

Diversity Cleaves?

Public Goods Provision and Soviet Emigration to Israel*

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Abstract

The conventional wisdom holds that diversity is a significant hindrance to collective action and the provision of public goods. Empirical support for this view comes primarily from the observation that measures of diversity are negatively correlated with provisions of public goods in the cross-section. The generally held conjecture is that this negative relationship is true within countries over time as well. I address this belief directly by exploiting a natural migration experiment and a unique IV strategy to causally identify the impact of diversity on public goods expenditures and revenues. With the political collapse of the Soviet Union in the fall of 1989, mass migration to Israel increased the population there by roughly seven percent over two years. This led to substantial changes in diversity in local communities, with some becoming more homogeneous and others becoming more diverse. While cross-sectional estimation produces the typical negative relationship, this approach systematically biases downward the estimate. The cross-sectional estimate is informative, but about historical institutions and mechanisms which may no longer be active. Using fixed effects and IV estimation, I find that local authorities do reduce expenditure on public property, but not on other forms of expenditure. On the revenue side, local authorities increase their use of direct taxation in response to increased diversity, rather than fees for service. The results suggest that while cross-sectional estimation yields valuable insights about the degree of social fragmentation in the past, these estimates are poor proxies for predicting the impact of future changes in diversity.

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*This version is a substantially revised version of an early draft, "Does Diversity Divide?". The word cleave is one of a few verbs in the English language that means one thing (to hew together), and its exact opposite (to split apart). All errors are my own.

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1 Introduction

The role diversity plays in the provision of public goods has been an important issue for many of the social sciences. The provisions of public goods, and collective action more generally, have been challenging problems to understand, given that individual incentives are often misaligned with social incentives. While theory has tended to focus on forces that either exacerbate or alleviate the collective action problem, the empirical observation has been that while some collective action is often observed, the provision of public goods seems to depend greatly on the specific characteristics of a given community.

The difficulty in generalizing the important forces driving the provision of public goods has led to researchers stressing different elements of diversity in trying to understand when collective action is likely to fail. Studies have looked at a variety of cleavages in society, including age, religion, income, ethnicity, and race. The general findings support the view that increased diversity is correlated with lower provisions of public goods, though the mechanisms behind these failures are less clear.

The conventional wisdom emphasizes that there is robust cross-country evidence that suggests individuals are more comfortable with fiscally redistributive policies when a country is more socially cohesive, and racial or ethnic diversity has been identified as a key source of social fracture. While cross-country evidence is relatively robust, generalizing to fiscal policy within a country over time does not immediately follow.

At best, cross-country evidence is suggestive, which is unsatisfactory in a world with increasing diversity and mass migration. If there is a true causal force leading from increased diversity to diminished provision of public goods, then a significant reorganization of societies will be necessary in an increasingly diverse world. To uncover the causal relationship between diversity and the provision of public goods, this paper considers a natural experiment following the collapse of the Soviet Union.

In 1989, after the Soviet Union crumbled, Israel experienced a significant shock to diversity brought about by a mass migration episode. The wave of migration was intense in both size and swiftness. Nearly 400,000 immigrants — nearly all from the former Soviet Union — entered Israel in 1990 and 1991, compared to only a couple of thousand in the years preceding. This initial shock represented about seven percent of the population in Israel at the time. Over the entire decade, nearly a million Soviet Jews would eventually move to Israel. The social and political ramifications of this immigration experience are still being felt today.

This migration episode has a number of features that make it an ideal natural experiment for studying the impact of diversity on public goods provision. Besides the swiftness and size already mentioned, the migration phase was unexpected. The collapse of the Soviet Union occurred

suddenly, and for many Soviet Jews, the opportunity to leave Russia was unplanned. Given the political and social uncertainty following the collapse, emigration was a new and necessary option for many Soviet Jews. From the point of view of empirical identification, the collapse of the Soviet Union was uncorrelated with local conditions in Israel, and represents an exogenous migration shock to Israel.

Furthermore, this was the second large Soviet migration shock to hit Israel in the last half of the 20th century. Following international outcry in response to the social repression brought about by the Dymshits–Kuznetsov Hijacking Affair in 1970, the Soviet Union temporarily relaxed emigration rules. This led to significant emigration of Soviet Jews to Israel from 1972 to 1975, representing an increase of about four percent of the Israeli population. This emigration wave and settlement pattern created networks of Soviet Jews in Israel, which were especially strong because the migrants spoke little Hebrew. To deal with concerns about settlement patterns in 1990 being driven by unobservable characteristics, I construct instruments for changes in diversity based on actual settlement patterns in the 1970's.

The settlement patterns in the 1990's are correlated with settlement patterns in the 1970's because of network effects, but the 1970's settlement patterns are uncorrelated with the economic environment in the 1990s. The first stage is thus driven by the magnitude of the immigration wave and immigrant network effects, while the exclusion restriction depends upon 1970's settlement patterns being uncorrelated with local factors in 1990 after accounting for time-invariant locality effects.

Focusing on local authorities in predominantly Jewish areas, I construct a measure of ethnic fragmentation based on geographic branching. The major ethnic division in Israel is between the Ashkenazi and the Mizrahim. The Ashkenazi have geographic roots in Western Europe, and make up the majority culture in Israel. The Mizrahim are composed of a variety of different Jewish traditions, and are often associated with Jews from Muslim or Middle Eastern cultures. The history of Judaism, with its exodus and return, has been shaped by the traditions and cultures that were developed while in exile in countries around the world. This geographic branching manifests itself in different linguistic, culinary, and liturgical practices. What is important to note is that the society itself has identified ethnicity as a salient social difference. All cultures struggle with their own sense of in-group and out-group, and the drawing of social boundaries. In this sense, ethnic divisions identified in this paper have been well documented within the Israeli culture itself, and represent an essential dimension of social fragmentation.

Using budgetary data from Local Authorities in Israel, ranging in population size from 5,000 to over 500,000, I consider the impact of ethnic diversity on both expenditure and revenues, as well as disaggregated categories of each. Consistent with previous approaches, cross-sectional estimates of the impact of diversity on local government spending and revenues suggest that diversity

and public goods are inversely related. These cross-sectional results are robust to additional controls, following the usual approach to mitigating omitted variable bias. In this regard, the Israeli experience is consistent with earlier studies in other countries around the world. The typical interpretation would therefore be that ethnic diversity in Israel is a significant hindrance in the provision of public goods.

However, the unique features of the migration wave allow for a further investigation. First, most results in the literature are based on pooled cross-sectional estimation because diversity changes slowly over time, nullifying any effective use of fixed effects estimation. Over shorter windows of analysis, diversity does not change sufficiently to allow for separate identification of the impact of diversity. Over longer periods, diversity may change sufficiently to allow for fixed effects estimation, but so would other aspects of society, nullifying the effectiveness of FE accounting for important omitted factors. In the present context, there are notable changes in diversity in a short period of time, allowing for effective use of fixed effects estimation.

Second, while locality fixed effects improves the empirical approach, concern over identification still lingers if time-variant omitted factors matter, which is likely the case. To address these concerns, the IV strategy discussed above is employed.

The results for both FE and IV estimation are notably different from the cross-sectional estimates, providing support to the general concern that cross-sectional identification of the impact of diversity on public goods is likely contaminated by omitted factors. The cross-sectional estimate systematically biases downward the estimated impact when compared to FE and IV estimates, consistent with the view that cross-sectional estimates are informative, but informative about the impact of historical status quo institutions, which may not be relevant in the face of future changes to diversity.

In general, local authorities do reduce spending on public property expenditure, but not on other forms of public spending. When all other spending is aggregated together, in fact, spending increases (weakly) with diversity, resulting in no net effect for overall spending. On the revenue side, local authorities increase their use of direct taxation in response to increased diversity. So while reduced investment in public property is consistent with the fragmenting view of diversity, the use of direct taxation, rather than more "private" forms of revenue generation such as licenses or fees for usage, is consistent with a "public" redistributive mechanism that increases contributions independent of usage. This suggests a far more complex relationship between provision of public goods and changes in diversity, which is completely absent in cross-sectional evidence.

Together, these results imply a significant bias in OLS estimation, which is likely related to historical circumstance. If institutions were historically constructed based on underlying social fragmentation, and diversity changes slowly over time, then OLS estimates on pooled or cross-sectional data will include both the true current effect of diversity on public provision along with

selection bias in the form of historical institutions, resulting in an estimate that is inappropriate for policy questions related to current changes in diversity.

In Israel, the status quo bias of political institutions may deteriorate faster than in other countries because of the inclusive voter registration process. The right to vote is granted to every resident of a Local Authority, regardless of citizenship, as long as the resident is listed on the population registry and is over 18 at the time of the election. Inclusion in the political process can thus reduce the importance of historical forces.

The paper is organized as follows. In Section 2, related literature is discussed, before turning to motivating theory in Section 3. Background of the shock and a discussion of ethnic fragmentation in Israel is presented in Section 4. Section 5 discusses the empirical design and implementation. The data is described in Section 6. Results are presented in Section 7, while Section 8 concludes.

2 Related Literature

A large body of literature grappling with the question of diversity and public goods exists, and a complete discussion of the related literature is beyond the scope of the present paper. [Alesina and Ferrara \(2005\)](#) provide a fuller treatment in their survey on ethnic diversity and economic performance. What distinguishes the present work from the previous literature is the attempt to empirically identify causality, and the application of this strategy to a variety of public goods covering most local government expenditures and sources of revenue within a country.

The correlation between diversity and growth outcomes has driven much of the interest in the literature. [Easterly and Levine \(1997\)](#) jump-started the literature by looking at ethnic-linguistic fractionalization (as measured by language) and cross-country growth patterns. They found a strong negative correlation, particularly for African countries. A number of papers followed up this observation by carefully documenting micro observations within African countries and villages, again finding similar negative correlations between ethnic fractionalization and public goods provisions. [Easterly \(2001\)](#) updates the analysis to include measures of institutional quality, and finds that good institutions counterbalance the negative effect of ethnic diversity, though it raises further questions about the endogeneity of institutions and ethnic fragmentation.

