

The World Business Cycle: Is It Here To Stay?

By Nariman Behravesh*

During the boom years of the 1960s and early 1970s, the U.S. was not overly concerned with the possibility that economic fluctuations would spill across national boundaries.¹ But since the 1973 oil embargo, the business cycles of the major industrialized nations have appeared to be moving more nearly in step than they were before. This apparent synchronization has prompted speculation that inflation and recession are *world* problems that no longer can be

dealt with by *national* stabilization policies.

If indeed we have entered a period of synchronized business cycles, we have a new argument for more closely coordinated economic policies, at least among the larger economies of the industrialized world. Some might go further and argue for a supranational policymaking agency or a world central bank. If the evidence for a world business cycle is not conclusive, however, then the case for closely linked policymaking is less convincing. And so the questions: Is the post-1973 cycle different from what came before? And, depending on the answer to that one, what impact did national policy initiatives and other developments have on business cycles during this period?

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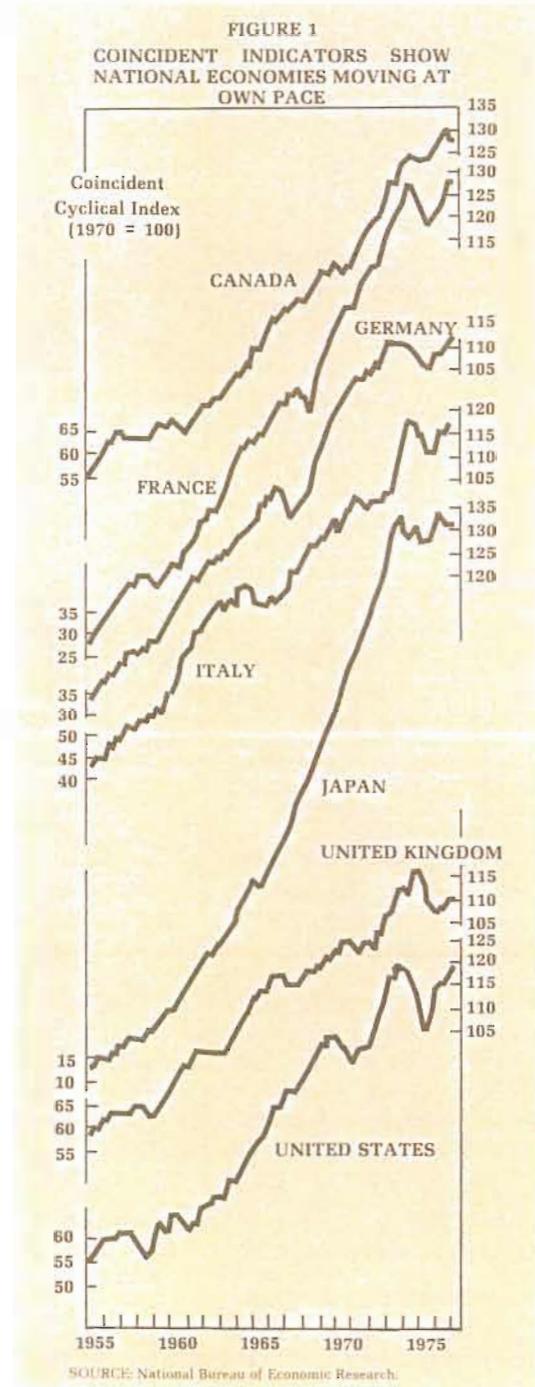
¹In the early 1950s, some attention was given, especially by European economists, to cycles induced by fluctuations in international trade.

IS THE POST-1973 CYCLE DIFFERENT?

Business cycles are complex phenomena, and so they're not easy to study. Since 1920, the National Bureau of Economic Research has analyzed U.S. business cycles and has developed coincident indicators that trace the path of business cycles.² Recently, the NBER also has developed coincident business cycle indicators for Canada, France, Germany, Italy, Japan, and the U.K. Looking at the coincident business cycle indicator for each country should tell us if the post-1973 business cycle is different from the pre-1973 cycle for each and all of the seven countries. But policymakers generally are more concerned with movements in the unemployment rate and the rate of inflation over the business cycle than with changes in the coincident indicators. Therefore, we shall be looking also at the unemployment rate and the percentage change in the consumer price index (CPI) for each of these nations to help put their recent business cycles into perspective.

Coincident Business Cycle Indicators. Coincident indicators for each country are composite indexes of such economic measures as gross national product adjusted for inflation, industrial production, retail sales adjusted for inflation, and the unemployment rate. Figure 1 plots the coincident indicators for each of the seven countries. The overall rise in each country's index shows how fast that country's economy is growing. The Japanese economy, for example, has grown the fastest, the British economy the slowest.

