CIDE

Robin M. Grier y Kevin B. Grier*

ABSOLUTE BUT TEMPORARY POWER: ON THE ECONOMIC
EFFECTS OF THE MEXICAN POLITICAL SYSTEM

I. Introduction

Although term limits are often viewed as a viable means to the end of shrinking government, strong restrictions on re-election for powerful political offices may be counter productive. For example, Mexican governance is a combination of massive state power with an absolute prohibition of re-election. This system produces incredibly powerful, but explicitly temporary, autocrats who to a large degree run the Mexican economy. Using the colorful terminology of the late Mancur Olson, Mexico has an institutionalized system of "roving bandits" that gorge themselves for 6 years then either fade into oblivion or flee in disgrace.[1]

In this paper, we argue that this political system of ubiquitous state control of the economy, concentrated political power, and short political time horizons works systematically to the detriment of the Mexican economy. We present supporting evidence showing that, while there is a significant 6 year election cycle in Mexican economic data, it does not remotely resemble an opportunistic political business cycle (PBC) designed to capture votes in the presidential election. Instead, we find a significant post-election economic collapse. We also examine electoral influence on inflation uncertainty and find that while the sexenio does influence uncertainty, elections create, rather than resolve, economic uncertainty, which is the opposite of the prediction of rational partisan models.

Besides pointing out the importance of political institutions for economic performance, our results also illustrate an unappreciated catch-22 in the term limits movement. While term limits are seen as a means to the end of shrinking big government, our results show that the combination of short political horizons and big government can actually be detrimental to economic performance.

In what follows below, section II presents the argument for why political time horizon is a key factor in the performance of big government states. Section III makes the case that Mexico is in fact an extreme example of an ubiquitous state with concentrated power and short time horizon. Section IV describes our hypotheses, data, and tests, while section V contains our results. We conclude with a discussion of the implications of our findings in section VI.

II. State Power and Political Time Horizons

The driving idea of this paper is very simple: with respect to macroeconomic performance, it is better to have a far sighted autocrat than a short sighted one.

---

[1]This statement is not only in reference to the famous case of Carlos Salinas, the ignominious ex-president of Mexico. Garrido (1989) claims that each of the four presidents before Salinas "had lost all credibility and personal prestige by the end of their terms, as if the responsibilities inherent in the office sentenced each president to end his term in national disrepute".

While there is some evidence in favor of this proposition in studies using cross country data, here we examine the effects of regular changes in the identity of the autocrat on economic performance in a single country (Mexico) over time.[2]

McGuire & Olson (1996) and Olson (1998) present an interesting story about the emergence of autocratic governments.[3] Unprotected peasants are at the mercy of roving bandits, who, lacking secure property rights to exploit them, take everything they can in hit and run plunder. In these circumstances, the emergence of a stationary bandit who conquers an area and establishes a secure property right to exploit the citizenry will actually be preferred by the peasants to their previous "freedom".

McGuire & Olson model the rational secure autocrat's choice of the level of confiscation (taxes) and public goods provision. They show that as the portion of national income flowing to the autocrat rises (which they call a greater "encompassing interest"), so does the autocrat's incentive to provide income enhancing public goods. In their model, the autocrat chooses a level of confiscation to maximize his wealth at any given level of national income. Given that level, he then invests in public goods that increase national income up to the point where his share in the increase equals the marginal resource cost of providing the good. Thus, the greater his level of confiscation, the closer his public goods provision level comes to the wealth maximizing level. The autocrat acts purely out of self interest, but still can provide a surprisingly large level of public goods.

This analysis breaks down, however, when the autocrat is insecure or has a short time horizon. If public goods provide benefits that extend beyond his attenuated horizon, those benefits will not be taken into account when the autocrat calculates their desirability. Further, private assets whose flow of revenue to the autocrat over the short horizon are less than their overall value will be confiscated (nationalized) instead of taxed. McGuire & Olson explain the importance of a long time horizon for aligning the interests of autocrat and citizens as follows: "autocrats, whenever they have short time horizons, become, in effect, roving bandits". While some empirical research studies the positive effects of actors having more encompassing interests, here we study the possible negative effects of an actor with an encompassing interest having a short time horizon.[4]

In Mexico, the "roving bandit" is institutionalized in the political system. The government, whose involvement in the economy is pervasive, is constrained by the Mexican constitution to have a short time horizon. The President, while he gets to name his successor, is not allowed the possibility of re-election. Although all Mexican presidents in the last seventy years have been from one party (the PRI) and

---

[2]On the effect of political instability on growth in a cross-sectional regressions, see for example Barro (1991), Knack & Keefer (1995) and Alesina, Oezler, Rubini & Swagel (1996).

[3]Their work builds on earlier studies, especially those of Tullock (1974, 1987).

[4]See for example Calmfors & Driffill (1988), Heitger (1987), and Summers, Gruber & Vergara (1993). For a critique of the first two works, see Grier (1997).

were nominally chosen by their predecessors, the fact that the PRI is a collection of diverse interests with no controlling core ideology has meant that there is little policy continuity from one president to the next.[5] The populist presidencies of Cárdenas, Echeverría, and Lopez-Portillo arose from the same party that produced the orthodox, technocratic presidencies of Salinas and Zedillo. We believe the only unifying principle in the history of the PRI is the desire to retain political power and control over the economy.[6]

The Mexican presidential phenomenon of short time horizons and incredible powers is made even more dominant by the fact that the legislature is also subject to a no re-election constraint and is powerless to counterbalance the executive branch.[7]

Below we describe the Mexican political system in more detail, focussing on how it produces an institutionalized autocrat with much power and a short time horizon.

III. The Mexican Political System

In this section, we describe the extraordinary state power and involvement in the Mexican economy, the concentrated political power in the hands of the president, and the short time horizons brought about by the no re-election laws.

A. State control of the economy

The modern Mexican state is characterized by two important political ideas. The first was a distrust of laissez faire capitalism and the second a belief in the ability of the government to regulate economic affairs. Bazdresch & Levy (1991) argue that the federal government has long had an "explicit mandate, enshrined in the Constitution, to intervene in the economy." Among the specific government interventions they discuss are, land redistribution, creation of public enterprises in manufacturing, transportation and banking, price controls, and foreign trade and credit policies.

---

[5]Needler (1971) argues that, ideologically, Mexican development has followed the path of a pendulum, "swinging from right to left as the inclusiveness of the ruling party impelled it always to search for the middle way between the extremes." That is, when one President shows himself to be too conservative, the next President has tended to be considerably more liberal. This argument casts doubt on the supposed ability of the President to nominate his personal favorite, without taking the other factions in the party into account.

