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Indicators of Inflation in Western Europe,
1952-55

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For more than three years, the major industrial countries of the free world have been enjoying what probably has been the largest and most rapidly expanding volume of production, employment, and consumption in their history. Such a situation inevitably gives rise to concern as to actual or potential inflationary pressures.

This paper lists some indicators of inflation in the economies of the United Kingdom and the six major Continental European countries (Belgium, France, Germany, Italy, the Netherlands, and Sweden) for the period 1952-55, and compares these indicators with each other and with those of the United States, in order to establish:

(i) in which Western European countries inflationary pressures seem to have reached a significant level over that period; and

(ii) which economic and financial data for that period if any, seem to show movements closely correlated with the degree of inflationary pressure.

Measurement of inflationary pressure

Inflationary pressure is understood to mean an excess of effective demand over available supplies of goods and services at prevailing prices. Such an excess is indicated by a significant rise in the price level, or by a significant deficit in the country's balance of current international payments, or -- most reliably -- by a combination of both factors.

In this paper, changes in the price level are measured by changes in the cost-of-living index. ^{1/} This index is preferred to the index of wholesale prices since wholesale prices are largely influenced by international price movements and therefore do not primarily reflect domestic occurrences in the individual countries. It is true that the cost-of-living index may be distorted by Government policies (rationing, price and rent controls, taxes and subsidies) which have the effect (often intended) of preventing the statistical data from moving in accordance with free-market forces. However, such Government interference probably was less frequent and intensive in the years 1952-55 than in the preceding war and postwar periods.

^{1/} All indices used in this paper take 1952 as base year. In that year the Korean war boom (and subsequent readjustment) had run its course in most countries, while the post-Korean boom had not yet begun. Prices and production were generally stable and most industrial countries had regained equilibrium in their international accounts. The use of that year therefore seems to eliminate as much as possible the distorting influence that an untypical base year would tend to exert. The indices are based on data published by the International Monetary Fund (International Financial Statistics, April 1956).

The balance of current international payments is measured by the country's trade balance expressed as a percentage of the country's imports. The trade balance is preferred to the current account balance because the measurement of "invisible" transactions is quite unreliable. Moreover, international trade is invariably far more important than "invisible" transactions, and is subject to more pronounced fluctuations; changes in the trade balance therefore tend by and large to reflect the changes in the country's entire current balance. It is true, however, that many industrial countries regularly have a moderate deficit on trade account, which may be offset by a surplus on service account and in this case does not indicate the presence of inflationary pressure. For that reason, this paper considers a trade deficit to be an indicator of inflationary pressure only if it either is rapidly rising or is equal to a large proportion (say, at least 25 per cent) of the country's imports.

Nevertheless, it should be remembered that both the cost-of-living index and the trade balance are very imperfect standards of measurement and that they can provide only very rough approximations of the comparative degree of inflationary pressure prevailing in the various countries.

Fortunately, however, in the countries and during the period under consideration, the differences among the various countries in the movement of those indicators were so striking as to permit the observer to reach reasonably safe conclusions, even if he has to concede a very wide margin of error. Between 1952 and 1955, four countries (United States, Belgium, France, and Germany), showed a cumulative rise in the cost of living of not more than 1 per cent; the other four countries (Italy, the Netherlands, Sweden, and the United Kingdom) showed a cumulative rise of not less than 5 per cent. Furthermore, the same four countries that showed no significant rise in the cost of living also had either a trade surplus or a negligible trade deficit at the end of the period; the four countries that showed a large rise in the cost of living also showed either a rapidly rising, or a continuously very large trade deficit. Finally, the two countries with the largest rise in the cost of living (Italy and the United Kingdom) also had the largest trade deficit at the end of the period (see Table 1).

It seems therefore possible to conclude that over the period under consideration the United States, Belgium, France, and Germany did not suffer from inflationary pressure; that the Netherlands and Sweden experienced a slight inflationary pressure; and that Italy and the United Kingdom suffered from serious inflationary pressure.

Economic and financial movements correlated with inflationary pressure

While the first question posed in this paper thus permits a clear-cut answer, it seems less easy to find an answer to the second question concerning correlations between the degree of inflationary pressure and the changes in other economic and financial data.

