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Multidimensional Poverty among the Native- and Foreign-born in the United States: Evidence from the 2010-2014 American Community Surveys

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CHAPTER 8

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8.1 Introduction

In recent years, academics, policy makers, and members of the general public of the United States have exhibited increased interest in the measurement and remediation of poverty. To some degree, the increased interest is likely attributable to the effects of the 2007–2009 recession. As evidence of the impact of the recession, during the years 2010–2014, the annual average poverty rate in the United States was 14.9% (U.S. Census 2015). This is the highest 5-year average poverty rate of any interval since the mid-1960s, and the 2014 poverty rate of 15.1% is the second highest rate reported since 1966 (DeNavis–Walt and Proctor 2015).[1] These statistics provide a measure of income-based deprivation in the United States; however, a number of researchers have noted that income- and consumption-based

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poverty measures may vastly understate deprivation. Given this shortcoming, researchers have produced a number of alternative measures of poverty. Central to this class of new measures is the Multidimensional Poverty Index, which extends beyond traditional income-based factors to provide a broader and, thus, more comprehensive depiction of deprivation that includes education, healthcare, living standards, etc.

The introduction of the Multidimensional Poverty Index (MPI) has led to a large and growing literature on the topic.[2] More often than not, however, these works have focused on poverty in developing countries. Relatively few studies have examined multidimensional poverty in developed economies and only a handful of works have looked at the U.S. (i.e., Brucker et al. 2015; Dhongde and Haveman 2015; Mitra and Brucker 2014; Wagle 2014; Azpitarte 2010). Further, while prior works have estimated multidimensional poverty rates for both the native- and foreign-born cohorts, variation across the foreign-born population, by immigrants' home countries, has not been considered. In short, relatively little attention has been afforded to potential differences between native- and foreign-born residents of the United States. Likewise, while a few studies seek to identify the determinants of multidimensional poverty in the U.S., no prior study has considered variation across native- and foreign-born cohorts in terms of these determinants.

Accordingly, we offer several contributions that extend the related literature. First, we document the extent to which multidimensional poverty currently exists in the United States. Doing so adds incrementally to the existing literature while also serving as a check, of sorts, of the veracity of our data. Delving more deeply, we examine variation in multidimensional poverty across native- and foreign-born residents of the United States. Three of the existing works on our topic (i.e., Brucker et al. 2015; Dhongde and Haveman 2015; Mitra and Brucker 2014) have considered such variation, broadly, across native- and foreign-born cohorts; however, our analysis is more detailed as we quantify the extent of multidimensional poverty across immigrant populations in the U.S. at the home country level of detail. Additionally, to identify the factors that contribute to multidimensional poverty, we present the results of an econometric analysis of the determinants of multidimensional poverty and examine variation in the determinants across both native- and foreign-born cohorts and across several groups of immigrants' home countries. By providing detailed coverage of the incidence and intensity of multidimensional poverty, we offer a deeper understanding of

the problem. We hope the information provided is of value to fellow researchers and for the formulation of public policies that aim to alleviate deprivation.

In our analysis, we examine data from the 2010–2014 American Community Survey (ACS) 5-year Public Use Microdata Sample (PUMS) files (U.S. Census 2016) while employing the methodology of Alkire and Foster (2009) to measure multidimensional poverty. Our findings are largely consistent with those of earlier studies; however, we report considerable variation across immigrant home countries in the incidence and intensity of deprivation and, thus, in MPI values. In our econometric analysis, we employ the binomial logit and ordered logit estimation techniques. The results confirm that, once we control for other factors, foreign-born individuals are more likely than comparable native-born individuals to be multidimensionally poor. Gender, race and ethnicity, age, education, marital and employment statuses, household size, and primary household language are all significant determinants of multidimensional poverty. While coefficient signs are largely consistent across native- and foreign-born cohorts, we find that the magnitudes of the coefficients differ to statistically significant extents. It is important to note, however, that we consider the analysis presented here to be an exploration of sorts, a "first-cut" analysis wherein our objectives are modest and our goal is to provide a basis for future research efforts on the topic.

In the next section, we discuss the current literature on multidimensional poverty in the United States. This is followed in Sect. 8.3 by a discussion of our methodology and by a presentation of MPI values and related findings for the U.S., for native- and foreign-born cohorts, and for the home countries of the foreign-born population. In Sect. 8.4, we present an econometric analysis that identifies the determinants of multidimensional poverty, and we explore variation in determinants across native- and foreign-born cohorts and across groupings of immigrants' home countries. We conclude in Sect. 8.5.

8.2 The Literature on Multidimensional Poverty in the United States

As we have noted, only a handful of studies have examined multidimensional poverty in the United States. Azpitarte (2010) is the first of these works. Using data from the 2001 U.S. Survey of Consumer Finances and the 2002 Spanish Survey of Household Finances, income and wealth

are utilized to examine poverty, and the findings are compared to those obtained from application of the standard income poverty approach. More specifically, Azpitarte categorizes the poor into three groups: twice-poor, protected-poor, and vulnerable-non-poor. The twice-poor group includes those who are poor and who have an insufficient stock of wealth. The protected-poor group consists of those whose income is beneath the income poverty threshold but who have a sufficient stock of wealth. Lastly, those in the vulnerable-non-poor group have incomes above the income poverty threshold but lack a sufficient stock of wealth.

Using a multidimensional approach, Azpitarte finds that poverty measurement based on income and wealth yields different results as compared to measurement based on the standard income poverty approach. Further, focusing on the U.S., an individual's risk of being a member of one of the three specified groups is found to vary based on demographic and household characteristics. For example, households headed by younger individuals, non-whites, individuals who are single or who are single parents, individuals with relatively low levels of educational attainment, and individuals who are unemployed, retired, or not in the labor force are more likely to suffer poverty. In addition, Azpitarte reports that a larger share of U.S. households experience poverty (either income or wealth poverty) as compared to Spain.

Wagle (2014) employs the Alkire-Foster (AF) (2009) approach and a dimensional approach of multidimensional poverty measurement. The two approaches differ in that the latter uses the dimensional indices (i.e., poverty status, intensity, and gap indices), while the former uses the indicators of the dimensions to recognize poverty and aggregate deprivations. In other words, to be considered multidimensionally poor, the dimensional approach requires an individual to be deprived in a specified number of dimensions, while the AF approach requires an individual to be deprived in a certain number of indicators. Using data from the 2004 U.S. General Social Survey to measure multidimensional poverty, Wagle illustrates the outcomes of each approach while using three core dimensions: economic resources, inner capabilities, and relational resources.

Relative to the AF approach, Wagle finds that the headcount ratio is more than 20% lower under the dimensional approach. He also finds that, regardless of approach, the Multidimensional Poverty Indices differ depending on race and ethnicity: Whites and Asians have the lowest levels of multidimensional poverty, with values near/below the national average, while blacks, Native Americans, and Hispanics have

levels considerably above the average value. Wagle also reports variation across the two approaches in terms of the contributions of each dimension. For example, relational resources appear to be the biggest factor in measuring multidimensional poverty under the dimensional approach. Under the AF approach, however, economic resources are the largest factors. Wagle also notes that the contributions of each dimension are fairly similar under the dimensional approach, but they vary considerably more when the AF approach is used. Further, he states that the AF approach overestimates the magnitude of poverty and, overall, he suggests that the dimensional approach contributes additional insights that are not provided by the AF approach.

To measure multiple overlapping deprivations, Mitra and Brucker (2014) apply the AF method to data from the March 2013 U.S. Current Population Survey and the 2012 American Community Survey. Limited by data availability, the authors employ only five of the eight dimensions specified by Stiglitz et al. (2009). Deprivation in material well-being is considered to occur if an individual's income is below the official poverty threshold. Individuals are considered to be deprived in terms of their health if they report being either in poor or fair health. With respect to the education dimension, an individual is considered to be deprived if she/he has not completed high school. An individual is also considered to be deprived in terms of work if she/he is unemployed, and for those under 17 years of age, the individual is considered deprived if the household head either lacks a high school education or is unemployed. Finally, if an individual lacks health insurance, she/he is categorized as deprived in the insecurity dimension. Equal weights are assigned to the dimensions, and the authors set a cut-off of being deprived in at least two dimensions (i.e., 40%) to be considered multidimensionally poor.

Mitra and Brucker find correlations between indicators are quite small. Hispanics, immigrants, and those with disabilities are more likely to be multiply deprived. Of direct relevance for our study, non-natives are found almost twice as likely (24.3%) to be multidimensionally poor as compared to the entire population (12.9%). Their results also indicate that the biggest contributors for the elderly are health and education deprivations. For non-elderly adults, the largest contributors are health insurance and income deprivations. Lastly, for children, the two largest contributors are income and education deprivations. Overall, 41% of the U.S. population experiences at least one deprivation, 15% experience two or more deprivations, while only 4% experience at least three deprivations.

The authors note that the income poor, as a share of the population, is near the percentage that experiences multiple deprivations. They also find that many individuals who suffer multiple overlapping deprivations are not income poor. Accordingly, they conclude that income is a poor proxy for being multiply deprived and, thus, that poverty measurements based only on income may be weak indicators of multiple deprivations.

Brucker et al. (2015) examine whether being disabled and within the working-age population is positively correlated with being poor. Using the AF method and data from the March 2013 U.S. Current Population Survey, the authors estimate multidimensional poverty in conjunction with other measures of poverty (i.e., the official poverty measure and the supplemental poverty measure (SPM)). The authors develop two multidimensional measures: an economic measure and a socioecopolitical measure. The dimensions for the economic measure include educational attainment, employment status, health insurance status, income, and food security. The dimensions for the second measure are educational attainment, employment status, social connectedness, computer/internet access, and political participation. A cut-off of being deprived in two or more of the dimensions is used to determine whether an individual is considered poor.

The authors report that, regardless of the poverty measure considered, the disabled have a greater likelihood of being multidimensional poor. They also find that, when the multidimensional measures are employed, the disability gap in poverty rates is greater relative to the gap calculated when using both the official poverty measure and the SPM. Therefore, they find that the official poverty measure and the SPM may not truly represent the deprivations experienced by those with disabilities. Considering differences across native- and foreign-born individuals, the authors report that among those who are not disabled, 14% of the native-born suffer economic multidimensional poverty rate as compared to 32.8% of the foreign-born. When using the socioecopolitical measure, the difference is less pronounced: 24.4% as compared to 39%. Among those who are disabled, the multidimensional poverty rates are less divergent: 48.3% for the native-born and 55.1% for the foreign-born (economic measure) and 62.5% for the native-born and 63.6% for the foreign-born (socioecopolitical measure).

