WIESŁAWA PRZYBYLSKA-KAPUŚCIŃSKA

EVALUATION OF THE EFFECTIVENESS OF BUDGETARY AND MONETARY POLICIES OF FRANCE AND ITALY

Effective solutions to the problem of cyclical fluctuations in the economic policy of any given state is limited by a persistant lack of means to stabilize short and medium-term fluctuations. Reasons for this stem from factors external to stabilization instruments. Some factors include changes in unemployment, inflation and economic objectives. In addition, internal problems may arise from the inadequacy of some instruments, or their misapplication.

This paper contains a comparative analysis of a short – term policy designed to stabilize the economy by means of different measures and methods used by the state. The author will try to show the differences and similarities of this policy when applied over a relatively long period in two highly developed countries – France and Italy.

The comparison of countercyclical policies of both countries suggests a reason why apparently identical levels of influence on the economic processes by the two countries do not quarantee the same effects in stabilizing cyclical fluctuations. An identical economic, social and political environment under the existing, empirically confirmed integration of the business cycle among the EU member states does not quarantee similar, satisfactory results of the anti--cyclical policy carried out by these states.

By studying the course of a business cycle and similar methods and measures of anti-cyclical policy used by the two countries, one can determine whether there exists a significant discrepancy between execution of the stabilization policy and in using the instruments of intervention properly.

A comparative analysis of a state's impact on cyclical fluctuation comprises two highly developed countries – France and Italy. Both countries are characterised by a similar level of economic development (over a long period of time), a similar rate of national income growth, a strong involvement of the state in economic life – both as organiser and producer of goods and services. Both have similar cultural traditions, long membership in the EC, highly developped systems of state interventionism, to mention a few. Those similarities justify a comparative analysis of anti-cyclical policy as applied in both countries.

The study of the effectiveness of a stabilisation policy in France and in Italy will base on the comparative analysis of budgetary and monetary policies of both countries. This analysis spans the years 1960 - 1990. The selection of this period is justified by the following reasons:

– a feasibility of observing the evolution of the main features of a contemporary business cycle against the background of long-term structural changes in a capitalist economy (prosperity of the 1950s and 1960s and recession of the 1970s and 1980s).

– the establishment of the EC – a new institutional form of co-operation of West European countries,

– France and Italy's entry into the EC which involved changes in the course of cyclical fluctuations as integration processes progressed.

1. A methodological basis for the comparative analyses of countercyclical policy

The course of a business cycle presented by the indicators of industrial production and the real GNP of the two economies served as a point of reference for studying the effectiveness of countercyclical policy carried out by means of budgetary and monetary instruments of France and Italy during the years 1960 - 1990, concerning the above-mentioned indicators. The author takes a relativistic view of changes in the application of instruments of budgetary and monetary policy.

Studying the business cycle of France and Italy and the timing of particular instruments of the budgetary and monetary policies, the author applied a procedure which produced deviation cycles. The deviation cycles are obtained through a comparison of the empirical values observed in economic reality, with the estimated values of the normal rate of changes in economic activity[1]. The normal rate of changes is understood as the value of the trend line estimated for a given series of empirical values. Deviation cycles are determined on the basis of quotients between empirical values (Y) of the time series and estimated values (Y'); growth is considered to be relatively high. When the rate of growth in empirical values is lower than the rate of growth in estimated values, the growth is regarded as low[2].

[1] See **I. Mintz**, Dating American Growth Cycles, in: Business Cycles Yoday, ed. **V. Zarmovitz**, NBER, New York 1972, p. 45.

[2] The procedure of distinguishing a business cycle leads to the determination of high and low phases of the business cycle depending on the trend line and on the extent of how the trend value is adjusted to empirical magnitudes. Each change in the trend line will, therefore, cause changes in the determined phases of the business cycle. Thus, the selection of an adequate mathematical function must be preceded by a profound analysis. See **K. Stock**. Verfahren zur statistischen Analyze zyklischen Schwankungen, IFO--Schnelldienst, no. 35 - 36, 1976, pp. 77 - 78.

Deviation cycles are the fluctuations occurring in the time series from which seasonal fluctuations, accidental fluctuations and growth tendency are eliminated. Seasonal and accidental fluctuations have been eliminated from the series by means of the commonly applied method known as X – 11 Arim's method, i.e. by means of "weighted moving averages".

This method assumes that seasonal and accidental fluctuations overlap with the growth tendency of a phenomenon through adequate multipliers[3]. The growth tendency is distinguished by means of statistical-mathematical methods from the time series obtained in this way. In order to select an adequate function to reflect changes in the application of particular methods of budgetary policy, different mathematical functions (which most clearly reflected the behaviour of the studied instruments against the economic reality) were studied[4]. The ultimate criterion for the trend function was the value of average adjustment error since estimation error measures to what extent empirical values deviate from estimated values. Next, the average estimation error was compared with the coefficient of standard deviation[5].

Having selected the trend function for which the average value of error was the lowest and fulfilled the standard deviation condition indicators of deviations from the trend function were calculated. Empirical data illustrating the application of particular instruments of the monetary policy (Y) were divided by the estimated values of the trend (Y') which yielded the indicators of deviations from the trend line.

Apart from the already mentioned problems connected with the realization of the research task, i.e. selection of indicators more or less adequately reflecting the course of cyclical fluctuations and the choice of statistical method of identifying the contemporary business cycle. Another significant problem formulation of the principles of determining the turning points in business conditions.

The author accepts the rules of determining the troughs and crests commonly applied in the research of business conditions in highly developed countries[6].

These principles are as follows:

– upper and lower turning points in a given series of empirical values are found in the crests of troughs of the given series,

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[3] See **R. Barczyk**, Teoretyczne podstawy statystycznych analiz współczesnych wahań koniunkturalnych, ZBSE GUS and PAN, Warszawa 1989, p. 235.

