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INFLATION, UNEMPLOYMENT AND MACROECONOMIC POLICY IN NEW ZEALAND: A PUBLIC CHOICE ANALYSIS

David J. Smyth and Alan E. Woodfield

Discussion Paper

No. 9007

This paper is circulated for discussion and comments. It should not be quoted without the prior approval of the author. It reflects the views of the author who is responsible for the facts and accuracy of the data presented. Responsibility for the application of material to specific cases, however, lies with any user of the paper and no responsibility in such cases will be attributed to the author or to the University of Canterbury.

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Inflation, unemployment and macroeconomic policy in New Zealand: A public choice analysis*

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1. Introduction

This paper estimates the New Zealand public's indifference map between inflation and unemployment using government approval survey data. We find that New Zealanders are much more concerned about unemployment relative to inflation than is the public in the United States. A survey of the recent economic history of New Zealand provides reasons for this behavior.

The extreme public aversion to unemployment makes it difficult for New Zealand governments to implement anti-inflation policies. The time period between elections in New Zealand is short, a maximum of three years, and it is tempting for governments facing reelection to inflate and reduce unemployment in the short-run. Recent institutional changes in New Zealand have been designed to circumvent such government intervention. The 1989 Reserve Bank of New Zealand bill removed the minister of finance from day to day operation of monetary policy and dropped the promotion of full employment from the central bank's goals, the Reserve Bank being required to concentrate on the goal of price stability.

Section 2 of the paper describes the survey and other data used and outlines the models to be estimated. Section 3 presents and discusses the empirical estimates. Section 4 examines the post-war economic history of New Zealand to provide an interpretation of these results. In section 5 we discuss recent institutional changes aimed at strengthening the Reserve Bank of New Zealand's mandate to fight inflation and reducing the extent of government interference with the Bank's operations.

2. The Model and Data

We assume that New Zealanders' social preferences between inflation and unemployment may be represented by a quadratic of the form

$$Y = \beta_0 + \beta_1 P^2 + \beta_2 U^2 \qquad (1)$$

where Y is a measure of the public's satisfaction (or dissatisfaction) with the rates of inflation and unemployment, P is the rate of inflation, U is the rate of unemployment, and $\beta_0 > 0$, $\beta_1 < 0$ and $\beta_2 < 0$. Such a quadratic social preference function is now widely used in theoretical analyses of macroeconomic policy. Graphically, a quadratic social preference function generates indifference curves that are concave to the origin. Along any indifference curve, $dY = 0$, so the slope of an indifference curve is

$$dP/dU = -(\beta_2/\beta_1)/(U/P) \qquad (2)$$

The satisfaction variable, Y, is not directly observable. We assume that the responses to a survey that asks members of the public whether or not they approve of the government's performance may be used to proxy satisfaction. The Heylen Research Institute has undertaken such surveys since the election of the Labour government in 1984.

The Heylen Research Centre introduces its questions on government performance with: "Now I have some questions on the performance of the Labour Government." Respondents are then

asked: "On the whole, do you approve or disapprove of .....their overall performance as the Government?" Usually, the following question is also asked: "On the whole do you approve or disapprove of.....their handling of the economy?" Respondents answers are classified as "Approve", "Disapprove", and "Neither/Don't Know".[1] We use data from time series generated by the answers to both questions.

In the United States, Gallup Poll surveys have asked respondents whether or not they approve of the way the President is handling the job of President and time series constructed from such surveys have formed the basis for a large number of studies.[2] The first of the Heylen questions is similar to the Gallup Poll question. The second question resembles one asked about the economic performance of the U.S. government by the Survey Research Center of the University of Michigan. Responses to this survey have been used in some recent U.S. studies.[3]

As the proxy variable for Y we use the ratio 100A/(A+D) where A and D denote the proportions approving and disapproving respectively. This procedure implies that the "Neither/Don't Know" respondents are allocated to "Approve" and "Disapprove" in the same proportion as those who gave a definite answer. We also repeated all our analyses with two other proxies for Y. First the simple value A, the proportion of respondents answering "Approve" to the questions. Secondly, the ratio 100(A+0.5N) where N denotes the "Neither/Don't Know" proportion; this procedure allocates the neither/don't know group equally to the two others. Our results were very robust with respect to the

measure used for Y, and so we do not report the results for alternative measures.

We use quarterly data for reasons relating both to the survey data and the independent variables. Survey data are not available for all months; there is never an observation for January and there are other gaps. Occasionally there are two observations for the same month. The day of the month the survey was undertaken was not consistent: for instance for August we have the following dates for 1984 through 1989: August 4, August 17, August 16, no August observation, August 20, August 5. Data on price level changes and the unemployment rate are available only quarterly.

We calculated the ratio 100A/(A+D) for any quarter by taking the average of all observations during that quarter.

The inflation series was calculated from the all items consumer price index as the percentage change over the index for four quarters previously.

The unemployment rate is the percentage of the labor force unemployed obtained from household surveys. It is broadly comparable to the unemployment measure reported for the United States and other OECD countries. The unemployment rate is available only from the fourth quarter of 1985 onwards. As is explained in Section 4 below, it is hazardous to attempt to backforecast this series using the available numbers of registered unemployed. The unemployment rate constraint limits our econometric analysis to the period starting the fourth quarter of 1985 and ending with the first quarter of 1990.[4]

Figure 1 plots the two performance ratio 100A/(A+D) series and Table 1 provides some summary statistics on the ratios. The two series move closely together. The simple correlation coefficient between the two is 0.972; the correlation between the first differences is 0.911. Thus, unless non-economic influences on the government's popularity are highly correlated with economic influences, the public's perception of how well the government is performing with respect to the economy is the overriding influence on its rating of the government's overall performance.

