 45 billion. For subsequent years, both items are expected to grow, with the exception of a drop in net private foreign borrowing in 1989. By 1991, when the current account deficit is expected to reach 137 billion baht, this is expected to be financed by 36 billion baht of direct investment, 78 billion baht of private net borrowing, and the remaining 22 billion baht taken up by public borrowing.

The dependence on foreign capital inflow to finance the current account deficit raises the question of debt servicing. The question was a major concern of the TDRI (1986) report, which estimated that the stock of external debt had risen to as much as 45 percent of GDP by 1985, from a low proportion of less than 10 percent in 1975. The high debt ratio was caused by high interest payments, low GDP growth and devaluation of the baht in 1984. According to World Bank's estimate, the ratio of outstanding debt to GDP has risen from 39.4 percent for 1982-86 to 41.4 percent in 1987-88. Yet, due to a fortunate change in the world monetary situation, interest rates have been falling, so that in spite of the rising stock of external debt, the debt service ratio has declined, from 24.2 percent of GDP during 1982-86, to 16.6 percent during 1987-88. For the period up to 1991, the World Bank foresees that the external debt situation would stabilize. The ratio of the total debt outstanding to GDP will be around just under 40 %, while the debt service ratio will be around 14 percent. The Thai sources under consideration do not deal with the question of debt servicing, though the amount of debt creation will be limited on the public sector side by the foreign debt ceiling, now increased to 1.2 billion US\$ per annum, and on the part of the private sector, by movements of interest rates in the world financial market. With the prospects of increasing interest rates in the industrialized countries, short term borrowing should decrease, leading to tightening of the domestic money market and the rise in interest rates. This

would in turn restrain the growth of investment. In the present context of shortage of capacities, this is perhaps a beneficial development on the monetary front.

In conclusion, the outlook for the period up to the end of the Sixth Plan according to the various projections is that the economy will continue to grow vigorously, if not at the rapid pace experienced in the past two years. The growth of the economy is dependent on the continued growth of manufactured exports to stimulate demand, and on the inflow of external finance to support the investment growth and ease the balance of payments constraints. Given the external growth prospects, the growth debt servicing burden is expected to be manageable.

## **2.4 The Outlook Beyond the Sixth Plan**

### **2.4.1 Toward 1996 and 2001**

Looking ahead beyond the end of the Sixth Plan, up to the year 2010, the equivalent of four more Five Year Plans, is an exercise in futurology. The projections considered so far do not cover the whole of the period, though some projections cover part of the period. The World Bank projections are taken to the year 2001, while the SCB only goes as far as 1994. TDRI is engaged in a study of Thailand up to the year 2010, but results are not so far available. For the purpose of this paper, we therefore consider the SCB and the World Bank's studies.

The World Bank projects the GDP growth over the period 1992-96 to be 6.3 percent annually, with exports growing at 8.4 percent per annum. Investment will continue to exceed domestic saving, so that dependence on foreign financing will continue. The current account deficit will be around 3.5 percent of GDP, a decline from the 5 percent ratio of the Sixth Plan period. For the period 1996-2001, the World Bank projections show exports increasing at 8.9 percent per annum, while other trends continue. The result is that the current deficit as a percentage of GDP falls to 2.5 percent.

#### 2.4.2 Sensitivity Analysis

For the longer term analysis, the World Bank considers the economy under two alternative scenarios. In the "high" case, using an assumption of stronger growth of manufactured exports, at 10 percent per annum, GDP growth is projected to increase by just under 1 percent, from 6.3 to 7.1 percent. The favorable external performance would reduce the current account deficit and the debt service ratio slightly. In the "low" case, the reverse is projected. GDP growth will drop to 4.6 percent, while the current account deficit would rise to 8.1 percent of GDP and the total debt service ratio would increase to 8.1 percent of GDP. In the historical perspective, the low case represents a return to the slow growing years of the early 1980s, with the attendant external problems.

The World Bank's scenario projections serve to demonstrate the sensitivity of the present development trends to the performance of manufactured exports. In the light of the projections, the World Bank concludes that.

"sound macroeconomic management will be critically important in order to maintain a faster growth path, the economy must increase both the level of investment and its efficiency.(World Bank, 1989:p.162).

