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the Land of Opportunity***

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Abstract

This paper revisits the influential work by Chetty, Hendren, Kline, and Saez (2014) who attempt to explain the variation in intergenerational mobility across commuter zones in the US (i.e., spatial mobility) using nine classes of variables. We employ Bayesian model averaging methods that allow for model uncertainty to identify robust predictors of spatial mobility. In doing so we pay special attention to the specification of model and parameter priors. We also investigate the heterogeneous effects of these predictors on spatial mobility across commuter zones in different average income quintiles. Our findings suggest a more nuance and complex characterization of the spatial mobility process than that proposed by Chetty, Hendren, Kline, and Saez.

Keywords: intergenerational mobility, income persistence, BMA, model uncertainty.

JEL Classification Codes: C14, I14, I24.

1 Introduction

There has been intense debate in the recent literature regarding intergenerational mobility - how dependent an offspring's social and economic outcomes are on those of her parents - in the United States (and also other countries). The debate springs from two concerns. First, there has been substantial disagreement about the trend in intergenerational mobility across time. While some studies have shown that intergenerational mobility has declined over time, others have instead found that intergenerational mobility has always been consistently low; see, for example, Aaronson and Mazumder (2008), Lee and Solon (2009), Hauser (2010), the comprehensive survey by Corak (2013), and Clark (2014).

Getting an accurate picture about trends in intergenerational mobility is important not only because it informs the collective narrative about the nature of living in the United States - can the United States truly be characterized as the “land of opportunity” where inhabitants are able to overcome initial conditions through individual talent and hard work? - but also because it potentially informs policy makers about the nature of barriers to mobility.

The concern over the nature of intergenerational mobility is also important because of its relationship with income inequality. The recent literature has proposed a connection between income inequality and intergenerational income mobility popularized in the form of the Great Gatsby curve (see Krueger (2012) and Corak (2013)). The Great Gatsby curve describes the strong positive correlation between higher levels of inequality and lower degrees of mobility in the cross-section of high-income countries. In fact, the United States has one of the highest levels of inequality and lowest degrees of mobility among the high-income countries.

The question here is over the determinants of intergenerational mobility and whether factors that drive lower levels of intergenerational mobility may also account for the rise

in higher degrees of income inequality. For example, Becker and Tomes (1979) refer to “endowments of capital that are determined by the reputation and ‘connections’ of their families, the contribution to the skills, race, and other characteristics of children from the genetic constitutions of their families, and the learning, skills, goals, and other ‘family commodities’ acquired through belonging to a particular family culture” that determine intergenerational mobility or lack thereof. Could these factors; perhaps in combination with others, also determine why some social groups are pulling away from others within the distribution of economic outcomes?

We focus in this paper on an influential recent paper by Chetty, Hendren, Kline, and Saez (2014) - henceforth, CHKS - who re-examine the trend in intergenerational mobility by focusing on children born in 1980-82 and their parents. CHKS address both concerns above in this paper. Their paper has quite a few novel features. First, they employ a comprehensive and reliable data set; i.e., federal income tax records. Second, instead of characterizing intergenerational mobility by estimating the intergenerational elasticity of earnings (IGE); i.e., by regressing the log income of children on the log income of parents, CHKS employ a rank-rank comparison instead. That is, they compare the rank of children to others in their birth cohorts with the rank of parents in relation to other parents with children in the aforementioned cohorts.

Using their rank-rank specification, CHKS were then able to estimate the degree of intergenerational mobility within each commuting zone (CZ) in the United States based on where children resided when they were 16. They then attempted to explain the variation in intergenerational mobility across CZ’s by considering 9 classes of covariates, or, as we will refer to them, “theories”: (i) Segregation (e.g., Schelling (1971), Borjas (1995), Wilson (1996), Cutler and Glaeser (1997)), (ii) Income Distribution or Inequality (e.g., Corak (2013), (iii) Tax (e.g., Becker and Tomes (1979, 1986), Ichino, Karabarbounis, and Moretti (2011)),

(iv) Quality of K-12 Education (e.g., Card and Krueger (1992)), (v) College Access, (vi) Local Labor Market (e.g., Autor, Dorn, and Hanson (2013)), (vii) Migration (e.g., Borjas and Katz (1997)), (viii) Social Capital (e.g., Coleman (1988)), and (ix) Family Structure (e.g., Becker (1991)). In total, CHKS consider over 30 variables associated with those 9 theories. Importantly, CHKS largely focus on simple univariate regressions from the large set of correlates on intergenerational mobility across CZ's. However, they also attempt to compare alternative hypotheses by running a horserace between a smaller set of selected variables meant to represent some of the most pertinent theories for explaining intergenerational mobility across CZ's. When they do so, they find that a set of five variables related to racial segregation, income inequality, the high school dropout rate, social capital, and the fraction of children with single parents exhibit the strongest and most robust correlations with spatial mobility. How persuaded should we be by their findings?

One implication of the above theories of social mobility is that they imply new channels of transmission beyond family income. The main problem in identifying the determinants of intergenerational mobility is that there do not exist good theoretical reasons to include a particular set of theories or proxies a priori. This is due to the fact that the theories of mobility are openended or mutually compatible. The validity of a theory of intergenerational mobility (e.g., Social Capital) does not logically exclude other theories from also being relevant (e.g., Segregation). The notion of openendedness was introduced by Brock and Durlauf (2001) in the context of economic growth who argued that this problem renders the coefficient estimates of interest to be 'fragile' in the sense of Leamer (1978). By fragility we mean that the estimated effect could change dramatically in magnitude, lose its statistical significance, or, even switch signs depending on which other (nuisance) variables are included or excluded in the regression equation. The potential fragility of coefficient estimates of mobility determinants under model uncertainty is important because it implies that findings

on the intergenerational transmission process, which do not properly account for model uncertainty, may be non-robust.

To address the issue of model (and theory) uncertainty, we employ Bayesian model averaging (BMA) methods; see, e.g., Raftery, Madigan, and Hoeting (1997). These methods have seen wide application in other areas of economics; especially, in the area of empirical growth, but are novel to this literature. BMA moves the focus of analysis from estimates obtained from a given model to estimates that do not depend on a particular model specification but that are instead conditional on the model space. Since the model space is generated from the set of plausible explanatory variables for the dependent variable, a model is therefore simply a particular permutation of the set of explanatory variables. BMA accounts for model uncertainty by forming a weighted average of model-specific estimates where the weights are given by the posterior model probabilities.

In the implementation of BMA, care has to be taken in the specification of priors. In general, researchers are required to specify priors over model-specific parameters and also priors over models in the model space. In particular, we note the pioneering work of Eduardo Ley and coauthors; see, in particular, Fernandez, Ley, and Steel (2001a,b). As pointed out by Fernandez, Ley, and Steel (2001a), a key concern in the literature is that posterior model probabilities—that is, the evidentiary weights that are used in BMA for averaging the estimates across models—are sensitive to the specification of priors over model-specific parameters; see, also, Kass and Raftery (1995). In this paper we follow Fernandez, Ley, and Steel (2001a) and use their “Benchmark” priors in our baseline specifications. Additionally, we provide extensive robustness checks that investigate various other parameter and model prior structures; see for example Raftery (1995), George (1999), Eicher, Papageorgiou, and Raftery (2011), Ley and Steel (2012).

Our findings, once we have accounted for model uncertainty, suggest a more nuance and

complex characterization of the spatial mobility process. We certainly do find that the five broad theories that CHKS have highlighted as being important for explaining spatial mobility are generally robust. However, the specific determinants within each of these theories that are important depend on the particular measure of spatial mobility employed in the analysis. We also found that other theories, above and beyond the five identified by CHKS, such as local labor market conditions and state fiscal policies also play potentially important roles in explaining the pattern of spatial mobility. Finally, we find substantial heterogeneity in the effect of mobility determinants on outcomes. The impact of particular determinants depends critically on whether the children grew up in urban areas and to which segment of the income distribution.

The rest of the paper is organized as follows. Section 2, which presents the standard regression framework of the analysis of the determinants of intergenerational mobility. Section 3 describes the data and replication results. Section 4 presents the BMA methodology. Section 5 describes our main empirical as well as robustness results. Section 6 concludes.

2 Standard Regression Framework

We revisit the analysis of CHKS on the determinants of intergenerational mobility using a more general framework that treats their specifications as particular examples of the linear regression model of intergenerational mobility. In particular, for each commuting zone i , we assume that the intergenerational mobility ρ_i between parents and offspring is determined by the following linear regression model, denoted by $\mathcal{M}_m$,

$$\rho_i = \alpha + x'_{mi}\beta_m + e_i, \tag{2.1}$$

where $m = 1, \dots, M$ and $i = 1, \dots, n$. x_{mi} is a set of k_m regressors chosen from a larger set of k regressors x_i and β_m is a vector of the corresponding regression coefficients. α is an intercept. We assume that $\text{rank}(1_n, X) = k + 1$, where 1_n is an n -dimensional vector of 1's and X is a stacked vector of x_i . Define β as the k -dimensional vector of coefficients of the full regression of ρ_i on x_i and let β be the object of interest. e_i is assumed to be a Normal regression error, $e_i|x_i \sim N(0, \sigma^2)$, where $\sigma^2 > 0$. Finally, we assume that we observe a random sample $\mathcal{D} = \{(\rho_i, x_i)\}_{i=1}^n$. All the specifications considered in CHKS constitute particular choices of x_{mi} . Both their baseline investigations in Table VII, which are based on univariate models and their multivariate models in Table IX can be viewed as particular models.

3 Data and Replication

3.1 Chetty-Hendren-Klein-Saez Data

Following CHKS we use two measures of intergenerational mobility and 31 determinants across US commuting zones made available by the Equality of Opportunity Project¹. Full descriptive statistics can be found in Table 1. More details can be found in the appendix of Chetty, Hendren, Kline, and Saez (2014).

Our sample differs in two dimensions. First, because the focus of our analysis is on multivariate analysis we balance our sample by eliminating missing observations. The balancing results in 509 commuting zones as opposed to the core sample of CHKS that includes 709 commuter zones. Second, due to multicollinearity issues we exclude from our analysis the following CHKS proxies: the segregation of poverty, the segregation of affluence,

¹<http://www.equality-of-opportunity.org/>

the gini coefficient for parent income, and the fraction middle class. For robustness purposes, we also consider an extended sample that drops the college variables to increase the sample size to 633 commuting zones.²

3.1.1 Measures of Mobility

Intergenerational mobility is a latent variable. The standard empirical approach in the literature estimates the intergenerational mobility using the intergenerational elasticity of income (IGE), which is the slope coefficient from a log-log linear regression model of children’s permanent income on parents’ permanent income controlling for some characteristics; see for example Blanden (2013) for an excellent recent survey. Instead, CHKS estimate the intergenerational mobility using a rank-rank LS regression between offspring’s percentile rank based on their position in the distribution of Child Income within her birth cohorts and the percentile rank of the parents based on their position in the distribution of Parent Income. More precisely, for each CZ i , CHKS estimate the following rank-rank regression

$$r_{ji}^o = \delta_{0i} + \delta_{1i}r_{ji}^p + \varepsilon_{ji}, \quad (3.2)$$

where r_{ji}^o denotes the national income rank of offspring j among offsprings in her birth cohort who grew up in CZ i and r_{ji}^p denotes the corresponding rank for her parent in the income distribution of parents in the core sample. Percentile ranks are measured on a 0-100 scale and slopes on a 0-1 scale, so δ_{0i} ranges from 0-100 and δ_{1i} ranges from 0 to 1.

CHKS argue that rank-rank regressions avoid at least two problems of the standard log-log regression analysis. LS linear regression between the logarithm of Child Income and the logarithm of Parent Income is likely to yield biased mobility estimates because it

²The corresponding descriptive statistics can be found in Table A1.

discards observations with zero income and omits nonlinearities. In contrast, a LS linear regression of a rank-rank model allows us to include zeros in Child Income and provides a good approximation of the conditional mean of a child's rank given her parents' rank, and hence, it does not suffer from bias due to omitted nonlinearities.

The data on Child and Parent Income are obtained from the IRS Databank and matching between parent and child is achieved using information from 1040 tax records. Children are assigned to the commuting zone reported in the 1040 record of their parents. CHKS's baseline analysis is based on a core sample of 1980-82 birth cohorts and measures Parent Income as the average parents' family income over the years 1996 to 2000 and Child Income as the mean family income in 2011-12, when children are approximately 30 years old.

Following CHKS, we consider two measures of intergenerational mobility: *Relative Mobility* and *Absolute Upward Mobility*. Relative Mobility, due to the linearity of the rank-rank regression, measures the difference in income between the expected ranks of children born to parents at the top and bottom of the income distribution within a CZ and is given by the estimated slope in equation (3.2), i.e., $\hat{\rho}_i = 100\hat{\delta}_{1c}$, of the rank-rank regression. Absolute mobility is defined as the expected child rank of children born to a parent whose national income rank is p in a particular CZ. Absolute Upward Mobility measures the average absolute mobility for children from families with below median parent income. Given the linearity of the rank-rank relationship, the average rank of children with below-median parent income equals the average rank of children from families at the 25th percentile of the national parent income distribution in equation (3.2), i.e., $\hat{\rho}_i = \hat{\delta}_{0i} + 25\hat{\delta}_{1i}$.

3.1.2 Determinants

The determinants of mobility are organized into nine different theories: *Segregation*, *Income Distribution*, *Tax*, *K-12 Education*, *College*, *Local Labor Market*, *Migration*, *Social Capital*, and *Family Structure*.

Following CHKS we investigate the effects of *Segregation* on intergenerational mobility by focusing on three alternative aspects of segregation - racial, income, and geographical - using data from the 2000 Census. For racial segregation, we include a Theil Index and the Fraction of Black Residents in each commuting zone. For income segregation we use a Theil Index, which is based on a weighted average of two groups. For geographical segregation we include the Share with Commute < 15 Mins, which is the number of commuters who commute less than 15 minutes over the total number of commuters in each zone.

Income Distribution is measured using the mean level of Household Income per Capita for Working-Age Adults in a CZ, the Gini Bottom 99%, and the Top 1% Income Share for Parents within each CZ. It is worth mentioning that CHKS were very careful to use the same income information as the one used for the estimation of mobility.

Tax is measured using four variables. The Local Tax Rate and the Local Government Expenditures per capita are based on data from the U.S. Census Bureau's 1992 Census of Government county-level summaries. State Income Tax Progressivity uses data from the Tax Foundation to measure the difference between 2008 state income tax rates for incomes in the top bracket (above \$100,000) and incomes in the bottom tax bracket. The State Earned Income Tax Credit (EITC) Exposure is obtained from Hotz and Scholz (2003) using yearly rates over the 1980-2001 period.

K-12 Education is measured using four variables: the Teacher-Student Ratio, which is based on 1996-97 school-level data, the School Expenditures, which are measured using

1996-97 school district data, the High School Dropout Rates, which are measured using 2000-01 school district data, and the Test Score Percentile controlling for Parent Income. The first three variables are based on data from the National Center for Education Statistics' Common Core of Data for public schools while the test scores are constructed using a weighted mean from the 2004, 2005, 2007 from Global Report Card (National Math and Reading Percentiles).

College is measured using three variables constructed from the Integrated Postsecondary Education Data System (IPEDS). The Number of Colleges per Capita is measured from the 2000 data while the College Graduation Rate (controlling for Parent Income) for each CZ is based on the 2009 data. The Mean College Tuition is the mean in-state tuition (and fees) for full-time, first-time undergraduates.

Local Labor Market is measured using four variables. The Labor Force Participation Rate is based on the 2000 US Census. The Teenage (14-16) Labor Force Participation is constructed as the number of children born from 1985-1987 who receive a W2 out of the total number of children in each zone. The Fraction Working in Manufacturing is computed from 2000 Census by dividing the number of people working in manufacturing by the total number of workers. And the Growth in Chinese Imports is based on Autor, Dorn, and Hanson (2013) and measures the per-worker change in imports from China between 1990 and 2000. At the commuting zone level, it is calculated as the growth in imports allocated to a zone, divided by the 1990 zone work force.

Migration is measured by the Migration Inflow Rate, the Migration Outflow Rate using county-to-county migration statistics from the Internal Revenue Service's Statistics of Income for 2004 to 2005, and the Share of Foreign Born Residents in each CZ based on the 2000 US Census.

Social Capital is measured by three variables. The Social Capital Index is taken from Rupasingha and Goetz (2008) who construct a 1990 county-level social capital index. The Fraction of Religious residents is based on the self-reported number of religious adherents from the Association of Religion Data Archives at Pennsylvania State University. The Violent Crime Rate in each zone is measured using the FBI’s Uniform Crime Reporting program obtained from county-level ICPSR data. More precisely, it is computed as the ratio of the total number of arrests for serious violent crimes to the total covered population.

Family Structure is measured using three variables from 2000 US Census: the Fraction of Adults Divorced, the Fraction of Adults Married, and the Fraction of Children with Single Mothers. The fraction of children with single mothers is constructed as the number of households with female heads with own children present (and no husband present) divided by the total number of households with own children present in each CZ.

3.2 Replication Results: Univariate and Short Regressions

A key focus of CHKS is the univariate regression analysis reported in Table VII of their paper. In particular, CHKS consider univariate regressions of absolute and Relative Mobility on 35 variables from the nine theories listed above. We begin by replicating this key table. We present our replication results in Table 2. Despite the fact that our sample is essentially a subsample of CHKS and we only use 31 variables, we closely replicate their regression results. Like CHKS we find that there is strong evidence that all of the 9 theories potentially predict spatial mobility (however measured) with some predictors within each theory being stronger than others. In unreported exercises we investigated the effect of switching some of the included variables with the ones that we excluded but our results remained unaffected.

We also replicate their preferred multivariate regressions in Table IX using our sample.