[6]The indentification of the 3 populist presidents comes from Bazdresch & Levy (1991), Populism and Economic Policy in Mexico. They claim these are the only populist presidents in post revolutionary Mexico

[7]Although the PRI no longer commands a majority of the seats in the Chamber of Deputies, it still has a large majority in the Senate and the 1998 federal budget was passed (after unprecedented debate) largely intact.

In 1925, the Mexican government owned or participated in 3 business firms. This number had increased to more than 1000 by 1981.[8] The extensive government involvement in the economy creates an environment where anti-competitive practices are tolerated, some businesses (private as well as public) are above the law, and others are required to pay bribes to stay in business. For example, Morris (1991) describes PEMEX, the government-owned and virtually untouchable petroleum industry as "a state enterprise that does practically whatever it wants, passing above the law, regulations and official norms of control.." In the late 1970s, about 85% of all PEMEX contracts "were made without competitive bidding as required by the law." As for other businesses, ones without the political pull of PEMEX, Morris states that "since the government is in a position to make or break any private firm, it is often more important to have good political connections than entrepreneurial skills."[9]

B. The Power of the President

The Constitution of 1917, enacted after the Mexican Revolution, endows the executive branch of government with extraordinary powers. As Garrido (1989) states, the previous constitution had already given the Mexican President authority over questions of "politics, legislation, foreign relations, jurisdiction, economics, finance, agriculture, commerce, health, education, and expropriation." The new constitution gave him the additional powers over "labor, the treasury, administration, culture, elections, governance of the Capital city, and the decentralized agencies and parastatal industries."

Beyond his wide ranging constitutional powers, the Mexican President also has available unwritten metaconstitutional authority. As the "supreme chief" of the governing party and all federal and state legislatures, the president has the ability to make amendments to the Constitution. Garrido (1989) states that, "every president since Obregon has revised the Constitution, often to augment the constitutional prerogatives of the chief executive." Garrido also points out that the president also is in charge of all federal, state, and local electoral commissions and is able to designate not only his successor, but also state governors, federal and state legislators, and mayors.[10] Without the restraint of legislative approval, the president

---

[8]Morris (1991) states that "central government expenditures (as a % of GDP) were 12.2% under President Gustavo Diaz (1964-1970), 15.9% under Echeverría (1970-1976), and 26.9% under López Portillo (1976-1982) and that expenditures for decentralized state firms accounted for an additional 11.7, 15.4, and 22.6 percent under the 3 administrations."

[9]Morris claims that bribes are commonplace to "acquire operating licenses, permits, to pay judges who refuse to accept papers, to speed up the process of paying taxes, and to obtain import and export licenses."

[10]He also has the power to remove any of the aforementioned politicians from office.

has the authority to appoint and dismiss the "diplomatic staff, cabinet members, and high level bureaucrats and army officers, and supreme court justices."[11]

C. Term Limits and Short Time Horizons

The Mexican Revolution was fought in part in protest over the dictatorship of Porfirio Diaz. When the war came to a close, the founders of the modern Mexican republic were eager to prevent a dictatorship from taking hold again. To safeguard against the eventuality, they wrote into the Constitution a clause prohibiting the President from being re-elected. The no re-election rule was soon extended to all legislators. Each President serves a 6 year term and afterward is, by custom, supposed to remove himself from the political arena and disappear from public life. Deputies in the lower house, the Chamber of Deputies, serve 3 year terms and Senators 6 years (with elections at the same time as Presidential elections). While a legislator can run again after a respite of at least 3 years, there are not many incentives for re-election and the practice is relatively rare.

The prohibition on re-election in the legislature was promulgated as part of a plan to limit the influence of local caudillos and promote the national party (at that time, called the PNR). Without the ability to be re-elected, local politicians had no chance of using their constituency to launch a long lasting political career. Because the PNR was already in charge of most of the federal bureaucracy, and thus most of the patronage jobs, the only way to become a career politician was to become a member of the PNR.[12] The Legislature, for most of its existence, has been a stepping stone to the more lucrative jobs in the federal bureaucracy. The vast majority of the legislators are first-timers, with little earlier experience in politics.[13] There is little incentive to learn much about legislating; first, because most power rests with the executive branch, and second, because the legislator will not be able to come back to serve a second term (at least not immediately).[14] Committees are not usually configured on the basis of seniority, and when they are, they still lack any authority over the decision making process.

[11]Peter Smith (1979), in his study of political recruitment in Mexico, finds that "one-third of all middle and top level officials were replaced with each presidential turnover, and that over two-thirds failed to hold onto office over a twelve year period." For more, see Haggard & Kaufman (1995).

[12]According to Nacif (1996a), the federal bureaucracy has been treated by the PRI (and earlier the PNR) as "political spoils." He states that, to date, "there have never been any regulations on recruitment and promotion in the bureaucracy."

[13]Nacif (1996a) calculates that 56.6% of the deputies elected from 1982 to 1991 had no previous experience in an elective office. The PRI deputies had, on average, a little more experience than opposition deputies. The average experience of a PRI deputy was 2.6 years in elective office, and 1.2 for the PAN and 1.25 for other opposition parties.

[14]In a study of the Mexican Chamber of Deputies between 1982 and 1991, Nacif (1996a) finds that, on average, 15.2% of the deputies are serving second terms, 2.9% are serving third terms, and almost none are serving fourth terms. As Nacif explains, to have a 3 term career in the Chamber would take fifteen years, with six of the years being spent outside of the Chamber.

We argue that the ubiquity of the state in the Mexican economy along with the weakness of the legislature gives the president and his top people incredible power. Bazdresch & Levy (1991) argue that the Mexican government was designed to be "the key actor or protagonist in the economic life of the country." They go on to add that "government, in the Mexican context, means the executive branch". To their analysis we must add the fact that the six year time horizon of the single term does not provide much incentive for the president to use this power wisely.[15] The rest of the paper describes, implements, and discusses a series of empirical tests of the effects of sexenial turnover on the modern Mexican economy.

IV. Hypotheses, Data, and Tests

We have argued that in theory, powerful states with short time horizons can be detrimental to economic performance and that Mexico is an excellent modern example of this phenomena. Here we develop an empirical model to compare our predictions with those of more traditional political business cycle and partisan models.[16] These predictions are considered in two parts, those relating to real outcomes and those relating to uncertainty.