3. Empirical Results

For the overall and economy approval rating variables we fit two alternative models. The first is

$$Y = \beta_0 + \beta_1 P^2 + \beta_2 U^2 + \epsilon \qquad (3)$$

which is simply equation (1) with the addition of a disturbance term, ϵ. In (3), while the relationship between Y and P and U is non-linear, that between Y and P^2 and U^2 is linear and may simply be estimated by ordinary least squares.

The approval rating variable is based on poll respondents making a discrete choice on whether or not they approve of the government's performance. This generates a probability model with replications on Y for each quarter. Y is bounded by zero and 100. It is possible that a non-linear specification, such as a logit model, may be more appropriate than (3). Accordingly, we also estimate a model of the form

$$\ln[Y/(100-Y)] = \alpha_0 + \alpha_1 P^2 + \alpha_2 U^2 + \delta \qquad (4)$$

where a suitable estimation procedure is ordinary least squares corrected for heteroscedasticity.[5] The corresponding α and β coefficients are not comparable because the coefficients have a different interpretation in each model but fortunately again the slope of an indifference curve is minus the ratio of the coefficients of U^2 and P^2 multiplied by the unemployment to inflation rates ratio, here

$$dP/dU = -(\alpha_2/\alpha_1)(U/P) \qquad (5)$$

In the reported regressions, the current quarter unemployment rate is used together with the inflation rate lagged four quarters. Alternative lag structures were markedly inferior. When lagged dependent variables were included they were very insignificant, so there is no evidence of a distributed lag or partial adjustment process.

Tables 2 and 3 present the estimated coefficients with t-statistics in parentheses, the adjusted R^2s, the Durbin-Watson statistics and the implied values of $-\beta_2/\beta_1$. The β and α coefficients have the correct signs and all have t-statistics with absolute values greater than three so they are significant at high confidence levels. The exact Durbin-Watson distributions were calculated and in all four equations we reject the existence of serial correlation at the 95% confidence level.[6] The results are quite robust across the measure used for Y and the linear and logistic specifications in equations (3) and (4). The estimated

slopes of the indifference curves are -20.62U/P and -19.77U/P in Table 2 and -21.35U/P and -20.64U/P in Table 3.

Figure 2 shows some of the indifference curves implied by the overall regression reported in Table 1 which is

$$Y = 73.85 - 0.0385P^2 - 0.794U^2 \qquad (6)$$

Rearranging equation (6) gives the indifference curve corresponding to any approval rating, Y,

$$P = (1918.18 - 25.97Y - 20.62U^2)^{0.5} \qquad (7)$$

The Figure 2 indifference curves are generated by plotting P against U in (7) for different values of Y. The indifference maps yielded by the other regressions are similar.

A striking feature of the estimates is that the indifference curves are very steep at moderate inflation rates and steep at even quite high rates of inflation. Thus New Zealanders are prepared to tolerate very large increases in the rate of inflation in order to reduce unemployment. The slopes of the indifference curves are approximately -20U/P. These are very much steeper than those obtained for the United States. For instance, using a quadratic social preference function similar to that used in the present paper, Smyth. Washburn and Dua (1989:340) estimated a slope of -3.2U/P for the Reagan presidency. At comparable inflation and unemployment rates, the New Zealand indifference curves are more than six times steeper.

To be more specific, let us consider what increase in inflation New Zealanders are prepared to accept to reduce the unemployment rate down by one percentage point. At the time of writing, July 1990, the most recent information that we have is for the second quarter of 1990. In that quarter the unemployment rate was 7.4 percent and the inflation rate 7.6 percent. So a one percentage point reduction in the unemployment rate means a reduction to 6.4 percent. Because such a change in unemployment is "large" we make direct estimates using the estimated regression equation (6) rather than simply applying the estimated indifference curve slope coefficient which is valid only for "small" changes.

With U = 7.4 and P = 7.6, we have Y = 28.15. This indifference curve is drawn in Figure 3 and the point U = 7.4, P = 7.6, is labelled A. The point labelled B is the point on the same indifference curve with U = 6.4. This shows the rate of inflation that yields the same approval rating as A, when now the rate of unemployment is 6.4 percent. To estimate this point numerically, we substitute U = 6.4 and Y = 28.15 in equation (7). This gives P = 18.5. Thus New Zealanders are prepared for the inflation rate to rise from 7.6 percent to 18.5 percent in return for a reduction in the unemployment rate from 7.4 percent to 6.4 percent. This is an increase of 11.1 percentage points in inflation. We think that this shows a remarkable tolerance for inflation. In contrast, with the same inflation and unemployment rates in the United States, Americans would be prepared to tolerate only an increase in the annual rate of inflation to 10.1 percent, an increase of 2.5 percentage points.[7]

Figure 3 also shows the dilemma facing the New Zealand Labour government that must call an election by October 1990. In addition to the Y = 28.15 approval line, generated by the second quarter 1990 inflation and unemployment rates, the line Y = 50 is also shown. This may be described as the "median voter line" as it shows the combinations of the rate of inflation and unemployment approved of by half the respondents and disapproved of by half. At an unemployment rate of 7.6 percent there is no rate of inflation that permits Y = 50. As far as macroeconomic policy with respect to inflation and unemployment is concerned, to obtain the approval of the median voter it is necessary for the government to reduce the rate of unemployment.

4. New Zealanders' Views of Unemployment and Inflation

In this section we explain New Zealanders' tolerance of inflation and intolerance of unemployment in terms of the recent economic history of the country.

The attitudes towards inflation and unemployment are reflected in the data graphed in Figure 4, which shows the responses over the period 1973 Q2 - 1990 Q2 to the following question asked by the National Research Bureau of a sample of eligible voters, "What is the single most important problem facing New Zealand right now?". Unemployment and inflation have always been included among the top ten problems perceived by voters during this period.