#### 2.4.3 An Alternative View

A more optimistic scenario is painted in the SCB projection, which covers the period to 1994. As already described, the SCB foresees a vigorous growth of exports of more than 20% up to 1991. Beyond 1991, the growth of exports is projected to slacken slightly, but will nevertheless remain strong, falling to only 18% in 1994. In contrast, imports are expected to decline sharply, from the 35% growth in 1989 to 16% in 1991, and falling further to 11% by 1994. The SCB reasons that the spurt of rapid investment growth will have declined, and with it the need to import capital goods extensively. At the same time, the investment already undertaken will be yielding output in return, contributing the rise in exports. The net result, according to the SCB scenario, is that by 1994, the trade deficit would decline to a mere 1.7 percent of GDP. When coupled with earnings from services and tourism, the current account will be in surplus, at the level of 1.2 percent of GDP. Interestingly, the SCB considers that the economy will face then a problem of labor shortage, due to the rapid absorption of labor by the manufacturing sector. Labor would no longer be

"cheap", and there would be a higher level of urban-based population and employment than at present.

Interestingly, the long term development issue appears to be identified as how to tackle the constraints on the supply side, with specific reference to the human resources to support continued industrialization. Within this context, the questions of the regional distribution of the labor force, employment and economic activities come to the fore, with important implications for the Upper Central Region. These issues will be discussed in the next Chapter.

### **3. IMPLICATIONS FOR THE UPPER CENTRAL REGION**

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#### **3.1 Relevance to Ongoing National Policies**

The projections reviewed above reflect the changing views of the Thai economy over the period since 1986. They are broadly similar in identifying the cause of upturn in economic performance in the favorable external trade sector. The views of the various analysts are reflected also in the revision of the Sixth Plan as stated in the Cabinet resolution in 1988. As such, it may be considered that the projections are part of the policy making environment. In particular, they help to identify the focus for policy. This has shifted from maintaining economic stability in an unfavorable environment to maintaining growth under the increasingly felt capacity constraints.

#### **3.2 Effects of Assumptions on Projection Results**

It is not possible to quantify the effects of various assumptions, though the effects on the results can be assessed qualitatively.

The TDRI 1986 assumptions are the most restrictive, by assuming low commodity prices and high oil prices, the projected external balance is highly unfavorable. In addition, the restrictive fiscal policy further dampens the growth of domestic demand. As events turned out, the external situation improved greatly in Thailand's favor. Commodity prices, in particular the oil price, moved in opposite direction from those assumed.

The restrictive assumptions were discarded in TDRI 1988. In addition, but the expansionary investment assumption helps to boost projected demand.

The SCB assumptions are the most favorable, with a bullish outlook on the expansion of world trade, and exchange rate movements helping to boost Thai export.

The World Bank assumptions are most elaborately detailed, but in essence, they reflect the generally held views that conditions favorable to growth of the Thai economy will continue.

### **3.3 Regional Implications of the Projection Results**

The projections reviewed are not explicitly concerned with the regional implications of the results, except in particular aspects of the investment growth and the labor force. Location of new manufacturing capacities and migration of labor seeking employment are major concerns in the World Bank and the SCB analyses. The NESDB projection does not explicitly deal with the regional issues, though reference is made to the policy in the original Sixth Plan. The more favorable context of the revised Sixth Plan allows the government to pursue the decentralization and redistribution objectives with greater effort than was envisaged in the original plan. The concern about equity and income redistribution issues is also reflected in the later TDRI analysis. In summary, the regional implications of the projections are favorable to further decentralization of activities and for the greater potential for growth in the regions, particularly the Upper Central Region.

The discussion will be divided into the following topics:

- (1) Location of economic activity
- (2) Employment
- (3) Government policy

#### **3.3.1 Location of Economic Activity**

The spatial consequence of the expected growth in manufacturing activities has not been elaborated in detail in any of the projections under review. However, a follow-up of the SCB study anticipates that there will be a strong outflow of labor from agriculture, into the manufacturing and services sectors, which would result in the expansion of the area where these activities are concentrated, namely the Bangkok Metropolis and the vicinity. In future, the SCB speculates that the "metropolitan" region may be expanded to include the provinces of the central region, as well as the provinces in the Eastern Seaboard Project.



