ABSTRACT  This paper empirically assesses, for the first time, the relationship between immigration and national economic development in both the global North and the global South. A series of panel models demonstrate that immigration exacerbates North-South inequalities through differential effects on average per capita incomes in the global North and global South. Immigration has positive effects on average incomes in both the North and the South, but the effect is larger in the global North. Thus the relationship between immigration and development evinces a Matthew Effect at the world level: by contributing to differential levels of economic development in the North and South, immigration widens international inequalities in the long term, resulting in the accumulation of advantage in the North. The implications of the results are discussed in the context theory and policy on the migration-development nexus.  

KEYWORDS  Migration, Development, Inequality, Global South, South-South Migration

International migration is globalizing. Humans have migrated throughout history, and the late nineteenth and early twentieth centuries were also characterized by significant surges in international migration (Hatton and Williamson 2006), but the current era is distinguished both by the absolute magnitude of these flows and by an unprecedented global diversity in their sources and destinations (Castles and Miller 2003). Although international migrants still represent approximately 3 percent of the world population, a figure that has remained relatively stable since the 1960s, an estimated 214 million people now reside outside of their country of birth, more than at any other time in the modern era (UN 2013). Indeed, if the global stock of international migrants represented the population of a single “country,” it would be the fifth most populous in the world, ranking between Indonesia (231 million) and Brazil (193 million).

Not only are there more international migrants, but migration patterns are broadening to include a much wider array of both sending and receiving countries (Castles and Miller 2003; UN 2009b). International migrants now move between all of the world regions, not just predominantly between Europe and its colonies as in the previous era of internationalization (Massey et al. 2005). One of the key trends associated with the globalization of international migration is the rising importance of migration into, and within, the global South. Indeed, approximately one-half of all migrants emigrating from less-developed countries now move to other less-developed countries, making “South-South” migration almost equivalent in magnitude to South-North migration (Ratha and Shaw 2007).
As international migration patterns have globalized, and as the Global South has gained recognition as an important destination for migrants, new questions are emerging about whether migration is capable of stimulating national economic development and, if so, whether it might ameliorate extant cross-national inequalities. Persistent, and in many cases expanding, income gaps between countries are perhaps the most pressing issue confronting world society (Milanovic 2007). International migration is emerging as a means of ameliorating these gaps as key international organizations place migration squarely at the front of the international development agenda. The United Nations has spearheaded the movement, beginning in 1994 with the Population and Development Conference in Cairo, which issued a Program of Action calling for “orderly international migration that can have positive impacts on both the communities of origin and the communities of destination” (UN 1994). Since Cairo, the United Nations has led the formation of the Global Commission on International Migration and has initiated the High-Level Dialogue on International Migration and Development, the Global Migration Group, and the Global Forum on Migration and Development, each of which has been tasked, in different respects, with addressing the relationship between migration and development. As a result of these efforts, the migration-development nexus is now prominent in international policy circles. Over the last few years, for example, migration and development has been the topic of the United Nations’ Human Development Report (2009a) and the World Bank’s Global Economic Prospects report (2006).

Yet disagreements over the consequences of migration for national economic development, and thus for international inequality, remain prominent. Prescriptions to liberalize migration flows are becoming ascendant as the search continues for alternative means of addressing seemingly intractable levels of international inequality: “In spite of a myriad of development projects, there is still a great chasm between rich and poor countries. However, one tool has as yet been left untried in attempts to bridge the divide: labor mobility” (Clemens 2010). However, ongoing concerns about the loss of population and brain drain continue to foster significant skepticism: “International migration today is not an instrument for reducing inequality” (Castles 2007:4).

Does migration exacerbate or diminish North-South inequality in the world economy? Does migration into the global South have different effects than in the global North? These are fundamental questions, but they have not yet been adequately addressed. Though migration has been placed at the forefront of the international development agenda, our understanding of the relationship between international migration, national economic development, and international inequality remains limited by the paucity of cross-national, empirical analysis. The movement to elevate migration as a development strategy has gained momentum rather quickly, outpacing empirical scrutiny. Cross-national research on international migration in the global South in particular is especially limited, even though approximately two of every five migrants in the world reside in the global South (Ratha and Shaw 2007).

This paper addresses these shortcomings. It provides the first cross-national empirical analysis of the long-term relationship between immigration and national economic development in both the global North and the global South.
Cross-country, or international, income differences are a function, in large part, of different rates of growth within countries. Thus the question of whether international migration is associated with international inequalities can be addressed by empirically assessing the effect of migration on economic development levels within countries over time, using cross-national data. This is the approach taken here. I begin by incorporating theory and prior research from neoclassical economics and international political economy, two disparate strands of research that have not engaged in much cross-fertilization, into an integrated theoretical framework. I then use this framework to develop the hypothesis that immigration exacerbates international inequalities by disproportionately benefiting receiving countries in the global North.

