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**The Effect of Fiscal Performance on Local  
Election Results in Israel: 1989-1998**

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**Abstract**

The results of the last three election campaigns in Israel's local authorities are analyzed, to find whether the fiscal performance of local authority heads affected their reelection probability. We find that in the 1989 and 1993 campaigns fiscal performance did not affect voter preferences. However, in the 1998 campaign financial performance is found to be a good predictor of local authority head reelection. Changes in the political environment, the effective enforcement of audit and financial reporting requirements by the Ministry of the Interior, tougher imposition of hard budget constraints and the development of local media are proposed as possible explanations. The hypotheses that the fiscal variables reflect the income level at the locality or the success of the authority's head in extracting resources from the central government are tested and rejected. The results are interpreted as suggesting that important progress has been made in Israel towards meeting critical preconditions for a more decentralized approach to local government.

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## **I. Introduction**

This study examines the last three election campaigns for Israel's local authorities (1989, 1993, and 1998) and focuses on the relationship between fiscal performance and the reelection prospects of incumbent local authority heads<sup>1</sup>. It is argued, based on the Public Finance and Public Choice literature, that this relationship contains important information regarding possible solutions for the weak financial position of many local authorities in Israel. To explore this relationship, a unique database was constructed, containing financial data from several sources, election results and information regarding the performance of the education system in local authorities.

The financial performance of local government in Israel has been characterized by repeated crises, usually resulting in central government intervention to cover the deficits of local authorities. Between 1987 and 1996, annual central government transfers to local authorities increased by one percentage point of GNP and, at the same time, the debt of local authorities to commercial banks rose by 1.1 percent of GNP (Chart 1; Bank of Israel, 1999). Moreover, the recurring financial bailouts of local authorities from financial collapse placed a heavy burden on deficit management by the central government<sup>2</sup>. Although formally the central government has substantial control over local authorities' activity - including the approval of all bank borrowing and the ability to replace elected officials by decree – effectively, the local authorities enjoy significant operational independence (Kalcheim, 1980; Ben-Eliah, 1995). As more emphasis was placed on fiscal consolidation, especially after the adoption of the

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<sup>1</sup>We will henceforth use, for brevity, the term mayor, instead of local authority head, although the official title of most local authority heads is "local council head" and only a minority are mayors.

<sup>2</sup>In the last decade, such bailouts occurred in 1989, 1992, 1994-1995, 1996 and 1997 (for 1997-1999).

“Budget Deficit Reduction Law,” it became clear that intergovernmental relations needed to be modified.

The economic literature provides two distinctive points of view regarding the relations between central and sub-national governments. One view is that decentralization of government expenditure can entail substantial welfare gains. Tiebout (1956) and Oates (1972) argued that by allowing various localities to offer different bundles of services, the freedom of individuals to choose between them would eliminate much of the inefficiency associated with public expenditure (Samuelson, 1954). The advantages of decentralization were attributed mainly to the availability of a wider variety of public goods, better information about residents’ (voters’) preferences, and the ability to relate charges (taxes) more closely to cost<sup>3</sup>. With local taxes reflecting the cost of services (Stigler, 1957), consumption smoothing by residents, and capitalization of the outcomes of fiscal policy in property prices (Rosen, 1986), decentralization would also result in fiscal discipline at the local level<sup>4</sup>.

More recent studies, however, focus on the weakening of fiscal management due to decentralization. This point of view follows from the recognition that even where local governments are better suited to carry out certain types of expenditure, the central government may still wish to influence the level of these expenditures where spillovers, merit goods, and income distribution are concerned (Musgrave and Musgrave 1980). Consequently, substantial financial flows from central to sub-national governments are required, and such intervention gives rise to

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<sup>3</sup>However, other studies pointed to mitigating factors that would make complete decentralization sub-optimal (Musgrave 1969). See also Ahmad and Craig (1997) for a discussion of other limitations of the benefits of decentralization.

coordination problems (including the “common pool” problem) that may lead to strategic behavior by local administrations (Hausman, 1997; IADB, 1997; Ter-Minnassian, 1997). According to this point of view, central government transfers may result in soft budget constraints for local governments and detach local expenditure from local taxes (Eichengreen and Von Hagen, 1996). Under these circumstances, since voters would not be facing the full cost of domestic services, they would be less likely to remove inefficient local administrations<sup>5</sup> (IADB, 1997; Tanzi, 1995). Moreover, it is argued that the voting process does not reflect voters’ evaluation of local government performance because: (I) local elections are decided, in most cases, on the basis of national party preferences (Dunleavy, 1980; Boyne, 1996) and (II) in many countries, the electorate does not possess the information required to evaluate the performance of local governments (Prud’homme, 1995).

These conflicting views highlight the important role of the local electoral process in determining whether decentralization is harmful for fiscal discipline. If the local electorate is indifferent to apparently irresponsible fiscal policies there are two possible explanations, neither of which is favorable to decentralization as a mechanism to support fiscal discipline. The first explanation is that, given a soft budget constraint, it is beneficial for the local authority to engage in sub-optimal behavior, as the central government will eventually step in to pick up the slack<sup>6</sup>. In such a case, one may even find that voters are supportive of policies that would otherwise seem undesirable. The second explanation is that local voters do not focus

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<sup>4</sup>Capitalization is not a necessary condition if migration is costly.

<sup>5</sup>The term “inefficient” relates to service levels different from those that voters would choose, given their budget constraints.

<sup>6</sup>Sub-optimal behavior may take the form of current deficits, debt accumulation, and lower supply of the services that are considered desirable by the central government.

on fiscal performance when they cast their votes, either because they are preoccupied with other issues, or due to lack of information. In this case, voter supervision over local decision-makers, stressed as an important advantage of decentralization, will not be exercised.

This study focuses on the interaction between the electoral process and fiscal performance, by examining the relationship between the fiscal performance of local authorities in Israel and the results of local elections. Since a large number of mayors are replaced in each election period (Table 1), we examine whether fiscal indicators play a role in determining election results. We also examine how this relationship evolved over time, and what factors in the fiscal and political environment may explain it. Section II describes the main characteristics of local government in Israel, the local election process, and the relations between central and local government. Section III describes the data sources exploited in this study and the variables used in the empirical analysis. Section IV provides the estimation results<sup>7</sup>, and Section V concludes and discusses the policy implications.

## II. Local Government in Israel

In this section we focus on those characteristics of local government in Israel that are most relevant for identifying whether the preconditions for effective voter supervision of fiscal performance at the local level were met<sup>7</sup>. These characteristics are:

- Do voters concentrate on local issues when they cast their votes?
- Do voters have the incentives to support fiscal discipline when they vote (i.e., are the local authorities facing a hard budget constraint)?

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<sup>7</sup>For a comprehensive description of local administration in Israel see Elazar and Kalchheim (1988).

- Does the required information to evaluate the authorities' performance exist?
- Are there ways of communicating that information to the relevant public?

In addition to investigating these questions, we also examine whether these characteristics have changed over time in a way that may have affected the association between election results and fiscal performance during the period reviewed.

The local authorities in Israel are divided into three categories: municipalities (usually cities with more than 20,000 residents), local councils (smaller towns) and regional councils (federations of rural settlements) (Newman, 1995). In the first two categories (consisting of 61 municipalities and 146 councils), which are the focus of this study, elections are held approximately every five years. Since 1978, the heads of local authorities have been elected directly by the public; members of the municipal or local council are elected by the relative vote method on the same date. A substantial number of incumbents were not reelected in each campaign, and empirical evidence show that election years are characterized by expanded expenditure and deficits.<sup>8</sup> These were typically covered by the central government in the following years, but this pattern seems to have moderated substantially in the run-up to the 1998 elections.