Table 1

Indicators of Inflationary Pressure, 1952-55

		<u>U.S.</u>	<u>Belgium</u>	<u>France</u>	<u>Germany</u>	<u>Italy</u>	<u>Netherl.</u>	<u>Sweden</u>	<u>U.K.</u>
Cost of living index <u>1/</u>	1952	100	100	100	100	100	100	100	100
	1953	101	100	99	98	102	100	101	103
	1954	101	102	99	98	105	104	102	105
	1955	101	101	100	100	108	106	105	110
Trade balance <u>2/</u>	1952	+ 22	0	- 12	+ 5	- 41	- 5	- 9	- 22
	1953	+ 12	- 6	- 4	+ 16	- 39	- 10	- 6	- 19
	1954	+ 23	- 10	- 1	+ 18	- 33	- 20	- 11	- 17
	1955	+ 27	- 3	+ 3	+ 8	- 35	- 24	- 15	- 25

1/ Annual average

2/ Per cent of annual imports (surplus +, deficit -)

Rise in the volume of money and credit — According to many economists, inflationary pressure is associated mainly with a rapid expansion of money and credit. However, the two countries that in 1952-55 showed the most rapid expansion in the money supply (France and Germany) did not suffer from inflation; the country with the smallest expansion in the money supply (United Kingdom) suffered from serious inflation. Similarly, the country that showed the most rapid expansion in commercial bank credit to the economy (Germany) did not suffer from inflation; the two countries with the smallest expansion in the credit supply (Sweden and the United Kingdom) both suffered from inflationary pressure (see Table 2, rows 1 and 2).

This inverse relationship is not materially affected if the expansion of money and credit is not considered in absolute terms, but in relation to the increase in industrial production. By far the highest ratio between expansion of money and increase in industrial production occurred in a country not suffering from inflation (France); the two lowest ratios occurred in the case of countries subject to inflationary pressure (United Kingdom and the Netherlands). As far as the ratio between credit expansion and increase in industrial production is concerned, the two highest ratios are shown by one country experiencing slight inflation (the Netherlands) and by one not subject to inflation (Germany); by far the lowest ratios occurred in two countries (United Kingdom and Sweden) suffering from inflationary pressure (see Table 2, rows 6 and 7).

Rise in production and employment — According to many economists, inflationary pressure is generally associated with a rapid rise in production and employment; either because a "mild" inflation is believed to promote an increase in economic activity, or because such an increase is believed to cause a rise in prices and a deterioration in the trade balance. However, in 1952-55 by far the largest

Table 2

Indicators of Economic and Financial Movements, 1952-55
(1952 = 100)

		<u>U.S.</u>	<u>Belgium</u>	<u>France</u>	<u>Germany</u>	<u>Italy</u>	<u>Netherl.</u>	<u>Sweden</u>	<u>U.K.</u>
1. Money supply <u>1/</u>	1953	102	103	111	110	110	106	104	103
	1954	104	105	127	124	120	113	106	107
	1955	107	109 e	145 e	136	132 e	123	107	106
2. Credit supply <u>2/</u>	1953	103	105	111	127	121	123	102	98
	1954	107	111	126	165	140	153	112	110
	1955	125	130	141 e	199	163 e	193	107	109
3. Industrial production <u>3/</u>	1953	108	100	97	109	110	110	100	106
	1954	100	106	106	122	120	122	104	114
	1955	112	114 e	117	141	130	131	110	119
4. Employment <u>3/</u>	1953	103	99	98	104	100	103	97	101
	1954	100	99	99	109	101	107	98	104
	1955	102	101 e	100	118	103 e	109 e	100	107
5. Wage rates <u>3/</u>	1953	106	98	103	105	106	102	103	104
	1954	109	100	108	110	110	103	107	108
	1955	113	106 e	117	117	115	118	114	116
6. "Excess" money supply <u>4/</u>	1953	95	103	115	101	100	97	104	97
	1954	104	99	120	102	100	93	102	94
	1955	95	96 e	124 e	96	102 e	94	97	89
7. "Excess" credit supply <u>5/</u>	1953	96	105	114	117	110	112	102	93
	1954	107	104	119	135	117	126	108	97
	1955	112	114 e	121 e	141	125 e	147	97	91
8. Productivity <u>6/</u>	1953	104	101	99	104	110	107	103	105
	1954	100	107	107	111	119	114	106	109
	1955	110	113 e	117	120	126 e	120 e	110	111
9. "Excess" wages <u>7/</u>	1953	102	97	104	101	97	96	100	99
	1954	109	93	101	99	92	100	101	99
	1955	103	94 e	100	97	91	99	104	104
10. "Real" wages <u>8/</u>	1953	105	98	104	107	104	102	102	101
	1954	107	98	109	112	104	109	105	103
	1955	112	105 e	117	117	106	111	109	105

1/ Currency and demand deposits, end of year.