The macro literature captured additional interest by tying the diversity of nations to the generosity of their welfare systems. In the most well-known study, [Alesina et al. \(2001\)](#) argue that one of the key determinants of the lack of development of a European-style welfare state in the U.S. can be found in the racial diversity of the country. All-encompassing welfare states require social cohesion from cradle to grave, which is easier to maintain if a country is more homogeneous. In this view, the difference between welfare systems in the U.S. and Sweden can be explained by the greater homogeneity of the latter.

The paper closest to the present study is [Alesina et al. \(1999\)](#) who study ethnic diversity and public goods in a cross-section of U.S. cities. This provides the clearest parallel since the focus is on the provision of local public goods, which is more likely to be subject to sorting as first hypothesized by [Tiebout \(1956\)](#). The authors attempt to control for unobserved forces driving the negative correlation observed in the cross-section by using a panel, but even with time-series data there is still concern that unobserved factors that change over time could be biasing the results.

A related paper by [Alesina et al. \(2004\)](#) attempts to tackle both causality and endogenous sorting behavior in studying the optimal size and characteristics of political boundaries in the presence of diverse communities. While they don't look at the variety of public goods provisions as in [Alesina et al. \(1999\)](#), they do study changes in school jurisdictions over time.

From a methodological perspective, the closest paper is [Boustan \(2010\)](#). Building off an identification strategy proposed by [Card \(2001\)](#), she uses the black migration experience in the U.S. after World War I to disentangle “white flight” from other causes of white suburbanization. Using a conceptually related IV of predicted migration patterns based on historical settlement patterns, she is able to disentangle the impact of black migrants into a neighborhood from other forces driving white residents away (such as changes in housing prices). While her constructed instruments depend upon predictions for both push and pull forces, here the collapse of the Soviet Union is used for push-side exogeneity coupled with previous settlement pattern to deal with pull-side exogeneity. Related network-based instruments have been employed by [Munshi \(2003\)](#) to study labor market outcomes for migrants.

Finally, the immigration wave in Israel after the collapse of the Soviet Union has been used before to study economic outcomes. [Friedberg \(2001\)](#) studies the impact of immigration on the labor market. Extensive data collected by the Israeli government on immigrants included information about the occupations of immigrants while in Russia, allowing for a cleaner estimate of the impact of immigrants on native wages. [Gandal et al. \(2004\)](#) use the migration experience to test the Rybczynski Theorem by looking at the change in production structure in response to the migration wave, which included a significant number of highly educated migrants.

3 Theory

There are a variety of theories linking diversity and economic outcomes, most of which emphasize a few main mechanisms. The most common mechanism suggested is simply one of preferences. Ethnic diversity enters individual preferences directly, as people prefer to be around others from their own group, and diversity in terms of inclusion of members from another group lowers utility. Taste for homogeneity theories has trouble explaining what are the salient features of similarity, or how this features may change over time.

A second mechanism emphasizes the difficulty of collective action, particularly issues of monitoring and enforcement when free-riding behavior is possible. This mechanism assumes nothing about the taste for diversity, but if there are market imperfections, it may be less costly to coordinate with people who share a type.¹ Affiliation with a group can expand the range of possible punishments, while increasing benefits from cooperative behavior. The expansive literature on collective action often emphasizes the relative costs and benefits of group coordination, although understanding group formation is still poorly understood.

While the first two mechanisms emphasize the costs of diversity, a third competing mechanism emphasizes potential benefits from diversity. Nearly all of the empirical literature confirms the negative relationship between diversity and various economic outcomes, and hence the majority of the theoretical literature has been devoted to explaining why this negative correlation exists. There are, however, reasons to think that diversity can improve economic outcomes, and most economic models build in some benefit from diversity, unwittingly or otherwise - capital and labor in a production function being a simple example.

Monopolistic competition models use standard Dixit-Stiglitz preferences and production functions to capture the positive aspect of diversity. Having a variety of inputs or a variety of consumption goods increases economic performance in these models, and more diversity is always preferred in the basic structure. It is natural to assume that integrating variety also comes with costs, leading to a conclusion that an optimal amount of diversity exists.

Related models of firm organization or innovation emphasize that the variety and diversity of ideas can improve economic outcomes, although there are additional costs associated with incubating this diversity. In general, a more nuanced model that captures both the potential benefits as well as the costs of diversity seems preferable to assumptions about tastes for diversity.

To help set expectations and interpretations of the empirical results, consider the following simple stylized model proposed by [Alesina and Ferrara \(2005\)](#). The output produced in the economy depends upon the total number of individuals in the economy, different types of individuals, and amount of inputs used:

$$Y = Nf(x; K) \tag{1}$$

where N is total population, x is a fixed factor of input, and K is the number of different types in the economy. Assume a standard constant returns to scale production function with diminishing returns to a factor, $f_x > 0$, $f_{xx} < 0$, $f_K > 0$, and $f_{KK} < 0$. The benefit from diversity is captured in the positive first derivative of f with respect to k . Finally, assume that there is a complementarity in production, $f_{xK} > 0$.

¹[Miguel and Gugerty \(2005\)](#) argue that social sanctions within groups are easier to impose than across ethnic groups. They explore this mechanism empirically and find that in more ethnically fragmented areas, communities impose fewer sanctions on parents who fail to contribute to local school funding.

Individual preferences depend on consumption, both of private and public goods. The utility derived from consumption of the public good depends upon the number of types as well as the amount of the public good consumed. The dependence on type captures either of the first two mechanisms mentioned above. It could simply reflect a dislike of having to share with a different type. It could also reflect the fact each type has an ideal public goods preference, but an increase in the number of types involved in producing the public good results in an increase in the expected difference between own preference and group outcome, an interpretation first suggested in [Alesina and Spolaore \(1997\)](#).

The utility function is given by:

$$U_i = u(c_i) + v(g, K) \quad (2)$$

The allocation between public and private goods depends on the tax rate in the economy such that

$$\begin{aligned} g &= t * y \\ &= t * Nf(x; K) \end{aligned} \quad (3)$$

In a social planner problem, the optimal allocation solves the following problem:

$$\max N[u(c_i) + v(g, K)]$$

subject to

$$\begin{aligned} Nc + g &= Nf(x, K) \\ g &= tNf(x; K) \end{aligned}$$

which yields a solution characterized by:

$$Nv_g(g^*, K) = u_g(c_i^*) \quad (4)$$

This equation states that the optimal allocation balances the marginal benefits from taxation (increased consumption of the public good) with the marginal costs of taxation (reduced private consumption).

Given this equilibrium, the question of how the optimal taxation, and hence public goods provision, changes with diversity can be explored further. Applying the implicit function theorem yields the following:

$$\text{sign}\left\{\frac{dt}{dK}\right\} = \text{sign}\{tN^2v_{gg}f_k + Nv_{gK} - (1-t)u_{cc}f_k\} \quad (5)$$

The impact of increased diversity on optimal taxation is ambiguous. While most empirical results have found a negative relationship, the trade-offs discussed above leave open the possibility that an increase in diversity can increase or decrease public goods expenditure. The key trade-off here is between the magnitude of the marginal benefit of public good consumption, which declines with social fragmentation, and the increase in productivity as a result of increased variety in production. The interpretation of the negative correlation observed in the data in light of the above theory is that the disutility of sharing public consumption with those different from you outweighs the gains in productivity from having greater variety in production, resulting in a reallocation of consumption away from public goods towards private goods.

For our present purposes, it is sufficient that diversity impacts both productivity and consumption of public goods, without having to make further assumptions on the theory. With this basic model in mind, we can now turn to the experiment.

4 Background

Starting from its founding in 1948, Israel has repeatedly experienced significant waves of immigration. Prior to statehood, migrants from Europe and the Arab world were common, and these trends continued throughout the modern history of Israel. By the 1980's, however, immigration had slowed significantly. Around one thousand immigrants arrived each month throughout the 1980's.

This relatively consistent trend was broken sharply at the end of the decade, beginning with the collapse of the Soviet Union in the Fall of 1989. Mass migration followed, with the peak of monthly immigration topping 36,000 in 1990 (see Figure 1). Over a two-year period, 1990 and 1991, the population of Israel increased by nearly seven percent (see Figure 2). By the end of 1991, immigration settled down to around 5-10 thousand per month, which continued for most of the rest of the decade. Over the first half of the decade, over 600,000 immigrants from the former Soviet Union arrived, which resulted in an increase of the population by over twelve percent. This represents a truly remarkable immigration experience, in both size and swiftness.

This mass migration can be directly linked to the lifting of emigration restrictions in the Soviet Union, which, when coupled with uncertain and unstable political conditions, led many Russian Jews to emigrate. Israel was a likely destination for a variety of reasons, including the lack of restrictions placed on new immigration. *Aliyah*, or the legal right of return, gives eligible immigrants certain political rights, including assisted settlement, automatic citizenship, and all the rights associated with citizenship.

In a period of marked uncertainty, access to Israel for migrants was highly appealing. The United States, for example, changed their immigration policy towards the Former Soviet Union

(FSU) in response to the political collapse. Prior to 1990, Soviet emigrants were accorded refugee status and migration, if possible, was less restricted. Starting in 1990, a standard quota approach to immigration was used for the Former Soviet Union. This severely limited immigration to the U.S. In addition, the U.S. enacted a policy that targeted “family reunification” and prioritized immigrants who already had close relatives living in the U.S. While 200,000 Soviet emigrants moved to Israel in 1990, only 35,000 emigrated to the United States.

For many countries, immigrants are actively excluded from the political process, either through explicit restrictions or informal barriers. This was not the case in Israel, where immigrants immediately had the right to vote, and political levers were in place from earlier Soviet settlement experiences. The right to vote is granted to every resident of a Local Authority, regardless of citizenship, so long as they are listed in the population registry and are 18 years or older in the election year (Elazar and Kalchheim (1988)). This political access is important for uncovering the impact of diversity and immigration on local public goods. If part of the observed negative relationship between immigration waves and declining welfare states is because of political participation, it would be a mistake to attribute this impact to changing diversity rather than political mechanisms. Immediate access to political levers in Israel is important when studying changes in local government expenditures and revenues, since immigrants need to be able to participate in the political process for this to be a meaningful outcome to measure.