A. Testing the sexenial collapse against the opportunistic PBC

In this section we proceed in two stages. First we formally test the null hypothesis that the Mexican real economy is unaffected by the 6 year presidential cycle. If we are able to reject this null, we then must compare the implied cycle against the predictions of the two competing models, the opportunistic PBC and our sexenial collapse model.

We will use the following equation as our baseline model:

$$\Delta \ln(IPMEX_t) = \beta_0 + \beta_1 \Delta \ln(IPUSA_t) + \beta_2 \Delta \ln(REALOIL_t) +$$

$$\sum_{i=1}^{N} \theta_{t-i} \Delta \ln(IPMEX_{t-i}) + \varepsilon_t \qquad (1)$$

[15]This is true not only of the President, but also most of the top levels of the federal bureacracy. The Mexican political system is characterized by camarillas, which are essentially political cliques centered around a person with power. When this individual moves up in the ranks of the bureaucracy, so does his clique. The pinnacle of this process is when the person achieves the rank of President. When the sexenio is over, most of the ex-president's camarilla will be moved out of power to make room for the incoming president's clique. Thus, many of the top policymakers in Mexico are constrained to have the same six year time horizon as the president. See Camp (1993) for an excellent description of the camarilla system.

[16]On the theory of the PBC see Nordhaus (1975) and Rogoff (1990). For the theory of Rational Partisan Models, see Chappell & Keech (1986) and Alesina (1987).

We model Mexican industrial production growth (ln(IPMEX)) as a function of US growth (ln(IPUSA)), the growth of real oil prices in dollar terms (ln(REALOIL)), and appropriate lags of Mexican Industrial Production growth.

It is important to note that we are deliberately not constructing or using special variables to represent recent Mexican crises. The debt crisis of 1982 and the peso crisis of 1995 were not exogenously imposed on Mexico by world events. We include US growth and real oil prices as important exogenous factors to the Mexican economy. The crises though, are endogenous to, and endemic in, the Mexican political system, which contains the above described incentives that generate crises.[17]

We test for sexenial effects on the Mexican real economy by adding dummy variables for 5 of the 6 years in the cycle. If we can reject the null hypothesis that the sexenio does not matter, we must then distinguish between the opportunistic PBC and the sexenial collapse. The main distinguishing feature is that the opportunistic PBC predicts a pre-election surge in growth to attract retrospective, economically oriented voters. It is possible to observe a post election decline in economic performance in both theories. However, if we observe only a post election decline without a pre-election surge, we would reject the PBC in favor of the sexenial collapse.

B.   Testing post-electoral uncertainty against the pre-election uncertainty of partisan models

In Partisan models of the election cycle, there are 2 parties with known preferences competing for office. Thus, the public faces uncertainty about future policies as the election draws closer, and the policy uncertainty stems directly from electoral uncertainty. With the election, uncertainty is resolved. In our sexenial collapse model, we argue that elections create, rather than resolve, uncertainty in the Mexican economy. Although the PRI wins every election, and the outgoing president has "chosen" his successor, we argue that the policies of that successor are not predictable from either the core ideology of the PRI or the policies of the outgoing president.

---

[17]While it may be argued that real exchange rate appreciation had much to do with the peso crisis of 1995, this appreciation was not imposed exogenously on the economy. The government deliberately kept the peso pegged to the dollar while simultaneously allowing a domestic inflation rate much higher than the U.S. rate. We view this crisis, and the others, as political crises inherent in the system. As far as the 1982 crisis, which some argue was brought on by increases in world wide interest rates and a drop in the price of oil, we account for these factors by including variables for oil prices and US industrial production.

We will use the follow 2 equation system as our baseline model:

$$\Delta \ln(CPIMEX_t) = \beta_0 + \sum_{i=1}^{N} \beta_{t-i} \Delta \ln(CPIMEX_{t-i}) + \varepsilon_t \qquad (2a)$$

$$\sigma^2_{\varepsilon_t} = \alpha_0 + \sum_{i=1}^{k} \alpha_{t-i}(\varepsilon^2_{t-i}) + \sum_{i=1}^{k} \delta_{t-i}(\sigma^2_{\varepsilon t-i}) \qquad (2b)$$

Inflation (ln(CPIMEX)), is modelled as an autoregressive process, with a conditionally heteroscedastic error term. The error variance is assumed to follow a GARCH (p,q) process. We will empirically determine the lag lengths in the mean and variance equations, then add 5 dummy variables representing all but 1 of the years in the sexenio to the variance equation. In this way, we can test for electoral effects on economic uncertainty.

If the dummy variables are significant as a group, we will conclude that the election cycle affects uncertainty and then proceed to distinguish between the predictions of rational partisan theory and our sexenial collapse model. Both theories admit the possibility of increased pre-electoral uncertainty. The distinguishing feature is that partisan models predict decreased post election uncertainty but the sexenial collapse predicts increased post election uncertainty.

V. Results

A. Elections and Industrial Production Growth

Figure 1 displays quarterly Mexican industrial production data, taken from the IFS CD-ROM) from 1958 - 1997.2 with presidential election quarters marked as vertical lines. It seems that the series is non-stationary and Augmented Dickey-Fuller tests confirm this fact. We find that the growth rate of the series is stationary and thus concentrate our analysis on industrial production growth.[18]

Before estimating a statistical model, we calculate the average growth rate of industrial production for each year of the presidential sexenio. These averages are displayed in Figure 2. The average growth rate is only about 1% in the first year of the sexenio, booming to above 7% in years 2 and 3. The second half of the sexenio is marked by another boomlet in year 5, with years 4 and 6 averaging around 3%. This initial look at the data holds more promise for the sexenial collapse model than for

---

[18]Specifically, in ADF tests using 1 to 12 lagged difference terms, the null hypothesis of a unit root can never be rejected for the level of industrial production, but can always be rejected using the growth rate of industrial production.

the PBC model, but we need to include our control variables and test the statistical significance of the differences before drawing any conclusions.

Table 1 presents our regressions of the effect of the sexenio on economic growth in Mexico (equation 1 above). The sample is quarterly from 1958.4 through 1996.4 covering 6 full sexenios and the first two years of current president Ernesto Zedillo's term. Column A of Table 1 presents the baseline model where industrial production growth is explained by U.S. industrial production growth, the growth rate of real oil prices, 4 lags of the dependent variable and 3 quarterly dummies to account for seasonality. U.S. production and real oil prices are positive and significant predictors of Mexican production, and the 4 lagged variables are significant at the 0.05 level as a group, as are the 3 quarterly dummies. The equation explains 39% of the variation in Mexican industrial production growth and passes a variety of diagnostic tests.[19]

Column B of Table 1 adds 5 dummy variables to account for the presidential election year and the first four years of the ensuing sexenio. The five electoral dummies are jointly significant at the 0.01 level. We can thus reject the null hypothesis of no electoral cycle in Mexican production growth at the 0.01 level.

