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Short- and Medium-Term Cycles in Asian Economies

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Introduction

The investment behavior of corporations is often a factor that brings about cyclical shifts in overall business and fluctuations in economic growth. In industrialized nations, levels of inventory investment generally fluctuate in a three-to-four-year (approximately forty-month) cycle known as the "kitchen cycle," conducing the nations' short-term cyclical business swings. Such economies also show a seven-to-ten-year cycle in their trends of investment in plants and equipment, known as the "Juglar cycle." The objective of this paper is to establish whether these two cyclical patterns also exist in the Asian economies.

Method Used

The analysis covers nine economies in Asia. A ratio calculated by dividing inventory investment figures in the national income statistics of each of these economies by their GNPs was taken as a measure of inventory investment. Similarly, plant and equipment investment was represented by a ratio calculated by dividing the economies' fixed investment figures by their GNPs. These ratios were then plotted in order to visualize their peaks and troughs.

Observed Short- and Medium-Term Cycles

Although varying somewhat in individual detail, peaks and troughs in the

inventory investment ratios of the nine Asian economies were apparent and showed certain distinct cyclical patterns.

As overall business expands, corporations tend to build their inventories. As a result their production activities become brisk and, at the same time, the inventory investment ratio rises. After a while the ratio reaches too high a point, and inventory adjustments begin, pushing back the ratio. However, since such adjustments cannot last forever, corporations return to their inventory buildup when that ratio becomes too low. One of the main characteristics of inventory investment is that it can be carried out flexibly as part of short-term corporate planning.

There were also obvious cyclical peaks and troughs in the plant and equipment investment ratios of these economies. Reflecting the dynamism of the economies for the period covered by this study, the basic trends of the ratios were upward, and more so than recently.

Unlike inventory investment, which can be adjusted elastically to meet the requirements of short-term business cycles, investment in plants and equipment has to be carried out in accordance with a corporation's medium-term plans. As long as the overall growth of an economy is expected to continue, investment in plants and equipment increases at a higher rate than that of the economy's growth. Consequently, the ratio of plant and equipment investment breaks through a certain permissive limit sooner or later, and the economy runs into a situation of surplus supply and surplus equipment. Then corporations curb their investment in plants and equipment to adjust the supply-demand gap, pulling the ratio back within a permissive range and producing room for another upswing in plant and equipment investment.

Summaries of the inventory investment cycles and plant and equipment cycles in the individual economies are given in the following sections.

Korea

The inventory investment ratio for the period from 1962 until the present comprised eight peaks and the same number of troughs. These peaks and troughs combined to form a clear-cut cycle in which the ratio comes to a standstill after reaching a critical level on the upper side and then goes down to a point where it remains stationary until it starts another upward move. The average time span between two successive peaks of the ratio was three years, and between two successive troughs 3.2 years.

The plant and equipment ratio for the same period showed peaks in 1968 and 1980 and troughs in 1964 and 1972. As long as corporations can make profits, they continue to invest more in plants and equipment, and the ratio keeps going up. But then the investment becomes saturated and levels off

until it starts declining. The time span between the ratio's two peaks was twelve years, and that between its two troughs eight years.

Taiwan

There were ten peaks and eleven troughs in the inventory investment ratio for the period from 1952 until the present. The average time span between two successive peaks, as well as that between two successive troughs, was 3.3 years. The plant and equipment investment ratio showed four peaks and the same number of troughs, with the peak-to-peak (abbreviated PTP

