

Patterns of Urban/Rural Migration in Israel

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Abstract

Background: Migration across internal boundaries is important because it involves different determinants and relations. Movement from one type of area to another attests to processes of distance, socio-economic barriers, and heterogeneity. Movement between two localities of one type entails fewer and different types of changes than migration between structurally diverse areas. **Objective:** We seek to examine urban-rural migration in Israel. Despite being a small country Israel has experienced extensive development outside of its major cities, accompanied by a population dispersion that has been constant although implemented in varying ways. **Methods:** The paper develops from a descriptive comparison of the urban and rural patterns of Jews and non-Jews; thereafter, due to the small number of non-Jewish migrants, it focuses solely on Jews, probing the demographic and socio-economic characteristics of migrants and non-migrants and differentiating among the latter by distance of migration. Finally, for those Jews who moved between localities, an attempt is made to assess the individual and area-contextual factors that affect migration between different types of localities. **Results:** Findings on five-year migration from the 2008 Israeli census point to a strong tendency to change type of residence, often also involving a change of district of residence. These patterns of urban-rural migration emphasize the importance of specific individual characteristics and the implications of such movements in terms of commuting to work and homeownership. Insofar as migration between different types of localities involves long distances, they are also guided by job opportunities and religio-ethnic concentration. **Conclusions:** Urban-rural population exchanges among Jews in

*Israel, while generally in accord with previous studies of the phenomena in other countries, tend to be less definite with respect to socioeconomic status and age. Perhaps this is because many of the urban and rural moves in Israel are of relatively short distance and either originate or end in lower density, peripheral, parts of large urban agglomerations. **Comments:** Regardless of these differences, it is clear that urban-rural exchanges of Jewish population in Israel are not a random process.*

1. Introduction

Israel, like all other more developed nations is highly urbanized. In fact, as early as 1955, some eight out of every ten people has been concentrated in places with 2,000 or more persons.¹ The urban share has risen to nine of every ten today. Hence, one might ask, why study urban-rural migration if only 10% of the nation's population lives in rural areas? The reason is because even with such high rate of urban population, people still move in and out of such places, and the selectivities of these migration streams can change the composition of urban and rural populations, even if they have little effect on the overall level of urbanization.

Older persons are less likely to move, for example, but among those who do move they are highly likely to seek rural destinations, thereby aging the rural population (Brown and Glasgow 2008). By contrast, people with advanced education and high professional qualifications are likely to be salient in migration from rural areas to cities, which offer better economic opportunities, higher returns on human capital, and cultural activities suited to people of medium and high social status (Anderson, 2011; Lichter and Brown, 2011) weakening the socio-economic profile of rural localities. Moreover, as Kulcsar and Curtis (2012) indicate in the *Handbook of Rural Demography*, rural areas, and their populations, continue to matter in more developed and highly urbanized countries because while only containing a minority of the population, they often account for a majority of a nation's land, water, minerals, energy and other natural resources, as well as large parts of a nation's infrastructure such as roads, bridges, pipelines, and of course most of its domestic food production. (Brown and Schafft 2011).

¹ The definition of urban in Israel is places with 2000 or more persons.

In this paper, we are interested in learning if migrants with certain social and economic characteristics are more likely to move from urban to rural locations, rural to urban locations, or to circulate among urban and rural places. Not surprisingly, the migration selectivity of the Jewish and non-Jewish populations is of interest in Israel. However, since non-Jews have extremely low mobility rates this paper simply examines differences in migration propensity and rural/urban direction between Jews and non-Jews. Thereafter, we narrow the look to Jews alone conducting in-depth analysis of the determinants of urban and rural migration. The analysis introduces both individual level characteristics and area-contextual factors. Despite being a small country with relatively short distances between places, Israel has experienced extensive development outside of its major cities. This has been accompanied by a population dispersion that has been constant although implemented in varying ways. Insight into the Israeli case, which to the best of our knowledge has not been investigated over the last several years, should contribute to the empirical and theoretical literature on urban and rural migration in contemporary industrial countries.

The remainder of this paper is structured as follows: "Background" section provides background review on spatial policy and physical characteristics of Israel. "Conceptual Issues" section discusses existing theories and empirical evidences of why and who are the people that are inclined to change type of locality. "Empirical basis and Definitions" section reviews the data and the division of the country into geographic units. In the next section of "Dynamics of Urban/Rural Migration" we trace changes in urban and rural dispersion and mobility among both the Jewish and non-Jewish populations. "Factors Associated with Urban/Rural Migration" focuses on the results of multivariate analyses for the Jewish population. Finally, "Discussion"

section summarizes the findings and discuss them further with respect to their theoretical and policy implications.

2. Background

Ever since Israel's establishment in 1948 its governments have viewed population as instrument for spatial planning and resettlement (Eisenstadt, 1973). In a country where agricultural workers account for only a small fraction of the labor force and the location of industries is not affected by the dispersion of natural resources, social, economic and geopolitical considerations as well as environmental preferences become major determinants of the desired pattern of population distribution (Brotskos, 1973). The government offers meaningful economic incentives, especially in housing, job opportunities, and tax breaks, to influence the spatial distribution of population and these factors, together with variability in individual resources (money, education, and social networks) have shaped the country's internal migration patterns (Goldscheider, 2002).

From an ideological perspective, Jewish nationalism emphasized the nation's "return to the land" and promoted the de-urbanization of the Jewish population (Goldscheider, 2002). Complemented by security considerations and utopian economic and social visions, a major guiding principle of policy and planning has been the deconcentration of the Jewish population to the national periphery (Cohen, 1970; Kirschenbaum, 1982). Special preference was, and is still, given to increasing the share of Jews in the North and South of the country, largely comprising the Galilee and the Negev. This involves strengthening "development towns," urban localities specially established to receive population and anchor regional development, in these areas; and the consolidation of geopolitically important areas

such as Jerusalem (Choshen, 2008). Another aim in distributing the Jewish population is to reinforce the nation's geopolitical borders. Also, since the ascent to power of the political right in the second half of the 1970s, increasing attempts have been made to intensify Jewish control over the Occupied Territories.

Clauses pertaining to population dispersion appear in the founding principles and platforms of all Israeli Governments. Practical-quantitative expressions of these intentions surface in programs prepared by governmental authorities especially the Ministry of Interior and Ministry of Finance, and in several master plans that forecast the size and distribution of the population. Some of these plans describe anticipated development without governmental intervention or a continuation of existing trends; others introduce policy goals that take processes elsewhere in the country into account (Sicron, 2002). That the Government continues to attach great importance to the development of the national peripheries was made evident by the establishment of the Ministry for the Development of the Negev and Galilee in 2005.

Given the country's small size (some 21,000 square kilometers)², some of the peripheries may be regarded as middle or outer rings of metropolitan areas, hence, while officially rural, they are located within easy access of urban places and labor markets. Moreover, the Israeli government has put substantial effort and money into improving the nation's road systems and advanced public transportation to allow easy and convenient commuting from peripheral to central locations. This should diminish the often-clashing considerations between dwelling security and employment and earning opportunities. Moreover, as is true of many modern societies (Frey, 1988), Israel has been experiencing some regional restructuring where new firms and economic centers, especially of high technology, are being established in

² Approximately half of the land is under military control, hence off-limits for dwelling.

intermediate hinterland areas that are growing faster than their metropolitan counterparts (Shefer, Frenkel and Roper, 2001).

The formal spatial policy and the country's physical characteristics enhance the likelihood of movement of people from urban localities to rural areas. Today's desire among young families for private houses and improved quality of life also strengthens the allure of rural localities. Consider the case of the kibbutz. This settlement type was originally based on ideological and practical egalitarianism; collective ownership of property, economic cooperation, and the production of agricultural and heavy industrial products. Today, however, the kibbutz is undergoing intensive privatization and attracting new members or non-member residents who seek to reside in an established rural environment with intimate social and cultural relationships (Ben-Rafael and Topel, 2004).

In contrast to Jews, Arab Israelis are severely limited in internal migration due to informal constraints including lack of accessible housing, limited economic networks, and discrimination (Goldschieder, 2002). Indeed, while the Arab population is growing in the nation's peripheral areas, this is largely attributable to natural increase not net internal migration. Hence, the regional distribution of the Arab population can change only modestly (Sicron, 2002). Arab dwelling needs originating in natural increase are challenged at the local level by intergenerational residential sharing, additions to existing houses, and expansion of villages (Khamaisi, 2005).