[4] These were the functions of straight line, parabola, exponential functions and multinominals of different degrees.

[5] When standard deviation is bigger than or equal to the average estimation error, one can assume that adjustment of the estimated trend values to empirical values is sufficient.

[6] See **A. F. Burns, W. C. Mitchell**, Measuring of Business Cycles, Studies in Business Cycles n° 2, NBER, New York 1946, Chap. 4.

– upper and lower turning points should always lie alternatively, i.e. any two crests should be separated by a trough of the series,

– when double crests occur the upper turning point is the one with the maximum value followed by a continuous decline lasting for some minimum period (e.g. two quarters of the year, five months)[7].

– when double troughs occur, the lower turning point is the one with the minimum value followed by a continuous growth lasting for at least a certain period of time (e.g. four quarters, ten months),

– when two crests separated by lower index values occur, an upper turning point is the first crest (Ṁ): the same applies to double troughs separated by higher index values (Ẇ),

– when there are no clear creasts or troughs in the analysed series, and when the magnitudes of the series assume identical values within several periods of time, turning points are chosen from the last of the equal values after which a clear change in the analysed indicators occurs.

Changes in the direction of economic activity occur at the turning points of the business cycle. By determining the turning points, the length of the cycle defined by its duration (in months or quarters) can be measured. The span between the two successive lower or two successive upper turning points shows a full business cycle. The periods between the turning points reflect particular phases of the business cycle.

Business cycle phases, or periodization, may be determined in different ways depending on the assumed concept[8]. The author uses a two-phase concept of the business cycle which is clear, simple and gives no rise to doubts as to the division of the periods of downward trend and upward trend into specific components. The simplicity of this concept facilitates the analysis, therefore because of its advantages it is more frequently used in practice. The two-phase concept of a business cycle[9] covers the period of decline – from the upper to the lower turning point and the upward trend of business conditions – from the lower to the upper turning points. The point at which the upper turning point occurs belongs to the period of upward phase, whereas the point at which the lower turning point occurs belongs to the decline phase.

Methodological considerations from this part of the paper will serve as a basis to assess the comparative analysis of effectiveness of the countercyclical policies implemented in France and Italy.

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[7] See **D. Hübner, M. Lubiński**, Współczesny cykl koniunkturalny, PWE, Warszawa 1989, pp. 20 - 21.

[8] See the concept of 4 phases of A. F. Burns and W. C. Mitchell, J. A. Schumperer, L. Mendelson, A. Szeworski, the concept of 3 phases of M. K. Evans – ibidem, pp. 21 - 24.

[9] See **G. Haberler**, Prosperity and Depression, Geneva 1941: **R. Dornbusch, S. Fischer**, Macroeconomies, New York 1984; There are some objections to this concept because the upward period in business conditions is treated one-sidedly, neglecting its differentiation and silently assuming proportionality of growth.

2. Assessment of effectiveness of the budgetary policy in stabilizing short-term cyclical fluctuations in France and Italy

The comparative analysis of the instruments of budgetary policy applied to stabilize cyclical fluctuations in France and Italy will be carried out trough comparison of the course of business cycles distinguished on the basis of two chosen quantitative indexes of business activity – industrial production and the GNP with directions of changes in the tools applied by this policy.

Of the many instruments of budgetary policy, the author has considered only those which were measurable and had a relatively long time series, available in quarterly intervals. Generally, assessment of the effectiveness of the budgetary policy instruments is difficult, due to the scarcity of quarterly information, despite an abundance of the tools themselves. Regarding the economies of France and Italy they are limited only to budgetary revenues – mainly to various categories of taxes. The quarterly analysis of budgetary expenditures is impossible because such data are not available in the statistical institutions of both countries.

Therefore, the presented considerations are fragmentary and can only partially illustrate the real significance of the instruments of budgetary policy for stabilizing fluctuations in economic activity.

The time-frame of the analysis in question is different in both countries and it was mainly determined by the availability of methodologically one-sided data for each of the considered series of statistical data. This caused differences concerning the initial year of the studies. Quarterly data for the French economy were available from 1963, whereas for the Italian economy – from 1970.

A similar research procedure consisting of determination of deviation cycles was used for all series of the budgetary policy instruments and for all indexes indentifying the French and Italian business cycles.

They facilitate understanding of the time structure of business fluctuations. They serve as a basis for assessing the response of the budgetary policy instruments and they show whether this response lags behind or outstrips the course of business fluctuations in the indicators of industrial production and the real GNP.

Table 1 shows time changes in the directions of some tools of the budgetay policy applied in France and compares them with the course of business cycles determined for this economy. Four groups of taxes were taken into account in the French economy:

- production-related taxes,
- taxes on earnings,
- taxes on income and enterprises assets,
- indirect taxes.

Table 1

Responses of the instruments of budgetary policy in the course of business cycle in France in the years 1963-1990

Instruments of countercyclical policy[a]	Phases of business cycles, their duration[b]													
	upward phase	downward phase	upward phase	downward phase	upward phase	downward phase	upward phase	downward phase	upward phase	downward phase	upward phase	downward phase	upward phase	downward phase
Production-related taxes	I 63- -IV 67	I 68- -IV 71	I 72- -II 73	III 73- -I 76	II 76- -I 79	II 79- -I 81	II 81- -IV 84	I 85- -III 85	IV 85- -IV 86	I 87- -IV 87	I 88- -IV 89	I 90-		
Taxes on earnings	I 63- -IV 68	I 69- -IV 71	I 72- -II 75	III 75- -I 76	II 76- -I 78	II 78- -I 81	II 81- -II 83	III 83- -IV 83	I 84- -IV 84	I 85- -III 86	IV 86- -I 87	II 87- -III 88	IV 88- -I 89	II 89-
Taxes on enterprises income and assets	I 63- -III 64 II 87- -II 88	IV 64- -II 66 III 89- -I 89	III 66- -II 67 II 89- -II 90	III 67- -II 69 III 90-	III 69- -IV 69	I 70- -II 72	III 72- -III 74	IV 74- -III 75	IV 75- -IV 76	I 77- -II 78	III 78- -I 82	II 82- -I 84	II 84- -II 86	III 86- -I 87
Indirect taxes (value added)		I 63- -II 68	III 68- -IV 73	I 74- -II 75	III 75- -I 80	II 80- -I 81	II 81- -IV 82	I 83- -I 86	II 86- -II 90	III 90-				