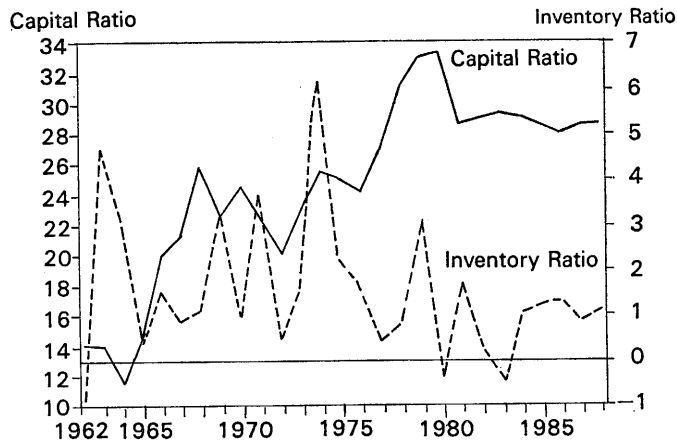

Fig. 17–1
Korea: Capital and Inventory Investment Ratios (%)

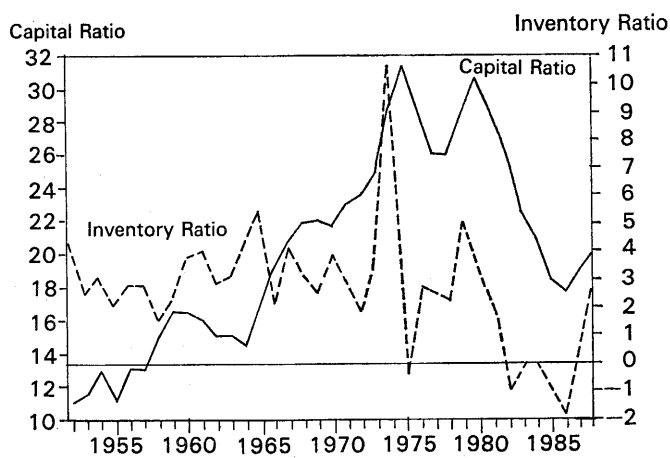

Fig. 17–2
Taiwan: Capital and Inventory Investment Ratios (%)

hereafter) average being 6.7 years and the trough-to-trough (abbreviated TTT hereafter) being 7.3 years.

Hong Kong

Hong Kong had four peaks and three troughs in its inventory investment ratio for the period from 1970 to the present; the PTP average was 3.7 years, and the TTT average four years. The plant and equipment investment ratio had two peaks and troughs; the average time spans were ten years for PTP and eight years for TTT.

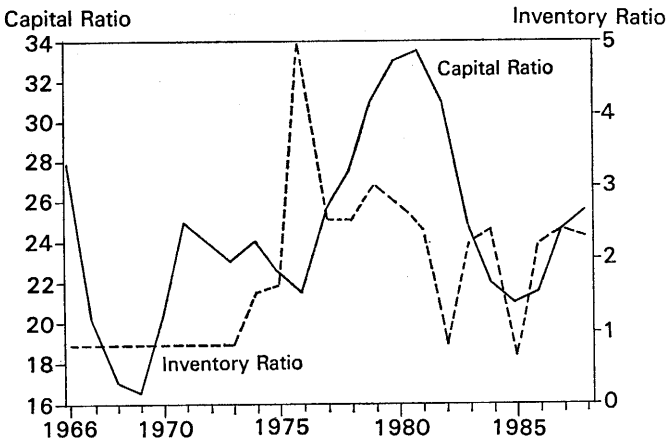

Fig. 17–3
Hong Kong: Capital and Inventory Investment Ratios (%)

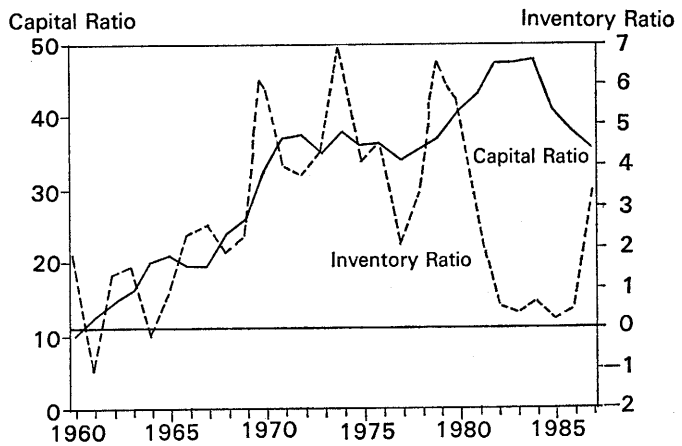

Fig. 17–4
Singapore: Capital and Inventory Investment Ratios (%)