3. Conceptual Issues

The conceptual and theoretical context within which this study is carried out postulates that migration across internal boundaries is important because it affects the relative sizes of places and their relative socioeconomic compositions. The long

tradition of research on urban-rural migration has emphasized the differences between urban and rural communities, yet differences between urban and rural patterns have substantially narrowed over time (Fulton et al., 1997; Lacour and Puissant 2007; Warren, 1987). With the decline in agriculture and other extractive industries, the economic activities of rural inhabitants and their urban counterparts have largely converged (Castle, 1998), and new information and transport technologies have linked rural and urban people, communities, and economies more closely. The weakening of the urban-rural dichotomy is especially salient when levels of migration between these two types of localities are high. The differences narrow even further in recently established rural areas that are close to big cities but outside the adjacent urban development, i.e., exurbs (Lichter and Brown, 2011). Hence, contemporary research on urban-rural migration in more developed nations such as Israel tends to emphasize the spatial integration that results from population mobility rather than spatial differentiation (Lichter and Brown 2013f).

Many residents of rural localities commute to work in the city and, by so doing, maintain rural and urban orientations simultaneously (Brown et al., 1997). Concurrently, rural areas have become places that city dwellers visit for recreation and to consume products and services (Green, 2001). Even though the strengthening of interdependency and the convergence of different types of localities is likely to moderate the social and economic impacts of population redistribution (Brown et al., 1997), researchers still report that urban versus rural place of residence is associated with differences in people's behaviors and attitudes (Lichter and Brown, 2011).

Even in today's less spatially differentiated societies, people continue to relocate from urban to rural or from rural to urban areas because of economic incentives and non-labor-market preferences associated with cultural patterns and amenities (Greenwood,

1985; Zuiches, 1980). The preference for small or isolated residence over one's current urban location persists even if it results in some loss of income (Fuguitt and Brown, 1990), attesting to a broader change: growing prioritization of consumption preferences over economic gains (the "clean break" theory - Vining and Straus, 1977). The amenities and quality-of-life factors that attract people to rural areas include low density (Wardwell, 1980), private houses (Vining et al., 1982), and a search for community of shared values and activities (Anderson, 2011; Castle, 1998).). Migrants are also attracted to rural areas that have economies of their own, such as recreation and tourism. Some rural communities have become established as destinations for retirement age migrants (Brown et. al., 2011; Brown and Glasgow, 2008).

Urban/rural migration is unevenly spread among the population of a given country. Although life-cycle stages embodied in age and educational attainment are paramount in explaining migration patterns, employment, family status, and gender play smaller but significant roles. The effects of these factors, however, are somewhat confusing, sometimes resembling each other in explaining migration in opposing directions. However, these supposed inconsistencies are more explainable once one acknowledges that urban-rural migration in more developed nations can reflect amenity preferences as well as more conventional differences in spatially proximate economic opportunities. Accordingly, while people with high levels of education and professional qualifications tend to leave rural areas for cities because of the latter better economic opportunities and cultural life that suite with such affinities (Anderson, 2011; Lichter and Brown, 2011), such persons are also likely to move toward less urbanized locations especially if such areas are within commuting range of an urban labor market.

Typically, young adults prefer urban areas where high costs of living are countered by abundant educational and labor opportunities. As people age, form families, and have children, their needs change; now they ascribe increasing importance to residential amenities and gravitate to non-metro and rural locations for this reasons. Retirees typified by fixed pension and greater leisure time "become increasingly interested in places where costs of living are low and amenities are high" (Domina, 2006: 377). Those with good pensions on top of Social Security may move to high-amenity rural communities (Glasgow, 1995; Johnson and Stewart, 20110). The age heterogeneity of migrants from central to fringe areas is characteristic of adjacent countries; in Sweden, for example, this direction of movement is associated with being old (Lindgren, 2003) while in Denmark it characterizes young people (Anderson, 2011). Perhaps more consistent is the evidence that women, singles, the self-employed, and those holding manual jobs (but not in agriculture) are less inclined to make counter-urban moves (Anderson, 2011; Fulton et al., 1997). By contrast, married persons, and those out of the labor market, , each group for different reasons, are more likely to relocate to rural localities (Lichter and Brown, 2011). The profile of migrants in either direction varies according to the characteristics of the wider regions of origin and destination and the specific location of the areas in the country at issue (Rayer and Brown, 2001; Poveda, 2007).

4. Empirical Basis and Definitions

4.1. Data

The data utilized in this study are derived from the 2008 Israel Population Census. The Census was conducted by the innovative integrated census method which combined data from administrative sources, mainly a population register, with sample

data gathered in surveys, i.e., in census field work. The field work included two surveys: the first was conducted from December 2008 to February 2009 and included approximately 400,000 households; the second was a telephone survey carried out during March to July, 2009 to complete census information and comprised of some 250,000 people. The data file that was made available for this study included both parts of the census.

Our sample is restricted to Jewish and Non-Jewish (e.g., Muslims, Christians, Druze) respondents aged 18 and over.³ A further criterion for inclusion in the analysis was residence in Israel 5 years prior to the census. We focus on one adult from each household, rather than multiple adults, in order to eliminate the potential bias of interdependence of migration behavior (Kritz and Nogle, 1994). Applying these criteria resulted in a sample of 307,061 respondents: 253,858 Jews (82.7%), and 53,203 Non-Jews (17.3%). Contextual measures, of the district in which sample households reside, are drawn from official publications of the Israeli Bureau of Statistics.

4.2 Census Divisions and Definitions

Localities in Israel are distinguished between rural and urban; the cutoff point is 2,000 in population. The type of locality is not dependent on its economic nature (agricultural or not). In fact, the rural category is quite diverse. It includes different types of organization and status. A main dimension of difference is between localities (moshavim, collective moshavim, and kibbutzim) that exhibit a particular kind of economic cooperation among inhabitants in production, marketing, or consumption

³ In 2008 some three-fourth of Israel's population were Jewish, another one-fifth were non-Jews, and the remaining five percent had no religion.

and institutional localities or community localities where such economic cooperation does not exist. To a large extent, localities that are characterized by economic cooperation are populated by Jews while institutional and community localities may be populated by Jews or non-Jews.⁴

In the non-Jewish segment of Israel's population, mainly that of Muslims, many urban localities maintain traditional-rural land use and economic patterns. Even if they undergo a process of population concentration this has not resulted in their urbanization in a social and economic sense. Though the population of these villages may be increasing, density may be on the rise, and there has been a beginning of residential construction using modern technology, these localities have not experienced developmental processes of industrialization and modernization which are typically associated with urbanization and urbanism. These localities lack industrial-economic base and/or services. In fact, the economic dependence of these non-Jewish localities in Jewish localities for work and consumption and in governmental budgets has strengthened (Khamaisi, 2005).

According to the 2008 Census, Israel had 1,178 localities in all, 229 urban and 949 rural. Each of the country's six official districts (see Map 1) had both urban and rural localities.⁵ The respective types of localities, however, are not evenly spread among the districts. Rural localities are disproportionately located in the peripheral areas: the Northern District (332 localities) and the Southern District (209 localities). Nevertheless, a substantial number of rural localities—187—may be found in the Central District. Tel Aviv is the only district that has more urban localities than rural localities.

⁴ Some rural localities are defined as "other" and are not included in the foregoing taxonomy.

⁵ "Districts" are regional agglomerations in Israel.

The total number of localities also includes Jewish settlements in the Occupied Territories. During the period of our research Israel withdrew unilaterally from the Gaza Strip and parts of the northern Samaria, removing twenty-one localities, most of which were rural. At the beginning of 2008, there were 119 Jewish settlements in the Occupied Territories—twenty-seven urban and ninety-two rural. These 119 settlements are included in our study.

(Map 1, about here)

5. Dynamics of Urban/Rural Migration in Israel

5.1. Urban/Rural Distribution and Mobility

Israel's population is significantly urban and this characteristic has been gathering strength, though not consistently, over time. In 1955, shortly after statehood was attained, some 85% of Israelis lived in localities of 2,000 inhabitants or more. By 2008, the proportion increased to 92% (Figure 1).