[a] – seasonal fluctuations were eliminated from all analysed time series by x-11 Arim's method, [b] – time span in quarters.

Source: The author's own calculations on the basis of INSEE data in Paris.

Table 2 specific the lengths of leads and lags in the response of the budgetary policy tools as compared with the course of business cycles in the French economy.

Table 2

Leads and lags of the turning points distinguished in the series of the budgetary policy instruments in France as compared with the series of reference

Series of reference	Instrument of budgetary policy	Length in quarters	
		leads	lags
Industrial production	Production related taxes	+4, +2	−5, −2, −2
	Taxes on earnings	+1	−4, −2, −4
	Taxes on enterprises income and assets	+1, +4	−2, −4, −3, −4 −2, 0, −2
	Indirect taxes (value added)	+4, +2	−5, −2, −2
Real Gross National Product	Production related taxes	+2, +2, +1	−2, 0, −2, −2, −3
	Taxes on earnings	+4	−5, −2, −4, 0 −6
	Taxes on enterprises income and assets	+1, +4	−4, −2, 0, −2 −1, 0, 0, −1
	Indirect taxes (value added)	+1, +1	0, −2, 0, −4 −1

Source: The author's own calculations.

The overall analysis of the directions of responses to particular instruments of the fiscal policy and their lags results in the following conclusion.

The comparison of turning points in business activity with changes in the application of this policy's tools shows that the above-mentioned changes were only partly correlated with short-term fluctuations of economic activity in France.

In the French economy indirect taxes showed the highest directional convergence with trends and phases of the business cycles. For eight of the distinguished phases of the cycles the correlation occurred in seven cases as compared with the series of reference, i.e. the real GNP, and in five cases when referred to industrial production. At the same time, taking into account the lags

in changes of the volume of indirect taxes against changes in the business situation in France, one can evaluate them as relatively short, allowing for the use of this tool to counteract cyclical fluctuations.

In the case of production-related taxes, out of eleven business cycles eight showed convergence with the phases of business cycles distinguished on the basis of the real GNP indicators, while in the case of cycles distinguished for industrial production indicators, the convergence occurred five times. Lags of the turning points of these responses lasted two quarters on average. Therefore, one can state that in the French economy, actitudes were undertaken aimed at using production-related taxes to improve short-term imbalances of the economic situation.

A relatively high convergence of directional changes in taxes as compared with the business situation occurred in the case of taxes on income and on enterprises assets. Out of seventeen phases of the cycles the correlation of turning points occured nine times.

This concerned both comparisions of industrial production and the real GNP. In both of the above-mentioned series the average shorter lags occurred in relation to the volume of real GNP. The fact that the turning points in business conditions exceeded the changes in enterprises income taxes threefold and a substantial share of shorter lags (1 - 2 quarters) prove that this tool was correctly applied in the implementation of countercyclical policy.

Considering the period when the correlation occurred between the turning points of business conditions and the introduction of changes in enterprises income taxes, one can state that the years 1974 - 1976 were particularly difficult for the drastically imbalanced economy; another visible connection between the changes of these taxes and the business situation occurred during the period of economic revival, after the "second oil shock" in the years 1982 - 1986.

As concerns taxes on earnings one could observe a relatively slight directional convergence of the turning points in business activity with the turning points in the application of this instrument. Only in four cases in relation to the series of industrial production, and in six cases in relation to the real GNP, for the thirteen distinguished phases of the cycles there occurred the correlation with changes in the application of this tool. Moreover, when considering the length of lags in the use of this instrument as compared with the changes in business conditions, it was on average longer than in the previously analysed instruments of the budgetary policy in France.

From the above considerations one can see that the highest correlation between the course of business cycles in the French economy and the measures of fiscal policy occurred in relation to **indirect taxes, taxes on income, on enterprises' assets** and **production-related taxes.** Due to the longer periods of lags as compared with the changes in business situation, taxes on earnings were not able to smooth out short-term fluctuations properly.

Table 3

Responses of the instruments of budgetary policy in the course of business cycle in Italy in the years 1970-1990

Instruments of countercyclical policy[a]	Phases of business cycles, their duration[b]											
	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase
Direct taxes on households	I 70- -IV 72	I 73- -IV 75	I 76- -II 76	III 76- -III 79	IV 79- -I 82	I 82- -II 87	III 87- -I 89	II 89-				
Direct taxes on enterprises	I 70- -II 73	III 73- -IV 74	I 75- -II 75	III 75- -IV 77	I 78- -II 78	III 78- -I 80	II 80- -III 83	IV 83- -I 85	II 85- -II 87	III 87- -II 88	IV 88- -III 89	IV 89-
Indirect taxes (value added)	I 70- -II 72	II 72- -IV 72	I 73- -III 74	IV 74- -III 75	IV 75- -II 77	III 77- -III 79	IV 79- -III 80	IV 80- -IV 81	I 82- -I 84	II 84- -IV 85	I 86- -IV 89	I 90-

[a] – seasonal fluctuations were eliminated from all analysed time series by x-11 Arim's method, [b] – time span in quarters.