Given that there is a cycle, the relevant question now becomes: what type of cycle? In this regard, it is important to note that there is absolutely no sign of any pre-election boom in the data. The presidential year dummy is actually negative, but insignificant. In fact, the only electoral dummy variable that is significant when considered individually is the one for the first year of the new sexenio, with a coefficient of -8.92 and a t-statistic of 2.57.

At this point, it is tempting to discard the opportunistic PBC theory in favor of the sexenial collapse. However, as Grier (1989, 1998) argues, using annual dummies can mask an electoral cycle that contains mid-year turning points. Accordingly, we now consider tests using 24 quarterly and electoral dummies. We compare the fit of the model with the quarterly electoral dummies to the fit of equation 2 in Table 1 with annual dummies by means of an F-test and find that using quarterly dummies does not significantly increase the explanatory power of the model.[20]

These results indicate that the presidential sexenio has a significant effect on Mexican economic growth. However, this effect is best seen as a collapse in the first year of the new sexenio, and not as any known form of the opportunistic PBC.[21]

---

[19]The Box-Pierce Q statistics show no sign of a pattern in the residuals, the Q^2 statistics show no sign of a pattern in the squared residuals (ARCH effects) and the residuals also pass a normality test.

[20]The calculated $F_{18,120}$ is 1.18, which is not significant, even at the 0.10 level.

[21]Although we argue that the 1982 and 1995 Mexican economic crises are endogenous to the political system, Appendix 1 shows that our results are not dependent on these two events. Equation 1 is an abbreviated electoral model with dummies for the first and last years of the sexenio. The results are virtually the same as those in Table 1. Equation 2 is the same regression estimated up to 1988.3 and again we find very similar results. Finally, Equation 3 stops the sample at 1982.3 and the

B. Elections and Inflation Uncertainty

In this section we investigate the relationship between the electoral sexenio and inflation uncertainty using a time series model for the inflation rate and a GARCH model to represent the conditional variance, or uncertainty, of inflation (equations 2a and 2b above). The quarterly inflation rate is displayed in Figure 3, and appears likely to be non-stationary. Formal augmented Dickey-Fuller tests confirm this suspicion. However, the first difference of the inflation rate is strongly stationary and thus will be used in the analysis.[22]

Table 2 displays an AR(7) (plus 3 quarterly dummies to account for seasonality) time series model for the first difference of inflation using quarterly data from 1960.1 - 1997.2. Inspection of the squared residuals indicates significant, but not persistent, conditional heteroscedasticity and pre-testing reveals that a GARCH(2,0) (or in other words an ARCH(2)) best describes the conditional variance of quarterly inflation in Mexico.

Table 3 presents an AR(7) - ARCH(2) model of the inflation process with dummy variables for 5 of the six sexenial years in the conditional variance equation. The conditional variance equation is significant at the 0.01 level (^{2} with 7 degrees of freedom is 92.8), and eliminates any conditional heteroscedasticity or non-normality in the residuals.

The effect of the election cycle on uncertainty is dominated by the coefficient on the first year of the sexenio. Ceteris paribus, uncertainty is 10 times higher than otherwise in the first year of a new presidency.[23] This result corresponds closely to the predictions of the sexenial collapse model. The lack of a core PRI ideology, the no-reelection constraint, and the wholesale turnover of the federal bureaucracy create greatly increased post-electoral uncertainty. Rational partisan models that predict increased pre-election uncertainty are not at all supported here, as the coefficients for the 5th and 6th years of the election cycle are small and completely insignificant.

The evidence for the effects of elections on uncertainty is consistent with our evidence for electoral effects on economic growth. In both cases, we see no pre-election effects, but find significant negative post-election effects. This pattern is inconsistent with both PBC and Rational Partisan models, but is consistent with our sexenial collapse model.

---

first year of the sexenio is still negative and significant. Thus, when we taken into account the two crises by excluding them from the sample, we continue to find significant evidence in favor of the sexenial collapse model and none for the opportunistic PBC.

[22]More formally, using anywhere from 1 to 12 lagged differences in the ADF tests, the null hypothesis of a unit root can never be rejected for the inflation rate, but can always be rejected using the first difference of inflation.

[23]Figure 4 illustrates this point by displaying the estimated conditional variance of inflation differences.

VI. Conclusion

The combination of massive government control of the economy, the fact that the president is also the head of the PRI, and the weakness of the legislature give the Mexican presidents an encompassing interest in the Mexican economy. McGuire & Olson (1996) argue that such a secure autocrat will limit his exploitation of the population and provide a surprising level of efficiency-enhancing public goods.

Unfortunately, the no-reelection clause of the Constitution forces a short (6 year) time horizon on Mexican presidents, which we argue makes them behave more like the Olsonian roving bandits than autocrats guided by an invisible hand to aid society. We compare the predictions of our sexenial collapse model with those of the opportunistic PBC model in equations for Mexican economic growth and with those of the rational partisan model in regressions explaining the Mexican inflation process. In both cases, the evidence supports the sexenial collapse model over the more traditional models of electoral effects. The institutional design of a extremely powerful, but short sighted president works systematically to the detriment of Mexican economic performance.

Two obvious policy suggestions for Mexico are to empower the legislature relative to the president, and increase the time horizon of the president. These clearly require modifications of the country's draconian term limit laws to allow some degree of reelection. However, a less obvious but quite possible more efficacious suggestion, is to reduce the power of the government over the economic life of the nation. With a small government, more economic competition, and less regulation, the economic need to increase the time horizon of the government would be greatly attenuated.

The case of Mexico should stand as a warning against the simplistic solutions often offered by advocates of term limits. With a large and intrusive government, term limits can hurt, rather than help, economic performance. Term limits alone (which Mexico has had for over 75 years) are not sufficient to reduce the size and scope of government. It may well be the case that smaller government is a prerequisite for an economy to enjoy the luxury of term limits rather than term limits being a effective means to reduce the size of government.

Bibliography

Alesina, A. (1987), Macroeconomic Policy in a Two-Party System as a Repeated Game, *Quarterly Journal of Economics* 102, 651-678.

Alesina, A., S. Oezler, N. Roubini and P. Swegel (1996), Political Instability and Economic Growth, *Journal of Economic Growth*, 1, 189-211.

