

System change and economic voting

A study of immigrants and natives in Israel

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Abstract: The adjustment in economic voting behavior of immigrants towards the one of natives is analyzed in a special case. Natives have the same ethnic background as immigrants, but they come from a communist system to a western market system. The data cover Eastern European Jews immigrating to Israel in comparison with native-born Jews controlled for origin. It is demonstrated that the adjustment of voting behavior of immigrants is immediate. Our results find virtually no difference between the economic evaluation function (vote function) of natives and immigrants.

Note: We are grateful for comments from Henry Chappell, Arye Hillman and Friedrich Schneider when the paper was presented at the 2001 Public Choice Meetings in San Antonio and Paris.

1. Introduction: normal and new voters

Since 1990 new democracies have been established in most of the post communist countries of Eastern and Central Europe. However, casual observations as well as studies (see Section 2.3) show that it takes time for a new democracy to stabilize into a “normal” political system.

The process of political normalization is complex and can be divided into many parts. One part of this process is that the average voter acquires a “normal” vote function. Our study started from the idea that voters have to learn the vote function as part of the political socialization process. The key idea of the study is that we have found an *almost perfect data* set that allows us to isolate and analyze one part of the normalization process: the socialization of the voters.

Our data are two pre-election polls from Israel. These data enable us to estimate economic vote functions for *natives* and *immigrants*¹⁾ as a function of the number of years since entry. Normally immigrants differs from natives ethnically²⁾. In our sample most recent immigrants came from Eastern Europe (notably Russia), precisely as did many of the natives only 1-3 generations ago. However, the immigrants came from a different economic system. We thus make three assumptions:

- [A1] Immigrants and natives have the same ethnic background.
- [A2] Immigrants come from a socialist economic system to a market economy.
- [A3] Immigrants want to be and will be fully assimilated, as fast as this is possible.

It is consequently assumed that immigrants will acquire the same vote function as natives. Our study examines how quickly this happens. Voting in Israel is unusually complex as politics have more *active* dimensions than in most countries: (i) economics, (ii) left/right, (iii) security/foreign policy, (iv) religion and (v) ethnic differences. Dimensions (iii) and (iv) are special for Israel, and will be disregarded. We hence concentrate on the usual interaction between (i) and (ii).³⁾ Strictly speaking we estimate an *economic evaluation function* and not a vote function. This leads to our fourth assumption:

- [A4] The learning pattern for economic evaluation generalizes. It shows how voters adjust their vote function to a new situation.

All four assumptions [A1] - [A4] are debatable, and various objections will be discussed, especially in Section 2.4. Some of the objections can be controlled for by available variables.

The paper is organized as follows: Section 2 presents the micro evaluation function and its context. Section 3 looks at the data, while results are given in Section 4. Finally, the conclusions are drawn in Section 5. Though some of the detailed results might be of interest, the key point is *one number*: The speed by which the evaluation function of immigrants converges to the one of natives.

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1. All immigrants included are Jews and we have consequently compared with Israeli Jews only. The term “natives” refers to Jews born in Israel, also known as Sabras.
 2. The term “ethnic” is defined as: of specified origin or culture. It thus relates to a group who shares a historical, cultural, racial, linguistic, or religious heritage.
 3. Dimensions (iii) to (v) exist in all countries, but they are normally (largely) dormant or have been integrated into dimensions (i) and (ii). Dimensions (i) and (ii) are also somewhat special in Israel as they interacts with dimension (v) the distinction between the Ashkenazim and Sephardim, see 2.4.

2. A micro evaluation function

The purpose of this section is to select a micro vote function that is relevant for the study at hand. It should be reasonably general, but adjusted to apply for Israel. Section 2.1 deals with vote functions in general. Section 2.2 selects the 4 models used in the study. Section 2.3 turns to economic voting in Eastern Europe, which is the area of origin of most of the immigrants, while Section 2.4 looks at some relevant traits – as regards [A1] - [A4] – of the population receiving the immigrants.

2.1 *Vote functions: general considerations*

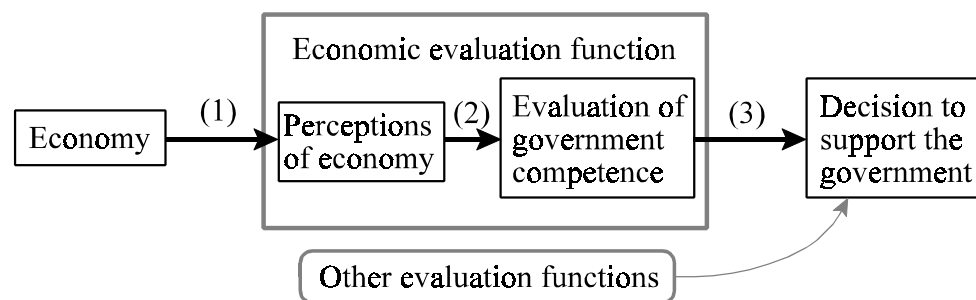
Thirty years of research into VP-functions (vote and popularity functions) has shown that the macro relationship between the real economy and government support is highly significant as well as unstable. The instability occurs both over time and across countries.⁴⁾ Recent research has tried to make sense of this observation by pointing to two explanations of instability:

(in1) Contextual factors.

(in2) The changing perceptions of the voters.