(Figure 1, about here)

The Jewish community that was present upon statehood was already urban. Indeed, during its formative years even as substantial numbers of the massive influx of foreign-born Jewish immigrants were directed to small settlements; many of these settlements quickly passed the size of 2,000 inhabitants, hence becoming “urban”.⁶ Many other Jewish immigrants settled in major cities such as Tel Aviv, Jerusalem and Haifa. While in 1955 some 85% of Jews lived in urban localities by the early 1970s it has increased to 89% and further to 92% today. In the meantime, the urbanized Jewish population has experienced suburbanization, with substantial movement from large

⁶ Officially, for some time, the Central Bureau of Statistics continued to assign rural settlements of two thousand inhabitants or more to the category of rural localities (under the sub-category 'large rural villages'). However, for simplicity of follow-up over time we have considered such large rural villages as urban.

urban cores to dormitory suburbs around major metropolitan areas (Goldscheider, 1992). The Non-Jewish population, in turn, has undergone rapid urbanization. The share of this population dwelling in localities with more than 2,000 inhabitants climbing from only 64% in 1961 to 94% in 2008. Thus, the non-Jewish population today is slightly more urban than its Jewish counterpart.

Urban growth among the Jewish population traces mainly to the residential patterns of large numbers of new immigrants. However, during 1983-2008, the last two intercensal periods (1983-1995, and 1995-2008), there has been a significant tendency of Jews to move from urban localities to agricultural and non-agricultural rural settlements. As shown in figure 2, with very few exceptions, the annual population exchange by type of locality resulted in a net gain for rural localities during the twenty-five years between 1983 and 2008. Within the fluctuation of this net gain, two intervals are especially salient: the early 1990s with its high surplus for rural areas and the first year of the decade of the last census in which rural localities have lost some population to the cities. Accordingly, although the proportion of rural residents among Jews diminished (because urban areas grew more rapidly), the absolute number of Jewish rural residents increased impressively by more than 50% (from 325,000 in 1983 to 508,000 in 2008) (Statistical Abstract of Israel, various years). Notably, some of this internal migration from city to rural locality, especially in northern Israel, is a "ruralization" process of sorts in which population leaps over major cities' suburbs into their more rural hinterland (Kirschenbaum 1992: 85). Hence, it can be observed that since 1978, Israel has experienced net urban to rural migration, but not counter-urbanization. This also shows that the nation's increasing percent urban is attributable to natural increase rather than to internal migration.⁷

⁷ And also possibly to international migration.

(Figure 2, about here)

Among non-Jews, the data in Figures 1 and 2 show an increasing urban concentration although net exchanges between urban and rural areas have been small since 1983 (Figure 2). Thus, the almost 10 percentage point increase in the level of urbanization experienced by non-Jews since 1983 is associated mainly with natural increase and also, consequently, with changes in the status of localities from rural to urban even as the localities retain a population that is geographically quite stable.

5.2. Prevalence of Migration, 2003-2008

The data in Table 1 show that between 2003 and 2008, some 15% of Israelis changed locality of residence, but the tendency to relocate to another locality is six times greater among Jews (17.7%) than among non-Jews (3.4%). About 60 percent of Jewish migrants made a substantial move, i.e., from one district to another. This is slightly less true for non-Jews where only about 55 percent of the migrants moved between districts during the 2003-2008 interval.

(Table 1, about here)

Table 2 provides a matrix of urban-rural residence in 2008 by type of residence in 2003 for Jewish and non-Jewish *migrants*. Type of locality of origin is strongly associated with the type of the destination locality. Eight out of every ten Israeli migrants who resided in an urban locality in 2003 moved to another urban locality and only one-fifth moved to a rural locality. In contrast, migrants who initially resided in a rural locality were almost equally divided between those who relocated to a similar type of locality (rural) and those who moved to an urban locality.

These patterns pertain mainly to the Jewish population. By contrast, non-Jewish migrants tended to relocate either from one urban locality to another (93.9%) or from

a rural locality to an urban settlement (90.4%). Among Jews, the overall effect of migration between different types of localities was a net loss of urban residents of 2% of its end-of-period adult population. For non-Jews, the exchange between different types of localities resulted in a net gain of 0.6% of their 2008 urban population. Thus, these data point to diffused processes – a stronger inclination toward rural residence among Jews and strengthening of the urban shift among non-Jews – all of which amid reversals and counter-streams among both sub-groups.

(Table 2, about here)

5.3. Prevalence of Longer Distance Moves

Attention is now directed to migrants within each origin-destination stream who relocated from one district to another. Since districts in Israel are somewhat similar to regions in some other countries, the proportion of migrants moving across district lines is often an indicator of *migration distance*. Hence, the higher the percentage crossing district lines, the greater the geographic distance of moves within the respective migration streams. Migration that has an urban locality as its destination, whether originating in an urban locality (urban-urban) or a rural locality (rural-urban), exhibits the highest rate of crossing of district boundaries. At the other extreme, movement from one rural locality to another rural locality is the least likely to involve a change of district (47%). These patterns characterize Jews and non-Jews alike, but except for rural to urban moves, migration among non-Jews is much more localized. For example, only a quarter of non-Jewish persons who moved from one rural area to another crossed district boundaries, and urban-urban and urban-rural movers are also significantly more localized than is true of their Jewish counterparts.

(Table 3, about here)

5.4. Migrants Compared with Non-Migrants

Given our focus on internal migration, and the relative scarcity of non-Jewish migrants, we restrict our attention to the Jewish population from this point forward. The data in Table 4 allow us to compare the socioeconomic and other characteristics of movers with persons who remained in their same locality during the last five years. Moreover, these data permit us to compare shorter distance with longer distance migrants – intra- and inter-district migrants, respectfully.⁸

Movers vs. Non-Movers: Movers between localities and non-movers differ in major socio-demographic characteristics. Movers, too, are not made of one cloth; there are often meaningful gaps between movers within a given district and counterparts who relocate to another district. Migrants are younger and are more likely to be males than are non-migrants. They are more likely to be single, but less likely to be widowed. They are much more likely to be native born, and more likely to be Israeli, e.g., native born whose fathers were also born in Israel. Among the foreign born, people who have been in the country for eleven years or longer are especially reluctant to move. Migrants are somewhat positively selected compared with non-migrants. Over 42% of migrants have at least a Bachelor's degree compared with only about a third of non-migrants, and migrants are more likely to be employed and they have somewhat higher income. Finally, migrants are almost twice as likely to rent their homes compared with non-migrants.

(Table 4, about here)

⁸ From this point on since we are restricting the analysis to Jews only, we will simply refer to the “population“ or the “Israeli population” rather than to the Jewish or non-Jewish population.

Local vs. Longer Distance Migrants: Shorter and longer distance migrants are more similar with each other than with non-migrants, but they also show some significant differences. Longer distance migrants are somewhat younger, more likely to be single, slightly more likely to be Israeli, and to have a bit more education. In contrast, longer distance migrants have slightly lower income and are more likely to be renters than their shorter distance counterparts. Shorter and longer distance movers are notably different in where they work. Relatively few of the former work from home or do not work at all; in contrast, counterparts who recently moved to another district seem either disinclined to be mobile and work from home (alternatively, their residential move may have been associated with retirement) or need to cross district boundaries to get to work. This may indicate that their former district of residence, and in turn their residential relocation, did not involve a change of place of work. Hence, while different in some important ways, longer and shorter distance movers are not characterized by substantial socioeconomic differences, especially when either group is compared with non-movers.

Following this broad comparison of movers and non-movers, we narrow our focus to movers only. We are mainly interested in examining the determinants of migration between different types of areas. First, we examine factors associated with migration between different types of localities, namely, urban to rural versus rural to urban. Afterwards, for longer distance migrants, i.e., those who change district of residence, we explore the role of individual characteristics as well as area-contextual factors in urban-to-rural migration as against migration from one urban locality to another.