The larger peaks and valleys on these plots coincide with large economic fluctuations. Prolonged dips correspond to recessions; steady upward movements correspond to economic expansions. The low points in the U.S. graph match the reces-



²This terminology has been developed by the National Bureau of Economic Research.

sions of 1958, 1960-61, 1969-70, and 1973-75.

It's apparent from Figure 1 that fluctuations in the Canadian economy roughly parallel those in the United States, whereas the same can't be said for the other economies. It's apparent also that these seven countries moved into the 1973-75 economic slowdown almost in step. But aside from these two items, the graphs show that the national economies have not been moving together. The Appendix presents further evidence that confirms the lack of coincidence for business cycles before 1973.³

Although most of these countries started their recessionary descents at roughly the same time, both the timing and the pace of their recoveries have been quite different. Canada has recovered fairly rapidly and strongly (that is, Canada's coincident business cycle index is well above its 1973 level). By early 1977, France, Germany, and the U.S. had barely recovered from the recession, whereas Italy, Japan, and the U.K. had not yet recovered. The British recovery continues weak.

Thus, although these seven countries suffered through recessions at roughly the same time, they seem to be recovering at their own individual paces.

The Unemployment Rate. Much the same can be said for the national unemployment-rate histories. Looking at changes in unemployment rates gives us a basis for comparing business cycles in these countries.

Figure 2 shows that all the unemployment rates rose during the recent recession, but it shows that they rose by different amounts. In Japan, whose graph is nearly flat, the unemployment rate has risen only slightly during slowdowns. Italy's unemployment rate shows a little more variation but in

recent years has been relatively unresponsive to changing economic conditions. The United Kingdom has seen its unemployment rate rising, on average, since 1958; but this rate has dropped during periods when the British economy has shown some strength (in 1960, 1965, and 1973). Similarly, France's unemployment rate has moved up fairly steadily in the past 15 years. Germany has managed to hold its rate steady for years at a time; but between these long stretches, the unemployment rate has responded to economic slowdowns. Only the U.S. and Canadian rates have moved in tandem since 1958, and these have fluctuated more widely than the rates in the other five countries.

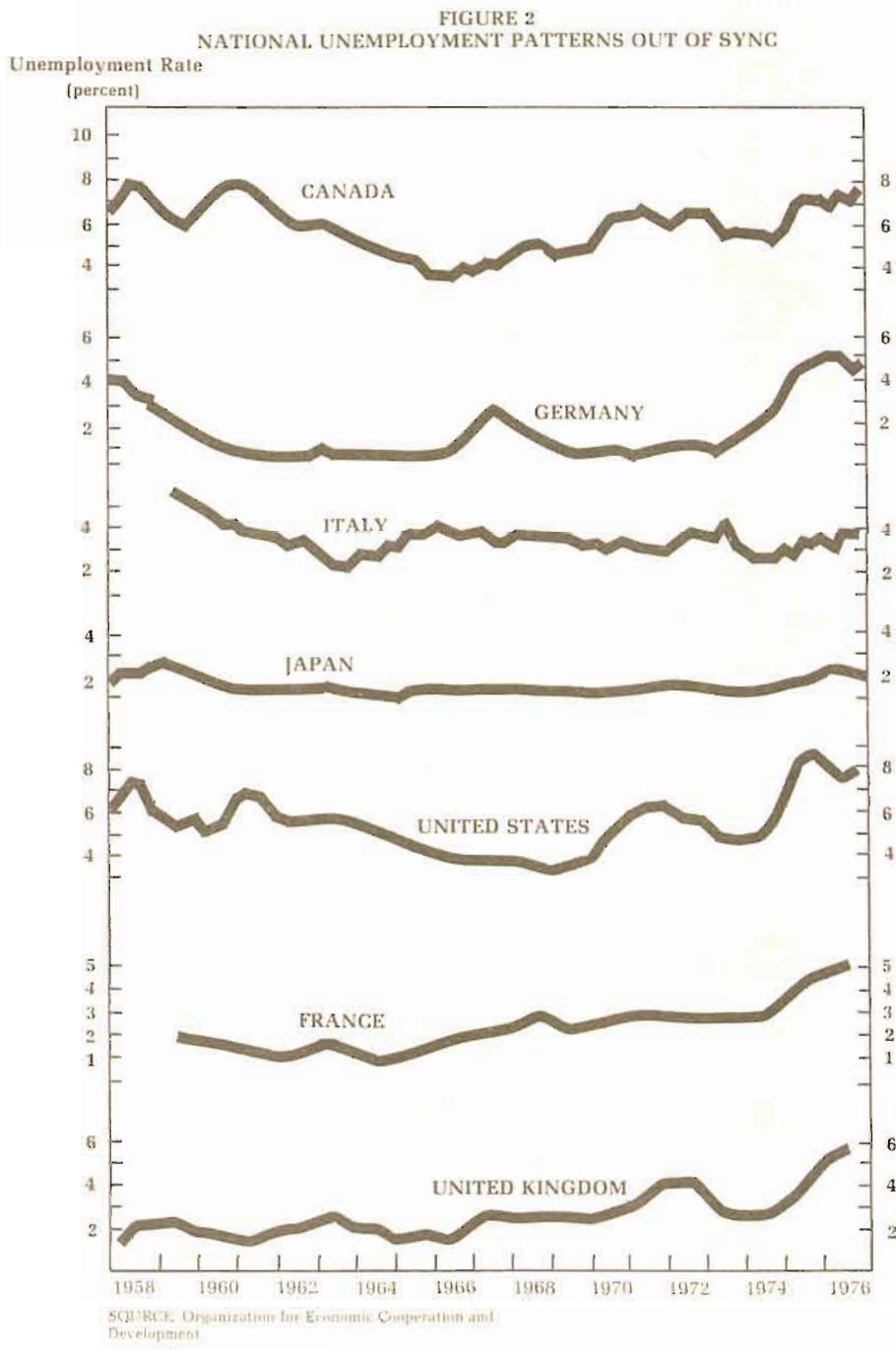
In short, because of structural differences in these economies, their responses to business cycles have been and continue to be different.