The national parties played a major role in local elections prior to the 1978 elections, and almost all the elected mayors represented the large national parties; several represented their parties in the Knesset concurrently. Following the adoption of direct elections<sup>9</sup>, their role eroded gradually however. This process was supported by a decline in the parliamentary power of the two major parties. An increasing number of

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<sup>8</sup>See, for example, Amrani and Rozevitch (1998), Kalcheim and Rozevitch (1990), and Rosenberg (1992).

candidates chose to run on a local “super-party” ticket, a phenomenon that culminated in the 1998 elections, when the two major parties appeared confused as to which candidates to support in several major cities. Also, since 1995 the law bans mayors from serving concurrently as Knesset members.

The share of self-income in local government finance increased substantially in 1985 when, during the implementation of the “stabilization program,” property taxes and water user fees were exempted from the general price freeze (Hecht, 1997). Many authorities raised their taxes, especially those on non-residential property. Following this rise, the Government curbed the general grant to the more affluent municipalities and revoked the transferred revenue schemes which were in place (Razin, 1997).

However, the apparent increase in local government independence (Chart 2) is misleading because since 1986 the Government has imposed annual non-discriminatory caps on municipal rate increases, usually using indexation to the CPI as the criterion. As a result, the share of self-income began to decline gradually. Only in 1998 did the Knesset approve differential increases in property taxes, based on the authority’s financial position and linking residential and business rates.

Government funds are allocated to the local authorities in two ways: (I) earmarked grants, to cover the costs of services required by the central government but delivered by the local authorities, (II) general grants, provided by the Ministry of the Interior (MOI) to fill gaps between needs and resources. These grants include a substantial equalization component (Hecht, 1988). However, both types of transfers are subject to manipulation and negotiations. The “earmarked grants” are subject to a constant

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<sup>9</sup>The law for direct elections of mayors was passed in 1975. The first direct elections were held in



debate regarding the cost incurred by the local authorities in providing the services required by the central government (Ben-Eliah, 1995, Government of Israel, 1998). The “general grants” are determined by negotiations regarding the gaps that need to be filled, thereby encouraging the creation of deficits. Moreover, as stated, repeated bailouts, which involved substantial government transfers, were implemented, providing support to those authorities which “managed” to generate the largest deficits. Moreover, Rozevitch and Weiss (1993) show that these grants were influenced in election years by the congruence between the national party in power and the party of the mayor in office.

The Suari Committee report (Suari et al., 1993) seems to mark a potentially important step towards the imposition of a hard budget constraint on local authorities. Although the formula proposed by the committee for determining the general grant is partially based on the actual current position of each authority - thus rewarding poor performance in the past - it provides a relatively objective criterion for the size of the grant. Adherence to these criteria may provide the government and the local authorities with a useful instrument, which will reduce uncertainty, and the room for strategic behavior, on both sides of the bargaining table.

Another important development with respect to the imposition of hard budget constraints was the 1997-1999 “rescue program.” Unlike previous programs, only 30 percent of the amounts allocated in this framework were to be released upon presentation of a fiscal rehabilitation plan agreed with the MOI and the Treasury. The remaining funds were to be allocated only when pre-specified performance criteria

were met. In the event, only 60 percent of the budgeted amount was released in 1998, possibly providing a signal that the “rules of the game” had changed.

A key factor behind the unstable financial position of the local authorities and the repeated need for “emergency rescue programs” has been the weakness of the accounting practices they used. As pointed out by the State Controller (1994, 1996), most local authorities did not submit audited financial reports at all, and the reports that were submitted were delayed by several years. Under these circumstances, discussions regarding the financial position of the authorities and the costs of service provision were fruitless. Moreover, the lack of reliable data allowed mayors to blame their poor performance on underfunding by the government, leaving the public in the dark with respect to who really was responsible for the crises.

Substantial progress was made in 1994, with respect to the provision of adequate information about the financial performance of the local authorities. Beginning in that year, the MOI (following recommendations from the State Controller) nominated independent accountants and auditors to produce financial and audit reports for each of the local authorities in Israel (Amrani, 1996). This practice provided the government with much needed information to evaluate the performance of local administrations. Moreover, as the audit reports were submitted to local councils, they became public knowledge, allowing residents to judge the performance of their mayor. As the reports for all the local authorities are published, comparisons between localities also became feasible. At the same time, the Treasury began publishing annual reports on wage deviations in the public sector, including all the local authorities. This information is also a potentially important input for the public in

evaluating the local administration's performance. Finally, the evolution of the local media in recent years, including the regional media that cover the smaller local councils, has enabled information on local authorities' performance to be communicated to the relevant public.

Returning to the questions posed at the beginning of this section, it is possible to discern a gradual process in which voters' attention has shifted from national to local issues since 1978. It can also be seen that the local authorities faced a soft budget constraint due to substantial government transfers, particularly ex-post transfers to cover deficits and accumulated debt<sup>10</sup>. Adequate and timely information about the financial position of the local authorities rarely existed and until recently the media to communicate such data to the residents of most localities did not exist. Some progress seems to have been made, however, with respect to hardening the budget constraint the authorities are facing, and the fiscal data on the local authorities has improved markedly since 1994. These developments may suggest that fiscal performance could have been a more important factor in the 1998 elections than in previous campaigns.

### III. Data Sources and Variable Specification

To examine the relationship between the electoral process and fiscal performance, we test whether the reelection probability of mayors is affected by a set of authority - specific fiscal variables. The value of the reelection variable is unity if the mayor was reelected, and zero if the mayor decided to run and lost or resigned<sup>11</sup>. Local authorities in which the elected mayor died, was removed from office by the council,

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<sup>10</sup>Preliminary empirical work indicates that a large proportion of the variance between authorities in the per-capita increase in government transfers is explained by past deficits and debt accumulation.

or was deposed by the MOI, are excluded. Also excluded are local authorities in which the mayor resigned prior to the financial year preceding the elections,<sup>12</sup> and those in which the election cycle differs from the national cycle<sup>13</sup>. However, it is assumed that mayors who quit their position shortly before the elections or decide not to run, did so because they recognized that their reelection chances were small. This assumption is consistent with the view presented below that it is the overall performance of a mayor during his term that determines reelection prospects and not last-minute fiscal manipulations (“election-year economics”).

To control for the personal characteristics of the mayor within his locality, the equations include the share of votes he received in the previous elections. For mayors who were elected in a second round of elections, we include the share of votes received in the first round<sup>14</sup> because it better represents the solid support he enjoyed. This variable also serves to control for the effect of a weaker political status of the mayor on fiscal performance. This effect, suggested by Rubini and Sachs (1989), would imply that unpopular mayors would also be unable to implement strong fiscal policies, leading to an observed negative correlation between reelection and fiscal performance.

The fiscal variables used in the estimation relate to the local authority’s debt and current deficit. Additional indicators of fiscal policy are examined in the 1998 campaign, when more fiscal data became available. We also include an indicator for

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<sup>11</sup>Data on election results and changes in mayor positions, including the reasons for these changes, were extracted from “Reshumot,” the official publication of the government.

<sup>12</sup>i.e., about 22 months prior to the elections.

<sup>13</sup>Mostly the settlements in the occupied territories.

the performance of the locality's education system, as a measure of the quality of services provided by the local authority. In specifying the variables, we take the view that rational voters would not be affected by last minute "election economics" (McCallum, 1978) and would focus on the mayor's performance throughout his term (Tullock, 1976). Moreover, we focus on the data that were known during the election campaign, hence reducing election year effects. These effects are tested separately and are shown to have no significant effect on election results.