Most closely related to our study, in terms of data and measurement approach, Dhongde and Haveman (2015) measure multidimensional poverty in the U.S. by applying the AF dual cut-off method to data from

the 2011 American Community Survey. The authors emphasize that income-based poverty measurements are insufficient and that other elements of well-being must also be considered to accurately depict deprivation. The AF dual cut-off approach requires establishing two thresholds. The first refers to each indicator for each dimension, and the second determines how many indicators an individual must be deprived of to be recognized as multidimensionally poor. Accordingly, the authors select four dimensions: health, education, standard of living, and housing. For each dimension, two indicators are chosen. For the health dimension, the indicators are health insurance coverage and disability status. The indicators for the education dimension represent schooling and English fluency. For the standard of living dimension, the indicators are the individuals' income poverty status and their employment status. Finally, for the housing dimension, the selected indicators include housing costs and whether an individual lives in a crowded housing unit.

Dhongde and Haveman choose the second cut-off to be two or more of the eight indicators and to weight the dimensions and indicators equally (i.e., a cut-off of 0.25). They find that 20.1% of the 2011 U.S. population was multidimensionally poor (i.e., were deprived in at least two indicators) and that the corresponding MPI value was equal to 6.6. By comparison, 42% of individuals were deprived in at least one indicator and 8.4% were deprived in three or more indicators. Furthermore, the dimension with the highest contribution to multidimensional poverty was standard of living (28.3%), while the lowest contributor was educational attainment (21.5%). Finally, like Azpitarte (2010) and Wagle (2014), Dhongde and Haveman report variation in the incidence of multidimensional poverty across race, ethnicity, nativity, gender, and age. Regarding nativity, the authors report that 42% of the foreign-born individuals in the United States were multidimensionally poor in 2011. By comparison, only 16.7% of native-born U.S. residents were multidimensionally poor.

While the existing literature is thorough and detailed, rather minimal attention has been afforded to potential differences between native- and foreign-born residents. Rates of multidimensional poverty have been estimated, but variation in rates across the home countries of the foreign-born has not been examined. Likewise, attempts have been made to identify the determinants of multidimensional poverty in the U.S., but scant attention has been paid to variation across native- and foreign-born cohorts in terms of these determinants. Finally, prior studies of

multidimensional poverty in the U.S. have generally examined data for single years. We consider a 5-year reference period; thus, our analysis may produce results that are more accurate. It is along these lines that our work primarily contributes to the literature.

8.3 Data, Methodology, and Multidimensional Poverty Measurement

We examine data from the 2010–2014 ACS 5-year PUMS files. Each observation in the PUMS person-level file represents a single person, and each observation in the household-level file represents a single housing unit. For our purposes, we have merged the files such that each observation in the person-level file has been matched to the corresponding household-level data. As the PUMS files cover a 5-year period, they represent approximately a 5% sample of the U.S. population. Following Dhongde and Haveman (2015), we restrict our data sample to include only those who are at least eighteen years of age and who do not live in group quarters units. The resulting final data file contains information for 15,510,910 individuals.

8.3.1 Dimensions and Indicators

We base our MPI on four dimensions that are comprised, in total, by eleven indicators. The four dimensions are (1) Health, (2) Education, (3) Standard of living, and (4) Housing costs. By design, our dimensions are similar to those employed by Dhongde and Haveman (2015); however, our measure does differ in terms of the chosen indicators. From the ACS data, we have selected indicators that we believe best represent each corresponding dimension. The specific indicators are presented below.

Beginning with the indicators chosen for the health dimension, we include measures of several forms of disability, the individuals' insurance coverage, and their nutrition/food security. An individual is considered deprived due to disability if she/he is experiencing at least one of the following: self-care difficulty, hearing difficulty, vision difficulty, independent living difficulty, ambulatory difficulty, or cognitive difficulty. For the insurance coverage indicator, individuals that lack health insurance are considered to be deprived. Lastly, individuals who are recipients of benefits through the Supplemental Nutrition Assistance Program

(i.e., a SNAP recipient, formerly known as "food stamps") are considered to face food insecurity and, thus, to be nutritionally deprived.

For the education dimension, we use educational attainment and whether or not the individual lives in a limited English-speaking household. For educational attainment, an individual is considered deprived if she/he has not completed high school. For the second indicator, we consider individuals to be deprived if no one in their household, who is 14 years or older, speaks English or is able to speak English very well.

Indicators for the standard of living dimension include housing amenities, availability of transportation, income-to-poverty level, and employment status. Housing amenities includes complete kitchen facilities (i.e., stove/range, refrigerator, and sink with faucet) and complete plumbing facilities (i.e., hot and cold running water, flush toilet, and bathtub/shower). Missing any component of either the complete kitchen or plumbing facilities indicates deprivation in terms of this indicator. For the availability of transportation indicator, individuals are considered deprived if no vehicles are available for their use. Individuals are also considered to be deprived if their income is below the corresponding poverty threshold. Lastly, in terms of employment status, an individual is considered deprived if she/he is either looking for work or has been laid off from a job.

Finally, the housing costs dimension includes two indicators: housing costs and crowded house. Housing costs include rent or monthly owner costs as a percentage of household income during the last year. Individuals are considered deprived if their housing costs equal or exceed 50% of their income. The crowded house indicator refers to the number of persons in a household in relation to the number of rooms. Deprivation in this indicator implies that there are more people in the household than there are rooms.

Given 55 pairwise correlations across the 11 indicators, the strongest correlation among indicators, in absolute value, is 0.46 for housing costs being equal to or greater than 50% of household income and the income-to-poverty ratio being less than one. The next strongest correlation among indicators ($\rho = 0.42$) is between the income-to-poverty ratio indicator and that which identifies the observation as a SNAP/food stamp recipient. All other correlations are equal to 0.23 or lower in absolute value, with 36 between 0 and 0.10, 14 between 0.10 and 0.20, and three between 0.20 and 0.23. Looking to the four

dimensions, of the six pairwise correlations, the strongest in absolute value is 0.39 between the Housing costs and Standard of living dimensions. The next strongest correlation ($\rho = 0.37$) is between the Health and Standard of living dimensions. The remaining correlations range from 0.13 to 0.24.

8.3.2 *Weights, Thresholds, and MPI Measurement*

Following the procedure outlined by Alkire and Santos (2010), we chose the indicator deprivation cut-offs, the first of our two cut-offs, which are described above. Weighting the dimensions equally results in a 0.25 weight for each. The corresponding indicators for each dimension are also weighted equally within each dimension. Therefore, each of the three indicators for the health dimension has a weight of 0.0833, each indicator for the education dimension is assigned a weight of 0.125, each indicator for the standard of living dimension has a weight of 0.0625, and indicators for the housing costs dimension each has a weight of 0.125. The second of the two deprivation cut-offs refers to whether or not an individual's deprivation score meets or exceeds a specific threshold. We adopt the value of 0.3333 that is employed by the United Nations (UNDP 2015) as our secondary cut-off.

To categorize observations as multidimensionally poor, deprivation scores (c) are calculated for each observation by summing the weighted values of indicators for which the individual is considered to be deprived. As noted, individuals for which the deprivation score is equal to or greater than one-third (i.e., where $c_i \geq 0.3333$) are identified as multidimensionally poor. The MPI value captures both the breadth and the depth of deprivation. It is constructed as the product of the headcount ratio (H) (i.e., $H = \frac{q}{n}$, where q is the number of people who are multidimensionally poor and n is the total population) and the intensity of poverty (A) (i.e., $A = \frac{\sum_i^q c_i}{q}$, where c_i is the deprivation score of the ith multidimensionally poor individual). Once factored by 100, the MPI ranges from zero (i.e., no deprivation) to 100 (i.e., maximum deprivation).

8.3.3 *The Scope and Scale of Multidimensional Poverty in the U.S.*

We find that while 9.48% of all individuals are considered multidimensionally poor, the average poverty intensity across these individuals is 0.4164. This is shown in Panel A of Table 8.1. Given the headcount and

intensity values, the MPI value for the full sample is 3.95. For comparison to Dhongde and Haveman (2015), we also adopt a cut-off of 0.25 and, to bookend our primary cut-off, also employ a value of 0.40. At the 0.25 cut-off, 17.1% of the individuals in our sample are multidimensionally poor, the average intensity of poverty is 0.3525, and the resulting MPI value is 6.0. This is quite similar to the values reported by Dhongde and Haveman for 2011: incidence and intensity estimates of 20.1% and 0.3283, respectively, and an MPI value of 6.6. When the cut-off is set

Table 8.1 Multidimensional poverty, deprivation, and dimensions/indicators

	Full sample	*Native-born*	*Foreign-born*
Panel A: Frequency, intensity, and multidimensional poverty indices			
Percentage of poor people (H)	0.0948	0.0791	0.2108
Average intensity across the poor (A)	0.4164	0.4096	0.4353
MPI ($H \times A \times 100$)	3.9475	3.2399	9.1761
Panel B: Breakdown of non-deprived, near-deprived, deprived, and severely deprived			
Not deprived (Deprivation Score (DS) < 0.20)	0.7580	0.7812	0.5871
Vulnerable (0.20 ≤ DS < 0.33)	0.1472	0.1398	0.2021
Moderate poverty (0.33 ≤ DS < 0.50)	0.0799	0.0689	0.1612
Severe poverty (0.50 ≤ DS)	0.0149	0.0102	0.0496
Panel C: Dimensions and indicators (indented), mean values (0,1)			
Education (weight = 25%)	0.3295	0.2989	0.5545
Educational attainment < High school diploma (12.5%)	0.2902	0.2848	0.3299
Limited english-speaking household (12.5%)	0.0393	0.0141	0.2246
Health (25%)	0.4186	0.4039	0.5259
Disabled (8.33%)	0.1455	0.1505	0.1086
Food stamp/SNAP recipient (8.33%)	0.147	0.1463	0.1519
Lacks health insurance coverage (8.33%)	0.1261	0.1072	0.2653
Housing costs (25%)	0.1886	0.1690	0.3336
Crowded house (12.5%)	0.0619	0.0493	0.1554
Housing costs ≥ 50% of household income (12.5%)	0.1267	0.1197	0.1782
Standard of living (25%)	0.2575	0.2467	0.3367
Income-to-poverty ratio < 1.0 (6.25%)	0.1383	0.1340	0.1699
Lacks complete kitchen and/or plumbing facilities (6.25%)	0.0076	0.0072	0.0102
Lacks transportation (i.e., No vehicles available) (6.25%)	0.0592	0.0549	0.0909
Unemployed (6.25%)	0.0524	0.0506	0.0657
Number of observations (N)	15,510,910	13,656,642	1,854,268

equal to 0.40, we find an MPI of 1.93 that corresponds with a poverty incidence estimate of only 3.9 and an intensity of 0.4955.

Looking to Panel B, we see that the vast majority of individuals in the U.S. (90.52%) are not deprived. Among these individuals, 75.8% have a deprivation score (DS) below 0.20; however, 14.72% are categorized as vulnerable (i.e., $0.20 \leq DS < 0.33$). Among those who are considered multidimensionally poor, 7.99% are classified as moderately poor (i.e., they have a deprivation score that is greater than or equal to the cut-off of one-third but is less than 0.50). The remaining 1.49% of all individuals are categorized as suffering severe poverty (i.e., $DS \geq 0.50$).

