PRESIDENTIAL APPROVAL IN VOLATILE CONTEXTS:
ECONOMIC VORING IN ARGENTINA, BRAZIL, AND VENEZUELA

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Scholars of economic voting seem to agree that political support for incumbent leaders varies directly with macroeconomic performance. As Lewis-Beck suggests, “one conclusion is unambiguous: macroeconomic downturn is associated with a fall in government support” (1988: 29). Despite this consensus, it remains very unclear, precisely which economic factors are responsible for fluctuations in approval, and why their significance varies across time and countries (Lewis-Beck and Paldam, 2000).

Part of the reason why the literature on economic voting is characterized by a lack of consistency with respect to the relative electoral salience of different economic indicators revolves around variations in economic performance. Under conditions of hyperinflation, for example, it is unlikely that other economic or even political factors will dominate the popularity function. Conversely, where the economy appears to be relatively stable, non-economic issues are likely to emerge as a major source of variation in support for elected leaders. As a result, the same macroeconomic indicator may have varying effects on presidential approval at different points in times in the same country. Similarly, macroeconomic indicator may also affect approval differently in different countries. If, for example, a president makes a credible promise to restore economic growth under conditions of recession, his/her popularity rating may not be negatively affected by recent economic downturns.

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1 This research is based on work supported by the National Science Foundation under Grant SES-0096695, and by the Latin American and Iberian Institute of The University of New Mexico under the NAFTA/MERCOSUR project.
The fact that similar economic factors have a varying impact on popular support over time and across countries is a significant empirical issue. If a single electorate is responding differently to the same macroeconomic indicator at different points in time, or if several electorates are responding differently to the same macroeconomic indicator across countries, it is not surprising to see so many conflicting results in the literature. If the literature is correct in suggesting that an economic decline is invariably associated with a loss of support, the key to the puzzle is to identify which economic factor matters most at different times and in different countries, if any factors does matter at all. As a result, the specific context of each country and the evolution of the economic situation within each country are of paramount importance to the study of economic voting. Hence, economic voting should be treated as a variable rather than as a constant (Stokes, 2001).

The current paper explores the relationship between the evolution of several macroeconomic indicators and quarterly presidential approval in Argentina, Venezuela, and Brazil during the 1980s and 1990s. While prior research has generated a very rich literature on the subject of economic voting, its focus has been largely limited to the well-established democratic regimes and stable economies of Europe and North America. Consequently, it remains unclear whether voters in less institutionalized democracies and more volatile economic contexts are more or less preoccupied with economic issues than citizens of advanced industrial democracies (Anderson and O’Connor, 2000). On the one hand, there are reasons to think that economic performance or policy effectiveness may strongly condition political behavior in relatively new and more fragile democracies (Seligson and Mueller, 1987), especially because their economies are considerably more
vulnerable to economic crises and fluctuations than those of the North Atlantic basin. Also, in regions such as Latin America, where the recent transition from a statist to a market-oriented model of development has created rapid and often traumatic economic transformations, popular sensitivity to issues of economic performance may be amplified. On the other hand, in more clientelistic societies, institutional and political bonds between a government and its constituents may influence attitudes toward governmental leaders in ways that prevent voters from punishing incumbents for economic policy failures. Lower levels of education and access to political information may have the same effect. By virtue of their political and economic characteristics, the countries of Latin America thus offer a theoretically interesting context in which to explore the broader comparative relevance of the literature on economic voting.

The results of the analysis suggest that inflation and unemployment have a significant effect on presidential approval. The relationship linking economic factors and presidential approval, however, appears to be mediated by the relative volatility of the indicators over time. The relationship between economic performance and approval also appears to vary across national political context. Although inflation is negatively related to presidential approval in all three countries, unemployment has different consequences in Venezuela then in the other two cases.

THEORETICAL FRAMEWORK

Are Latin American presidents systematically punished for economic downturns and rewarded for economic improvements? If so, what economic factors have the greatest impact on presidential approval? When are their effects most and least
significant? To what extent are the relationships linking these economic factors to presidential approval the same across countries?