Contextual factors are analyzed mostly at the comparative macro level. Such factors as the party system and the presence and clarity of alternatives are shown to affect voters' ability to reward or punish the incumbent government for the state of the economy.⁵⁾ The importance and variability of the voters' perception of the economy can (only?) be analyzed at the micro level. Here data are so numerous that it is often possible to find stable parts of the picture and to isolate unstable parts. Especially the rich British data have been used to demonstrate how the VP-function changes.⁶⁾

Figure 1. Internal structure of the VP-function



The whole complex from the development in the economy to the vote has at least three steps indicated in Figure 1: (1) From the objective economy to perception (and knowledge) of the voters. (2) From the perceptions to the evaluation of governments' competency in handling the economy. (3) From the

4. See surveys by Paldam (1981), Nannestad and Paldam (1994) and Lewis-Beck and Paldam (2000).

5. This cross-country literature was started by Paldam (1991) and has been developed by Powell and Whitten (1993), Anderson (2000), Chapell & Veiga (2000) and others.

6. See the classical studies of Goodhart & Bhansali (1970) and Pissarides (1980) and the studies of H.D. Clarke and D. Sanders and their collaborators, see, eg the two recent volumes: Lewis-Beck & Paldam (2000) and Dorussen & Taylor (2000). Few studies of the Israeli vote function have appeared and none of them are micro. The stability of the Danish micro popularity function is analyzed in Nannestad and Paldam (1997).

competency assessment to the actual party choice. We assume that the actual vote is a weighted sum of the evaluation function in different fields of which one is the economic field.⁷⁾ Our contention is that for Israel three evaluation functions enter into the vote function, and that only the economic evaluation function generalizes to other countries. The other evaluation functions are therefore disregarded.

The three steps are not well understood, but the middle step (2) may be the most stable.⁸⁾ This is the basis for the micro VP-function chosen. It explains the respondent's assessment of the competency of the two (main) government alternatives to handle the economy.

2.2 Four related models

The dependent variable is a binary choice, so we use probit regression.⁹⁾ The model used for natives is as standard as possible:

$$(1) \quad y_i^* = \beta_0 + \beta' \mathbf{x}_i + u_i, \text{ where } \mathbf{x}_i = [Z_i, E_i, Id_i, g] \text{ and } u_i \sim N(0,1),$$

where $y_i = 1$, if $y_i^* > 0$ and 0 otherwise

The other variables and parameters are: The voter index, i , the parameter vector, β , the constant, β_0 , and the residual, u_i . The explanatory variables are a vector, Z_i , of voter characteristics as age, gender, education, etc. An egotropic variable, E_i , "how has your personal economy developed?" A personal ideology variable, Id_i , corresponding to a party identification. Finally g is an incumbency dummy, indicating if Likud is in government or opposition. In cross section estimates g is excluded. Model (1) is estimated in several versions: for natives alone, for immigrants alone and for the whole sample.

Immigrants are explicitly considered in Models (2) and (3). They contain two additional variables: A binary dummy, d . It is 1 for immigrants and 0 for natives. The number of years since immigration, t . Also, the models have a separate parameter vector, α , for immigrants.

$$(2) \quad y_i^* = \beta_0 + \beta' \mathbf{x}_i + \alpha_0 d_i + \alpha' (\mathbf{x}_i \cdot d_i) + u_i \quad \text{with separate levels for immigrants and natives}$$

$$(3) \quad y_i^* = \beta_0 + \beta' \mathbf{x}_i + \alpha_0 d_i + \alpha' (\mathbf{x}_i \cdot d_i) e^{-\gamma t} + u_i \quad \text{as (2), but with learning function, } e^{-\gamma t}$$

Both Models (2) and (3) are the same as Model (1) for natives (where $d = 0$). In Model (2) immigrants are permanently different from natives if α is non-zero. In Model (3) the behavior of immigrants may (or may not) converge to the evaluation function of natives.

The expression $e^{-\gamma t}$ describes the learning process whereby the behavior of immigrants adjusts over time, t . Figure 2 shows learning processes which are consistent with Model (3). The picture has a level of the variable for natives (set at 1), and a level for immigrants (set at 0). For seven hypothetical values of the adjustment parameter $\gamma = -0.1, -0.05, 0, 0.1, 0.5, 1$ and 2.5 the corresponding learning