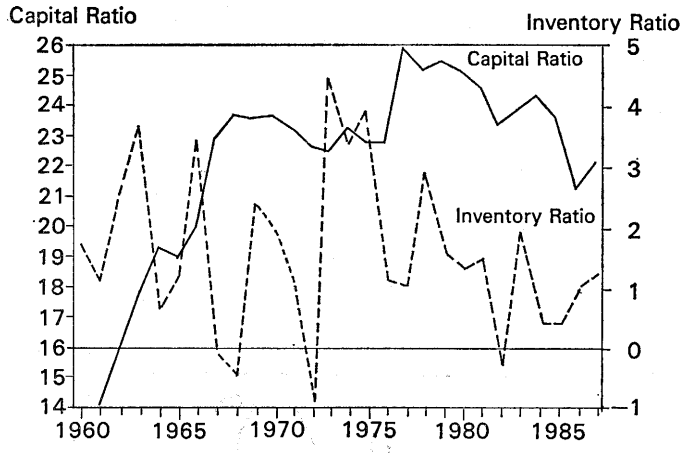

Fig. 17–5
Thailand: Capital and Inventory Investment Ratios (%)

Singapore

Singapore's inventory investment ratio comprised eight peaks and eight troughs for the period from 1960 to the present, with the PTP average being 3.5 years, and the TTT average 3.4 years. The plant and equipment investment ratio saw three peaks and two troughs, with the average PTP time span being 8.5 years, and the TTT span ten years.

Thailand

There were eight peaks and nine troughs in the inventory investment ratio for the period from 1960 to the present, with the PTP average being 2.9 years, and the TTT average being three years. The plant and equipment investment ratio had two peaks and two troughs. The PTP span was seven years and the TTT span nine years.

The Philippines

The country's inventory investment ratio showed nine peaks and ten troughs from 1946 until the present, with the PTP average being 3.6 years and the TTT average being 4.6 years. Its plant and equipment investment ratio showed two peaks and two troughs, the PTP span being fourteen years and the TTT span thirteen years.

Malaysia

Malaysia's inventory investment ratio had five peaks and five troughs for the period from 1967 to the present, with the PTP average being 3.8 years

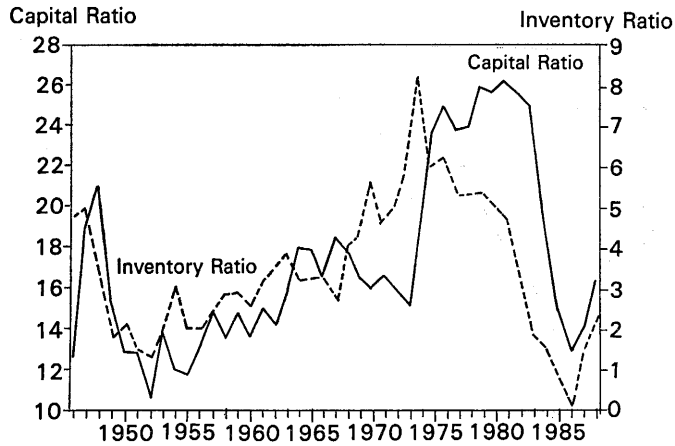

Fig. 17–6
The Philippines: Capital and Inventory Investment Ratios (%)