Armstrong, G. M., Jr., (1989), *Law and market society in Mexico* (New York: Praeger).

Barro, R. (1991), Economic Growth in a Cross Section of Countries, *Quarterly Journal of Economics*, 106, 407-443.

Bazdresch, C. and S. Levy (1991), Populism and Economic Policy in Mexico, in Dornbush & Edwards eds. *The Macroeconomics of Populism in Latin America* (Chicago: University of Chicago Press).

Camp, R. Ai. (1993), *Politics in Mexico* (New York: Oxford University Press).

Chappell, H. and W. Keech (1986), Policy Motivation and Party Differences in a Dynamic Spatial Model of Party Competition, *American Political Science Review*, 80, 881-900.

Grindle, M. S. (1977), Patrons and clients in the bureaucracy: career networks in Mexico, *Latin American Research Review*, 12, no. 1, 37-66.

Garrido, L. J. (1989), The Crisis of *Presidencialismo*, in Wayne A. Cornelius, Judith Gentleman, and Peter H. Smith (eds), *Mexico's Alternative Political Futures* (San Diego: Monograph Series 30, Center for U.S.-Mexican Studies, University of California).

Grier, K. (1998), Presidential Elections and Real GDP Growth in the US, CIDE Working Paper.

Grier, K. (1997), Governments, Unions, and Economic Growth, in Villy Bergstrom (ed) *Governments and Growth* (London: Oxford University Press).

Grier, K. (1989), On the Existence of a Political Monetary Cycle, *American Journal of Political Science*, 33, 376-389.

Haggard, S. and R. Kaufman (1995), *The political economy of democratic transitions* (Princeton: Princeton University Press).

Knack, S. and P. Keefer (1995), Institutions and Economic Performance, *Economics and Politics*, 7, 207-227.

McGuire, M. C. and M. Olson, Jr. (1996), The economics of autocracy and majority rule: the invisible hand and the use of force, *Journal of Economic Literature*, Vol. XXXIV, March, 72-96.

Morris, S. D. (1991), *Corruption and politics in contemporary Mexico* (Tuscaloosa: University of Alabama Press).

Nacif, B. (1996a), *Political careers, political ambitions, and career goals*, CIDE Working Paper.

Nacif, B. (1996b), *Electoral institutions and single party politics in the Mexican Chamber of Deputies*, CIDE Working Paper.

Needler, M. C. (1971), *Politics and society in Mexico* (Albuquerque, University of New Mexico Press).

Nordhaus, W. (1975), The Political Business Cycle, *Review of Economic Studies*, 42, 162-190.

Olson, M. (1998), *Capitalism, socialism, and dictatorship: outgrowing communist and capitalist dictatorships*, unpublished manuscript.

Rogoff, K. (1990), Equilibrium Political Budget Cycles, *American Economic Review*, 80, 21-36.

Smith, P. (1979), *Labyrinths of power* (Princeton: Princeton University Press).

Tullock, G. (1987), *Autocracy* (Holland: Kluwer Academic Press).

Tullock, G. (1974), *The social contract* (Blacksburg, VA: VPI Press).

Table 1: Industrial Production Growth in Mexico, with annual electoral dummies

Variable	A		B	
	Coef.	T-stat.	Coef.	T-stat.
Constant	4.97	1.97	8.30	2.50
% IP_{-1}	-0.04	0.47	-0.10	1.29
% IP_{-2}	-0.20	2.55	-0.23	2.88
% IP_{-3}	-0.04	0.56	-0.07	0.86
% IP_{-4}	0.35	4.45	0.35	4.47
% IP_{us}	0.31	2.18	0.31	2.26
% RealOil	0.15	1.49	0.18	1.78
1st year	*	*	-8.92	2.57
2nd year	*	*	1.61	0.47
3rd year	*	*	-1.02	0.29
4th year	*	*	-4.71	1.33
Pres. Year	*	*	-4.35	1.22
Q2	2.05	0.61	2.31	0.71
Q3	-7.43	2.21	-6.69	2.04
Q4	0.77	0.23	0.32	0.10

R^2	.392	.443
Box-Pierce Q(2), Q^2(2)	0.68, 3.40	1.55, 1.94
Box-Pierce Q(4), Q^2(4)	3.20, 4.10	3.85, 2.45
Box-Pierce Q(8), Q^2(8)	7.50, 8.70	8.80, 10.0
Jarque-Bera:	2.00	0.39

The sample is 153 quarterly observations from 1958.4 to 1996.4. Q2-4 are quarterly dummy variables to control for seasonality in the data. The critical values at the .05 level are the following: Q(2),Q^2(2), Jarque-Bera = 5.99; Q(4) and Q^2(4) = 9.49; Q(8) and Q^2(8) = 15.51.

Table 2: A time series model of the rate of inflation in Mexico, 1960.1-1997.1

$$\Delta\Pi_t = 3.57 - .05\ \Delta\Pi_{t-1} - .24\ \Delta\Pi_{t-2} - .01\ \Delta\Pi_{t-3} - .06\ \Delta\Pi_{t-4} - .11\ \Delta\Pi_{t-5} - .12\ \Delta\Pi_{t-6} - .11\ \Delta\Pi_{t-7} + \varepsilon_t$$
$$\quad (1.73)\quad (.35)\qquad (2.39)\qquad (.26)\qquad (.76)\qquad (1.56)\qquad (2.26)\qquad (2.04)$$

Log-likelihood = -573.4 $R^2 = .17$

$Q(2) = .09,\ Q(4) = .51,\ Q(8) = .85$

$Q^2(2) = 7.7\ Q^2(4) = 7.9,\ Q^2(8) = 9.0$

Jarque-Bera: 471

The sample is 149 quarterly observations. The numbers in parentheses are t-statistics. We also use 3 quarterly dummies to control for seasonality. They are significant as a group but are not reported here to save space. The critical values at the .05 level are the following: $Q(2), Q^2(2)$, Jarque-Bera = 5.99; $Q(4)$ and $Q^2(4) = 9.49$; $Q(8)$ and $Q^2(8) = 15.51$