That bad economic management negatively affects a president’s popularity is rarely challenged. In fact, most research on economic voting is in agreement. Yet the literature does not seem to concur on what precise economic factor is responsible for fluctuations in presidential approval across countries, and over time within the same country. Although unemployment, inflation, and/or income are found in most studies of economic voting, their impact on presidential approval or vote choice is far from constant. Kramer (1971) was one of the firsts to test hypotheses of the economic voting literature with data from the United States. He developed a vote function that accounts for inflation, real income, and unemployment. He found that the levels of inflation and real income have a significant impact on the electoral faith of the incumbent party, but that unemployment is irrelevant. In studying the French case, Lewis-Beck (1980) used the number of unemployed and the rate of change in the consumer price index, but did not include any measure of income. He found that the economic effects are felt with a two months lag. Whiteley (1986) used the logged inflation rate differenced with respect to the previous month and the logged unemployment rate. He found that both factors have a significant impact on the popularity of the British government. His study covered the 1947-1980 period. Yet, Norpoth (1987) found that unemployment is a significant factor in the British case, but that inflation has no impact on the popularity of the government. His analysis covered the 1979-85 period.

One of the problems found in this body of literature is that, so far, most scholars have treated economic voting as a constant. They have built statistical models around the
premise that economic factors have an equal impact on presidential approval over time and across country. There are reasons to believe, however, that economic voting not only varies across countries, but even more importantly, over time within countries. Along these lines, economic voting should be treated as a variable.

It is thus possible that economic voting varies across economic contexts. Accordingly, different economic factors may have varying effects on presidential approval at different times and in different countries. To address this possibility the concept of salience is very useful. When an issue becomes salient, it is likely to influence party support and voting behavior (Miller, Miller, Raine and Browne, 1976; Abramowitz, 1994; van der Eijk and Franklin, 1996; Wlezien, 2001). If voters feel that a specific issue is important to them, they will evaluate their elected leaders on the basis of this issue. Conversely, if voters feel an issue is completely unimportant to them, there is no reason to believe that they will evaluate their government on that basis.

Similarly, when individuals evaluate the performance of the president, the most likely scenario is that they react to the economic factor that is most important to them, the one that has greater salience. If individuals are not concerned with inflation, there is no reason to believe that they will punish the president for a deterioration of the indicator. Conversely, however, if inflation is of major concern to those individuals, the likelihood is that the deterioration of the indicator will trigger a loss of popularity for the president. The key to this puzzle is to identify the most salient economic issues.
HYPOTHESES

The foundation of the retrospective economic voting theory argues that individuals assess past economic performance when evaluating the president. If an individual citizen is satisfied with past economic performance, he/she approves of the president, but if not, she/he registers disapproval. By extension, this mechanism should be reflected at the aggregate-level in similar relationships between macroeconomic indicators and quarterly presidential approval. The first hypothesis (H1) thus suggests that poor economic performance is associated with lower presidential approval ratings, and vice versa. The assumption is that the individual-level mechanism will be reflected in the aggregate-level relationships.

However, the relative salience of the different macroeconomic factors is believed to have a direct effect on the propensity of voters to reward or punish elected leaders for the economic performance of their country. Economic issues will dominate voters’ assessments, and thus the relationship between economic performance and aggregate support for presidents, when their volatility reaches high magnitudes.\(^2\) Conversely, when their volatility is relatively low, voters potentially turn their attention to other issues such as corruption, public safety, education, etc. Accordingly, it is expected that the relationship between macroeconomic performance and presidential approval will be mediated by the extent to which macroeconomic indicators display volatility. The second hypothesis (H2) is that macroeconomic indicators will have a stronger impact on presidential approval when they display increased volatility.

\(^2\) Although, theoretically, the concept of salience revolves around an individual level mechanism, in practice, it has clear aggregate-level implications. In the aggregate, the most salient economic factors are likely to correspond to those macroeconomic indicators that display high levels of volatility.
MODEL AND METHODS

The general model developed in this paper draws on prior work; however, it also takes into consideration the recent experiences of Latin American countries with unusually harsh economic crises, characterized by periods of hyperinflation and severe unemployment. For the purpose of this analysis, presidential approval rating was collected on a quarterly basis for each country for most of the 1980s and 1990s, together with quarterly measures of inflation and unemployment. The macroeconomic indicators included in the analysis are those most frequently found in analyses of economic voting, i.e., inflation and unemployment. Unfortunately, other indicators such as real disposable income were not available on a quarterly basis in the countries under study.