The relative importance of unemployment and inflation as most serious problems has changed dramatically over the period. Until the second quarter of 1977, unemployment was never

considered the most serious problem by more than 2 percent of the sampled population, and was never ranked above eighth among the top ten problems. Over this period, registered unemployment never exceeded one half of one percent of the labour force. Until the second quarter of 1975, inflation ranked first among the top ten problems, and was ranked second in all but one succeeding period. During this period, the inflation rate averaged 12.9 percent.

After 1977 Q2, however, a very different picture emerges. Until July 1980, inflation and unemployment vie with one another fairly closely as the most serious perceived problem. Thereafter, compared to inflation, unemployment is always thought to be the most serious problem by a larger proportion of the voting population, and the unimportance of inflation in the mind of voters in the last few years of the period mirrors the unimportance of unemployment in the first years. During 1985, unemployment fell and inflation increased, and this is reflected in the surveyed results. But the resurgence in the growth in unemployment thereafter clearly captured voters' interest, while inflation, which varied considerably over this period from a maximum of 19 percent in 1987 Q2 to 4 percent in 1989 Q1, was clearly relegated to the back seat.

To explain these attitudes, it is widely accepted that the Great Depression of the 1930's had a profound effect on New Zealanders, leading to the development of a comprehensive welfare state which has emphasized 'cradle to grave' security for its citizens. Full employment became enshrined as the major objective of economic policy, and while inflation, the balance

of payments, and other aspects of economic performance continued to be issues of major concern in the Post World War II years, they tended to be sacrificial lambs to the altar of full employment. It is noteworthy that New Zealand's relative living standards fell disastrously after 1952, from third highest per capita income in the world, to a ranking in the mid 20's by 1984.

The fourth Labour Government came to power in 1984 under dismal economic circumstances. Productivity growth had been the lowest among OECD countries over the previous 25 years. The previous administration had borrowed heavily to sustain current consumption and finance highly dubious energy projects. A two year wage-price freeze controlled the symptoms of an inflation which had been running at more than 15 percent annually. Cross-subsidization permeated the economy, and unemployment had recently reached its highest level since the Great Depression.

The new Labour Government had made few promises prior to the election, but delivered sweeping structural changes which were sufficiently popular to enable their re-election in 1987. Since then, the pace of reform has diminished markedly, along with the political demise of the reforming finance minister Roger Douglas, and the popularity of the government.

The reforms which were mainly enacted during 1984-87 were breathtaking in both magnitude and speed, but they were by no means comprehensive. The thrust of the reforms were designed to transform New Zealand into an efficient open trading economy. The major reforms included pursuing an anti-inflationary monetary policy, deregulation of financial markets including removal of interest rate controls and government security ratios for

financial institutions, the creation of greater autonomy for the central bank and the creation of a competitive commercial banking structure, floating the exchange rate and the removal of most controls on private overseas borrowing, foreign exchange and direct foreign investment, the progressive reduction of quantitative import controls and tariffs, abolition of wage and price controls, removal of export incentives, the deregulation of telecommunications and broadcasting, the reform of government spending including a user pays basis for many outputs of state enterprises and the corporatization of others, substantial reductions in rates and progressivity of the personal income tax, reductions in corporate profits tax rates, the introduction of a comprehensive uniform rate indirect commodity tax, the sale of a number of major state assets including those in banking, finance, energy and transport, and a substantial reduction in, and full-funding of, the fiscal deficit.

The deficit reduction, however, was achieved mainly through revenue increases and government spending as a share of GDP remained at historically high levels. The reason was that traditional Labour Party strongholds of health, education and social welfare spending were maintained or strengthened by diverting resources previously allocated to the private sector as industry props. Further, the government did little to reform an extremely rigid labour market. As a consequence, the labour market has been unable to absorb growing numbers of workers made redundant by public sector shakeouts, and the exposure of the manufacturing sector to cheap labour-intensive manufactured imports.

While the New Zealand public had been prepared for considerable sacrifices during the adjustment process, the absence of economic growth and the continuing increase in the length of the dole queue has made the public lose confidence in the ability of the government to restore prosperity, price stability, and full employment. In particular, it appears that unemployment will be the Achilles heel of the administration.

To understand why, it is important to consider the historical behaviour of unemployment in New Zealand. For a sustained period of time following World War II, the full employment target seemed to be largely achieved. While New Zealand has only recently developed a measure of unemployment similar to that used in the United States and other developed economies, and which is used in the econometric sections of this paper, there is an extensive data set for persons registered as unemployment with the Department of Labour. People may register as unemployed if they are out of work but are seeking work of a full-time nature. Not all job-searchers register, however. One main incentive to register is that registration is necessary for qualification for (non-earnings related) unemployment compensation paid by the government. Not all the unemployed are entitled to compensation, however, and these people will not generally register if they believe that the Department of Labour will be unable to find them a satisfactory job, or if they are not seeking full-time work. Offsetting these are persons who stay on the register after they have found work.

Figure 5 portrays the behaviour of the registered unemployment rate from 1947-84. The years end at March 31 (the

end of the fiscal year in New Zealand) and for which the Department of Labour's estimated labour force survey series, which is used to deflate the registered unemployed series, is defined. This data set is the source of the OECD Labour Force Statistics unemployment rate series for New Zealand up to 1984. The series discontinues in 1984 because the Department of Statistic's Household Labour Force Survey (HLFS) introduced a new and noncommensurate measure of the labour force which is used to deflate surveyed unemployment. In the HLFS survey, there is no minimum hours worked requirement in defining employment and no minimum hours of work sought in defining unemployment. Consequently, the HLFS labour force series can be expected to be greater than the corresponding Labour Department series.