Turning to Panel C, we see that the health dimension contributes the most to multidimensional poverty, with 41.86% of all individuals deprived in this area. Health is followed by education (32.95%), standard of living (25.75%), and housing costs (18.86%). The indicator with the greatest percentage of deprived individuals falls within the education dimension; those who did not receive their high school diploma comprise 29.02% of the sample. However, many are also found to be deprived due to being disabled (14.55%) or due to nutritional deprivation/food insecurity (14.7%). Both of these indicators are within the health dimension. The indicator with the smallest impact is housing amenities; those who lack complete kitchen/plumbing facilities make up only 0.76% of the sample.

We estimate the MPI and related measures separately for the native- and foreign-born cohorts. Revisiting Panel A of Table 8.1, we find significant differences between the two groups.[3] Only 7.91% of the native-born population is considered to be multidimensionally poor as compared to 21.08% of the foreign-born population. While 78.12% of native-born individuals are considered not deprived, a much smaller share of the foreign-born population (58.71%) falls into this category. At all other levels (i.e., vulnerable, moderate poverty, and severe poverty), the percentage of foreign-born individuals is greater than that of native-born individuals.

The native-born cohort follows the full sample with health contributing to multidimensional poverty more so than the remaining dimensions. Specifically, 40.39% of native-born individuals are categorized as deprived in terms of the health dimension. However, the foreign-born cohort is much different in that 55.45% of individuals are deprived in the education dimension and 52.59% are deprived in the health dimension. For this cohort, the indicators with the largest impact are educational attainment and health insurance: 32.99% of foreign-born individuals did not

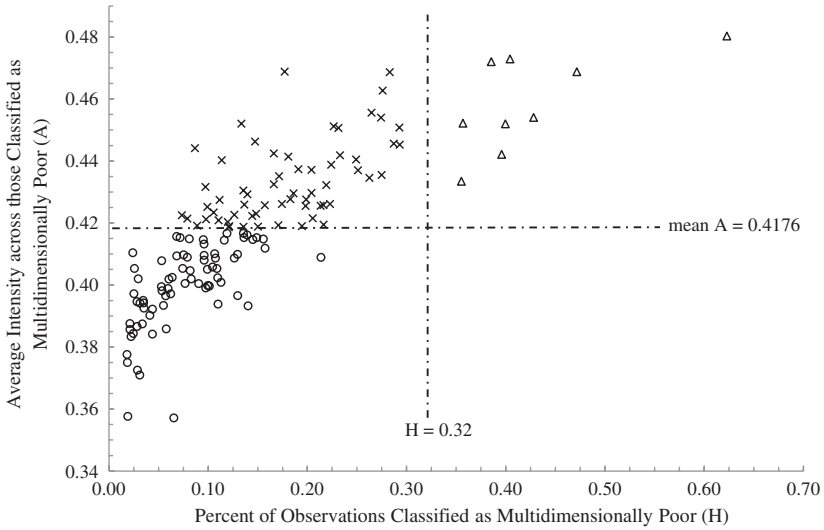

Fig. 8.1 Immigrant home country cohorts, grouped by relative frequency and intensity measures

earn their high school diploma and 26.53% lack health insurance coverage. However, for both cohorts, the indicator with the smallest impact is the same as that of the full sample: housing amenities.

In addition to calculating MPI and related values for the native- and foreign-born cohorts, we also calculate these values for each immigrant home country. A scatterplot of the headcount ratio and poverty intensity series is presented as Fig. 8.1. Interestingly, the home countries can be grouped into three cohorts based on their positioning. Cohort 1 includes the home countries that have lower headcount ratios (7.69%, on average) and below average poverty intensity values (0.3997, again, on average).[4] The values for these countries are quite similar to those of the native-born cohort (see Table 8.1); thus, the countries within this cohort tend to have lower MPI values (3.11, on average) relative to other immigrant groupings. For example, Cohort 2 also includes home countries with relatively low headcount ratios (17.97%, on average) but have higher than average values for the poverty intensity series (0.4333, on average). This second cohort has an average MPI value of 7.83, which is below that of the full foreign-born cohort. Lastly, countries with higher

headcount ratios (42.44%, on average) and higher than average poverty intensities (0.4586, on average) are grouped into Cohort 3. This third group is rather small in number, consisting of the nine countries with the highest MPI values (19.54, on average).[5] In our econometric analysis, we examine variation in the determinants of multidimensional poverty not only across native- and foreign-born cohorts but also across the three identified foreign-born cohorts.[6]

To better illustrate the extent of multidimensional poverty among the foreign-born cohort, Table 8.2 presents the headcount ratio (H), poverty intensity (A), and MPI values for each immigrant home country. Countries are ranked in descending order by MPI value, and we identify each home country by cohort. To further compare home countries, in Table 8.3, we present the shares of home country populations in the U.S. that are classified as not deprived, vulnerable, facing moderate poverty, and in severe poverty.

It is important to note that, for most home countries, the majority of immigrants are considered to be not deprived and a very small percentage are considered severely deprived. In fact, 53 of the home countries listed have MPI values below the full sample value of 3.95, and 42 home countries have MPI values that are less than that of the native-born cohort. Even so, nearly two-thirds of the home countries listed (63.2%) have MPI values that are greater than that of the full sample. More than a quarter of home countries (27.8%) have MPI values more than two times the full sample value, and 11.8% have values more than three times the full sample value. In short, there is considerable variation across home countries in terms of MPI values, the component metrics (i.e., headcount ratio and poverty intensity measure), and shares of immigrant populations that are categorized as not deprived, vulnerable, facing moderate poverty, or experiencing severe poverty.

8.4 Determinants of Multidimensional Poverty

Having documented the extent of multidimensional poverty for the full sample, for both the native- and the foreign-born cohorts, and for each of the home countries in our data set, we turn our attention to our examination of the potential determinants of multidimensional poverty. Specifically, we estimate a series of regression models using two related measures of multidimensional poverty, separately, as our dependent variable series. We refer to the first measure as the MD Poor series. It is a

Table 8.2 Home country-specific frequency, intensity, and multidimensional poverty indices

Home country	*Cohort*	*N*	*H*	*A*	*MPI*	*Home country*	*Cohort*	*N*	*H*	*A*	*MPI*
Bhutan	3	949	0.623	0.480	29.911	Malaysia	2	3184	0.114	0.440	5.006
Somalia	3	2443	0.472	0.469	22.106	Macedonia	1	1101	0.119	0.417	4.958
Guatemala	3	32,525	0.428	0.454	19.432	Yugoslavia	1	3415	0.116	0.414	4.818
Iraq	3	7367	0.404	0.473	19.117	Bahamas	2	1560	0.112	0.427	4.768
Myanmar	3	4700	0.385	0.472	18.188	Kazakhstan	2	1258	0.110	0.421	4.650
Honduras	3	18,764	0.400	0.452	18.058	Korea	1	51,783	0.113	0.401	4.529
Mexico	3	472,915	0.396	0.442	17.499	Argentina	2	8118	0.106	0.423	4.470
Dominican Rep.	3	35,453	0.357	0.452	16.134	Bolivia	1	3274	0.110	0.402	4.412
El Salvador	3	46,975	0.355	0.433	15.396	Jamaica	1	30,138	0.109	0.405	4.411
Congo	2	371	0.283	0.469	13.264	Venezuela	1	9052	0.107	0.409	4.388
Guinea	2	509	0.293	0.451	13.196	Greece	1	7498	0.107	0.410	4.370
Sudan	2	1522	0.293	0.445	13.048	St. Kitts and Nevis	1	191	0.110	0.394	4.330
Ecuador	2	16,284	0.287	0.446	12.793	Italy	1	22,872	0.104	0.406	4.239
Nepal	2	3527	0.276	0.463	12.765	Saudi Arabia	2	2783	0.099	0.425	4.217
Bangladesh	2	8478	0.274	0.454	12.450	Israel	2	7266	0.097	0.432	4.200
Uzbekistan	2	2460	0.265	0.456	12.056	Bosnia and Herzegovina	2	5078	0.098	0.421	4.122
Azerbaijan	2	866	0.275	0.435	11.968	West Indies	1	1403	0.101	0.400	4.045
Cuba	2	50,478	0.262	0.435	11.407	Chile	1	4395	0.099	0.405	4.018
Gambia	2	281	0.249	0.440	10.973	Trinidad and Tobago	1	10,571	0.100	0.400	3.983
Haiti	2	24,420	0.251	0.437	10.970	Turkey	1	5591	0.096	0.413	3.961
Afghanistan	2	2698	0.231	0.451	10.423	United Arab Emirates	1	431	0.095	0.415	3.944
Eritrea	2	1215	0.233	0.442	10.291	Fiji	1	1928	0.096	0.410	3.930
Togo	2	437	0.227	0.451	10.221	Ghana	1	5615	0.096	0.408	3.917

(continued)

Table 8.2 (continued)

Home country	*Cohort*	*N*	*H*	*A*	*MPI*	*Home country*	*Cohort*	*N*	*H*	*A*	*MPI*
Senegal	2	866	0.224	0.439	9.830	Brazil	1	15,016	0.098	0.399	3.893
Cabo Verde	2	1602	0.223	0.426	9.496	Uganda	2	1015	0.087	0.444	3.851
Laos	2	7962	0.219	0.432	9.468	Sri Lanka	2	2284	0.089	0.419	3.725
Cambodia	2	7484	0.216	0.426	9.205	Poland	1	21,256	0.090	0.400	3.623
Nicaragua	1	10,490	0.213	0.426	9.079	Czechoslovakia	1	1160	0.081	0.415	3.362
Vietnam	2	62,412	0.216	0.419	9.076	Barbados	1	2495	0.083	0.402	3.335
Syria	2	3302	0.204	0.437	8.923	Kuwait	2	1164	0.079	0.421	3.331
Jordan	2	2914	0.204	0.430	8.774	Romania	1	8059	0.082	0.405	3.314
Tonga	1	730	0.214	0.409	8.739	Hungary	1	4075	0.079	0.409	3.232
Moldova	2	1816	0.205	0.422	8.658	Croatia	2	2136	0.074	0.423	3.105
Dominica	2	1152	0.199	0.428	8.500	Panama	1	6988	0.075	0.410	3.084
Ukraine	2	15,670	0.198	0.426	8.434	Nigeria	2	10,008	0.077	0.400	3.073
Georgia	2	728	0.191	0.437	8.351	Indonesia	1	4653	0.074	0.405	3.014
Tanzania	2	943	0.177	0.469	8.302	Hong Kong	1	11,876	0.072	0.415	2.979
Armenia	2	3671	0.194	0.419	8.149	Latvia	1	1216	0.068	0.416	2.837
China	2	85,124	0.186	0.430	7.993	Spain	1	6161	0.068	0.409	2.798
Thailand	2	11,185	0.181	0.441	7.979	Cyprus	1	345	0.064	0.402	2.566
Belarus	2	2603	0.183	0.428	7.821	Serbia	1	1012	0.062	0.397	2.472
Pakistan	2	14,486	0.171	0.435	7.461	Lithuania	1	1819	0.060	0.402	2.430
Uruguay	2	2134	0.174	0.426	7.428	Slovakia	1	1040	0.060	0.399	2.378
Egypt	2	7661	0.166	0.442	7.352	Estonia	1	214	0.065	0.357	2.336
Morocco	2	3105	0.166	0.432	7.187	Taiwan	1	19,709	0.057	0.397	2.267
Azores Islands	2	1212	0.171	0.419	7.161	Bermuda	1	831	0.058	0.386	2.229
Ethiopia	2	7212	0.157	0.426	6.688	India	1	86,094	0.053	0.408	2.169
Kenya	2	4448	0.147	0.446	6.571	Philippines	1	97,549	0.055	0.393	2.163
St. Lucia	1	966	0.157	0.412	6.481	Zambia	1	336	0.054	0.398	2.133