Table 3: An ARCH(2) + Politics model of inflation and inflation uncertainty in Mexico, 1960.1-1997.1

$$\Delta\Pi_t - .24 - .54 \, \Delta\Pi_{t-1} - .45 \, \Delta\Pi_{t-2} - .22 \, \Delta\Pi_{t-3} + .05 \, \Delta\Pi_{t-4} - .08 \, \Delta\Pi_{t-5} - .08 \, \Delta\Pi_{t-6} - .18 \, \Delta\Pi_{t-7} + \varepsilon_t$$
$$\quad (.31) \quad (7.1) \qquad (5.9) \qquad (3.3) \qquad (.71) \qquad (.96) \qquad (1.2) \qquad (4.63)$$

$$\sigma^2_{\varepsilon t} = 15.8 + .72\varepsilon^2_{t-1} + .40\varepsilon^2_{t-2} + 9.31\text{Pres. Year} + 156.2\text{Year1} - 10.8\text{Year2} + 6.2\text{Year4} - 16.8\text{Year5}$$
$$\quad (.93)(2.61) \quad (3.20) \qquad (.42) \qquad\qquad (4.4) \qquad (.56) \qquad (.24) \qquad (1.0)$$

Log-likelihood = -527.03

Q(2) = 2.15 Q(4) = 3.5   Q(8) = 4.9

$Q^2(2) = .33$ $Q^2(4) = 3.2$ $Q^2(8) = 7.4$

Jarque-Bera: 1.92

The sample is 149 quarterly observations. The numbers in parentheses are t-statistics. We also use 3 quarterly dummies to control for seasonality. They are significant as a group but are not reported here to save space. The critical values at the .05 level are the following: $Q(2), Q^2(2)$, Jarque-Bera = 5.99; Q(4) and $Q^2(4)$ = 9.49; Q(8) and $Q^2(8)$ = 15.51

Figure 1. Mexican Industrial Production, 1958 - 1997
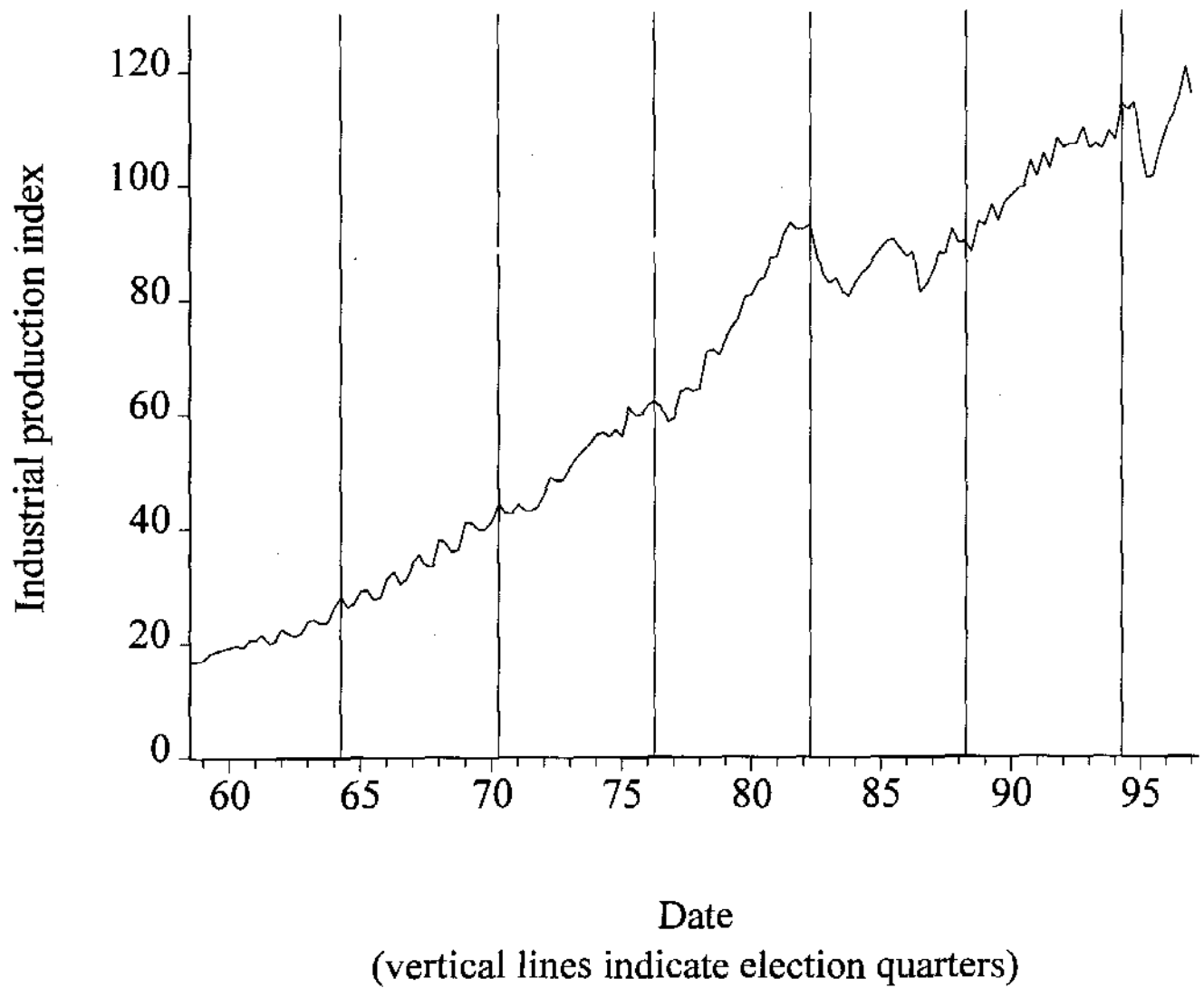
Date
(vertical lines indicate election quarters)