Debt is an important variable in characterizing a government's fiscal policy, as it reflects the accumulation of future obligations and interest payments. Based on commercial bank data provided by the Banking Supervision Department at the Bank of Israel, debt series were constructed for all the local authorities in Israel from 1980 to 1998. These measure the per-capita debt of each local authority at the end of each year, at constant end-1996 prices.

To evaluate the performance of a mayor, we calculated the change in per-capita debt during his term. This variable reflects the burden created by the mayor for future taxpayers, adjusted for the size of the population attracted by his policies. While debt might be generated by investment projects that have not yet paid their returns, the long period over which the variable is calculated limits (although it does not eliminate) the scope of this possibility. Additionally, although the accounting practices of the local authorities do not allow for an accurate separation between investments and current expenditure, it is clear that much of the debt was created by

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<sup>14</sup>Local elections in Israel are conducted in a "first past the post" system. Forty percent of the votes are required for a candidate to be elected in the first round. If no candidate receives 40 percent, the two candidates with most votes proceed to the second round.

current deficits. Hence, higher debt accumulation is expected to lead to voter dissatisfaction with the mayor's performance - inter alia due to a decline in relative real estate prices - unless the central government is expected to cover that debt. However, this effect is likely to be moderated, or even eliminated, in new settlements, where large infrastructure investments are required. To control for this possibility, we include a slope dummy variable for the effect of the change in per-capita debt in "new" local authorities<sup>15</sup>. As discussed below, we also attempt to control specifically for the size of development expenditure.

The effect of changes in the debt on voter evaluation of policies is also expected to depend on the size of the debt. A given debt reduction would seem less adequate to address the debt problem in high-debt localities than in low-debt localities. To control for this possibility, we include an interaction variable between the per-capita debt and the change in the debt.

The stock of per-capita debt can also affect a mayor's reelection prospects as it reflects the limitations he faces in conducting his policies. If market discipline exists,<sup>16</sup> a higher debt would limit the flexibility of the local authority in choosing policies and is therefore expected to lower the probability of reelection.

The current balance of a public entity's budget is an important indicator of its fiscal stance. Consumption-smoothing residents would prefer to avoid large gaps between current expenditure and taxes, and are likely to object to policies that generate such

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<sup>15</sup>"New" local authorities are defined as those in which the elections are held for the second time in a given campaign. Due to data limitation, this variable is available only for 1998.

deficits. Since the accounts of the local authorities are presented using a cash-flow concept rather than using a more meaningful economic concept, we constructed the current balances of the local authorities by deducting loans and special grants for debt amortization from the income side, and debt amortization from the expenditure side<sup>17</sup>. This deficit is an indicator of the current budget, although it should be noted that the authorities do not religiously observe the separation between current and development expenditures. The balance in the year preceding the election year (e.g., 1997 for the 1998 elections) is used as an indicator for the budgetary stance of the authority.

Mayors' performance is probably judged not only by financial indicators, but also by the quality of services provided. Given a deficit, it is likely that voters will prefer a mayor who provides better services, hence generating a larger "fiscal residuum" (Oates, 1969). As Rosen (1977) shows, measuring service quality by cost is inadequate and it should be measured by objective criteria such as student performance in standardized national tests. In Israel, the matriculation examinations for 12<sup>th</sup> grade students may serve as such an indicator as they are conducted nationwide and their results are important for parents (voters). Success in them is a precondition for admission to the universities and an important screening device for employers.

Although most of the education system and education budget in Israel is controlled by the central government, local authorities have managed to gain considerable influence on the performance of the local education system (Caspi, 1994; Sarid, 1994).

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<sup>16</sup>See Lane (1993) for a discussion of the factors that would limit the effectiveness of market discipline.

Therefore, the proportion of the local student body that is eligible for a matriculation certificate may be an indicator of the quality of the local authority's education services<sup>18</sup>. However, other variables, such as parents' income and education, which also vary between local authorities, are likely to be responsible for a significant part of the differences in student performance between localities. Therefore, it is important to exclude fixed local authority effects from the estimation. In order to do this, we used Ministry of Education data<sup>19</sup> to calculate the percentage-point change in the success rate of students during the mayor's term. This variable was used as an indicator for the mayor's effect on the quality of the local school system,<sup>20</sup> and may also indicate whether local voters ignore local issues altogether, or are just indifferent to deficits and debts, which they expect the central government to cover.

In 1994, as part of the effort to strengthen financial control over public entities, the Director of Wages and Labor Relations in the Treasury began to publish annual reports with detailed information regarding wage excesses in these entities. This information receives broad publication and media coverage. It is expected that public sentiment with respect to such excesses will be negative, as they represent a rise in price rather than in the quantity or quality of services, especially when paid to the existing staff of the administration. To account for the different magnitudes of excesses, we use the ratio of the excess wage paid in 1996<sup>21</sup> to total expenditure by the authority.

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<sup>17</sup>Central Bureau of Statistics data were used for 1988 and 1992, and data provided by the Local Authorities Audit Department at the MOI were used for 1997.

<sup>18</sup>Nearly 30 percent of local authorities' budgets are spent on education.

<sup>19</sup>These data include the overall number of students in each cohort, and the number of students eligible for a matriculation certificate. Data were available for 1988, 1989, 1992, 1993, 1996 and 1997.

<sup>20</sup>The average success rate in the two academic years preceding the elections compared to the average in the two years preceding the previous elections.

<sup>21</sup>The 1996 report was the last one published before the 1998 elections.



The audited financial reports of the local authorities, which have been published by the Local Authorities Audit Department at the MOI since 1994, include data on the tax collection effort of the local authorities. While tax rates are dictated to a large extent by the central government, the collection effort is local. A weak collection effort, which is likely not to be equally distributed among residents, can be expected to lead to voter discontent. We test whether this is indeed the case by including the proportion of property taxes collected, out of the total amount charged, as an indicator of the intensity of the tax collection effort<sup>22</sup>.

“Election-year economics” are well documented in general, and in Israel’s local authorities in particular. This phenomenon assumes many forms, such as increased current and development expenditure, and enhanced tax exemptions. However, there is little evidence that these practices actually succeed in attracting voter support. To examine whether such practices have been effective in Israel, we use the change in per-capita debt (at constant prices) during the election year.

A claim often made in discussing the local administration in Israel is that the public cares less about a mayor’s management qualities (e.g., those reflected in the fiscal variables described above) than about his success in extracting central government support. In such a case, lower debts and deficits can be associated with success in extracting support from the central government. When controlling for the increase in these amounts, the effect of the debt and deficit variables on the election results should diminish or even disappear.

Two measures are used to examine the success of mayors in extracting central government funds. The first is the total per-capita amount (at constant prices) received by the local authority as a special “accrued deficit-reduction grant” in 1995-1997. Alternatively, we use a dummy variable that obtains a value of unity if the authority did receive such a grant. The second measure is the change in the general central government grant per-capita between the financial year that ended prior to the elections and the previous election year<sup>23</sup>.

Another factor that may contribute to a strong fiscal performance is residents’ income. Several mayors have argued that it is more difficult to satisfy voters in a low-income locality, as they expect to receive the same quality of service as in high-income localities even though the resources are not sufficient. When mayors fail to deliver this high quality service, the argument goes, the electorate will vote them out of office. In order to test this claim, we included the average salary of an employed male in the locality as a proxy for the income level. Alternatively, we included the socio-economic index calculated by the CBS for each locality.