In spite of its limitations, the registered unemployment rate series suggests that the full employment objective was satisfied to a tolerable approximation during the postwar period until 1977. In the ten years following the war, registered unemployed rarely exceeded 100 persons in any month, and rarely exceeded 1000 persons in the subsequent decade. Over the 20 year period, the registered unemployment rate averaged only 0.17 percent. This history would have suggested to New Zealanders that full employment was a feasible and sustainable policy target. It has most clearly not been achieved since 1977, with over 150,000 registered as unemployed (about 5.7 percent of working age population) in early 1990.

The behaviour of the inflation rate over a similar period makes an interesting comparison. Figure 6 portrays the quarter to quarter yearly percentage rate of change of the (All Groups)

Consumer Price Index from March 1947-June 1990. A belief that New Zealand might face a stable Phillips Curve would clearly be seen to be misplaced. Under a stable Phillips Curve, it might have been expected that inflation would have been high and fairly steady until 1977, and then falling on a more or less continuous basis thereafter. Figure 6 shows instead that New Zealand has experienced a diverse history of inflation, with the average rate much higher than that for the United States. A period of high inflation followed the removal of rationing after World War II, and another period of high inflation accompanied the boom in commodity prices during the Korean War. Inflation stabilized somewhat for a lengthy period until the late 1960's, after which time inflation was both substantially higher and more variable. When unemployment began to increase sharply in late 1977, the inflation rate was 15.5 percent. With unemployment growing steadily, the inflation rate generally remained at high levels. A wage-price freeze beginning in 1982 and lasting for two years accounts for the dramatic fall in measured inflation over this period, but this was followed by a rapid return to previous inflation rates as people divested themselves of unwanted real money balances acquired during the freezes. Inflation, although erratic, stayed at high levels until September 1987, after which it fell from 17 percent to a low of 4 percent in March 1989, before rising to 7.6 percent in June 1990.

While New Zealand experienced a golden period of very low unemployment and relatively low and steady inflation between 1953-69, people could look back to earlier periods, including times of peace and war, and observe that low inflation had not

always been New Zealand's experience. Moreover, from 1969-77, during which period unemployment remained at very low levels, the inflation rate, although erratic, accelerated sharply and was maintained at historically high levels.

In sum, our argument is that New Zealand's postwar historical experience up to 1977 was suggestive that full employment was a sustainable objective. Short bursts of high inflation were seen as temporary aberrations, possibly of concern at the time, but not clearly related to the maintenance of full employment except perhaps in the very short run. Accelerating inflation after 1969 was a similar aberration, but of a sustained nature, while the unemployment picture changed little until 1977. The subsequent rapid rise in unemployment has been associated with highly erratic inflation behaviour, but again containing substantial periods of high inflation rates.

Further, and consistent with the welfare state ideology, New Zealand developed a number of institutional mechanisms to compensate the majority of citizens for inflation. The major example of this has been the role of government in the labour market, although compensation for inflation has occurred in public sector production and welfare activities and for government bondholders. On the other hand, compensation has not been universal, and exporters have been severely disadvantaged by high inflation under fixed exchange rates (as well as by high real interest rates under floating exchange rates).

As well as introducing mechanisms for resolving disputes, government has acted so as to strongly influence and frequently determine wage setting processes. The 1936 amendment to the

Industrial Conciliation and Arbitration Act of 1894 introduced compulsory membership of trade unions and permitted the formation of national unions organized on an occupational rather than industrial basis. This was later modified somewhat to permit membership to be based on unqualified preference clauses in agreements. National unions tended to negotiate awards for wages and working conditions to be applied on a national basis, which were legally enforceable as wage minima. In many industries, second-tier bargaining served to drive negotiated wages above the award rate, although the introduction of the Labour Relations Act of 1987 requires either the award to be binding, or else an agreement to be binding, but not both.

During the period analyzed, government played a major direct role in the wage setting process. First, it used award rates for unskilled labour as the basis for a national adult minimum wage, which, since 1977, has been the same for male and female workers. For most of the period, general wage orders and pronouncements have been issued by the Arbitration Court or the Executive from time to time. The Arbitration Court decisions served mainly to keep real award wages from falling until 1967 when, during a period of rapid inflation, a nil order was issued. Large wage increases were then negotiated outside the Court, and the government reacted with its Stabilization of Remuneration Act of 1971. Wage orders under the umbrella of various authorities proceeded until 1979, after which time the government took over the role of determining centralized wage changes. The Remuneration Act of 1979 downplayed the role of compensation for inflation in setting wage adjustments somewhat, and, more

recently, the government has distanced itself from direct intervention in wage setting, although the implementation of comparable worth schemes from July 1990 will restore a major role for government in direct wage setting.

Further, government has been a major employer of labour over the period analyzed. Recent moves to privatize and corporatize public sector trading organizations have led to a very substantial shakeout of a featherbedded public sector labour force in many sectors, and a move away from setting public sector pay rates merely on the basis of ruling rates for comparable skills in the private sector.

Thus, we would argue that the experience has suggested to New Zealanders that there is little connection between inflation and unemployment except perhaps of an ephemeral nature, and that it is possible to experience continuing full employment at rates of inflation which, although greater than would be tolerated in the United States, are many times less than rates experienced by New Zealand in very different circumstances for unemployment. Further, until recently, government has protected large sectors of the population from the harmful effects of inflation.