**IMMIGRATION, DEVELOPMENT, AND INTERNATIONAL INEQUALITY**

Historical evidence strongly suggests that national economic development depends, in large part, upon the existence of a sufficient supply of cheap, flexible labor (Castles and Miller 2003). Capitalist economies rest upon a fundamental distinction between capital and labor. Capital is a fixed factor of production; it cannot be idled without imposing direct costs on its owners. Labor, however, is a variable factor of production; it can be idled as necessary to maintain profitability. The availability of a sufficient supply of cheap, flexible labor is thus crucial for capitalist economic growth because it smooths out fluctuations in the business cycle and restrains wage growth, both of which further the process of capital accumulation.

Initially, production draws on internal supplies of labor, but eventually accumulation rests on the ability to procure supplies of foreign, immigrant labor. Lewis (1954) describes the role of a cheap, flexible supply of labor in his classic dual-sector model of economic development. The development of national capitalist economies is predicated on the existence of dual sectors within the country: a capitalist sector and a noncapitalist, subsistence sector. The capitalist sector develops, or expands, only by incorporating labor from the subsistence sector. Early on, the capitalist sector can expand without increasing wages because there is essentially an unlimited supply of labor in the subsistence sector. By keeping wages low, this unlimited supply of labor allows higher returns to capital, which promotes a self-sustaining cycle of growth through accumulation. Some portion of the surplus value is reinvested in production in order to further accumulation, which stimulates employment demand and draws in more labor from the subsistence sector. Eventually, however, growth in the capitalist sector effectively exhausts the supply of surplus labor from the internal subsistence sector, causing wages to increase (i.e., the Lewis turning point) (Ranis and Fei 1961).

In response to upward pressure on wages, employers search for new sources of labor abroad, stimulating inflows of foreign labor and effectively creating an international labor supply system (Sassen 1988). The availability of an essentially unlimited international supply of labor was a key impetus to economic development in the global North. Brinley Thomas’s (1973) seminal analysis of the nineteenth- and early twentieth-century Atlantic economy demonstrates the profound role of immigration in US economic development. Thomas demonstrates that major inflows of immigrant labor in the United States preceded...
expansions in fixed capital investments and building activity. The very availability of such large supplies of immigrant labor stimulated both the large-scale investments in fixed capital and the innovations in production methods that furthered capital accumulation and economic growth: “The introduction of automatic machines eliminating human skill over a wide field was stimulated by the incursion of such a considerable volume of cheap labor; it was profitable to invest in capital-saving equipment. . . . Thanks to immigration of cheap labor, the U.S. was able to take full advantage of those innovations by ‘widening’ her capital structure with enormous benefit to her physical productivity and economic power” (Thomas 1973:165).

More recent studies lend further support to earlier historical studies while more precisely estimating the economic effects of immigration. Much of this research focuses on how immigration affects the wages of residents in host countries. Borjas (1995) describes the gains from immigration in terms of an immigration surplus: the increase in national income that accrues to native residents as a result of immigration. Most studies estimate the immigration surplus to be positive but relatively small compared to the size of the host economy. For example, following several assumptions about the elasticity of wages and labor supply compositions, Borjas (1995) estimates the immigration surplus to be approximately 0.1 percent of GDP in the United States, which in a $1.4 trillion economy equates to roughly $14 billion per year or $47 per person.

Understanding how immigration affects wages is a step toward understanding the broader effect of immigration on aggregate incomes (Dustmann, Glitz, and Frattini 2008), and a series of econometric studies have taken this next step. This research generally shows that immigration raises per capita incomes, usually by 1 to 2 percent of GDP, in a wide array of host countries. Most of this research, however, is cross-sectional, which cannot shed light on the long-term implications of immigration and is limited to developed countries, including Norway, Sweden, and Finland (Feridun 2004, 2005, 2007), the United States (Borjas 1995, 2003; Ottaviano and Peri 2008), Canada and Mexico (Aydemir and Borjas 2007), Spain (De Arce and Mahia, forthcoming), the United Kingdom and Ireland (Barrell, Fitzgerald, and Riley 2010), and Greece (Cholezas and Tsakloglou 2009; Lianos, Sarris, and Katseli 1996). An exception to the exclusive focus on developed countries is a recent study of Thailand (Pholphirul and Rukumnuaykit 2009).

There are a few econometric studies that further expand the scope of the analysis from one country to multiple countries. The World Bank’s World Economic Prospects report (2006) included a global simulation that estimated that incomes in developed countries would increase by 0.4 percent given a 3 percent increase in immigration from less-developed countries. Two background papers for the UN’s Human Development Report (2009a) provide similar findings. One study found that developed countries would capture approximately one-fifth of the increase in income resulting from a 5 percent increase in immigration, resulting in a gain of approximately $190 billion (van der Mensbrugghe and Roland-Holst 2009). Another study analyzed annual immigration flows in 14 OECD countries over the period 1980–2005 and found that a 1 percent increase in immigration raised per capita incomes by 1 percent (Ortega and Peri 2009). Again, however, these studies are restricted largely to developed countries, limiting the cross-national applicability of the
findings. In perhaps the only previous cross-national study to include less-developed countries, Felbermayr, Hiller, and Sala (2010) estimated a model on 163 countries in 2000 and found that immigration had a positive but relatively small effect on per capita incomes, increasing incomes by 0.12 percent. That is, on average, a 10 percent increase in the stock of immigrants would be associated with an increase in per capita incomes of 2.2 percent.