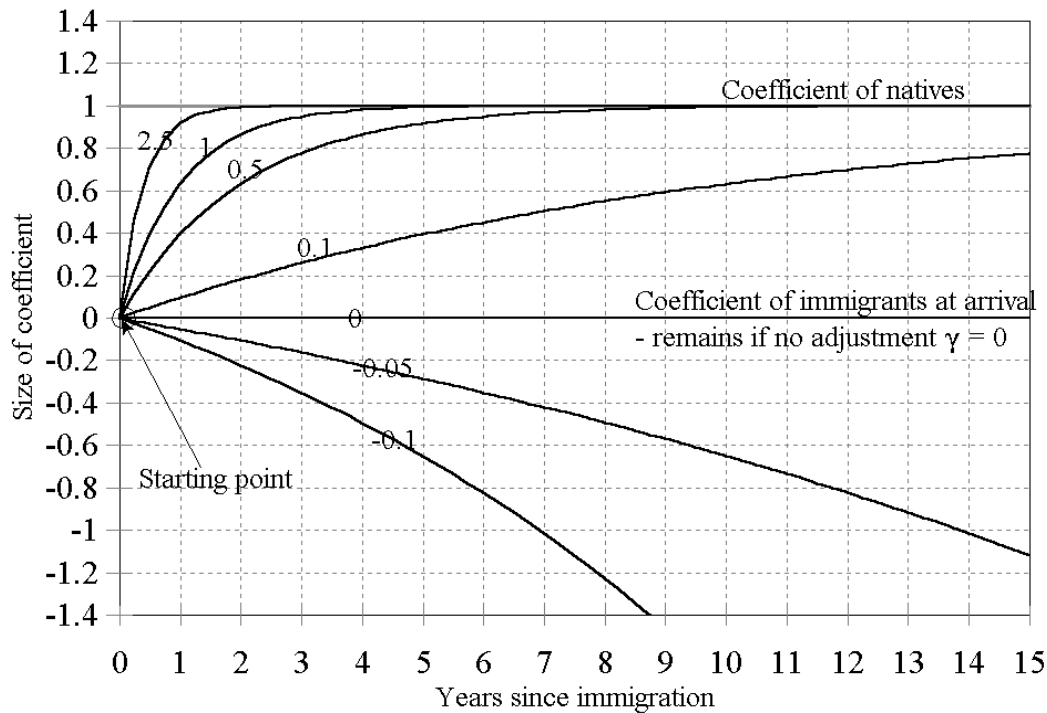
7. We here follow the lead of Nickelsburg & Norpoth (2000) who estimate a popularity function for the USA president with two separate evaluation functions: one for foreign policy and one for economic policy. It is then showed that the aggregate popularity is a weighted sum of the two evaluation functions and that the enter with approximately the same weight.

8. The three links are separately estimated by Sanders (1999, 2000) on UK data, and Nannestad & Paldam (2000a and b) on Danish data.

9. Therefore, in principle, the models are formulated using two y-variables: y_i^* is a latent (unobserved, continuous) evaluation of voter i of the relative economic competency of the two government alternatives: Likud and Labor. The observed variable, y_i , is the choice of the individual based upon y_i^* . The latent variable gives the "strength" of the evaluation, while the observed variable gives the actual choice.

curves are shown.

Figure 2. Hypothetical examples of Models (3) and (4) drawn with 7 learning curves



It turns out to be difficult to find a learning pattern. Therefore, we also run (3) in a version where we have forced the starting point of immigrants to be zero (as drawn on Figure 2). It assumes that they start without an evaluation function, but then learn the evaluation function of the natives:

$$(4) \quad y_i^* = \beta_0 + \alpha_0 d_i + \beta' x_i (1 - d_i e^{-\gamma t}) + u_i \quad \text{as (3), but immigrants enter with "clean slate"}$$

Model (3) and (4) are equivalent to a model with heteroskedasticity in the residuals with respect to t .

The figure is drawn under one simplified assumption. All learning curves start at the same *starting point* (zero) at time $t = 0$, where immigrants enter the country, as formulated in Model (4) below. Model (3) estimates the starting point ($\beta + \alpha$) jointly with the learning speed parameter (γ).

The learning curves are easy to interpret if $\gamma > 0$. Here the curve moves from the starting point of immigrants and converges toward the curve of natives. The parameter γ describes the speed of the process. For $\gamma = 0$ the speed is zero, so no learning occurs. For $\gamma < 0$ immigrants become more and more different from natives. Obviously, divergence must cease, so it is not a realistic possibility. If we had found a significantly negative γ , we would have had to reformulate the model.

The models estimated are close to Kinder & Kiewiet (1979). Their model has been found to work in practice in half a dozen countries, even when serious theoretical objections have been raised in connection with the egotropic/sociotropic controversy. These objections are discussed at length in Nannestad & Paldam (1997).¹⁰⁾

10. Voters are *egotropic* if the economic factor is the voters' own economy, and *sociotropic* if the economic factor is the national economy. Using US data Kinder & Kiewiet (1979) found that voters were sociotropic. The main objection (see Kramer, 1983) is that it makes no sense to estimate the sociotropic effect in a static model where the sociotropic variable per definition is the same for all voters. What is termed the sociotropic variable can only

The relations are estimated for one or two periods. In the later case an incumbency dummy is included. Time hence enters as an age variable and (in the immigrant version of the relation) as a migration age (t) as well, but not otherwise. This means that the model is unable to catch the sociotropic assessments of the voters, and it is therefore not a serious problem that the data contain only egotropic assessments of the voters.

2.3 *Economic voting in the countries of origin of the immigrants*

No study exists of economic voting in the communist countries, but since the big system collapse and the start of the process of change in 1989/90 studies of economic voting in post communist countries have begun to appear.

Table 1. Two reasons for the instability of the vote function in post communist countries

W1	As a result of the instability and changes of the economy. The function is the same, but the variables and institutions are volatile.
W2	As an effect of a learning process for the vote function (evaluation function).

Note: The two ways the transition can lead to instability are in addition to the two normal reasons for instability listed as (in1) and (in2) in Section 2.1.

Voting in the post communist countries has hitherto exhibited a high degree of instability. The shares of the parties change greatly at elections, and the parties themselves often change names and policies. In short, the party system seems unsettled and it appears likely that few voters have clear party identifications.¹¹⁾ This instability might be explained in the two ways (W1) and (W2) listed in Table 1. The two explanations are difficult to distinguish in data from post communist countries. However, we have isolated (W2) if assumptions [A1] to [A3] of the introduction holds.

The only study we know that resembles ours is Anderson and O'Connor (2000) comparing vote functions of East German (ex DDR/GDR) and West German voters. They find a considerable difference and argue that this is due to the learning process in Eastern Germany. However, it is obvious that profound economic and political changes are still taking place in Eastern Germany, and it is therefore difficult for them to sort out (W1) and (W2).