Source: The author's own calculations based on the internal data of Banca d'Italia, Roma.

Table 3 presents the changes over time of some instruments of Italian budgetary policy, thus marking the turning points in the application of these tools. By comparing them with the course of business cycles in the Italian economy it became possible to determine the length of lags (and leads) in the response of the measures of this policy. Table 4 presents these values.

Table 4

Leads and lags of the turning points distinguished in the series of the budgetary policy instruments in Italy as compared with the series of reference

Series of reference	Instrument of budgetary policy	Length in quarters	
		leads	lags
Industrial production	Direct taxes on households	+1, +2	−2
	Direct taxes on enterprises	+4, +2, +6, +2	0
	Indirect taxes (value added)	+1	−1, −1, −2, −2 +1
Real Gross National Product	Direct taxes on households	+2, +2	−1, 0
	Direct taxes on enterprises	+2, +3, +1	0
	Indirect taxes (value added)		−1, −3, 0, +2 +2, 0

Source: The author's own calculations.

In the analysis of Italian budgetary policy three groups of magnitudes were used:

– direct taxes on households,
– direct taxes on enterprises,
– indirect taxes.

Comparing the turning-points in business activity with changes in the direction of the application of particular forms of taxation in Italy makes it possible to state that they experienced a substantially lower correlation with the fluctuations in economic activity than those of the French economy.

In the Italian economy indirect taxes (value added) were most highly correlated with directional changes of taxes in relation to the business situation. Both as compared with the industrial production and the real GNP, for the thirteen distinguished phases of the cycle there occurred convergence of the turning points and in six cases – a change in the volume of indirect taxes. Also a relatively short period of lags (1-2 quarters on average) proves that this measure fulfilled its task of smoothing out short-term economic fluctutations.

Analysing the period in which correlation of the turning points of business cycles with responses in the sphere of indirect taxes was most distinct, our attention is drawn to the yeras 1972 - 1980.

A slightly weaker correlation appeared between the changes in the business situation and the direction of using direct taxes on enterprises. In the case of business cycles distinguished by means of industrial production indicators the convergence occurred 5 times, whereas the concergence occurred 4 times, when related to real GNP.

Generally, changes in the directions of direct taxes on enterprises preceded the turning points of business activity by about 2 - 4 quarters. Only in one case were they of simultaneous character. The cause-effect relation between changes in these taxes and changes in the directions of business fluctuations was characteristic mainly of the years 1973 - 1977.

As regards direct taxes on households, one can say that they revealed the smallest correlation with the changes of the business situation in Italy. For the thirteen distinguished phases of the cycle the turning points of business fluctuations corresponded to the changes in the application of this instrument, namely in three cases as compared with the industrial production and in four cases for the real GNP. Although the period of lags (leads) was similar to that in the previously analysed instruments of the budgetary policy and did not exceed 2 quarters, due to very few interdependencies between the phenomena. The significance of this instrument in the countercyclical Italian policy was smaller. The years 1972 - 1976 were the period in which taxes on households were used to counteract cyclical fluctuations.

The considerations presented so far indicate that a relatively strong correlation of the applied budgetary policy tools with the course of business cycles in the Italian economy concerned mainly **inderect taxes** and **direct taxes on enterprises.** The direct taxes on households were only of supplementary character as compared with the remaining taxes and the frequency of their changes did not prove their strictly countercyclical application. Similarly to the French economy, the instruments of budgetary policy were most extensively applied, mainly in the period of the world oil crisis in the mid-seventies.

Comparing the application of the presented tools of budgetary policy in the stabilization policy of short-term fluctuations in the economies of France and Italy, one can state that their significance was undoubtedly much greater in France. Regardless of all previously made observations concerning limitations related to the subject matter, the directional convergence between the changes in taxes and the fluctuations of economic activity was much higher in the French economy. This conclusion results both from a greater correlation between the applied tools of budgetary policy and the business situation in France and from a greater number of budgetary instruments revealing a higher directional convergence with the changes in economic activity.

The analysis of some instruments of budgetary policy applied to smooth out short-term cyclical fluctuations in the economy proved that these instruments were used with different skills and different frequency in both countries. Due to the fact that directional changes of the applied measures of the budgetary policy only partly overlapped with the turning points in business activity of France and Italy, these tools fulfilled their task only to a limited extent. Simultaneously, an element exerting a positive influence on the results of taxation policy in these countries was a relatively short period of lags (and sometimes also leads) in the application of this policy's instruments.

As concerns the category of taxes the application of which was more adequate to the business situation in both countries, one should first of all mention **indirect taxes** and **taxes on enterprises.** Taxes paid by individuals fulfilled these functions to a much lesser degree.

The feature common to the budgetary policies of France and Italy was the application of all categories of taxes in order to achieve short-term objectives during crisis and economic recession in the mid-seventies – the years which witnessed most severe economic difficulties in the whole post-war period in all highly industralized countries, including France and Italy. In the remaining periods, at the turn of the seventies and the eighties, despite another breakdown of the economic equilibrium, the application of the set of taxation instruments occurred only in France, whose economic problems at that time were relatively more severe than those in Italy.

One more conclusion can be drawn from the comparative analysis: application of a similar set of budgetary tools in both countries during the mid-seventies did not yield the same results as regards economic revival. Taking into account smaller difficulties in the sphere of foreign exchange, the balance was restored more quickly in Italy.