5. Changing the Reserve Bank Act to Target Inflation

At the time of the Reserve Bank of New Zealand's inception in 1933 the enabling legislation did not provide for any form of government direction. However, Section 10(1) of the Reserve Bank Amendment Act of 1936 required the central bank to give effect to the government's monetary policy. The 1964 Reserve Bank Act continued this intention, specifying in Section 8(1) that such

monetary policy "shall be directed to the maintenance and promotion of economic and social welfare in New Zealand, having regard to the desirability of promoting the highest level of production and trade and full employment, and of maintaining a stable price level".

Evidently, for most of its history, the Reserve Bank has had little autonomy and has not been required to publicly account for its actions. Parkin (1986) has argued that evidence supports the view that there is a systematic relationship between rates of inflation and the degree of independence of central banks across countries. Certainly, New Zealand has experienced higher than OECD average rates of inflation during a period when the Reserve Bank was subject to the directive of the minister of finance, and it is arguable that monetary policy has typically been geared to emphasize the full employment objective at the expense of price stability. Where wage rates have been negotiated or determined centrally at levels unsupported by productivity increases, monetary policy has been accommodating so as to prevent higher real wages from inducing increases in unemployment. During the third Labour Government's regime in the early 1970's, and which continued in the subsequent National Government regimes until 1984, significance increases in budget deficits occurred, reaching an historical maximum of nine percent of GDP near the end of the period. Again, accommodating monetary policy served to monetize much of these deficits, resulting in sustained high inflation rates.

As previously noted, the fourth Labour Government adopted a strong anti-inflationary stance, reducing the deficit and

financing it mainly through bond sales. This administration has emphasized the importance of a low inflation target, and, in May 1989, chose to enhance the credibility of its position by introducing a bill which has subsequently been enacted as the Reserve Bank of New Zealand Act (1989) to take effect from February 1, 1990. The principal purpose of the Act was to recognize price stability as the primary objective of monetary policy, and to effectively remove employment objectives from its terms of reference. One reason for this may be found in the views of the Governor of the Bank, where it is argued that loosening monetary policy would, at best, give a small, temporary boost to employment and would be more likely to generate stagflation. Given the government's commitment to structural reform, the government and the Governor would not be at odds.

This concord contrasts sharply with previous administrations, and in the view of a passive central bank embodied in the 'unpleasant monetarist arithmetic' of Sargent and Wallace (1984). Here, it is argued that while deficits may be financed by short-term bond sales, if the real stock of outstanding bonds is to be constant in the long run then continuing deficits must be monetized. This argument requires a dominant Treasury and passive monetary authority. In New Zealand, the 1989 Act provides for both greater autonomy for the Bank and greater accountability. Monetary policy is now ultimately the responsibility of the Bank's Governor as the result of an agreement between the Minister and the Governor which commits the latter to deliver a stable price level (defined as a rate of change of consumer prices in the range 0-2 percent

by the end of 1992), and which legally requires the Bank to offset disturbances resulting from changes in wages, offshore interest rates, and exchange rates by adjusting the monetary stance so as to satisfy the inflation target. Further, the Bank is required to specify the path of adjustment to low inflation, and to issue policy statements at least every six months to explain how monetary policy will be implemented in the future and to account for the Bank's performance over the previous six months. In addition, under S49 of the new Act, the Governor General may, by Order-in-Council, on the advice of the Minister of Finance remove the Governor of the Reserve Bank from office if the Minister is satisfied that the Governor's performance in achieving the target has been inadequate. The Board of Directors of the Bank are also empowered to monitor the Governor's performance and make recommendations to the Minister where performance is seen as inadequate. These changes restore inflation as a monetary rather than fiscal phenomenon, and places pressure on the government to balance its budget in the long term.

In terms of the empirical results of this paper, however, the question arises as to whether the stance of the government makes sense if it wishes to be re-elected. The answer depends in part on the government's belief in the existence of a short term tradeoff between inflation and unemployment. If there is no tradeoff, then the government is clearly rational in the short term to emphasize control over inflation. If they believe that such a tradeoff exists, the question arises as to why they do not support a rapid monetary expansion at this point in time so as

to buy some reduction in the unemployment rate, since it is increases in unemployment that appear to be so important to the electorate compared to inflation increases. Unfortunately for the government, the required reduction in unemployment appears to be too large to be achievable by means of monetary policy.

This becomes more complicated if the citizenry, rightly or wrongly, believes that unemployment could be substantially reduced by monetary expansion. And at the time of writing, pressure is mounting on the government to relax its monetary stance. For example, the Catholic Commission for Justice, Peace and Development, the Wellington Chamber of Commerce, and the Bankers' Association are calling for a change in monetary stance. Editorials in local newspapers have similar viewpoints. Only the President of Federated Farmers is encouraging the government to stick to its last, and the government's response is that it will continue to do so.

Its justification may come from two sources. First, its reform program has excluded substantive reforms of the labour market and public spending in traditional Labour areas of health, education, and welfare, especially the latter. Real interest rates have been maintained at high levels discouraging private sector investment, and growth in the natural rate of unemployment has probably accounted for a great deal of the growth in total unemployment since 1984 as a result of public sector shakeouts and exposure of the highly protected manufacturing sector to foreign competition while maintaining a relatively rigid wage structure.

Secondly, the government may see its policies as long run optimal. Even if the next election is lost, if the incoming government reverts to using monetary policy rather than labour market reforms to reduce unemployment, the resulting stagflation and return to the 'bad old days' may improve the Labour Party's future electoral prospects and its chances of completing the reform process. Its courage, however, may never extend this far. It has been difficult for right-wing parties to adopt consistent cold turkey monetarist positions. It may be impossible for a traditionally left-wing party to do so, and hence, may suffer from being dammed if it permits unemployment to grow, and also if it takes the hard remedies to cure unemployment.