There has been a big wave of euphoria and later repeated waves of nostalgia in Eastern Germany in connection with the reunification of Germany. The "Ossies" and the "Wessies" are still different in many small and complex ways, and even when the East Germans were overwhelmingly for the reunification they also dislike being overwhelmed by the size and wealth of Western Germany.¹²⁾

be different perceptions of the same objective economy. To estimate a truly sociotropic effect time series data are needed. Mixed time series/cross country estimates find that voting in the US is about 50/50 egotropic-/sociotropic. Our finding on Danish data is that voting is egotropic, and so it is in the UK.

11. Studies of the development of the party systems such as Kitschelt et al (1999) and Nørgaard (2000) are now appearing, but few studies of vote functions are available, see however Fidrmuc (2000).
12. Relations between the Ossies and Wessies are ambivalent. Some of the nostalgia ("ostalgie") has a whimsical character, such as the fight for the "Ampelmännchen" which are the red and green men on semaphores at sidewalk crossings. They actually had a nicer design in the DDR and when the new west-dominated regime started to streamline all East German Ampelmännchen to the western pattern, a (successful) political campaign resulted. It was meant to be fun, but not just fun.

Also it should be kept in mind that several of the states (Länder) of Eastern Germany had some of the most distinct regional cultures of Germany.

However, Anderson and O'Connor argue that after the transition to a market economy and a political democracy, people must acquire various cognitive and evaluative skills before being able to “translate” economic conditions into government support in a stable and predictable way. As long as such skills are largely absent, one may expect to find unreliable and sometimes erratic linkages between the development of the real economy and political support for the government. It hence follows that they believe that they are estimating (W2). If our results – reported below – generalize, then Anderson and O'Connor are in fact mainly capturing the effects of (W1).

While Anderson and O'Connor concentrate on the voters' ability to evaluate the real economy with some measure of accuracy, ie on the leftmost arrow in Figure 1, our investigation focuses on the arrow in the middle, ie on the evaluations of economic competence of governments. As mentioned, it can be argued that if this process is to produce a stable and predictable result, such an evaluation must be based on a certain level of knowledge and understanding of how a market economy and democratic institutions work. If this is the case, one should, as a minimum, expect certain systematic differences with respect to how voters with a lifelong experience with the institutions of a market economy and a liberal democracy rate the economic competence of the government at a given point in time, compared to how voters without such experiences rate the same government's economic competence.

2.4 The recipient country – the four assumptions [A1] - [A4] of the introduction

Israel is a complex society and space only permits a few notes. They will be concentrated on the four assumptions of the introduction.

[A1] Natives and immigrants have the same ethnic background. The complex ethnic composition of the Israeli Jews is the main problem for this assumption. The basic distinction is between Ashkenazim (mainly from Eastern Europe) and Sephardim (mainly from Arab countries). Data allow us to control for this distinction as mentioned in 3.3. However, there are other potentially relevant differences (such as the intensity of religion) we are unable to control for.

[A2] Immigrants come from an eastern *socialist dictatorship* to a western *market democracy*. The main objection is that in the first few decades as a new country Israel was one of the most socialist economies in the West, with heavy trade regulation and a great deal of public and cooperative ownership (see Chapters 8 and 10 in Hillman, 1991). To a large extent Israel was dominated by the “labor establishment” of the Labor Party, the Histadrut and the Kibbutz movement.¹³⁾

Assumptions [A1] and [A2] interact. The Labor *establishment* was built by Ashkenazim, who were the largest group before the war of independence (1948). The largest wave of Sephardim arrived in connection with the war. They had less education, and became *outsiders* relative to the establishment, ie the Ashkenazim *insiders*. To a remarkable extent Israel had a reverse socio-political structure with a socialist establishment of Ashkenazim voting Labor, and a right wing of relatively poor Sephardim voting Likud. However, already in 1977 Likud won power and in the 1980s the country went through

13. Both the Trade Union Histadrut and the Kibbutz Movement were major owners of industry, trade, banks, etc. By the traditional Marxist definition (ownership to the means of production) Israel was a socialist country as late as the mid 1970s. Today the main difference between the degree of socialism in NW Europe and Israel is that much land is publicly owned in Israel.

a major liberalization and a large wave of bankruptcies in the cooperative sector, which changed the economy to become a more typical western economy. Also, the two groups gradually merged.

[A3] Immigrants want to be and will be fully absorbed. This is probably the least problematic of the four assumptions. Israel has the national aim of being the home of all Jews, and therefore makes a large effort of receiving and integrating immigrants. It is still not easy to be absorbed in a new country, of course, but there is little discrimination, and most Israelis know the problems of immigration from their own family.

Finally, [A4] assumes that the economic evaluation function estimated generalizes. Two objections will be mentioned: First, the function has (at least) one Israeli variable that does not generalize, and it misses a few others, we would have liked to include. What we suggest generalizes is the difference (not) found between the functions of natives and immigrants and the (high) speed of adjustment (γ). Second, it is clear that the economic evaluations are one part of the vote function only. As mentioned in the introduction it is possible that the economic evaluation function is relatively less important in Israel. Therefore, it might be a little problematic to generalize.

Having stated these objections, we want to add that it is difficult to find a data set that fulfills the assumptions [A1] to [A4] better than the one we use.