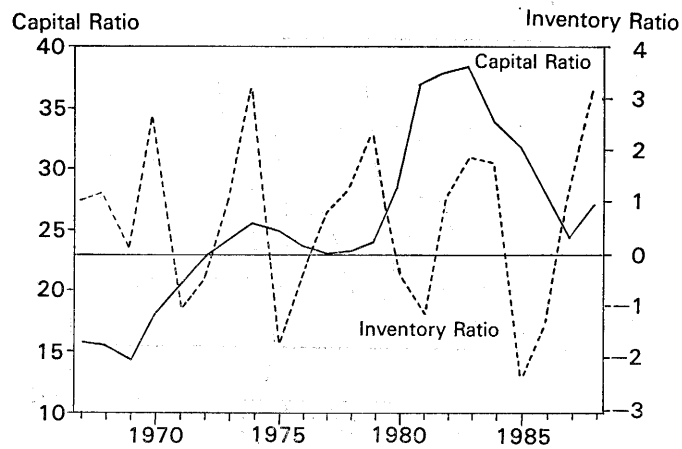

Fig. 17–7
Malaysia: Capital and Inventory Investment Ratios (%)

and the TTT average four years. The plant and equipment investment ratio had two peaks and two troughs, with the PTP span being nine years and the TTT span being eight years.

Indonesia

Due to the very limited coverage of the data available on the country's inventory investment ratio, definite peaks or troughs could not be identified except for two troughs in 1984 and 1986. The time span between them was

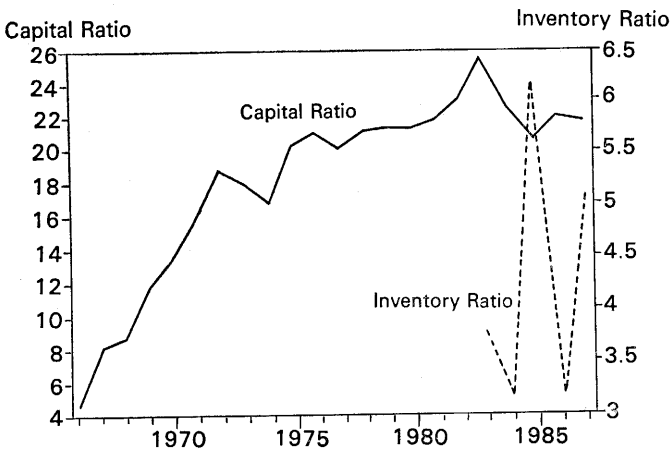

Fig. 17–8
Indonesia: Capital and Inventory Investment Ratios (%)

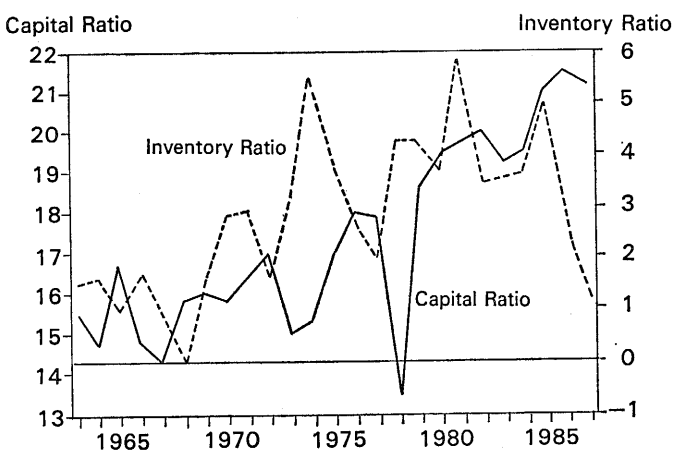

Fig. 17–9
India: Capital and Inventory Investment Ratios (%)

two years. The plant and equipment investment ratio had two peaks and two troughs for the period from 1966 to the present, with the PTP span being eleven years and the TTT span twelve years.

India

The inventory investment ratio saw seven peaks and six troughs for the period from 1963 until the present, with the PTP average being 3.5 years and the TTT average being 3.4 years. The plant and equipment investment

ratio had three peaks and two troughs, with the PTP average spanning 10.5 years and the TTT span being eleven years.