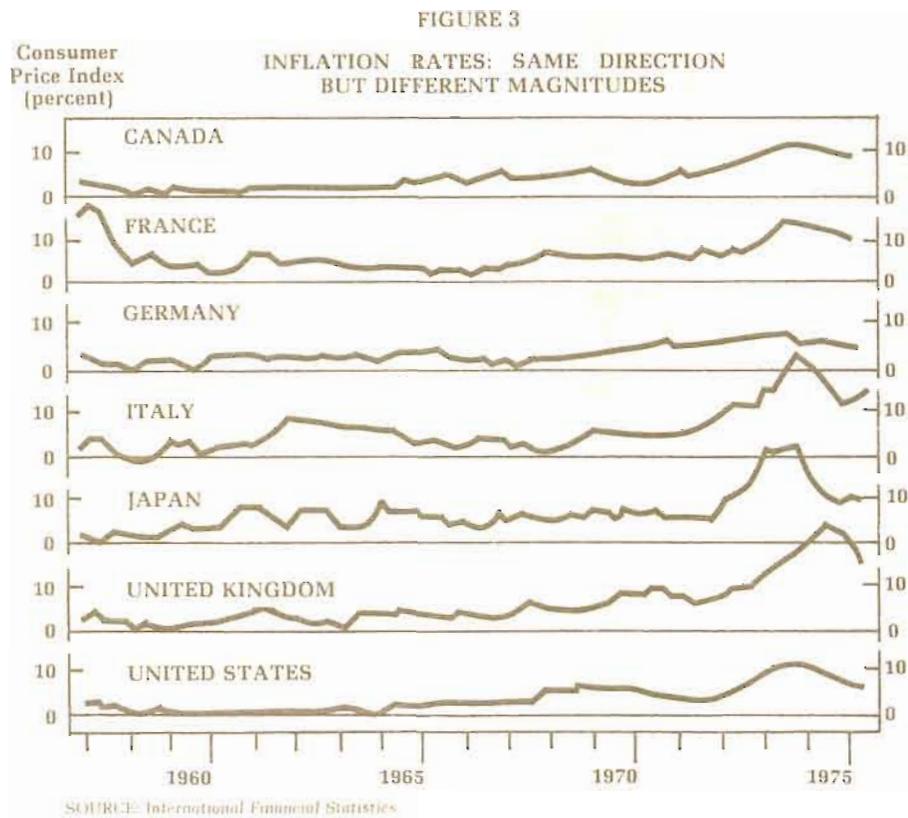
The Consumer Price Index. Unlike the coincident indicators and unemployment, the CPI shows roughly the same pattern for each country (Figure 3). From 1958 to 1972 the rates of inflation for these countries showed secular increases but were generally stable, with the exception of France at the end of the Fourth Republic in 1958.

Since 1958, the rates of inflation in Canada, Germany, and the U.S. have been lower than the rates in the other four countries. The rates of inflation in Italy, Japan, and the U.K. are the most volatile among these nations. But the rates of inflation in all countries have moved up and down in response to business cycles. Usually, price increases have slowed down during or soon after recessions.