3. Data and variables

The data come from two pre-election polls conducted a few days prior to the Israeli parliamentary elections held in 1992 and 1996, respectively.¹⁴⁾ The polls did not include people living in kibbutzim or in the territories under military administration.¹⁵⁾

3.1 *The structure of the data*

Politically, the two situations in which the polling occurred were mirror images of each other. In 1992, the incumbent government was led by Likud, with Yitzhak Shamir as prime minister. It was challenged by the Labor Party led by Yitzhak Rabin. In 1996, the incumbent government was led by the Labor Party, with Shimon Peres as prime minister after the assassination of Yitzhak Rabin in 1995. It was challenged by Likud under the leadership of Benjamin Nethanyahu. In both elections the incumbent government lost and was subsequently ousted.¹⁶⁾

Table 2 gives the main structure of the data. Natives and old immigrants constitute almost 90% of the respondents. It appears that only 5% of the respondents have been in the country less than 10 years, so it is difficult to estimate the reactions in the first couple of years.

14. The data sets were obtained from the Social Science Data Archive, the Hebrew University, Jerusalem. The data were collected by Asher Arian and Michal Shamir, see their (1999).

15. Referred to as the “West Bank” or “Judea, Samaria, and The Gaza Strip”. Incidentally, but conveniently from the point of view of our research interest, this excludes a group of immigrants from the US which makes up a part of the settlers in the territories.

16. The two elections took place under two different electoral systems. The electoral system of 1996 introduced a separate ballot for the office of prime minister. This may have contributed to increasing the focus on the economic competence on the candidates running for prime minister at the expense of the focus on the parties.

Table 2. The structure of the data

Year of election	Immigrants									Natives		All
	New: $t \leq 10$			$10 < t < 25$			Old: $t \geq 25$			N	Share	
	N	Avr t	Share	N	Avr t	Share	N	Avr t	Share			
1992	41	2.2	5.3%	61	19.6	7.8%	192	40.3	24.6%	485	62.3%	779
1996	43	4.6	5.3%	33	19.6	4.1%	209	43.5	25.9%	522	64.7%	807
Merged	84	3.4	5.3%	94	19.6	5.9%	401	41.9	25.3%	1007	63.5%	1586

Note: The table covers the respondents used in the regressions. Figure 3 also includes respondents who do not answer all questions analyzed.

Figure 3. The age of immigration of the respondents at the two polls (merged)

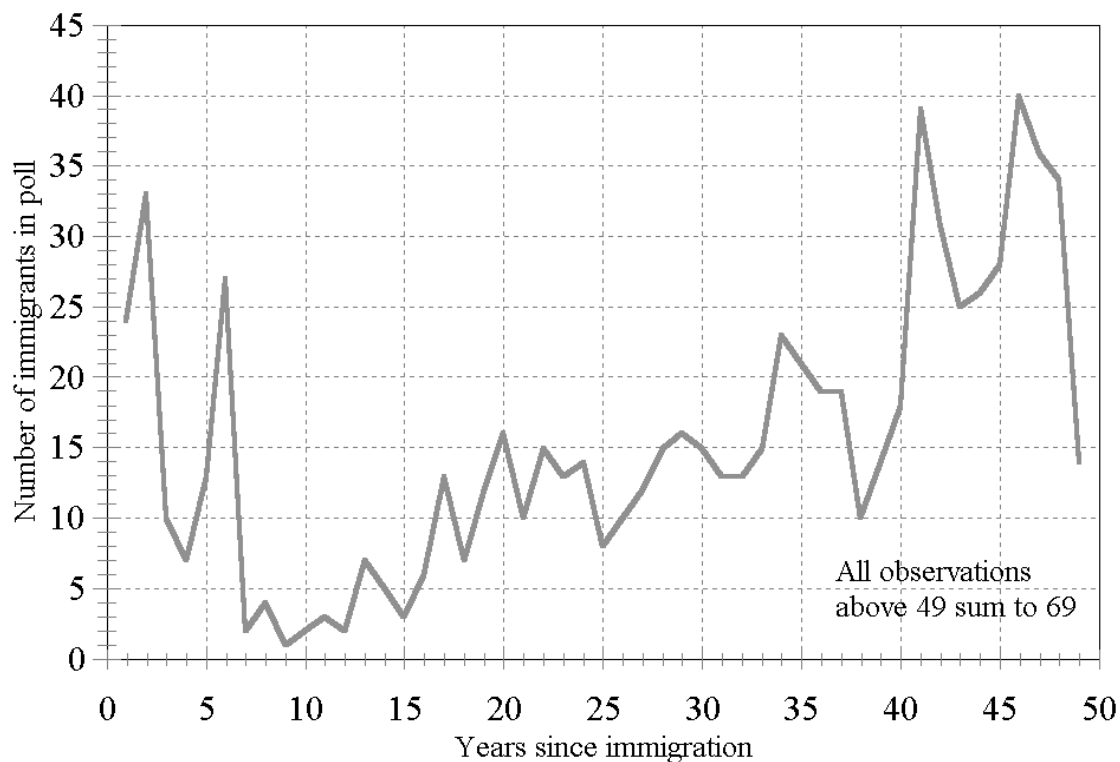


Figure 3 shows the distribution of immigrants in the two samples (merged) according to the time since entry into the country. The main problem is that the group which has spent 7-12 years in the country is small. However, the group that has arrived within the last 6 years is reasonably large.