The relationship between economic performance and presidential approval is estimated by regressing quarterly presidential approval ratings on economic indicators, with an autoregressive specification of the dependent variable to control for autocorrelation. In addition to the economic variables, each model includes a series of dummy variables to account for non-economic factors. The general autoregressive model is as follows:

\[ \text{PRES}_{(i,t)} = \alpha_{(i)} + \beta_1 \text{PRES}_{(i,t-1)} + \beta_2 \text{ECON}_{(i,t)} + \beta_3 \text{FIRST}_{(i)} + \epsilon \]

The quarterly measure of presidential approval rating consists of the aggregation of survey data conducted by local polling firms in each country. The Argentine database was constructed with survey data obtained from Mora y Araujo y Asociados, and published data by CEOP, Buenos Aires. The Brazilian data came from Ibope, Datafolha, Gallup, and Vox Populi. Most of this data was collected during field research in Brazil in the Fall of 2000. I was able to fill in the blanks thanks to the generosity of Professor Wilber A. Chaffee, who let me use all of his data. The Venezuela data comes from Consultores 21, Caracas. If no data was available for a given quarter, the average of the preceding and following quarters was computed. The detailed list of these exceptions is available from the author upon request. Macroeconomic data was obtained through the central statistical office of each country as well as their Ministry of Economics and the IMF’s International Financial Statistics CD-ROM 2001.

Alternative regression methods with mechanisms to correct for first-order autocorrelation were explored such as the PRAIS-WINSTEN transformation or ARIMA. They generated similar results. Tables are available from the author upon request.
where PRES is the dependent variable reflecting quarterly presidential approval ratings at
the national level of government. The lagged value of the dependent variable is also
included as an explanatory variable to control for autocorrelation. ECON is a vector of
macroeconomic variables measuring (a) inflation, (b) change in inflation, and (c)
unemployment. Inflation (a) consists of the quarterly percentage change in the Consumer
Price Index (CPI). The first difference of inflation (b) is also added to the model to
eliminate the potential effect of non-stationarity. Because of severe problems of
skewness associated with hyperinflation, the inflation variable was logged for the
estimates involving Argentina and Brazil. The use of a logarithmic transformation
assumes that the marginal effect of inflation on presidential approval will decrease as
inflation reaches very high levels. Unemployment (c) consists of the percentage of the
active population currently unemployed. Entries are the most recently published figures.
FIRST is a vector of dummy variables that identify the first quarter of each new
president’s term. The inclusion of these variables serves to control for the unusually large
difference between current presidential approval and its lagged value during the first
quarter of each president’s term. By including these dummy variables, it is not necessary
to exclude the first quarter of each new presidency (Beck, 1991: 93). Finally, ε is an error
term.

The statistical analysis relies upon OLS. The analysis begins by estimating the
model by including each macroeconomic variable individually, and without controlling

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5 The first difference of inflation was computed by deducting the lagged value of the variable INFL from its
current value \( \Delta \text{INFL} = \text{INFL}_{t-1} - \text{INFL}_t \). The variable INFLATION displayed non-stationarity in
Argentina and Brazil, but not its first-difference. Non-stationarity may bias the results of the regression
analysis.

6 Because of the presence of negative inflation, the natural log was calculated on the basis of the absolute
value of the indicator. The negative sign was restored after the log had been taken.
for their relative volatility over time. To the extent that the traditional theory of economic voting is correct, the expectation is that fluctuations in presidential approval will vary directly with the economic performance (H1). In order to explore the second hypothesis (H2), a control for periods of price instability will be introduced in the models. The expectation is that the macroeconomic indicators will impact presidential approval differently in periods of price instability and periods of relative price stability. Each country analysis is presented separately to account for the specificities of the countries’ economic context.

EMPIRICAL ANALYSIS

Table 2.1 presents the results of the regression analysis for quarterly presidential approval, inflation, and unemployment in Argentina, Brazil, and Venezuela during the 1980s and 1990s, without considerations for variations in the volatility of the different macroeconomic indicators. In general, the results indicate that the economy has a clear impact on presidential approval.