Figure 2: Mexican industrial production growth, by year of the sexenio
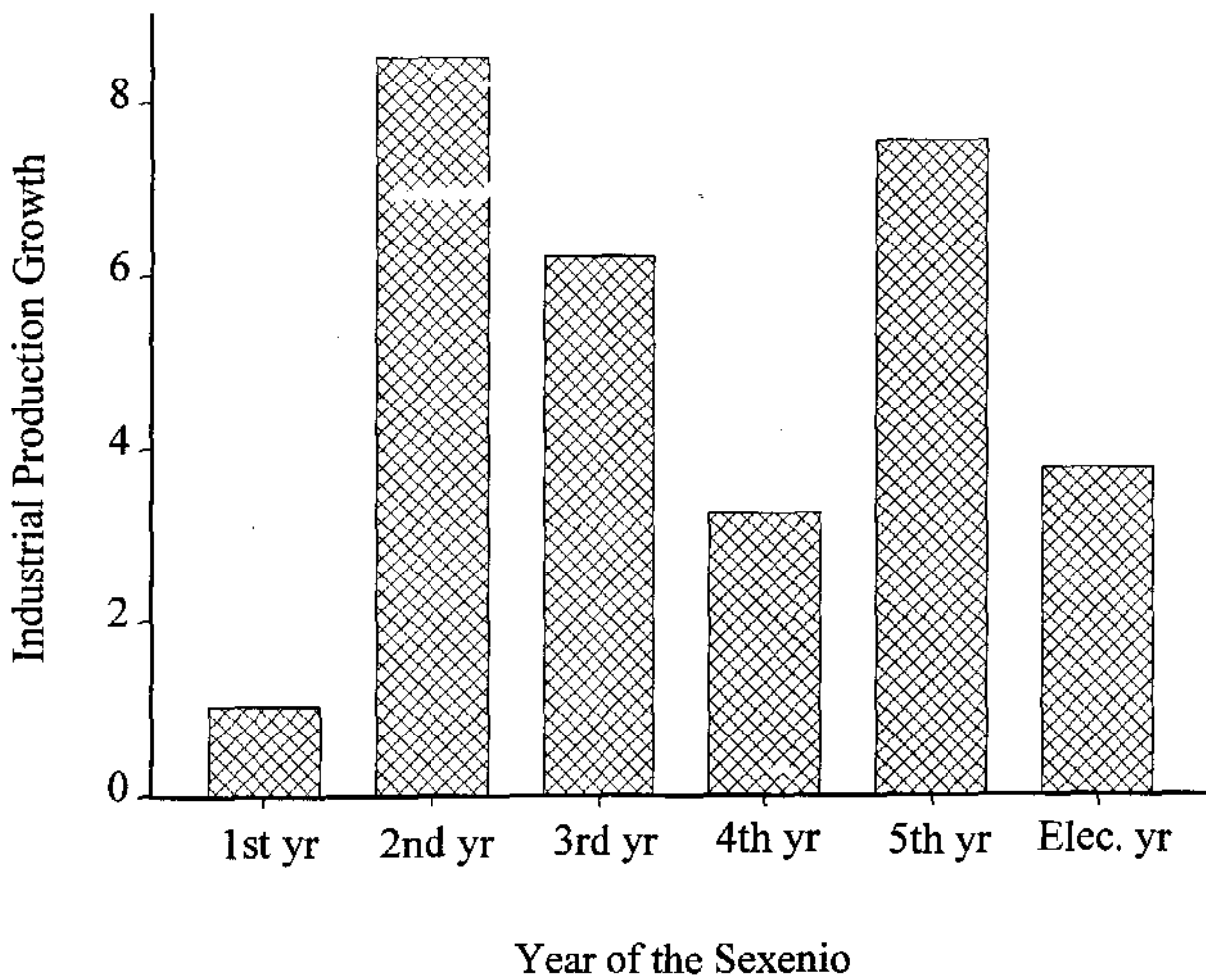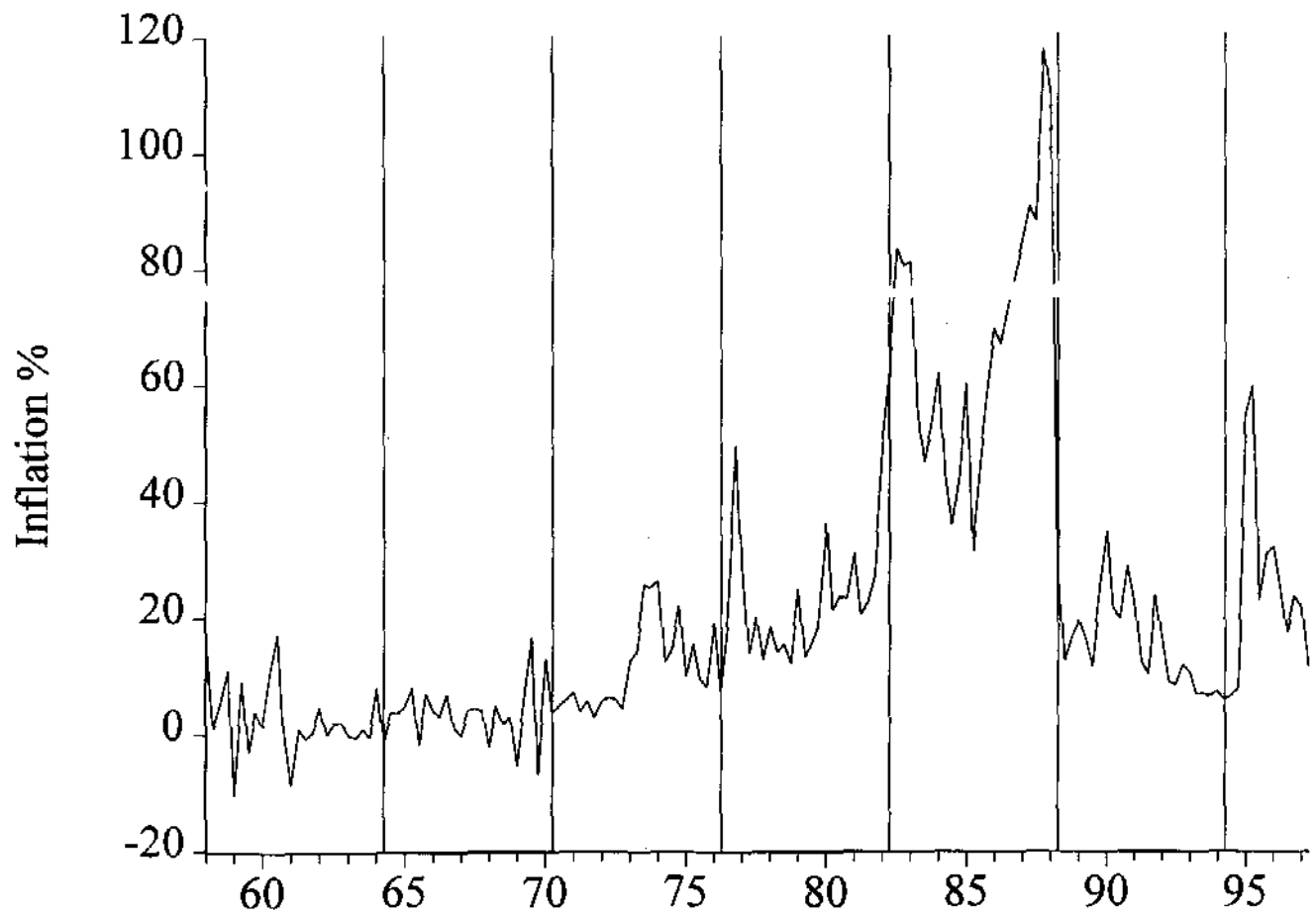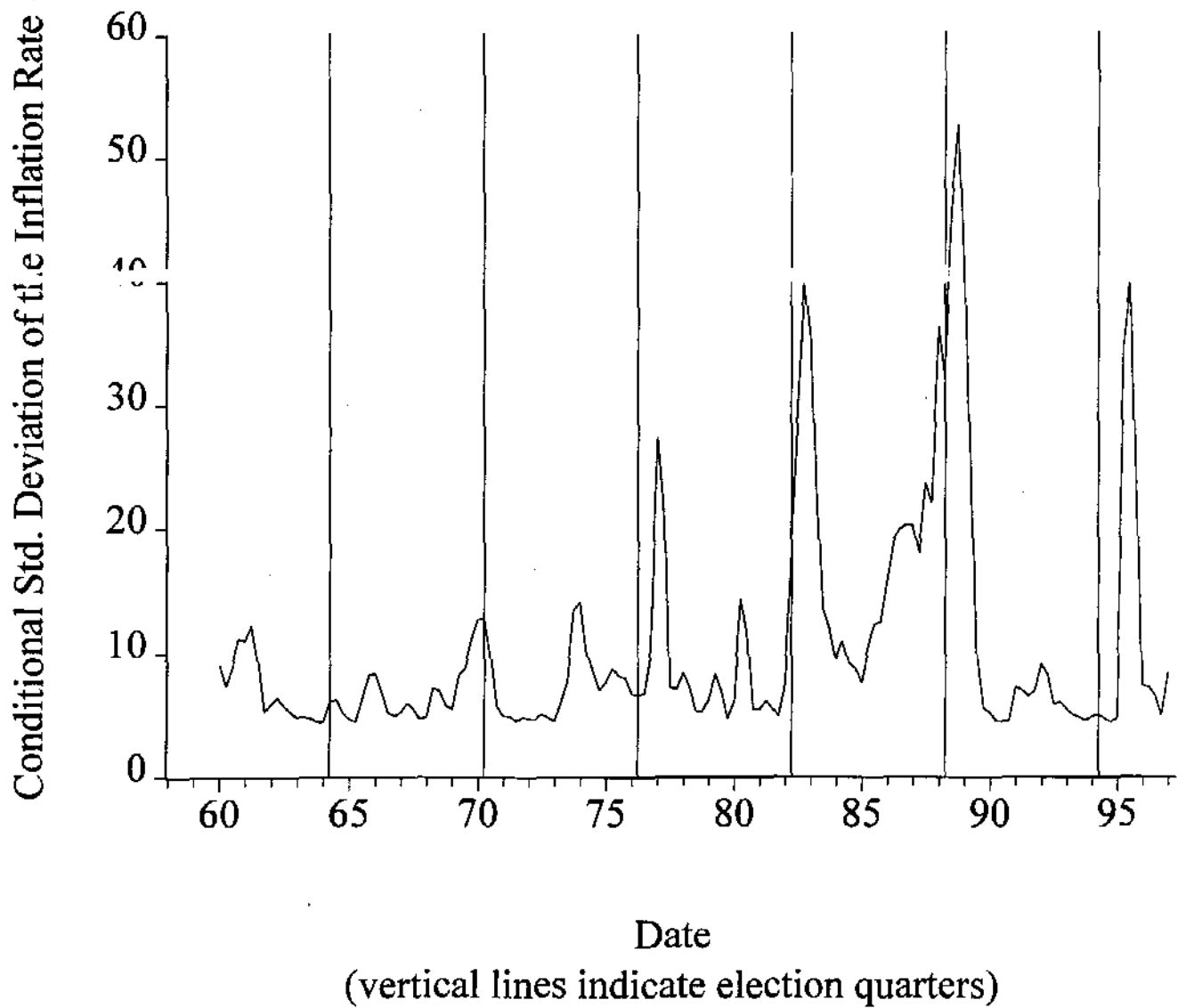
Figure 3. Mexican Inflation Rate, 1958 - 1997