3.2 The fraction of “choosers” and “non-choosers”

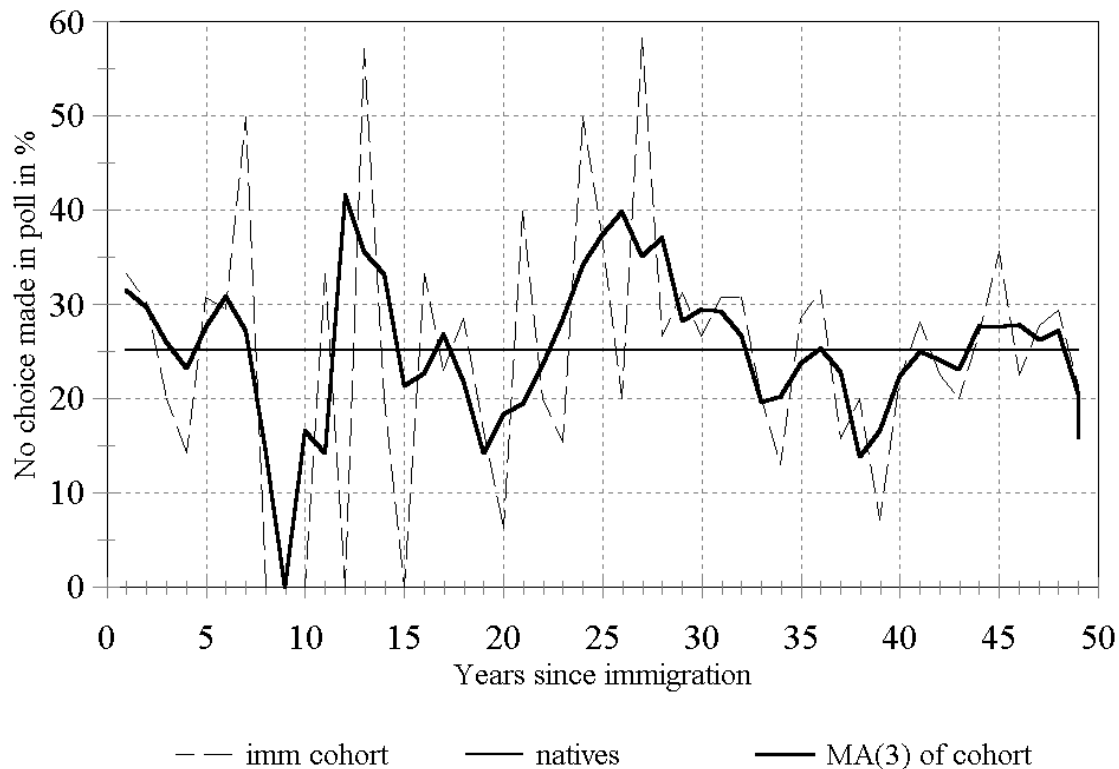
The dependent variable is the recoded answer of the respondents to the question: *Which party do you consider most capable of handling the economic situation?* There are five response categories: (1) Likud, (2) Labor, (3) both, (4) neither, and (5) don't know/no answer. The last three answers all represent people who cannot choose.¹⁷⁾ We therefore term those who answer in the first two categories

17. Category (5) is a rare choice, and there is no trend in the relative size of (3) and (4).

the *choosers* and those who opt for the last three categories the *non-choosers*.

Figure 4 analyzes the fraction of non-choosers, Φ . The natives have $\Phi^n \approx 25.1\%$, indicated as a vertical line. The fraction of non-choosers for immigrants is shown as a function of t , the time since entry, $\Phi^i = \Phi^i(t)$. The two Φ^i -curves drawn oscillate around Φ^n , and no trends are visible. The fraction shows no sign that newcomers feel less able to choose than natives.¹⁸⁾

Figure 4. The fraction of non-choosers for natives and immigrants as a function of the time since the entry into the country



The dependent variable is defined only for choosers, giving a two-point scale (see Table 3). Respondents opting for Likud and Labor were coded as 1 and 0 respectively. Therefore the data demand a binary choice estimation technique. We use probit regressions.¹⁹⁾

3.3 Explanatory variables

Table 3 gives the variables chosen as explanatory variables. The first six variables are the background set, \mathbf{x} , containing the usual variables as age, gender, education and income. In addition we have included a poverty indicator, which is the number of persons per room. The last background variable is the control for ethnic background. As it gives a substantial effect, we also ran some regressions for each of the two groups separately. It appeared that the control variable does work rather well.²⁰⁾ The last

18. We also ran a series of tests to confirm the impression. They failed to show trends and shifts.

19. Linear probability models estimated gave essentially identical results. They will not be presented.

20. We ran the estimates of Table 5 for the two groups separately. The result for the Ashkenazim did not differ significantly from the result for all respondents for any of the remaining variables, but the one for the Sephardim had a larger effect of age and a smaller effect of education.

two variables are: (7) the ideological “identification” variable, and (8) egotropic economic evaluations.

Table 3. Variables used in regressions

y	Best able to deal with the economic situation: 0 = Labor, 1 = Likud
x	(1) Age: In years, increasing scale of 9 points
	(2) Gender: 0 = male, 1 = female
	(3) Education: Years of schooling, increasing scale of 5 points
	(4) Income relative to average: 1 = much above, 2 = above, 3 = average, 4 = below, 5 = much below
	(5) Poverty indicator: Density of dwelling, ie persons per rooms in dwelling of respondent
	(6) Ethnic background: 0 = Sephardim, 1 = Ashkenazim
	(7) Ideology: 1 = definitely capitalist, 2 = capitalist, 3 = socialist, 4 = definitely socialist
	(8) Egotropic evaluation of current personal situation on increasing 9 point scale
	(9) Incumbency: 0 if Labor rules before the election (1996) and 1 if Likud rules (1992)

We have included three income related variables: (4), (5) and (8). They turn out to have little multicollinearity and in several regressions all three become significant.