[Table 3.1 about here]

The results show that inflation is a significant factor shaping presidential approval. High inflation (Model 1) and/or a change in inflation (Model 2) generate a decline in presidential approval in all three countries. However, the significance of inflation and the direction of the relationship vary with the specification of the variable. In Argentina presidents are punished (rewarded) for change in inflation (Model 2), as was
hypothesized. However, the coefficient for the logged inflation rate (Model 1) does not reach statistical significance. As expected, in Brazil, presidents are held accountable for inflation, independently of the operationalization of the variable. Venezuela evinces a third pattern inasmuch as presidents are blamed (rewarded) for the level of inflation, but not for changes in the level.\(^7\)

The fact that the rate of inflation is not significant in Argentina (Model 1) is surprising in view of the literature emphasizing the importance of this variable to electoral outcomes (Lewis-Beck and Paldam, 2000). The lack of statistical significance of the inflation coefficient, however, can be explained by its trend over time. The mean of both the inflation rate and presidential approval decreases significantly with time.\(^8\) As a result, while the theory predicts that inflation and approval vary negatively, the observed bivariate relationship is positive. Hence, when no controls for time or any other factors are introduced, or when the variable is not de-trended, the relationship between the level of inflation and approval is positive. What the coefficient for the level of inflation (Model 1) is capturing, then, is most probably the long-term relationship between the two variables.

The analysis of unemployment (Model 3) also offers mixed results. In fact, the direction and level of significance of the coefficient for unemployment varies across countries. While higher unemployment has a negative impact on presidential approval in Argentina, it has a positive impact in Venezuela, and none in Brazil.

\(^7\) The lack of statistical significance of the coefficient for change in the level of inflation in Venezuela is not surprising, however, since inflation in Venezuela during the 1980s and 1990s does not fluctuate as much as it did in Argentina and Brazil over the same period of time.

\(^8\) The results of the Dickey-Fuller test reveals that the variable inflation are non-stationary, i.e., that the mean and variance or the variable are time dependent.
This first look at the relationship between economic factors and presidential approval in Argentina, Brazil and Venezuela is generally satisfactory. However, the specification of the model may generate misleading conclusions about the relationship between the different economic indicators and presidential approval. The first hypothesis builds on the expectations that the relationship between economic factors and presidential approval is constant across macroeconomic contexts. It assumes that a one unit change in inflation or unemployment will have the same impact on presidential approval at any point in time, despite the relative volatility of the different economic factors.

As hypothesized earlier, however, it seems more logical to expect that different macroeconomic indicators matter at different times and in different contexts. When a macroeconomic indicator displays high volatility, individuals become more sensitive to variations in this macroeconomic indicator. Under such conditions, it becomes a more salient issue for individual voters. Accordingly, fluctuations of this indicator should have a relatively stronger impact on presidential approval than otherwise.

To assess this possibility, the specification of the model is revisited. Given that economic instability in Latin American countries is often associated with inflation, the focus of this analysis is put on price stability. A dummy variable is thus introduced into the model to separate periods of high price instability from periods of relative price stability. This dummy variable is then interacted with the macroeconomic indicators to assess their relative impact on presidential approval in the different macroeconomic contexts.⁹

⁹ The dummy variable takes the value 1 in Argentina for all quarters prior to the second quarter of 1992, and otherwise zero. In Brazil, the dummy variable takes the value one for all quarter prior to the second quarter of 1995, and otherwise zero. The choice of these cut-off dates are motivated by the fact that 1991 in Argentina, and 1994 in Brazil marked the end of almost a decade of hyperinflation. During 1991-92 in
Table 2.2 presents the results of the regression analysis for inflation, and unemployment during periods of price instability in Argentina, Brazil, and Venezuela. With the inclusion of the dummy variable and its interaction with the macroeconomic indicators, the model now accounts for the variations in economic voting across macroeconomic context.

[Table 3.2 about here]

The results of the improved model indicate that inflation only really matters during periods of relative price instability, and not otherwise. In all three countries, inflation is only a significant factor when prices display higher levels of volatility. When inflation is brought under control, it no longer has an impact on the popularity of presidents. In all three countries, worsening inflation imposes a loss of popularity for presidents. This is indicated by the negative sign of the coefficients for inflation.