For each of these nations in the 1973-76 period, the rate of inflation was 2 to 3 times as high as the rate of inflation in the 1958-72 period. These price-level rises were particularly dramatic for Italy, Japan, and the U.K. The recession in each country has slowed the pace of inflation, but not enough in most countries to bring the rate down to 1972 levels. In Italy, inflation accelerated again

³There is some evidence that four of these countries (the U.S., the U.K., Italy, and Germany) experienced growth slowdowns in the early 1970s. But the combined effect of these slowdowns had a very small impact on world economic growth.





in early 1976.

Thus, even before 1973, inflation rates moved more in unison than either the coincident indicators or the unemployment rates. Nevertheless, even these rates show considerable differences.

These three measures—the coincident indicators, the unemployment rate, and the CPI—give us a picture in which one feature stands out: the simultaneity of recession's onset in the industrialized countries in 1973. That's the point that needs to be explained.

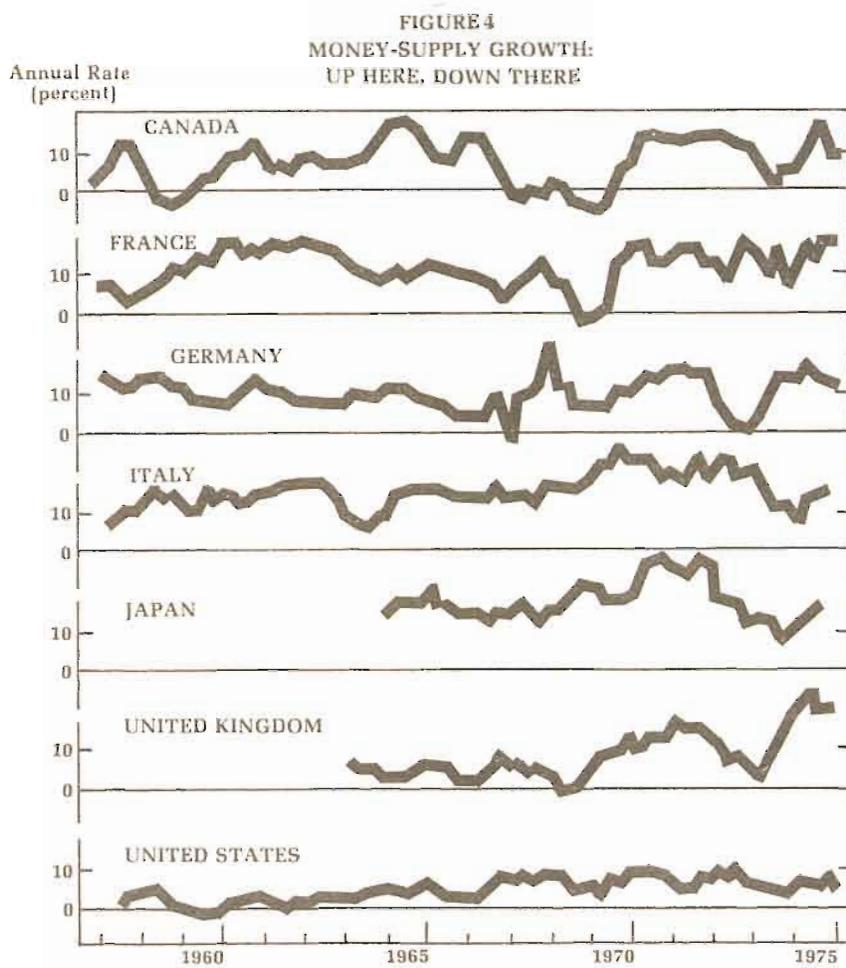
WHY WAS THE 1973-75 RECESSION SYNCHRONIZED?

What factors contributed to the nearly simultaneous downturn of the large indus-

trialized economies in the recent recession? Can these factors recur? And have they changed the structure of the world economy so that business cycle coincidences are more likely? To answer these questions, it's necessary to explore the roles that economic policy and other factors played during this time.

Monetary and Fiscal Policy. To determine what role, if any, monetary and fiscal policy played in the recent recession, let's look at money-supply growth rates and government budget deficits for each of these countries.

Figure 4 plots money-supply growth rates for the seven countries. The pattern of these



rates is quite different for each country. U.S. growth rates, for example, have been smoother and lower than the rest, whereas the money-growth rates for Canada have been relatively high and have fluctuated more.