CHKS argue that five theories exhibit the strongest and most robust correlations with intergenerational mobility: Segregation, Income Inequality, School Quality, Social Capital, and Family Structure. They then run regressions of the spatial mobility measures on the following 5 proxy variables: Racial Segregation Theil Index, Gini Bottom 99%, High School Dropout Rate, Social Capital Index, Fraction Single Mothers, and Fraction Black. They conclude that the variation in spatial mobility is explained by a combination of the above 5 theories and their proxies rather than any single theory. We refer to this kind of analysis as “short regressions” to emphasize the fact that CHKS only include a particular subset of the 35 regressors. Our replication results in Table 3 are substantively similar to their findings in Table IX, albeit with small differences in the magnitude of the coefficients due to the differences in the two samples.³

4 BMA Methodology

A direct implication of theory uncertainty is that no individual model in equation (2.1) can be viewed a priori as the true one. This includes the case when equation (2.1) is the full model. Ignoring issues of multicollinearity and the fact that the sample size n can be smaller than k , the full model is just a single model in the set of all 2^k possible combinations of regressors from the vector x_i , and may potentially have weak evidentiary support. This set defines the model space and is denoted by $\mathcal{M} = \{\mathcal{M}_1, \dots, \mathcal{M}_M\}$. So how can one obtain robust statistical inference for statistics of interest that does not depend on a specific choice of determinants but rather depends on a model space whose elements span an appropriate range of determinants suggested by a large body of work? To deal with this problem we employ a Bayesian Model Averaging (BMA) approach to identify robust determinants of

³In the Appendix we also provide the replication of Table IX using our extended sample with similar results; see Table A2.

intergenerational income mobility. BMA dates back to Leamer (1978), and was further studied by Draper (1995), Kass and Raftery (1995), and Raftery, Madigan, and Hoeting (1997).⁴

BMA integrates out the uncertainty over models by computing the posterior distribution of β , $\hat{\mu}(\beta|\mathcal{D})$, as a weighted average of model-specific posterior distributions of β , $\hat{\mu}(\beta|\mathcal{M}_m, \mathcal{D})$,

$$\hat{\mu}(\beta|\mathcal{D}) = \sum_{m=1}^M \hat{w}_m \hat{\mu}(\beta|\mathcal{M}_m, \mathcal{D}), \quad (4.3)$$

with weights $\hat{w}_m$ given by the posterior model probabilities of model $\mathcal{M}_m$, which are computed via Bayes' rule

$$\hat{w}_m \equiv \hat{\mu}(\mathcal{M}_m|\mathcal{D}) = \frac{\hat{\mu}(\mathcal{D}|\mathcal{M}_m)\mu(\mathcal{M}_m)}{\sum_{m=1}^M \hat{\mu}(\mathcal{D}|\mathcal{M}_m)\mu(\mathcal{M}_m)} \quad (4.4)$$

where $\hat{\mu}(\mathcal{D}|\mathcal{M}_m)$ is the integrated likelihood (also known as the marginal likelihood) of the data given a model and $\mu(\mathcal{M}_m)$ is the prior probability for a model. The denominator is the total posterior mass, which is constant over all models.

Deferring the discussion on the parameter and model priors for the subsections below, the BMA estimator of β takes the form of a weighted average of model-specific coefficient estimates

$$\hat{\beta}_{BMA}^{\mathcal{M}} = \sum_{m=1}^M \hat{w}_m \hat{\beta}_m \quad (4.5)$$

where $\hat{\beta}_m$ is the LS estimator of β_m in model $\mathcal{M}_m$ and with standard errors based on the

⁴BMA has proven to be particularly useful in identifying robust growth determinants; see for example, Brock and Durlauf (2001), Fernandez, Ley, and Steel (2001b), Sala-i Martin, Doppelhofer, and Miller (2004), Durlauf, Kourtellos, and Tan (2008), and Masanjala and Papageorgiou (2008).

corresponding model averaging variance estimator

$$\hat{V}_{BMA}^{\mathcal{M}} = \sum_{m=1}^M \hat{w}_m \hat{V}_m^{\beta} + \sum_{m=1}^M \hat{w}_m (\hat{\beta}_m - \hat{\beta}_{BMA}^{\mathcal{M}})^2, \quad (4.6)$$

where $\hat{V}_m^{\beta}$ is the model specific variance matrix of $\hat{\beta}_m$. The first term captures the variance of the within model estimates and the second term captures the variance of model-specific estimates across models. The latter is an additional source of variance, which does not arise when computing variances in the absence of model uncertainty. The notation $\hat{\beta}_{BMA}^{\mathcal{M}}$ and $\hat{V}_{BMA}^{\mathcal{M}}$ emphasizes the dependence of the estimator on the model space $\mathcal{M}$ instead of an individual model $\mathcal{M}_m$.

The standard way to conduct inference in the context of BMA is to reference the posterior probability of inclusion (PIP) for each regressor. The PIP is computed as the sum of the posterior probabilities of all the models that contain that variable. Following Sala-i Martin, Doppelhofer, and Miller (2004) and Durlauf, Kourtellis, and Tan (2008) we also report BMA posterior t-statistics for coefficient estimates and interpret them in the classical sense. Our approach can be viewed as a “hybrid” approach to BMA, which mixes frequentist probability statements about observables given unobservables with Bayesian probability statement about unobservables given observables. So while $\hat{\beta}_{BMA}^{\mathcal{M}}$ and $\hat{V}_{BMA}^{\mathcal{M}}$ are Bayesian objects, namely, the posterior mean and variance of β given data, we report BMA posterior t-statistics for coefficient estimates and interpret them in the classical sense.⁵

Equations (4.3) and (4.4) imply that to operationalize BMA, we need make decisions regarding the prior model probabilities, prior parameter probabilities, and model space.⁶

⁵One problem with this kind of inference is that the asymptotic distribution of the t-statistic is a mixture of Normal distributions and hence, standard asymptotical Normal inference can be misleading.

⁶Our model space is constructed using the birth-death MCMC sampler based on 10^6 burn-ins and 2×10^6 draws. Our BMA results are also based on aggregate information from the sampling chain with posterior model distributions based on MCMC frequencies. However, as is evident from the bottom figure in Figure 1 the differences from an exact likelihood approach are practically indiscernible.

The assumption about the prior distribution of parameters is required in order to obtain the model-specific posterior probability and the marginal likelihood. A simpler alternative to specifying explicit priors is to approximate the posterior model probability by the exponential of the Bayesian information criterion (BIC). This approximation is justified when a unit information prior for parameters and a uniform model prior are assumed; see Raftery (1995) and Kass and Wasserman (1995).

4.1 Parameter Priors

The standard BMA approach assumes that α is independent of β and σ^2 so that $\mu(a, \beta, \sigma) = \mu(a)\mu(\beta|\sigma^2)\mu(\sigma^2)$. Following Fernandez, Ley, and Steel (2001a) it is also typical to assume improper uninformative priors $\mu(\alpha) \propto 1$ and $\mu(\sigma) \propto \sigma^{-1}$ for α and σ , respectively. However, given that the number of regressors k is typically large and in many cases $k \approx n$ or even $k > n$, there is a need for an informative prior for β . Fernandez, Ley, and Steel proposed the following prior distribution

$$\mu(\beta_m|\sigma^2) = N\left(0, \sigma^2 (gX'_m X_m)^{-1}\right), \quad (4.7)$$

where the variance of the prior distribution includes a shrinkage factor (or hyperparameter) g known as the “Zellner’s g prior”.⁷ The hyperparameter g captures the prior belief of the econometrician on the parsimony of the model. A large g corresponds to the belief that the size of the true model is small, that is, many coefficients are indeed zero while a small g means that a larger model is more likely to be the true model. When $g \rightarrow 0$ we obtain the LS estimator of the full model.

The above g -prior framework yields a simple closed form solution for the marginal

⁷ X_m is defined by stacking the vector x_{mi} .

likelihood $\hat{\mu}(\mathcal{D}|M_m)$ that is invariant under scale transformations. This marginal likelihood is a function of the R^2 and a model size penalty factor k . This simplicity and the invariance property are considered important advantages over more traditional Bayesian priors such as the Gamma priors.

Effectively, the choice of the prior distribution of β has been transformed into the simple choice of a single parameter. Different choices of g correspond to different prior structures. Several studies have investigated the performance of different priors; see for example, Fernandez, Ley, and Steel (2001a), Liang, Paulo, Molina, Clyde, and Berger (2008), Eicher, Papageorgiou, and Raftery (2011), and Ley and Steel (2012). Following Fernandez, Ley, and Steel our baseline prior is based on their benchmark priors (g-BRIC), which correspond to $g = \max(n, k^2)$. For robustness purposes we also report full results in Appendix using the Unit Information Prior (g-UIP), which corresponds to $g = n$.

Following Liang, Paulo, Molina, Clyde, and Berger (2008) we also investigate the robustness of our main findings using a more flexible prior structure that assumes a hyper-prior on g ,

$$\frac{g}{1+g} \sim \text{Beta}(1, (a-1)/2) \quad (4.8)$$

We consider two choices for a : “hg-UIP” that corresponds to $a = 2 + 2/n$ and “hg-BRIC” that corresponds to $a = 2 + 2/\max(n, k^2)$.⁸

⁸In an unreported exercises we also considered the “Empirical Bayes - Local” (EBL), which is another flexible prior that correspond to $g_m = \max(0, F_m - 1)$, where F_m is the F-statistic; see Liang, Paulo, Molina, Clyde, and Berger (2008).

4.2 Model Priors

The most popular structure for model prior probabilities is based on Mitchell and Beauchamp (1988)

$$\mu(M_m) = \prod_{l=1}^k \pi^{d_l} (1 - \pi)^{1-d_l}, \quad (4.9)$$

where d_l is an indicator function that takes value 1 or 0 when variable l is included or excluded in model M_m , respectively. As our baseline model prior we use the Uniform Model Prior, which implies that the prior probability that any variable is included in the true model is $\pi = 0.5$. This prior is not only simple but it also exhibits superior performance. For example, in an important recent paper, Eicher, Papageorgiou, and Raftery (2011) compare the cross-validated predictive performance of various parameter prior specifications including both the UIP and the g-prior. They also considered two specifications for model priors; i.e., the uniform prior and a prior that pre-specifies the expected model size. They find that the UIP with the uniform model prior generally outperformed the other model specifications.

However, there are good reasons as to why a uniform model prior may not be appropriate in every setting. As argued by Brock and Durlauf (2001) the uniform prior creates a problem that is analogous to the irrelevance of independent alternatives (IIA) in the discrete-choice literature by ignoring interrelations between different variables.⁹ In our context this implies that the probability that one variable affects spatial mobility may be logically dependent on whether others do as well. Since one goal of our study is to evaluate the relative importance of various theories of spatial mobility (as opposed to individual proxy variables), we require that our model priors capture non-informativeness (i.e., agnosticism) across theories. The problem with the uniform prior is that a researcher can increase or reduce the prior weights

⁹The IIA problem is also known as the red bus/blue bus problem. In the logit model, the presence of the blue bus does not affect the ratio of the choice probabilities between a red bus and a taxi. This poses a problem, however, since the blue bus is identical in all but color to the red bus, that is a close substitute, while the taxi is not.

across theories simply by intelligently choosing “redundant” proxy variables for each theory. To deal with this problem we consider two sets of robustness exercises that use hierarchical priors and dilution priors. Brock and Durlauf (2001) proposed a tree structure to construct prior probabilities. In particular, the set of variables in M_j are classified into T theories. Priors are defined across theories and over variables within theories. The prior probability that a particular theory is included in the “true” model is assumed to be 0.5 to reflect a flat non-informative prior across theories. This prior specification also assumes that theories are independent in the sense that the inclusion of one theory in a model does not affect the probability that some other theory is also included.

Following George (1999, 2010) we employ a tessellation defined dilution prior in order to dilute the prior model probabilities of clusters of similar models by assigning uniform probabilities to neighborhoods of models rather than to individual models. The neighborhoods are defined by appropriate regions of the surface of a high dimensional sphere, which form Voronoi tessellations; see Moser and Hofmarcher (2014) for details on the implementation of this idea.¹⁰

5 BMA Results

5.1 Baseline Exercises

We now report results from our BMA regressions that consider the entire model space based on all 31 variables, and not just a selected subset of models. How credible were the models proposed by CHKS? The top panel of Figure 1 shows the distribution of model sizes for our

¹⁰Our choice of informative priors does not imply that other alternatives may not be appropriate; see for example the BACE approach of Sala-i Martin, Doppelhofer, and Miller (2004), the hierarchical priors with dilution proposed by Durlauf, Kourtellis, and Tan (2008) and Magnus and Wang (2014).

baseline exercise. What appears to be clear is that neither the univariate models considered in Table VII nor the 5-variable regression model in Table IX of CHKS enjoy particularly strong support by the data. The posterior probability for models of those sizes is effectively negligible. This is true not just for our baseline specification, but also for any of the prior specifications we discussed in Section 4 above. In fact, the posterior mean for model size using our benchmark specification is 14 suggesting that the process governing spatial mobility is relatively complex. What about the 5 variable/hypotheses highlighted by CHKS as the strongest and most robust correlates with spatial mobility? We now ask whether the 5 determinants favored by CHKS show at least strong evidence for an effect (i.e., have a PIP greater than 95%).¹¹

Table 4 shows the PIP for each of the variables in the model space while Table 5 shows the corresponding posterior means and standard errors. We focus first on Absolute Upward Mobility. Figure 2 provides a graphical representation of the PIP of variables for the Baseline exercise for Absolute Upward Mobility focusing on the top 100 models with the strongest posterior support (i.e., highest posterior model probabilities). What is clear from Tables 4 and 5, and Figure 2 is that (i) not all the 5 CHKS variables are important determinants of spatial mobility, and (ii) there are other variables outside of these 5 that nevertheless are also important determinants and their existence changes the nature of the narrative around what explains the variation in mobility across CZ's in the US.

There is certainly *prima facie* evidence that there is a racial component to spatial mobility. Our BMA results agree with CHKS that the Theil index of racial segregation is an (perhaps the most) important in explaining the variation of mobility across CZ's. However, our BMA results do not find that the fraction of black residents has a negative impact on

¹¹We follow the interpretation of PIP proposed by Eicher, Henn, and Papageorgiou (2012) and Kass and Raftery (1995): $PIP < 50\%$ indicates lack of evidence for an effect, $50\% < PIP < 75\%$ indicates weak evidence for an effect, $75\% < PIP < 95\%$ indicates positive evidence for an effect, $95\% < PIP < 99\%$ indicates strong evidence for an effect, and $99\% < PIP < 100\%$ indicates decisive evidence for an effect.

Absolute Upward Mobility (as was the case in CHKS' univariate results), even though this variable is shown to be highly important in terms of PIP. In fact, our BMA findings suggest that CZ's with higher fractions of black residents enjoy higher levels of Absolute Upward Mobility when other determinants have been controlled for. The story here therefore appears to be about segregation and not race itself. This narrative is further strengthened by the fact that the share of commuters with a commute of under 15 minutes; another measure of segregation, also turns out to be a highly important and positively significant predictor of spatial mobility.

It is also true that variables associated with K-12 Education (the high school dropout rate), Social Capital (the social capital index), and Family Structure (the fraction of children with single mothers) all enjoy strong posterior support for being important explanations for spatial mobility (at least for some of the regression specifications) and with the direction of effect predicted by CHKS. However, a lot is left out of the narrative if we only focus on these three particular variables. For instance, for the case of Social Capital, the BMA evidence suggests that it is not only the social capital index that is associated with higher Absolute Upward Mobility. The same also holds for the fraction of the population that self-report to be religious adherents. While it certainly appears to be true that secondary schooling systems and family structures that are placed under stress are associated with worse mobility outcomes, it is also true that the changing nature of the local labor market (the fraction of the workforce in manufacturing) and state fiscal policies (state income tax progressivity) contribute importantly to Absolute Upward Mobility as well. And, for income inequality, our BMA results suggest that it is not what is happening with the bottom 99% of the income distribution that is important, but rather the income share of the top 1% (although the negative effect is only significant for the specification where state fixed effects are included in the regression). The bottom 99% Gini coefficient is not an important explanation for

Absolute Upward Mobility at all.

Our BMA results also suggest that the determinants that are important for Absolute Upward Mobility are not necessarily similar to the ones that are important for explaining Relative Mobility or even Absolute Upward Mobility in urban areas. For instance, while racial segregation and social capital are important determinants in explaining Relative Mobility, when it comes to theories like Income Distribution, K-12 Education, the Local Labor Market, and Family Structure, the determinants that are relevant for explaining Relative Mobility differ considerably from those that explain Absolute Upward Mobility. For Relative Mobility, it is the level of household income per capita for working-age adults rather than the distribution of income that appears to be important, it is the performance of students in terms of test scores rather than their drop out rate that matters, the children of divorced parents are able to overcome their initial disadvantages and close the gap relative to their peers, the availability of cheap imports improves Relative Mobility while the importance of manufacturing is of no consequence, while the rate of migration inflows puts pressure on Relative Mobility. Similarly, for residents in urban areas, it is variables like the level of household income, the accessibility of higher education (mean college tuition), the impact of foreign import competition, violent crime, and the fraction of adult divorces that affect Absolute Upward Mobility.

Overall, our BMA results paint a picture of nuance and complexity when explaining spatial mobility. The determinants that are important depend on whether we are concerned with the relative within-cohort rankings of children relative to those of their parents (Relative Mobility), or, if we are interested only in the relative within-cohort rankings of children born to parents from the lower half of the income distribution (Absolute Upward Mobility). These determinants also depend on whether these children grew up in urban areas.

5.2 Robustness

In terms of robustness checks, we consider four different sets of exercises. First, we consider two individual models of our model averaging model space: the posterior mode model in Table 6 and the full (largest) long regression model in Table 7. From the Bayesian perspective, if a researcher prefers to select a model from the model space rather than engage in model averaging, the posterior mode model would be the one that is best supported by the data. However, as the 2nd panel in Figure 1 shows, even the posterior mode model is not a model that enjoys overwhelming support; it has a posterior model probability of only just slightly more than 8%. Nevertheless, we find that the conclusions we made from the BMA exercises reported in the above section are borne out in the findings for the posterior mode model. Hence, even if the researcher insists on selecting a model from the model space, the main findings would not vary.