At the same time, the World Bank study touches on the problems of industrial growth in Regional Cities. According the World Bank report,

"Regional cities have stayed small in Thailand. In these cities, wages are lower, land is cheaper, and workers who can be easily trained are available. The main constraints are the lack of efficient government and business services, information flows for marketing and technology, and transport access." (World Bank, 1989: p.111)

The report attaches considerable importance to the role of small and medium enterprises in generating economic activity. It then notes that these enterprises generally depend on low-cost access to basic infrastructure and on physical proximity to linked enterprises. For these reasons, they tend to choose to locate in urban centers of some size. In turn, the center plays the role of the "incubator" for these enterprises by providing them with the services they require at low cost. The problem, as identified by the World Bank, is that due to congestion and controls on factory establishment in the Bangkok Metropolitan Region, there is a shortage of suitable sites for these enterprises.

### **3.3.2 Employment**

The employment problem under consideration is the location of employment. As anticipated by the SCB study, migration into the Bangkok Metropolitan Region is likely to continue. The problem of housing the new workers is highlighted. However, there is a growing opinion that industry is moving to areas where labor is already available, mainly the urban centers designated the "Regional Cities" such as Nakhon Ratchasima. How this trend develops will depend on the provision of necessary infrastructure to support the operations of industries locating there.

### **3.3.3 Government Policy**

Under the heading of government policy, the main point is not whether there is a policy to decentralize economic activity from the Bangkok Metropolitan Area, but how this can be achieved. As described in the World Bank report,

there are deficiencies in the planning of infrastructure, which need to be rectified if the decentralization policy is to be successfully implemented.

The implications for the Upper Central Region are that the emerging trends are highly conducive to rapid the industrial development of the region. The reasons are: close proximity to the BMR, existence of some infrastructure, and the availability of land at lower costs than in the BMR. However, there is a need to assess carefully the advantages and disadvantages of the region for specific industries, and there is a need to plan carefully for the provision of physical and social infrastructure to accommodate the potential industrial growth.

## 4. TECHNICAL NOTE

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The set of projections under review comprises the following:

- (1) The Sixth National Economic and Social Development Plan, published in 1986 for use during the period 1987-1991.
- (2) The Revised Sixth Plan, published in incomplete form, in 1989, following a resolution by the Council of Economic Ministers on adjustment of the Sixth Plan in October 1988.
- (3) The World Bank report, "Thailand: Country Economic Memorandum, Building on the recent Success-- A Policy Framework", published in February 1989.
- (4) The Siam Commercial Bank Economic Research Division, "Trends and challenges for the Thai Economy", published January 1989.
- (5) Thailand Development Research Institute, "Financial Resources Management", prepared by the Macroeconomic Policy Program, for the Year-end Conference on Resources Management, 1986.
- (6) Thailand Development Research Institute, "An Economic Forecast for Thailand in 1988 and During the Sixth Plan period", Year-end Conference, 1988.

In addition, the paper draws on published data issued by the Bank of Thailand and the National Accounts Division, NESDB.

Existing projections of reference are as follows:

NESDB, 1986: The Sixth National Economic and Social Development Plan,

NESDB, 1989: The Revised Sixth Plan, draft working papers.

NESDB, 1988: Resolution by the Council of Economic Ministers on Adjustment of the Sixth Plan.

World Bank, 1989: "Thailand: Country Economic Memorandum, Building on the recent Success-- A Policy Framework".

TheSiam Commercial Bank Economic Research Division, 1989: "Trends and Challenges for the Thai Economy".

Thailand Development Research Institute, 1986: "Financial Resource Management", prepared by the Macroeconomic Policy Program, for the Year-end Conference on Resources Management, 1986.

Thailand Development Research Institute, 1988: "An Economic Forecast for Thailand in 1988 and During the Sixth Plan Period", Year-end Conference, 1988.

Bank of Thailand, 1986: Annual Economic Report 1986.

Bank of Thailand, 1987: Annual Economic Report 1987.

Bank of Thailand, 1988: Monthly Economic Report December 1988.