While voting participation at the local level in Israel has been trending down over time, the most significant change in participation came in 1978, when local and national elections were decoupled. After a sharp fall in local government participation in 1978, voting was flat for most of the next two decades, before falling sharply to fifty percent in 2003. Immigration doesn’t appear to be a significant contributor to these trends. In 1989, voting participation in local governments was about fifty-nine percent, compared to fifty-six percent in 1993, but trends were generally flat in the 1980’s and 1990’s as can be seen in Figure 3.

While the migration wave in response to the collapse of the Soviet Union was unique in scope and speed, it wasn’t entirely unprecedented. A similar Soviet migration wave to Israel had occurred in the early 1970’s. Following the Six Days War in 1967, the Soviet Union and Israel cut diplomatic relations. In response to domestic repression, Soviet Jewish dissidents organized a hijacking of a plane headed to Sweden, in what become known as the Dymshits–Kuznetsov Hijacking Affair. The authorities in the Soviet Union responded to this incident by harshly cracking down on Jewish dissidents. As international condemnation grew, the Soviet Union relaxed emigration rules and allowed significant numbers of Soviet Jews to emigrate to Israel.

As can be seen in Figure 1, there was a spike in monthly immigration starting in the early 1970’s, ending around 1975. While the magnitude of this immigration experience is swamped by the 1990’s experience, it was a significant immigration wave at the time, relative to the total

population of Israel. The earlier immigration episode represented about a four percent increase in the population.

This initial Soviet immigration wave created settlement patterns that were relevant for the 1990's immigration experience. Most of the immigrants coming in the 1970's could not speak the official language. Fewer than twenty-five percent of the immigrants had any previous experience with Hebrew, and actual fluency was significantly lower. The immigrants also had different culinary and liturgical practices, and the communities they set up in the 1970's would create network effects that attracted immigrants in the 1990's, who similarly lacked proficiency in Hebrew. These network effects form the basis of the instrumental approach employed below.

The Soviet Jewish immigrants were distinct from native Israelis in a number of important ways. In particular, many of the Russian Jews were highly educated with significant work experience. On average, the typical Russian migrant was more highly educated than the native Israeli. After the migration experience, Israel would have one of the highest PhD per capita ratios in the world. Besides labor market integration, there were significant differences in linguistic and religious characteristics. While Jewish, most of the new immigrants were significantly less religiously oriented than the natives. In addition, the unfamiliar languages increased barriers to the integration of the new migrants into society.

Diversity and Social Cleavage in Israel

It is necessary to identify social cleavages that are important within the culture to understand the impact of social diversity on fiscal redistribution. While certain dimensions of racial or ethnic categories may matter in one society, they may be completely unimportant in another. For the purposes of making general statements about the impact of diversity, one needs to identify the aspects of a culture that represent real division, especially those aspects which the society itself identifies as important. Religion, ethnicity, and class have constituted the most significant cleavages in Israeli society ([Ben Rafael and Sharot \(1991\)](#)).

The ethnic dimension of social fragmentation in Israel has been self-identified as an important source of conflict. Jewish ethnic identity is strongly tied to geographic branching. For centuries prior to the establishment of Israel as a nation-state, Jews migrated throughout the world and melded into different cultures. As part of this process, traditions and religious practices evolved in dialogue with foreign cultures. When Israel was founded as a nation in 1948, the waves of immigrants that followed brought back with them different traditions, languages, tastes, and liturgical interpretations.

The primary ethnic division is between the Ashkenazim and the Mizrahim. The Ashkenazim, which is literally translated as German but has come to more broadly encompass Jews from West-

ern Europe, is considered the dominant ethnic group. The Ashkenazi were the driving political force during the founding of the state, and controlled the levers of power starting in 1948. Mizrahim is used to signify Jews who fall outside of this ethnic tradition. Mizrahim literally translates as Eastern, and it is used to describe Jews who emigrated from predominantly Muslim cultures. While the early ethnic contestations in Israel were neatly categorized with this dichotomy, there are additional competing ethnic divisions, including the Beta Israel (Ethiopian Jews), Soviet and Eastern European Jews, and Jews from North America. It is common to distinguish a Jew in Israel using a country of origin adjective - a Syrian Jew or an American Jew, for example. Geographic branching plays an important role in distinguishing ethnic divisions in Israel, and forms the basis of the ethnic fragmentation variable constructed here.

The salience of these ethnic divisions can be seen throughout the history of Israel. Following the founding of the country, immigrants in the 1950s were evenly split between Ashkenazi and Mizrahim, but the Mizrahim tended to settle in peripheral and less productive areas. These settlement patterns have been attributed to the fact that the Ashkenazim controlled the levers of political power from the founding of the country (Smooha (1993)).

These early settlement patterns and frictions manifested themselves in social discord. In 1959, ethnic tensions spilled over in the form of the Wadi Salib Riots, which pitted the Mizrahim against the Ashkenazi over issues of economic resources, particularly affordable housing. The riots eventually resulted in more public spending on public housing and improved access to public goods for many Mizrahim.

Tensions boiled over again in the early 1970's. A small but vocal group of Mizrahim started the Black Panther movement, demanding increased political and economic rights for the Mizrahim and other disadvantaged groups in Israel. This Black Panther movement forged ties with the Black Panther movement in the United States, as well as anti-apartheid organizations in South Africa. It was the first Jewish movement to explicitly compare the plight of the Mizrahim to Arabs in Israel. In response to resulting riots, the government redirected resources towards impoverished areas, with increased public housing support again significant.

Political expression of social fragmentation was solidified in the 1977 election, as the Likud party won power for the first time in Israel's history. The electoral shift that swept the center-right party into power has been attributed to the changing voting patterns and increased political power of the Mizrahim. The election marked a shift in party affiliation, with explicit ethnic party identification emerging. The ethnic political party became important in the 1980's, particularly the Shas party, which was the first political party in Israel to explicitly identify with an ethnic group. In the 1988 Knesset elections, about eighty percent of Eastern Jews voted for Likud, Shas, or smaller parties on the right, while a similar proportion of Ashkenazi voted for Labor or parties on the left. (Smooha (1993))

The ethnic divisions between Ashkenazi and Mizrahim manifest themselves in typical socio-economic indicators. For example, in 1988 a Mizrahim head of household earned only 64.3% of the income of an Ashkenazi head of household. Furthermore, only 13.3% of Mizrahim had a post-secondary education compared to 33% of Ashkenazi. The ratio of students in college in 1988 was about 4 to 1, even though the overall populations were of similar size. Intermingling of Ashkenazi and Mizrahim was also low. 75% of Mizrahim married within their own ethnic group, and in 1995, only 9% of new brides came from mixed ethnic families. These kinds of outcome disparities reflect the underlying social distance between ethnic groups in Israel during the time period under analysis.

While outsiders tend to think of religious fragmentation as the only social fracture in Israel, as the preceding has suggested, ethnic divisions within Israel are strong, with in-group identification well defined. These ethnic differences are reflected in political voting behaviors and social unrest. Ethnic diversity is an important fracture in Israeli society, and the large migration wave from the Soviet Union following its political collapse exacerbated these ethnic social cleavages.

While Israel has traditionally had a welcoming immigration policy for foreign Jews, the size and speed of this particular immigration phase was challenging for both natives and migrants, who had to learn to integrate culturally, politically, and economically. This process of integration had profound impacts on many aspects of life for both groups and, given the size of the adjustment required, provides an ideal natural experiment for exploring the impact of changing diversity on the provision of local public goods.

5 Empirical Design and Implementation

The majority of work on diversity and provision of public goods depends on cross-section analysis, which is plagued by omitted variable bias. While studies try to include as many control variables as seem appropriate, these are limited by data and an awareness of channels through which provisions of public goods work. The omitted variables problem (OVP) will be a concern in any cross-sectional analysis on the impact of diversity.

While the OVP is well-known, providing a sufficient solution is far more challenging. Adding more control variables is unlikely to yield more convincing results. Where possible, incorporating a time dimension to the analysis might help to alleviate concerns over omitted variables that are invariant over time. While a reasonable approach, progress has been hampered by the fact that diversity changes little over time within a country, and even when there are significant changes to diversity, the forces driving these changes are likely correlated with changes in local public goods.

In the [Alesina et al. \(1999\)](#) study of U.S. municipalities for example, the authors use a single cross-section in 1990 for the primary analysis. They attempt to incorporate a time-dimension, but

are limited by the data. Using 1970 or 1980 census data would fail to capture enough significant changes in measures of diversity to make the analysis worthwhile (since diversity cannot be separately identified from other time-invariant factors). Instead, they incorporate data from 1960, but only for a limited number of areas and a more restricted measure of racial diversity (the census tracked fewer racial categories in 1960). Of course, while looking over a thirty year time horizon solves the problem of racial variation, there are no doubt significant unobserved forces changing over the same period, which confounds inferences about the impact of social diversity. These kinds of issues with data and variation plague most studies that incorporate a time dimension.

To push forward then requires, at a minimum, good data on local government revenues and expenditures as well as significant changes to diversity over time. Furthermore, since a fixed effects specification can only control for unobservables that are time-invariant, the best hope for providing a causal interpretation on the impact of diversity on local public goods requires a treatment policy. The approach employed in this paper relies on just such a natural experiment.

The collapse of the Soviet Union and emigration to Israel provides sufficient variation in diversity over time to make the analysis meaningful. In addition, the exogenous shock of migration from the collapse of the Soviet Union is uncorrelated with local conditions in Israel. The last component of identification exploits pre-existing settlement patterns from an earlier Soviet emigration episode to construct instruments for changes in social diversity.

There are two key aspects to the migration phase that make it a useful natural experiment for studying the impact of diversity on public goods expenditure. First, the push side of the migration - emigration from the Former Soviet Union - was exogenous to the local conditions in Israel. Second, settlement patterns of migrants in Israel were influenced by historical settlement patterns, which can be used to deal with concerns that settlement responded to unobserved characteristics of the local authorities at the time of settlement.

An additional useful feature of the experiment is that because of the size of the migration episode, areas were differentially impacted such that measured diversity in some local political jurisdictions increased, while in other cases measured diversity decreased. The same basic shock altered measures of diversity in different directions, providing sufficient variation to measure the impact of diversity on public goods provision.