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Table 1. Summary statistics on the ratios 1985Q2 to 1990Q2

	Overall	Economy
Maximum	60.07	58.28
Minimum	25.27	23.16
Mean	44.35	43.14
Standard deviation	11.43	10.43
Coefficient of variation	0.26	0.24

Table 2. Indifference Curve Estimates, Equation 3

Dependent Variable / Coefficient	Overall	Economy
β_0	73.85 (21.33)	69.15 (17.01)
β_1	-0.0385 (-3.98)	-0.0351 (-3.09)
β_2	-0.794 (-11.28)	-0.694 (-8.40)
Adjusted R^2	0.885	0.807
Durbin-Watson	2.74	1.99
Implied - β_2/β_1	-20.62	-19.77

Table 3. Indifference Curve Estimates, Equation 4

Dependent Variable / Coefficient	Overall	Economy
α_0	0.981 (8.15)	0.789 (5.68)
α_1	-0.00155 (-4.42)	-0.00141 (-3.60)
α_2	-0.0331 (-12.42)	-0.0291 (-8.96)
Adjusted R^2	0.883	0.796
Durbin-Watson	2.69	1.82
Implied - β_2/β_1	-21.35	-20.64

Notes

1. The wording of the questions and the percentage of respondents in each classification were provided by the Heylen Research Centre.

2. For references to studies using Gallup Poll data see Smyth and Dua (1989) and Smyth, Washburn and Dua (1989).

3. Smyth and Dua (1988, 1989).

4. Because we do not include the first year of office for the Labour party there is no need to include in the model a dummy variable reflecting the "honeymoon" usually enjoyed by an incoming government.

5. For discussion on the specification and estimation of logistic models see Kmenta (1986:560-578).

6. The estimates were made using SHAZAM6.2. Shazam calculates exact Durbin-Watson distributions. The HETCOV option was used to ensure a heteroscedastic-consistent covariance matrix for the results in Table 3.

7. We make the U.S. estimates using the values $\beta_0 = 79.66$, $\beta_1 = -0.108$ and $\beta_2 = -0.347$ from Table I of Smyth, Dua and Washburn (1989).

FIGURE 1

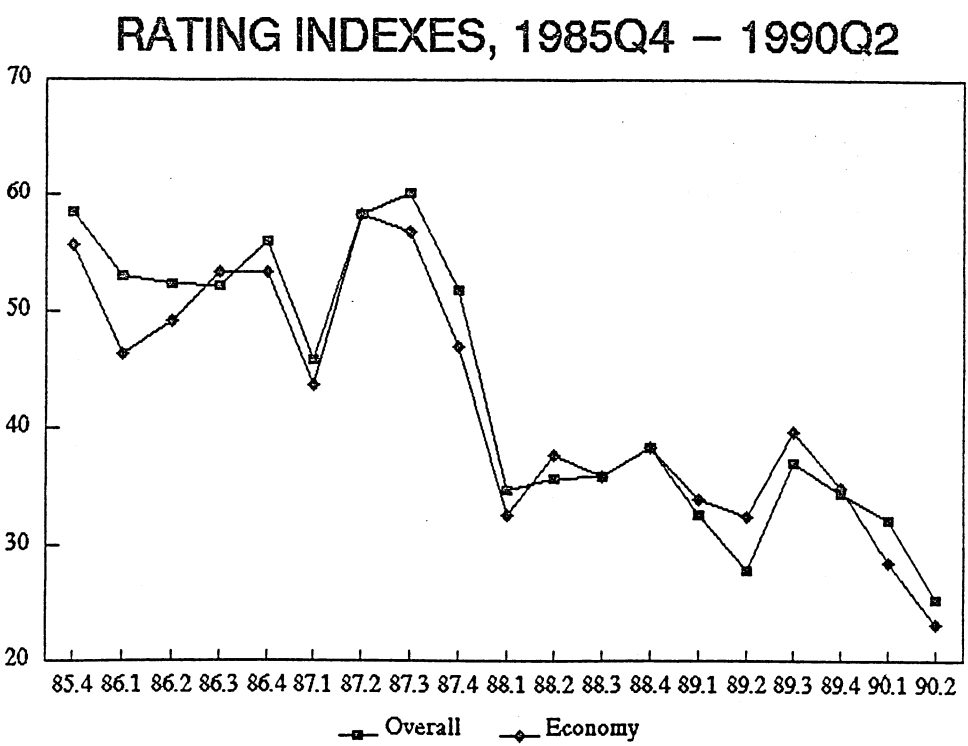

RATING INDEXES, 1985Q4 – 1990Q2
70
60
50
40
30
20
85.4 86.1 86.2 86.3 86.4 87.1 87.2 87.3 87.4 88.1 88.2 88.3 88.4 89.1 89.2 89.3 89.4 90.1 90.2
Overall
Economy