The full model includes all the available determinants of mobility and it is typically reported in standard regression analysis. It is a low-bias model (at the cost of reduced efficiency) with potentially many irrelevant covariates, which nests all models that belong in $\mathcal{M}$. This model, however, has a negligible posterior model probability suggesting that it is a rather poor model. In general, the number of significant variables implied by the classical analysis based on the BMA regression model in Table 5 is much smaller than the one in the full regression model. While in some cases the set of significant variables in the BMA analysis is a subset of the one in the full regression analysis (e.g., the baseline specification) there are also several cases where the BMA analysis identifies significant variables that the full model does not. For example, in the case of Relative Mobility the BMA analysis shows that Household Income per capita is a decisively important as well as a strongly significant variable. In contrast, using the long full regression analysis we find that Household Income per capita is not a significant determinant of Relative Mobility.

Second, we report BMA results in Tables 8 and 9 using our extended sample that excludes the College variables. In general, we find that the analysis in the above section is robust to the exclusion of the College variables (and the increase in sample size). We find that College variables did not play a major role in CHKS’ analysis, and did not show strong evidence for a significant effect on either of the mobility measures in our BMA exercises in Tables 4 and 5. By dropping these variables, we were able to increase the sample size (while still keeping the sample balanced) to be closer to that of CHKS’ univariate analysis.

Third, following our discussion in Sections 4.1 and 4.2 we investigate the robustness of our choice of baseline priors: uniform model priors and g-BRIC. In Tables 10 and 11, we report the PIP and coefficient estimates and standard errors results for BMA exercises for the Baseline regression model for Absolute Upward Mobility for combinations of 3 alternative model priors (uniform, hierarchical, and tessellation defined dilution) with 4 alternative parameter priors; 2 fixed parameter priors (g-BRIC, g-UIP) and 2 flexible parameter priors (hg-BRIC, hg-BRIC). Employing tessellation model priors instead of the baseline uniform model priors leads to no qualitative changes. However, moving from uniform model priors to a hierarchical model prior structure does lead to one major change. While in the benchmark case, both the racial segregation Thiel index and the fraction of black residents are important predictors of Absolute Upward Mobility, only the fraction of black residents remains important under hierarchical model priors. In Tables A3 and A4 of the Appendix we also report full results that correspond to Tables 4 and 5 using uniform model prior and g-UIP. Compared to our benchmark exercises, it appears that variations in parameter priors specifications do not change the results. Overall, our findings appear to be very robust to changes in prior structures.

Finally, we examine in Table 12 the question of whether the effects of the various predictors of Absolute Upward Mobility exhibit heterogeneity across the distribution of CZ’s

organized according to the average income of parents within the CZ. We report the PIP, posterior mean, and posterior standard error for the Baseline model in Tables 4 and 5 for each quintile of CZ's according to income. We do find strong evidence of heterogeneity in terms of the determinants that explain spatial mobility across socioeconomically dissimilar neighborhoods. We do also find that some previously identified determinants are consistently important across these neighborhoods.

For example, in terms of the effects of segregation on mobility, the share of commuters with commutes below 15 mins was found to be important and to have a positive impact on Absolute Upward Mobility across CZ's for all income quintiles with a relatively stable coefficient estimate. Similarly, the share of manufacturing in the local labor market as well as the fraction of children with single mothers both exhibit important and negative effects on Absolute Upward Mobility across all income quintiles. In contrast, income distribution variables such as household income per capita or the top 1% income share for parents only affect residents in CZ's in the lowest or highest incomes, respectively. Children of higher income households living in the poorest 5th of CZ's enjoy higher rates of Absolute Upward Mobility, while children of households residing in the richest 5th of CZ's with higher income shares for the top 1% tend to face lower prospects of upward mobility (presumably because they are already from exceptionally rich backgrounds and therefore experience mean reversion). Finally, it is interesting to point out that different proxies for social capital appear to influence the mobility prospects of residents in different quintiles of the income distribution. While both the social capital index and the fraction of self-reported religious residents both exert important and significant positive effects on Absolute Upward Mobility, the former (emphasized by CHKS) appears to only impact residents in the 1st quintile of the income distribution. In contrast, the fraction of self-reported religious residents affects the mobility prospects of the top 3 quintiles of the income distribution.

Overall, our results suggest that much more attention needs to be paid to the question of how determinants that affect intergenerational mobility exhibit potentially very heterogeneous effects across neighborhoods with different social characteristics. The story of what drives upward mobility for one social group may vary considerably from the narrative for another.

6 Conclusion

In this paper we assess the evidentiary support for various determinants of intergenerational mobility across commuter zones in the US. In particular, we revisit the influential work by Chetty, Hendren, Kline, and Saez (2014) who considered over 30 determinants of spatial mobility from nine different classes (theories): Segregation, Income Distribution, Tax, Quality of K-12 Education, College Access, Local Labor Market, Migration, Social Capital, and Family Structure. They found that a set of five variables related to racial segregation, income inequality, the high school dropout rate, social capital, and the fraction of children with single parents exhibit the strongest and most robust correlations with two measures of mobility: Absolute Upward Mobility and Relative Mobility. Our goal in this paper is to evaluate the strength of their claims using BMA methods in order to account for model uncertainty. In the implementation of BMA, we pay particular attention to the specification of model and parameter priors.

Once we account for model uncertainty we find a more nuance and complex picture of the spatial mobility process suggesting that their claims may be incomplete. In particular, while we generally verify the robustness of the five broad theories that they have highlighted as being important for explaining spatial mobility, we find that the specific determinants within each of these theories that are important are sensitive to the choice of the particular measure

of spatial mobility. More importantly, we also find evidence that other theories, above and beyond the five identified by Chetty, Hendren, Kline, and Saez (2014), such as local labor market conditions and state fiscal policies also play important roles in explaining the spatial variation in intergenerational mobility. Finally, our results show substantial evidence of heterogeneity in the effect of mobility determinants on outcomes, which suggests the need for future work to investigate the presence of nonlinearities in the spatial mobility process.

Figure 1: Model Size Distribution and Posterior Model Probabilities

The red line denotes the prior model size distribution while the blue line denotes the posterior model size distribution.

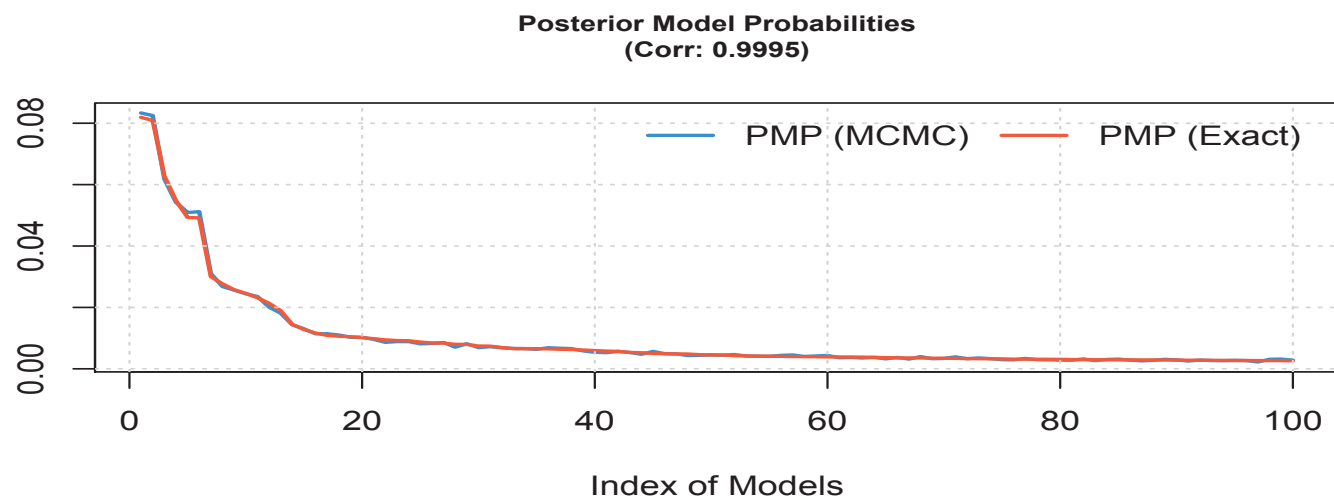
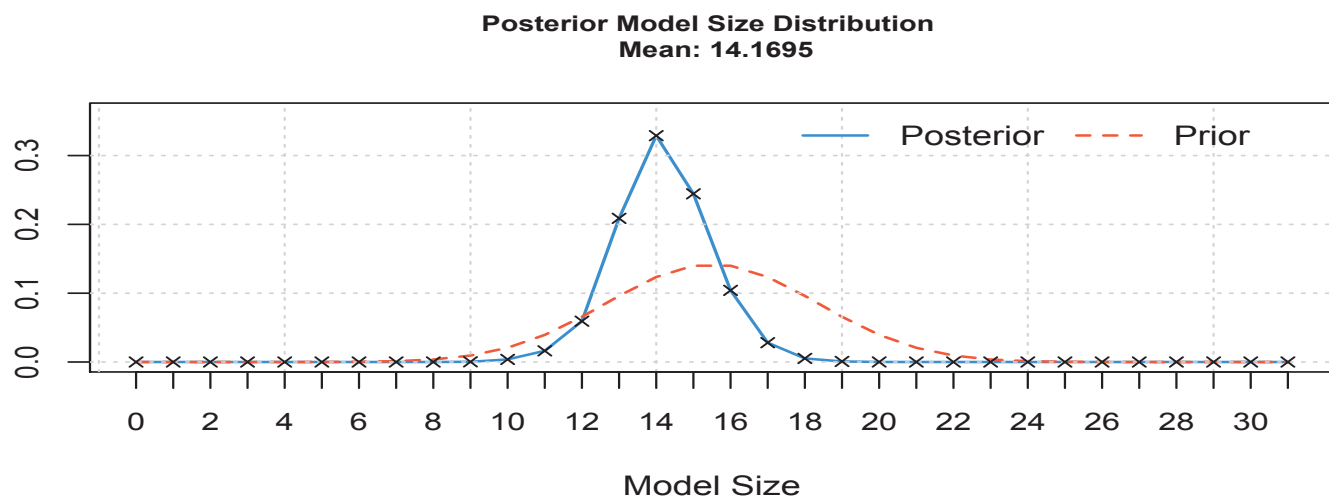


Figure 2: Regressors Included in Best Models

The blue color corresponds to a positive coefficient, red to a negative coefficient, and white to non-inclusion (a zero coefficient). On the horizontal axis it shows the best 100 models, scaled by their PMPs. The intercept and the time trend are always kept in the model.

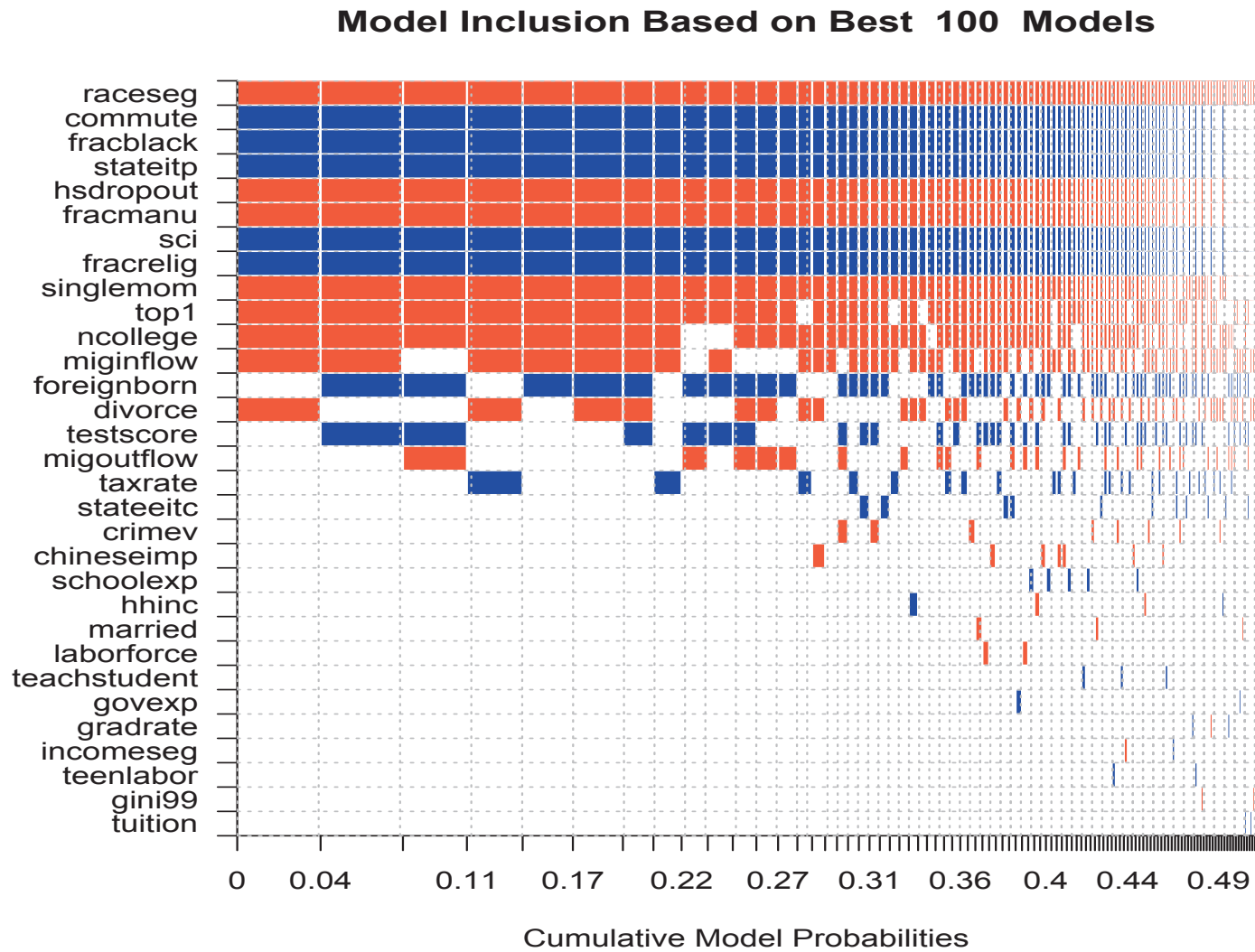


Table 1: Descriptive Statistics

This table reports descriptive statistics for two measures of spatial intergenerational mobility and 31 determinants across US commuting zones made available by the Equality of Opportunity Project. The statistics refer to a balanced sample of 509 commuting zones, which is a sub-sample of the one used by Chetty, Hendren, Kline, and Saez (2014).

Variable	Mean	Std. Dev.	Min	Max
Absolute Upward Mobility	43.259	5.182	26.672	64.019
Relative Mobility	0.331	0.061	0.121	0.488
Segregation				
Fraction of Black Residents	0.090	0.131	0.001	0.658
Racial Segregation Theil Index	0.147	0.097	0.006	0.515
Income Segregation Theil Index	0.047	0.031	0.003	0.138
Share with Commute <15 Mins	0.426	0.119	0.156	0.755
Income Distribution				
Household Income per Capita for Working-Age Adults	32728.980	5342.714	17400.510	54014.140
Top 1% Income Share for Parents	11.165	4.170	4.291	55.821
Gini Bottom 99%	0.307	0.055	0.175	0.447
Tax				
Local Tax Rate	0.019	0.007	0.007	0.055
Local Government Expenditures per Capita	2189.219	655.833	992.257	5441.653
State EITC Exposure	1.474	4.008	0.000	21.333
State Income Tax Progressivity	0.839	1.509	0.000	6.300
K-12 Education				
School Expenditure per Student	5.952	1.071	4.086	11.906
Teacher-Student Ratio	16.918	2.132	10.685	24.805
Test Score Percentile	-0.692	7.790	-30.399	17.463
High School Dropout Rate	0.001	0.018	-0.034	0.099
College				
Number of Colleges per Capita	0.023	0.020	0.004	0.243
Mean College Tuition	4247.333	3738.171	0.000	24619.000
College Graduation Rate	-0.005	0.131	-0.350	0.473
Local Labor Market				
Labor Force Participation Rate	0.620	0.056	0.417	0.782
Fraction Working in Manufacturing	0.154	0.076	0.009	0.422
Growth in Chinese Imports 1990-2000	1.257	1.714	0.000	25.405
Teenage Labor Force Participation Rate	0.005	0.001	0.002	0.008
Migration				
Migration Inflow Rate	0.017	0.010	0.003	0.077
Migration Outflow Rate	0.017	0.007	0.004	0.052
Fraction of Foreign Born Residents	0.042	0.049	0.004	0.312
Social Capital				
Social Capital Index	0.022	1.127	-3.199	3.071
Fraction Religious	0.533	0.146	0.214	1.019
Violent Crime Rate	0.002	0.001	0.000	0.006
Family Structure				
Fraction of Children with Single Mothers	0.211	0.050	0.082	0.434
Fraction of Adults Divorces	0.098	0.015	0.042	0.146
Fraction of Adults Married	0.566	0.041	0.373	0.653

Table 2: Univariate Regressions

This table reports the regression coefficients and their corresponding standard errors from univariate LS regressions of a measure of mobility on the variable listed in each row. These results replicate Table VII in Chetty, Hendren, Kline, and Saez (2014) using a balanced sub-sample, instead. Both the dependent and independent variables are standardized to have mean 0 and standard deviation 1 in the estimation so that the regression coefficient equal correlation coefficients. ***, **, and * denote significance of the regression coefficients at 1%, 5%, and 10%, respectively.