Push side exogeneity is clear, as the number of immigrants in Israel prior to the political collapse of the Soviet Union was small, but increased dramatically in the Fall of 1989 as the Soviet Union crumbled. In other examples of large mass migrations, one might be concerned about push side exogeneity, since it is usually something about local characteristics in the landing country that drive the migration wave. In this example, there were significant numbers of emigrants trying to leave the Soviet Union, and there were limited landing options. Put another way, the collapse of the Soviet Union was exogenous from the perspective of local conditions in Israel.

The more pressing issue for identification is a concern that settlement is not random, but rather responding to unobservable characteristics at the locality level. These unobservables could significantly bias the results. I address this issue in two ways. First, using a panel of localities over time, time-invariant characteristics are accounted for in the analysis. A panel approach to estimating the impact of diversity on the provision of public goods has been used in previous studies, but there are reasons to think the approach in Israel's case is likely to produce better inference. Since diversity changes so little within a country over time (in enough localities to ensure statistical validity), panels usually stretch over decades. The longer the time horizon, however, the less likely that important unobservables are time-invariant. In Israel's case, the migration shock represents a significant change to diversity over a short period of time, making it more likely that important unobservables fall into the time-invariant category.

While time-invariant factors are accounted for with locality fixed effects, there is a concern that idiosyncratic forces may be driving both settlement patterns and public good expenditures. For example, the mayor of a locality that had traditionally been hospitable to immigrants, fearing that the area can't handle a large influx of migrants, decides to take steps to minimize immigration flows. This would represent an idiosyncratic change in locality behavior since the area had previously been hospitable to immigrants, and could lead to bias in the estimation of the impact of diversity on public goods expenditure.

To deal with this kind of concern, I construct instruments for actual changes in diversity using the migration networks from the 1970's. The basic idea is to ask what diversity would have looked like if migrants in 1990 had followed the settlement patterns in 1970. Settlement patterns are highly correlated because of the strong network effects based on shared linguistic, culinary, and cultural characteristics. The settlement patterns of the 1970's, however, are unlikely to be correlated with idiosyncratic settlement decisions in 1990, except to the degree that there are time-invariant factors in both periods. The impact of these time-invariant forces is accounted for using fixed effects. Predicted changes in diversity would then be valid instruments for actual changes in diversity. Combining the migration shock and predicted changes in diversity comprises the strategy to causally identify the impact of diversity on the provision of public goods at the local level.

For all of these reasons - push side exogeneity, large migration flows, pre-existing Soviet migrant network, dimensions of social fragmentation - the Soviet emigration experience to Israel is an ideal setting in which to identify the impact of changes in diversity (along a variety of dimensions) on public goods provisions at the local level.

5.1 Estimation

The standard approach in the literature would estimate the following:

$$public\ good_i = \beta_0 + \beta_1[Diversity_i] + X_i\beta_2 + \epsilon_i \quad (6)$$

where $public\ good_i$ is a measure of the provision of public goods in region i , $Diversity_i$ is a measure of diversity in region i , and X_i is a set of controls. The omitted variables problem arises if there are relevant variables not included in the set of controls, leading to biased estimates of β_1 . If these omitted variables are time-invariant, then adding a time-dimension to the analysis can provide unbiased estimation of β_1 . Suppose the provision of public goods depends on unobserved time-invariant factors and a common time-trend:

$$public\ good_{it} = \beta_0 + \beta_1[Diversity_{it}] + X_{it}\beta_2 + z_i\gamma + \delta_t + \epsilon_{it} \quad (7)$$

In this case, taking differences yields the following estimating equation:

$$\Delta public\ good_{it} = \beta_1[\Delta Diversity_{it}] + \Delta X_{it}\beta_2 + \Delta\delta_t + \Delta\epsilon_{it} \quad (8)$$

which yields unbiased estimates of the impact of diversity on the provision of public goods under the assumption that unobserved factors are time-invariant. The traditional challenge with a difference-estimator is that diversity is not separately identifiable from other time-invariant factors, that is, the rank condition is not satisfied.

As is standard in empirical approaches that use a differences estimator, assuming that the parallel trends assumption is met, a simple difference estimation with no controls would be sufficient. However, the migration treatment under study alters not only the composition of diversity, but also the composition of the community along a number of other dimensions. I include control variables that have been identified as important by the cross-section literature, but with the added benefit that these controls are also experiencing significant variations from the migration shock. After isolating the relevant treatment variables, the identifying assumption is that the parallel trends assumption is valid in all other dimensions.

To avoid having to take a stand on the temporal structure of the error terms, I focus on a “before and after” approach. With $T > 2$, assumptions regarding the serial correlation of error terms raises concerns about biased standard errors, and thus hampering inference (see for example [Bertrand et al. \(2004\)](#)). When the time period is two, the fixed effects and first-differences estimators are the same, since there is no serial correlation in the error terms by construction. For the preferred specification, I focus on before the shock (1989) and after the shock (1993). Limitations in access to data from which diversity measures are constructed precludes studying longer changes in diversity

at present.

The main concern with either Equation (7) or Equation (8) in the present context is unobserved idiosyncratic behavior in a locality in response to the immigration wave. Consider again the Mayor example mentioned above, who deviates from previous hospitable behavior to increase local barriers to migration. This is a problem for identification because the locality had previously been hospitable to immigrants, but is no longer hospitable. If the preference for immigrants was unchanged, it would be wiped out by the fixed effect and would not impact the estimation of diversity. The possibility for these unobserved, time-varying locality effects suggests the need to instrument for changes in diversity. In terms of identification, the concern is that the error terms are correlated with changes in diversity, even after conditioning on locality fixed effects and control variables.

The settlement patterns from the 1970's emigration experience form the basis of the construction of the instruments. The central idea is that settlement patterns of Soviets in the 1970's and 1990 are correlated through migration networks, but the settlement patterns of the 1970's are uncorrelated with any locality innovations in 1990. The settlement patterns may be driven by unobservables that are invariant over time, but these are accounted for with the locality fixed effects. Using 1970's settlement patterns rather than the actual 1990's settlement patterns, I construct a measure of predicted diversity, and I use the resulting predicted change in diversity to instrument for the actual change in diversity. I estimate the following specification:

$$\Delta public\ good_{it} = \beta_1[\Delta Diversity_{it}] + \Delta X_{it}\beta_2 + \Delta\delta_t + \Delta\epsilon_{it} \quad (9)$$

and instrument for $\Delta Diversity_{it}$ with $\Delta Predicted\ Diversity_{it}$.

The instruments are constructed using the settlement patterns from the 1970's, and predicting the number of Soviet immigrants in each locality instead of the actual number of Soviet immigrants observed in each locality. Using the predicted number of Soviet immigrants in place of actual immigrants, I recalculate ethnic fragmentation for each locality. For areas that received no Soviet immigrants in either the 1970's or 1990's, there is no difference between predicted and actual changes in diversity.

One view of the experiment under consideration is a short-run response of diversity on public goods budgets via the political mechanism. This is a specific answer to untangling how public goods *expenditures* (*revenues*) respond to *diversity*, and the short-run analysis can be thought of as studying a more general case with limited mobility. A related, but separate, question of how diversity impacts local government would consider long-run adjustment mechanisms, particularly sorting. Tiebout (1956) argues that at the local level, it is labor mobility and sorting which could drive all of the adjustment in response to changes in preferences for public expenditures. In a world with zero or small fixed costs of mobility, the sorting mechanism may be the appropriate

one to consider. When transport costs are high, the level of expenditure is more likely to be the margin of adjustment. For the Israeli case, where linguistic and cultural barriers are significant, the assumptions of high mobility costs (and hence a focus on political adjustment rather than geographic adjustment) seems reasonable.

6 Data

The data used in this paper draws on a comprehensive source of information about local public budgets. Local Authorities in Israel are the primary governmental structure for local issues. These authorities raise revenues from within their geographic areas through taxes and fees, while also receiving grants from the national government. Furthermore, Local Authorities have access to credit markets and can borrow (or lend) to cover revenue shortfalls. The budget is composed of two components, the Ordinary Budget and the Extraordinary Budget. The Ordinary Budget includes expenditures for four main purposes: General Administration, Local Services, State Services, and Establishments. The Ordinary budget has three broad sources: Own Revenue, Transferred Income, and Government Participation. The Local Authority has significant discretion over how they allocate expenditures across services, although they receive some restrictions about usage from national government grants.²

The data is drawn from three main sources: 1) Local Authorities in Israel, Financial Data, 2) Local Authorities in Israel, Physical Data, and 3) Labor Force Survey (LFS). This data was collected annually for the years 1985 until 1993.

To construct geographically disaggregated demographic variables, the annual LFS was employed. The LFS collects data on a variety of dimensions, including information on household demographics, education, occupation, and labor market participation. In trying to hew to the previous literature, I follow the convention of capturing diversity using a measure of fractionalization.³ A Herfindahl index is used to measure fracture in a society based on group shares,

$$Fractionalization = 1 - \sum_i s_i^2 \quad (10)$$

where s_i is the share of the group over the total population.⁴

Since Israel has been a country with significant immigration, data collection on immigration

²Appendix A provides additional information on the roles and powers of local government in Israel.

³While [Bossert et al. \(2011\)](#) derive a theoretically consistent measure of fractionalization, I follow the standard in the literature by using the Herfindahl Index so that the results here are as comparable to previous studies as possible. [Esteban and Ray \(2011\)](#) derive a theoretically consistent measure of conflict based on indexes of polarization, fractionalization, and income inequality.

⁴The Herfindahl index is interpreted as the probability that two randomly drawn individuals from the unit of observation (in this case, the local authority) belong to two different social groups.

issues is excellent. The LFS collects data on the country of origin as well as country of origin of the father for each Jewish resident. I construct a measure of ethnic diversity using information on the country of origin of the father, which is available for immigrant households as well as domestic households. The LFS organizes countries into larger geographic groupings, which form the basis of the ethnic fractionalization shares.