In addition, in Argentina and Brazil, where inflation reached much higher levels than in Venezuela, the change in inflation also has a significant impact on presidential approval during periods of price instability. Under such conditions, individuals not only blame presidents for high levels of inflation, but also for the pace at which the situation is worsening. In Venezuela, where quarterly inflation never exceeded 31 percent during the 1980s and 1990s, this relationship is neither observed nor expected.

Argentina, and 1994-95 in Brazil, the governments managed to bring inflation under control and reduce the rate to below 10 percent per quarter. In Venezuela, two price instability periods are identified. The first period begins during the second quarter of 1987 and ends during the first quarter of 1990. The second period begins during the second quarter of 1994 and ends during the first quarter of 1997. During these two episodes, the inflation rate increases significantly and displays a very high level of volatility.
Finally, the results presented in Table 3.2 show that unemployment does not have any effect on presidential approval during periods of price instability. It only has a significant effect during periods of price stability, when inflation is brought under control. This is consistent with the expectations.

The political consequences of deteriorating unemployment are not as consistent as mounting inflation, however. While the Argentine and Brazilian cases suggest that worsening unemployment results in the loss of support for the president, the Venezuelan case illustrates quite the opposite. According to the results presented in Table 3.1 and Table 3.2, Venezuelan presidents can in fact enjoy growing support even when the unemployment rate deteriorates. This is indicated by the positive sign of the coefficient for unemployment.

Prior research based on individual-level data has suggested that Venezuelans, unlike Argentines and Brazilians, behave in a prospective manner (Weyland 1998), and that they are more responsive to expectations about the future than to past economic performance when evaluating the work of their elected leaders. According to this logic, it is not impossible that past economic deterioration be associated with growing popular support. Citizens may not hold the current president responsible for past economic performance, and rather put the blame of past presidents. Likewise, citizens may be responding positively to promises of improvement, and support presidents who pledge to correct the situation in the future. A mixture of both elements is also possible.

Theoretically, this interpretation of the results is consistent with that of other authors (Stokes, 2001; Przeworski, 2001), who suggest that worsening economic conditions can be associated with growing popularity in situations where voters do not extrapolate
from past economic performance to form prediction about future performance, or (2) do not view the current government’s policies as having caused past economic performance (Stokes 2001: 13).

INTERPRETATION OF RESULTS

The use of OLS has the advantage of offering results that are very easy to interpret. The coefficients reported in Table 3.1 and Table 3.2 can be read as the slope of the partial relationship between a single explanatory variable and the dependent variable. For example, the coefficient for GDP growth in Model 8 of Table 3.2 tells us that a one percent increase in GDP growth will have a favorable effect of three quarters of a percent on presidential approval.

Unfortunately, the logarithmic specification of inflation in Argentina and Brazil makes the interpretation of the coefficients slightly more complicated. As with other variables, the coefficients for inflation represent a linear relationship. Figure 3.1 offers a graphical representation of the partial relationship between change in inflation (logged) and presidential approval in Argentina during the pre-stabilization period (1983-1992).

[Figures 3.1 about here]

The vertical axis represents change in presidential approval, and the horizontal axis represents change in inflation. To ease the reading of the graph, the numbers appearing on the horizontal axis are the real values of inflation rather than their logarithmic transformation. The shape of the curve appearing in Figure 3.1 indicates that the slope of
the relationship linking change in inflation and presidential approval is very steep when
the change in inflation is relatively low, and relatively flat at higher levels. Hence, past a
certain point, presidents are punished almost equally for changes in inflation.

CONCLUSION

Prior research on economic voting consistently finds that there is a significant
relationship linking economic performance and public support for presidents. Although
there are disagreements on whether the relationship is symmetrical, generally speaking,
presidents are believed to be punished for deteriorating economic conditions, and
rewarded for improving economic performance. What fails to generate consensus,
however, is the identification of the economic factors responsible for fluctuations in
presidential approval. Authors often conflict on whether inflation, unemployment or per
capita income is the key economic element to consider. They disagree on which
economic factors are of relevance across countries, but also within countries over time.
As a result, almost each case study has its own explanation.