The volume of development activity in a locality (given the amount of debt accumulation) may indicate to residents how much effort was made by the mayor to enhance its future progress. To examine whether residents reward more intensive development expenditure, we include the level of per-capita expenditure in the “extraordinary budget” (a proxy for the development budget) in the year preceding the

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<sup>22</sup>The difference between charges and collections reflects discounts, exemptions, and the success in collecting the remaining charges. A collection of arrears would raise this ratio.

election year, and the accumulated expenditure on projects which were in progress during that year.<sup>24</sup>

The mean values of selected variables for the local authorities in which mayors were reelected, compared with those in local authorities in which they were not reelected, are presented in Table 2.

#### IV. Results

Probit equations were estimated for the elections of 1989, 1993, and 1998<sup>25</sup>. Table 3 provides the results of the equations that included the variables available for all three campaigns. We found no statistically significant effect of the fiscal variables on the results of the election campaigns in 1989 and 1993. Furthermore, the coefficients of most variables have the “wrong” signs, indicating that if any voter preferences are implied by the analysis they were for higher deficits and debts. The only significant coefficient in these equations is the proportion of votes received in the 1989 elections, as a predictor for reelection in 1993. As expected, the equations are not successful in predicting the election results, adding only marginally to estimation based on the assumption that all mayors will be reelected.

The results for 1998 are in sharp contrast to those for the two previous campaigns. All the coefficients are statistically significant with the “correct” signs. Larger current deficits, higher debt, and larger accumulation of debt all significantly reduce the

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<sup>23</sup>As Rozevitch and Weiss (1993) show, the general grant is much more susceptible to discretionary adjustments and political manipulation than earmarked transfers.

<sup>24</sup>Including expenditure from previous years on projects still in progress.

<sup>25</sup>All the equations were also estimated using the Logit procedure. There were no notable differences in the results.

probability of reelection. The effect of any given debt reduction on reelection prospects is moderated, the larger the size of the debt<sup>26</sup>. A larger share of the votes received in the previous elections also increases the probability of reelection. Using this equation to predict reelection substantially increases the success rate, bringing it to 73 percent.

Turning to the effectiveness of “election year economics,” we found that in none of the three campaigns did expansionary policies, reflected by larger accumulation of per-capita debt during the election year, matter. The coefficients in all three campaigns are not significant and they are negative in 1989 and 1993, indicating that, if anything, large deficits during an election year are associated with a lower probability of reelection. Moreover, none of the other coefficients is substantially affected by the inclusion of this variable, indicating that the increased probability of reelection due to “responsible” fiscal behavior does not reflect the ability to generate larger deficits during the election year.

Next, we turn to the Rubini-Sachs (1989) proposition that weaker politicians generate higher debts. Table 4 gives the results of regression equations that estimate the relationship between the share of votes the mayor received in the campaign in which he was elected and the change in per-capita debt during his term in office. We found no significant relationship for mayors elected in 1983, while the more popular mayors elected in 1989 tended to increase debt faster than their less popular parallels. This may indicate that deficits were less the result of local coalition weaknesses than of a

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<sup>26</sup>Nevertheless, the effect is positive for more than 95 percent of the observations in the sample.

choice less popular mayors were more hesitant to take, fearing disciplinary action by the MOI. The opposite seems to be true for the mayors elected in 1993, however.

Table 5 shows the effect of student performance in national matriculation exams, and the central government grants received by the local authority, on the mayor's reelection prospects, as well as on the other coefficients. With respect to the matriculation examinations, we found that in both campaigns the incremental student success rate had a significant positive effect on the mayor's reelection chances. This indicates that both in 1993 and in 1998 local performance did matter for reelection. We also found that none of the other coefficients was significantly affected by the inclusion of this variable, suggesting that effective investment in education was not the cause for the lack of significance of the fiscal variables in the 1993 equation.

The equations including the grant variable show that, controlling for fiscal performance, the increase in the general grant received from the central government did not affect the mayor's reelection probability. That is, voters do not seem to particularly appreciate those mayors who do well in extracting funds from the central government. This assertion is also supported by the results presented in Table 6. Moreover, incorporating the grant variable into the equation did not significantly affect any of the other variables, indicating that the public preference for fiscal discipline in 1998 did not simply reflect budgetary improvements through government transfers. This result may indicate that even when government funds do come, it takes an "effort," in the form of service interruptions, to induce the government to cough up the money, and that these interruptions are not perceived by voters as preferable to orderly budget adjustments without transfers.

Table 7 presents two additional variables in the 1998 election equation: wage excesses and the intensity of the tax collection effort. Both variables have a significant effect on the mayor's reelection probability and substantially lower the Akaike information measure. This constitutes an indication that the composition of the deficit also matters in the public's evaluation of mayors' performance. We also find, as expected, that voters in "new" local authorities are more supportive of debt accumulation than those in veteran localities. Finally, residents' income, as measured by the average salary of an employed male, does not have a significant effect on the mayor's reelection probability, and does not substantially change the other coefficients. A comparison of the actual success rates of mayors with the reelection probability assigned by the probit equation is presented in Chart 3.

The effect of development activity on the probability of reelection is shown in Table 8. We found that given the amount of debt accumulation and the overall size of the debt, residents favor mayors who spend more on development projects. We also tested whether the socio-economic status of the locality affects voter preferences. We find no evidence that this is the case, nor that the inclusion of this variable in the equation affects any of the other coefficients. Hence, we find no support for the claim that voter disapproval of poor fiscal performance reflects dissatisfaction with the weak socio-economic status of their locality.

## V. Conclusion and Policy Implications

Our results suggest that the factors affecting voters' decisions in Israel's local elections changed markedly in the 1998 campaign. While fiscal performance was not

a relevant factor for voter decisions in the 1989 and 1993 campaigns, voters in 1998 seem to have been substantially affected by it. It appears that progress in three areas critical for effective voter supervision contributed to this shift:

1. Voter tendency to focus on local issues, as the power of the large national parties diminished. The results may also reflect a shift in voters' focus, discussed by Pierre (1998), away from local political issues towards service quality and effective management, as incomes rise.
2. Better information availability, due to a more effective enforcement of audit and accounting requirements by the MOI.
3. Imposition of a harder budget constraint by the central government, including more effective use of the 1997 rehabilitation programs and the implementation of elements of the Suari Committee report. This created closer relations between local management, service quality, and tax rates. Service quality was affected by the unprecedented number of authority-specific service interruptions and strikes, due to liquidity problems. Although tax rates were not changed prior to the elections, a large number of local authorities raised property taxes for 1999 by more than the legally required minimum. Furthermore, 35 authorities (excluding regional councils) received special approval to increase property taxes in 1999 even more than the maximum legal rate. Preliminary data indicate that the probability of such a request is positively and statistically significantly correlated with the size of the current deficit (as defined in this study) in 1997.

The large number of mayors leaving office raises the question whether these mayors were trying to get reelected at all, as is commonly assumed in models of political behavior (e.g., Peltzman, 1976; Hilman, 1989), or whether they were pursuing other

goals. Rosenberg (1992), examining election-year local development expenditures in Israel, suggested that mayors generate deficits in order to improve their employment prospects in the private sector. However, this result does not seem to apply to our study. First, since we use data on performance during the entire period in office, **except the election year**, it does not seem plausible that a large number of mayors take office with the intention of slacking on the job for 5 years and quitting. Second, it is hard to imagine that private-sector employers will be impressed by a former mayor with a record of deficits, inflated debt, and weak tax collection who paid excessive wages and failed to improve the local education system.

Table 9 gives simulations of the potential effect of several policy prescriptions on mayors' reelection probability<sup>27</sup>. It appears that, if the new "rules of the game" remain in effect during the current term, relatively moderate policy measures can substantially increase reelection prospects. The two recommendations that stand out are: (I) avoid wage excesses, even if their budgetary effects are offset by other measures, (II) start early. For example, a 2 percent cut in current expenditure during the first year in office, used to reduce the deficit, can substantially increase reelection probability. Implementation of the same cut two years before the next election will have a much weaker effect.