Information drawn from the Labor Force Survey is reported in the top panel of Table 1. The average locality measure of fractionalization is 0.693, with significant variation across localities and over time. The variation across localities is correlated with measures of local government spending, as in previous studies. The variation over time, especially before and after the immigration wave drive the identification in the analysis below. Figure 4 shows ethnic fragmentation by locality before and after the immigration wave.

Information on expenditures (middle panel) and revenues (lower panel) are also reported in Table 1. The expenditure focus is on overall spending, as well as disaggregated measures of spending. Local control on expenditure is greatest over the Local Services budget, of which the largest components are on sanitation and public property. There is additional expenditure on State Services such as education, culture, and welfare, but the central government significantly influences this spending through targeted grants. Additional discretionary expenditure is possible at the local level however if a locality chooses to invest more in these types of goods and services. To put these numbers in perspective, in 1989, the average per capita expenditure was 1400 shekels, which is roughly \$700. According to [Alesina et al. \(1999\)](#), per capita spending in the US at this time was similar at the local level was \$876. Revenues come from two main sources: own revenues and total grants. Own revenues include taxes raised on local residents as well as pay for service sources such as fees and licenses. Total grants include general grants as well as targeted grants which are earmarked for certain categories such as education.

In addition to the financial data, I incorporate information from two additional sources, the *Audit of Local Authorities, Physical Data* and the *Immigrant Absorption Survey, 1972*. The *Physical Data* audit includes information on population size, area of locality, municipality status, and other locality characteristics. The immigrant survey is a comprehensive three-year panel on immigrants who arrived from the Soviet Union in 1972 and 1973, providing information on settlement behavior as well as household demographic information.

Over the time period being considered, there are roughly 70 predominantly Jewish local authorities in the sample, ranging in size from just around 5,000 inhabitants to over 500,000. This provides ample variation in which to analyze the provision of local public goods across a variety of types of municipalities, from small communities to large cities. These localities represent about eighty percent of the population in 1989, with the rest of the country living in local councils (for which matched data was not available), non-Jewish Local Authorities, or associations with fewer

than 5,000 people in each area.

7 Results

To start the analysis, we focus on the standard measures of provision of public goods by considering per capita expenditure and per capita revenues at the local level of government. In Table 2, we consider the standard approach by running a simple bivariate regression of total per capita expenditures on ethnic fragmentation, and find a statistically significant and negative effect. Consistent with other countries and other studies, using the standard pooled cross-sectional approach, there is a strong negative correlation between ethnic fragmentation and local government spending in Israel. In column (2), we include year dummies to account for any common temporal changes in local spending between 1989 and 1993, which no significant changes in the estimated effect.

As mentioned above, the problem with such an approach is that confounding factors may be driving both ethnic fragmentation and per capita spending at the locality level, and the challenge has typically been to include appropriate controls that could capture all possibly omitted variables that might be driving the results. In column (3), we follow the kitchen-sink approach as well and include common covariates identified in the literature, and estimate a slightly larger and more statistically significant negative effect of ethnic fragmentation.

However, as noted above, additional controls likely are not capturing all relevant forces, and omitted variables may likely be influencing the estimated effect. One benefit of the present study is that the change in ethnic fragmentation was relative large (and varied across localities) and occurred in a relatively short period of time. This allows for a fixed effects approach that is typically not available to researchers, since in most countries ethnic fragmentation evolves slowly over time, often requiring decades before significant variation is observed. In those cases, the usefulness of fixed effects estimation may be limited since relevant unobserved forces are not likely time-invariant over such long periods.

In the present context, the migration event was rapid and large, resulting in large observable changes in ethnic fragmentation allowing for a fixed effects approach to potentially yield valid results. Column (4) considers changes in ethnic fragmentation on changes in total expenditure per capita through the inclusion of locality fixed effects. The estimated impact of ethnic fragmentation is significantly smaller than in the pooled sample, and is marginally significant. When additional covariates are included in column (5), the estimated effect falls by over 50% and is now no longer statistically significant. Columns (4) and (5), when compared to columns (2) and (3), suggest that cross-section correlations between ethnic fragmentation and locality expenditures should be interpreted carefully. The time-series variation estimate yields very different results from the cross-sectional variation estimate, and should give some preliminary pause to concerns about the impact

of diversity on the provision of public goods. If the cross-sectional observation is determined by historical factors that are no longer activated, or whose influence is diminished, then it would not be surprising to observe a negative correlation between ethnic fragmentation and public goods provision in the cross-section, but not expect to see a similar relationship regarding future changes in ethnic fragmentation. Cross-sectional correlations, regardless of the robustness of the relationship, are more informative about historical institutions and fragmenting forces than future predicting future impacts of increased social fragmentation.

While the fixed effects approach is uniquely informative in this setting because of the rapid and large immigration wave, in terms of empirical identification, there are still additional concerns about time-varying factors that could bias the estimates of the relationship between social fragmentation and public goods provision. For example, if local governments took steps to increase the generosity of public goods to encourage more migrants to settle in areas that initially had less fragmentation, then the FE estimate would be biased upwards since there would be a positive feedback mechanism from per capita expenditure to fragmentation. A variety of alternative stories could yield different predictions about the sign and size of the selection bias, suggesting FE estimation is not sufficient to make causal claims about the impact of increased fragmentation on public goods expenditure.

To go further, Columns (6) and (7) utilize the IV strategy discussed above, using historical settlement patterns of Soviet immigrants from the 1970's to predict diversity changes. These predicted changes are strongly correlated with actual diversity changes because of the immigration networks that draw in migrants, but the settlement patterns from the 1970's are unlikely to be correlated with changes in spending in the 1990's after controlling for time invariant factors at the locality level. In column (6), the estimated effect of ethnic fragmentation on per capita spending is positive, but statistically insignificant. Once additional covariates are included, the estimated effect is essentially zero in column (7).

Note that first stage results indicate the instrument is sufficiently powerful. The first stage F statistic on the excluded instrument is greater than 10 both with and without additional covariates, and is twice as large once covariates are included. The individual coefficient of predicted diversity on actual diversity is positive and highly significant (0.1% significance level). The validity of the instrumental approach ultimately depends upon the exclusion restriction that settlement patterns in the 1970's are uncorrelated with changes in public goods expenditure in the 1990's except to the degree that historical settlement patterns predicted later settlement patterns.

These results imply that future changes in ethnic fragmentation are not correlated with the provision of public goods. This is in stark contrast to the cross-sectional estimates in columns (1)-(3), which find a large negative effect. The implication is that while cross-sectional relationships between social fragmentation and public goods expenditure are informative, they are informative

about historical institutions rather than being informative about how public goods provision evolves in the future.

Having considered total expenditures, we next move to total revenues per capita. While the results for expenditures and revenues are likely to be similar, this need not necessarily be the case if some localities use financial markets to help adjust to changes in ethnic fragmentation. In 1989, the typical locality had a budget deficit of 11.1%, which rose to 14.4% in 1993. Localities could maintain similar levels of public goods, but respond to increased fragmentation by altering their borrowing behavior.

Table 3 considers per capita revenues from all sources, including transfers from the central government. The pattern of the analysis mirrors that of Table 2, starting with traditional pooled cross-sectional approaches before considering FE and IV models. Column (1) considers a bivariate model, with column (2) including year fixed effects. In both cases, the relationship between ethnic fragmentation is negative and statistical significant, which a smaller magnitude than compared to spending. Column (3) includes covariates, with the resulting point estimate highly statistically significant and negative. The point estimates between column (3) in Table 2 and column (3) in Table 3 are not statistically distinguishable, suggesting that revenues and expenditures evolve in response to increased social fragmentation in similar ways. Note that once again, the typical social fragmentation results are observed. The estimate is robust to the additional of socio-economic controls, and in the case of revenues, the statistical significance is improved. Once again, one would be inclined to conclude that ethnic fragmentation has a deleterious effect on the provision of public goods.

However, in columns (4) and (5), fixed effects estimation gives pause to this interpretation. In column (4), the estimated coefficient is still negative, but notable smaller and statistically indistinguishable from zero. Column (5), which includes covariates as well as locality fixed effects estimates a small positive coefficient on social fragmentation, although the effect is not statistically significant. The patterns for total revenues per capita are nearly identical to those presented in Table 2. In the preferred specification of column (7), when instrumental variables and covariates are included, the estimated coefficient is statistically indistinguishable from zero, and the point estimate itself is essentially zero, suggesting that the effect is not present rather than implying that it cannot be precisely estimated from the data.

At the aggregate level of public goods provision, expenditures and revenues do appear to be negatively correlated with social fragmentation in the cross-section, consistent with previous literature, but the new evidence presented here using a unique natural experiment suggests caution in how to interpret the finding. The negative correlation is more information about historical mechanisms rather than predictive about future evolution. To explore further the relationships between local political authorities and ethnic fragmentation, I consider more disaggregated measures of

revenues sources and expenditure categories. In Table 4, revenue sources are first broken up into total grants and own revenue sources. Total grants reflect transfers from the central government, and in 1989, make up about 35% of overall revenues for the median locality. However, this average hides significant variation, which is strongly correlated with locality budgets. If budgets shares are weighted by total revenue, total grants make up just 23% of the budget for the median locality.

Grants come in two distinct forms, general grants and targeted grants. General grants are blocks of money transferred to the local authority, and are used by the local government in any way they deem appropriate. Targeted grants, on the other hand, are funds transferred to the local authority to be used on specific categories of spending. Targeted grants make up about 68% of total grants for localities in 1989. Target grants predominately target spending on two primary categories, education and welfare. Approximately 60% of targeted grants are earmarked for education, with another 35% targeting welfare. The remaining 5% targets health, culture, and religion.

While targeted grants incentivize certain behaviors by the local authority deemed appropriate by the central authority, if local authorities have significant sources of own revenue, targeted grants by themselves may not restrict local spending patterns much. Larger and richer localities, for whom grants are a smaller share of the budget, will have more scope to alter spending to reflect local preferences. Own revenues are further broken up into two categories, locally raised taxes and other sources which include fees and licenses. For localities in 1989, taxes make up about 60% of all local revenue.