	Absolute Upward Mobility								Relative Mobility			
	Baseline		State F.E.		Pop. Weighted		Urban Areas Only		Controls			
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	-0.534***	0.026	-0.360***	0.031	-0.534***	0.026	-0.695***	0.038	-0.396***	0.025	0.580***	0.026
Racial Segregation Theil Index	-0.331	0.042	-0.287***	0.038	-0.331***	0.042	-0.413***	0.050	-0.173***	0.029	0.387***	0.037
Income Segregation Theil Index	-0.296***	0.037	-0.248***	0.025	-0.296***	0.037	-0.219***	0.059	-0.129***	0.026	0.112***	0.041
Share with Commute < 15 Mins	0.706***	0.040	0.478***	0.039	0.706***	0.040	0.575***	0.058	0.436***	0.037	-0.511***	0.048
Income Distribution												
Household Income per Capita for Working-Age Adults	0.075*	0.040	-0.012	0.058	0.075*	0.040	0.034	0.059	0.040	0.038	-0.124***	0.046
Gini Bottom 99%	-0.604***	0.034	-0.481***	0.050	-0.604***	0.034	-0.611***	0.055	-0.396***	0.038	0.452***	0.040
Top 1% Income Share for Parents	-0.228***	0.061	-0.093*	0.053	-0.228***	0.061	-0.123**	0.059	-0.094***	0.031	0.035	0.056
Tax												
Local Tax Rate	0.378***	0.036	0.181***	0.051	0.378***	0.036	0.233***	0.046	0.156***	0.036	-0.418***	0.045
Local Government Expenditures per Capita	0.246***	0.050	0.043	0.056	0.246***	0.050	0.096**	0.048	0.084**	0.041	-0.437***	0.053
State EITC Exposure	0.231***	0.032	0.098	0.063	0.231***	0.032	0.321***	0.058	0.103***	0.029	-0.131***	0.028
State Income Tax Progressivity	0.163***	0.040	0.087	0.065	0.163***	0.040	0.165***	0.047	0.068**	0.029	-0.147***	0.039
K-12 Education												
School Expenditure per Student	0.214***	0.038	-0.007**	0.062	0.214***	0.038	0.225***	0.055	0.005	0.030	-0.216***	0.044
Teacher-Student Ratio	-0.212***	0.041	-0.184***	0.067	-0.212***	0.041	0.030	0.052	-0.106***	0.034	-0.077	0.048
Test Score Percentile	0.572***	0.039	0.537***	0.046	0.572***	0.039	0.428***	0.060	0.318***	0.049	-0.358***	0.052
High School Dropout Rate	-0.557***	0.048	-0.392***	0.053	-0.567***	0.048	-0.485***	0.062	-0.324***	0.042	0.357***	0.045
College												
Number of Colleges per Capita	0.226**	0.107	0.029	0.100	0.226**	0.107	-0.048	0.081	0.045	0.092	-0.125*	0.064
Mean College Tuition	-0.028	0.041	-0.044	0.049	-0.028	0.041	-0.004	0.065	-0.030	0.035	0.111***	0.038
College Graduation Rate	0.152***	0.041	0.141***	0.034	0.152***	0.041	0.186**	0.067	0.130***	0.031	-0.042	0.041
Local Labor Market												
Labor Force Participation Rate	0.267***	0.039	0.081*	0.042	0.267***	0.039	0.225***	0.069	0.147***	0.030	-0.274***	0.046
Fraction Working in Manufacturing	-0.258***	0.042	0.037	0.049	-0.258***	0.042	-0.162**	0.061	0.048	0.038	0.421***	0.043
Growth in Chinese Imports 1990-2000	-0.156**	0.062	0.004	0.023	-0.156**	0.062	-0.054	0.076	-0.053**	0.022	0.154**	0.086
Teenage Labor Force Participation Rate	0.624***	0.034	0.476***	0.055	0.624***	0.034	0.524***	0.056	0.334***	0.036	-0.529***	0.040
Migration												
Migration Inflow Rate	-0.142***	0.041	-0.174***	0.038	-0.142***	0.041	-0.015	0.059	-0.163***	0.030	-0.195***	0.038
Migration Outflow Rate	-0.063***	0.037	-0.136***	0.037	-0.063*	0.037	0.001	0.056	-0.062**	0.030	-0.204***	0.039
Fraction of Foreign Born Residents	0.022	0.028	-0.062*	0.033	0.022	0.028	0.100***	0.036	0.001	0.021	-0.290***	0.034
Social Capital												
Social Capital Index	0.635***	0.036	0.472***	0.059	0.636***	0.036	0.506***	0.057	0.381***	0.037	-0.336***	0.045
Fraction Religious	0.465***	0.043	0.338***	0.045	0.465***	0.043	0.422***	0.060	0.323***	0.031	-0.090*	0.050
Violent Crime Rate	-0.559***	0.059	-0.321***	0.045	-0.559***	0.059	-0.382***	0.066	-0.213***	0.041	0.377***	0.070
Family Structure												
Fraction of Children with Single Mothers	-0.697***	0.033	-0.563***	0.043	-0.697***	0.033	-0.754***	0.042	-0.639***	0.057	0.618***	0.032
Fraction of Adults Divorces	-0.440***	0.046	-0.376***	0.046	-0.440***	0.046	-0.340***	0.063	-0.424***	0.033	0.154***	0.052
Fraction of Adults Married	0.492***	0.041	0.384***	0.049	0.492***	0.041	0.433***	0.057	0.221***	0.063	-0.334***	0.051
State Fixed Effects	no		yes		no		no		no		no	
Controls	no		no		no		no		yes		no	

Table 3: Short Regressions

This table reports the regression coefficients and their corresponding standard errors from multivariate LS regressions of a measure of mobility on a set of determinants. These results replicate Table IX in Chetty, Hendren, Kline, and Saez (2014) using a balanced sub-sample, instead. Both the dependent and independent variables are standardized to have mean 0 and standard deviation 1 in the estimation so that the regression coefficient equal correlation coefficients. ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Racial Segregation Theil Index	-0.100*** (0.028)	-0.118*** (0.030)	-0.097*** (0.028)	-0.157*** (0.039)	0.196*** (0.037)	0.278*** (0.038)	-0.170*** (0.031)	
Gini Bottom 99%	0.015 (0.041)	-0.038 (0.045)	0.012 (0.041)	0.076 (0.068)	0.051 (0.066)	0.354*** (0.063)	-0.243*** (0.040)	
High School Dropout Rate	-0.162*** (0.037)	-0.129*** (0.045)	-0.183*** (0.037)	-0.134** (0.052)	0.013 (0.046)	0.111*** (0.043)	-0.245*** (0.037)	
Social Capital Index	0.323*** (0.032)	0.221*** (0.038)	0.319*** (0.032)	0.269*** (0.050)	0.028 (0.053)	0.025 (0.063)	0.326*** (0.039)	
Fraction of Children with Single Mothers	-0.444*** (0.039)	-0.389*** (0.048)	-0.438*** (0.039)	-0.552*** (0.061)	0.521*** (0.053)			-0.660*** (0.053)
Fraction Black Residents								-0.042 (0.043)
Constant	-0.021 (0.024)	0.061 (0.110)	-0.023 (0.023)	0.024 (0.038)	-0.006 (0.032)	0.011 (0.035)	-0.036 (0.027)	-0.036 (0.028)
State Fixed Effects		x						
Population Weighted			x					
Urban Areas Only				x				
Adjusted R-squared	0.672	0.799	0.677	0.597	0.444	0.314	0.571	0.555
Sample Size	509	509	509	278	509	509	509	509

Table 4: BMA Regressions - Posterior Model Probabilities

This table reports the baseline BMA results for the regressions of a measure of mobility on the model space spanned by the various subsets of determinants. Each cell reports the posterior inclusion probability (PIP), which is the sum of posterior model probabilities over all those models that contain that variable, using the Benchmark Priors (g-BRIC).

	Absolute Upward Mobility				Relative Mobility	
	Baseline	State F.E.	Pop. Weighted	Urban Areas Only	Controls	
Segregation						
Fraction of Black Residents	0.985	1.000	-	-	0.988	-
Racial Segregation Theil Index	0.989	1.000	1.000	0.198	0.995	1.000
Income Segregation Theil Index	0.038	0.071	0.056	0.301	0.043	0.036
Share with Commute <15 Mins	1.000	1.000	-	-	1.000	-
Income Distribution						
Household Income per Capita for Working-Age Adults	0.061	0.045	1.000	0.999	0.057	1.000
Gini Bottom 99%	0.037	0.047	0.299	0.769	0.040	0.046
Top 1% Income Share for Parents	0.841	0.990	0.053	0.068	0.978	0.036
Tax						
Local Tax Rate	0.250	0.108	0.531	0.391	0.049	0.035
Local Government Expenditures per Capita	0.043	0.053	0.573	0.636	0.034	0.041
State EITC Exposure	0.098	0.053	0.084	0.049	0.036	0.034
State Income Tax Progressivity	1.000	1.000	0.050	0.479	0.999	0.112
K-12 Education						
School Expenditure per Student	0.072	0.041	1.000	0.450	0.034	0.113
Teacher-Student Ratio	0.058	0.049	0.040	0.055	0.048	0.117
Test Score Percentile	0.398	1.000	0.114	0.182	0.274	1.000
High School Dropout Rate	0.992	0.052	0.092	0.084	0.943	0.037
College						
Number of Colleges per Capita	0.831	0.920	0.997	0.303	0.993	0.038
Mean College Tuition	0.033	0.052	0.953	0.953	0.030	0.043
College Graduation Rate	0.037	0.052	0.036	0.036	0.041	0.057
Local Labor Market						
Labor Force Participation Rate	0.059	0.052	0.043	0.045	0.056	0.034
Fraction Working in Manufacturing	1.000	1.000	0.057	0.312	1.000	0.034
Growth in Chinese Imports 1990-2000	0.101	0.056	1.000	1.000	0.099	1.000
Teenage Labor Force Participation Rate	0.044	0.041	0.229	0.037	0.036	0.115
Migration						
Migration Inflow Rate	0.699	0.175	0.055	0.051	0.780	1.000
Migration Outflow Rate	0.302	0.964	0.850	0.563	0.275	0.040
Fraction of Foreign Born Residents	0.609	0.991	0.075	0.431	0.959	0.043
Social Capital						
Social Capital Index	0.995	0.050	0.183	0.726	0.991	1.000
Fraction Religious	1.000	0.999	0.994	0.481	1.000	0.820
Violent Crime Rate	0.095	0.040	1.000	1.000	0.077	0.092
Family Structure						
Fraction of Children with Single Mothers	1.000	1.000	0.045	0.044	1.000	0.122
Fraction of Adults Divorced	0.453	0.066	1.000	1.000	0.754	1.000
Fraction of Adults Married	0.051	0.045	1.000	0.352	0.063	0.037
State Fixed Effects	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Controls	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>yes</i>	<i>no</i>

Table 5: BMA Regressions - Posterior Means and Standard Errors

This table reports the posterior mean (PM) and the posterior standard error (PSE) for BMA regressions of a measure of mobility on the model space spanned by the various subsets of determinants and using the Benchmark Priors (g-BRIC). The PM is the average of the LS coefficient estimates (COEF) of individual models weighted by the posterior model probability and the PSE is the BMA estimate for the standard error (SE). ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	Absolute Upward Mobility								Relative Mobility			
	Baseline		State F.E.		Pop. Weighted		Urban Areas Only		Controls			
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	0.158***	0.046	0.275***	0.033	-	-	-	-	- 0.152***	0.043	-	-
Racial Segregation Theil Index	-0.078***	0.021	-0.082***	0.017	-0.096***	0.020	-0.015	0.035	-0.080***	0.020	0.155***	0.017
Income Segregation Theil Index	0.000	0.006	-0.002	0.009	0.002	0.009	-0.036	0.063	0.001	0.008	-0.001	0.015
Share with Commute <15 Mins	0.270***	0.034	0.292***	0.029	-	-	-	-	0.260***	0.032	-	-
Income Distribution												
Household Income per Capita for Working-Age Adults	0.001	0.012	0.000	0.006	0.225***	0.035	0.256***	0.055	0.002	0.014	-0.093***	0.019
Gini Bottom 99%	0.000	0.005	0.000	0.005	-0.023	0.040	-0.162	0.108	-0.001	0.005	0.002	0.014
Top 1% Income Share for Parents	-0.087	0.048	-0.127***	0.033	-0.001	0.010	-0.003	0.029	-0.111***	0.034	0.000	0.006
Tax												
Local Tax Rate	0.014	0.027	0.004	0.014	0.055	0.059	0.061	0.086	0.001	0.007	-0.001	0.008
Local Government Expenditures per Capita	0.001	0.007	0.001	0.008	0.036	0.036	0.059	0.052	0.000	0.006	-0.007	0.060
State EITC Exposure	0.003	0.010	0.001	0.006	0.003	0.014	-0.001	0.010	0.000	0.004	0.000	0.000
State Income Tax Progressivity	0.101***	0.017	0.168***	0.020	0.001	0.005	0.039	0.046	0.074***	0.017	0.000	0.000
K-12 Education												
School Expenditure per Student	0.002	0.010	0.000	0.005	0.095***	0.017	0.038	0.048	0.000	0.004	0.000	0.001
Teacher-Student Ratio	0.001	0.009	0.001	0.008	0.000	0.005	0.001	0.013	0.001	0.007	0.000	0.001
Test Score Percentile	0.028	0.039	0.193***	0.028	0.004	0.014	0.016	0.039	0.016	0.029	-0.005***	0.001
High School Dropout Rate	-0.090***	0.024	-0.001	0.006	0.004	0.015	-0.005	0.023	-0.070***	0.027	0.000	0.000
College												
Number of Colleges per Capita	-0.058	0.033	-0.058**	0.025	-0.094***	0.023	-0.023	0.040	-0.087***	0.022	0.002	0.021
Mean College Tuition	0.000	0.003	-0.001	0.005	-0.075***	0.027	-0.116***	0.041	0.000	0.003	-0.003	0.023
College Graduation Rate	0.000	0.004	-0.001	0.005	0.000	0.004	0.000	0.007	0.001	0.005	0.000	0.000
Local Labor Market												
Labor Force Participation Rate	-0.002	0.010	-0.001	0.006	-0.001	0.005	0.001	0.008	-0.002	0.009	0.000	0.002
Fraction Working in Manufacturing	-0.236***	0.025	-0.182***	0.021	0.001	0.008	-0.032	0.055	-0.167***	0.024	0.000	0.007
Growth in Chinese Imports 1990-2000	-0.003	0.010	-0.001	0.005	-0.214***	0.026	-0.361***	0.042	-0.003	0.010	0.227***	0.022
Teenage Labor Force Participation Rate	0.001	0.010	0.000	0.007	-0.009	0.018	0.000	0.007	-0.001	0.007	0.000	0.001
Migration												
Migration Inflow Rate	-0.055	0.041	-0.011	0.028	0.002	0.012	-0.001	0.015	-0.071	0.043	-12.263***	2.355
Migration Outflow Rate	-0.021	0.036	-0.107***	0.030	-0.062*	0.033	-0.086	0.086	-0.021	0.037	0.003	0.047
Fraction of Foreign Born Residents	0.044	0.041	0.100***	0.025	-0.002	0.011	-0.061	0.078	0.081***	0.029	-0.006	0.060
Social Capital												
Social Capital Index	0.141***	0.036	0.001	0.008	0.009	0.021	0.117	0.087	0.137***	0.033	-0.253***	0.039
Fraction Religious	0.164***	0.022	0.097***	0.022	0.138***	0.035	0.083	0.101	0.140***	0.021	0.006**	0.003
Violent Crime Rate	-0.004	0.016	0.000	0.006	0.160***	0.022	0.226***	0.033	-0.003	0.013	0.002	0.006
Family Structure												
Fraction of Children with Single Mothers	-0.467***	0.049	-0.462***	0.039	-0.001	0.008	-0.001	0.009	-0.419***	0.045	0.376	1.201
Fraction of Adults Divorced	-0.032	0.039	-0.002	0.009	-0.336***	0.036	-0.428***	0.074	-0.057	0.040	0.447***	0.043
Fraction of Adults Married	-0.001	0.010	0.000	0.006	-0.118***	0.022	-0.028	0.043	-0.002	0.012	-0.002	0.022
State Fixed Effects	no		yes		no		no		no		no	
Controls	no		no		no		no		yes		no	