The upward trends in money-growth patterns that we see in some of these countries may explain in part the upward trends in the rates of inflation. Between 1970 and 1973, many of these countries experienced fairly rapid money-growth rates. This prob-

ably set the stage for the rapid rates of inflation experienced in 1973 to 1975, but it goes only part way toward explaining why these rates were as high as they were.

Money-supply growth rates in each of these countries slowed down in 1973 and 1974. But the magnitude of the decline differed from country to country, and the timing wasn't exactly in phase. The slowdown in money-growth rates may have helped to retard economic activity in each country that suffered a downturn.

Figure 5 plots the government budget deficits for each country. Here again, the picture is an eclectic one.⁴ France, Germany, Japan, and the U.S. had budgets that were nearly in balance up until 1974, while Italy and the U.K. have been running increasingly large deficits since 1970. Each country's deficit has increased during recessions, and all seven countries registered unusually large deficits during the last recession.

Most economists would agree that government deficits can be inflationary and that whether they are or not depends on how they are financed. Some would argue further that inflation leads to belt-tightening by consumers and businesses and, therefore, to recession. Except perhaps in Italy and the U.K., however, the recent large deficits materialized only after inflation rates had started their upward spirals and after the economic downturns had begun. If anything can be concluded from this sequence of events, it's that the national recessions drove governments into deficit by reducing their tax revenues and increasing their expenditures for unemployment insurance and social security. It doesn't appear that the deficits caused the recessions.

Thus we can attribute only part of the severity and the coincidence of the recent recessions to monetary and fiscal policy. We have to look elsewhere for the key to the 1973-75 slowdown.

Other Factors. The Arab oil embargo and the shift from fixed to relatively flexible exchange rates may shed light on the issue at hand.

The embargo and the subsequent oil price increases were severe shocks to the industrialized nations, and their impacts were

felt by all countries at roughly the same time. The immediate result was a reduction in the productive capacity and an increase in the rate of inflation of each country.⁵ Given its timing and effects, the embargo can be blamed, in large part, for the coincidence and the severity of the 1973-75 recessions.

Similarly, along with price increases for other raw materials, the swift rise in oil prices caused by the embargo was a main contributor to high rates of inflation during 1974 and 1975.

The impact of the move from fixed to more flexible exchange rates is a little more controversial. Some economists believe that this shift may have had a destabilizing effect on the world economy. But most economists would agree that in a world with flexible exchange rates, economic fluctuations will not spill over national boundaries as readily as they might in a world with fixed exchange rates.⁶ The effect of this change on the world economy has yet to be assessed fully. Therefore it is premature to say because of the change to flexible rates that we do or do not have a world business cycle.

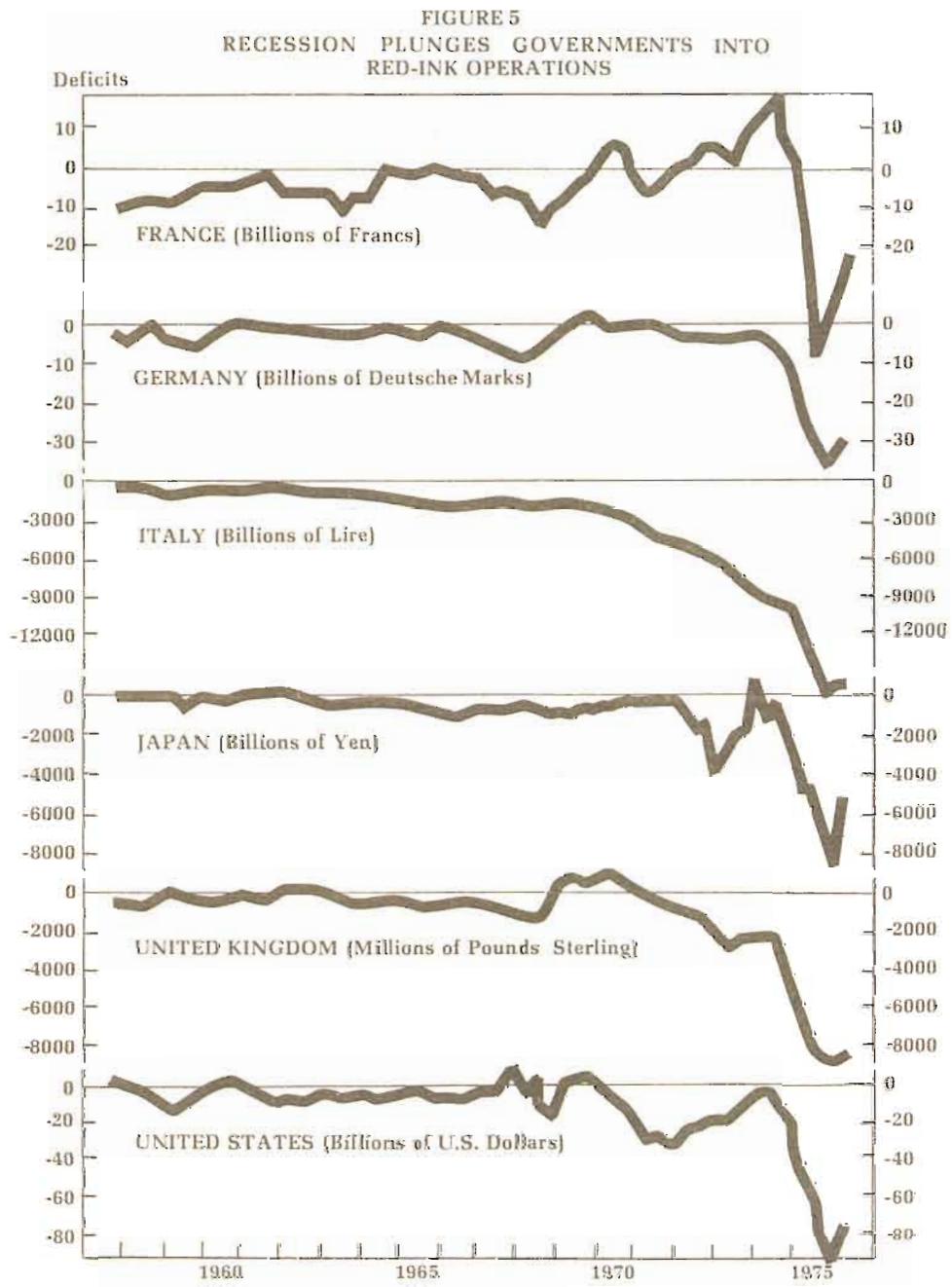
ONE POLICY OR MANY?