(continued)

Table 8.2 (continued)

Home country	*Cohort*	*N*	*H*	*A*	*MPI*	*Home country*	*Cohort*	*N*	*H*	*A*	*MPI*
St. Vincent and the Grenadines	1	1028	0.156	0.415	6.457	Bulgaria	1	3138	0.053	0.399	2.113
						Japan	1	26,028	0.044	0.392	1.721
Colombia	2	28,860	0.150	0.419	6.293	Iceland	1	570	0.044	0.384	1.685
Sierra Leone	2	1422	0.148	0.423	6.276	Czech Rep.	1	1527	0.041	0.390	1.610
Samoa	1	611	0.149	0.415	6.185	Germany	1	61,983	0.035	0.393	1.385
Liberia	2	2755	0.144	0.422	6.100	France	1	11,213	0.035	0.394	1.375
Libya	2	397	0.134	0.452	6.035	Belgium	1	2288	0.035	0.395	1.364
Peru	1	18,071	0.145	0.415	6.014	Austria	1	3029	0.034	0.387	1.305
Cameroon	2	1755	0.140	0.429	5.992	Canada	1	51,065	0.031	0.394	1.233
Lebanon	2	5941	0.135	0.430	5.833	Zimbabwe	1	915	0.030	0.402	1.186
Costa Rica	2	3612	0.136	0.426	5.813	Finland	1	1158	0.031	0.371	1.153
Antigua and Barbuda	1	869	0.139	0.416	5.795	Australia	1	4919	0.028	0.395	1.115
						England	1	23,641	0.028	0.387	1.096
Iran	2	17,027	0.136	0.419	5.679	New Zealand	1	1772	0.029	0.373	1.072
Belize	1	2344	0.136	0.415	5.652	Denmark	1	1787	0.026	0.405	1.043
Albania	1	3246	0.136	0.417	5.648	Singapore	1	1829	0.025	0.397	0.999
Algeria	1	870	0.140	0.393	5.515	Norway	1	1663	0.024	0.410	0.987
Paraguay	2	910	0.126	0.423	5.341	Ireland	1	7321	0.025	0.384	0.945
Guyana	1	12,430	0.130	0.410	5.313	Netherlands	1	5464	0.022	0.383	0.856
Montenegro	1	372	0.126	0.409	5.164	Sweden	1	2744	0.021	0.388	0.819
Portugal	1	8824	0.130	0.397	5.146	Scotland	1	4058	0.021	0.386	0.817
Russia	2	18,834	0.121	0.419	5.079	South Africa	1	4885	0.019	0.375	0.699
USSR	2	2186	0.121	0.419	5.056	Switzerland	1	2634	0.018	0.378	0.688
Grenada	2	1427	0.120	0.420	5.037	Northern Ireland	2	315	0.019	0.358	0.681

H Percent of observations classified as multidimensionally poor; *A* Average intensity across those classified as poor; and MPI = $H \times A$.

Table 8.3 Home country-specific frequency of non-deprived, near-deprived, deprived, and severely deprived, by cohort

Home country	*Not deprived (DS < 0.20)*	*Vulnerable (0.20 ≤ DS < 0.33)*	*MD poor (0.33 ≤ DS < 0.50)*	*Severe poverty (DS ≥ 0.50)*
Bhutan	0.148	0.230	0.379	0.243
Somalia	0.316	0.213	0.298	0.174
Guatemala	0.336	0.236	0.292	0.136
Iraq	0.383	0.213	0.248	0.156
Myanmar	0.414	0.200	0.243	0.143
Honduras	0.347	0.254	0.278	0.121
Mexico	0.322	0.282	0.292	0.104
Dominican Republic	0.401	0.242	0.255	0.101
El Salvador	0.367	0.278	0.272	0.083
Congo	0.477	0.240	0.186	0.097
Guinea	0.430	0.277	0.210	0.083
Sudan	0.475	0.232	0.208	0.085
Ecuador	0.487	0.226	0.211	0.076
N. Ireland	0.898	0.083	0.019	0.000
Bangladesh	0.496	0.230	0.199	0.075
Uzbekistan	0.530	0.206	0.182	0.083
Azerbaijan	0.562	0.163	0.210	0.065
Cuba	0.489	0.248	0.203	0.059
Gambia	0.555	0.196	0.192	0.057
Haiti	0.505	0.244	0.192	0.060
Afghanistan	0.546	0.222	0.169	0.062
Eritrea	0.550	0.217	0.175	0.058
Togo	0.561	0.213	0.149	0.078
Senegal	0.568	0.208	0.166	0.058
Cabo Verde	0.531	0.247	0.179	0.044
Laos	0.528	0.253	0.173	0.046
Cambodia	0.528	0.255	0.172	0.044
New Zealand	0.890	0.081	0.028	0.001
Vietnam	0.546	0.238	0.177	0.039
Syria	0.592	0.204	0.153	0.051
Jordan	0.598	0.197	0.160	0.044
Tonga	0.522	0.264	0.186	0.027
Moldova	0.616	0.179	0.163	0.042
Dominica	0.622	0.180	0.161	0.037
Ukraine	0.615	0.187	0.159	0.039
Georgia	0.607	0.202	0.143	0.048
Tanzania	0.700	0.123	0.106	0.071
Armenia	0.593	0.212	0.160	0.035
China	0.621	0.193	0.149	0.037

(continued)

Table 8.3 (continued)

Home country	*Not deprived (DS < 0.20)*	*Vulnerable (0.20 ≤ DS < 0.33)*	*MD poor (0.33 ≤ DS < 0.50)*	*Severe poverty (DS ≥ 0.50)*
Thailand	0.629	0.190	0.132	0.049
Belarus	0.665	0.152	0.150	0.033
Pakistan	0.626	0.203	0.132	0.039
Uruguay	0.590	0.236	0.134	0.040
Egypt	0.667	0.167	0.123	0.043
Morocco	0.646	0.188	0.131	0.035
Azores Islands	0.589	0.240	0.140	0.031
Ethiopia	0.643	0.200	0.127	0.030
Kenya	0.706	0.147	0.099	0.048
St. Lucia	0.641	0.202	0.140	0.018
St. Vincent and the Grenadines	0.636	0.208	0.134	0.021
Colombia	0.647	0.202	0.125	0.026
Sierra Leone	0.697	0.155	0.122	0.027
Samoa	0.588	0.264	0.128	0.021
Liberia	0.650	0.205	0.117	0.028
Libya	0.733	0.134	0.078	0.055
Peru	0.650	0.205	0.123	0.022
Cameroon	0.676	0.184	0.109	0.031
Lebanon	0.706	0.158	0.106	0.030
Costa Rica	0.662	0.202	0.110	0.027
Antigua and Barbuda	0.702	0.159	0.124	0.015
Iran	0.709	0.155	0.113	0.023
Belize	0.662	0.202	0.115	0.021
Albania	0.669	0.195	0.114	0.022
Algeria	0.674	0.186	0.130	0.010
Paraguay	0.701	0.173	0.107	0.020
Guyana	0.679	0.191	0.113	0.016
Montenegro	0.642	0.231	0.108	0.019
Portugal	0.645	0.226	0.116	0.014
Russia	0.709	0.169	0.101	0.020
USSR	0.747	0.132	0.101	0.020
Grenada	0.701	0.179	0.102	0.018
Malaysia	0.753	0.133	0.087	0.027
Macedonia	0.688	0.193	0.097	0.022
Yugoslavia	0.687	0.196	0.100	0.016
Bahamas	0.705	0.183	0.094	0.017
Kazakhstan	0.696	0.194	0.086	0.025
Korea	0.693	0.194	0.100	0.013
Argentina	0.735	0.159	0.086	0.020

(continued)

Table 8.3 (continued)

Home country	*Not deprived (DS < 0.20)*	*Vulnerable (0.20 ≤ DS < 0.33)*	*MD poor (0.33 ≤ DS < 0.50)*	*Severe poverty (DS ≥ 0.50)*
Bolivia	0.700	0.191	0.097	0.013
Jamaica	0.707	0.184	0.097	0.011
Venezuela	0.729	0.163	0.092	0.015
Greece	0.708	0.186	0.091	0.015
St. Kitts and Nevis	0.743	0.147	0.099	0.010
Italy	0.704	0.191	0.091	0.013
Saudi Arabia	0.702	0.199	0.081	0.018
Israel	0.770	0.133	0.076	0.022
Bosnia and Herzegovina	0.741	0.161	0.081	0.017
West Indies	0.710	0.189	0.091	0.011
Chile	0.730	0.170	0.086	0.013
Trinidad and Tobago	0.731	0.170	0.091	0.009
Turkey	0.747	0.157	0.081	0.015
United Arab Emirates	0.740	0.165	0.079	0.016
Fiji	0.724	0.180	0.081	0.015
Ghana	0.729	0.175	0.084	0.012
Brazil	0.731	0.171	0.087	0.011
Uganda	0.774	0.139	0.062	0.025
Sri Lanka	0.790	0.121	0.071	0.018
Poland	0.732	0.178	0.081	0.009
Czechoslovakia	0.755	0.164	0.070	0.011
Barbados	0.768	0.149	0.074	0.009
Kuwait	0.760	0.161	0.065	0.014
Romania	0.767	0.151	0.070	0.011
Hungary	0.772	0.149	0.069	0.010
Croatia	0.762	0.165	0.060	0.013
Panama	0.802	0.123	0.066	0.009
Nicaragua	0.541	0.246	0.172	0.042
Indonesia	0.779	0.147	0.065	0.010
Hong Kong	0.793	0.136	0.062	0.010
Latvia	0.807	0.125	0.056	0.012
Spain	0.800	0.132	0.059	0.010
Cyprus	0.814	0.122	0.058	0.006
Serbia	0.803	0.134	0.056	0.006
Lithuania	0.776	0.164	0.053	0.007
Slovakia	0.798	0.142	0.054	0.006
Estonia	0.780	0.154	0.065	0.000
Taiwan	0.814	0.129	0.052	0.005