6. Factors Associated with Jewish Urban/Rural Migration

6.1 Model Specification

In this section we examine the social and economic correlates of the internal migration in Israel during 2003-2008. In particular, we are interested in understanding why Israeli Jews have tended to decentralize into rural spaces during recent years (see Figure 2). The above descriptive comparison of migrants vs. non-migrants is mostly consistent with the usual determinants of migration -- age, marital status, education, income, commuting distance also underlie internal migration selectivities in Israel. However, it is unclear which of these factors will retain its effect when other social and economic variables are accounted for in a multivariate analysis. In addition, because of Israel's particular migration history, we are interested in determining whether duration of residence in Israel as well as continent of origin effect internal migration propensities. Finally, we examine whether the characteristics of migrants' origin communities, e.g., unemployment rate, income level, proportion of Jews, and amount of construction, effect the propensity to move after the above socioeconomic characteristics of movers themselves are accounted for.

We examine these questions using logistic regression. This technique allows us to define a dichotomous dependent variable that contrasts different migration streams. Consistent with our attempts to understand the attraction or aversion to rural localities, we explore the likelihood of urban-to-rural moving as against rural-to-urban (Table 5); the likelihood of urban-to-rural moving as against moving between urban localities (Table 6); and the determinants of rural-to-urban moving as against moving from a rural area in one district to a rural area in another (Table 7). While the first model is solely concerned with a change in any type of locality, the latter two models are restricted to migration that crosses district boundaries (e.g., longer distance

moves), allowing evaluation of the effects of contextual conditions at the beginning of the migration period district of residence.

Data shown previously in Tables 2 and 3 indicate that the rate of internal migration is particularly low among Israel's non-Jewish population. In fact, only 3.5% of non-Jews changed residence between 2003 and 2008 compared with 15% mobility among Jews. Accordingly, the multivariate analysis of the determinants of urban/rural migration focuses solely on the country's Jewish population. Furthermore, given the existence of compulsory military service in Israel (two years for women and three years for men) and the strong tendency of young adults to seek post-secondary education after demobilization, the analyses are narrowed to people aged 25 and over. The explanatory variables are clustered into three major blocs: demographic characteristics, socio-economic variables, and contextual factors. The copious theoretical and empirical literature on the topic provides solid ground for the variables included in the models.

Demographic characteristics: Our explanatory demographic variables are age, gender, marital status, nativity status, and ethnic background. Age was represented by the cohorts 25-34, 35-44, 45-64 and 65 and over (the omitted category). Gender is set at 1 if the person is female; males are the reference category. Marital status distinguishes among singles, separated or divorced, widowed, and people currently married (the omitted category). We distinguish among respondents' nativity status by combining place of birth and duration in Israel (in 2003) with those born in Israel as the reference group and adding three dummy variables for foreign nativity parsed by duration in Israel: 0-5 years, 6-10 years, and 11 years or more. Ethnicity is defined by continent of birth and, for native Israelis, by father's place of birth: European-American ethnicity was assigned to respondents who had been born in these continents

(including Oceania and South Africa) and to native-born respondents whose father had been born in these areas. Asian-African ethnicity was assigned to respondents born in these two continents and native Israelis whose fathers originated in these areas. Israel, the reference category, was comprised of Israel-born offspring of Israel-born fathers.

Socio-economic characteristics: The socio-economic control variables used in this analysis are education, employment status, proximity to work, income, and homeownership. Education was decomposed into six dummy variables: less than high school completion as the reference category, high school with no matriculation, high school with matriculation, vocational, baccalaureate degree, and advanced academic education. Employment status distinguishes among people who did not work in 2008 (the omitted category), employees, and the self-employed. In the census respondents were asked to indicate the location of their place of work: at home or in their locality of residence (an omitted category that also includes those who currently do not work), different locality but same district, different district, or no permanent place of work. This gives us a rough indication of the distance travelled to work with inter-district commutes being the longest. We divided the individual's total yearly (gross) income into quintiles of 20% of respondents, with the lowest quintile as the omitted category, those in the second quintile, third quintile, fourth quintile, and finally the fifth quintile, the 20% of our sample that had the highest income. Homeownership distinguishes between those who rent the dwelling in which they reside (omitted category) and those who own their dwelling.

District-level contextual variables: We employed three measures to evaluate the effect of contextual conditions at the origin on urban/rural migration across districts, controlling for characteristics of the migrants themselves. These contextual variables

indicate the socioeconomic well-being of the origin community in terms of unemployment rate, per-capita income, and new housing construction. Conceptually, we are examining whether where one initially resides has an independent impact on one's migration propensity net of the effects of individual characteristics. To mitigate the possible effect of inter-temporal fluctuations in unemployment rates, we used the average of the mean total unemployment rate for each district for the five year period under investigation. The income data, expressed in New Israeli Shekels (NIS), refer to the average gross monthly income in the district of residence in 2003-2007. New housing construction is the average yearly number of dwellings completed during the five years preceding the census. All contextual measures are introduced as continuous variables and are linked to individual records according to their beginning-of-period district of residence.

The religious composition of the areas varies widely. We calculated the percentages of Jews in the total population at the beginning-of-period district of residence. For settlements in the Occupied Territories of the West Bank and Gaza, the proportion of Jews was calculated out of the total population of these settlements rather than the population in the entire area, most of which is Arab. All respondents in a given district have the same concentration value.

Appendix Table A presents summary statistics (means and standard deviations) of the dependent variables and explanatory variables.

6.2. Determinants of Urban-to-Rural versus Rural-to-Urban Migration

The analysis in Table 5 examines the effects of a set of individual factors that differentiate urban-to-rural migrants versus migrants who move in the opposite direction, e.g., from rural to urban areas. Hence, this analysis examines the selectivity of urban-ward migration compared with migration leading from urban to rural

communities. The relations between the independent variables and migration are presented as odds ratios ($\exp[b]$) that express the likelihood of the occurrence of the event (migration). Odds ratios less than 1.0 indicate that an explanatory variable is negatively associated with being an urban-to-rural migrant rather than a rural to urban migrant; while an odds ratio of 1.0 or higher indicates the opposite. For example, the odds ratio of 1.149 associated with being a female vs. a male indicates that female migrants are more likely than male migrants to move to rural areas rather than to cities. Conversely, the odds ratio of 0.499 for being single vs. being married means that single migrants are less likely to move from urban to rural areas than is true of married migrants. Hence, everything else equal, we can see that the net urban to rural migration that occurred during 2003-2008 was fueled by married persons. The 'Pseudo R²' (Nagelkerke R²) is a measure of the model's overall explanatory power.

Approximately half of the coefficients are statistically significant. They represent categories of eight variables: gender, marital status, nativity, ethnic extraction, education, employment status, commuting, and homeownership. In contrast, age and income do not stand alone as determinants of changes in type of residential locality when other factors are controlled. The direction of the relations indicate that women (versus men), people of European-American or Asian-African ethnic extraction (versus Israeli), those with advanced academic education, those who work outside their locality of residence, and those who own their dwelling - are more likely to move from an urban locality to a rural one than in the opposite direction. In other words, Israel's dominant internal migration stream, from urban to rural, is selective of women, people of European-American or Asian-African ethnic extraction, better educated persons, long distance commuters, and owners. Several coefficients are especially large; e.g., place of work, according to which some urban-to-rural movers

prefer not to commute long distances while others work in a district other than that in which they have recently settled, perhaps maintaining their pre-migration work situation. Likewise, people who recently experienced urban-to-rural migration are twice as likely to result in owning their current dwelling than counterparts who move from a rural location to the city. This may attest to more certainty and permanency of the urban-to-rural move whereas those who relocate to the city are less confident about their change in type of locality (and perhaps are also influenced by the higher rates of housing in the city than in rural areas).

(Table 5, about here)

In contrast, being unmarried - especially single or divorced (versus married), foreign-born who have lived in Israel for a short time (as compared with native-born), and employees (relative to those who do not work) tends to inhibit urban-to-rural migration. People who exhibit such characteristics are about half as likely to move from an urban locality to a rural one than peers who move in the opposite direction. category. Urban localities retain their singles and attract other singles from rural areas. It stands to reason that the axiomatic characteristics of a city – a large population – enhance opportunities to find a partner; more generally, singles search for places of entertainment, which are more available in cities. As far as employees are concerned, it should be remembered that this status documented in the census is post-migration; we know nothing about whether these migrants worked before leaving the urban origin and what kind of job they had held. Either way, a city provides more economic opportunities. Both outcomes of a large urban locality - proximity to peers and as a better supply of jobs - are likely to be central in immigrants' preference of urban localities over rural ones. To this we may add the tendency of Diaspora Jews to live in

urban places (DellaPergola, 2010), those who immigrate to Israel maintaining this spatial behavior in their new country.