On balance, the evidence available suggests that we have not entered an era of internationally coordinated business cycles. Except in the case of the most recent slowdown, if there has been business-cycle coincidence among the major industrialized countries, it has been very weak. Furthermore, changes in economic activity, employment, and even prices have been far from uniform across national boundary lines.

⁵Because of the oil shortage, fewer oil-dependent goods could be produced; and because of higher oil prices, more of the economy's scarce resources were drawn into oil importing and away from other productive activities.

⁶See J. M. Westerfield, "Would Fixed Exchange Rates Control Inflation?" *Business Review*, Federal Reserve Bank of Philadelphia (July/August 1976), pp. 3-10.

⁴The government budget deficit (or surplus) measured at full employment is a better indicator of fiscal policy, but it is not available for most of these countries.



SOURCE: *International Financial Statistics*

Although monetary policy and fiscal policy initiatives may have had some influence on the 1973-75 recession, they can't take all the blame for the timing or severity of that recession, both of which were caused in large part by the oil embargo. In the absence of shocks of this kind, widespread coincident slowdowns probably will not be common occurrences in the future.

It's one thing to say that industrial nations, because of their increased dependence on imported energy and raw materials, are more vulnerable than they used to be to shocks such as the oil embargo. It's entirely different to suggest

that business cycles in these same countries would be in step with one another even in the absence of outside shocks. There's enough evidence to suggest international vulnerability to external shocks. But as yet, there's little evidence to support the view that business cycles are closely linked worldwide.