Note finally that variable (9) can be included only in the regressions, where the data for two periods are merged. We interpret the coefficients as an incumbency effect, but strictly speaking the variable accounts for *all* differences between 1992 and 1996, including differences in the (sociotropic) economic situation.

4. Findings

The main findings are summarized in Tables 4 to 7. All results presented are probit regressions. The coefficients are marginal effects. They give the average change in the probability of supporting Likud for one step upward for each of the variables listed in Table 3.

4.1 *Estimated evaluation functions using Model (1)*

Table 4 compares natives and all respondents. The coefficients are remarkably stable across all four columns, though the level of significance rises dramatically from left to right, by a strange fluke. The results for the two periods are rather similar. This permits us to merge the observations as is done in Table 5. The merged data have enough observations to allow an estimate for immigrants alone.

Three effects are stable and significant throughout: One additional step of education decreases the likelihood of support for Likud by 6-7%. The poverty indicator has the reverse effect. One person more per room increases the probability of supporting Likud by 11-15%. Finally, it appears that Ashkenazim are more critical toward Likud than Sephardim. Here the effect is no less than 18%. Also, the ideological factor is negative and mostly significant. It is interesting that age, gender and income have small coefficients. The only variable that changes sign depending upon the government in power is the egotropic economic evaluation.

It is well known from polls that immigrants have a stronger tendency to vote against the government – that is any government – than natives. However, our results indicate that this is only a

weak effect as regards the economic factor in the vote.²¹⁾

Table 4. Evaluation function for natives and all respondents – the two years separately

Probit regression	Results for 1992 – Likud gov.				Results for 1996 – Labor gov.			
	Natives		All		Natives		All	
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Age	-0.006	0.52	-0.007	1.16	-0.005	1.53	-0.012	7.94
Gender	-0.026	0.56	-0.041	1.32	-0.039	2.42	-0.014	3.17
Education	-0.073	2.42	-0.064	3.97	-0.054	4.17	-0.064	8.55
Income	0.021	1.01	0.019	1.23	0.015	1.57	0.015	4.18
Poverty proxy	0.126	2.14	0.121	2.39	0.171	2.71	0.158	6.54
Ethnic group	-0.205	3.85	-0.190	3.54	-0.146	2.98	-0.152	7.24
Ideology	0.007	0.27	<i>-0.031</i>	<i>1.91</i>	-0.024	2.80	-0.054	7.76
Egotropic eval.	0.028	1.57	0.020	1.44	-0.052	3.36	-0.053	7.92
N	485		779		522		807	
Log Likelihood	-302		-482		-355		-465	
LR Index	0.096		0.095		0.118		0.141	

Note: The coefficients are marginal effects – hence there is no constant. Significant coefficients are in bold at the 5% level and in italics at the 10% level.

Table 5. The evaluation function for the merged data set

Probit regression	Data for 1992 and 1996 merged					
	Natives		Immigrants		All	
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Age	-0.006	1.23	-0.005	2.72	-0.011	4.81
Gender	<i>-0.039</i>	<i>1.91</i>	-0.011	1.33	-0.031	3.11
Education	-0.065	4.57	-0.058	4.90	-0.067	6.33
Income	0.018	1.52	0.023	2.78	0.018	2.65
Poverty proxy	0.153	2.70	0.113	3.66	0.134	4.26
Ethnic group	-0.181	3.32	-0.181	4.39	-0.180	5.09
Ideology	-0.009	0.87	-0.112	4.56	-0.042	5.20
Egotropic eval.	-0.018	2.80	-0.021	5.16	-0.019	5.48
Incumbency	0.025	1.07	-0.024	2.43	0.005	0.48
N	1007		579		1586	
Log Likelihood	-625		-326		-962	
LR Index	0.093		0.149		0.105	

Note: See Table 4. The incumbency dummy is added.

21. We have also tried to interact the incumbency dummy with the other variables. We did find a small interacted effect on the egotropic variable, but it had no effect on the other coefficients.

The key point to note is that the estimates for immigrants and natives are remarkably alike. Only the coefficient to ideology appears to be different. It is not surprising that immigrants rely more on ideology than natives. The ideological factor gives 10% less probability for supporting Likud.

The great similarity of the pattern for immigrants and natives suggest that we will have difficulties estimating the adjustment pattern using Models (3) and (4).

4.2 Estimates using Models (2) to (4)

Table 6 shows the results for the two periods – once more they are similar, and in Table 7 the data are merged. The two sections of Table 6 and the corresponding section of Table 7 tell the same story.