While many covariates of urban-to-rural migration exhibit a statistically significant relation, the model was able to explain only 13.5% of the variance in migration patterns.

6.3. Rural or Urban Destination of Inter-District Urban Origin Migrants

We now seek to identify individual characteristics and area-contextual factors that influence whether people who leave urban areas crossing district boundaries migrate to rural or to other urban destinations. The introduction of macro-level contextual factors provides insights about whether positive or negative attributes of the origin affect destination choice. We use hierarchical binary logistic regression to evaluate the improvement in predictability of membership in the modeled category of the dependent variable, associated with the inclusion of the area-contextual factors.

With very few exceptions, all individual and contextual characteristics exhibit statistically significant relations with inter-district migration from urban locality to rural locality versus migration between urban localities (Table 6). Migrants who are middle-aged, female, highly educated, self-employed but not working at home (and at a workplace that is more likely to be their district of residence), and homeowners are more likely to make a double change (different district of residence and different type of locality) as compared to those who make a single change (different district of residence, but same residence type). In contrast, being unmarried, born abroad, of an ethnic extraction, employed, and highly salaried, reduces the probability that urban-origin migrants will move to a rural destination. Hence, inter-district migration that originates in urban localities contributes to strengthening the familial nature and

educational level of rural settlements while further concentrating unmarried persons, those new in the country, and employees who earn the middle or higher levels of income in urban areas. Hence, inter-district migration enhances the demographic and socio-economic polarization of urban and rural populations shown previously in Table 5.

(Table 6, about here)

The analysis in Table 6 also shows that contextual factors affect the destinations of inter-district urban-origin migrants. Controlling for personal characteristics, high unemployment in origin urban areas seems to increase the probability that urban-origin migrants will move to a rural locale rather than to another urban one. For each percentage point increase in the unemployment rate of the urban origin, the odds of migration to a rural destination are increased by 37%. Perhaps unemployed migrants are attracted to rural localities because of their lower cost of living. Everything else being equal, Jewish concentration has a negative relation with urban-to-rural migration that crosses district boundaries. The 0.979 odds ratio indicates that Jews who in 2003 resided in a city that had a higher percentage of compatriots (the proportion of Jews in the district's total population) were less likely to move to a rural locality in a different district than those who lived in districts that had smaller concentrations of Jews, and they preferred to resettle in another urban locality. For each point increase in Jewish concentration, the odds of migrating from urban locality to rural locality were 2.2% less than those of moving between two urban localities. In Israel, rural localities are homogenous in religious composition, i.e., Jewish localities have only Jewish inhabitants for the most part. Thus, our interpretation of this finding is that Jews who reside in a city that has a high proportion of Jews are not attracted to homogeneous Jewish environments, namely a rural locality. Per-capita income and

construction of new dwellings, though significantly associated with migration, do not result in a meaningful variation in the direction of either move - urban-to-rural or urban-to-urban.

The individual characteristics and area-contextual factors were able to explain 17.2% of the variation in inter-district migration from urban localities, whether to rural localities or to other urban localities. Comparing Block 1 of the hierarchical binary logistic regression (composed only of individual independent variables) with Block 2 (after including the contextual predictor factors), we find that the measure of error, -2LL, was reduced (Block Chi-square of 250.379 for Block 2) and was significant at $p < .001$. Thus, the inclusion of the contextual variables improved the ability of the model to predict migration patterns.

6.4. Rural or Urban Destination of Inter-District Rural Origin Migrants

The analysis in Table 7 presents factors associated with destination choice of rural origin migrants. The odds ratios indicate which individual and contextual characteristics increase the likelihood that a rural origin migrant will move to an urban or a rural destination. Compared with the analysis presented in Table 6, far fewer variables are significantly related to rural origin destination choice. Older migrants, commuters and homeowners are less likely to move from rural to urban areas than vice versa. In contrast, singles and previously married persons are twice as likely than married people to make a rural-to-urban move as against exchanging one rural locality for another. This type of move also characterizes people who are employed as against those who are unemployed, with an odds ratio of 1.678 at $p < .001$. Our findings show that recent relocation from a rural to an urban locality is

common among those in the upper quintile of the earning scale. Overall, unmarried, employed and high income migrants trend to leave rural areas for urban destinations.

(Table 7, about here)

As unemployment in the rural origin rises, people are more likely to leave their rural locality for an urban one rather than to resettle in another rural locality. Per-capita income and number of dwellings completed do not have a meaningful effect on migration. In contrast, a large number of coreligionists in one's origin district is negatively associated with a move to an urban locality in a different district. This may indicate that much migration of this kind is from rural localities in central parts of the country, which are highly populated by Jews, to rural localities on the periphery, where there are large Arab concentrations. It may also be related to Israel's unilateral withdrawal from Gaza, where most Jewish localities had been rural (< 2,000 inhabitants), after which most Jewish residents moved to other rural localities within sovereign Israel.

Despite the rather small number of variables that had statistically significant effect (13 out of 33 coefficients), the socio-demographic characteristics and macro-level factors were highly efficient in explaining variations in inter-district migration by rural residents with an R^2 of 29.3%. The incorporation of the area-contextual factors reduced the measure of error (Block Chi-Square of 127.597 at $p < .001$ for Block 2), attesting to the importance of these factors in understanding why some rural inhabitants move to the city while others relocate to another rural locality.

6.5. Summary of Similarities and Dissimilarities

A comparative summary of the relations between the socio-demographic individual characteristics and area-contextual factors patterns of urban/rural migration is

presented in Table 8. Neither of the individual variables behaves in a similar manner throughout the three models. Often, a given coefficient has a negative sign in one model and a positive sign in another. Such differences are especially salient for the determinants of migration between different types of localities versus migration between similar types of localities in different districts (Models 2 and 3). Concurrently, there are quite a few coefficients with a similar sign (though not always statistically significant) for urban-to-rural migration versus rural-to-urban migration and for urban-to-rural migration versus urban-urban migration across district boundaries (Models 1 and 2). This may suggest that the motivation to move from a city to a rural locality is guided by well defined factors that are not dependent on alternative types of migration or its spatial boundaries, either inter-district or intra-district. More consistent are the effects of area-contextual factors, especially those representing economic considerations (employment opportunities) and group belonging (concentration of religious peers), which operate in a similar direction, respectively, of encouraging a change in type of locality and inhibiting such a change, regardless of the direction of the change (urban-to-rural or rural-to-urban).

(Table 8, about here)

Discussion

This study examined the levels, directions, and determinants of urban-rural migration in Israeli during 2003-2008. The paper first developed a descriptive comparison urban- rural migration patterns among Jews and non-Jew. Thereafter, due to a small number of non-Jewish migrants, we focused solely on Jews comparing the demographic and socio-economic characteristics of migrants vs. non-migrants, and among the latter according to distance of migration. The final part of the analysis,

which is restricted to longer distance migrants who moved between districts, adds area-contextual factors to determine if attributes of the destination affect migration between different types of localities.

Despite being a highly urban society, Israelis exhibit strong tendency to change type of residence from urban to rural as well as in the reverse direction. Many of these movements are relatively short distance, but a substantial number are longer distance involving a change of district of residence. These patterns of urban/rural migration are not spread evenly among the population; rather certain socio-demographic characteristics differentiate among persons engaged in various streams of rural-urban movement. Our findings portray a socio-demographic profile of persons who leave the city in favor of a rural place, but also of people who are likely to move in the opposite direction. Moreover, in addition to migration between urban and rural areas, our data show that some migrants move within settlement types, e.g., urban-to-urban or rural-to-rural. To the extent that such movements are of a long distance, they are guided not only by individual characteristics but also by considerations associated with contextual conditions including economic opportunities and the concentration of religio-ethnic groups. These factors, on the macro level are important for understanding why some people make a single change of district of residence but to a similar type of locality while others are at a double change of both district and type of locality. Hence, the analysis examined in this paper reflects major aspects of the demographic interplay between urban and rural areas in Israel.