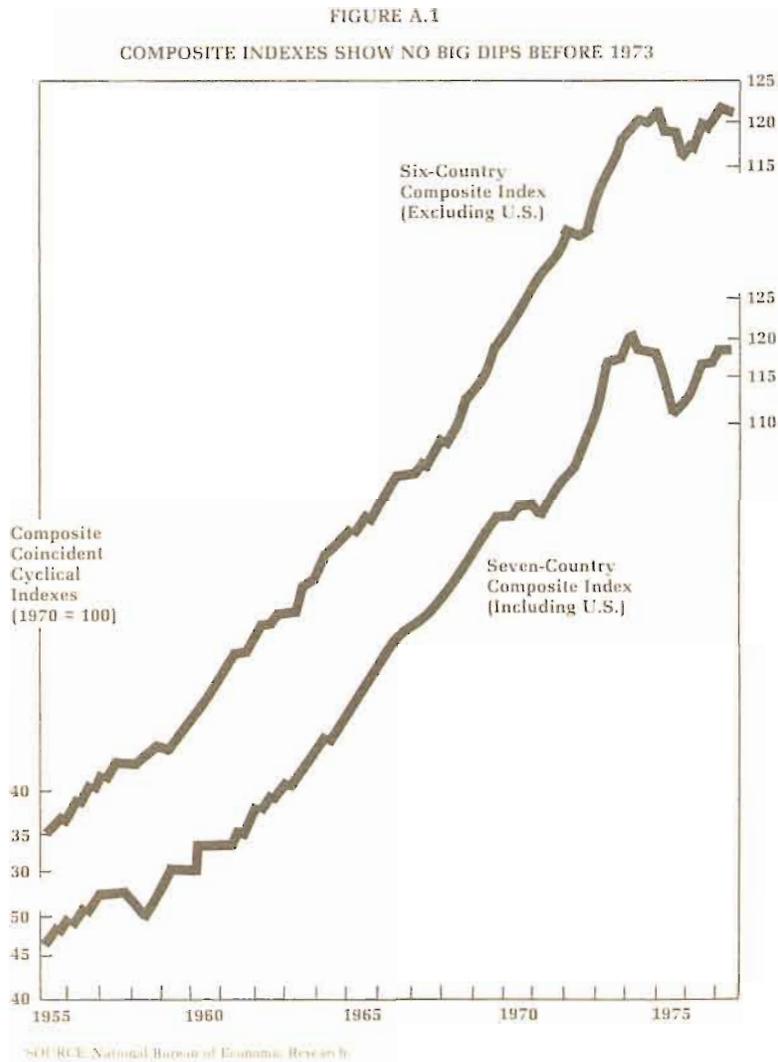
Thus it may be prudent for the industrialized nations to be prepared to bail one another out in case their economies suffer external shocks. But individual nations still are in a position to use traditional stabilization policies in trying to cope with the movements of their own national business cycles.

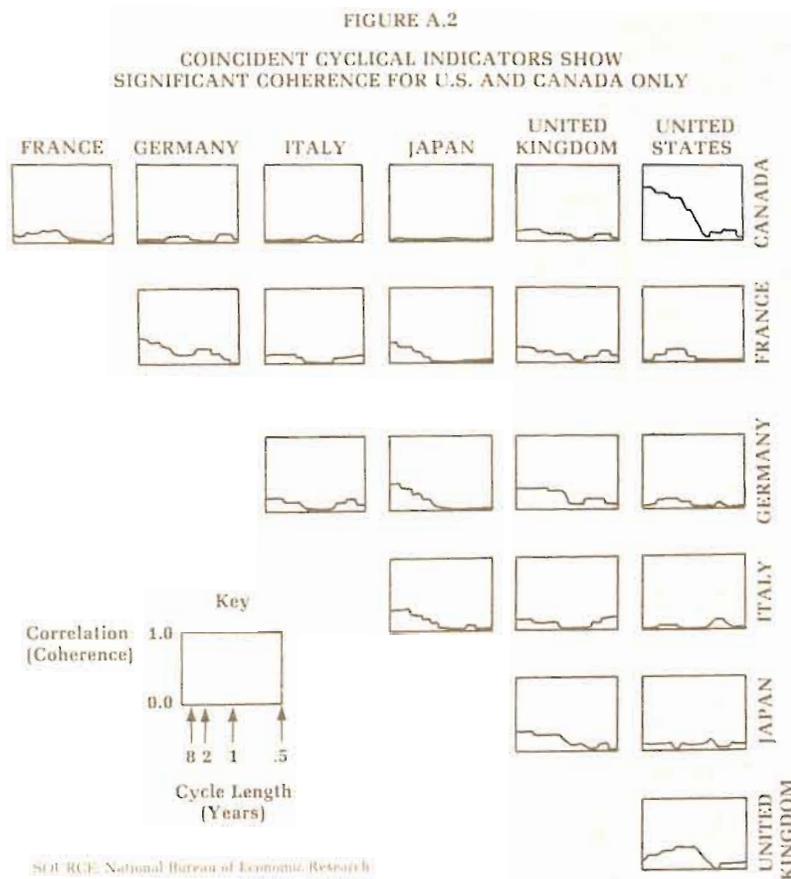
APPENDIX

In the text of this article, the conclusions regarding the noncoincidence of the pre-1973 cycles were arrived at by eyeballing the data. Since eyeballing is not an entirely satisfactory method, this appendix presents two more precise measures of the interrelations among the individual business cycles.