There is a broad consensus that the relationship between immigration and economic development becomes evident only over a long-term time horizon (Goldin, Cameron, and Balajaran 2011). Thomas (1973) found that the time lag between inflows of immigrants and economic expansion in the United States was quite long, often requiring years to manifest, because immigration induces structural transformations in the basic foundations of the economy, including capital-labor relations and production techniques. Recent research more precisely estimates that gains in productivity, output, and income from immigration require approximately 10 years to manifest, as firms restructure production operations to incorporate immigrant labor and as workers, both immigrant and native, transition toward new employment opportunities requiring different skill levels (Peri 2010; Zavodny 2011).

Immigration is thus a key, but relatively underinvestigated, explanation of national economic development. Prior research demonstrates that countries that have been able to draw on an international supply of flexible, cheap labor have been able to expand their economies and that immigration has a positive but relatively small effect on average incomes in destination countries:

**Hypothesis 1**: Immigration will be positively associated with long-term economic development.

Previous research, however, has neglected the world-economic context in which international migration occurs and has therefore overlooked the possibility that immigration may not be uniformly beneficial for all countries. Indeed, there is reason to believe that wealthier countries gain disproportionately from immigration. High-income countries maintain their advantaged position vis-à-vis other countries coercively, through political-military force, but also by monopolizing new technologies that drive leading sectors (Modelski and Thompson 1996) and keep them at the more profitable end of the product cycle (Vernon 1966). Leading sectors are the “basic stimulants” of national economies, and leading economies are the “spark plugs of the world economy” (Modelski and Thompson 1996:71). Control over new forms of technology and innovation produces monopoly profits in industries employing these technologies but also generates huge spillover effects throughout the economy. The economic surplus generated from these leading sectors then finances the expansion of coercive, military-political power, which further supports the advantaged position of wealthier countries. As leading-sector technologies and innovations diffuse outward from core countries to more peripheral countries, competition increases, profitability levels decline, and growth rates slow (Modelski and Thompson 1996).

Immigration therefore is likely to have uneven effects across the global North-South divide. On the one hand, immigration into wealthier, northern countries may stimulate relatively higher levels of innovation and investment because these countries are at the leading edge of the product cycle. Economic production in northern countries is driven by industries
in leading sectors that generate relatively higher levels of surplus value. These sectors have more highly developed technological infrastructures and more highly educated labor forces that augment the investment- and innovation-inducing effects of immigration on development levels. On the other hand, immigration into countries in the global South may also promote long-term development, but the investment- and innovation-inducing effects of immigration are likely to be weaker, or dampened, by the lower surplus value–generating forms of economic production that predominate in these economies. Thus the disproportionate effects of immigration in the global North and South exacerbate international inequality across the North-South divide through a differential effect on average incomes within countries, over time. This paper tests this proposition:

**Hypothesis 2:** Immigration will be more beneficial, over the long term, for per capita incomes in countries in the global North compared to countries in the global South.

**DATA AND METHOD**

**Key Variables and Hypotheses**

The dependent variable is GDP per capita in constant 2000 US dollars. It is taken from the World Development Indicators data set (World Bank 2009). GDP per capita is the most widely used measure of economic development, or aggregate living standards, in the cross-national sociological literature. The World Bank converts domestic currency values of GDP into dollar values using 2000 official exchange rates. The key independent variable is the stock of international migrants per capita. This variable represents cumulative, long-term immigration into the host country and it is taken from the United Nations’ Trends in International Migration Stock (2009b). The United Nations defines an international migrant as a person who is living in a country outside of his or her country of birth. These data are compiled from national population censuses and registers that identify migrants by place of birth (i.e., the foreign-born population) or citizenship (i.e., the foreign population). Approximately 78 percent of the countries with data on the international migrant stock identify migrants on the basis of their birthplace (179 of 230 countries), and the others identify migrants on the basis of citizenship (42 of 230 countries). International migrant stocks data include refugees and asylum seekers. Because refugee and asylee populations may have different effects than labor migrants on development, they are removed from the migrant stocks variable. International migrant stocks is considered the most “global and comparable” measure of international migration currently available (United Nations 2008). Moreover, international migrant stocks is particularly well suited to this study because the time series spans 40 years, allowing an analysis of long-term effects, and it is available only at 5-year intervals, reducing its sensitivity to short-term shocks (United Nations 2009b). Both per capita income and immigration per capita are logarithmically transformed to correct for skewed distributions and to aid interpretation of the results, as log-transformations make it possible to interpret the effect of immigration on per capita income in percentage terms across countries that may have very large differences in the sizes of their immigrant stocks.