Research on urban-rural migration outside of Israel typically shows well established selectivities with migration to urban areas being comprised of younger, better educated persons who are either single or newly married. Persons who move from urban to rural are also positively selected in terms of socio-economic factors such as

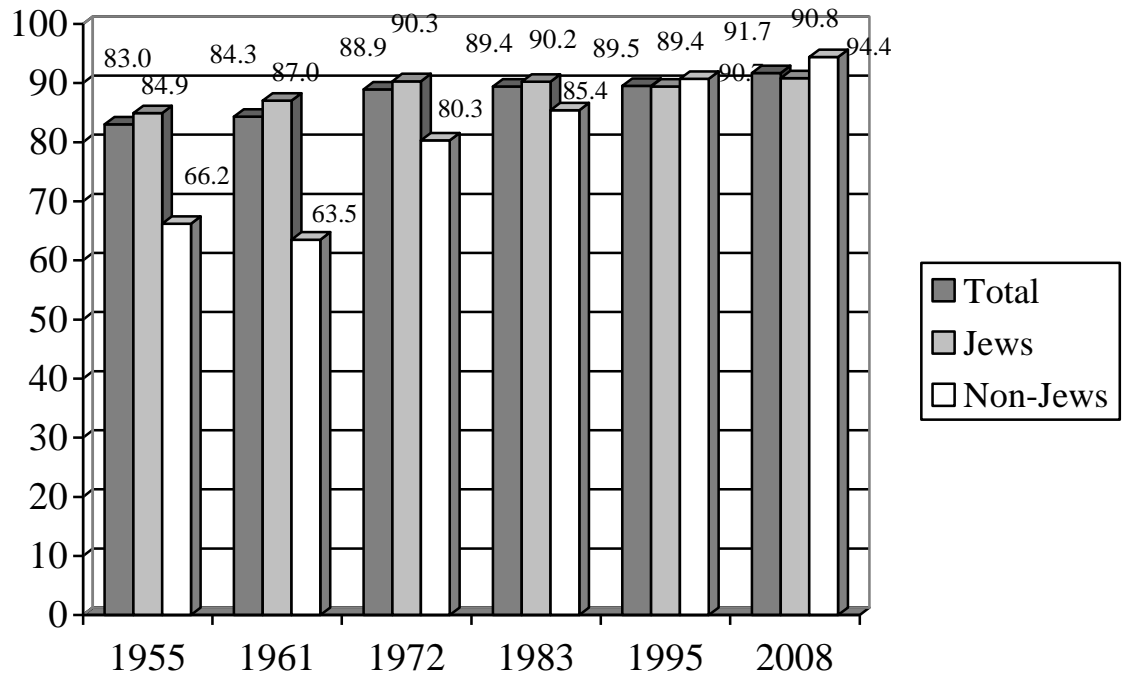
income and education, but they also tend to be older than persons who move to the cities (Kulcsar and Curtis 2012a). In contrast, urban-rural population exchanges among Jews in Israel while generally in accord with previous studies of the phenomena in other countries tend to be less definite with respect to socioeconomic status and age. Perhaps this is because many of the rural-urban moves in Israel are of relatively short distance and either originate or end in lower density, peripheral, e.g., rural, parts of large urban agglomerations. Regardless of these differences, it is clear that rural-urban exchanges of Jewish population in Israel is not a random process. Persons who move within and between the rural and urban settlement categories are socioeconomically differentiated from each other, and among longer distance movers, economic opportunities and ethnic composition of the destination also affect migration probabilities. Accordingly, while research on rural-urban migration elsewhere is a guide for such research in Israel, the Israeli situation also matters. Future research should re-analyze these models for the non-Jewish population. As indicated above, this was not possible with the census data due to the small number of migrants. Such an investigation will allow us to assess the effect of being part of the majority population (Jews) vs. minority (non-Jews) when all other things being equal. This could shed light on processes of integration vs. separation thus expanding the contribution of this study beyond the demographic-geographic realm to better understand the spatial dimension of group belonging in contemporary Israel.

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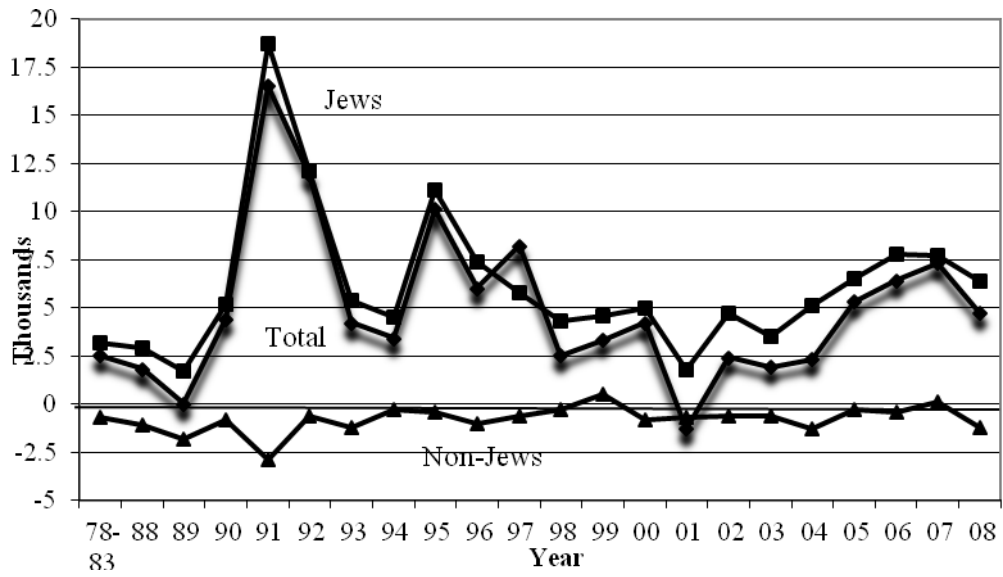
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Figure 1. Percentage of Population in Localities of 2,000 Inhabitants or More For Selected Years and by Group Affiliation



Source: CBS, Statistical Abstracts, various years.

**Figure 2. Net Rural Gain or Loss from Internal Migration:
Total Population, Jews, and Non-Jews, 1978-2008**



Sources: For 1978-1983: CBS, Internal migration, 1988; for 1988-2008: Statistical Abstracts, various years.

**Table 1. Five-Year Migration Status among Jews and Non-Jews:
2008 Israel Census of Housing and Population (Percentages)**

| Religion | Total | (N) | Same Locality ^a | Same District ^b | Different District |
|----------|-------|-----------|----------------------------|----------------------------|--------------------|
| Total | 100.0 | (307,061) | 84.8 | 6.0 | 9.2 |
| Jews | 100.0 | (253,858) | 82.4 | 7.0 | 10.7 |
| Non-Jews | 100.0 | (53,203) | 96.5 | 1.5 | 1.9 |

a) Including same address, different address in the same locality, and unknown address in same locality.

b) Including different locality in same natural area, different natural area in same sub-district, and different sub-district.