Despite the greater attention of voters in the last election campaign, the financial position of many local authorities remains fragile. The shift in voter behavior highlights the possibility that voters will serve as the guardians of fiscal discipline, however. Provided that the changes in the operating environment of the local

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<sup>27</sup>Note that the individual probit coefficients cannot be used directly as elasticities.



authorities are reinforced, mayors may avoid deficits in order to increase their reelection prospects. However, the important role of a hard budget constraint, imposed by the central government, for achieving this result cannot be overemphasized. This is particularly acute in view of the short experience with imposing fiscal discipline on local government in Israel. Without hard budget constraints, voters would not have the incentive to press for budgetary discipline. As Von-Hagen (1991) found, stringent rules per-se are not effective in the absence of hard budget constraints. Indeed, the Israeli experience of 1998, if it persists, may indicate that the stringent imposition of existing basic budgetary and reporting standards can produce local-authority fiscal discipline, even in the absence of substantial structural changes.

As substantial progress appears to have been made towards meeting the preconditions for effective decentralization that are mentioned in the literature, allocating more decision-making powers to local government may be considered. There has been a pronounced process of decentralization in most of the developed countries over the past 50 years, explained by important underlying political and economic factors. In Israel, the role of local government is smaller than in most of the developed economies (Charts 4 and 5), suggesting that orderly progress along this path may be desirable. This process may be initiated by granting more autonomy to authorities with a strong record of financial performance. Setting a minimum size requirement for the decentralization of certain functions may also be useful for encouraging smaller authorities to merge. Such mergers could generate substantial cost-savings to both residents and the central government (see e.g., Razin, 1997). Finally, decentralization should focus on dividing functions between central and local government, rather than

on sharing responsibility for the same services. Such a separation will reduce the scope of strategic behavior and clearly identify the responsible party to voters.

To consolidate the progress made in bringing the local authorities' financial position to the heart of the local political process, the momentum with respect to adequate financial reporting should be maintained. The new legal requirement that all local authorities publish their audited financial accounts in a local newspaper is a useful step in this direction. Adopting stringent objective criteria for determining the general grant may also support the imposition of hard budget constraints on local authorities.

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**Appendix I****Variable Definitions**

- |                             |  |
|-----------------------------|--|
| 1. DEBT_CHANGE              | Change in per-capita debt, in fixed prices, during term in office until the beginning of the election-year   |
| 2. DEBT                     | Local authority's commercial bank debt per-capita (in logs)  |
| 3. DEBT-<br>DEBT_CHANGE-INT | (1) multiplied by (2).   |
| 4. VOTES                    | Share of votes received by the mayor in the previous campaign  |
| 5. BALANCE                  | Current balance, excluding debt amortization, loans received, and special grants for debt amortization   |
| 6. DEBT_CHANGE<br>-ELEC     | Change in commercial bank debt during the election year  |
| 7. EXAM_CHANGE              | Change in the success rate of students in matriculation exams  |
| 8. GRANT_CHANGE             | Change in the general grant per-capita, in fixed prices, between the previous elections and the financial year preceding the current election-year |
| 9. GRANT_DEFICIT            | Total per-capita amount of special deficit reduction grants received during 1995-1997, in fixed prices.  |
| 10. GRANT_<br>DEFICIT_D     | A dummy variable, receives the value 1 when (9) is positive.   |
| 11. CHARIGOT96              | The overall amount of wage excesses, as a share of total expenditure in 1996.  |
| 12. ARNONA                  | Share of property tax collection out of total charges  |
| 13. D_CHANGE<br>_NEWLOC     | Equal to (1) for new local authorities.  |
| 14. ELECT                   | Equals 1 if the mayor was reelected and zero otherwise   |
| 15. DEV_EXP                 | Per-capita expenditure in 1997, in the extraordinary budget  |
| 16. DEV_EXP_ACCU            | Accumulated expenditure, per-capita, in the extraordinary budget in 1997   |
| 17. SOCIO_ECO               | Socio-economic index calculated by the CBS   |

**Table 1: Local Authority Head Return Rate 1989-1998**

Campaign	Number of local authority heads elected in the previous campaign	Local authority heads reelected	Local authority heads not reelected	of which: Ran and lost	Percent returning to office
1998	160	78	82	31	48.8
1993	150	83	67	36	55.3
1989	151	73	78	40	48.3

\* The number of local authority heads not reelected includes those who died during their term, were replaced by a nominated committee, were deposed by the local authority's council, or resigned during their term.

Table 2: Mean Values of Regression Variables <sup>1</sup>

	1988			1993			1998		
	Reelected	Not reelected		Reelected	Not reelected		Reelected	Not reelected	
		Runner	Not runner		Runner	Not runner		Runner	Not runner
ELECT (Number of obs.)	65	35	22	75	33	25	77	31	36
DEBT_CHANGE	636.18 (977.46)	407.40 (520.63)	815.12 (716.90)	406.09 (850.76)	336.03 (615.22)	582.60 (1129.95)	-365.11 (1037.19)	164.21 (696.94)	-184.83 (1048.57)
DEBT	2150.49 (2308.57)	1173.19 (925.49)	1593.88 (1000.44)	2094.70 (1662.94)	1632.59 (1438.76)	3052.47 (3035.06)	1970.58 (1498.28)	1987.46 (798.30)	2470.90 (1620.84)
log(DEBT)	7.23 (0.97)	6.79 (0.76)	7.18 (0.67)	7.40 (0.71)	7.05 (0.90)	7.71 (0.85)	7.38 (0.63)	7.51 (0.45)	7.65 (0.56)
VOTES	53.35 (18.53)	46.14 (11.39)	51.92 (17.84)	55.26 (17.73)	48.50 (15.10)	50.77 (13.53)	58.16 (15.15)	48.08 (13.48)	50.48 (13.25)
BALANCE	-48.59 (556.83)	-19.55 (401.54)	-22.15 (205.92)	-107.99 (252.34)	-84.25 (236.47)	-73.98 (334.72)	129.68 (346.62)	51.66 (255.19)	-53.06 (392.60)
EXAM_CHANGE	--	--	--	4.50 (12.24)	0.33 (5.08)	0.70 (8.37)	6.16 (7.23)	4.69 (8.80)	2.89 (8840.66)
ARNONA	--	--	--	--	--	--	76.46 (16.50)	61.39 (18.88)	66.60 (20.00)
CHARIGOT96	--	--	--	--	--	--	0.13 (0.20)	0.30 (0.56)	0.26 (0.36)
DEV_EXP							1.40 (1.17)	1.30 (0.84)	1.08 (0.77)
DEV_EXP_ACCU							2.83 (2.70)	2.45 (1.74)	2.71 (2.68)

<sup>1</sup> Standard errors in parentheses.