While the aggregate revenues per capita are interesting, they could be hiding a variety of possible effects, especially since central governments can heavily influences revenues through grants. To better separate out fiscal federalism effects and focus on local authority adjustments, Table 4 reports a series of regressions on different categories of revenue.

The first part of Table 4 considers the highest level of aggregation, total grants and own revenue sources.⁵ Columns (1)-(6) report the coefficient on ethnic fragmentation, and are comparable to columns (2)-(7) in Tables 2 and 3. Columns (1) and (2) consider pooled cross-sectional data, and find that the negative correlation found in Table 3 is being driven by grant transfers rather than local revenue sources. The estimated coefficients on own revenues is essentially zero once covariates are included. The coefficient on total grants however is negative and highly significant at the 0.1% level. This finding is consistent with the interpretation that cross-sectional results are informative about historical institutions rather than present and future conditions, and these institutional forces can be further interpreted as omitted variables driving biased estimates of increased ethnic fragmentation on local governmental behaviors.

This suspicion is confirmed in columns (3) and (4), when fixed effects estimation is utilized.

⁵There is a third category, transfer income, which makes up less than 0.1% of the budget, and is not included in the analysis.

The impact of ethnic fragmentation on total grants per capita is now statistically insignificant and much closer to 0. On the other hand, own revenue is now positively related to ethnic fragmentation and highly significant, once covariates are included (column (4)). The pooled cross-sectional estimate is a poor predictor of model estimates based on temporal variation, and the differences are systematically biased downward when based on cross-sectional variation.

When IVs are used in columns (5) and (6), I find no effect of ethnic fragmentation on total grants or own revenue, although estimated coefficient for own revenue is nearly identical in columns (4) and (6), but larger standard errors associated with the IV estimate reduce statistical significance.

Each revenue category can be further disaggregated, starting first with grants. Targeted grants and general grants could in principle behave very differently as targeted grants impose more restrictions on local authority behavior, although as mentioned earlier, the effective degree of this restriction depends upon the amount of own revenue in a locality. The results suggest that even though there is some cross-sectional evidence for a negative relationship between ethnic fragmentation and targeted grants, neither fixed effects nor IV estimation implies any direct relationship between ethnic fragmentation and the level or type of central government intervention. As with previously results, cross-sectional variation has a strong downward bias.

Finally, focusing on truly local revenue responses, I consider local tax revenue and revenue raised from fee-for-services. While neither is statistically related to ethnic fragmentation in the pooled sample, local taxes is strongly and positively associated with ethnic fragmentation once fixed effects and IV estimation is utilized. That is, after accounting for additional covariates, locality fixed effects, and selection bias concerns, the impact of increased ethnic fragmentation on local revenues is an increase in tax revenues.

The choice of the tax revenue mechanism is interesting as it suggests that local authorities respond to increased ethnic fragmentation by encouraging more local engagement through increased tax system participation. For example, local authorities could have responded to increased ethnic fragmentation by increasing "private" revenue generation through increased licenses and fees for service. Licenses and fees for service are "private" mechanisms in the sense that fees and services are directly correlated. The tax revenue is a more public and redistributive mechanism in the sense that it funds local services by requiring everyone to contribute regardless of direct usage of services.

The Tiebout theory of local authority behavior is that localities should focus on goods that have direct tax-benefit linkages, goods with fewer externalizes or spillovers across localities (as these will be under-supplied by an individual locality), and goods with limited economics of scale. The revenue results here suggest that in response to increased social fragmentation, localities did not emphasize the direct tax-benefit linkage by increasing fees-for-service revenue, but rather re-

sponded with a more redistributive and public mechanism that emphasized a social or communal approach to local funding.

Having dug into the revenue side of the budget further and found evidence on revenue generation mechanisms that was not apparent at the aggregate level, I next turn to considering disaggregated categories of spending. There are five primary categories of spending, spending on State Services (SS), Local Services (LS), Government Administration, Establishments, and other. The first three of these categories make up about 90% of local spending budgets, with Local Services making up 25% and State Services spending making up 50% of overall spending.

In terms of preferences and control, Local Services spending has the most flexibility as State Services are significantly funded by central government grants. The subcategories of State Services include education, welfare, health, culture, and religion, which are mostly under the authority of the central government. The subcategories of Local Services include sanitation services, public property, planning and construction, emergency services, security services, and an other category. Sanitation spending makes up about 40% of the local services budget, while public property maintenance and investment makes up on average about 35% of the budget. The remaining 25% of the budget is roughly evenly split between the remaining four categories (around 4-7% each).

As Local Services (LS) have the most direct control, this would be the category one would most expect to see impacted by increased ethnic fragmentation. Focusing first on total LS spending per capita, column (2) of Table 5 finds a negative and statistically significant effect of increased ethnic fragmentation on spending per capita, again consistent with typical cross-sectional approaches. When fixed effects estimation is employed in columns (3) and (4), the estimated effect is about 50% smaller but still negative and highly statistically significant, potentially confirming the conventional wisdom that increased ethnic fragmentation leads to lower provision of public goods. However, while fixed effects estimation is an improvement over the typical cross-sectional approach, it does not necessarily solve the selection bias problem and therefore cannot be treated as a causal estimate. When IVs are employed in columns (5) and (6), the estimated effect of social fragmentation of local services spending is very different in the preferred specification, the point estimate is again essentially zero and statistically insignificant.

Taking all of these results together, and in light of previous results, some general patterns are confirmed. Cross-section variation overstates the true effect of social fragmentation, and is more informative about historical institutional forces than the more relevant policy question of how changing ethnic fragmentation is likely to impact local spending. Furthermore, without a credible identification strategy, fixed effects estimation is suspect as it is unlikely to fully correct for selection bias, particularly omitted variables that are likely influencing both changes in ethnic fragmentation and changes in local spending.

While overall local spending might not be responsive to changes in ethnic fragmentation, pref-

erences over categories of spending may change. To consider this further, large spending subcategories are separately considered. Sanitation spending, the largest budgetary expenditure, appears to be negatively impacted by increased ethnic fragmentation at 1% statistical significance when pooled data is utilized, as is spending on public property, which is the second largest budget spending category. This once again echoes the previous literature on diversity and the provision of public goods.

For sanitation spending, however, the cross-sectional estimates are once again misleading. The fixed effects estimation in columns (3) and (4) result in estimates one-half to two-thirds smaller, and are not statistically significant. When IVs are used in columns (5) and (6), the estimated effect switches signs and is positive, although not statistically significant.

On the other hand, spending on public property does in fact respond negatively to increased ethnic fragmentation. When fixed effects estimation is employed (columns (3) and (4)), the estimated coefficients are about 25% smaller, but still highly statistically significant. When IVs are used (along with additional covariates), the estimated effect is nearly as large as the pooled estimate and retains statistical significance. While in general the pooled estimate is not a good predictor of the true causal estimate, in the case of public property spending, the two estimates are similar.

Why might spending on public property be affected by increased social fragmentation, while other measures of spending were not? Expenditure on public property is consistent with the typical fragmenting view of ethnicity since public property spending is space where different groups would co-mingle. If there is homogeneity preference for joint consumption, then consumption of public property would be less valuable to the community when ethnic fragmentation increases. The estimated effect is not insignificant, as a beta coefficient of -0.77, implies that a one-standard deviation increase in ethnic fragmentation results in a decline in public property expenditure of 0.77 standard deviations. The average absolute change in ethnic fragmentation between 1989 and 1993 was 0.125, which would imply a decline of per capita expenditure on public property of 24%.

The decline in public property expenditure per capita is offset by a nearly equal reallocation of spending towards all other local services, which explains the failure to find an effect at more aggregate spending levels. If all other LS services are aggregated together, the estimated impact of ethnic fragmentation on these aggregate spending categories is 1.10 (marginally significant 10%), which would imply a 14% increase in all other LS spending categories for the typical change in ethnic fragmentation. The weighted net effect would be essentially zero, which was the finding for aggregate LS spending.

While local services provide the most direct channel for social fragmentation to influence spending behaviors of the government, the local authority does have some control of state services spending. While targeted grants play a significant role in funding state service spending, there is still scope for discretionary spending above the targeted level. If local authorities wanted

to lower spending on education, for example, they would be able to adjust along discretionary spending even though the targeted grants would provide a ceiling on spending.

Table 6 considers discretionary spending in response to changes in ethnic fragmentation, focusing on overall State Services spending per capita and the three largest subcategories of discretionary spending: education, culture, and welfare. The patterns are consistent with the previous findings. Pooled sample estimation once covariates are included tend to produce negative correlations at statistically significant levels (the exception being education, which is insignificant). These estimates are consistently biased downward when compared to fixed effects and IV estimation. There is no evidence that ethnic fragmentation influences discretionary State Services spending once selection bias concerns are properly accounted for in the estimation.⁶ These results support that view that cross-sectional variation is informative about historical fragmentation effects, but not necessarily about the future changes in ethnic fragmentation.

8 Conclusions

There has been extensive discussion of the role that diversity plays in facilitating collective action, guided by the empirical observation that diversity and public goods provision are negatively correlated. In this paper, I argue that there are good reasons to be wary of a causal interpretation of higher diversity leading to lower public goods provision. While observed negative correlations are robust in the sense that they have been replicated in a variety of settings, the strategy to identify causality has been hampered by poor data, small samples, and limited experimental validity. This paper attempts to address this pressing issue by exploring a natural experiment and utilizing unique instrumental variables.

Consistent with previous literature, I find a large, negative and statistically significant effect of ethnic fragmentation on public goods expenditure and revenues in pooled cross-sectional analysis. Based on this observation, one would conclude, as previous studies have, that social diversity hampers the fiscal redistributive policy at the local level. However, these cross-sectional estimates systemically bias downward the estimated effect. When using fixed effects (during period of notable diversity changes) and IV estimation, I find that local governments reduce public expenditure on public property, but this offset by increased public expenditure on other public goods. For revenues, local authorities respond to increased diversity by raising direct taxes. This contradicts the typical cross-sectional finding that revenues are reduced, and further contradicts the view that increased diversity should lead to more private forms of revenue generation such as utilizing fees for services. By increasing taxation, local governments focused on revenue generation mechanisms

⁶Total State Services spending, inclusive of targeted grants, has similar patterns as discretionary spending reported in Table 6.

that impacted the larger community, and thus enhanced household engagement with the local government.