To test whether immigration has differential effects across the North-South divide, I place countries into one of two world-groups, the global North and the global South, on
the basis of their score on the United Nations’ Human Development Index (HDI). The HDI is a composite score composed of three indicators: GDP per capita, life expectancy, and education. Because it is the most comprehensive measure available, it is well suited to assess cross-national differences in development. The global North is composed of countries with “very high human development,” defined by the United Nations as HDI scores of 0.8 or more, and the global South is composed of countries with HDI scores less than 0.8. This definition allows countries to move into, or out of, each region over time as human development levels increase or decrease.

Estimation Techniques and Additional Sensitivity Tests
This study uses time series of cross-sectional (i.e., panel) data to estimate autoregressive random effects and fixed effects models with a 10-year lag between the independent variables and the dependent variable. This estimation strategy addresses two important methodological issues associated with studying the migration-development relationship over time and across countries. First, a primary purpose of the paper is to estimate the long-term effect of immigration on development. To do this, it is necessary to specify a time lag between the independent and dependent variables. However, lagging the dependent variable is also important methodologically, as it mitigates against endogeneity bias, or reverse causality. I hypothesize that immigration levels will affect economic development levels, but it is possible that higher economic development levels affect immigration levels. Specifying a contemporaneous relationship between immigration and development leaves open the question of endogeneity bias. For example, it would be difficult to determine the direction of causality if the models related immigration levels in the year 2000 to development levels in the year 2000. This is a problem for cross-sectional research. Lagging the dependent variable cannot entirely mitigate the problem of reverse causality. However, by incorporating time into the model, longitudinal models can reduce the problem of endogeneity bias by more effectively satisfying the time order criterion of causality. For example, it is a non sequitur to state that development levels in the year 2000 influence immigration levels in 1990. Thus the models include measures of the dependent variable 10 years after the measures of the independent variables.

Specifying a 10-year lag is not arbitrary. Prior research has shown that the effects of immigration require approximately 10 years to become evident (Peri 2010; Thomas 1973). In addition, a decennial time horizon compromises between a desire to examine the relationship over as long a time period as possible and a desire to maximize the number of observations available for the models. Because international migration data are only available in 5-year intervals, the shortest time frame possible for these models is 5 years, which is not sufficient to examine long-term effects. However, 15-year time lags significantly reduce the number of observations available for each model. Thus a 10-year time period maximizes the number of observations while allowing any long-term relationship to manifest.

Second, in addition to the problem of endogeneity bias, the models address the problem of unobserved heterogeneity. By pooling multiple cross sections over time, panel data include variation over space (i.e., countries) and time (i.e., years), allowing the models to incorporate time-invariant, country-specific factors not explicitly included in the model.
Unobserved effects are central to the problem of causal inference, and panel data provide an advantage over cross-sectional data in addressing the issue of unobservable influences (Halaby 2004). A sequence of preliminary specification tests was conducted to determine the appropriate analytic model. The Breusch-Godfrey Lagrange multiplier test and the Wooldridge test for autocorrelation in panel data both indicated that the residuals were autocorrelated. To address serial correlation in the residuals, the residuals are modeled as a first-order autoregressive (AR[1]) process. The Breusch-Pagan Lagrange multiplier test indicated that country-specific heterogeneity is present in the data, suggesting the need to use a random or fixed effects technique. The Hausman specification test selected the fixed effects model. As a result, I present fixed effects models with an AR(1) correction. These models also include dummy variables for time periods to model unobserved effects that are invariant with cross-sectional time periods, making them two-way fixed effects models (Baum 2006). Although it is not entirely possible to demonstrate causality with existing methods, taken together, this analysis employs one of the most rigorous techniques available to test the hypotheses, as the models address endogeneity bias, both unit-specific and time-period-specific heterogeneity bias, and serial correlation in the residuals.

The results presented in the following tables are robust to additional sensitivity tests. Although the analyses incorporate data on the largest possible sample given data availability, it is possible that the estimates might be sensitive to sample composition. Thus two different resampling techniques were used to estimate the standard errors for the coefficients: bootstrapping and jackknifing. Both techniques are data-dependent, nonparametric approaches to estimating standard errors from the observed distribution of the sample. Bootstrapping constructs samples of the standard errors by taking random draws of N observations from an N-observation data set. For this analysis, the bootstrapped standard errors were calculated on the basis of 1,000 repetitions of sample size N for each model. Jackknifing repeatedly calculates the statistic by omitting one randomly selected observation from each sample. As a result, jackknifing has been used to check the robustness of the estimates to influential observations through resampling. Because the data are clustered, one country-year (i.e., observation) was omitted from each sample when calculating the jackknife standard errors for the estimates. The estimates presented below are robust to both bootstrap and jackknife resampling techniques (results from these supplemental analyses are available upon request).