3. Assessment of the effectiveness of monetary policy in stabilizing short-term economic fluctuations in France and Italy

Similar to the previous evaluation of the effectiveness of the budgetary policy, the comparative analysis of the results of the monetary policy instruments will involve comparison of the course of business cycles distinguished on the basis of business activity indicators – the industrial production and the GNP – with directional changes in the tools of this policy. Among many instruments of the monetary policy influencing economic activity, the author takes into account only those which were of measurable character and had a relatively long time series available quarterly. Therefore, no analysis of foreign transactions was

carried out because the range of these problems is too vast and because there is a variety of administrative solutions. Hence a great number of decisions and solutions are impossible to quantify.

As regards direct credit control as a tool one can say that it is also partly of nonmeasurable character (formal conditions of credit availability) and can be listed as an instrument of administrative-control policy.

The time range of the studies of particular instruments of the monetary policy is differentiated and it was determined first of all by the accessibility of methodologically homogeneous data for each series of empirical values. For the French economy the author had access to a greater number of instances of monetary policy tools application than in the case of Italy. Moreover, it must be said that not all monetary policy instruments were properly applied from the beginning of the studied period. A relatively short period of the application of an open market policy in France and Italy, where in fact there is no tradition of its implementation, was responsible for the fact that it was omitted in the analysis. The open market policy was initiated in the Italian economy in 1980 and so far no impressive results have been achieved. France's experience of open market policy is shorter still as it started in 1986.

The analysis of the obligatory reserve was carried out from 1967 because at that time the system of obligatory reserve was being created in both countries. The system of obligatory reserve based on credits was started in 1971 and it was continued until 1986.

To analyse, the changes in the directions of monetary policy tools of the same research procedure as for the analysis of the budgetary instruments was used, that is, that deviation cycles were determined.

Table 5 shows changes in time in the application of certain instruments of monetary-credit policy in France and compares them with the period of growth and decline in the business activity of industrial production and the real GNP.

Table 6 presents the lengths of leads and lags of the applied monetary policy tools as compared with the course of business cycles in the French economy.

The joint analysis of the directions of responses of particular instruments of the monetary policy and their lags makes it possible to observe the following regularities.

As regards the discount rate, for nine of the distinguished phases of the cycle there were (despite lags) relative correlations between the turning points of the business activity, distinguished in the series of reference, and the changes in the application of this instrument. This concerns both comparisons with the series of industrial production and the real GNP. Relatively shorter lags occurred as regards the series of real GNP than that of industrial production. Directional convergence with phases of the cycles distinguished by means of quantitative indicators is confirmed particularly by changes in the application of this tool in the downward period of business conditions – in 1968 and in the years

Table 5

Changes of the instruments of monetary policy in the course of business cycles in France in the years 1969 - 1990[a]

Applied instruments of countercyclical policy[a]	Phases of business cycles, their duration[d]													
	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase
Discount rate of central bank (%)[b]	*	I 60 - -I 64	II 64 - -II 68	III 68 - -IV 69	I 70 - -III 72	IV 72 - -IV 74	I 75 - -IV 75	I 76 - -II 76	III 76 - -II 78	III 78 - -I 84	II 84 -			
Obligatory reserve (%)[c]	I 67 - -I 69	II 69 - -IV 70	I 71 - -II 71	III 71 - -II 72	III 72 - -I 74	II 74 - -IV 75	I 76 - -IV 76	I 77 - -III 78	IV 78 - -I 81	II 81 - -III 83	IV 83 - -IV 85	I 86 - -III 86	IV 86 - -III 87	IV 87 -
Credits in total	IV 69 - -III 73	IV 73 - -III 79	IV 79 - -III 83	IV 83 - -III 87	IV 87 -									
Credits for enterprises	IV 69 - -I 75	II 75 - -II 81	III 81 - -IV 83	I 84 - -I 87	II 87 -									
Credits for individuals	IV 69 - -III 73	IV 73 - -III 75	IV 75 - -II 76	III 76 - -III 78	IV 78 - -III 83	IV 83 - -II 86	III 86 - -II 89	III 89 -						
Investment credits	IV 69 - -II 70	III 70 - -II 75	III 75 - -I 78	II 78 - -II 79	III 79 - -IV 84	I 85 - -II 85	III 85 -							

* – no data available, [a] – majority of homogeneous data accessible in official statistics were stored in 1969; seasonal fluctuations were eliminated from time series x-11 Arim's method, [b] – data available until 1960, [c] – data available until 1967, [d] – time span in quarters.

Source: The author's own calculations based on the data of the IMF and Banque de France.

Table 6

Leads and lags of turning points distinguished in time series of instruments of monetary policy as compared with indicators of reference

Indicator of reference	Instrument of monetary policy	Length in quarters	
		leads	lags
Industrial production	Discount rate of central bank	0, +3, +4	−4, −4, −3, −2
	Obligatory reserve	+1	−1, −3, 6, −3
	Credits – total	+3	
	Credits for enterprises		−3
	Credits for individuals	+3, 0, +3	−2, −5
	Investment credits	+1	−4, −1, −6
	Export credits		−4
Real Gross National Product	Discount rate of central bank	+4, +5, +4	−2, 0, −3, −1
	Obligatory reserve	+1, +2	0, −1, −3, 0
	Credits – total	+2	0
	Credits for enterprises		−4, −1, 0
	Credits for individuals	+2, +3, +3	0, −3
	Investment credits	+1	−4, −1
	Export credits	+1	−5, 0

Source: The author's own calculations.

1974-1975 when the economy faced most serious troubles. Evaluating the periods of lags in the functioning of discount rate one can say that they fell within the average time interval of the responses of the monetary policy tools to the changes in business activity. This period covers two to four quarters[10].

As concerns obligatory reserve in the studied period (1967-1990), its directional convergence with the phases of the cycles occurred in the years 1974-1978.