The totality of the evidence presented here suggests that cross-sectional estimates of the impact of diversity are informative, but they are informative about the bias of historical institutions, which by itself does not imply that historical bias is correlated with present views on the value of diversity. In the case of Israel, the fact that new immigrants had a political outlet may help to explain the disconnect between the cross-sectional and IV estimates. As has been suggested by [Easterly \(2001\)](#) in cross-country analysis, access to good institutions - in the present case comprehensive voting rights for immigrants in Israel - may help to mitigate any negative effects from increased diversity. Unlike other countries, eligible immigrants have minimal barriers to political participation, and this political access may help to explain observed local government behavior. The impact of historical institutions on the present can die out quicker when the political process is more open and engaged with new members of the community.

Future work should study long-run adjustments more carefully. The focus here was on the short-run, when mobility costs are high and political channels are the mechanism by which adjustment takes place. In the longer run, internal sorting may play an important role for adjustment if households move to areas that better reflect their political preferences (Tiebout Sorting). Furthermore, fiscal adjustment in the long-run may differ systematically from the short-run fiscal adjustment studied here.

The view that diversity is a hindrance to the provision of public goods has been the predominant view, however the empirical justification may not be warranted. When appropriate empirical methods are employed for disentangling the causal effect of diversity on the provision of public goods, the stark negative effect is missing. Rather, the traditional cross-sectional findings tell us more about social fragmentation in the past, and are likely a poor predictor of the future impact of changes in diversity.

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Figures

Figure 1: Israeli Immigration by Month, 1970-2010

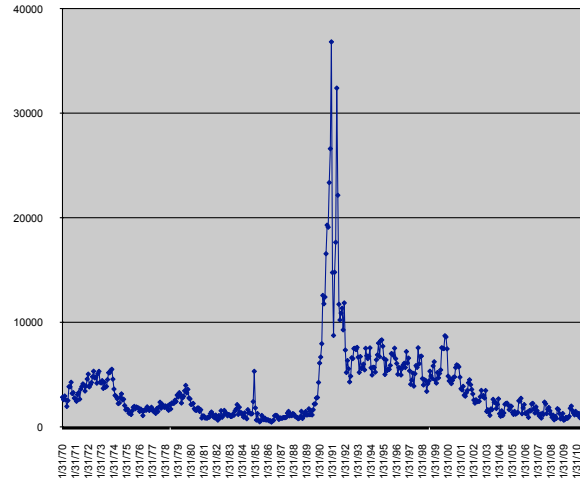


Figure 2: Israeli Population Growth, 1970-2010

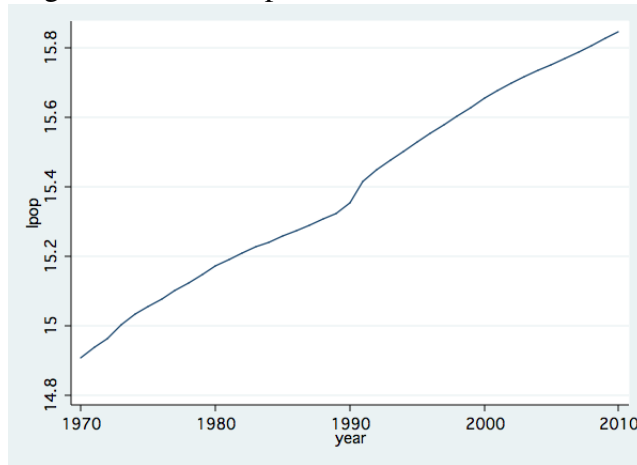
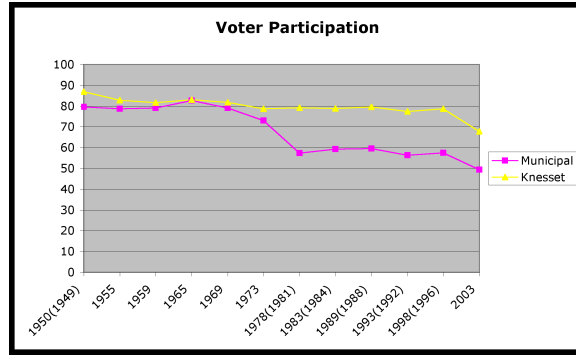
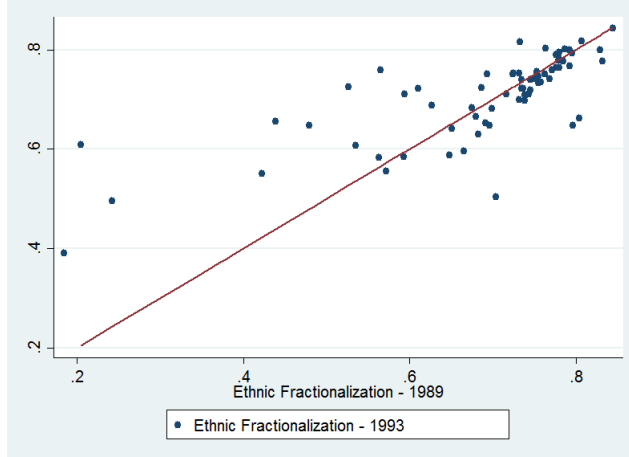


Figure 3: Voter Participation, Municipal and Knesset Elections, 1949-2003



Note: Voter participation in local and national elections for selected elections. After 1973, when local and national elections were decoupled, the nearest national election is used as a point of comparison. National election year in brackets.

Figure 4: Ethnic Fractionalization: 1989 vs 1993



Note: Diversity for each of the local authorities is measured prior to the immigration shock in 1989 and after the major portion of the shock in 1993. The diagonal line would represent no change in diversity. Values above the diagonal line represent an increase in ethnic diversity, while values below the diagonal line represent a decrease in ethnic diversity.

Table 1: Summary Statistics: Social and Financial Indicators

	Obs	Mean	Std Dev	Min	Max
Labor Force Survey					
Ethnic Fragmentation	620	0.693	0.116	0.146	0.848
Share Under 17	620	0.345	0.057	0.000	0.506
Share Over 65	620	0.133	0.057	0.000	0.368
Share Post-Secondary Education	620	0.225	0.102	0.000	0.542
Skilled Occupation Ratio	620	0.250	0.081	0.000	0.482
Immigrant Share	620	0.521	0.086	0.219	0.759
Population (1000s)	621	52.2	79.7	5.3	567.1
Expenditures					
Total Expenditure	620	1362	726	263	4788
Local Services Expenditure	620	318	177	57	1,510
Sanitation (% of LS)	620	0.411	0.083	0.146	0.645
Public Property (% of LS)	620	0.341	0.083	0.146	0.606
State Services Expenditure	620	643	350	116	2,018
Education (% of SS)	620	0.565	0.073	0.396	0.803
Culture (% of SS)	617	0.150	0.057	0.024	0.371
Welfare (% of SS)	620	0.240	0.069	0.040	0.428
Revenues					
Total Revenues	138	1,652	613	775	4,638
Own Income	138	940	455	261	3,066
Tax Revenue (% of Own Income)	138	0.604	0.094	0.301	0.798
Fees, Licenses, and Other Sources (%)	138	0.396	0.094	0.201	0.699
Total Grants	138	711	511	133	3,626
General Grants (% of Total Grants)	138	0.297	0.249	0.000	0.792
Targeted Grants (%)	138	0.703	0.249	0.208	1.000

Notes: Data from the labor force survey is from the 69 predominantly Jewish local authorities used in the analysis, from 1985 until 1993. The expenditure data covers the same set of Local Authorities over the same time period. The revenues data is drawn from the same 69 localities, but only for the years used in the analysis, 1989 and 1993. All expenditure and revenues values are reported in Israeli shekels. Ethnic fragmentation is a Herfindhal index constructed based on geographic branching. Skilled occupation ratio is the ratio of skilled workers in the labor force relative to all workers in the labor force based on LFS classifications.

Table 2: Ethnic Diversity on Total Expenditures Per Capita

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	OLS	OLS	OLS	FE	FE	IV	IV
Ethnic Fragmentation	-1.175 (0.471)**	-1.112 (0.465)**	-1.421 (0.456)***	-0.354 (0.181)*	-0.153 (0.173)	0.319 (0.472)	0.0735 (0.295)
Controls:							
Under 17 Share			0.111 (0.664)		-0.0848 (0.278)		-0.121 (0.274)
Over 65 Share			2.591 (1.334)*		-0.778 (0.375)**		-0.666 (0.399)*
Post-Secondary Share			-0.708 (0.481)		0.0647 (0.236)		0.0301 (0.239)
Skilled Industry Share			-0.153 (0.664)		0.097 (0.199)		0.134 (0.200)
Immigrant Share			-1.480 (0.496)***		0.382 (0.287)		0.367 (0.291)
ln (Population)			0.0008 (0.048)		-0.837 (0.139)****		-0.858 (0.139)****
First Stage: Ethnic Diversity Predicted Diversity						0.555 (0.163)****	0.600 (0.129)****
R^2						0.322	0.495
F on Excluded Instrument						11.30	20.33
Time Fixed Effect	No	Yes	Yes	Yes	Yes	Yes	Yes
Locality Fixed Effect	No	No	No	Yes	Yes	Yes	Yes
IVs	No	No	No	No	No	Yes	Yes
N	138	138	138	138	138	138	138
Localities	69	69	69	69	69	69	69

Notes: Locality Clustered Standard Errors in parenthesis. * indicates significant at 10%; ** significant at 5%; *** significant at 1%; **** significant at 0.1%. The sample includes data from 1989 and 1993 for 69 Jewish Local Authorities. Instruments used in columns (6) and (7) are based on predicted diversity using post-1990 immigrant volumes and 1970's immigrant settlement patterns. Dependent variable is log per capita expenditures.