Countries Included in the Analyses
The analyses include data on all countries with populations greater than 1 million that have complete data on the variables in the models. The dissolution of the Soviet Union artificially inflated the population of international migrants in post-Soviet countries, as large proportions of populations living in the former Soviet Union suddenly became “international migrants” in the successor states without necessarily moving into these states. To avoid problems associated with these discontinuities in the data, successor states from the former Soviet Union are excluded from the analyses.

Because cross sections of data are pooled over time, the unit of analysis, or observation, is the country-year. Country-years are selected on the basis of data availability. That is, country-years are included in the analysis if they have information on the independent
variables at time $t$ and the dependent variable at time $t + 10$. They are not included if they are missing data on the dependent variable at time $t$ or any of the independent variables at time $t - 10$. The overall time span for the study covers the period 1970–2005 because the first wave of data is available in 1970 and the last wave of data is available in 2005. In order to maximize the sample size for each model, the sample size varies across models, a common approach in cross-national sociological research.

The set of countries included in the analyses varies across models in order to maximize the amount of information available for each model. Together, these countries are not, strictly speaking, a random draw from the population of countries, but they are generally representative of the world population in terms of both regional distribution and income distribution. Thus the set of countries included in the analyses represent the most comprehensive test of the hypotheses that is possible with extant data. A list of countries included in the analyses is available upon request.

**Other Independent Variables**

Previous cross-national studies have identified two international factors that are important for national development outcomes: international trade and foreign direct investment (FDI) (Chase-Dunn 1975; Jorgenson 2009; Jorgenson, Dick, and Mahutga 2007; Kentor 1998, 2001; Kentor and Boswell 2003; Kentor and Jorgenson 2010; London 1988; London and Smith 1988; Shandra et al. 2004, 2005; Timberlake and Kentor 1983). To distinguish the effect of international migration from international trade and FDI, the analysis controls for exports per GDP and FDI stocks per GDP. The former measure comes from the World Development Indicators data set (World Bank 2009), and the latter measure comes from the *World Investment Report* (UNCTAD 2005). FDI stocks is log-transformed to correct for a skewed distribution. Previous studies (Dixon and Boswell 1996; Firebaugh 1992) found that domestic investment and foreign investment have different effects on host social structures. The analysis therefore also includes a control for gross domestic investment per GDP. This measure comes from the World Development Indicators data set (World Bank 2009) and is log-transformed to correct for a skewed distribution.

Several factors internal to countries are likely to affect development levels. Democratic political structures are more likely to respond to public opinion and special interest groups concerned with issues related to development than more repressive political structures. The analyses control for this effect by including a measure of democratic development, or domestic political structure, in the country. Values on this variable range from $-10$ to $+10$, with lower scores indicating more authoritarian political structures and higher scores indicating more democratic political structures. These data are taken from the Polity IV data set (Marshall, Jaggers, and Gurr 2006). Similarly, the state plays a crucial role in economic development (Evans 1995), as it shapes the policy context in which national markets operate and serves as an intermediary between broader, international factors and national populations. Thus the analyses include a variable to control for the influence of the state on development. A state’s capacity to influence development is largely a function of its size, which is often measured as government consumption per GDP. This measure is taken from the *World Development Indicators* data set (World Bank 2009), and it includes all government...
expenditures for the purchase of goods and services. Finally, the models include two measures to assess the independent effects of population on development: urbanization and population age structure. Urbanization is measured as the percentage of the population living in urban areas, and population age structure is measured as the percentage of the population aged 20 to 29. These two variables assess the effects of the spatial distribution of the population and the proportion of the population in the modal age group for immigrants in the labor market. Both variables come from the World Development Indicators (World Bank 2009). Bivariate correlations and descriptive statistics for the variables included in the analysis are available upon request.

RESULTS

Table 1 provides results from the multivariate analysis. Seven models are presented that test the two hypotheses. The key finding to emerge from the analysis is that immigration is a robust explanation of long-term economic development in receiving countries and that it is disproportionately beneficial for countries in the global North.

In model 1, per capita incomes are regressed only on immigration as a baseline test of the relationship across the widest possible sample of countries, without differentiating between countries in the global North and global South. Because GDP per capita and international migration per capita are log-transformed, the coefficient for international migration should be interpreted as the percentage change in per capita incomes associated with a percentage change in immigration. The coefficient for immigration is positive, indicating that immigration is associated with higher average incomes 10 years later, but the effect is not statistically significant. Model 2 allows for development levels to vary between countries of the global North and global South by including the dummy variable for global South. Controlling for a country’s position in the world economy is important for understanding the relationship between immigration and development. On average, per capita incomes in the global South are lower than in the global North, as indicated by the main effect for global South. Controlling for this relationship, the coefficient for immigration is positive and significant, indicating that a 1 percent increase in immigration is associated with a 1.3 percent increase in per capita incomes. The magnitude of the effect of immigration is very much in line with prior research. Together, the results from models 1 and 2 provide some support for hypothesis 1: immigration has a positive effect on economic development levels within countries, regardless of their position in the world economy.