While analysing the periods of lags (or leads) as compared with the series of reference, one can observe a greater correlation between the changes in obligatory reserves and indicators of the real GNP. As regards comparisons with the series of industrial production, lags were relatively longer, indicating a relatively smaller convergence of the distinguished upward and downward phases of business activity. For the thirteen phases of the cycles a relative convergence occurred at five turning points.

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[10] **Z. Kowalczyk**, Antycykliczna interwencja państwa kapitalistycznego na rynkach pieniężno-kredytowych i finansowych, in: Wybrane zagadnienia koniunktury gospodarczej, AE, Poznań 1980, p. 48.

In the case of changes in credit volume, one cannot interpret them univocally throughout the course of the business cycle, both as regards the series of industrial production and real GNP only once. The joint volume of credits granted in the French economy was correlated with the course of the cycle.

Similarly, other tools, i.e. credits for enterprises only once showed a correlation with the course of fluctuations in industrial production. However, as regards changes in the real GNP, correlation of the turning points in the application of this tool occurred in the periods 1975 - 1981 and 1986 - 1987.

In the case of credits for individuals, which concerned eight phases of the business cycles, five were convergent with the phases of business cycles distinguished by means of indicators of industrial production and the real GNP. Moreover, the connection between changes in credits for individuals and fluctuations in economic activity was also significant because lags or leads fell within the limits from zero to nine months. Correlation between the turning points of business activity, distinguished in the studied series of credits for individuals, and the directions of changes in the economic situation proves that this tool was correctly applied in countercyclical policy. For six of the distinguished phases of the cycles, changes in the volume of investment credits for enterprises were convergent on three occasions with changes in the analysed series of reference.

Additionally, the author studied directional changes of export credits as compared with changes in cyclical fluctuations in the French economy. However, no connections were observed between the turning points of business activity, and that is why they are not included in the Tables 5 and 6.

The analysis proves that in the French economy the strongest correlation between the course of business cycles and the tools of monetary policy occurred in the case of **credits for individuals** and **the central bank discount rate** and successively in the case of **obligatory reserve.** The remaining tools only occasionally fulfilled their countercyclical task.

It is also characteristic that all monetary policy instruments analysed in the aspect of business activity were applied in the decline phase – in 1975. The fear of the recession of 1974 - 1975 made the French monetary authorities apply a substantial set of interventionist measures.

Table 7 shows changes in time of the tools of monetary policy in Italy, marking the turning points in the application of these tools. The comparison of the directions of these changes with the phases of business cycles distinguished on the basis of deviations from the trend line in the quantitative indicators of business activity, makes it possible to evaluate some regularities in the application of particular instruments of the monetary policy in their countercyclical aspect.

Table 7

Changes of the instruments of monetary policy in the course of business cycles in Italy in the years 1967 - 1990

Applied instruments of countercyclical policy	Phases of business cycles, their duration[b]											
	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase	upward phase	down-ward phase
Discount rate of central bank	*	I 60 - -II 64	III 64 - -I 70	II 70 - -II 73	III 73 - -III 74	IV 74 - -IV 75	I 76 - -IV 76	I 77 - -III 79	IV 79 - -I 81	II 81 - -II 86	III 86 - -I 89	II 89 -
Obligatory reserve (in billion liras)[a]	I 67 - -III 71	IV 71 - -II 74	III 74 - -IV 74	I 75 - -IV 79	I 80 - -II 82	III 82 - -III 83	IV 83 - -III 84	IV 84 -				
Short-term credits	I 60 - -III 67	IV 67 - -IV 73	I 74 - -II 74	III 74 - -I 75	II 75 - -III 76	IV 76 - -I 79	II 79 - -II 81	III 81 - -II 82	III 82 - -III 84	IV 84 -		

* – no data available, [a] – time series for obligatory reserve was available from 1967, [b] – time span in quarters.

Source: The author's own calculations based on the data of ISCO and Banca d'Italia.

Apart from these comparisons, Table 8 shows leads and lags of the turning points of the monetary policy instruments as compared with the turning points in business activity, distinguished in the series of industrial production and the real GNP. The joint analysis concerning responses of particular policy instruments and their leads or lags makes it possible to formulate the following conclusions for the Italian economy.

As regards the discount rate, the direction of changes throughout the whole period under analysis was convergent with fluctuations in the economic activity, i.e. when the economy needed cheap credits the discount rate was lowered and vice versa. The correlation of these time changes with the fluctuations in business acivity was correct. For ten of the distinguished phases of the cycles, the convergence of the turning points of business activity occurred seven times. Leads or lags in the response of this tool presented in Table 8 are relatively small because 1-2 quarter lenght lags dominate, which must be valued highly as an expression of the effectiveness of monetary authorities and as a correct response to the market impulses indispensable for shaping the economic policy.

Table 8

Leads and lags of turning points distinguished in time series of instruments of monetary policy as compared with indicators of reference

Indicator of reference	Instrument of monetary policy	Length in quarters	
		leads	lags
Industrial production	Discount rate of central bank	+3	0, −1, −2, −1 −2
	Obligatory reserve	+4, +1, +2	0
	Short − term credits	+1, +1, +4	−3, 0, −5
Real Gross National Product	Discount rate of central bank	+3	−3, −2, −1, 0 −4, 0, −3
	Obligatory reserve	+3, +1, +4	−2
	Short − term credits	+2, +1, +4	−5, −2, −5

Source: The author's own calculations.

As regards changes in the obligatory reserve kept by the Italian banks and financial institutions during the whole period under analysis, one can observe that directions of their changes were slightly less connected with the changes in business activity than the discount rate. They were mostly of leading character

when compared with the fluctuations in the economic activity. Lesser efficiency in the application of this tool of the monetary policy results not so much from the lack of skill as it is very flexible and provides great opportunities of influencing fluctuations in economic activity it results rather from the fact that in Italy this instrument was also used to achieve objectives other than those related to business activity. With a variety of goals to be achieved, the effectiveness of a given tool used to realize a certain aim will always be limited (if not doubtful).