Table 6: BMA Regressions - Posterior Mode Models

This table reports the posterior mode models in the BMA regressions of a measure of mobility on the model space spanned by the various subsets of determinants and using the Benchmark Priors (g-BRIC). ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	Absolute Upward Mobility								Relative Mobility			
	Baseline		State F.E.		Pop. Weighted		Urban Areas Only		Controls			
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	0.113***	0.043	0.290***	0.036	-	-	-	-	0.105***	0.043	-	-
Racial Segregation Theil Index	-0.078***	0.027	-0.079***	0.024	-0.231***	0.032	-	-	-0.073***	0.025	0.328	0.044
Income Segregation Theil Index	-	-	-	-	-	-	-	-	-	-	-	-
Share with Commute <15 Mins	0.271***	0.041	0.321***	0.035	-	-	-	-	0.258***	0.038	-	-
Income Distribution												
Household Income per Capita for Working-Age Adults	-	-	-	-	0.129***	0.034	-0.195**	0.095	-	-	-0.039	0.056
Gini Bottom 99%	-	-	-	-	-	-	-0.455***	0.069	-	-	-	-
Top 1% Income Share for Parents	0.000	0.033	-0.003	0.027	-	-	-	-	0.006	0.034	-	-
Tax												
Local Tax Rate	-	-	-	-	0.120***	0.036	-	-	-	-	-	-
Local Government Expenditures per Capita	-	-	-	-	0.100***	0.038	0.118***	0.050	-	-	-	-
State EITC Exposure	-	-	-	-	-	-	-	-	-	-	-	-
State Income Tax Progressivity	0.102***	0.016	0.167***	0.025	-	-	-	-	0.088***	0.015	-	-
K-12 Education												
School Expenditure per Student	-	-	-	-	0.056*	0.033	0.020	0.060	-	-	-	-
Teacher-Student Ratio	-	-	-	-	-	-	-	-	-	-	-	-
Test Score Percentile	-	-	0.191***	0.034	-	-	-	-	-	-	-0.073	0.060
High School Dropout Rate	-0.090***	0.027	-	-	-	-	-	-	-0.080***	0.025	-	-
College												
Number of Colleges per Capita	-0.073***	0.024	-0.054***	0.021	0.108**	0.050	-	-	-0.089***	0.023	-	-
Mean College Tuition	-	-	-	-	-0.065*	0.034	-0.198***	0.083	-	-	-	-
College Graduation Rate	-	-	-	-	-	-	-	-	-	-	-	-
Local Labor Market												
Labor Force Participation Rate	-	-	-	-	-	-	-	-	-	-	-	-
Fraction Working in Manufacturing	-0.230***	0.020	-0.157***	0.020	-	-	-	-	-0.164***	0.021	-	-
Growth in Chinese Imports 1990-2000	-	-	-	-	-0.132***	0.037	-0.123***	0.053	-	-	0.140*	0.074
Teenage Labor Force Participation Rate	-	-	-	-	-	-	0.267***	0.069	-	-	-	-
Migration												
Migration Inflow Rate	-0.062***	0.020	-	-	-	-	-	-	-0.066***	0.020	-0.281***	0.043
Migration Outflow Rate	-	-	-0.103***	0.018	0.002	0.030	-0.061	0.049	-	-	-	-
Fraction of Foreign Born Residents	-	-	0.074**	0.029	-	-	-	-	-	-	-	-
Social Capital												
Social Capital Index	0.182***	0.024	-	-	-	-	-	-	0.167***	0.023	-0.270***	0.053
Fraction Religious	0.149***	0.021	0.106***	0.025	0.224***	0.033	-	-	0.129***	0.020	-0.030	0.046
Violent Crime Rate	-	-	-	-	-	-0.263***	0.045	-0.061	0.054	-	-	-
Family Structure												
Fraction of Children with Single Mothers	-0.489***	0.054	-0.526	0.041	-	-	-	-	-	-	-0.457***	0.056
Fraction of Adults Divorced	-0.078***	0.026	-	-	-0.260***	0.038	-0.241***	0.047	-0.094***	0.025	0.113**	0.050
Fraction of Adults Married	-	-	-	-	0.262***	0.040	-	-	-	-	-	-
Posterior Model Probability	0.040		0.299		0.086		0.007		0.199		0.215	
State Fixed Effects	no		yes		no		no		no		no	
Controls	no		no		no		no		yes		no	

Table 7: Long Full Regressions

This table reports the regression coefficients and their corresponding standard errors from multivariate LS regressions of a measure of mobility on the full set of determinants. Both the dependent and independent variables are standardized to have mean 0 and standard deviation 1 in the estimation so that the regression coefficient equal correlation coefficients. ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	Absolute Upward Mobility								Relative Mobility			
	Baseline		State F.E.		Pop. Weighted		Urban Areas Only		Controls			
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	0.170***	0.048	0.228***	0.050	0.167***	0.048	0.067	0.063	0.152***	0.049	0.154***	0.056
Racial Segregation Theil Index	-0.080***	0.029	-0.086***	0.028	-0.079***	0.029	-0.071*	0.040	-0.083***	0.027	0.244***	0.040
Income Segregation Theil Index	-0.008	0.036	-0.025	0.035	-0.009	0.036	-0.093*	0.053	0.020	0.035	-0.020	0.051
Share with Commute <15 Mins	0.262***	0.056	0.253***	0.054	0.261***	0.056	0.198***	0.060	0.279***	0.053	-0.205***	0.069
Income Distribution												
Household Income per Capita for Working-Age Adults	0.008	0.037	0.006	0.039	0.006	0.037	0.021	0.053	0.033	0.037	-0.021	0.057
Gini Bottom 99%	-0.098***	0.036	-0.115***	0.037	-0.094***	0.036	-0.198***	0.068	-0.116***	0.034	-0.026	0.063
Top 1% Income Share for Parents	-0.015	0.032	-0.006	0.029	-0.013	0.032	-0.055	0.078	-0.022	0.030	-0.019	0.037
Tax												
Local Tax Rate	0.031	0.031	0.036	0.034	0.033	0.031	0.123***	0.043	0.014	0.029	-0.035	0.042
Local Government Expenditures per Capita	-0.017	0.030	0.003	0.034	-0.013	0.030	-0.041	0.033	-0.017	0.030	0.014	0.046
State EITC Exposure	0.021	0.020	0.015	0.028	0.019	0.020	0.060	0.037	0.010	0.020	-0.038	0.029
State Income Tax Progressivity	0.099***	0.021	0.156***	0.030	0.100***	0.021	0.045	0.034	0.077***	0.019	-0.042	0.026
K-12 Education												
School Expenditure per Student	-0.003	0.031	-0.020	0.036	-0.002	0.031	-0.030	0.057	-0.010	0.030	0.007	0.039
Teacher-Student Ratio	0.028	0.029	0.024	0.044	0.033	0.029	0.047	0.040	0.020	0.027	-0.186***	0.039
Test Score Percentile	0.070**	0.033	0.187***	0.039	0.071**	0.033	-0.027	0.042	0.057*	0.031	-0.033	0.044
High School Dropout Rate	-0.080***	0.027	-0.012	0.030	-0.093***	0.026	-0.065*	0.039	-0.065**	0.025	0.025	0.032
College												
Number of Colleges per Capita	-0.068***	0.023	-0.067***	0.023	-0.066***	0.023	-0.134***	0.037	-0.081***	0.021	-0.017	0.035
Mean College Tuition	-0.006	0.020	0.003	0.019	-0.005	0.019	0.000	0.043	-0.011	0.019	0.039	0.028
College Graduation Rate	-0.003	0.022	-0.013	0.021	-0.004	0.022	-0.023	0.042	0.000	0.021	0.030	0.033
Local Labor Market												
Labor Force Participation Rate	-0.034	0.039	-0.004	0.036	-0.032	0.038	-0.082	0.061	-0.036	0.038	0.004	0.048
Fraction Working in Manufacturing	-0.228***	0.028	-0.185***	0.028	-0.225***	0.028	-0.350***	0.045	-0.148***	0.028	0.227***	0.038
Growth in Chinese Imports 1990-2000	-0.025**	0.012	-0.011	0.012	-0.025**	0.012	-0.002	0.029	-0.027**	0.013	-0.023	0.019
Teenage Labor Force Participation Rate	0.022	0.043	0.015	0.049	0.023	0.043	0.030	0.064	-0.010	0.042	-0.250***	0.060
Migration												
Migration Inflow Rate	-0.053	0.038	-0.056*	0.032	-0.054	0.038	-0.070	0.075	-0.055	0.037	0.052	0.043
Migration Outflow Rate	-0.039	0.035	-0.067**	0.031	-0.038	0.035	-0.066	0.062	-0.050	0.034	-0.038	0.043
Fraction of Foreign Born Residents	0.076**	0.034	0.084**	0.041	0.075**	0.034	0.132**	0.063	0.093***	0.033	-0.145***	0.056
Social Capital												
Social Capital Index	0.117***	0.039	0.020	0.044	0.115***	0.039	0.175***	0.063	0.109***	0.038	0.201***	0.059
Fraction Religious	0.169***	0.026	0.090***	0.027	0.167***	0.026	0.216***	0.035	0.142***	0.024	0.032	0.036
Violent Crime Rate	-0.041	0.031	0.000	0.036	-0.042	0.031	-0.010	0.032	-0.040	0.030	0.041	0.043
Family Structure												
Fraction of Children with Single Mothers	-0.458***	0.064	-0.424***	0.061	-0.455***	0.064	-0.465***	0.084	-0.421***	0.066	0.328***	0.088
Fraction of Adults Divorced	-0.038	0.030	-0.035	0.036	-0.035	0.030	-0.033	0.040	-0.064**	0.029	0.025	0.045
Fraction of Adults Married	-0.034	0.037	0.002	0.036	-0.036	0.037	-0.053	0.065	-0.040	0.037	0.116*	0.061
State Fixed Effects	no		yes		no		no		no		no	
Controls	no		no		no		no		yes		no	

Table 8: BMA Regressions - Posterior Model Probabilities (sample without College)

This table uses a larger sample size (633 commuting zones) than our baseline results at the expense of excluding the College variables from the sample space. Each cell reports the posterior inclusion probability (PIP), which is the sum of posterior model probabilities over all those models that contain that variable, using the Benchmark Priors (g-BRIC).

	Absolute Upward Mobility				Relative Mobility	
	Baseline	State F.E.	Pop. Weighted	Urban Areas Only	Controls	
Segregation						
Fraction of Black Residents	0.996	1.000	-	-	0.995	-
Racial Segregation Theil Index	0.988	1.000	1.000	0.222	0.987	1.000
Income Segregation Theil Index	0.042	0.053	0.092	0.069	0.067	0.048
Share with Commute <15 Mins	1.000	1.000	-	-	1.000	-
Income Distribution						
Household Income per Capita for Working-Age Adults	0.057	0.038	1.000	1.000	0.058	1.000
Gini Bottom 99%	0.045	0.054	0.171	0.276	0.051	0.057
Top 1% Income Share for Parents	0.730	0.969	0.095	0.094	0.913	0.044
Tax						
Local Tax Rate	0.297	0.119	0.647	0.456	0.071	0.047
Local Government Expenditures per Capita	0.047	0.061	0.576	0.905	0.035	0.052
State EITC Exposure	0.121	0.053	0.058	0.053	0.048	0.045
State Income Tax Progressivity	1.000	1.000	0.051	0.914	1.000	0.140
K-12 Education						
School Expenditure per Student	0.078	0.049	1.000	0.243	0.040	0.149
Teacher-Student Ratio	0.107	0.089	0.047	0.046	0.121	0.141
Test Score Percentile	0.555	1.000	0.174	0.852	0.563	1.000
High School Dropout Rate	0.999	0.065	0.137	0.048	0.998	0.048
Local Labor Market						
Labor Force Participation Rate	0.062	0.050	0.044	0.041	0.058	0.043
Fraction Working in Manufacturing	1.000	1.000	0.044	0.127	1.000	0.045
Growth in Chinese Imports 1990-2000	0.100	0.071	1.000	1.000	0.097	1.000
Teenage Labor Force Participation Rate	0.053	0.052	0.178	0.039	0.037	0.142
Migration						
Migration Inflow Rate	0.595	0.157	0.044	0.052	0.642	1.000
Migration Outflow Rate	0.360	0.950	0.639	0.940	0.398	0.051
Fraction of Foreign Born Residents	0.716	0.983	0.079	0.093	0.973	0.051
Social Capital						
Social Capital Index	0.993	0.051	0.290	0.273	0.989	1.000
Fraction Religious	1.000	0.998	0.998	0.189	1.000	0.865
Violent Crime Rate	0.103	0.041	1.000	1.000	0.089	0.109
Family Structure						
Fraction of Children with Single Mothers	1.000	1.000	0.045	0.044	1.000	0.159
Fraction of Adults Divorced	0.251	0.048	1.000	1.000	0.379	1.000
Fraction of Adults Married	0.046	0.062	1.000	0.130	0.062	0.046
State Fixed Effects	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Controls	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>yes</i>	<i>no</i>

Table 9: BMA Regressions - Posterior Means and Standard Errors (sample without College)

This table uses a larger sample size (633 commuting zones) than our baseline results at the expense of excluding the College variables from the sample space. It reports the posterior mean (PM) and the posterior standard error (PSE) for BMA regressions of a measure of mobility on the model space spanned by the various subsets of determinants and using the Benchmark Priors (g-BRIC). The PM is the average of the LS coefficient estimates (COEF) of individual models weighted by the posterior model probability and the PSE is the BMA estimate for the standard error (SE). ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	Absolute Upward Mobility								Relative Mobility			
	Baseline		State F.E.		Pop. Weighted		Urban Areas Only		Controls			
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	0.175***	0.040	-0.001	0.005	-	-	-	-	0.183***	0.040	-	-
Racial Segregation Theil Index	-0.075***	0.021	0.270	0.027	-0.107***	0.020	-0.016	0.035	-0.074***	0.021	0.155***	0.017
Income Segregation Theil Index	0.000	0.007	0.000	0.006	0.004	0.015	-0.003	0.018	0.002	0.011	-0.001	0.018
Share with Commute <15 Mins	0.256***	0.032	-0.001	0.007	-	-	-	-	0.242***	0.032	-	-
Income Distribution												
Household Income per Capita for Working-Age Adults	0.001	0.011	0.098***	0.026	0.194***	0.036	0.267***	0.045	0.002	0.014	-0.094***	0.019
Gini Bottom 99%	-0.001	0.006	0.286***	0.032	-0.011	0.029	-0.035	0.066	-0.001	0.006	0.002	0.016
Top 1% Income Share for Parents	-0.071	0.052	-0.173***	0.021	-0.004	0.016	-0.007	0.030	-0.094**	0.041	0.000	0.007
Tax												
Local Tax Rate	0.018	0.031	0.093***	0.022	0.074	0.064	0.063	0.080	0.002	0.011	-0.001	0.010
Local Government Expenditures per Capita	0.001	0.008	-0.001	0.005	0.037	0.037	0.097**	0.043	0.000	0.005	-0.008	0.068
State EITC Exposure	0.004	0.011	0.001	0.009	0.001	0.010	-0.001	0.010	0.001	0.005	0.000	0.000
State Income Tax Progressivity	0.103***	0.018	0.000	0.005	0.001	0.005	0.100***	0.043	0.080***	0.017	0.000	0.000
K-12 Education												
School Expenditure per Student	0.002	0.011	-0.001	0.008	0.091***	0.019	0.017	0.035	0.000	0.005	0.000	0.001
Teacher-Student Ratio	0.004	0.014	-0.001	0.007	0.000	0.006	0.000	0.011	0.005	0.015	0.000	0.001
Test Score Percentile	0.042	0.043	-0.001	0.005	0.008	0.019	0.107*	0.056	0.039	0.040	-0.005	0.001
High School Dropout Rate	-0.101***	0.022	0.001	0.009	0.007	0.020	0.001	0.011	-0.091***	0.021	0.000	0.000
Local Labor Market												
Labor Force Participation Rate	-0.002	0.010	-0.010	0.028	0.000	0.005	0.000	0.007	-0.001	0.009	0.000	0.002
Fraction Working in Manufacturing	-0.222***	0.025	-0.100***	0.031	0.000	0.006	-0.009	0.028	-0.156***	0.025	0.000	0.008
Growth in Chinese Imports 1990-2000	-0.003	0.010	-0.082***	0.017	-0.204***	0.025	-0.339***	0.037	-0.003	0.009	0.227***	0.023
Teenage Labor Force Participation Rate	0.002	0.011	0.000	0.006	-0.006	0.015	0.000	0.006	0.000	0.007	0.000	0.001
Migration												
Migration Inflow Rate	-0.042	0.040	0.001	0.008	0.000	0.008	-0.001	0.013	-0.052	0.043	-12.337***	2.307
Migration Outflow Rate	-0.024	0.036	-0.481***	0.039	-0.041	0.036	-0.180***	0.062	-0.029	0.039	0.004	0.054
Fraction of Foreign Born Residents	0.057	0.042	0.001	0.005	-0.001	0.011	-0.008	0.033	0.097***	0.030	-0.006	0.065
Social Capital												
Social Capital Index	0.141***	0.038	0.171***	0.021	0.016	0.029	0.032	0.062	0.132***	0.036	-0.252***	0.039
Fraction Religious	0.163***	0.022	0.005	0.015	0.152***	0.035	0.019	0.049	0.140***	0.021	0.006**	0.003
Violent Crime Rate	-0.005	0.017	0.003	0.014	0.164***	0.023	0.215***	0.033	-0.004	0.015	0.002	0.007
Family Structure												
Fraction of Children with Single Mothers	-0.485***	0.047	0.000	0.008	-0.001	0.007	0.001	0.008	-0.453***	0.045	0.493	1.360
Fraction of Adults Divorced	-0.014	0.029	0.198***	0.028	-0.360***	0.039	-0.564***	0.062	-0.023	0.034	0.447***	0.043
Fraction of Adults Married	-0.001	0.008	-0.111***	0.036	-0.133***	0.022	-0.007	0.022	-0.002	0.011	-0.002	0.025
State Fixed Effects	no		yes		no		no		no		no	
Controls	no		no		no		no		yes		no	

Table 10: Robustness to Priors Specification - Posterior Inclusion Probabilities

This table reports posterior inclusion probability (PIP) for various specifications of priors for the baseline model space of Table 6. The first six columns provide variations of fixed prior structures while the last four use a flexible prior structure based on a hyper-g prior, whose data-dependent shrinkage adapts posterior model distributions to data quality.