Model 3 provides an initial test of hypothesis 2 by including an interaction term that allows the effect of immigration to vary across countries in the global South and global North. The results confirm the importance of the North-South divide for understanding the macro-level, long-term effects of immigration on economic development in the world economy. As hypothesized, immigration disproportionately benefits countries in the global North. Immigration is associated with higher levels of economic development 10 years later, but the effect in countries in the global North is nearly twice as large as in countries of the global South. On average, a 1 percent increase in immigration raises long-term average incomes by approximately 2 percent in the global North, but only 1 percent in the global South. Notably, the effect of position in the world economy disappears when the effect of
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<tr>
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<th>Model 1</th>
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<td>0.047</td>
<td>-0.012</td>
<td>5.081***</td>
</tr>
<tr>
<td></td>
<td>-1.01</td>
<td>-0.15</td>
<td>-0.30</td>
<td>0.45</td>
<td>1.54</td>
<td>-0.42</td>
<td>21.92</td>
</tr>
</tbody>
</table>

*(continued)*
immigration is allowed to vary across the global North and global South, which suggests that immigration explains the effect of being positioned in the global North or global South for long-term development.

Models 4 through 7 assess the robustness of the findings against alternative explanations of development. The results generally uphold the main findings. Across all the models, immigration has a positive effect on average per capita incomes in countries of the global North, raising incomes from 1.4 percent (model 5) to 2.8 percent over 10 years. Immigration is also associated with higher average incomes in countries of the global South, but the effect is much smaller, ranging from 0.3 percent to 1 percent. These income gains from immigration are relatively small, but they are not trivial. Take the average effect of these gains in the United States, for example. A 1 percent increase in the stock of foreign-born persons per capita would raise average income by $1,000 (2 percent) at a per capita income of approximately $50,000 per year. The effect of immigration in the global South is only nonsignificant when controlling for FDI stocks and gross domestic investment, both of which are also nonsignificant in this model. The coefficients from this model, however, should be interpreted with the caveat that the sample size is nearly 70 percent smaller than in most of the other models, an outcome of the fact that data on FDI stocks and gross domestic investment were not available for as large of a sample. Of the control variables, only urbanization and exports are significant explanations of per capita incomes; the former is associated with higher average incomes and the latter with lower average incomes over 10 years.

**TABLE 1.** Autoregressive Two-Way Fixed Effects Regressions of GDP per Capita on International Migrants per Capita, 1970–2005 (continued)

<table>
<thead>
<tr>
<th>Year</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>-0.100</td>
<td>0.035</td>
<td>0.029</td>
<td>0.071</td>
<td>-0.036</td>
<td>0.020</td>
<td>6.465***</td>
</tr>
<tr>
<td></td>
<td>-0.28</td>
<td>0.89</td>
<td>0.75</td>
<td>1.51</td>
<td>-0.91</td>
<td>0.54</td>
<td>22.34</td>
</tr>
<tr>
<td>1990</td>
<td>0.059</td>
<td>0.122**</td>
<td>0.116**</td>
<td>0.175**</td>
<td>0.017</td>
<td>0.104*</td>
<td>7.359***</td>
</tr>
<tr>
<td></td>
<td>1.57</td>
<td>2.69</td>
<td>2.59</td>
<td>3.21</td>
<td>0.38</td>
<td>2.51</td>
<td>22.58</td>
</tr>
<tr>
<td>1995</td>
<td>0.125**</td>
<td>0.221***</td>
<td>0.217***</td>
<td>0.276***</td>
<td>0.088</td>
<td>0.204***</td>
<td>7.973***</td>
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<td></td>
<td>3.01</td>
<td>4.42</td>
<td>4.39</td>
<td>4.51</td>
<td>1.71</td>
<td>4.47</td>
<td>22.77</td>
</tr>
<tr>
<td>Constant</td>
<td>7.722***</td>
<td>7.656***</td>
<td>7.572***</td>
<td>7.442***</td>
<td>6.398***</td>
<td>7.714***</td>
<td>-0.721***</td>
</tr>
<tr>
<td>R² (within)</td>
<td>.07</td>
<td>.18</td>
<td>.20</td>
<td>.23</td>
<td>.26</td>
<td>.26</td>
<td>.09</td>
</tr>
<tr>
<td>N (country-years)</td>
<td>970</td>
<td>703</td>
<td>703</td>
<td>561</td>
<td>703</td>
<td>625</td>
<td>171</td>
</tr>
<tr>
<td>N (countries)</td>
<td>165</td>
<td>134</td>
<td>134</td>
<td>115</td>
<td>134</td>
<td>129</td>
<td>57</td>
</tr>
</tbody>
</table>

Note: *p < .05; **p < .01; ***p < .001 (two-tailed tests); unstandardized coefficients with z-values below.
DISCUSSION AND CONCLUSION

The world is characterized by large, and in many cases expanding, income gaps between countries of the global North and countries of the global South. The World Bank (2010) estimates that the citizens of Luxembourg hold the highest incomes in the world, earning an average of US$89,992 in 2010. At the bottom, citizens in the Democratic Republic of the Congo earned an average income of US$175 in 2010. The gap is remarkable. The typical Luxembourger garners nearly 2.40 times the average income of a Congolese, earning in a little more than one day what an average Congolese will earn in the entire year. The absolute North-South gap is unprecedented. Never before have human beings lived in a context in which living standards are as unequal as they are today (Milanovic 2007).