Analysing directions and changeability of business cycles one can observe that in six cases of nine distinguished phases of the business cycles they were convergent.

Fifty per cent of the turning points indicating directions of changes in short-term credits had a relatively short period of lead (1 - 2 quarters) as compared with the analysed series of reference, which can also be assessed as a correct response to changes in the economic conditions.

The application of the instruments of the Italian monetary policy in their countercyclical aspect, proved that the discount rate was characterized by the strongest cause-effect relation to the changes in the economic activity. The remaining tools had a supporting function.

In the years 1973 - 1978 the impact and directional divergence between the particular instruments and the changes in business activity were clearly visible. Later on no joint directional influence of all the applied instruments on the economic activity in Italy was observed.

The qualitative analysis of applying the instruments of monetary policy in their countercyclical aspect carried out on the example of France and Italy, facilitates a comparative evaluation of this policy on several planes. Considering similarities and differences in the application of particular instruments of the monetary policy, different criteria can be taken into account.

From the viewpoint of the time structure of the cycles, in both countries an extensive application of a complex of interventionist monetary policy measures was connected with the period of particularly strong economic tensions caused by the oil crisis and the breakdown of the world monetary system in the years 1974 - 1978. The package of measures was consistently applied in Italy also in the period of oil shock II – 1979 - 1982, whereas in France only the obligatory reserve was clearly affected by this period.

In both countries a common feature of the monetary policy is a cler differentiation, or gradation of the tools applied to stabilize the economy. Among the analysed instruments of this policy, the monetary authorities in both countries most frequently resorted to the discount rate and the obligatory reserve. However, the preferences of each country were different as regards the most important instrument of monetary policy. In the French economy this

instrument was the obligatory reserve, whereas in the Italian economy it was the discount rate. Both in France and in Italy there occurred a directional convergence in the application of these tools and fluctuations in the economic activity in the majority of the phases of business cycles. The lags, however, revealed limited possibilities of this policy's impact on short-term fluctuations.

In the case of credits used in the economies of France and Italy in order to achieve short-term stabilization, one can generally say that the correlation between changes in the volume of credits and the course of business cycles in these countries was relatively weak. This opinion, however, requires explanation.

More data characterizing different credit categories were available for the French economy, therefore evaluation of this tool should be differentiated. Short-term export credits and credits for enterprises did not reveal any significant links with the changes in business activity. A relatively greater correlation was observed between the turning points of business cycles and the changes in credits for individuals and investment credits. This, however, was not a convergence adequate to the level of correlation as regards obligatory reserve. In the case of Italy short-term credits were only a supplementary tool for smoothing out cyclical fluctuations. Longer lags or leads as compared with the previously discussed monetary policy instruments prove that credits were only a tool of supplementary character.

Another feature common to monetary policy in both countries was relatively shorter lags when using the discount rate. This proves that the discount rate was applied skillfully. The occurrence of lags, in turn, may suggest that this instrument played the role of indicator announcing changes in the monetary policy of the government.

In the analysed period one can distinguish in both countries the instruments of monetary policy whose significance in smoothing out cyclical fluctuations gradually or rapidly decreased. This covers quantitative restrictions on credits after 1983 and the discount rate in France in the period of the so-called oil shock II.

Studies of the application of some instruments of the monetary policy facilitating implementation of the countercyclical policy in France and Italy proved that they were used in different ways in both countries and that their effectiveness was limited. This conclusion results from the frequency of application of these instruments in the course of the cycle which finds its reflection in the correlation between the phases of business cycles in France and Italy and the turning points of the series of application of a given measure of the monetary policy. It should also be underlined that directions and changes in time in the applied tools of this policy were only partly convergent with fluctuations in the business activity. Moreover, with time lags in the response of these tools, the effectiveness of monetary policy in both countries was unsatisfactory.

On the other hand, assessment of the monetary policy from the viewpoint of quantitative realization of the general objective of economic policy does not have to be convergent with evaluation of the tools of this policy properly chosen for the phases of a business cycle. The quantitative objective might not be attained despite the application of adequate instruments. Therefore, there may appear a divergence of opinions on the effectiveness of monetary policy. As it has been pointed out previously in the assessments of yearly objectives of monetary policy in both countries, these opinions are not always identical and consistant with the assessment of the proper use of these instruments. Controversies are only apparent because in both cases different problems were assessed. A multi-plane impact of the monetary policy-both as regards the general objectives of economic policy and partial spheres of this policy – is responsible for the fact that monetary policy instruments are not always properly applied from the viewpoint of the requirements of countercyclical policy. Quite frequently governments deliberately withdraw from using certain tools in the countercyclical aspect, if other economic requirements are more urgent. Keeping in mind that in the post-war period none of the highly developed economies was affected by drastic fluctuations of the business conditions and none of them experienced the psychosis of the deep crisis (1929 - 1933), short-term economic fluctuations are no longer such a threat for the governments as they used to be.

Final remarks

This paper does not cover all tools of budgetary and monetary policy which could be used to smooth out short-term fluctuations. Therefore, it is not possible to fully assess how effective both kinds of policy are in counteracting business fluctuations.

At the same time it is important to realize the difficulties which such an assessment encounters due to various inherent limitations of both these policies.

The absence of countercyclical policy or its insufficient effetiveness in reviving economic activity, do not only depend upon the depth of economic fluctuations. This is exemplified by the situation in both of the compared countries where the application of the same tools to stabilise the course of business cycles of similar amplitude rendered completely different or differenti-

ated results in restoring the economic equilibrium. Despite the development of theoretical knowledge, regarding both the methods of stabilization policy, their implementation and various interventionist measures, as well as widely conducted empirical research, its effectiveness is still far from satisfactory. Regardless of the force of economic fluctuations, countercyclical policy is subject to all kinds of limitations which make it difficult for the public authorities to carry out. Therefore, its effectiveness is quite frequently hindered by factors unrelated to the character of the very tools of this policy but by external factors, exogeneous of the stabilization policy.