**Table 3: The Effect of Fiscal Variables and Election Year Debt Accumulation on Local Elections: 1989, 1993 and 1998**

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	ELECT89	ELECT93	ELECT98	ELECT89	ELECT93	ELECT98
Variables <sup>1</sup>						
C	-2.0617 (-1.69)*** (-1.63)	-1.0894 (-0.95) (-0.94)	1.8892 (1.15) (1.09)	-2.0707 (-1.7)* (-1.63)	-1.0755 (-0.95) (-0.93)	1.8160 (1.11) (1.06)
DBET_CHANGE	-0.0030 (-1.71)*** (-1.45)	0.0009 (0.69) (0.63)	-0.0039 (-3.14)* (-2.77)*	-0.0029 (-1.62) (-1.39)	0.0009 (0.70) (0.64)	-0.0038 (-3.03)* (-2.75)*
DEBT	0.2522 (1.52) (1.41)	0.0581 (0.38) (0.37)	-0.4452 (-2.06)* (-2.00)*	0.2555 (1.53) (1.42)	0.0657 (0.43) (0.42)	-0.4303 (-1.98)** (-1.95)**
VOTES	0.0113 (1.52) (1.51)	0.0157 (2.11)** (2.07)**	0.0270 (2.82)* (3.20)*	0.0111 (1.49) (1.47)	0.0153 (2.08)** (2.03)**	0.0263 (2.73)* (3.14)*
BALANCE	-0.0002 (-0.74) (-0.66)	-0.0002 (-0.46) (-0.45)	0.0010 (2.48)* *2.37*	-0.0002 (-0.77) (-0.69)	-0.0002 (-0.52) (-0.50)	0.0011 (2.74)* (2.56)**
DEBT-DEBT_CHANGE-INT	0.0003 (1.63) (1.36)	-0.0001 (-0.79) (-0.71)	0.0005 (3.01)* (2.67)*	0.0003 (1.53) (1.30)	-0.0001 (-0.79) (-0.71)	0.0004 (2.84)* (2.60)*
DEBT_CHANGE_ELEC				-0.0001 (-0.24) (-0.20)	-0.0003 (-1.04) (-0.94)	0.0006 (1.01) (0.93)
Mean dependent var	0.53	0.56	0.53	0.53	0.56	0.53
S.E. of regression	0.50	0.50	0.45	0.50	0.50	0.45
Restr. log likelihood	-84.30	-91.10	-99.47	-84.30	-91.10	-99.47
Probability(LR stat)	0.11	0.35	0.00	0.17	0.37	0.00
Akaike info criterion	1.41	1.42	1.23	1.42	1.43	1.24
McFadden R-squared	0.05	0.03	0.17	0.05	0.04	0.17
Correct predictions (%)	56.56	56.39	72.92	59.84	58.65	72.22

\* = significant at the 1% level      \*\* = significant at the 5% level      \*\*\* = significant at the 10% level

<sup>1</sup> For variable definitions, see Appendix I. Numbers in the upper parentheses are Z-statistics calculated using Huber/White standard errors and covariance. Z-statistics using GLM robust standard errors are shown in the lower parentheses.

**Table 4: The Effect of Mayor Popularity on Debt Reduction: 1989, 1993 and 1999**

	(1)	(2)	(3)
Dependent variable	DEBT_CHANGE89	DEBT_CHANGE93	DEBT_CHANGE98
Variables			
C	617.45 (2.65)*	-155.07 (-0.65)	505.93 (1.84)***
VOTES	-0.53 (-0.12)	10.87 (2.51)**	-13.05 (-2.66)*
R <sup>2</sup>	0.00	0.04	0.04
Adj. R <sup>2</sup>	-0.01	0.04	0.04
Log likelihood	-1024.12	-1114.49	-1305.16
F-statistic	0.90	6.31	7.08
Prob(F-statistic)	0.02	0.01	0.01

\* = significant at the 1% level

\*\* = significant at the 5% level

\*\*\* = significant at the 10% level

**Table 5: The Effect of Student Performance and Increased Government Transfers on Mayor Reelection: 1993, 1998**

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	ELECT93	ELECT98	ELECT93	ELECT98	ELECT93	ELECT98
Variables <sup>1</sup>						
C	-0.8190 (-0.70) (-0.71)	1.2595 (0.77) (0.72)	-1.2564 (-1.04) (-1.06)	2.5717 (1.42) (1.36)	-0.9390 (-0.77) (-0.78)	1.9036 (1.05) (1.01)
DEBT_CHANGE	0.0004 (0.30) (0.27)	-0.0036 (-2.82)* (-2.57)*	0.0006 (0.45) (0.40)	-0.0044 (-3.22)* (-2.94)*	0.0003 (0.24) (0.21)	-0.0041 (2.93)* (2.75)*
DEBT	0.0288 (0.18) (0.18)	-0.4205 (-1.92)*** (-1.91)***	0.0813 (0.51) (0.51)	-0.5242 (-2.22)** (-2.19)**	0.0439 (0.27) (0.28)	-0.4933 (-2.08)** (-2.10)**
VOTES	0.0141 (1.82)*** (1.86)***	0.0322 (3.51)* (3.56)*	0.0151 (2.05)** (1.98)**	0.0262 (2.73)* (3.07)*	0.0140 (1.82)*** (1.83)***	0.0312 (3.39)* (3.42)*
BALANCE	-0.0002 (-0.42) (-0.40)	0.0011 (2.67)* (2.60)*	-0.0002 (-0.38) (-0.37)	0.0011 (2.65)* (2.55)*	-0.0002 (-0.38) (-0.36)	0.0012 (2.78)* (2.75)*
DEBT-DEBT_CHANGE-INT	-0.0001 (-0.43) (-0.37)	0.0004 (2.75)* (2.50)**	-0.0001 (-0.59) (-0.51)	0.0005 (3.08)* (2.85)*	-0.0001 (-0.38) (-0.32)	0.0005 (2.84)* (2.67)*
EXAM_CHANGE	0.0267 (2.32)** (1.98)**	0.0339 (2.08)** (2.06)**			0.0243 (1.94)*** (1.71)***	0.0332 (2.01)** (2.00)**
GRANT_CHANGE			0.0002 (0.77) (0.80)	-0.0003 (-1.15) (-1.07)	0.0001 (0.44) (0.45)	-0.0003 (-0.99) (-0.98)
Mean dependent var	0.56	0.53	0.56	0.53	0.56	0.53
S.E. of regression	0.49	0.45	0.50	0.45	0.50	0.45
Restr. log likelihood	-91.10	-99.47	-90.52	-99.47	-90.52	-99.47
Probability(LR stat)	0.12	0.00	0.42	0.00	0.23	0.00
Akaike info criterion	1.40	1.22	1.43	1.24	1.42	1.22
McFadden R-squared	0.06	0.19	0.03	0.17	0.05	0.20
Correct predictions (%)	58.65	72.22	58.33	72.22	59.09	71.53

\* = significant at the 1% level    \*\* = significant at the 5% level    \*\*\* = significant at the 10% level

<sup>1</sup> For variable definitions, see Appendix I. Numbers in the upper parentheses are Z-statistics calculated using Huber/White standard errors and covariance. Z-statistics using GLM robust standard errors are shown in the lower parentheses.

**Table 6: Government Transfers and Mayor  
Reelection Probability: 1993 and 1998**

	(1)	(2)	(3)	(4)
Dependent variable	ELECT93	ELECT98	ELECT98	ELECT98
Variables <sup>1</sup>				
C	0.1228 (1.02) (1.00)	0.0766 (0.72) (0.73)	0.0969 (0.76) (0.76)	0.0369 (0.24) (0.24)
GRANT_CHANGE	0.0002 (0.72) (0.69)	-0.0001 (-0.46) (-0.56)		
GRANT_DEFICIT			-0.0001 (-0.26) (-0.26)	
GRANT_DEFICIT_D				0.0773 (0.37) (0.37)
Mean dependent var	0.564	0.527	0.531	0.531
S.E. of regression	0.499	0.502	0.502	0.502
Restr. log likelihood	-91.099	-100.980	-100.227	-100.227
Probability(LR stat)	0.482	0.577	0.793	0.711
Akaike info criterion	1.396	1.409	1.410	1.409
McFadden R-squared	0.003	0.002	0.000	0.001

\* = significant at the 1% level

\*\* = significant at the 5% level

\*\*\* = significant at the 10% level

<sup>1</sup> For variable definitions, see Appendix I. Numbers in the upper parentheses are Z-statistics calculated using Huber/White standard errors and covariance. Z-statistics using GLM robust standard errors are shown in the lower parentheses.