Conclusion

In the inventory investment ratios surveyed and summarized in Table 17–1, the longest peak-to-peak average was 3.8 years (Malaysia) and the shortest 2.9 years (Thailand). The overall average for the nine Asian economies was 3.4 years. The longest trough-to-tough average was 4.6 years (the Philippines) and the shortest 2 years (Indonesia). The overall average for the nine economies was the same as that for peak-to-peak spans: 3.4 years. These average figures are almost equal to those for the inventory investment ratios of Japan and the United States; therefore it may be concluded that certain short-term business cycles due to inventory investment, like those found in industrialized nations, do exist in these nine Asian economies too.

In the plant and equipment investment ratios surveyed and summarized in Table 17–2, the longest peak-to-peak average was fourteen years (the Philippines) and the shortest 6.7 years (Taiwan), with the overall average for the nine economies being ten years. The longest trough-to-trough average was thirteen years (the Philippines) and the shortest 7.3 years (Taiwan), with the overall average being 9.6 years. Although these figures are somewhat longer than those for Japan or the United States, it seems clear that there are also certain mid-term cycles due to plant and equipment investment in these Asian economies.

When it comes to the question of what causes the short- and medium-term cycles in each of these Asian economies, one needs to take into account their close trade relations with the United States and Japan, the trade activities among these economies, and the individual features of each. However, as the objective of this paper has been to establish the existence in the Asian economies of cycles in inventory investment as well as in plant and equipment investment, analysis of their causes will be left to another opportunity.

Table 17-1
Inventory Investment Ratios

	Korea	Taiwan	Hong Kong	Singapore	Thailand	Philippines	Malaysia	Indonesia	India		Japan	U.S.A.
1949						T						
50						P						
51												
52						T						
53		T										
54		P				P						
55		T				T						
56												
57		P									P	
58		T									T	T
59						P						P
60						T						
61		P		T	T						P	T
62		T									T	P
63	P			P	P	P						
64				T	T				P		P	T
65	T	P				T			T			
66	P	T			P	P			P		T	P
67	T	P		P		T						
68				T	T		P		T		P	T
69	P	T			P		T				T	P
70	T	P		P		P	P				P	T
71	P					T	T		P			
72	T	T		T	T				T		T	
73					P							P
74	P	P		P	T	P	P		P		P	
75		T		T	P	T	T				T	T
76		P	P	P		P						
77	T		T	T	T				T		P	
78		T			P	T					T	P
79	P	P	P	P		P	P		P			
80	T				T				T		P	T
81	P				P		T		P			P
82		T	T		T				T			T
83	T			T	P		P				T	
84		P	P	P				T				P
85			T	T	T		T	P	P		P	
86	P	T				T		T			T	T
87	T		P									
88												
89												
P-P	3.0	3.3	3.7	3.5	2.9	3.6	3.8	—	3.5	3.4	3.4	3.6
T-T	3.2	3.3	4.0	3.4	3.0	4.6	4.0	2.0	3.4	3.4	3.5	3.5

Note: P=peak, T=trough.

Table 17-2
Capital Investment Ratios

	Korea	Taiwan	Hong Kong	Singapore	Thailand	Philippines	Malaysia	Indonesia	India	Japan	U.S.A.
1949											
50											
51											
52											
53											
54											
55										T	
56											
57											P
58											
59											
60		P									
61										P	T
62											
63											
64	T	T									
65				P					P	T	
66											P
67				T		P			T		
68	P										
69		P	T				T				
70		T			P					P	
71			P								T
72	T							P			
73					T	T					
74				P			P	T			P
75		P									
76			T						P		T
77		T		T	P		T				
78									T	T	
79											
80	P	P								P	
81			P			P					P
82				P	T						
83							P	P		T	
84											
85			T					T			
86		T				T			P		
87											T
88											
89											
P-P	12.0	6.7	10.0	8.5	7.0	14.0	9.0	11.0	10.5	10.0	9.5	8.0
T-T	8.0	7.3	8.0	10.0	9.0	13.0	8.0	12.0	11.0	9.6	9.3	8.7

Note: P=peak, T=trough.