Table 3: Ethnic Diversity on Total Revenues Per Capita

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	OLS	OLS	OLS	FE	FE	IV	IV
Ethnic Fragmentation	-0.778 (0.407)*	-0.719 (0.395)*	-1.204 (0.432)***	-0.135 (0.171)	0.149 (0.136)	-0.202 (0.406)	-0.0499 (0.246)
Controls:							
Under 17 Share			-0.941 (0.644)		-0.741 (0.263)***		-0.709 (0.261)***
Over 65 Share			1.615 (1.260)		-0.512 (0.449)		-0.611 (0.461)
Post-Secondary Share			-0.551 (0.480)		-0.149 (0.222)		-0.118 (0.226)
Skilled Industry Share			-0.0255 (0.617)		0.362 (0.146)**		0.329 (0.151)**
Immigrant Share			-1.313 (0.426)***		0.440 (0.217)**		0.453 (0.227)**
ln (Population)			0.0280 (0.0449)		-0.469 (0.109)****		-0.451 (0.118)****
First Stage: Ethnic Diversity							
Predicted Diversity						0.555 (0.163)****	0.600 (0.129)****
R^2						0.322	0.495
F on Excluded Instrument						11.30	20.33
Time Fixed	No	Yes	Yes	Yes	Yes	Yes	Yes
Locality Fixed Effect	No	No	No	Yes	Yes	Yes	Yes
IVs	No	No	No	No	No	Yes	Yes
N	138	138	138	138	138	138	138
Localities	69	69	69	69	69	69	69

Notes: Locality Clustered Standard Errors in parenthesis. * indicates significant at 10%; ** significant at 5%; *** significant at 1%; **** significant at 0.1%. The sample includes data from 1989 and 1993 for 69 Jewish Local Authorities. Instruments used in columns (6) and (7) are based on predicted diversity using post-1990 immigrant volumes and 1970's immigrant settlement patterns. Dependent variable is log per capita revenues.

Table 4: Ethnic Fragmentation on Revenue Sources

	(1) OLS	(2) OLS	(3) FE	(4) FE	(5) IV	(6) IV
Total Grants	-2.752 (0.544)****	-1.764 (0.471)****	-0.355 (0.258)	-0.122 (0.298)	-0.0718 (0.633)	0.123 (0.591)
Own Revenue	0.991 (0.738)	-0.0945 (0.399)	0.128 (0.223)	0.524 (0.187)***	0.28 (0.418)	0.449 (0.309)
Grants:						
General Grants	-4.142 (3.18)	-1.571 (2.2)	0.769 (1.312)	0.139 (1.347)	1.452 (1.881)	0.244 (1.719)
Targeted Grants	-1.804 (0.542)***	-1.022 (0.542)*	-0.0982 (0.324)	0.127 (0.338)	-0.389 (0.605)	-0.039 (0.572)
Own Revenue:						
Fees, Licenses, and Other Sources	0.853 (0.627)	-0.145 (0.486)	-0.344 (0.436)	0.18 (0.427)	-0.409 (0.846)	0.113 (0.584)
Local Taxes	1.237 (0.85)	0.0958 (0.542)	0.519 (0.274)*	0.858 (0.241)****	0.834 (0.54)	0.905 (0.437)**
First Stage: Ethnic Diversity						
Predicted Diversity					0.555 (0.163)****	0.600 (0.129)***
R^2					0.322	0.495
F on Excluded Instrument					11.3	20.33
Time Dummy	No	Yes	Yes	Yes	Yes	Yes
Locality Fixed Effect	No	No	Yes	Yes	Yes	Yes
IVs	No	No	No	No	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes
N	138	138	138	138	138	138
Localities	69	69	69	69	69	69

Notes: Reported coefficient on ethnic fragmentation from regression of log per capita revenues on ethnic fragmentation. Locality Clustered Standard Errors in parenthesis. * indicates significant at 10%; ** significant at 5%; *** significant at 1%; **** significant at 0.1%. The sample includes data from 1989 and 1993 for 69 Jewish Local Authorities. Instruments used in columns (6) and (7) are based on predicted diversity using post-1990 immigrant volumes and 1970's immigrant settlement patterns. .

Table 5: Impact of Ethnic Fragmentation On Local Services

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	OLS	FE	FE	IV	IV
Local Services - Total	-0.409 (0.614)	-1.456 (0.462)***	-0.721 (0.328)**	-0.642 (0.320)**	0.378 (0.660)	-0.0527 (0.556)
Local Services Categories:						
Sanitation (LS)	-0.410 (0.729)	-1.076 (0.366)***	-0.487 (0.433)	-0.349 (0.437)	0.555 (0.759)	0.838 (0.622)
Public Property (LS)	-2.225 (1.406)	-2.135 (0.726)***	-1.522 (0.609)**	-1.645 (0.605)***	-0.986 (1.061)	-1.935 (0.925)**
First Stage: Ethnic Diversity						
Predicted Diversity					0.555 (0.163)*****	0.600 (0.129)***
R^2					0.322	0.495
F on Excluded Instrument					11.3	20.33
Time Fixed Effect	No	Yes	Yes	Yes	Yes	Yes
Locality Fixed Effect	No	No	Yes	Yes	Yes	Yes
IVs	No	No	No	No	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes
N	138	138	138	138	138	138
Localities	69	69	69	69	69	69

Notes: Reported coefficient on ethnic fragmentation from regression of log per capita expenditure on ethnic fragmentation. Locality Clustered Standard Errors in parenthesis. * indicates significant at 10%; ** significant at 5%; *** significant at 1%; ***** significant at 0.1%. The sample includes data from 1989 and 1993 for 69 Jewish Local Authorities. Instruments used in columns (6) and (7) are based on predicted diversity using post-1990 immigrant volumes and 1970's immigrant settlement patterns.

Table 6: Impact of Ethnic Fragmentation on State Services - Discretionary Spending

	(1) OLS	(2) OLS	(3) FE	(4) FE	(5) IV	(6) IV
State Services	-0.524 (0.601)	-1.173 (0.556)**	-0.331 (0.424)	0.0615 (0.365)	0.603 (0.975)	0.207 (0.627)
Local Services Categories:						
Education	-0.303 (0.677)	-0.971 (0.618)	-0.547 (0.435)	-0.281 (0.416)	1.128 (1.280)	0.595 (0.905)
Culture	-0.455 (0.884)	-1.236 (0.732)*	-0.322 (0.735)	0.0221 (0.733)	-0.564 (1.384)	-1.151 (1.391)
Welfare	-1.628 (0.470)****	-1.834 (0.679)***	-0.178 (0.495)	0.0474 (0.654)	-0.646 (1.068)	-0.787 (0.981)
First Stage: Ethnic Diversity						
Predicted Diversity					0.555 (0.163)****	0.600 (0.129)***
R^2					0.322	0.495
F on Excluded Instrument					11.3	20.33
Time Dummy	No	Yes	Yes	Yes	Yes	Yes
Locality Fixed Effect	No	No	Yes	Yes	Yes	Yes
IVs	No	No	No	No	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes
N	138	138	138	138	138	138
Localities	69	69	69	69	69	69

Notes: Reported coefficient on ethnic fragmentation from regression of log per capita expenditure on ethnic fragmentation. Discretionary spending is defined as expenditure less targeted grants. Locality Clustered Standard Errors in parenthesis. * indicates significant at 10%; ** significant at 5%; *** significant at 1%; **** significant at 0.1%. The sample includes data from 1989 and 1993 for 69 Jewish Local Authorities. Instruments used in columns (6) and (7) are based on predicted diversity using post-1990 immigrant volumes and 1970's immigrant settlement patterns.

Appendix A: Local Government

Local government in Israel is made up of three different types of administrative units: Municipalities, Local Councils, and Regional Councils. Municipalities govern larger urban areas, usually with over 20,000 residents. Local Councils are made up of smaller urban areas, with around 5,000-20,000 residents. Regional Councils are smaller administrative units, usually governing agricultural communities and small settlements. The data covers all Municipalities and most Local Councils over 5,000 residents. The Local Authorities covered in the sample account for about eighty percent of the population in 1989.

The legal status of local governments and their relation with government ministries is based upon the Municipal Corporations Ordinance 5724-1964. Local Government is authorized to operate in six primary areas, including legislation, taxation, financial management, joint activities with other bodies, and more general powers. The Ministry of Foreign Affairs describes the scope of local government in Israel as “while not completely independent in any of these areas, a local authority is able to act on behalf of local interests within each of them according to the wishes of the elected representatives of the local constituency.”⁷

Local Authorities serve a variety of functions. Functions include the developing and planning of local infrastructure, sanitation, parks, education, welfare, culture, and environmental protection. The Local Authorities are responsible for primary and secondary education, although some education is provided by local non-profits with aid from the local government. In the realm of welfare services, local government targets needy populations, such as the elderly and disabled.

Local government has three main sources of revenue for the ordinary budget: locally-generated income, government participation, and loans. While Local Authorities had traditionally had trouble financing and balancing their budgets, starting with reforms in 1981 greater financial accountability was demanded of the Local Authorities, and locally-generated income increased substantially. Locally-generated income comes primarily in the form of local taxes and payments for services.

Government participation takes the form of general grants and targeted grants. General grants are not tied to any specific expenditures, and can be used however the Local Authority sees fit. Targeted grants go to specific expenditures, such as welfare. The Ministry of Labor and Social Welfare sets certain standards, which are funded with ear-marks. However, the Local Authority is able to authorize higher welfare standards if local interests demand it, and these higher standards are funded out of locally generated income. The Ministry of Education sets standards on the curriculum, while the Local Authorities decide on the implementation of education, including the hiring of teachers, administration, and building of schools.

⁷The Ministry of Foreign Affairs, <http://www.mfa.gov.il/MFA/Government/Branches+of+Government/Executive/Israeli+Democracy+How+does+it+work.htm#local>

Finally, local governments can secure loans to finance investment projects, such as water treatment, sanitation, education and cultural facilities, as well as general development projects to support local interests. On occasion, loans are also given to balance budget shortfalls. After Local Authorities were reformed in 1981, increased powers were delegated to the Local Authorities, consistent with the view that local government is better able to meet the needs of the electorate in many social arenas. The Ministry of Foreign Affairs sums it up: “Studies show that local authorities generally succeed in fulfilling their duties and in completing projects which they initiate, even though many approvals are involved in the process. The influence of the local authority is relatively wide in many areas, even when the central government controls the purse strings or other factors.”