FIGURE 2. INDIFFERENCE MAP, 1985 Q4 - 1990 Q2

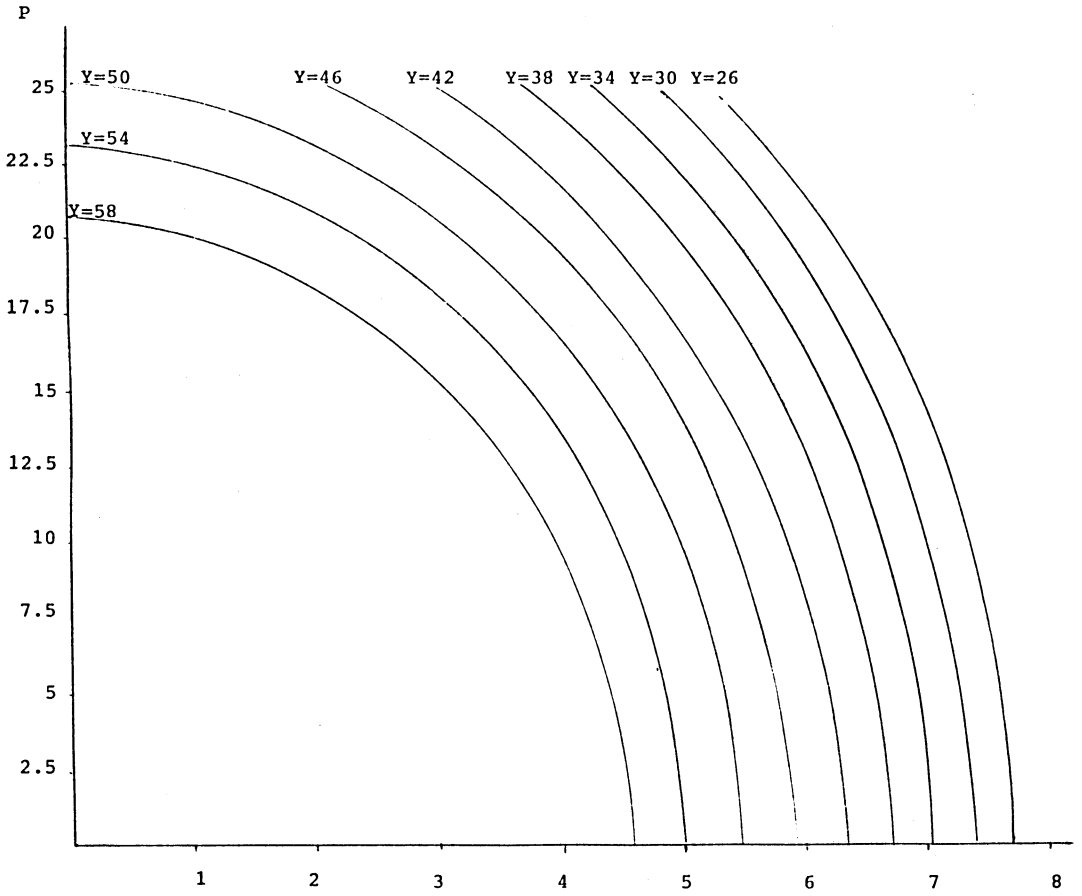


FIGURE 3. INDIFFERENCE CURVES, 1985 Q4 - 1990 Q2

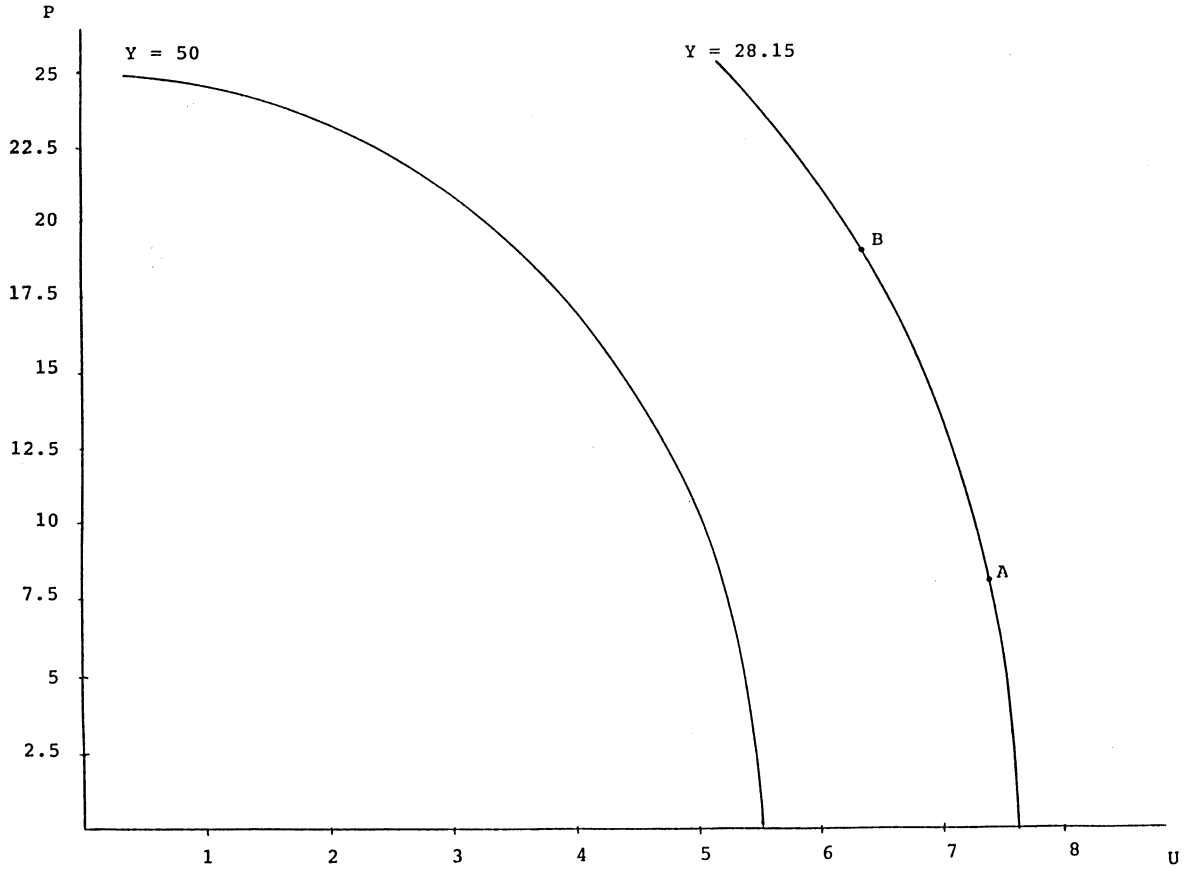


FIGURE 4

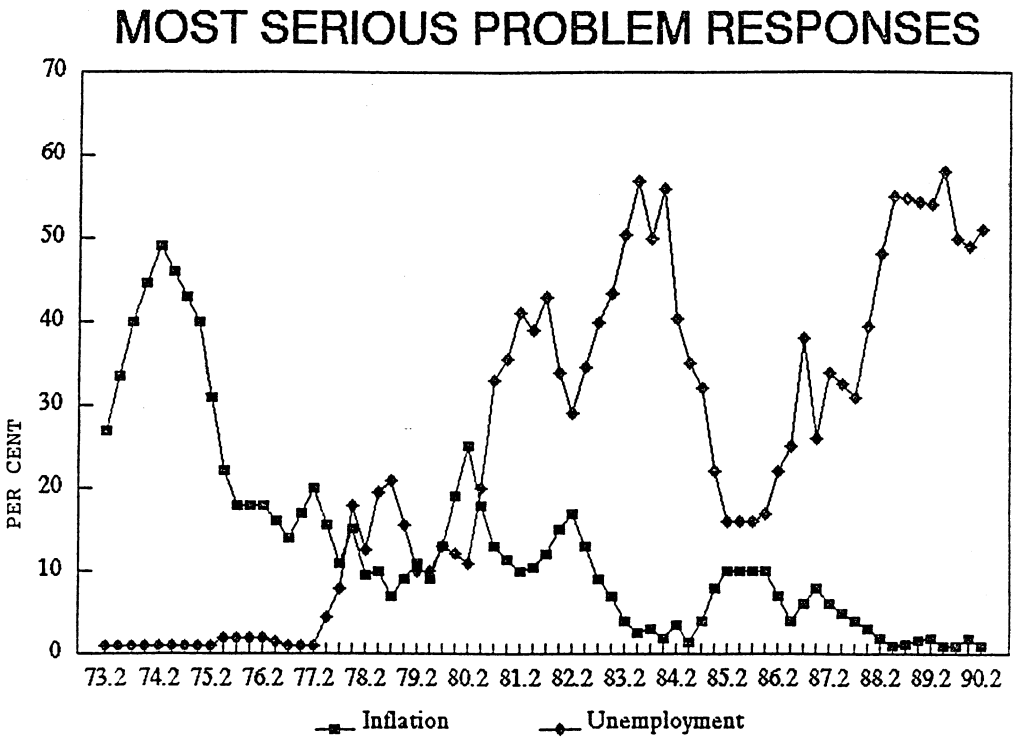
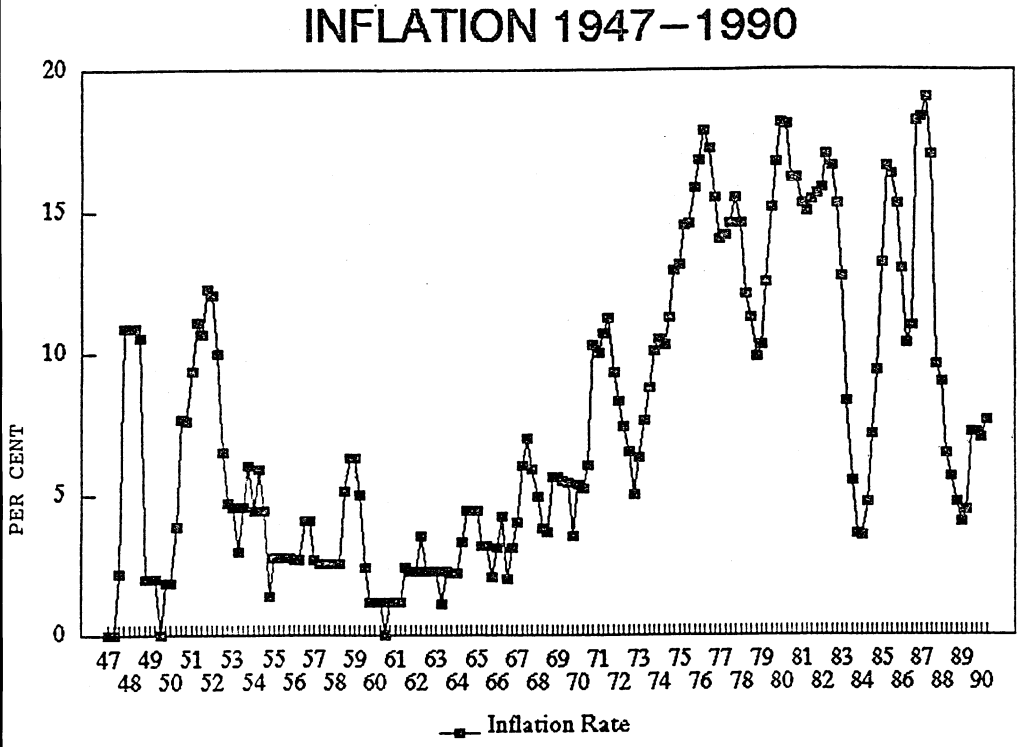

MOST SERIOUS PROBLEM RESPONSES
PER CENT
70
60
50
40
30
20
10
0
73.2 74.2 75.2 76.2 77.2 78.2 79.2 80.2 81.2 82.2 83.2 84.2 85.2 86.2 87.2 88.2 89.2 90.2
Inflation
Unemployment

FIGURE 5


REGISTERED UNEMPLOYMENT 1947–1984
PER CENT
6
5
4
3
2
1
0
1947
1949
1951
1953
1955
1957
1959
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979
1981
1983
Registered Unemployment Rate

FIGURE 6


INFLATION 1947–1990
PER CENT
20
15
10
5
0
47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89
48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90
Inflation Rate

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