A proper coordination of both policies is a separate question.

Assessment of the effectiveness of both policies in stabilizing business activity is very difficult. Due to the contradictory character of the objectives of economic policy; or due to the fact that these objectives cannot be accomplished at the same time, the effects obtained by particular governments cannot be evaluated in the same way. A complicated network of interdependencies in the financial and budgetary system and insufficient knowledge of the mechanisms of these interdependencies cause that the impact of both policies on the actual economic processes is not fully known. Therefore, it is difficult to determine the cause-effect relation between the application of certain countercyclical instruments and the visible effects in the sphere of stabilization of the business situation[11]. Moreover, the effectiveness of both policies can be interpreted in many different ways, depending on the views of the individual who evaluates this policy.

This aspect is very important in the light of modern controversies between Keynesians and monetarists. The remarks presented here do not comprise all questions connected with evaluation of the effectiveness of stabilization policy realized by means of the budgetary and monetary policies in France and Italy. Regardless of the factors limiting its effectiveness and resulting from the recent economic, organizational-institutional and political conditions along with the tightening of political and economic relations of the EU members, the effectiveness of an individual country's internal policy decreases because of the implementation of the EU regulations. Internationalization of the economic processes makes it difficult to attain the objectives of internal policy.

The analysis proves that both the budgetary and monetary policies carried out throughout the last thirty years have fulfilled the tasks of the stabilizing short-term business fluctuations to a limited extent.

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[11] Ibidem, p. 46.

Table 9

Estimated functions of trend for explained variables used in empirical studies

Explained variable	Form of trend function	Average residual error	Correlation coefficient
Gross national product of France	$y = 120173 + 2939.05x - 10.5x^2$	4717	0.966
Gross national product of Italy	$y = 9130.1 + 139.06x$	0.61	0.990
Industrial production of France	$y = 79330 + 2453.1x - 12.2x^2$	5480	0.988
Industrial production of Italy	$y = 30.02 + 1.13x - 0.0045x^2$	3.57	0.984
Indirect taxes, France	$y = 9939.56 + 308.8x - 1.12x^2$	539.0	0.995
Production-related taxes, France	$y = 1328.61 - 477.9x + 11.6x^2$	1684	0.995
Taxes on earnings, France	$y = 2342.1 - 103.23x + 1.72x^2$	463	0.971
Taxes on enterprises' income and assets, France	$y = 1664.1 - 16.3x + 2.38x^2$	951	0.986
Direct taxes on individuals, Italy	$y = 1672.9 - 199.7x + 8.5x^2$	637.4	0.967
Direct taxes on enterprises, Italy	$y = 556 - 55.8x + 1.88x^2$	240.3	0.985
Indirect taxes, Italy	$y = 2282.3 - 107.4x + 5.89x^2$	515.4	0.995
Credits in total, France	$y = 491.6 + 7.89x + 0.59x^2$	28.97	0.999
Credits for enterprises, France	$y = 285.4 + 5.89x + 0.24x^2$	20.4	0.998
Investment credits, France	$y = 109.39 + 5.18x + 0.084x^2$	31.6	0.988
Credits for individuals, France	$y = 148.42 + 1.737x + 0.266x^2$	15.7	0.999
Discount rate, France	$y = -0.32 + 0.143x^2 - 0.00014x^2 + 3.42 \cdot 10^{-9} \cdot x^5$	1.02	0.935
Obligatory reserve, Italy	$y = \log 3.45 + x \cdot \log 0.019$	0.034	0.997
Short-trem credits, Italy	$y = 18935 - 1115.6x + 25.49x^2$	66.5	0.991
Discount rate, Italy	$y = 3.04 + 0.89x - 0.0032x^2 + + 4.72 \cdot 10^{-8} \cdot x^5 - 7.23 \cdot \cdot 10^{-10} \cdot x^6 + 2.87 \cdot 10^{-12} \cdot x^7$	1.45	0.963
Obligatory reserve, France	$y = -488.7 - 3.52 + 0.14x^2 - - 10.41 \cdot \frac{x - 34.4}{1 + 0.02(x - 34.3)^2}$		0.945

Source: The author's own calculations.

SUMMARY

The effectiveness of the impact of economic policy on the stabilization of short and medium-term fluctuations remains an unsolved problem. This results from external reasons as well as internal reasons originating from the shortcomings of the tools themselves.

This paper is a comparative analysis of the short-term policy of stabilizing the economy by means of the chosen instruments of bugetary and monetary policies in two highly developed countries – France and Italy. It points out the similarities and differences of these policies during the period 1960 - 1990.

The author analyses directional convergence of the application of the studied tools of the budgetary and monetary policy with the course of business cycles in both countries. The business cycle was identified by means of the so-called deviation cycles distinguished in the series of reference, i.e. industrial production and GNP.

The following conclusions are reacted:

– bugetary tools applied in both countries fulfilled their task to a limited extent, with the lags being relatively short,

– stabilization tasks were realized better through indirect taxes and taxes paid by enterprises,

– instruments of budgetary policy were more important in France,

– instruments of monetary policy were applied in different ways and their effectiveness was also limited,

– the French countercyclical policy more frequently used the discount rate while the Italian one resorted to obligatory reserve,

– lags in the application of monetary tools prove that the impact of this policy on short-term fluctuations is limited,

– credit instruments revealed a relatively weak correlation between changes in their volume and the course of business cycles in the countries analysed.