As the absolute number of international migrants continues to rise, and migration patterns continue to globalize, international migration is increasingly being proffered as a possible means of reducing these inequalities. This paper provided the first cross-national empirical test of the relationship between international migration and international inequality. Using the most inclusive and comprehensive data possible, and the most rigorous modeling techniques available, a series of panel models demonstrated that international migration exacerbates international inequality through differential effects on national development levels in the global North and global South. The results suggest that immigration has a positive long-term effect on average per capita incomes in countries in both the global North and global South but that it is much more beneficial in the global North. In countries of the global North, a 1 percent increase in immigration is associated with income gains of up to approximately 2.5 percent, on average, compared to the global South, where the same increase in immigration results in income gains ranging from 0.3 percent to 1 percent.

The beneficial effect of immigration in the global North is consistent with the vast majority of prior research, which reports that immigration has a relatively small but positive effect on aggregate incomes of approximately 1 percent. The effect of immigration in the global South, however, has not been empirically demonstrated prior to this paper. Much research suggests that immigration is uniformly beneficial for development across countries, but the global South has received relatively little attention in prior research. The findings from this paper challenge the straightforward application of findings from the global North to countries of the global South. The world-historical context is important for understanding the effects of immigration on development prospects today.

The findings from this study have practical and theoretical implications. Even in a globalizing economy, the pursuit of development remains predominantly a national project, at least in the policy realm; there is not yet a polity with authority to manage or influence development beyond the nation-state. In countries across the world, democratic and otherwise, leaders come to power, and hold onto their positions, largely on the basis of promises to deliver (continual) improvements in living standards. The results from this study suggest that using immigration to promote economic development is a rational course of action for policy makers, as immigration raises long-term living standards in countries in both the global North and the global South. In this sense, efforts to minimize or reduce immigration at the national level appear much less rational, and attempts to place responsibility on immigrants for national economic ills seem even less reasonable. On the contrary, this
study provides evidence that immigration promotes national economic development in the long term: countries in which foreign-born persons represent larger proportions of the population have higher average incomes over the long term.

Since the world economy remains divided up into national units with borders, questions about migration and development at the national level remain relevant. But because countries are also embedded within a world economy, the effects of immigration on economic development within countries have implications for understanding international inequalities within the world economy. Political leaders in the global North, and the United States in particular, realize that the relationship between immigration and development at the national level shapes the position of the country in the world economy. According to Barack Obama (2013), “The promise we see in those who come here from every corner of the globe, that’s always been one of our greatest strengths. It keeps our workforce young. It keeps our country on the cutting edge. And it’s helped build the greatest economic engine the world has ever known.” And according to George W. Bush (2006), “It says something about our country that people around the world are willing to leave their homes and leave their families and risk everything to come to America. Their talent and hard work and love of freedom have helped make America the leader of the world.”

Thus, although development remains largely a national goal, globalization is elevating this goal to a supranational level, where it is becoming possible to discuss global development. It is at this level in particular, among the highest echelons of discourse and exchange at the World Bank, the United Nations Development Programme, and the International Monetary Fund, that international migration has emerged as a strategy to deliver global development. At this level, only one unit of analysis, the world (economy), develops. If the world is the appropriate unit of analysis for development policy, then it is important to inquire not only about whether international migration develops (i.e., grows) the world economy but also about how international migration affects the distribution of development, or growth, throughout countries in the world economy.

This study cannot answer the question of whether migration promotes global development per se. However, it does shed light on the question of how the relationship between immigration and development within countries affects international inequalities. In this regard, the findings lend credence to ongoing concerns about whether international migration can ameliorate international inequalities. At a minimum, the results presented here suggest that international migration may not remedy international inequalities, at least not at historical, or current, levels of international migration. Indeed, this study provides evidence that immigration is actually a mechanism that exacerbates international inequalities.

This is concerning from many different perspectives, but it is especially concerning because international migration is increasingly being touted as a development tool by key actors at the highest levels of policy making. To be clear, the findings from this study do not support policies to restrict immigration at the national level if economic development is an objective. However, at the global level it appears that immigration, by itself, will not close income gaps, and the political institutions and policy mechanisms to ameliorate this problem do not yet exist. Thus the unit of analysis that develops (i.e., nation-states, the world, etc.) is important for understanding the implications of migration for development.
In this regard, the promoters of migration-as-development are not necessarily wrong in claiming that migration is development. From the perspective of receiving countries, immigration promotes long-term economic development within countries of both the global North and the global South. But immigration can promote national economic development in all countries, while exacerbating international inequalities at the same time if it promotes different levels of development in countries of the North and South. Only a cross-national lens can provide such insight by moving the perspective beyond the nation-state. If international inequalities are a key driver of international migration, as economic theory argues, then immigration may be reproducing the very problem that migration-as-development promoters hope it will ameliorate—uneven development in the world economy.