Model Priors	Fixed Priors						Flexible Priors			
	Uniform		Hierarchical		Tessellation		Uniform		Hierarchical	
	g-BRIC	g-UIP	g-BRIC	g-UIP	g-BRIC	g-UIP	hg-BRIC	hg-UIP	hg-BRIC	hg-UIP
Parameter Priors										
Segregation										
Fraction of Black Residents	0.985	0.990	0.963	0.956	0.986	0.989	0.991	0.992	0.945	0.947
Racial Segregation Theil Index	0.989	0.992	0.261	0.339	0.989	0.990	0.992	0.992	0.395	0.393
Income Segregation Theil Index	0.038	0.051	0.001	0.002	0.038	0.050	0.085	0.085	0.002	0.003
Share with Commute <15 Mins	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Income Distribution										
Household Income per Capita for Working-Age Adults	0.061	0.075	0.003	0.004	0.060	0.073	0.109	0.109	0.005	0.005
Gini Bottom 99%	0.037	0.050	0.001	0.001	0.037	0.051	0.083	0.083	0.002	0.002
Top 1% Income Share for Parents	0.841	0.879	0.015	0.021	0.842	0.883	0.904	0.901	0.029	0.030
Tax										
Local Tax Rate	0.250	0.258	0.094	0.122	0.251	0.253	0.272	0.276	0.151	0.150
Local Government Expenditures per Capita	0.043	0.055	0.003	0.003	0.043	0.055	0.084	0.082	0.004	0.004
State EITC Exposure	0.098	0.121	0.008	0.009	0.095	0.116	0.166	0.167	0.010	0.010
State Income Tax Progressivity	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
K-12 Education										
School Expenditure per Student	0.072	0.083	0.018	0.025	0.072	0.083	0.114	0.113	0.028	0.029
Teacher-Student Ratio	0.058	0.075	0.001	0.002	0.058	0.077	0.117	0.119	0.002	0.002
Test Score Percentile	0.398	0.463	0.007	0.010	0.392	0.466	0.558	0.561	0.011	0.010
High School Dropout Rate	0.992	0.994	0.991	0.989	0.992	0.993	0.994	0.994	0.988	0.988
College										
Number of Colleges per Capita	0.831	0.869	0.048	0.068	0.832	0.870	0.896	0.894	0.089	0.090
Mean College Tuition	0.033	0.042	0.001	0.002	0.032	0.043	0.074	0.076	0.002	0.002
College Graduation Rate	0.037	0.049	0.002	0.002	0.037	0.050	0.081	0.082	0.003	0.003
Local Labor Market										
Labor Force Participation Rate	0.059	0.080	0.001	0.002	0.056	0.081	0.134	0.132	0.003	0.002
Fraction Working in Manufacturing	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Growth in Chinese Imports 1990-2000	0.101	0.127	0.004	0.005	0.096	0.127	0.188	0.192	0.006	0.007
Teenage Labor Force Participation Rate	0.044	0.058	0.001	0.002	0.046	0.058	0.091	0.089	0.002	0.003
Migration										
Migration Inflow Rate	0.699	0.709	0.049	0.069	0.703	0.698	0.686	0.686	0.084	0.087
Migration Outflow Rate	0.302	0.324	0.010	0.014	0.297	0.334	0.388	0.388	0.018	0.018
Fraction of Foreign Born Residents	0.609	0.663	0.022	0.031	0.605	0.666	0.731	0.732	0.038	0.040
Social Capital										
Social Capital Index	0.995	0.995	0.999	1.000	0.994	0.995	0.994	0.995	0.999	0.999
Fraction Religious	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Violent Crime Rate	0.095	0.125	0.003	0.004	0.096	0.126	0.189	0.194	0.005	0.005
Family Structure										
Fraction of Children with Single Mothers	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Fraction of Adults Divorced	0.453	0.477	0.073	0.096	0.459	0.474	0.504	0.495	0.121	0.117
Fraction of Adults Married	0.051	0.068	0.002	0.003	0.051	0.073	0.112	0.114	0.004	0.004

Table 11: Robustness to Priors Specification - Posterior Means and Standard Errors

This table reports the posterior mean (PM) and the posterior standard error (PSE) for various specifications of priors for the baseline model space of Table 6. Panel provide variations of fixed prior structures while Panel B reports results using a flexible prior structure based on a hyper-g prior, whose data-dependent shrinkage adapts posterior model distributions to data quality. ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

Model Priors	Panel A: Fixed Priors											
	Uniform				Hierarchical				Tessellation			
	g-BRIC		g-UIP		g-BRIC		g-UIP		g-BRIC		g-UIP	
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	0.158***	0.046	0.159***	0.045	0.169***	0.045	0.166***	0.047	0.158***	0.046	0.159***	0.045
Racial Segregation Theil Index	-0.078***	0.021	-0.078***	0.021	-0.018	0.033	-0.024	0.035	-0.078***	0.021	-0.078***	0.021
Income Segregation Theil Index	0.000	0.006	0.000	0.007	0.000	0.001	0.000	0.001	0.000	0.007	0.000	0.007
Share with Commute <15 Mins	0.270***	0.034	0.270***	0.034	0.297***	0.033	0.294***	0.034	0.270***	0.034	0.271***	0.034
Income Distribution												
Household Income per Capita for Working-Age Adults	0.001	0.012	0.001	0.012	0.000	0.003	0.000	0.003	0.001	0.012	0.001	0.012
Gini Bottom 99%	0.000	0.005	-0.001	0.006	0.000	0.001	0.000	0.001	0.000	0.005	-0.001	0.006
Top 1% Income Share for Parents	-0.087	0.048	-0.091**	0.046	-0.001	0.009	-0.002	0.012	-0.087*	0.048	-0.092**	0.045
Tax												
Local Tax Rate	0.014	0.027	0.013	0.026	0.007	0.022	0.009	0.024	0.014	0.027	0.013	0.026
Local Government Expenditures per Capita	0.001	0.007	0.001	0.008	0.000	0.002	0.000	0.003	0.001	0.007	0.001	0.008
State EITC Exposure	0.003	0.010	0.003	0.011	0.000	0.003	0.000	0.004	0.003	0.010	0.003	0.010
State Income Tax Progressivity	0.101***	0.017	0.101***	0.017	0.107***	0.016	0.107***	0.017	0.101***	0.017	0.101***	0.017
K-12 Education												
School Expenditure per Student	0.002	0.010	0.002	0.010	0.001	0.007	0.001	0.008	0.002	0.010	0.002	0.010
Teacher-Student Ratio	0.001	0.009	0.002	0.010	0.000	0.001	0.000	0.001	0.002	0.009	0.002	0.010
Test Score Percentile	0.028	0.039	0.032	0.040	0.000	0.005	0.001	0.006	0.028	0.039	0.033	0.040
High School Dropout Rate	-0.090***	0.024	-0.089***	0.023	-0.112***	0.025	-0.110***	0.025	-0.090***	0.024	-0.089***	0.023
College												
Number of Colleges per Capita	-0.058	0.033	-0.061**	0.031	-0.003	0.015	-0.004	0.017	-0.058*	0.033	-0.061**	0.031
Mean College Tuition	0.000	0.003	0.000	0.004	0.000	0.001	0.000	0.001	0.000	0.003	0.000	0.004
College Graduation Rate	0.000	0.004	0.000	0.005	0.000	0.001	0.000	0.001	0.000	0.004	0.000	0.005
Local Labor Market												
Labor Force Participation Rate	-0.002	0.010	-0.002	0.011	0.000	0.001	0.000	0.002	-0.001	0.009	-0.002	0.011
Fraction Working in Manufacturing	-0.236***	0.025	-0.236***	0.025	-0.200***	0.021	-0.200***	0.021	-0.236***	0.025	-0.236***	0.025
Growth in Chinese Imports 1990-2000	-0.003	0.010	-0.003	0.011	0.000	0.002	0.000	0.003	-0.003	0.010	-0.004	0.011
Teenage Labor Force Participation Rate	0.001	0.010	0.001	0.011	0.000	0.002	0.000	0.002	0.001	0.010	0.001	0.011
Migration												
Migration Inflow Rate	-0.055	0.041	-0.056	0.042	-0.003	0.013	-0.004	0.016	-0.056	0.041	-0.056	0.042
Migration Outflow Rate	-0.021	0.036	-0.022	0.036	0.000	0.004	-0.001	0.005	-0.021	0.036	-0.023	0.037
Fraction of Foreign Born Residents	0.044	0.041	0.048	0.041	0.001	0.008	0.002	0.010	0.044	0.041	0.048	0.041
Social Capital												
Social Capital Index	0.141***	0.036	0.139***	0.035	0.178***	0.026	0.178***	0.026	0.141***	0.036	0.138***	0.035
Fraction Religous	0.164***	0.022	0.164***	0.022	0.158***	0.022	0.159***	0.022	0.164***	0.022	0.164***	0.022
Violent Crime Rate	-0.004	0.016	-0.006	0.019	0.000	0.003	0.000	0.003	-0.004	0.016	-0.006	0.019
Family Structure												
Fraction of Children with Single Mothers	-0.467***	0.049	-0.462***	0.048	-0.550***	0.049	-0.545***	0.052	-0.467***	0.049	-0.462***	0.048
Fraction of Adults Divorced	-0.032	0.039	-0.032	0.039	-0.007	0.027	-0.009	0.030	-0.032	0.040	-0.032	0.039
Fraction of Adults Married	-0.001	0.010	-0.002	0.011	0.000	0.002	0.000	0.002	-0.001	0.010	-0.002	0.012

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Table 11 continued

Model Priors	Panel B: Flexible Priors							
	Uniform				Hierarchical			
	g-BRIC		g-UIP		g-BRIC		g-UIP	
	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation								
Fraction of Black Residents	0.160***	0.045	0.161***	0.045	0.163***	0.050	0.163***	0.050
Racial Segregation Theil Index	-0.078***	0.021	-0.078***	0.021	-0.028	0.037	-0.028	0.037
Income Segregation Theil Index	-0.001	0.010	-0.001	0.010	0.000	0.001	0.000	0.002
Share with Commute <15 Mins	0.270***	0.034	0.270***	0.034	0.291***	0.035	0.291***	0.035
Income Distribution								
Household Income per Capita for Working-Age Adults	0.000	0.014	0.000	0.014	0.000	0.004	0.000	0.004
Gini Bottom 99%	-0.001	0.007	-0.001	0.007	0.000	0.001	0.000	0.001
Top 1% Income Share for Parents	-0.095**	0.044	-0.094**	0.044	-0.002	0.014	-0.002	0.015
Tax								
Local Tax Rate	0.013	0.025	0.013	0.025	0.011	0.027	0.011	0.027
Local Government Expenditures per Capita	0.001	0.010	0.001	0.010	0.000	0.003	0.000	0.003
State EITC Exposure	0.004	0.012	0.004	0.012	0.000	0.004	0.000	0.004
State Income Tax Progressivity	0.101***	0.018	0.101***	0.018	0.107***	0.017	0.107***	0.017
K-12 Education								
School Expenditure per Student	0.002	0.011	0.002	0.011	0.001	0.009	0.001	0.009
Teacher-Student Ratio	0.003	0.012	0.003	0.012	0.000	0.002	0.000	0.001
Test Score Percentile	0.039	0.040	0.039	0.040	0.001	0.007	0.001	0.006
High School Dropout Rate	-0.088***	0.023	-0.088***	0.023	-0.109***	0.026	-0.109***	0.026
College								
Number of Colleges per Capita	-0.062**	0.030	-0.062**	0.030	-0.006	0.020	-0.006	0.020
Mean College Tuition	0.000	0.005	0.000	0.005	0.000	0.001	0.000	0.001
College Graduation Rate	0.000	0.006	0.000	0.006	0.000	0.001	0.000	0.001
Local Labor Market								
Labor Force Participation Rate	-0.004	0.015	-0.004	0.015	0.000	0.002	0.000	0.002
Fraction Working in Manufacturing	-0.236***	0.025	-0.235***	0.025	-0.201***	0.022	-0.201***	0.022
Growth in Chinese Imports 1990-2000	-0.005	0.013	-0.005	0.013	0.000	0.003	0.000	0.003
Teenage Labor Force Participation Rate	0.002	0.013	0.002	0.013	0.000	0.002	0.000	0.003
Migration								
Migration Inflow Rate	-0.054	0.042	-0.054	0.042	-0.005	0.018	-0.005	0.018
Migration Outflow Rate	-0.026	0.038	-0.026	0.038	-0.001	0.006	-0.001	0.006
Fraction of Foreign Born Residents	0.053	0.040	0.054	0.040	0.002	0.011	0.002	0.011
Social Capital								
Social Capital Index	0.136***	0.036	0.136***	0.036	0.178***	0.027	0.178***	0.027
Fraction Religious	0.164***	0.022	0.164***	0.022	0.159***	0.022	0.159***	0.022
Violent Crime Rate	-0.009	0.022	-0.009	0.022	0.000	0.004	0.000	0.004
Family Structure								
Fraction of Children with Single Mothers	-0.456***	0.049	-0.456***	0.049	-0.539***	0.055	-0.540***	0.055
Fraction of Adults Divorced	-0.032	0.038	-0.031	0.037	-0.011	0.033	-0.011	0.033
Fraction of Adults Married	-0.003	0.015	-0.003	0.015	0.000	0.002	0.000	0.003

Table 12: BMA Results for Quintiles of Commuting Zones by Average Parental Income

This table reports the posterior inclusion probability (PIP), posterior mean (PM) and the posterior standard error (PSE) for the Baseline model in Tables 4 and 5 for each quintile of CZs according to income.

	1st QUINTILE			2nd QUINTILE			3rd QUINTILE			4th QUINTILE			5th QUINTILE		
	PIP	PM	PSE	PIP	PM	PSE	PIP	PM	PSE	PIP	PM	PSE	PIP	PM	PSE
Segregation															
Fraction of Black Residents	0.437	0.069	0.088	0.642	0.146	0.124	0.044	0.002	0.021	0.040	0.002	0.019	0.200	-0.030	0.069
Racial Segregation Theil Index	0.840	-0.103*	0.058	0.816	0.139*	0.081	0.354	-0.037	0.056	0.063	-0.004	0.019	0.035	0.000	0.007
Income Segregation Theil Index	0.233	0.032	0.067	0.056	-0.004	0.023	0.052	0.003	0.023	0.039	0.001	0.020	0.037	-0.001	0.010
Share with Commute <15 Mins	0.997	0.327***	0.091	0.940	0.368***	0.133	0.840	0.229*	0.127	0.998	0.385***	0.075	1.000	0.359***	0.054
Income Distribution															
Household Inc. per Capita for W.-A. A.	0.985	0.446***	0.125	0.049	0.011	0.077	0.046	0.010	0.071	0.035	-0.004	0.056	0.173	-0.018	0.045
Gini Bottom 99%	0.153	0.015	0.042	0.039	-0.001	0.018	0.880	-0.098**	0.048	0.069	-0.003	0.015	0.117	-0.008	0.026
Top 1% Income Share for Parents	0.418	-0.066	0.088	0.524	-0.133	0.147	0.040	0.002	0.017	0.063	-0.006	0.032	1.000	-0.246***	0.048
Tax															
Local Tax Rate	0.036	0.000	0.010	0.038	0.000	0.012	0.099	0.009	0.033	0.226	0.026	0.056	0.328	0.028	0.046
Local Gov. Expenditures per Capita	0.099	-0.010	0.037	0.231	-0.036	0.075	0.049	0.002	0.021	0.032	0.000	0.010	0.069	-0.004	0.018
State EITC Exposure	0.034	0.001	0.025	0.093	-0.008	0.033	0.806	0.099	0.059	0.034	0.000	0.006	0.138	0.005	0.014
State Income Tax Progressivity	0.051	0.002	0.013	0.249	0.023	0.046	0.912	0.122**	0.054	0.783	0.101	0.066	0.149	0.006	0.016
K-12 Education															
School Expenditure per Student	0.040	0.000	0.011	0.073	-0.004	0.020	0.093	0.008	0.032	0.034	0.000	0.011	0.045	0.000	0.008
Teacher-Student Ratio	0.086	-0.005	0.021	0.060	0.003	0.017	0.043	0.001	0.016	0.032	0.000	0.010	0.058	0.002	0.012
Test Score Percentile	0.046	0.002	0.014	0.103	0.009	0.034	0.215	0.027	0.059	0.034	0.001	0.012	0.092	0.006	0.024
High School Dropout Rate	0.039	0.000	0.008	0.857	-0.117*	0.062	0.170	-0.019	0.050	0.032	0.000	0.010	0.271	-0.025	0.047
College															
Number of Colleges per Capita	0.034	0.000	0.006	0.211	-0.023	0.052	0.347	-0.049	0.076	0.086	-0.007	0.030	0.035	0.001	0.008
Mean College Tuition	0.033	0.000	0.008	0.038	0.001	0.008	0.049	0.001	0.012	0.034	0.000	0.008	0.043	0.001	0.007
College Graduation Rate	0.047	0.001	0.010	0.061	-0.002	0.014	0.326	0.033	0.054	0.047	-0.002	0.013	0.070	0.003	0.013
Local Labor Market															
Labor Force Participation Rate	0.997	-0.238***	0.060	0.046	0.002	0.020	0.038	0.000	0.013	0.197	0.028	0.064	0.084	-0.006	0.024
Fraction Working in Manufacturing	0.883	-0.145**	0.070	0.989	-0.258***	0.072	1.000	-0.349***	0.062	1.000	-0.220***	0.044	1.000	-0.269***	0.038
Growth in Chinese Imports 1990-2000	0.071	-0.002	0.009	0.107	-0.008	0.028	0.120	-0.019	0.061	0.038	-0.001	0.019	0.040	0.001	0.011
Teenage Labor Force Participation Rate	0.656	-0.151	0.128	0.202	0.047	0.111	0.071	0.006	0.034	0.048	0.003	0.023	0.050	0.002	0.018
Migration															
Migration Inflow Rate	0.070	0.003	0.023	0.339	-0.050	0.078	0.372	-0.065	0.095	0.085	-0.007	0.031	0.154	-0.009	0.025
Migration Outflow Rate	0.175	0.013	0.032	0.438	-0.062	0.079	0.490	-0.074	0.085	0.039	0.001	0.019	0.061	-0.002	0.014
Fraction of Foreign Born Residents	0.877	0.139**	0.068	0.372	-0.050	0.073	0.096	-0.011	0.042	0.050	-0.003	0.023	0.992	0.135***	0.035
Social Capital															
Social Capital Index	0.971	0.274***	0.089	0.569	0.145	0.146	0.056	0.003	0.027	0.034	0.000	0.014	0.061	-0.004	0.023
Fraction Religious	0.809	0.087	0.053	0.288	0.029	0.052	1.000	0.250***	0.050	0.999	0.255***	0.047	1.000	0.250***	0.052
Violent Crime Rate	0.063	0.004	0.022	0.102	-0.012	0.043	0.133	-0.018	0.057	0.058	-0.005	0.027	0.037	0.000	0.008
Family Structure															
Fraction of Children with Single Mothers	1.000	-0.403***	0.088	0.970	-0.445***	0.168	1.000	-0.559***	0.090	1.000	-0.719***	0.111	0.989	-0.296***	0.077
Fraction of Adults Divorced	0.263	-0.031	0.059	0.364	-0.052	0.076	0.055	-0.003	0.021	0.041	-0.001	0.015	0.546	-0.064	0.068
Fraction of Adults Married	0.063	-0.004	0.022	0.041	0.000	0.017	0.064	-0.005	0.027	0.846	-0.239*	0.127	0.040	-0.001	0.017

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Appendix

Figure A1: Model Size Distribution and Posterior Model Probabilities (g-UIP)

The red line denotes the prior model size distribution while the blue line denotes the posterior model size distribution. These results are based on the Uniform Information Priors (g-UIP).