(continued)

Table 8.3 (continued)

Home country	*Not deprived (DS < 0.20)*	*Vulnerable (0.20 ≤ DS < 0.33)*	*MD poor (0.33 ≤ DS < 0.50)*	*Severe poverty (DS ≥ 0.50)*
Bermuda	0.824	0.118	0.057	0.001
India	0.842	0.105	0.046	0.007
Philippines	0.807	0.138	0.050	0.005
Zambia	0.848	0.098	0.054	0.000
Bulgaria	0.811	0.136	0.049	0.004
Japan	0.830	0.126	0.041	0.003
Iceland	0.860	0.096	0.040	0.004
Czech Republic	0.830	0.129	0.036	0.005
Germany	0.864	0.100	0.033	0.002
France	0.873	0.092	0.031	0.003
Belgium	0.872	0.093	0.032	0.002
Austria	0.867	0.099	0.030	0.003
Canada	0.876	0.093	0.029	0.003
Zimbabwe	0.872	0.098	0.026	0.003
Finland	0.877	0.092	0.029	0.002
Australia	0.902	0.070	0.027	0.002
England	0.885	0.087	0.027	0.002
Netherlands	0.892	0.085	0.022	0.000
Denmark	0.889	0.086	0.023	0.003
Singapore	0.875	0.100	0.023	0.002
Norway	0.883	0.093	0.020	0.004
Ireland	0.876	0.099	0.023	0.001
Nepal	0.536	0.189	0.181	0.095
Sweden	0.897	0.082	0.020	0.001
Scotland	0.889	0.090	0.021	0.000
South Africa	0.910	0.071	0.018	0.001
Switzerland	0.904	0.078	0.017	0.001
Nigeria	0.766	0.157	0.069	0.008

binary variable that is equal to one if an individual's deprivation score value is equal to or greater than one-third (i.e., if the observation is categorized as multidimensionally poor) and is otherwise equal to zero. Our second measure is the MD Poor Category series. This latter measure is a categorical variable that takes one of four values based on the level of the deprivation score variable (i.e., not deprived (0), vulnerable (1), suffering moderate poverty (2), and experiencing severe poverty (3)). These latter two categories cleave the group of observations that are considered to be multidimensionally poor.

Our set of explanatory variables includes demographic indicators of each observation's nativity, gender, race, ethnicity, age category, marital status, and employment status. We also control for household size and primary household language. Additionally, our estimation equations include variables that identify the survey year and each observation's state of residence to control for unobserved time- and location-specific fixed effects, respectively. Descriptive statistics are presented in Table 8.4.

8.4.1 Descriptive Statistics

Beginning with the dependent variable series, what may be most striking are the marked differences between the native- and foreign-born cohorts. Specifically, the mean value of the binary MD Poor variable for the foreign-born cohort (0.2108) is nearly three times that reported for the native-born cohort (0.0791). Similarly, the foreign-born cohort has a mean value of the MD Poor Category variable that is more than twice that of the native-born cohort: 0.6757 as compared to 0.3089.[7] Considerable differences are also found with respect to the mean values for the three cohorts of foreign-born individuals, with the mean values for cohort 1 often being quite similar to those of the native-born cohort and mean values for cohort 2 being near the values observed for the entire foreign-born cohort.

The mean values for cohort 3, however, reflect a much more pronounced deprivation than is observed for any other group. The mean value for the binary MD Poor variable (0.393) is almost six times the corresponding value of cohort 1, nearly five times that of the native-born cohort, more than four times the mean value of the full sample, and about twice the values of cohort 2 and the foreign-born cohort. A similar pattern is found for the MD Poor Category series. The share of individuals from home countries classified as part of cohort 3 who are not deprived ranges from about one-half to two-thirds of the corresponding levels for other groupings. Individuals from countries in cohort 3 are roughly two to three times more likely to be classified as vulnerable, two to six times more likely to suffer moderate poverty, and eight to thirty-eight times more likely to experience severe poverty.

Looking to the mean values of the explanatory variables, we again see pronounced differences. Individuals from countries in cohort 3 differ from the native-born and from individuals from cohort 1 and cohort 2 countries in that they are more frequently Hispanic (96.42%), male

Table 8.4 Descriptive statistics

	Full sample	*Native-born*	*Foreign-born*	*Cohort 1*	*Cohort 2*	*Cohort 3*
N	*15,510,910*	*13,656,642*	*1,854,268*	*737,477*	*494,700*	*622,091*
Variables	*(a)*	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
Dependent variables…						
MD poor (0, 1)	0.0948	0.0791	0.2108	0.0686	0.1938	0.393
	(0.2929)	(0.2698)	(0.4079)	(0.2528)	(0.3953)	(0.4884)
MD poor category (0–3)	0.3527	0.3089	0.6757	0.2842	0.6383	1.1695
	(0.6939)	(0.6446)	(0.9211)	(0.6122)	(0.8923)	(1.0124)
Not deprived (category 0)	0.758	0.7812	0.5871	0.7929	0.5999	0.3328
(DS < 0.20)	(0.4283)	(0.4135)	(0.4924)	(0.4052)	(0.4899)	(0.4712)
Vulnerable (category 1)	0.1472	0.1398	0.2021	0.1385	0.2063	0.2742
(0.20 ≤ DS < 0.33)	(0.3543)	(0.3468)	(0.4016)	(0.3454)	(0.4064)	(0.4461)
Moderate poverty (category 2)	0.0799	0.0689	0.1612	0.0609	0.1525	0.2872
(0.33 ≤ DS < 0.50)	(0.2711)	(0.2532)	(0.3678)	(0.2392)	(0.3595)	(0.4524)
Severe poverty (category 3)	0.0149	0.0102	0.0496	0.0077	0.0413	0.1011
(0.50 ≤ DS)	(0.1212)	(0.1005)	(0.2171)	(0.0873)	(0.1991)	(0.3014)
Explanatory variables…						
Gender						
Female	0.5125	0.5111	0.523	0.5485	0.5289	0.488
	(0.4998)	(0.4999)	(0.4995)	(0.4976)	(0.4992)	(0.4999)
Male	0.4875	0.4889	0.4770	0.4515	0.4711	0.5120
	(0.4998)	(0.4999)	(0.4995)	(0.4976)	(0.4992)	(0.4999)
Educational attainment						
Less than high school	0.2902	0.2848	0.3299	0.1626	0.269	0.5768
	(0.4538)	(0.4513)	(0.4702)	(0.369)	(0.4434)	(0.4941)
High school graduate	0.193	0.195	0.1779	0.1661	0.1774	0.1922
	(0.3946)	(0.3962)	(0.3824)	(0.3721)	(0.382)	(0.394)

(continued)

Table 8.4 (continued)

	Full sample	*Native-born*	*Foreign-born*	*Cohort 1*	*Cohort 2*	*Cohort 3*
N	*15,510,910*	*13,656,642*	*1,854,268*	*737,477*	*494,700*	*622,091*
Variables	*(a)*	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
Some college	0.2734	0.2803	0.2229	0.2629	0.2383	0.1631
	(0.4457)	(0.4491)	(0.4162)	(0.4402)	(0.426)	(0.3695)
4-year college degree	0.1319	0.1289	0.154	0.2321	0.1732	0.0463
	(0.3384)	(0.3351)	(0.361)	(0.4222)	(0.3784)	(0.2101)
Post-graduate degree	0.1115	0.111	0.1153	0.1763	0.1422	0.0216
	(0.3147)	(0.3141)	(0.3194)	(0.3811)	(0.3492)	(0.1455)
Race and ethnicity						
Asian	0.0557	0.025	0.2817	0.409	0.4301	0.0127
	(0.2293)	(0.1561)	(0.4498)	(0.4917)	(0.4951)	(0.112)
Black	0.1158	0.1207	0.0798	0.1072	0.111	0.0226
	(0.32)	(0.3258)	(0.271)	(0.3094)	(0.3141)	(0.1486)
White	0.7795	0.8167	0.5062	0.455	0.421	0.6347
	(0.4146)	(0.387)	(0.5)	(0.498)	(0.4937)	(0.4815)
Other race	0.0489	0.0376	0.1323	0.0288	0.0379	0.33
	(0.2157)	(0.1903)	(0.3388)	(0.1671)	(0.191)	(0.4702)
Hispanic	0.139	0.1015	0.4151	0.0683	0.2415	0.9642
	(0.3459)	(0.302)	(0.4927)	(0.2523)	(0.428)	(0.1859)
Employment status						
Employed	0.4467	0.4312	0.5603	0.5585	0.5469	0.5732
	(0.4971)	(0.4953)	(0.4963)	(0.4966)	(0.4978)	(0.4946)
Unemployed	0.0424	0.0412	0.0511	0.0424	0.0518	0.0609
	(0.2015)	(0.1987)	(0.2203)	(0.2015)	(0.2216)	(0.2392)
Not in labor force	0.5109	0.5276	0.3885	0.3991	0.4013	0.3659
	(0.4999)	(0.4992)	(0.4874)	(0.4897)	(0.4902)	(0.4817)

(continued)

Table 8.4 (continued)

	Full sample	*Native-born*	*Foreign-born*	*Cohort 1*	*Cohort 2*	*Cohort 3*
N	*15,510,910*	*13,656,642*	*1,854,268*	*737,477*	*494,700*	*622,091*
Variables	*(a)*	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
Age category						
18–29 years	0.3647	0.3841	0.2217	0.1872	0.2272	0.2581
	(0.4813)	(0.4864)	(0.4154)	(0.3901)	(0.419)	(0.4376)
30–39 years	0.1156	0.1059	0.187	0.1611	0.1663	0.2342
	(0.3198)	(0.3077)	(0.3899)	(0.3676)	(0.3723)	(0.4235)
40–49 years	0.1321	0.1227	0.2016	0.1848	0.198	0.2244
	(0.3386)	(0.3281)	(0.4012)	(0.3882)	(0.3985)	(0.4172)
50–59 years	0.1496	0.1469	0.1699	0.1833	0.1759	0.1492
	(0.3567)	(0.354)	(0.3755)	(0.3869)	(0.3808)	(0.3563)
60 or more years	0.238	0.2405	0.2199	0.2836	0.2327	0.1341
	(0.4259)	(0.4274)	(0.4142)	(0.4508)	(0.4225)	(0.3408)
Marital status						
Divorced or separated	0.1036	0.1042	0.0994	0.099	0.101	0.0987
	(0.3047)	(0.3055)	(0.2993)	(0.2987)	(0.3014)	(0.2983)
Married	0.4238	0.4029	0.5778	0.6004	0.5752	0.5531
	(0.4942)	(0.4905)	(0.4939)	(0.4898)	(0.4943)	(0.4972)
Single	0.4163	0.4362	0.2701	0.2341	0.2695	0.3132
	(0.493)	(0.4959)	(0.444)	(0.4234)	(0.4437)	(0.4638)
Widowed	0.0563	0.0568	0.0527	0.0666	0.0543	0.035
	(0.2304)	(0.2314)	(0.2234)	(0.2493)	(0.2265)	(0.1838)
Household size						
1 person	0.1511	0.1567	0.1099	0.1428	0.1098	0.071
	(0.3582)	(0.3635)	(0.3128)	(0.3499)	(0.3126)	(0.2568)