2/ Bank credit to private economy, end of year.

3/ Annual average

4/ Ratio of change in money supply (row 1) to change in production (row 3).

5/ Ratio of change in credit supply (row 2) to change in production (row 3).

6/ Ratio of change in production (row 3) to change in employment (row 4).

7/ Ratio of change in wages (row 5) to change in productivity (row 8).

8/ Ratio of change in wages (row 5) to change in cost of living (Table 1).

e = Estimated on basis of incomplete data.

increase in industrial production occurred in a non-inflationary country (Germany), the smallest in a country suffering from slight inflationary pressure (Sweden).

Similarly, the largest increase in employment occurred in a non-inflationary country (Germany), while of the two countries without an increase in employment one did not show inflationary pressure (France), but the other one (Sweden) did so (see Table 2, rows 3 and 4).

Rise in wage rates — Most economists agree that inflationary pressure usually is associated with a rapid rise in money wage rates; either because a rise in wage rates tends to cause inflation, or because inflation tends to induce wage earners to insist upon a rise in wage rates. For 1952-55, statistical data show indeed a positive correlation between the rise in money wage rates and the degree of inflationary pressure: the country with the largest rise in wage rates (the Netherlands) experienced a slight inflationary pressure, and the two countries with the smallest rises (Belgium and United States) did not do so. However, the countries with the most serious inflationary pressures (United Kingdom and Italy) had smaller increases in money wage rates than two non-inflationary countries (Germany and France); the correlation thus does not seem to be very strong (see Table 2, row 5). Needless to say, the correlation does not give any indication of whether the rise in money wage rates was cause or effect of the inflationary pressure.

The positive correlation is even weaker if inflationary pressure is correlated not with the rise in money wages in absolute terms, but with the ratio between the rise in money wages and the rise in labor productivity -- although this ratio should theoretically provide a better correlation than the movement in money wages as such. The two countries with the largest excess of money wages over the rise in productivity (United Kingdom and Sweden) indeed experienced inflationary pressure; but so did the country in which money wages lagged farthest behind productivity (Italy). Moreover, the United States, which did not suffer from inflation, showed almost as great an excess of wages over productivity as the United Kingdom and Sweden (see Table 2, rows 8 and 9).

In 1952-55, there was an inverse correlation between inflationary pressure and the rise in real wage rates (wage rates deflated by the cost of living): the two countries with by far the largest rise in real wages (France and Germany) did not experience inflation, while of the two countries with the smallest rise one country (Belgium) did not suffer from inflation, but the other one (United Kingdom) did so (see Table 2, row 10).

Conclusions

The lack of a significant positive correlation between the degree of inflationary pressure and most of the economic and financial movements usually associated with such a pressure, and even the inverse

correlation between inflationary pressure and the rise in money, credit, production, and employment, does not necessarily indicate that these economic movements were not, in fact, positively connected with the presence of inflation. It only shows that any positive influence that such movements may have had on inflation, or inflation may have had on such movements, was, in the countries and during the period under consideration, offset by opposite influences of other factors.

However, it may be permitted to draw three more specific conclusions from that lack of positive correlation:

1. There is nothing inevitable about a positive correlation between inflationary pressure and the supply of money and credit. A country may be suffering from inflationary pressure even if the volume of money and credit is prevented from rising faster than output, and it may be free from such pressure even if the volume of money and credit is permitted to rise rapidly.

2. There is nothing inevitable about a positive correlation between inflationary pressure and a rapid rise in real economic activity. There is no reason to assert, and in fact some reason to deny, that a rapid rise in real economic activity -- production, employment, real wages -- is promoted by the tolerance of inflation, or that it makes such toleration necessary.

3. In order to judge the probable inflationary implications of economic and financial movements, it is generally not sufficient to rely on a few "key" factors such as the volume of credit and money or the rapidity of economic expansion. It is therefore generally impossible to make a reliable forecast of inflationary developments on the basis of a simple formula or "model" with a small number of variables.