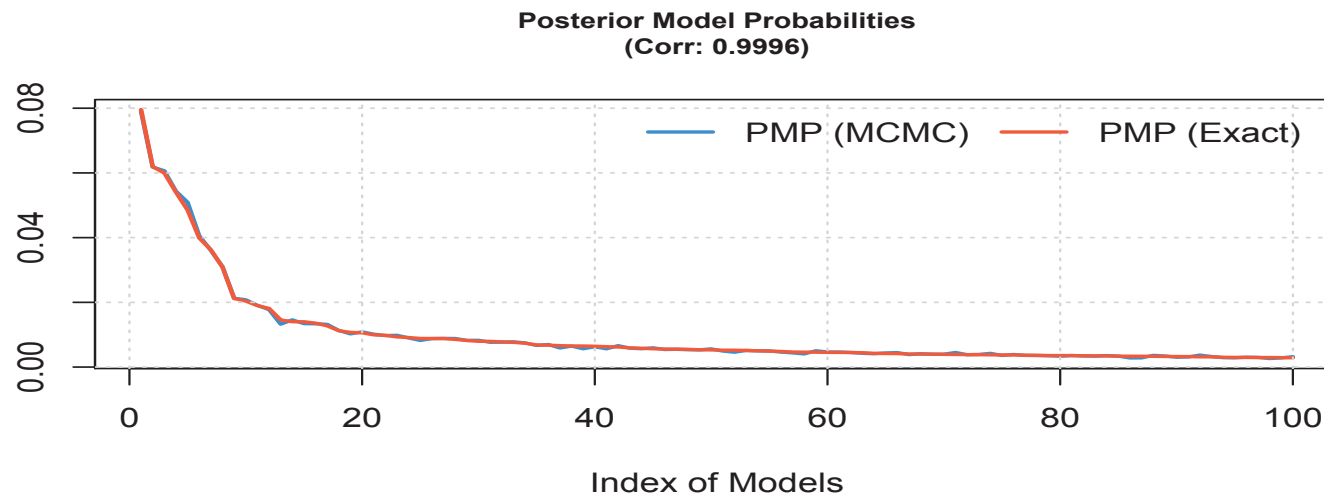
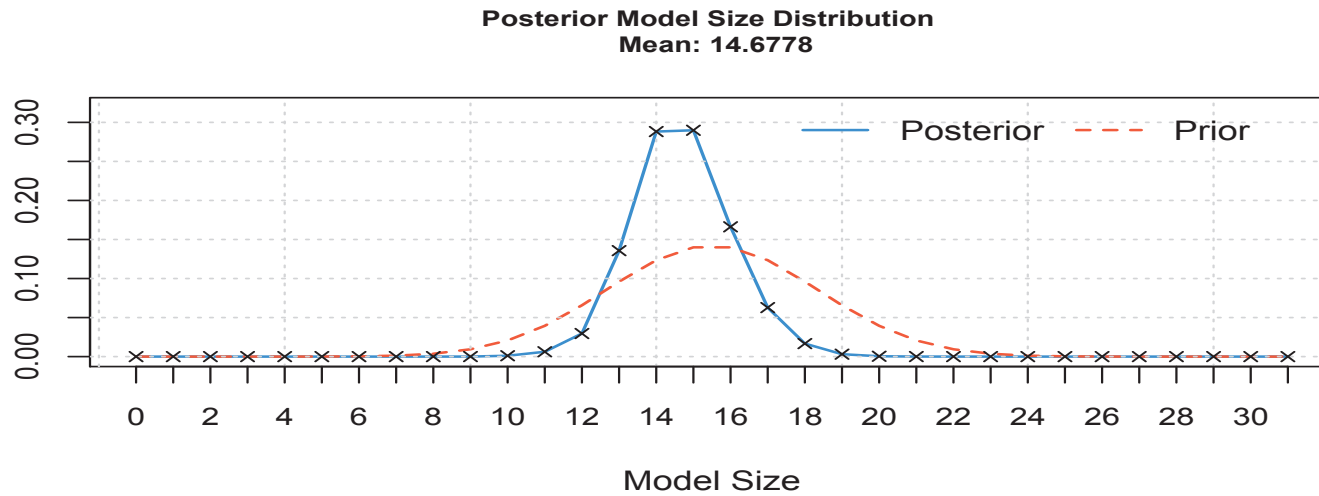


Figure A2: Regressors Included in Best Models (g-UIP)

The blue color corresponds to a positive coefficient, red to a negative coefficient, and white to non-inclusion (a zero coefficient). On the horizontal axis it shows the best 100 models, scaled by their PMPs. The intercept and the time trend are always kept in the model. These results are based on the Uniform Information Priors (g-UIP).

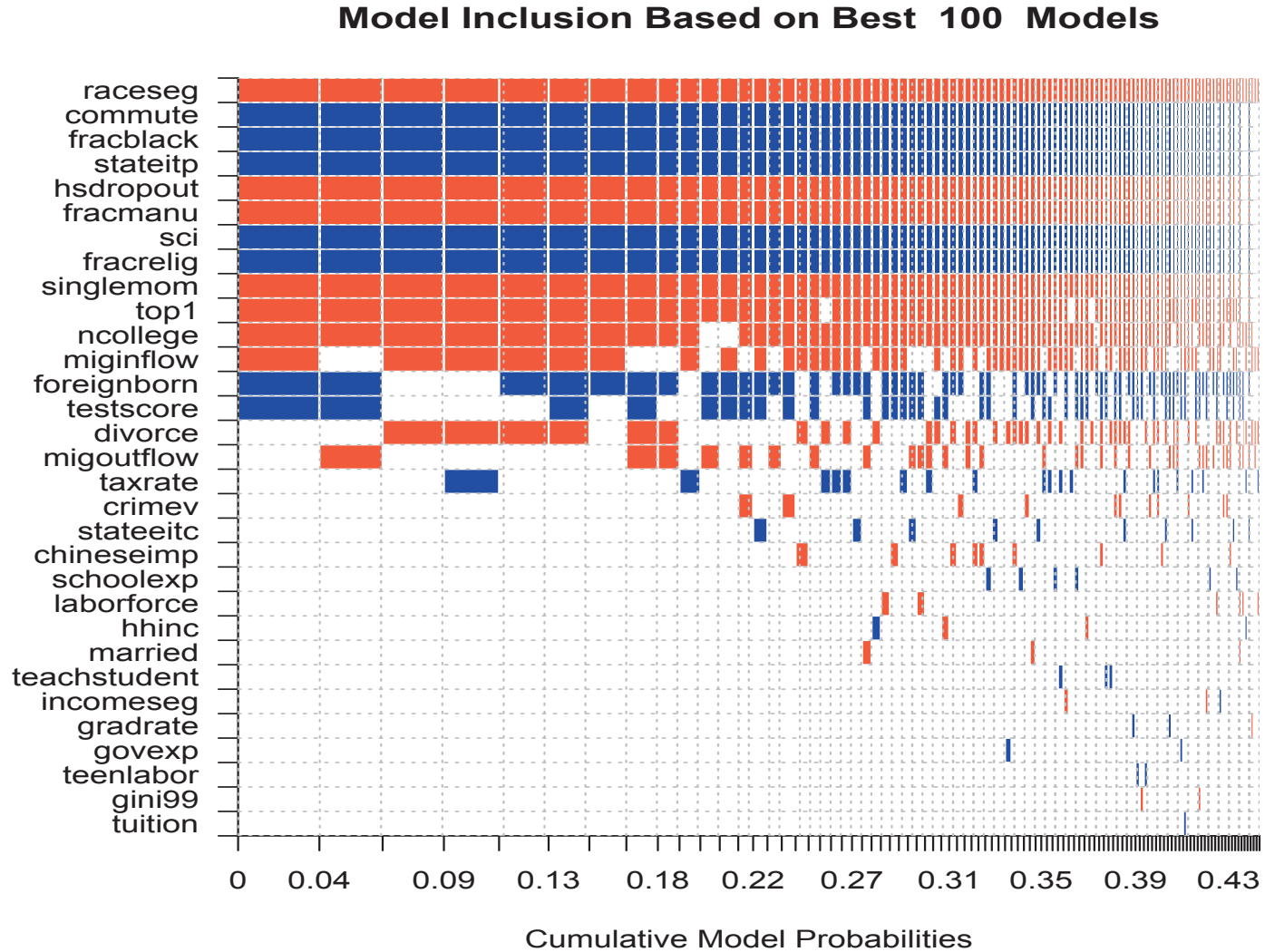


Table A1: Descriptive Statistics (sample without College)

This table reports descriptive statistics for two measures of spatial intergenerational mobility and 31 determinants across US commuting zones made available by the Equality of Opportunity Project. The statistics refer to a balanced sample of 633 commuting zones, which is a sub-sample of the one used by Chetty, Hendren, Kline, and Saez (2014). This subsample excludes the College variables to increase the sample size.

Variable	Mean	Std. Dev.	Min	Max
Absolute Upward Mobility	44.300	5.733	26.672	64.019
Relative Mobility	0.324	0.066	0.068	0.508
Segregation				
Fraction of Black Residents	0.079	0.126	0.000	0.658
Racial Segregation Theil Index	0.134	0.101	0.000	0.554
Income Segregation Theil Index	0.040	0.031	0.000	0.138
Share with Commute <15 Mins	0.452	0.130	0.156	0.767
Income Distribution				
Income Distribution				
Household Income per Capita for Working-Age Adults	32517.530	5419.612	17378.600	58628.390
Top 1% Income Share for Parents	10.864	5.163	2.673	64.788
Gini Bottom 99%	0.300	0.056	0.063	0.447
Tax				
Local Tax Rate	0.020	0.009	0.007	0.089
Local Government Expenditures per Capita	2248.112	841.149	952.169	11529.130
State EITC Exposure	1.484	4.055	0.000	21.333
State Income Tax Progressivity	0.844	1.496	0.000	6.300
K-12 Education				
School Expenditure per Student	6.006	1.113	4.086	11.906
Teacher-Student Ratio	16.569	2.286	10.270	24.805
Test Score Percentile	0.126	8.188	-31.837	20.071
High School Dropout Rate	-0.001	0.019	-0.043	0.099
Local Labor Market				
Labor Force Participation Rate	0.615	0.059	0.364	0.782
Fraction Working in Manufacturing	0.146	0.080	0.009	0.437
Growth in Chinese Imports 1990-2000	1.164	1.664	-0.003	25.405
Teenage Labor Force Participation Rate	0.005	0.001	0.002	0.008
Migration				
Migration Inflow Rate	0.016	0.010	0.000	0.077
Migration Outflow Rate	0.017	0.007	0.003	0.052
Fraction of Foreign Born Residents	0.040	0.049	0.003	0.378
Social Capital				
Social Capital Index	0.150	1.221	-3.199	5.266
Fraction Religious	0.551	0.161	0.171	1.049
Violent Crime Rate	0.002	0.001	0.000	0.006
Family Structure				
Fraction of Children with Single Mothers	0.203	0.053	0.082	0.434
Fraction of Adults Divorces	0.096	0.017	0.040	0.156
Fraction of Adults Married	0.574	0.045	0.373	0.695

Table A2: Short Regressions (sample without College)

This table reports the regression coefficients and their corresponding standard errors from multivariate LS regressions of a measure of mobility on a set of determinants. These results replicate Table IX in Chetty, Hendren, Kline, and Saez (2014) using a balanced sub-sample of 633 commuting zones. Both the dependent and independent variables are standardized to have mean 0 and standard deviation 1 in the estimation so that the regression coefficient equal correlation coefficients. ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Racial Segregation Theil Index	-0.100*** (0.024)	-0.107*** (0.024)	-0.098*** (0.024)	-0.157*** (0.038)	0.201*** (0.033)	0.293*** (0.035)	-0.185*** (0.027)	
Gini Bottom 99%	-0.006 (0.039)	-0.073* (0.038)	-0.011 (0.039)	0.080 (0.068)	0.107* (0.060)	0.402*** (0.055)	-0.279*** (0.040)	
High School Dropout Rate	-0.169*** (0.032)	-0.147*** (0.033)	-0.188*** (0.032)	-0.139*** (0.052)	0.005 (0.041)	0.141*** (0.041)	-0.294*** (0.033)	
Social Capital Index	0.283*** (0.034)	0.147*** (0.040)	0.279*** (0.034)	0.278*** (0.049)	0.072 (0.046)	0.071 (0.053)	0.284*** (0.040)	
Fraction of Children with Single Mothers	-0.490*** (0.037)	-0.433*** (0.042)	-0.482*** (0.037)	-0.547*** (0.060)	0.531*** (0.049)			-0.790*** (0.044)
Fraction Black Residents								0.034 (0.041)
Constant	0.035 (0.022)	0.053 (0.092)	0.032 (0.022)	0.026 (0.038)	-0.010 (0.030)	-0.011 (0.033)	0.035 (0.026)	0.045* (0.025)
State Fixed Effects		x						
Population Weighted			x					
Urban Areas Only				x				
Adjusted R-squared	0.697	0.808	0.701	0.609	0.461	0.342	0.594	0.598
Sample Size	633	633	633	283	633	633	633	633

Table A3: BMA Regressions - Posterior Model Probabilities (g-UIP)

This table reports the baseline BMA results for the regressions of a measure of mobility on the model space spanned by the various subsets of determinants. Each cell reports the posterior inclusion probability (PIP), which is the sum of posterior model probabilities over all those models that contain that variable, using the Uniform Information Priors (g-UIP).

	Absolute Upward Mobility				Relative Mobility	
	Baseline	State F.E.	Pop. Weighted	Urban Areas Only	Controls	
Segregation						
Fraction of Black Residents	0.990	1.000	-	-	0.991	-
Racial Segregation Theil Index	0.992	0.999	1.000	0.316	0.996	1.000
Income Segregation Theil Index	0.051	0.066	0.071	0.398	0.058	0.048
Share with Commute <15 Mins	1.000	1.000	-	-	1.000	-
Income Distribution						
Household Income per Capita for Working-Age Adults	0.075	0.044	1.000	0.999	0.070	1.000
Gini Bottom 99%	0.050	0.048	0.317	0.757	0.060	0.054
Top 1% Income Share for Parents	0.879	0.992	0.064	0.099	0.981	0.042
Tax						
Local Tax Rate	0.258	0.097	0.579	0.535	0.067	0.048
Local Government Expenditures per Capita	0.055	0.053	0.593	0.745	0.047	0.053
State EITC Exposure	0.121	0.048	0.099	0.085	0.050	0.045
State Income Tax Progressivity	1.000	1.000	0.063	0.510	0.999	0.140
K-12 Education						
School Expenditure per Student	0.083	0.044	1.000	0.460	0.045	0.150
Teacher-Student Ratio	0.075	0.047	0.053	0.083	0.071	0.145
Test Score Percentile	0.463	1.000	0.140	0.210	0.339	1.000
High School Dropout Rate	0.994	0.052	0.113	0.176	0.958	0.050
College						
Number of Colleges per Capita	0.869	0.919	0.997	0.344	0.995	0.047
Mean College Tuition	0.042	0.053	0.962	0.977	0.042	0.059
College Graduation Rate	0.049	0.055	0.044	0.066	0.053	0.076
Local Labor Market						
Labor Force Participation Rate	0.080	0.051	0.055	0.077	0.079	0.044
Fraction Working in Manufacturing	1.000	1.000	0.072	0.401	1.000	0.044
Growth in Chinese Imports 1990-2000	0.127	0.054	1.000	1.000	0.132	1.000
Teenage Labor Force Participation Rate	0.058	0.041	0.260	0.061	0.049	0.142
Migration						
Migration Inflow Rate	0.709	0.170	0.069	0.083	0.762	1.000
Migration Outflow Rate	0.324	0.971	0.884	0.591	0.313	0.049
Fraction of Foreign Born Residents	0.663	0.994	0.086	0.436	0.964	0.051
Social Capital						
Social Capital Index	0.995	0.047	0.218	0.812	0.992	1.000
Fraction Religious	1.000	0.998	0.992	0.640	1.000	0.860
Violent Crime Rate	0.125	0.037	1.000	1.000	0.105	0.113
Family Structure						
Fraction of Children with Single Mothers	1.000	1.000	0.056	0.072	1.000	0.156
Fraction of Adults Divorced	0.477	0.060	1.000	1.000	0.780	1.000
Fraction of Adults Married	0.068	0.046	1.000	0.489	0.089	0.048
State Fixed Effects	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Controls	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>yes</i>	<i>no</i>

Table A4: BMA Regressions - Posterior Means and Standard Errors (g-UIP)