(continued)

Table 8.4 (continued)

	Full sample	*Native-born*	*Foreign-born*	*Cohort 1*	*Cohort 2*	*Cohort 3*
N	*15,510,910*	*13,656,642*	*1,854,268*	*737,477*	*494,700*	*622,091*
Variables	*(a)*	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*
2 people	0.2789	0.2869	0.2202	0.2976	0.2237	0.1256
	(0.4485)	(0.4523)	(0.4144)	(0.4572)	(0.4167)	(0.3314)
3–4 people	0.3687	0.3662	0.3871	0.3898	0.4124	0.3637
	(0.4824)	(0.4818)	(0.4871)	(0.4877)	(0.4923)	(0.4811)
5–7 people	0.1797	0.1716	0.2397	0.1511	0.2187	0.3614
	(0.384)	(0.377)	(0.4269)	(0.3581)	(0.4133)	(0.4804)
8 or more people	0.0216	0.0186	0.0432	0.0187	0.0354	0.0783
	(0.1453)	(0.1353)	(0.2032)	(0.1355)	(0.1849)	(0.2687)
Primary household language						
Asian or Pacific Island	0.0377	0.0159	0.1989	0.2764	0.323	0.0082
	(0.1906)	(0.1249)	(0.3991)	(0.4472)	(0.4676)	(0.0905)
English	0.7295	0.8065	0.1626	0.3284	0.087	0.026
	(0.4442)	(0.395)	(0.369)	(0.4696)	(0.2819)	(0.159)
Indo-European	0.0466	0.0295	0.1727	0.2601	0.2517	0.0062
	(0.2108)	(0.1692)	(0.3779)	(0.4387)	(0.434)	(0.0782)
Spanish	0.1301	0.0939	0.3973	0.0739	0.2282	0.9152
	(0.3365)	(0.2916)	(0.4893)	(0.2616)	(0.4197)	(0.2786)
Other language	0.056	0.0542	0.0686	0.0612	0.1101	0.0444
	(0.2299)	(0.2265)	(0.2528)	(0.2397)	(0.313)	(0.2061)

Standard deviations in parentheses. All foreign-born cohort mean values (column (c)) are significantly different from the corresponding native-born cohort mean values (column (b)) at the 1% level of significance. Similarly, all foreign-born cohort mean values (columns (d)-(f)) are significantly different from the corresponding native-born cohort mean values at the 1% level of significance.

(51.2%), younger, less educated (e.g., 57.68% lack a high school diploma and only 4.63% of individuals in cohort 3 have completed a 4-year college degree with only 2.16% having also completed graduate study), and more likely to use Spanish as their primary household language (91.52%) and to live in a larger household (i.e., one with five or more occupants). Comparing across native- and foreign-born cohorts, we again see Spanish is more commonly used in the households of the foreign-born (39.73%), while English is the primary language in most households of the native-born (80.65%). This makes sense as the typical foreign-born individual is more likely to be Hispanic (41.51%) as compared to the typical native-born individual (10.15%). The foreign-born are also more likely to be Asian (28.17%) relative to the native-born and, generally, a higher share of adults are employed in the households of the foreign-born.

8.4.2 Econometric Results

Our estimation equations are constructed based on intuition, the specifications employed in earlier studies, and available data; thus, admittedly, our regression models are ad hoc. Given the observation from Table 8.4 that being foreign-born corresponds with a greater likelihood of multidimensional poverty, our regression models are structured such that each explanatory variable is interacted, separately, with dummy variables that identify individuals as being native- or foreign-born. This allows us to isolate the cohort-specific effect of each explanatory variable on the likelihood of being multidimensionally poor. It also permits us to perform Wald tests of the equality of coefficients across cohorts. Results obtained when using the binary MD Poor series as our dependent variable are presented in column (a) of Table 8.5. In column (b), we present results obtained from the estimation of an ordered logistic regression, where the MD Poor Category variable is the dependent variable series.

Beginning with the coefficients of the dummy variable that identifies individuals as being foreign-born, results presented in column (a) indicate that, all else equal, being foreign-born corresponds with an increase of 1.11 in the log-odds ratio. Likewise, the results in column (b) reveal that, again all else equal, being foreign-born increases the log-odds that the deprivation score is sufficiently high to be categorized as either more vulnerable to multidimensional poverty or more likely to suffer moderate or severe poverty by 0.98. To better depict these findings, we use the

Table 8.5 Determinants of deprivation scores and of multidimensional poverty, native- and foreign-born cohorts

Dependent variable	*Binomial Logit*		*Ordered Logit*		*Dependent variable*	*Binomial Logit*		*Ordered Logit*	
	MD Poor (0, 1)		*MD Poor (0–3)*			*MD Poor (0, 1)*		*MD Poor (0–3)*	
Explanatory var. interacted with	*Foreign-born*	*Native-born*	*Foreign-born*	*Native-born*	*Explanatory var. interacted with*	*Foreign-born*	*Native-born*	*Foreign-born*	*Native-born*
	(a)		*(b)*			*(a)*		*(b)*	
Nativity (excluded: native-born)					*Age category (continued)*				
Foreign-born	1.1148***	–	0.9754***	–	60 or more	−0.2642***	−0.2114***	−0.185***	0.2711***
	(0.0152)		(0.0106)		years	(0.0087)	(0.007)	(0.0068)	(0.0039)
Gender (excluded: male)					*Marital status (excluded: single)*				
Female	−0.0242***	0.1277***	−0.0663***	0.0685***	Divorced or	0.2114***	0.4978***	0.2387***	0.4169***
	(0.0046)	(0.0023)	(0.0036)	(0.0015)	separated	(0.0091)	(0.0055)	(0.007)	(0.0033)
Educational attainment (excluded: less than high School)					Married	−0.1512***	−0.5404***	−0.1931***	−0.5516***
High School	−1.7359***	−1.8526***	−1.9051***	−2.0244***		(0.0065)	(0.0057)	(0.0052)	(0.0033)
Graduate	(0.0062)	(0.0045)	(0.0047)	(0.0026)	Widowed	0.152***	0.2175***	0.1984***	0.2093***
Some College	−2.2583***	−1.9224***	−2.4202***	−2.0962***		(0.0117)	(0.0074)	(0.0089)	(0.004)
	(0.007)	(0.0042)	(0.0049)	(0.0025)	*Household size (excluded: 1 person in household)*				
4-year college	−2.6031***	−3.0062***	−2.7861***	−2.9612***	2 people	−0.3294***	−0.3751***	−0.3204***	−0.3147***
degree	(0.0101)	(0.0091)	(0.0065)	(0.0044)		(0.0102)	(0.0053)	(0.0075)	(0.0031)
Post-graduate	−3.0228***	−2.0239***	−3.2315***	−2.2751***	3–4 people	−0.7371***	−0.7303***	−0.6793***	−0.6193***
degree	(0.0141)	(0.0059)	(0.0085)	(0.0034)		(0.0098)	(0.0055)	(0.0073)	(0.0032)
Race and ethnicity (excluded: white and non-hispanic)					5–7 People	−0.2213***	−0.1856***	−0.1185***	−0.0932***
Asian	−0.0007	−0.0751***	−0.0084	−0.0948***		(0.0099)	(0.0058)	(0.0075)	(0.0035)
	(0.0106)	(0.0087)	(0.0077)	(0.006)	8 or more	0.4094***	1.1366***	0.5429***	1.3824***
Black	0.5165***	1.1405***	0.5559***	1.0161***	people	(0.0123)	(0.0072)	(0.0094)	(0.005)
	(0.01)	(0.0029)	(0.0075)	(0.0021)	*Primary household language (excluded: English)*				
Other race	0.086***	0.7104***	0.1167***	0.6931***	Asian or	1.4271***	0.4481***	1.4218***	0.4773***
	(0.0059)	(0.0048)	(0.0049)	(0.0036)	Pacific	(0.013)	(0.0101)	(0.0093)	(0.0071)
					Island				

(continued)

Table 8.5 (continued)

Dependent variable	*Binomial Logit*		*Ordered Logit*		*Dependent variable*	*Binomial Logit*		*Ordered Logit*	
	MD Poor (0, 1)		*MD Poor (0–3)*			*MD Poor (0, 1)*		*MD Poor (0–3)*	
Explanatory var. interacted with	*Foreign-born*	*Native-born*	*Foreign-born*	*Native-born*	*Explanatory var. interacted with*	*Foreign-born*	*Native-born*	*Foreign-born*	*Native-born*
	(a)		*(b)*			*(a)*		*(b)*	
Hispanic	−0.1142***	0.5618***	0.1305***	0.5306***	Indo-European	1.2089***	0.3913***	1.1707***	0.3227***
	(0.0121)	(0.0044)	(0.0086)	(0.0032)		(0.0107)	(0.006)	(0.0074)	(0.0045)
Employment status (excluded: employed)					Spanish	2.0735***	0.5957***	1.7981***	0.5844***
Unemployed	1.4337***	2.4133***	1.4654***	2.2321***		(0.0141)	(0.0043)	(0.0096)	(0.0032)
	(0.0094)	(0.005)	(0.0077)	(0.0034)	Other language	0.3124***	−1.3448***	0.4306***	−0.5055***
Not in labor force	0.4277***	1.0631***	0.473***	0.8581***		(0.0155)	(0.0077)	(0.0101)	(0.0034)
	(0.0055)	(0.0044)	(0.0042)	(0.0024)	Constant	−2.6212	–	–	–
Age category (excluded: 18–29 years of age)						(0.0107)	–	–	–
30–39 years	0.4833***	0.9752***	0.4519***	0.9556***	/Cut 1	–	–	0.9001	–
	(0.0077)	(0.0058)	(0.0061)	(0.0036)		–	–	(0.0067)	–
40–49 years	0.0181**	0.8393***	0.0458***	0.8322***	/Cut 2	–	–	2.483	.
	(0.0083)	(0.0063)	(0.0064)	(0.0038)		–	–	(0.0067)	–
50–59 years	−0.2303***	0.677***	−0.155***	0.7425***	/Cut 3	–	–	4.7199	–
	(0.0089)	(0.0065)	(0.0068)	(0.0039)		–	–	(0.007)	–
N	–	–	–	–	–	15,510,910	–	15,510,910	–
Wald Chi^2	–	–	–	–	–	1,934,402***	–	4,283,969***	–
Pseudo R^2	–	–	–	–	–	0.2979	–	0.2449	–
Log pseudo-likelihood	–	–	–	–	–	−3,414,345	–	−8,881,092	–
Count R^2	–	–	–	–	–	0.9130	–	0.7760	–

Robust standard errors in parentheses. All estimations include year and state fixed effects terms, which are not reported here due to space limitations. "***", "**", and "*" indicate statistical significance from zero at the 1, 5, and 10% levels, respectively.

mean values presented in Table 8.4 with the results presented in column (a) of Table 8.5 to calculate predicted probabilities. We find the typical foreign-born individual has an estimated likelihood of being multidimensionally poor that is 8.77% higher than the likelihood of the typical native-born individual. This cleavage in predicted probabilities persists when the results presented in column (b) are used to calculate predicted probabilities: compared to the typical native-born individual, the typical foreign-born individual is 24.58% less likely to not be deprived, 16.29% more likely to be vulnerable to poverty, 7.27% more likely to live in moderate poverty, and 1.02% more likely to experience severe poverty.