One way to test for a world business cycle is to compute a weighted average of the coincident

cyclical indicators for the countries being considered. The weights to be used for such a calculation are the gross national products of each country. Two such weighted averages, computed by the National Bureau of Economic Research, are presented in Figure A.1. The first composite index is for six countries excluding the U.S. This index shows virtually no fluctuations until 1973. Thus, until then, the business





cycles in the six countries did not coincide.* The seven-country index, which includes the U.S., shows some fluctuations at U.S. business cycles. This happens because the weight given to the U.S. in this composite index is by far the largest.

Another way to measure the interrelation among business cycles is to look at the correlation of the coincident indicators across business cycles. This measure, known in time series analysis as *coherence*, differentiates between the correlations of two variables for economic cycles which last from half a year to ten years (Figure A.2) For example, if the coherence of two varia-

bles has a peak for 5-year to 10-year cycles, then it can be assumed that these two variables are correlated across business cycles. But if coherence has a peak for cycles from 6 months to 2 years in length, the two variables are correlated for very short-term fluctuations and generally don't move together in business cycles.

Usually, coherence of 0.5 or more can be considered evidence of interrelation between two variables. But a high coherence says nothing about causality; it indicates only that two variables are related to one another in some way.†

The coherence of one pair of countries, the U.S.

*The same kind of picture emerges from the weighted averages of the industrial production or gross national product of these countries.

†Coherence may be a poor measure of such interrelations because the effects of other variables are not held constant. Thus partial coherence may be a better measure.

and Canada, has a peak at business cycles (7 to 10 years). But for the remaining countries, the interrelation across cycles generally is weak—

confirming our observation that from 1955 to 1973 there was no world business cycle.

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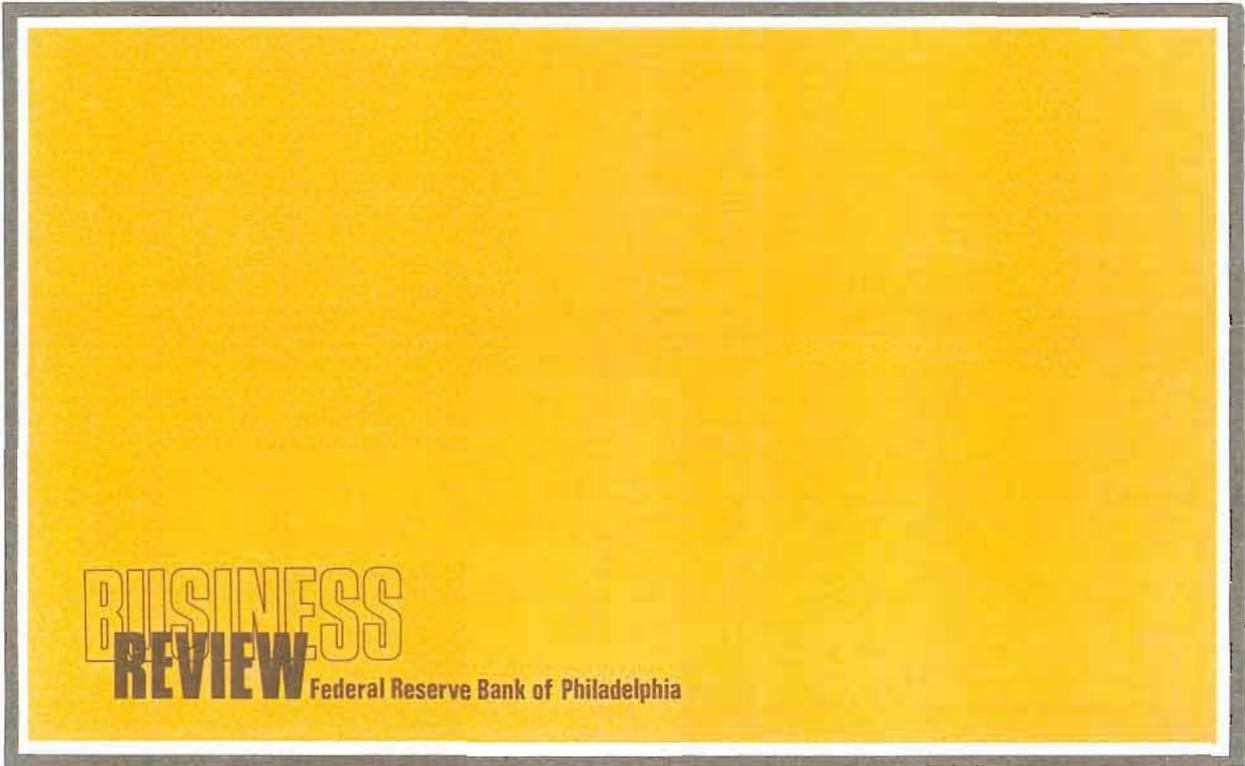
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