This table reports the posterior mean (PM) and the posterior standard error (PSE) for BMA regressions of a measure of mobility on the model space spanned by the various subsets of determinants and using the Uniform Information Priors (g-UIP). The PM is the average of the LS coefficient estimates (COEF) of individual models weighted by the posterior model probability and the PSE is the BMA estimate for the standard error (SE). ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	Absolute Upward Mobility								Relative Mobility			
	Baseline		State F.E.		Pop. Weighted		Urban Areas Only		Controls			
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	0.159***	0.045	0.275***	0.032	-	-	-	-	-	-	0.152***	0.042
Racial Segregation Theil Index	-0.078***	0.021	-0.082***	0.017	-0.097***	0.020	-0.025	0.042	-0.079***	0.020	0.155***	0.017
Income Segregation Theil Index	0.000	0.007	-0.002	0.009	0.002	0.010	-0.047	0.068	0.001	0.009	-0.001	0.018
Share with Commute ≥15 Mins	0.270***	0.034	0.292***	0.029	-	-	-	-	-	-	0.260***	0.032
Income Distribution												
Household Income per Capita for Working-Age Adults	0.001	0.012	0.000	0.005	0.223***	0.035	0.236***	0.057	0.002	0.014	-0.093***	0.019
Gini Bottom 99%	-0.001	0.006	-0.001	0.005	-0.024	0.040	-0.150	0.106	-0.001	0.006	0.002	0.015
Top 1% Income Share for Parents	-0.091**	0.046	-0.127***	0.032	-0.001	0.010	-0.002	0.034	-0.111***	0.033	0.000	0.007
Tax												
Local Tax Rate	0.013	0.026	0.003	0.013	0.060	0.059	0.084	0.093	0.001	0.008	-0.001	0.010
Local Government Expenditures per Capita	0.001	0.008	0.001	0.008	0.037	0.036	0.069	0.050	0.000	0.006	-0.008	0.069
State EITC Exposure	0.003	0.011	0.001	0.005	0.004	0.015	-0.002	0.014	0.000	0.004	0.000	0.000
State Income Tax Progressivity	0.101***	0.017	0.168***	0.020	0.001	0.006	0.038	0.044	0.075***	0.017	0.000	0.000
K-12 Education												
School Expenditure per Student	0.002	0.010	0.000	0.005	0.094***	0.017	0.035	0.044	0.000	0.005	0.000	0.001
Teacher-Student Ratio	0.002	0.010	0.001	0.007	0.000	0.006	0.000	0.015	0.002	0.008	0.000	0.001
Test Score Percentile	0.032	0.040	0.193***	0.027	0.005	0.016	0.015	0.037	0.019	0.031	-0.005***	0.001
High School Dropout Rate	-0.089***	0.023	-0.001	0.006	0.005	0.016	-0.012	0.034	-0.071***	0.025	0.000	0.000
College												
Number of Colleges per Capita	-0.061**	0.031	-0.058**	0.025	-0.094***	0.023	-0.024	0.039	-0.087***	0.022	0.002	0.023
Mean College Tuition	0.000	0.004	-0.001	0.005	-0.076***	0.026	-0.121***	0.038	0.000	0.004	-0.004	0.028
College Graduation Rate	0.000	0.005	-0.001	0.005	0.000	0.004	-0.001	0.010	0.001	0.005	0.000	0.000
Local Labor Market												
Labor Force Participation Rate	-0.002	0.011	-0.001	0.006	-0.001	0.005	0.000	0.011	-0.002	0.011	0.000	0.002
Fraction Working in Manufacturing	-0.236***	0.025	-0.182***	0.021	0.002	0.009	-0.041	0.058	-0.166***	0.024	0.000	0.008
Growth in Chinese Imports 1990-2000	-0.003	0.011	-0.001	0.005	-0.215***	0.025	-0.360***	0.042	-0.004	0.011	0.227***	0.023
Teenage Labor Force Participation Rate	0.001	0.011	0.000	0.007	-0.010	0.019	0.001	0.008	-0.001	0.008	0.000	0.001
Migration												
Migration Inflow Rate	-0.056	0.042	-0.010	0.027	0.002	0.013	-0.001	0.019	-0.069	0.044	-12.352***	2.311
Migration Outflow Rate	-0.022	0.036	-0.108***	0.029	-0.065**	0.032	-0.081	0.080	-0.023	0.038	0.004	0.053
Fraction of Foreign Born Residents	0.048	0.041	0.100***	0.024	-0.001	0.012	-0.055	0.072	0.082***	0.029	-0.006	0.065
Social Capital												
Social Capital Index	0.139***	0.035	0.001	0.008	0.010	0.022	0.129	0.080	0.136***	0.033	-0.252***	0.039
Fraction Religious	0.164***	0.022	0.097***	0.022	0.135***	0.035	0.109	0.100	0.140***	0.021	0.006**	0.003
Violent Crime Rate	-0.006	0.019	0.000	0.006	0.160***	0.022	0.227***	0.033	-0.004	0.015	0.002	0.007
Family Structure												
Fraction of Children with Single Mothers	-0.462***	0.048	-0.462***	0.038	-0.001	0.009	-0.001	0.011	-0.417***	0.045	0.487	1.354
Fraction of Adults Divorced	-0.032	0.039	-0.002	0.009	-0.332***	0.036	-0.408***	0.071	-0.058	0.038	0.447***	0.043
Fraction of Adults Married	-0.002	0.011	0.000	0.006	-0.118***	0.022	-0.039	0.047	-0.003	0.015	-0.002	0.025
State Fixed Effects		no		yes		no		no		no		no
Controls		no		no		no		no		yes		no

Table A5: BMA Regressions - Posterior Mode Models (g-UIP)

This table reports the posterior mode models in the BMA regressions of a measure of mobility on the model space spanned by the various subsets of determinants and using the Uniform Priors (g-UIP). ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	Absolute Upward Mobility								Relative Mobility			
	Baseline		State F.E.		Pop. Weighted		Urban Areas Only		Controls			
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	0.161***	0.034	0.290***	0.036	-	-	-	-	-	-	-	-
Racial Segregation Theil Index	-0.063***	0.026	-0.079***	0.024	-	-	-	-	-0.066***	0.026	0.364***	0.038
Income Segregation Theil Index	-	-	-	-	-	-	-	-	-	-	-	-
Share with Commute <15 Mins	0.291***	0.039	0.321***	0.035	-	-	-	-	0.328***	0.035	-	-
Income Distribution												
Household Income per Capita for Working-Age Adults	-	-	-	-	-0.164***	0.041	-0.360***	0.047	-	-	-0.145***	0.044
Gini Bottom 99%	-	-	-	-	-0.317***	0.037	-0.532***	0.055	-	-	-	-
Top 1% Income Share for Parents	0.011	0.036	-0.003	0.027	-	-	-	-	-0.001	0.032	-	-
Tax												
Local Tax Rate	-	-	-	-	-	-	-	-	-	-	-	-
Local Government Expenditures per Capita	-	-	-	-	0.029	0.048	-0.031	0.038	-	-	-	-
State EITC Exposure	-	-	-	-	-	-	-	-	-	-	-	-
State Income Tax Progressivity	0.116***	0.017	0.167***	0.025	-	-	-	-	0.058***	0.018	-	-
K-12 Education												
School Expenditure per Student	-	-	-	-	-0.048	0.031	0.030	0.043	-	-	-	-
Teacher-Student Ratio	-	-	-	-	-	-	-	-	-	-	-	-
Test Score Percentile	0.042	0.028	0.191***	0.034	-	-	-	-	-	-	-0.105**	0.050
High School Dropout Rate	-0.102***	0.026	-	-	-	-	-	-	-	-	-	-
College												
Number of Colleges per Capita	-0.064***	0.025	-0.054***	0.021	-0.017	0.050	-0.235***	0.042	-0.086***	0.027	-	-
Mean College Tuition	-	-	-	-	-0.121***	0.030	-0.038	0.048	-	-	-	-
College Graduation Rate	-	-	-	-	-	-	-	-	-	-	-	-
Local Labor Market												
Labor Force Participation Rate	-	-	-	-	-	-	-	-	-	-	-	-
Fraction Working in Manufacturing	-0.230***	0.021	-0.157***	0.020	-	-	-0.380***	0.040	-	-	0.413***	0.037
Growth in Chinese Imports 1990-2000	-	-	-	-	-0.118***	0.046	-	-	-0.055***	0.013	-	-
Teenage Labor Force Participation Rate	-	-	-	-	-	-	-	-	-	-	-	-
Migration												
Migration Inflow Rate	-0.067***	0.019	-	-	-	-	-	-	-	-	-	-
Migration Outflow Rate	-	-	-0.103***	0.018	-	-	-	-	-0.048***	0.018	-0.163***	0.037
Fraction of Foreign Born Residents	-	-	0.074**	0.029	0.214***	0.030	0.316***	0.043	0.081***	0.028	-	-
Social Capital												
Social Capital Index	0.163***	0.028	-	-	0.445***	0.042	0.389***	0.056	0.182***	0.027	-0.191***	0.048
Fraction Religious	0.165***	0.021	0.106***	0.025	-	-	0.276***	0.036	-	-	-0.015	0.039
Violent Crime Rate	-	-	-	-	-0.153***	0.040	-0.050	0.037	-	-	-	-
Family Structure												
Fraction of Children with Single Mothers	-0.523***	0.045	-0.526	0.041	-	-	-	-	0.344***	0.030	-	-
Fraction of Adults Divorced	-	-	-	-	-0.219***	0.039	-0.079**	0.037	-0.178***	0.021	0.116***	0.044
Fraction of Adults Married	-	-	-	-	-	-	-	-	-	-	-	-
PMP (Exact)	0.035		0.320		0.073		0.002		0.145		0.157	
PMP (MCMC)	0.037		0.306		0.072		0.002		0.144		0.154	
State Fixed Effects	no		yes		no		no		no		no	
Controls	no		no		no		no		yes		no	

Table A6: BMA Regressions - Posterior Model Probabilities (without College, g-UIP)

This table uses a larger sample size (633 commuting zones) than our baseline results at the expense of excluding the College variables from the sample space. It reports the posterior mean (PM) and the posterior standard error (PSE) for BMA regressions of a measure of mobility on the model space spanned by the various subsets of determinants and using the Benchmark Priors (g-BRIC). Each cell reports the posterior inclusion probability (PIP), which is the sum of posterior model probabilities over all those models that contain that variable, using the Uniform Information Priors (g-UIP).

	Absolute Upward Mobility				Relative Mobility	
	Baseline	State F.E.	Pop. Weighted	Urban Areas Only	Controls	
Segregation						
Fraction of Black Residents	0.996	1.000	-	-	0.996	-
Racial Segregation Theil Index	0.988	0.999	1.000	0.314	0.990	1.000
Income Segregation Theil Index	0.050	0.050	0.104	0.101	0.083	0.046
Share with Commute <15 Mins	1.000	1.000	-	-	1.000	-
Income Distribution						
Household Income per Capita for Working-Age Adults	0.065	0.046	1.000	1.000	0.067	1.000
Gini Bottom 99%	0.055	0.057	0.181	0.323	0.062	0.057
Top 1% Income Share for Parents	0.770	0.966	0.104	0.119	0.922	0.043
Tax						
Local Tax Rate	0.290	0.124	0.674	0.533	0.087	0.047
Local Government Expenditures per Capita	0.054	0.062	0.585	0.922	0.046	0.052
State EITC Exposure	0.140	0.057	0.064	0.077	0.061	0.046
State Income Tax Progressivity	1.000	1.000	0.057	0.911	0.999	0.137
K-12 Education						
School Expenditure per Student	0.084	0.048	1.000	0.297	0.053	0.148
Teacher-Student Ratio	0.129	0.093	0.052	0.071	0.159	0.142
Test Score Percentile	0.609	1.000	0.200	0.851	0.610	1.000
High School Dropout Rate	1.000	0.065	0.159	0.071	0.998	0.048
Local Labor Market						
Labor Force Participation Rate	0.077	0.048	0.049	0.064	0.072	0.045
Fraction Working in Manufacturing	1.000	1.000	0.051	0.191	1.000	0.041
Growth in Chinese Imports 1990-2000	0.121	0.059	1.000	1.000	0.121	1.000
Teenage Labor Force Participation Rate	0.061	0.040	0.195	0.059	0.049	0.143
Migration						
Migration Inflow Rate	0.607	0.157	0.049	0.078	0.665	1.000
Migration Outflow Rate	0.379	0.949	0.682	0.929	0.387	0.050
Fraction of Foreign Born Residents	0.759	0.982	0.087	0.128	0.974	0.050
Social Capital						
Social Capital Index	0.993	0.048	0.317	0.358	0.990	1.000
Fraction Religious	1.000	0.998	0.998	0.267	1.000	0.858
Violent Crime Rate	0.123	0.046	1.000	1.000	0.111	0.112
Family Structure						
Fraction of Children with Single Mothers	1.000	1.000	0.052	0.068	1.000	0.155
Fraction of Adults Divorced	0.265	0.051	1.000	1.000	0.415	1.000
Fraction of Adults Married	0.059	0.061	1.000	0.202	0.076	0.047
State Fixed Effects	<i>no</i>	<i>yes</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>
Controls	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>yes</i>	<i>no</i>

Table A7: BMA Regressions - Posterior Means and Standard Errors (without College, g-UIP)

This table uses a larger sample size (633 commuting zones) than our baseline results at the expense of excluding the College variables from the sample space. It reports the posterior mean (PM) and the posterior standard error (PSE) for BMA regressions of a measure of mobility on the model space spanned by the various subsets of determinants and using the Uniform Priors (g-UIP). The PM is the average of the LS coefficient estimates (COEF) of individual models weighted by the posterior model probability and the PSE is the BMA estimate for the standard error (SE). ***, **, and * denote significance of the regression coefficient at 1%, 5%, and 10%, respectively.

	Absolute Upward Mobility								Relative Mobility			
	Baseline		State F.E.		Pop. Weighted		Urban Areas Only		Controls			
	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE	COEF	SE
Segregation												
Fraction of Black Residents	0.176***	0.039	0.286***	0.032	-	-	-	-	0.181***	0.040	-	-
Racial Segregation Theil Index	-0.076***	0.021	-0.082***	0.017	-0.107***	0.020	-0.024	0.041	-0.074***	0.021	0.155***	0.017
Income Segregation Theil Index	0.000	0.007	-0.001	0.007	0.004	0.015	-0.005	0.022	0.003	0.013	-0.001	0.018
Share with Commute <15 Mins	0.255***	0.032	0.270	0.027	-	-	-	-	0.241***	0.032	-	-
Income Distribution												
Household Income per Capita for Working-Age Adults	0.001	0.011	0.000	0.005	0.193***	0.036	0.256***	0.047	0.001	0.014	-0.094***	0.019
Gini Bottom 99%	-0.001	0.006	-0.001	0.006	-0.011	0.029	-0.040	0.069	-0.001	0.007	0.002	0.016
Top 1% Income Share for Parents	-0.075	0.050	-0.111***	0.036	-0.004	0.017	-0.008	0.033	-0.094***	0.040	0.000	0.007
Tax												
Local Tax Rate	0.016	0.030	0.005	0.015	0.077	0.064	0.075	0.083	0.003	0.011	-0.001	0.010
Local Government Expenditures per Capita	0.001	0.008	0.001	0.009	0.038	0.037	0.099**	0.043	0.000	0.006	-0.008	0.068
State EITC Exposure	0.004	0.012	0.001	0.006	0.002	0.010	-0.002	0.013	0.001	0.006	0.000	0.000
State Income Tax Progressivity	0.103***	0.018	0.171***	0.021	0.001	0.006	0.095**	0.042	0.080***	0.017	0.000	0.000
K-12 Education												
School Expenditure per Student	0.002	0.011	0.000	0.006	0.090***	0.019	0.020	0.036	0.001	0.006	0.000	0.001
Teacher-Student Ratio	0.005	0.015	0.003	0.014	0.000	0.006	0.000	0.013	0.006	0.017	0.000	0.001
Test Score Percentile	0.046	0.043	0.198***	0.028	0.009	0.021	0.103*	0.055	0.043	0.040	-0.005***	0.001
High School Dropout Rate	-0.101***	0.022	-0.001	0.008	0.008	0.022	0.001	0.013	-0.090***	0.021	0.000	0.000
Local Labor Market												
Labor Force Participation Rate	-0.002	0.011	-0.001	0.005	-0.001	0.005	0.001	0.008	-0.002	0.010	0.000	0.002
Fraction Working in Manufacturing	-0.223***	0.025	-0.173***	0.021	0.000	0.006	-0.013	0.033	-0.155***	0.025	0.000	0.008
Growth in Chinese Imports 1990-2000	-0.003	0.011	-0.001	0.005	-0.205***	0.025	-0.338***	0.037	-0.003	0.010	0.227***	0.023
Teenage Labor Force Participation Rate	0.002	0.012	0.000	0.007	-0.007	0.016	0.000	0.008	0.000	0.008	0.000	0.001
Migration												
Migration Inflow Rate	-0.044	0.040	-0.010	0.028	0.000	0.008	-0.002	0.017	-0.054	0.043	-12.315***	2.316
Migration Outflow Rate	-0.025	0.041	-0.100***	0.031	-0.044	0.036	-0.173***	0.065	-0.027	0.038	0.004	0.053
Fraction of Foreign Born Residents	0.060	0.036	0.098***	0.026	-0.001	0.012	-0.010	0.036	0.096***	0.030	-0.006	0.065
Social Capital												
Social Capital Index	0.138***	0.037	0.001	0.008	0.018	0.030	0.042	0.066	0.130***	0.035	-0.252***	0.039
Fraction Religious	0.162***	0.022	0.093***	0.022	0.149***	0.035	0.028	0.056	0.140***	0.021	0.006**	0.003
Violent Crime Rate	-0.006	0.018	0.000	0.006	0.165***	0.023	0.216***	0.033	-0.005	0.016	0.002	0.007
Family Structure												
Fraction of Children with Single Mothers	-0.481***	0.047	-0.482***	0.039	-0.001	0.008	0.001	0.010	-0.450***	0.045	0.481	1.346
Fraction of Adults Divorced	-0.015	0.028	-0.001	0.007	-0.358***	0.039	-0.546***	0.063	-0.025	0.034	0.447***	0.043
Fraction of Adults Married	-0.001	0.009	0.001	0.008	-0.133***	0.022	-0.011	0.027	-0.002	0.012	-0.002	0.025
State Fixed Effects	no		yes		no		no		no		no	
Controls	no		no		no		no		yes		no	