Table 2. Type of Residence Five Years Ago by Type of Current Residence for Persons Who Moved between Localities (Percentages), and Gain or Loss for Urban Areas Owing to Inter-Type Five-Year Migration as Percent of 2008 Population

| Type of Residence, 2003 | Type of Residence, 2008 | | |
|-------------------------|-------------------------|-----------------|----------------|
| | Urban | Rural | Total (N) |
| | | Total | |
| Urban | 80.3 | 19.7 | 100.0 (39,535) |
| Rural | 52.7 | 47.3 | 100.0 (7,259) |
| Net Gain or Loss | -1.51 | | |
| | | Jews | |
| Urban | 79.8 | 20.2 | 100.0 (38,149) |
| Rural | 50.2 | 49.8 | 100.0 (6,809) |
| Net Gain or Loss | -2.0 | | |
| | | Non-Jews | |
| Urban | 93.9 | 6.1 | 100.0 (1,386) |
| Rural | 90.4 | 9.6 | 100.0 (450) |
| Net Gain or Loss | +0.63 | | |

**Table 3. Percentage Moving To another District by Type of Migration
Among Jews and Non-Jews**

| Type of Migration | Group Affiliation | | |
|-------------------|-------------------|------|----------|
| | Total | Jews | Non-Jews |
| Urban-Urban | 61.5 | 61.8 | 54.4 |
| Rural-Rural | 47.0 | 47.3 | 25.6 |
| Urban-Rural | 57.8 | 57.9 | 47.6 |
| Rural-Urban | 64.5 | 64.3 | 66.3 |

Table 4
Socio-Demographic Characteristics of Five-Year (2003-2008) Movers and Non-Movers:
Israeli Jews, 2003-2008 (Percentages)

| | Total | Movers within Districts | Movers between Districts | Non-Movers |
|--------------------------------|--------------|-------------------------|--------------------------|--------------|
| <i>Age</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Age 25-34 | 19.7 | 47.7 | 57.2 | 13.2 |
| Age 35-44 | 20.2 | 26.4 | 20.8 | 19.6 |
| Age 45-64 | 37.9 | 18.5 | 14.7 | 42.1 |
| Age 65+ | 22.2 | 7.4 | 7.3 | 25.1 |
| <i>Gender</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Male | 46.2 | 50.3 | 50.4 | 45.4 |
| Female | 53.8 | 49.7 | 49.6 | 54.6 |
| <i>Marital Status</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Single | 10.6 | 20.3 | 27.9 | 7.9 |
| Married | 66.4 | 62.4 | 57.8 | 67.7 |
| Divorced/Separated | 12.4 | 13.4 | 10.7 | 12.6 |
| Widowed | 10.6 | 4.0 | 3.6 | 11.9 |
| <i>Nativity</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Native-born | 56.2 | 75.2 | 75.2 | 52.5 |
| Foreign born 0-5 | 2.8 | 2.8 | 3.3 | 2.7 |
| Foreign-born 6-10 | 6.2 | 4.2 | 4.8 | 6.6 |
| Foreign-born 11+ | 34.8 | 17.8 | 16.8 | 38.2 |
| <i>Ethnicity</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Israeli | 15.2 | 27.4 | 31.8 | 12.4 |
| Europe-America | 44.8 | 35.7 | 36.9 | 46.4 |
| Asia-Africa | 40.0 | 36.9 | 31.3 | 41.3 |
| <i>Education</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| 1-8 Years | 17.5 | 7.2 | 7.9 | 19.3 |
| High school no matriculation | 18.1 | 15.1 | 11.9 | 19.0 |
| High school with matriculation | 16.5 | 20.2 | 22.4 | 15.5 |
| Vocational | 15.9 | 15.1 | 13.4 | 16.3 |
| Baccalaureate degree | 19.5 | 29.0 | 31.4 | 17.4 |
| M.A. degree or higher | 12.6 | 13.4 | 12.9 | 12.5 |
| <i>Employment Status</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Employee | 54.1 | 70.8 | 69.0 | 51.1 |
| Self-employed | 11.6 | 11.8 | 10.4 | 11.7 |
| Don't work | 34.3 | 17.4 | 20.7 | 37.2 |
| <i>Place of Work</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Work from home/Don't work | 63.3 | 37.4 | 47.4 | 67.2 |
| Work same district | 19.6 | 40.9 | 21.1 | 17.8 |
| Work different district | 13.3 | 16.6 | 26.8 | 11.6 |
| Work no permanent address | 3.7 | 5.0 | 4.7 | 3.5 |
| <i>Income</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Income quintile I | 22.2 | 16.9 | 22.1 | 22.6 |
| Income quintile II | 20.6 | 18.8 | 20.9 | 20.8 |
| Income quintile III | 19.2 | 20.7 | 19.5 | 19.1 |
| Income quintile IV | 19.0 | 21.3 | 19.1 | 18.8 |
| Income quintile V | 19.0 | 22.3 | 18.4 | 18.7 |
| <i>Homeownership</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> |
| Owning apartment | 66.5 | 39.2 | 30.6 | 72.8 |
| Renting apartment | 33.5 | 60.8 | 69.4 | 27.2 |

Table 5.
Odds Ratios (Exp[b]) of Five-Year Migration from Urban Locality to Rural Locality vs. Migration from Rural Locality to Urban Locality on Individual Characteristics: Israeli Jews, 2003-2008

| Independent Variables | Odds Ratios | (S. E) |
|------------------------------------|-------------|--------|
| Age 25-34 | 0.826 | (.166) |
| Age 35-44 | 1.177 | (.166) |
| Age 45-64 | 1.040 | (.161) |
| Gender | 1.149** | (.052) |
| Marital status single | 0.499*** | (.061) |
| Marital status divorced/separated | 0.426*** | (.082) |
| Marital status widowed | 0.746 | (.187) |
| Foreign born 0-5 | 0.369*** | (.193) |
| Foreign-born 6-10 | 0.627** | (.163) |
| Foreign-born 11+ | 1.055 | (.087) |
| Ethnicity Europe-America | 1.193** | (.067) |
| Ethnicity Asia-Africa | 1.237*** | (.061) |
| High school no Matriculation | 1.212 | (.121) |
| High school with matriculation | 1.056 | (.115) |
| Vocational | 1.161 | (.120) |
| Baccalaureate degree | 1.145 | (.113) |
| M.A. degree or higher | 1.368* | (.128) |
| Employee | 0.449*** | (.095) |
| Self-employed | 0.874 | (.106) |
| Work same district | 4.070*** | (.068) |
| Work different district | 2.897*** | (.073) |
| Work no permanent address | 2.257*** | (.106) |
| Income quintile II | 1.027 | (.077) |
| Income quintile III | 0.922 | (.078) |
| Income quintile IV | 0.872 | (.081) |
| Income quintile V | 0.900 | (.089) |
| Homeownership | 2.093*** | (.058) |
| | | |
| (N) | 9,403 | |
| Pseudo R ² (Nagelkerke) | 13.5% | |

* $P < .05$; ** $P < .01$; $P < .001$

a) Reference categories are as follows: age – 65 years and over; gender – male; marital status-married; nativity – native-born Israelis; ethnicity – Israeli; education – less than high school graduation; employment status – don't work; place of work – at home or locality of residence (as well as not working); income – lowest quintile (0-19.9%); homeownership – owning house/apartment of residence.

Table 6.
Odds Ratios (Exp[b]) of Five-Year Inter-District Migration from Urban Locality to Rural Locality vs. Migration between Urban Localities on Individual Characteristics and Area Context Factors: Israeli Jews, 2003-2008

| Independent Variables | Odds Ratios | (S. E) |
|---|-------------|--------|
| <i>Individual Characteristics (Block 1)</i> | | |
| Age 25-34 | 0.744 | (.121) |
| Age 35-44 | 1.405** | (.122) |
| Age 45-64 | 1.348* | (.120) |
| Gender | 1.172* | (.042) |
| Marital status single | 0.530*** | (.050) |
| Marital status divorced/separated | 0.469*** | (.075) |
| Marital status widowed | 0.758* | (.142) |
| Foreign born 0-5 | 0.164*** | (.197) |
| Foreign-born 6-10 | 0.218*** | (.145) |
| Foreign-born 11+ | 0.612*** | (.067) |
| Ethnicity Europe-America | 0.846** | (.053) |
| Ethnicity Asia-Africa | 0.806*** | (.050) |
| High school no Matriculation | 1.668*** | (.099) |
| High school with matriculation | 1.930*** | (.093) |
| Vocational | 1.845*** | (.098) |
| Baccalaureate degree | 1.793*** | (.092) |
| M.A. degree or higher | 1.728*** | (.101) |
| Employee | 0.661*** | (.079) |
| Self-employed | 1.379*** | (.087) |
| Work same district | 3.354*** | (.059) |
| Work different district | 2.302*** | (.058) |
| Work no permanent address | 2.247*** | (.093) |
| Income quintile II | 1.073 | (.061) |
| Income quintile III | 0.868* | (.065) |
| Income quintile IV | 0.849* | (.066) |
| Income quintile V | 0.696*** | (.072) |
| Homeownership | 2.900*** | (.049) |
| <i>Area Context Factors (Block 2)</i> | | |
| Unemployment | 1.369*** | (.044) |
| Per capita income | 1.001*** | (.000) |
| Construction | 1.000*** | (.000) |
| Jewish concentration | 0.979*** | (.003) |
| (N) | 18,905 | |
| Pseudo R ² (Nagelkerke) | 17.2% | |
| Block 1 -2LL | 16,913.604 | |
| Block 2 -2LL | 16,663.225 | |
| Block Chi-Square | 250.379*** | |

* $P < .05$; ** $P < .01$; $P < .001$

a) Reference categories are as follows: age – 65 years and over; gender – male; marital status-married; nativity – native-born Israelis; ethnicity – Israeli; education – less than high school graduation; employment status – don't work; place of work – at home or locality of residence (as well as not working); income – lowest quintile (0-19.9%); homeownership – owning house/apartment of residence.