Turning attention to the estimated coefficients of the remaining explanatory variables, with few exceptions, we see considerable similarity across estimations. For example, women who are foreign-born are less likely to be multidimensionally poor as compared to native-born women. We also see that, as expected, additional educational attainment reduces the likelihood of experiencing multidimensional poverty. Relative to the white non-Hispanic control group, Hispanics, those who are black, and individuals of other races (i.e., that are neither Asian, black, nor white) have higher probabilities of being multidimensionally poor. This stands in contrast to Asians who have lower estimated probabilities. Not surprisingly, individuals who are employed tend to have lower likelihoods of being multidimensionally poor as compared to the unemployed and individuals who are not in the labor force. Relative to individuals who are 18–29 years of age, the likelihood of being multidimensionally poor is typically higher for individuals who are 30–50 years of age, after which the likelihood decreases. Being married, relative to being single, corresponds with a lower probability of being multidimensionally poor; however, being widowed, divorced, or separated corresponds with a higher probability. Compared to households with only one resident, those with up to seven individuals have lower likelihoods of being multidimensionally poor. For all estimations, however, households with eight or more residents have higher likelihoods of multidimensional poverty. Lastly, generally speaking, predominant use of a language other than English in one's household is positively related to multidimensional poverty.

Finally, following each of the estimations for which results are presented in Tables 8.5, 8.6 and 8.7, Wald tests were conducted to determine whether the corresponding coefficient estimates differed significantly across native- and foreign-born cohorts. In nearly all instances, the estimated coefficient values are significantly different. Specifically, we

Table 8.6 Determinants of multidimensional poverty, by foreign-born cohorts and native-born (Binomial Logit Estimations)

Explanatory var. interacted with	*Cohort 1 (a)*	*Cohort 2 (b)*	*Cohort 3 (c)*	*Native-born (d)*
Cohort (excluded: native-born)				
Cohort dummy	0.4298***	0.7722***	3.3323***	
	(0.0267)	(0.0301)	(0.042)	
Gender (excluded: native-born, male)				
Female	−0.044***	−0.0888***	0.0194***	0.1276***
	(0.0107)	(0.0086)	(0.0066)	(0.0023)
Educational attainment (excluded: native-born, less than high school)				
High school graduate	−1.7346***	−1.5901***	−1.8534***	−1.8531***
	(0.0155)	(0.0117)	(0.0087)	(0.0045)
Some college	−2.1111***	−2.0818***	−2.3922***	−1.9221***
	(0.0155)	(0.0123)	(0.011)	(0.0042)
4-year college degree	−2.549***	−2.3872***	−2.5885***	−3.0064***
	(0.0194)	(0.0157)	(0.0214)	(0.0091)
Post-graduate Degree	−3.0973***	−2.8152***	−2.8666***	−2.0242***
	(0.0271)	(0.0204)	(0.0331)	(0.0059)
Race and ethnicity (excluded: native-born, non-hispanic white)				
Asian	0.2927***	−0.2196***	0.2462***	−0.0775***
	(0.0166)	(0.0165)	(0.047)	(0.0087)
Black	0.9399***	0.1547***	0.2886***	1.1389***
	(0.017)	(0.0156)	(0.0225)	(0.0029)
Other race	0.5521***	0.1106***	0.0246***	0.7105***
	(0.0265)	(0.0215)	(0.0065)	(0.0048)
Hispanic	0.4547***	−0.2971***	−1.5813***	0.5653***
	(0.0259)	(0.0261)	(0.0293)	(0.0044)
Age category (continued)				
50–59 years	0.4887***	−0.0627***	−0.5622***	0.6764***
	(0.0259)	(0.0183)	(0.0115)	(0.0065)
60 or more years	0.2324***	−0.0386***	−0.6409***	−0.2124***
	(0.0242)	(0.0174)	(0.0124)	(0.007)
Marital status (excluded: native-born, single)				
Divorced or separated	0.3848***	0.2979***	0.0309***	0.4984***
	(0.023)	(0.0182)	(0.0122)	(0.0055)
Married	−0.1643***	0.0134	−0.3022***	−0.5399***
	(0.0205)	(0.0145)	(0.0081)	(0.0057)
Widowed	0.1562***	0.277***	−0.0653***	0.2178***
	(0.0252)	(0.0216)	(0.0183)	(0.0074)
Household size (excluded: native-born, 1 person in household)				
2 people	−0.6056***	−0.3646***	−0.2104***	−0.3754***
	(0.019)	(0.0169)	(0.017)	(0.0053)
3–4 people	−1.0273***	−0.8122***	−0.6361***	−0.7309***
	(0.0194)	(0.0162)	(0.016)	(0.0055)
5–7 people	−0.6232***	−0.4071***	−0.1485***	−0.1856***
	(0.0204)	(0.0167)	(0.016)	(0.0058)
8 or more people	−0.0011	0.2108***	0.4526***	1.1368***
	(0.0303)	(0.0232)	(0.0184)	(0.0072)
Primary household language (excluded: native-born, English-speaking)				
Asian or Pacific Island	0.9946***	1.9946***	0.2744***	0.4486***
	(0.0192)	(0.0262)	(0.0623)	(0.0101)

(continued)

Table 8.6 (continued)

Explanatory var. interacted with	*Cohort 1 (a)*	*Cohort 2 (b)*	*Cohort 3 (c)*	*Native-born (d)*	*Explanatory var. interacted with*	*Cohort 1 (a)*	*Cohort 2 (b)*	*Cohort 3 (c)*	*Native-born (d)*
Employment status (excluded: native-born, employed)					Indo-European	0.9251***	1.8593***	0.2114***	0.3888***
Unemployed	1.9204***	1.5551***	1.2201***	2.4131***		(0.0145)	(0.0246)	(0.0567)	(0.006)
	(0.0194)	(0.0169)	(0.0135)	(0.005)	Spanish	0.9526***	2.0604***	1.6898***	0.5962***
Not in labor	0.7092***	0.721***	0.3625***	1.0633***		(0.0257)	(0.034)	(0.0285)	(0.0043)
force	(0.0148)	(0.0107)	(0.0075)	(0.0044)	Other language	−0.5632***	1.0352***	−0.7569***	−1.3453***
Age category (excluded: native-born, 18–29 years of age)						(0.0303)	(0.0279)	(0.0347)	(0.0077)
30–39 years	0.7995***	0.4653***	0.3399***	0.975***	Constant	−2.6206	–	–	–
	(0.0251)	(0.0172)	(0.0095)	(0.0058)		(0.0107)	–	–	–
40–49 years	0.6412***	0.2446***	−0.2782***	0.8387***	–	–	–	–	–
	(0.0256)	(0.0177)	(0.0102)	(0.0063)					
N	15,510,910	–	–	–	–	–	–	–	–
Count R^2	0.9140	–	–	–	–	–	–	–	–
Wald Chi^2	1,940,713***	–	–	–	–	–	–	–	–
Log pseudo likelihood	−3,394,124	–	–	–	–	–	–	–	–
Pseudo R^2	0.302	–	–	–		–	–	–	–

See Table 8.5 notes

Table 8.7 Determinants of MDP poor categories, by foreign-born cohorts and native-born (ordered logit estimations)

Explanatory var. interacted with	*Cohort 1 (a)*	*Cohort 2 (b)*	*Cohort 3 (c)*	*Native-born (d)*
Cohort (excluded: native-born)				
Cohort dummy	0.3779***	0.6663***	2.9509***	–
	(0.0164)	(0.022)	(0.0326)	–
Gender (excluded: Native-born, male)				
Female	−0.0937***	−0.1263***	0.0015	0.0687***
	(0.0067)	(0.0068)	(0.0055)	(0.0015)
Educational attainment (excluded: native-born, less than high school)				
High school	−1.8062***	−1.8023***	−2.0313***	−2.0287***
graduate	(0.0098)	(0.0095)	(0.0068)	(0.0026)
Some college	−2.144***	−2.3005***	−2.6074***	−2.0999***
	(0.0094)	(0.0093)	(0.0079)	(0.0025)
4-year college	−2.5548***	−2.6468***	−2.8811***	−2.9655***
degree	(0.0112)	(0.0112)	(0.015)	(0.0044)
Post-graduate	-3.0617***	−3.1548***	−3.1034***	−2.2791***
degree	(0.0143)	(0.0138)	(0.0216)	(0.0034)
Race and ethnicity (excluded: native-born, non-hispanic white)				
Asian	0.2071***	−0.1749***	0.2496***	−0.0971***
	(0.0103)	(0.013)	(0.0386)	(0.006)
Black	0.8438***	0.2262***	0.297***	1.0173***
	(0.0109)	(0.0124)	(0.0187)	(0.0021)
Other race	0.5266***	0.1153***	0.0395***	0.6956***
	(0.0181)	(0.0175)	(0.0055)	(0.0036)
Hispanic	0.3808***	−0.1234***	−1.2097***	0.5352***
	(0.0175)	(0.0201)	(0.0225)	(0.0032)
Age category (continued)				
60 or more	0.3432***	0.0081	−0.6505***	0.2713***
years	(0.0147)	(0.0135)	(0.0103)	(0.0039)
Marital status (excluded: native-born, single)				
Divorced or	0.3373***	0.3221***	0.047***	0.4181***
separated	(0.0142)	(0.0139)	(0.0101)	(0.0033)
Married	−0.2425***	−0.064***	−0.3209***	−0.5517***
	(0.0122)	(0.011)	(0.0068)	(0.0033)
Widowed	0.2285***	0.3074***	−0.0387**	0.2099***
	(0.0154)	(0.0174)	(0.0151)	(0.004)
Household size (excluded: native-born, 1 person in household)				
2 people	−0.4753***	−0.285***	−0.282***	−0.3153***
	(0.012)	(0.0134)	(0.0143)	(0.0031)
3–4 people	−0.7951***	−0.7212***	−0.6527***	−0.6209***
	(0.0121)	(0.0129)	(0.0135)	(0.0032)
5–7 people	−0.3868***	−0.2636***	−0.1178***	−0.0934***
	(0.0131)	(0.0135)	(0.0136)	(0.0035)
8 or more	0.4365***	0.4763***	0.4086***	1.3883***
people	(0.02)	(0.0187)	(0.015)	(0.005)
Primary household language (excluded: native-born, English-speaking)				
Asian or Pacific	1.0009***	1.9649***	0.5893***	0.4795***
Island	(0.0119)	(0.0186)	(0.0491)	(0.0071)
Indo-European	0.8585***	1.8199***	0.5053***	0.3213***
	(0.0091)	(0.0174)	(0.0448)	(0.0045)