Table 6. Allowing for differences between natives and immigrants and for a learning process

Probit regression		Results for 1992 – Likud gov.				Results for 1996 – Labor gov.			
		Only level		Adjustment		Only level		Adjustment	
		Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Plain	Age	-0.006	0.51	-0.005	0.42	-0.005	0.45	-0.005	0.44
	Gender	-0.025	0.55	-0.024	0.56	-0.037	0.84	-0.036	0.83
	Education	-0.071	2.49	-0.075	2.77	-0.051	2.09	-0.051	2.05
	Income	0.020	0.98	0.019	0.95	0.014	0.65	0.014	0.66
	Poverty proxy	0.122	2.02	0.113	0.95	0.162	2.49	0.162	2.05
	Ethnic group	-0.199	3.57	-0.197	3.46	-0.139	2.51	-0.139	2.44
	Ideology	0.006	0.26	0.006	0.23	-0.023	0.98	-0.023	0.97
	Egotropic eval.	0.027	1.49	0.029	1.63	-0.049	3.36	-0.049	3.51
Interacted with d, the immigrant dummy	Constant	0.216	0.58	0.109	0.52	0.357	0.82	0.369	0.83
	Age	0.020	1.15	0.016	0.97	-0.018	0.95	-0.017	0.75
	Gender	-0.039	0.48	-0.020	0.44	0.061	0.78	0.058	0.73
	Education	0.015	0.34	0.012	0.57	-0.014	0.32	-0.015	0.34
	Income	-0.006	0.17	-0.002	0.12	0.015	0.41	0.013	0.33
	Poverty proxy	0.014	0.19	0.016	0.41	-0.035	0.35	-0.037	0.37
	Ethnic group	0.034	0.40	0.012	0.27	-0.068	0.80	-0.067	0.80
	Ideology	-0.121	2.48	-0.061	0.97	<i>-0.103</i>	<i>1.86</i>	<i>-0.100</i>	<i>1.81</i>
Egotropic eval.	-0.022	0.84	-0.014	0.84	-0.008	0.31	-0.008	0.33	
γ , adjustment speed		-	-	0.006	0.70	-	-	0.000	0.06
N		779		779		807		807	
Log Likelihood		-474		-473		-460		-460	
LR Index		0.110		0.110		0.151		0.151	

Note: See Table 4. For the adjustment parameter, we report the value of the estimated parameter rather than the marginal effect, as the estimated parameter is easier to interpret.

The coefficients to the interacted variables are insignificant except for ideology. When Models (2) and (3) in Section 2.2 are considered it is obvious that the same variables enter twice; both plain and interacted with the immigrant dummy, d . This gives collinearity, and hence a reduction in significance levels. However, the coefficients to the plain variables remain stable compared to previous tables.

Tables 6 and 7 give three estimates for the adjustment speed γ . It is -0.006, 0.000 and -0.003 respectively. These estimates are far from significance. Natives and immigrants are so similar in the relevant respects that no adjustment takes place, and no adjustment speed can be estimated. The one coefficient that differs for natives and immigrants is ideology. Ideology is more important for immigrants. However, ideology appears to interact with the adjustment parameter, so that immigrants learn to take ideology less seriously over time.

Table 7. Estimates of (2), (3) and (4) for all respondents merged

Probit regression		Starting point estimated				Start at zero	
		Only level		Adjustment		Adjustment	
		Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Plain	Age	-0.006	0.75	-0.006	0.77	-0.006	1.09
	Gender	-0.037	1.21	-0.037	1.19	-0.031	1.27
	Education	-0.063	3.34	-0.065	3.26	-0.068	3.09
	Income	0.018	1.20	0.018	1.20	0.019	2.15
	Poverty proxy	0.148	3.28	0.147	3.45	0.136	5.07
	Ethnic group	-0.174	4.48	-0.175	4.58	-0.178	4.34
	Ideology	-0.009	0.53	-0.009	0.53	-0.044	2.69
	Egotropic eval.	-0.018	1.83	-0.016	1.68	-0.020	2.14
	Incumbency	0.024	0.73	0.021	0.78	0.008	0.35
Interacted with d, the immigrant dummy	Constant	0.228	0.83	0.209	0.78	“Clean slate” definition: $\alpha + \beta = 0$ for $t = 0$	
	Age	0.001	0.04	0.006	0.59		
	Gender	0.025	0.47	0.019	0.45		
	Education	0.000	0.01	0.001	0.03		
	Income	0.007	0.27	0.002	0.08		
	Poverty proxy	-0.027	0.45	-0.025	0.50		
	Ethnic group	-0.019	0.33	-0.019	0.41		
	Ideology	-0.111	3.11	-0.083	1.79		
	Egotropic eval.	-0.005	0.26	-0.005	0.41		
Incumbency	-0.050	0.88	-0.034	0.67			
γ , adjustment speed		-	-	-0.003	0.71	4.934	0.44
N		1586		1586		1586	
Log Likelihood		-952		-950		-961	
LR Index		0.116		0.116		0.107	

Note: See Table 6.

The last regression in the last table is the estimate of Model (4), where immigrants have a “clean slate” when entering. That is, for $t = 0$, all parameters ($\alpha + \beta$) are forced to be zero for immigrants. The regression finds a large, but highly insignificant, adjustment speed $\gamma = 4.9$. If the reader consults Figure 2 above it appears that this implies a full adjustment within 1 year.

We have thus failed to find signs that immigrants have any problems learning the economic evaluation function of natives – a result in the spirit of Wittman (1995), who argues that people always

know enough to act in a rational way.

4. Conclusion

The empirical results reached are unusually easy to interpret: we have found very small differences in the economic evaluation function between native-born Israelis and immigrants. The only difference is that ideology matter more for immigrants. The newest groups of immigrants are small relative to the sample, but the data has 5% immigrants, who have been in Israel less than 7 years. They seem to have absorbed the economic voting pattern of the natives.

We conclude that when voting patterns in the post communist countries of Eastern and Central Europe are volatile it is because the economic system and the political institutions are volatile, not because it is difficult for the voters to learn to behave rationally.

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