**Table 7: The Effect of Wage Excesses and Tax Collection Effort on Mayor Reelection: 1998**

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	ELECT98	ELECT98	ELECT98	ELECT98	ELECT98	ELECT98
<b>Variables <sup>1</sup></b>						
<b>C</b>	<b>2.4892</b> (1.50) (1.29)	<b>1.9825</b> (1.17) (1.04)	<b>2.6983</b> (1.50) (1.30)	<b>2.1571</b> (1.18) (1.05)	<b>2.8639</b> (1.71)*** (1.42)	<b>1.7671</b> (1.03) (0.94)
<b>DEBT_CHANGE</b>	<b>-0.0033</b> (-2.48)** (-1.98)**	<b>-0.0029</b> (-2.0)** (-1.75)***	<b>-0.0035</b> (-2.31)** (-1.91)***	<b>-0.0030</b> (-1.88)*** (-1.68)***	<b>-0.0030</b> (-2.12)** (-1.73)***	<b>-0.0029</b> (-2.11)** (-1.79)***
<b>DEBT</b>	<b>-0.6644</b> (-2.85)* (-2.64)*	<b>-0.6629</b> (-2.81)* (-2.71)*	<b>-0.6845</b> (-2.83)* (-2.60)*	<b>-0.6798</b> (-2.80)* (-2.64)*	<b>-0.7303</b> (-3.09)* (-2.68)*	<b>-0.6849</b> (-2.81)* (-2.83)*
<b>VOTES</b>	<b>0.0228</b> (2.26)** (2.57)**	<b>0.0270</b> (2.94)* (2.93)*	<b>0.0226</b> (2.23)** (2.53)**	<b>0.0269</b> (2.90)* (2.90)*	<b>0.0233</b> (2.34)** (2.62)*	<b>0.0291</b> (3.14)* (3.11)*
<b>BALANCE</b>	<b>0.0010</b> (2.46)** (2.20)**	<b>0.0011</b> (2.62)* (2.44)**	<b>0.0010</b> (2.36)** (2.17)**	<b>0.0011</b> (2.43)** (2.36)**	<b>0.0010</b> (2.55)** (2.25)**	<b>0.0010</b> (2.52)** (2.48)**
<b>DEBT-DEBT_CHANGE-INT</b>	<b>0.0004</b> (2.48)** (1.99)**	<b>0.0003</b> (2.10)** (1.78)***	<b>0.0004</b> (2.24)** (1.88)***	<b>0.0004</b> (1.85)*** (1.67)***	<b>0.0004</b> (2.15)** (1.76)***	<b>0.0004</b> (2.16)** (1.82)***
<b>DEBT_CHANGE_NEWLOC</b>	<b>0.0024</b> (3.14)* (2.75)*	<b>0.0024</b> (3.06)* (2.82)*	<b>0.0024</b> (3.13)* (2.75)*	<b>0.0024</b> (3.05)* (2.82)*	<b>0.0024</b> (3.14)* (2.74)*	<b>0.0025</b> (2.94)* (3.10)*
<b>ARNONA</b>	<b>0.0226</b> (2.73)* (2.73)*	<b>0.0239</b> (2.81)* (2.96)*	<b>0.0220</b> (2.60)* (2.58)*	<b>0.0235</b> (2.68)* (2.83)*	<b>0.0232</b> (2.77)* (2.79)**	<b>0.0161</b> (1.51) (1.62)
<b>CHARIGOT96</b>	<b>-1.6933</b> (-2.81)* (-2.66)*	<b>-1.8082</b> (-3.27)* (-2.76)*	<b>-1.6757</b> (-2.75)* (-2.60)*	<b>-1.7978</b> (-3.21)* (-2.73)*	<b>-1.7566</b> (-2.88)* (-2.73)*	<b>-1.7478</b> (-3.02)* (-2.72)*
<b>EXAM_CHANGE</b>		<b>0.0363</b> (2.19)** (2.03)**		<b>0.0362</b> (2.17)** (2.02)**		<b>0.0402</b> (2.3)** (2.27)**
<b>GRANT_CHANGE</b>			<b>-0.0001</b> (-0.37) (-0.28)	<b>-0.0001</b> (-0.28) (-0.23)		
<b>GRANT_DEFICIT</b>					<b>0.0004</b> (0.71) (0.64)	
<b>SALARY_MALE96</b>						<b>0.0001</b> (1.26) (1.27)
<b>Mean dependent var</b>	<b>0.53</b>	<b>0.53</b>	<b>0.53</b>	<b>0.53</b>	<b>0.53</b>	<b>0.53</b>
<b>S.E. of regression</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>	<b>0.42</b>	<b>0.41</b>
<b>Restr. log likelihood</b>	<b>-99.47</b>	<b>-99.47</b>	<b>-99.47</b>	<b>-99.47</b>	<b>-99.47</b>	<b>-99.47</b>
<b>Probability(LR stat)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Akaike info criterion</b>	<b>1.12</b>	<b>1.10</b>	<b>1.13</b>	<b>1.11</b>	<b>1.13</b>	<b>1.10</b>
<b>McFadden R-squared</b>	<b>0.28</b>	<b>0.31</b>	<b>0.28</b>	<b>0.31</b>	<b>0.28</b>	<b>0.31</b>
<b>Correct predictions (%)</b>	<b>77.08</b>	<b>76.39</b>	<b>77.78</b>	<b>76.39</b>	<b>77.78</b>	<b>77.08</b>

**Table 8: The Effect of Development Expenditure  
on Mayor Reelection: 1998**

Dependent variable	(1)	(2)
	ELECT98	ELECT98
<b>Variables <sup>1</sup></b>		
<b>C</b>	2.8900 (1.67)*** (1.43)	3.3129 (1.89)*** (1.65)***
<b>DEBT_CHANGE</b>	-0.0037 (-2.54)** (-2.11)**	-0.0028 (-2.09)** (-1.71)***
<b>DEBT</b>	-0.8312 (-3.40)* (-3.05)*	-0.9344 (-3.66)* (-3.29)*
<b>VOTES</b>	0.0271 (2.98)* (2.94)*	0.0266 (2.88)* (2.95)*
<b>BALANCE</b>	0.0010 (2.52)** (2.43)**	0.0010 (2.42)** (2.39)**
<b>DEBT-DEBT_CHANGE-INT</b>	0.0005 (2.63)* (2.17)**	0.0003 (2.16)** (1.75)***
<b>DEBT_CHANGE_NEWLOC</b>	0.0023 (2.93)* (2.81)*	0.0025 (3.08)* (2.99)*
<b>ARNONA</b>	0.0252 (2.92)* (3.10)*	0.0282 (3.17)* (3.37)*
<b>CHARIGOT96</b>	-1.8840 (-3.26)* (-2.85)*	-1.8919 (-3.45)* (-2.85)*
<b>EXAM_CHANGE</b>	0.0385 (2.28)** (2.18)**	0.0376 (2.21)** (2.14)**
<b>DEV_EXP</b>		0.3546 (2.02)** (2.04)**
<b>DEV_EXP_ACCU</b>	0.1100 (1.73)** (1.60)	
<b>Mean dependent var</b>	0.53	0.53
<b>S.E. of regression</b>	0.41	0.41
<b>Restr. log likelihood</b>	-99.47	-99.47
<b>Probability(LR stat)</b>	0.00	0.00
<b>Akaike info criterion</b>	1.09	1.08
<b>McFadden R-squared</b>	0.32	0.33
<b>Correct predictions (%)</b>	78.47	75.00

\* = Significant at the 1% level.