The findings presented in this paper offer strong support for the argument that
economic performance plays a significant role in shaping presidential approval in
Argentina, Brazil, and Venezuela. The results of the analysis consistently indicate that
uncontrolled inflation is extremely costly for presidents. In all three countries, rising
inflation is invariably associated with a loss of support for the president. The results also
indicate that worsening unemployment is detrimental to presidents in Argentina and
Brazil, but not in Venezuela. In Venezuela, the results suggest that worsening
unemployment can be associated with increasing presidential approval. This rather
surprising finding may be explained by the fact that Venezuelans respond positively to credible promises of improvement in the future made by the president, or simply blame past governments for the poor economic performance. Both explanations find support in extant research on economic voting.

In an effort to enhance our general understanding of economic voting, this paper suggests that the relationship linking economic performance and presidential popularity is contingent upon the relative volatility of the different economic factors over time. It is believed that when economic factors are highly volatile they gain salience in voters’ mind, and consequently have a greater impact on approval. To test this possibility, the model is adjusted to account for the relative volatility of inflation over time. The analysis demonstrates that inflation matters only when it displays high volatility. In all three countries, inflation is found to have a significant impact on presidential approval during periods of price instability, but not otherwise. The analysis also demonstrates that other factors such as unemployment become relevant only when inflation is brought under control.

The findings presented in this paper have important implications for the study of economic voting. First, they serve to reinforce the broader theoretical relevance of prior studies of economic voting. Prior research has almost exclusively focused on the study of economic voting in countries marked by their relative democratic and economic stability. By exploring economic voting hypotheses in countries that have been undergoing significant political transformations and economic shocks over the past two decades, the research probes the broader applicability of generalizing about economic voting in relatively fragile democratic institutional settings and more volatile economies. Second,
by finding that presidents are punished for poor economic performance in countries
where the clientelistic nature of the party system may be expected to shield politicians
from popular scrutiny, the paper offers optimistic views about the quality of democratic
life in Latin America. In doing so, it contributes to challenge the view that democratic
regimes in the region are fragile, flawed, and incomplete. Finally, the results presented in
this paper emphasize the need to consider the peculiarities of the economic context when
exploring the relationship linking economic performance and presidential approval. The
findings thus suggest that economic voting is contingent upon the relative volatility of the
different economic factors.
REFERENCES:


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<td>Model 1</td>
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<td>.705*** (9.22)</td>
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Notes: The dependent variable is the percentage of respondents approving of the presidential during each quarter. T-values in parentheses. * = statistically significant at .05, ** = statistically significant at .01, and *** = statistically significant at .001 or better.
Table 3.2: Quarterly Presidential Approval, Inflation, and Unemployment During Periods of Price Instability in Argentina, Brazil, and Venezuela (OLS)

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<td>.768*** (10.34)</td>
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<td>.867*** (21.21)</td>
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<td>8.071*** (3.21)</td>
<td>21.052*** (3.15)</td>
<td>15.517*** (3.80)</td>
<td>6.773** (2.38)</td>
<td>25.955** (2.10)</td>
<td>2.918 (1.25)</td>
<td>3.89** (2.25)</td>
<td>-7.772 (-1.49)</td>
</tr>
<tr>
<td>N</td>
<td>67</td>
<td>67</td>
<td>68</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.84</td>
<td>0.84</td>
<td>0.82</td>
<td>.74</td>
<td>.71</td>
<td>.68</td>
<td>0.91</td>
<td>0.89</td>
<td>0.90</td>
</tr>
<tr>
<td>F</td>
<td>57.95***</td>
<td>58.51***</td>
<td>51.07***</td>
<td>26.55***</td>
<td>23.10***</td>
<td>19.89***</td>
<td>85.42***</td>
<td>72.31***</td>
<td>78.72***</td>
</tr>
</tbody>
</table>

Notes: The dependent variable is the percentage of respondents approving of the presidential during each quarter. T-values in parentheses. * = statistically significant at .05, ** = statistically significant at .01, and *** = statistically significant at .001 or better.
Figure 3.1  Partial Effect of Change in the Level of Inflation on Presidential Approval in Argentina Before Stabilization

Note: Values appearing on the x-axis are change in the rate of inflation (i.e., x[t] - x[t-1]) before the logarithmic transformation. Source: own calculation.