## **APPENDIX 1. LIST OF STUDY REPORTS AND PAPERS**



## APPENDIX 1. LIST OF STUDY REPORTS AND PAPERS

### 1. REPORTS

Design for the Study

Inception Report

Inception Report: Amendment

Progress Report

Interim Report

Executive Summary

Master Plan Report

Technical Reports

- Vol. 1 Spatial Framework for Development
- Vol. 2 Environmental Management
- Vol. 3 Land Use and Agricultural Development
- Vol. 4 Industrial Development
- Vol. 5 Distribution
- Vol. 6 Water Resources Management
- Vol. 7 Transportation
- Vol. 8 Economic Environment
- Vol. 9 Local Government Finance
- Vol. 10 Energy
- Vol. 11 Landsat Analysis

Draft Final Report

Executive Summary

Master Plan Report

Sector Reports

- Vol. 1 Spatial Framework and Network for Development
- Vol. 2 Urban Management
- Vol. 3 Environmental Management
- Vol. 4 Water Resource Management, Agricultural Development and Land Use Management
- Vol. 5 Industrial Development
- Vol. 6 Distribution and Marketing
- Vol. 7 Energy
- Vol. 8 Social Development in Rural Economies
- Vol. 9 International and National Economic Environment
- Vol. 10 Human Resource Development
- Vol. 11 Landsat Analysis

Final Report

Executive Summary

Master Plan Report

Sector Reports

- Vol. 1 Spatial Framework and Network for Development
- Vol. 2 Urban Management
- Vol. 3 Environmental Management

Vol. 4	Water Resource Management, Agricultural Development and Land Use Management
Vol. 5	Industrial Development
Vol. 6	Distribution and Marketing
Vol. 7	Energy
Vol. 8	Social Development in Rural Economies
Vol. 9	International and National Economic Environment
Vol. 10	Human Resource Development
Vol. 11	Landsat Analysis

## 2. PAPERS

### Papers for Seminar, Sara Buri, November 2-3, 1989

1. Development Framework, Strategies, and Production
2. Urban, Land Use and Infrastructure Development
3. Critical Issues for Development Management

### Papers for Seminar, Pattaya, July 28-29, 1990

1. Agriculture and Water Resources: Policies and Programs
2. Industry and Energy: Policies and Programs
3. Urbanization and Infrastructure Facilities: Policies and Programs
4. Development Administration and Environmental Management: Policies and Programs



## **APPENDIX 2. STAFF INPUT**



## APPENDIX 2. STAFF INPUT

### Members of UCR Study Project Staff of NESDB

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| 1.  | Mr. Vithya Siripongse       | Deputy Secretary-General and Project Director                             |
| 2.  | Dr. Utis Kaothien           | Director of Urban Development Coordination Division and Projector Advisor |
| 3.  | Mr. Manu Sattayateva        | Director of Central Region Development Center and Project Manager         |
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| 5.  | Mr. Teerapat Kaiyarit       | - do -  |
| 6.  | Mr. Numthip Pattanaskul     | - do -  |
| 7.  | Mrs. Somsiri Protitikul     | - do -  |
| 8.  | Mr. Sumeth Srisangthaisuk   | - do -  |
| 9.  | Mr. Kiattikul Lueangwattana | UDCD Official and Counterpart Team Member                                 |
| 10. | Ms. Piyachat Sonkom         | CRDC Official and Counterpart Team Member                                 |
| 11. | Mr. Poolwit Bua-on          | - do -  |
| 12. | Mr. Mana Ligkachai          | - do -  |
| 13. | Mr. Sumitra Pooltong        | - do -  |
| 14. | Mr. Chokdee Srisomboon      | - do -  |

### Members of JICA Advisory Committee for UCR Study

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| 2. | Mr. Koichi Nonaka     | Member of the Committee, Institute of Developing Economies               |
| 3. | Mr. Koji Taniguchi    | Member of the Committee, IDE   |
| 4. | Dr. Kunitoshi Sakurai | Member of the Committee, IFIC, JICA                                      |

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| 5. | Mr. Atsushi Matsumoto | Member of the Committee and Officer in Charge, JICA |
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CUSRI:	Chulalong Korn University Social Research Institute
ECFA:	Engineering Consulting Firm Association
IDCJ:	International Development Center of Japan
PCI:	Pacific Consultants International
SOMC:	Shinko Overseas Management Consultant

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