Table 7.
Odds Ratios (Exp[b]) of Five-Year Inter-District Migration from Rural Locality to Urban Locality vs. Migration between Rural Localities on Individual Characteristics and Area Context Factors: Israeli Jews, 2003-2008

| Independent Variables | Odds Ratios | (S. E) |
|---|-------------|--------|
| <i>Individual Characteristics (Block 1)</i> | | |
| Age 25-34 | 0.968 | (.301) |
| Age 35-44 | 0.455** | (.301) |
| Age 45-64 | 0.384*** | (.290) |
| Gender | 0.889 | (.090) |
| Marital status single | 2.099*** | (.108) |
| Marital status divorced/separated | 2.673*** | (.148) |
| Marital status widowed | 1.537 | (.317) |
| Foreign born 0-5 | 1.325 | (.288) |
| Foreign-born 6-10 | 1.016 | (.262) |
| Foreign-born 11+ | 0.869 | (.157) |
| Ethnicity Europe-America | 1.075 | (.114) |
| Ethnicity Asia-Africa | 0.947 | (.110) |
| High school no Matriculation | 0.603* | (.216) |
| High school with matriculation | 0.876 | (.201) |
| Vocational | 0.749 | (.211) |
| Baccalaureate degree | 0.984 | (.202) |
| M.A. degree or higher | 0.943 | (.230) |
| Employee | 1.678*** | (.157) |
| Self-employed | 0.945 | (.100) |
| Work same district | 0.269*** | (.116) |
| Work different district | 0.545*** | (.123) |
| Work no permanent address | 0.437*** | (.172) |
| Income quintile II | 1.006 | (.126) |
| Income quintile III | 1.232 | (.130) |
| Income quintile IV | 1.261 | (.139) |
| Income quintile V | 1.520** | (.159) |
| Homeownership | 0.376*** | (.110) |
| <i>Area Context Factors (Block 2)</i> | | |
| Unemployment | 1.228* | (.093) |
| Per capita income | 1.000 | (.000) |
| Construction | 1.000 | (.000) |
| Jewish concentration | 0.986** | (.005) |
| (N) | 3,048 | |
| Pseudo R ² (Nagelkerke) | 29.3% | |
| Block 1 -2LL | 3,561.928 | |
| Block 2 -2LL | 3,434.330 | |
| Block Chi-Square | 127.597*** | |

* $P < .05$; ** $P < .01$; *** $P < .001$

a) Reference categories are as follows: age – 65 years and over; gender – male; marital status-married; nativity – native-born Israelis; ethnicity – Israeli; education – less than high school graduation; employment status – don't work; place of work – at home or locality of residence (as well as not working); income – lowest quintile (0-19.9%); homeownership – owning house/apartment of residence.

Table 8.
Summary of the Direction and Statistical Significance of Effect of
Independent Variables on Patterns of Urban/Rural Migration

| Independent Variables | Intra- and Inter-District Migration | Inter-District Migration | |
|--------------------------------------|---|---|---|
| | | Urban-to-Rural vs. Urban-to-Urban (Model 2) | Rural-to-Urban vs. Rural-to-Rural (Model 3) |
| | Urban-to-Rural vs. Rural-to-Urban (Model 1) | | |
| <i>Individual Characteristics</i> | | | |
| Age (young) | Positive (N.S.) | Positive | Negative |
| Female | Positive | Positive | Negative (N.S.) |
| Unmarried | Negative | Negative | Positive |
| Foreign-born | Negative | Negative | Positive (N.S.) |
| Ethnicity | Positive | Negative | Positive (EA-N.S.) Negative (AA-N.S.) |
| Education (high) | Positive | Positive | Negative (N.S.) |
| Working | Negative | Negative (employee) Positive (self-employed) | Positive |
| Work away from locality of residence | Positive | Positive | Negative |
| Income | Negative (N.S.) | Negative | Positive |
| Homeownership | Positive | Positive | Negative |
| | | | |
| <i>Area Context Factors</i> | | | |
| Unemployment | - | Positive | Positive |
| Per capita income | - | Positive | No effect (N.S.) |
| Construction | - | No effect | No effect (N.S.) |
| Jewish concentration | - | Negative | Negative |
| | | | |
| R^2 | Lowest | Medium | Highest |

Appendix A.
Definitions and Summary Statistics for Analysis Variables

| Variable ^a | Definition | Mean (S. D.) |
|-----------------------------------|---|-----------------|
| <i>Dependent Variables</i> | | |
| Urban-Rural | =1 for five-year migration from urban locality to rural locality | .176 |
| Rural-Urban | =1 for five-year migration from rural locality to urban locality | .073 |
| <i>Individual Characteristics</i> | | |
| Age 25-34 | =1 for 25-34 years old | .532 |
| Age 35-44 | =1 for 35-44 years old | .232 |
| Age 45-64 | =1 for 45-64 years old | .163 |
| Gender | =1 for female | .503 |
| Marital status single | =1 for single persons | .247 |
| Marital status divorced/separated | =1 for divorced or separated persons | .118 |
| Marital status widowed | =1 for widowed | .037 |
| Foreign born 0-5 | =1 for foreign-born with 5 or less years of tenure in 2003 | .031 |
| Foreign-born 6-10 | =1 for foreign-born with 6 to 10 years of tenure in 2003 | .045 |
| Foreign-born 11+ | =1 for foreign-born with 11+ years of tenure in 2003 | .172 |
| Ethnicity Europe-America | =1 for persons of European-American background | .364 |
| Ethnicity Asia-Africa | =1 for persons of Asia-Africa background | .336 |
| High school no Matriculation | =1 for high school Graduation with no matriculation | .132 |
| High school with matriculation | =1 for high school with matriculation exams | .215 |
| Vocational | =1 for vocational studies | .141 |
| Baccalaureate degree | =1 for B.A. diploma | .304 |
| M.A. degree or higher | =1 for M.A. or higher diploma | .131 |
| Employee | =1 for employee | .697 |
| Self-employed | =1 for self-employed | .110 |
| Work same district | =1 if person works in district of residence | .294 |
| Work different district | =1 if person works in a district different from district of residence | .225 |

| | | |
|-----------------------------|--|-----------------------|
| Work no permanent address | =1 if person's place of work is not permanent | .049 |
| Income quintile II | =1 for second quintile of income (20-39.9%) | .200 |
| Income quintile III | =1 for third quintile of income (40-59.9%) | .200 |
| Income quintile IV | =1 for forth quintile Of income (60-79.9%) | .200 |
| Income quintile V | =1 for fifth quintile Of income (80-100%) | .201 |
| Homeownership | =1 for persons owning house/apartment of residence | .658 |
| <i>Area Context Factors</i> | | |
| Unemployment rate | Average for 2003-2008 in percentages | 8.970 (1.288) |
| Per capita income | Average monthly income for 2003-2008 in absolute numbers | 7801.817 (877.068) |
| Construction completed | Average for 2003-2008 in absolute numbers | 5321.64 (2665.27) |
| Jewish concentration | For 2003 in percentages | 80.826 (15.187) |

a) Reference categories are as follows: age – 65 years and over; gender – male; marital status-married; nativity – native-born Israelis; ethnicity – Israeli; education – less than high school graduation; employment status – don't work; place of work – at home or locality of residence (as well as not working); income – lowest quintile (0-19.9%); homeownership – renting house/apartment of residence.