\*\* = Significant at the 5% level

\*\*\* = Significant at the 10% level.

<sup>1</sup> For variable definitions, see Appendix I. Numbers in the upper parentheses are Z-statistics calculated using Huber/White standard errors and covariance.

**Table 9: The Effect of Policy Measures on the Probability of Reelection <sup>1</sup>**  
**(Simulation results)**

	Average <sup>2</sup>	3d. quarter <sup>3</sup>	33 <sup>rd</sup> percentile <sup>4</sup>
	(Probability of reelection)		
<b>Baseline probability</b>	<b>0.536</b>	<b>0.223</b>	<b>0.284</b>
1 Avoiding wage excesses	0.673	0.344	0.416
2 Increasing the effective collection rate of property taxes by 5 percentage points	0.583	0.260	0.326
3 (1) +(2)	0.715	0.389	0.463
4 Improving current balance by reducing spending by 2 percent <sup>5</sup> from the beginning of the term and thus reducing debt and deficit	0.643	0.290	0.373
5 Like (4) but in the last year before the elections	0.585	0.256	0.325
6 (1) + (4)	0.765	0.424	0.513

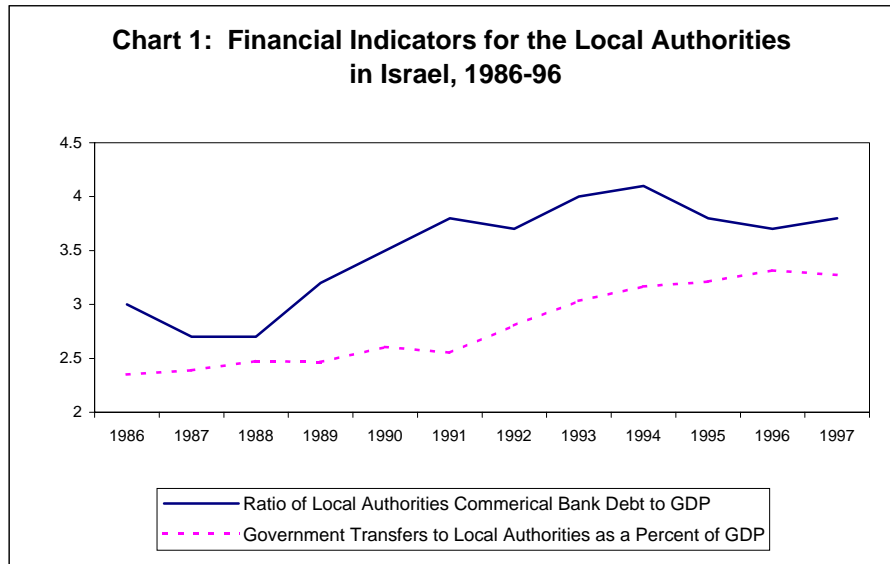
<sup>1</sup> These simulations were conducted using equation 2 in table 7.

<sup>2</sup> All the variables receive the average value.

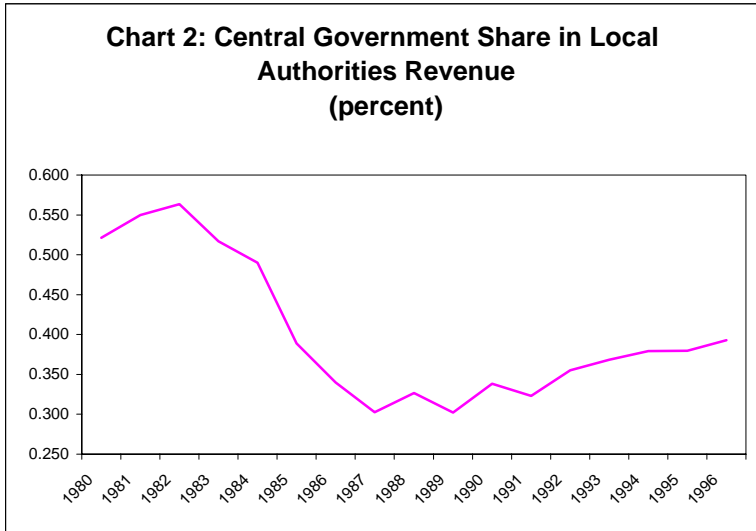
<sup>3</sup> All the variables receive the value at the 25<sup>th</sup> percentile. For variables with a negative effect on reelection, the 75<sup>th</sup> percentile is used.

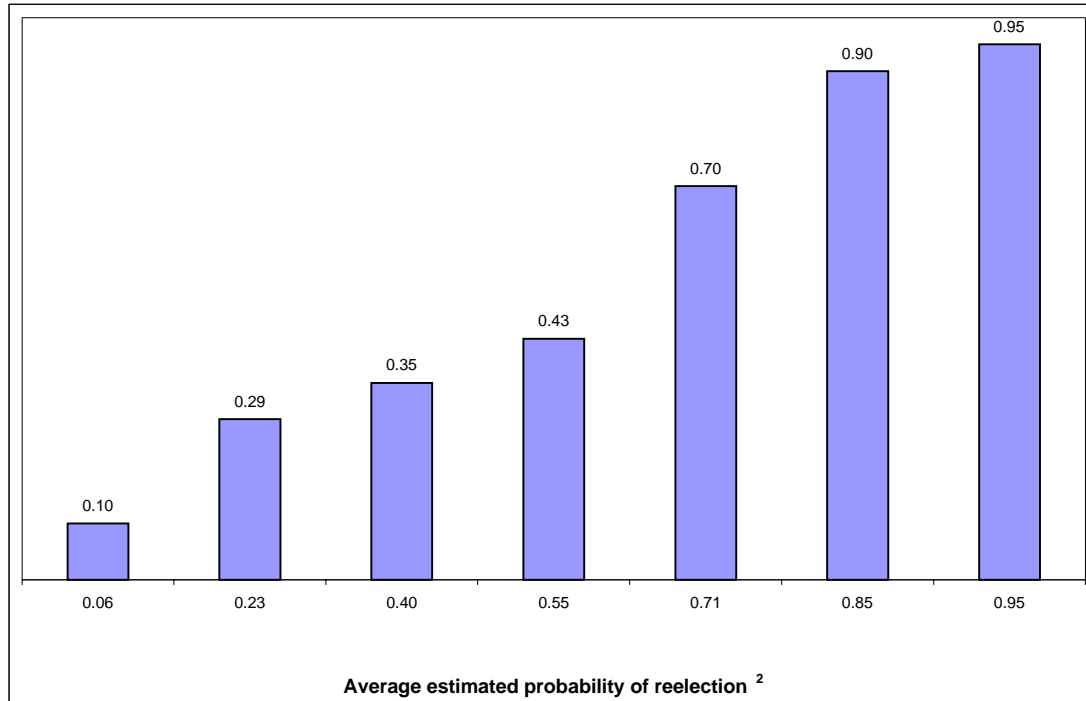
<sup>4</sup> All the variables receive the value at the 33<sup>rd</sup> percentile. For variables with a negative effect on reelection, the 67<sup>th</sup> percentile is used.

<sup>5</sup> Two percent of the average per-capita current expenditure for all local authorities.







**Chart 3: Actual Reelection Compared with a Probit Estimated Reelection Probability<sup>1</sup>**

<sup>1</sup> Observations are divided into seven categories, based on the probit assigned probability for reelection.

<sup>2</sup> Calculated as the average between the two end-points for each category.



**Chart 5 : Local Government's  
Share in Overall Government  
Expenditure** <sup>1,2</sup>



<sup>1</sup> Average for 1991-97. When data for some of the years are missing, average for the remaining years.

<sup>2</sup> Excluding intergovernment transfers at all levels.