(continued)

Table 8.7 (continued)

Explanatory var. interacted with	*Cohort 1 (a)*	*Cohort 2 (b)*	*Cohort 3 (c)*	*Native-born (d)*	*Explanatory var. interacted with*	*Cohort 1 (a)*	*Cohort 2 (b)*	*Cohort 3 (c)*	*Native-born (d)*
Employment status (excluded: native-born, employed)					Spanish	0.8825***	1.8942***	1.6533***	0.5865***
Unemployed	1.6891***	1.5472***	1.3055***	2.2361***		(0.0173)	(0.0242)	(0.021)	(0.0032)
	(0.0139)	(0.0148)	(0.0117)	(0.0034)	Other	−0.1811***	1.0361***	−0.1212***	−0.5066***
Not in labor	0.5992***	0.6828***	0.4343***	0.8593***	Language	(0.0151)	(0.0197)	(0.025)	(0.0035)
force	(0.0086)	(0.0082)	(0.0062)	(0.0024)	/Cut 1	0.8981	–	–	–
Age category (excluded: native-born, 18–29 years of age)						(0.0067)	–	–	–
30–39 Years	0.6694***	0.4265***	0.3052***	0.9576***	/Cut 2	2.4897	–	–	–
	(0.0151)	(0.0132)	(0.0079)	(0.0036)		(0.0067)	–	–	–
40–49 Years	0.5719***	0.2271***	−0.2988***	0.8337***	/Cut 3	4.7462	–	–	–
	(0.0154)	(0.0134)	(0.0085)	(0.0038)		(0.007)	–	–	–
50–59 Years	0.4956***	−0.0329**	−0.5708***	0.7439***	–	–	–	–	–
	(0.0155)	(0.0138)	(0.0095)	(0.0039)					
N	1,55,10,910	–	–	–	–	–	–	–	–
Count R^2	0.7760	–	–	–	–	–	–	–	–
Wald Chi^2	4320,686***	–	–	–	–	–	–	–	–
Log pseudo likelihood	−8,850,466	–	–	–	–	–	–	–	–
Pseudo R^2	0.2475	–	–	–		–	–	–	–

See Table 8.5 notes

find significant differences across 23 of the 26 pairs (88.46%) of native- and foreign-born coefficients presented in Table 8.5.

Looking to the variation in poverty intensity and incidence that is depicted in Fig. 8.1 and to the differences in mean values across the three foreign-born cohorts that are presented in Table 8.4, we further modify our regression model to interact dummy variables for each of the three foreign-born cohorts, and a dummy variable that represents native-born individuals, with each of the explanatory variables. The results obtained when the binary MD Poor variable is employed as the dependent variable series are presented in Table 8.6, and the results obtained with the MD Poor Category variables used as the dependent variable series are provided in Table 8.7.

Focusing first on the cohort-specific dummy variables, in both tables, we see positive and statistically significant coefficients for each cohort. Considering the relative MPI values of each cohort, it is unsurprising to see the coefficients increase in magnitude as we move from cohort 1 to cohort 2 to cohort 3. After each set of results presented in Tables 8.6 and 8.7 we perform Wald tests to consider whether differences in coefficient magnitudes across cohorts are statistically significant. In Table 8.6, we find that 149 of the 156 coefficient pairs differ significantly (95.51%), and we have that 147 of the 156 coefficient pairs (94.23%) in Table 8.7 are significantly different. It is important to note, however, that although coefficient values generally differ, in a number of cases the magnitudes of the differences are slight and the differences may carry no practical significance. We also find a fair amount of consistency across cohorts in terms of the signs of the coefficients presented in Tables 8.6 and 8.7. This consistency, however, is not universal.[8]

Again we calculate predicted probabilities, this time for the MD Poor Categories, using the mean values presented in Table 8.4 and the estimation results that are presented in Table 8.5 for the entire foreign-born cohort and in Tables 8.6 and 8.7 for the native-born cohort and three foreign-born cohorts. Results are illustrated in Fig. 8.2.

We find that, for all groupings except cohort 3, the likelihood of being multidimensionally poor decreases in value as we move from left to right in the figure. For the native-born cohort, there is an estimated 86.3% probability of being within the not deprived category, a 10.6% probability of being vulnerable to multidimensional poverty, a 2.8% probability of living in moderate poverty, and a 0.3% probability of experiencing severe poverty. As noted earlier, cohort 1 mirrors the

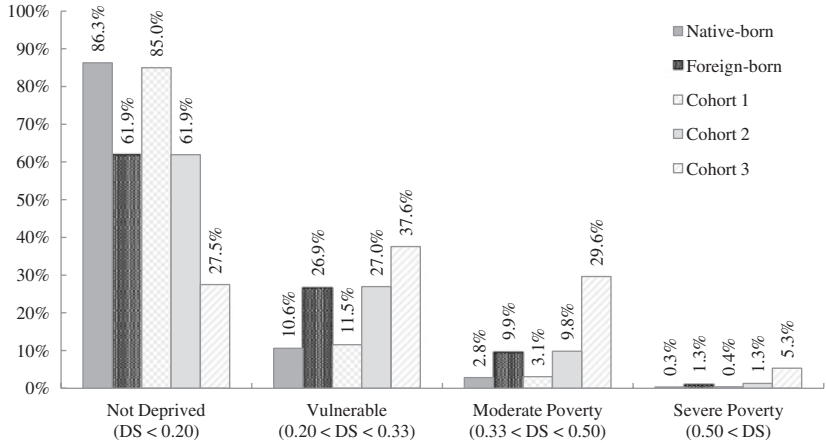

Fig. 8.2 Predicted probabilities from ordered logit estimations, by home country cohort

Note **probabilities for the foreign-born group are calculated using the results presented in column (b) of Table 8.5. All other probabilities are calculated using the results presented in Table 8.7**

native-born cohort to a considerable extent. We see that pattern again here as the estimated probabilities for cohort 1 are quite similar to those of the native-born cohort. Similarly, in Fig. 8.2, we again see that the estimated probabilities for the entire foreign-born cohort and for cohort 2 are nearly identical. Where we find the greatest deviation from the general pattern is with cohort 3. Individuals from the home countries in this group have only a 27.5% predicted probability of not being deprived. They have a 37.6% likelihood of being vulnerable to multidimensional poverty, a 29.6% probability of living in moderate poverty, and a 5.3% probability of facing severe poverty.

8.5 Summary/Conclusions

We have examined data from the 2010–2014 ACS 5-year PUMS files (U.S. Census 2016) while employing the methodology of Alkire and Foster (2009) to measure multidimensional poverty. We have documented the extent to which multidimensional poverty exists in the present-day U.S., and our findings are generally consistent with those of

earlier studies. However, extending the literature, we find considerable variation across native- and foreign-born residents of the U.S. and across immigrant home countries in the incidence and intensity of deprivation as reflected by their respective MPI values. Our econometric analysis has identified factors that contribute to multidimensional poverty and, again extending the literature, we have examined variation in the determinants across both native- and foreign-born cohorts and across groupings of immigrants' home countries. Our results confirm that, once other factors are controlled for, foreign-born individuals who reside in the United States are more likely than the native-born to be multidimensionally poor.

We hope that the detailed coverage we have provided is of value to fellow researchers and for the formulation of public policies that aim to alleviate deprivation. To that end, our findings suggest that reductions in multidimensional poverty within the U.S. and, more directly, among members of the foreign-born population of the U.S. can be achieved via the creation and implementation of public policies that target individuals who are from the countries we classify as cohort 3. Further, the thrust of such policies should be to increase educational attainment and/or English fluency. This alone, of course, is insufficient to remediate all deprivation; however, targeting the individuals and groupings that are most deprived will allow for reductions in overall multidimensional deprivation.

Finally, as we note in the introduction, we see this as a first step toward a more comprehensive and, thus, more useful understanding of multidimensional policy in the United States. There are, however, many potential avenues for additional research. For example, we have employed a lack of health insurance coverage as an indicator of multidimensional poverty and our reference period is 2010 through 2014. This coincides with the enactment of the Affordable Care Act (ACA) (March 2010) and the phase-in period for most of the Act's major provisions (i.e., through January 2014). Thus, the extent to which the Act reduced multidimensional poverty is surely of value for public policy, especially as the political debate over health care in 2017 is centered on repeal and/or replacement of the ACA. Similarly, our reference period spans the recovery from the Great Recession (December 2007–June 2009). A lengthier reference period would facilitate examination of the effects of the recession on multidimensional poverty, both generally and for various demographic cohorts, and allow for the study of the related recovery paths.

Notes

1. In 1983, the U.S. poverty rate was equal to 15.2% (DeNavis–Walt and Proctor 2015).
2. Bibi (2005) and Zeumo et al. (2011) provide surveys of the related literature.
3. T tests reveal that the differences in values across the native- and foreign-born cohorts are statistically significant ($p < 0.01$) for all listed variables.
4. Given the natural break in the headcount ratio series, we use $H = 0.32$ to distinguish cohorts 1 and 2 from cohort 3. For the poverty intensity series, we use the mean value to differentiate between cohorts 2 and 3 and cohort 1.
5. The mean deprivation score values, by cohort, are 0.1157 for the full sample, 0.1076 for the native-born, 0.1759 for the foreign-born, and 0.1006, 0.1724, and 0.2679 for Cohorts 1, 2, and 3 respectively. T tests indicate that the mean values for each of the five sub-groups differ significantly ($p < 0.01$) from the full sample mean value.
6. The number of indicators for which each observation is deprived, averaged across countries, is 1.45 for the full sample, 1.12 for Cohort 1, 1.64 for Cohort 2, and 2.80 for Cohort 3. *T* tests indicate that the mean values for all three cohorts are significantly different from the full sample mean value ($p < 0.01$).
7. Another illustration of the differences between the native- and foreign-born is that 41.74% of native-born individuals have deprivation scores equal to zero while the same is true for only 28.77% of foreign-born individuals.
8. An alternative set of estimations employ the Deprivation Score for each individual as the dependent variable series while retaining the set of explanatory variables presented in Tables 8.5, 8.6 and 8.7. Given the prevalence of observations where the Deprivation Score is equal to zero (40.19% of the full sample), the Tobit estimation technique was employed. The results, which are not presented here due to space limitations but which are available from the authors upon request, are generally consistent with the findings presented in this chapter.

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