Inflation %

Date
(vertical lines indicate election quarters)

Figure 4. Mexican Inflation Uncertainty, 1960 - 1997

Date
(vertical lines indicate election quarters)

Appendix 1: Results do not depend on the exact sample period

Variable	1958.4-1996.4	1958.4-1988.3	1958.4-1982.3
Constant	7.43	9.31	19.12
	(2.61)	(2.79)	(5.53)
% IP_{-1}	-0.09	-0.10	-0.34
	(1.01)	(0.86)	(2.74)
% IP_{-2}	-0.24	-0.24	-0.48
	(3.70)	(2.76)	(4.87)
% IP_{-3}	-0.08	-0.03	-0.27
	(1.06)	(0.28)	(2.46)
% IP_{-4}	0.33	0.32	0.12
	(3.83)	(3.17)	(1.17)
% IP_{us}	0.34	0.30	0.25
	(2.62)	(2.15)	(1.47)
% RealOil	0.16	0.12	0.01
	(2.79)	(1.30)	(0.07)
1st year	-8.09	-7.08	-8.42
	(2.28)	(2.01)	(2.28)
Pres. Year	-3.37	-4.28	-5.65
	(1.31)	(1.36)	(1.33)
R^2	.429	.475	.581
Box-Pierce Q(2), Q^2(2)	1.13, 2.34	1.31, 0.93	0.44, 0.72
Box-Pierce Q(4), Q^2(4)	2.85, 2.34	2.26, 1.24	1.14, 1.74
Box-Pierce Q(8), Q^2(8)	6.74, 10.9	7.46, 6.55	6.94, 4.59
Jarque-Bera:	0.65	0.026	0.81

Numbers in parentheses are t-statistics. We also use 3 quarterly dummies to control for seasonality. They are significant as a group but are not reported here to save space. The critical values at the .05 level are the following: Q(2),Q^2(2), Jarque-Bera = 5.99; Q(4) and Q^2(4) = 9.49; Q(8) and Q^2(8) = 15.51.

Appendix 2: Summary Statistics

Variable	Mean	Std. Dev.
% IP	5.16	15.55
% IP_{us}	3.49	7.32
% RealOil	-0.19	10.45
Inflation	21.78	24.62

The information for the first 3 variables is from 1958.4-1996.4.
The information for inflation is from 1960.1-1997.1
These are the sample periods of the respective regressions in the text.