Theoretically, this study demonstrates the utility of integrating conceptual insights from otherwise disparate strands of social theory and research. Researchers drawing on neoclassical economics and international political economy have generally talked past one another, employing different conceptual frames to investigate the same relationship linking migration and development. The results from this study, however, support both theories. As neoclassical economic theory posits, migration promotes development. Economic development in the countries of the global North was predicated upon inordinate supplies of cheap labor, first from within the borders of these countries and then from abroad. Indeed, the nearly unlimited supply of immigrant labor allowed higher returns to capital, generating a self-sustaining cycle of growth through capital accumulation. As international political economy suggests, however, this internal relationship between migration and development has international implications for global development. Through its differential effects on growth within the countries of the global North and South, immigration seems to enhance cross-national inequalities. If social science is to advance knowledge about such important issues and remain relevant for policy making, it is crucial to avoid the problem in which conceptual frames become ideological lenses. The national, and international, implications of migration for development are more interpretable with an approach drawing upon both theoretical traditions.

Sociological theory and research in particular have neglected migration for too long as an important aspect of development. International migration is an important outcome of development in the global economy (Sanderson 2010, 2014; Sanderson and Kentor 2008, 2009), but this paper demonstrates that migration drives development too. Thus it is no longer tenable to exclude international migration from sociological theory and research on development. Sociology is especially well suited to investigate in more detail the specific mechanisms at the micro level that link migration to development in particular places. This study provides a macro-level basis for such research.

Three limitations to this study are worth noting. First, the findings represent the average effect of immigration across countries and over time. These are cross-national-level results and should not be applied to specific countries. The effect of immigration probably varies in magnitude, or even direction, in any particular country. The analyses do, however, include country-specific effects, reducing to the largest extent possible biased results due to the exclusion of important time-invariant, country-specific factors. Moreover, the magnitude of the effect of international migration found here is quite similar to the magnitudes reported...
in previous studies of individual countries, which lends credence to the notion that if the effect does differ in specific countries, it is probably not considerably different. Second, the data used in this study probably underreport the actual level of immigration because they do not include undocumented migrants. This is an unavoidable problem in migration research, but it is one that deserves mention. It should be noted, however, that if undocumented migrants represent a large proportion of all migrants, then the estimates presented probably underestimate the true magnitude of the effect of immigration. Indeed, the relatively small aggregate gains from immigration reported in prior research are usually attributed to the fact that migrants make up relatively small shares of the populations (Kapur and McHale 2005).

Third, the data used here could not distinguish the impacts of different types of migration on development. Through more selective immigration policies, countries in the global North may be able to reap greater gains from immigration because they receive larger numbers of higher-skilled immigrants. This “brain drain” may be detrimental to countries in the global South, which are not able to effectively compete with the global North on the returns they can offer to high-skilled migrants. It is likely that future studies will be able to test for any differential impacts of high- and low-skilled migration on development as more refined migration data become available, but it was not possible in this study.

In addition to research on the mechanisms linking migration and development, two other avenues for future research are especially warranted on the basis of this study. Although immigration appears to be beneficial for aggregate incomes in the global North, it is likely that it does not benefit all host country residents equally. Indeed, economic theory suggests that a relatively small gain in aggregate income from immigration disguises a relatively large redistribution of wealth. For example, Borjas (1995) estimates that while immigration produces an aggregate gain in income (i.e., the “immigration surplus”) it also produces a net transfer of wealth from laborers to capital owners of approximately 2 percent of GDP. Specifically, host country laborers working in sectors in which they must compete for employment with immigrant labor experience decreases in wage levels. These wage decreases, however, represent gains to capital owners, who benefit directly from immigration, regardless of whether they directly employ immigrant labor (Borjas 1995). Thus future studies of the relationship between immigration and within-country inequality would extend and refine this study and possibly even shed new light on the political-economic implications of immigration in host countries.

At the international level, the empirical question of whether international migration promotes or stems international inequality ultimately depends on the perspective taken: the perspective of destination countries (i.e., immigration), of origin countries (i.e., emigration), or of migrants themselves. This study is limited solely to the former; it cannot address the question from the other perspectives. There is a general consensus that international migration benefits immigrants themselves, as otherwise they would not move, and migration research increasingly consists of micro-level investigations of the implications of migration.

Yet as long as national boundaries exist, the fates and fortunes of peoples will be shaped, to an important extent, by social structures that exist at the nation-state level of analysis. Until people are allowed to move without constraint across national boundaries, it will be crucial to investigate the national-level causes and consequences of international migration.
In this respect, the findings from this study open up an important opportunity for future research addressing the question of how international migration affects international inequality from the perspective of origin countries. There is a real need for research that examines the effects of migrant remittances on per capita incomes in origin countries because remittances may reduce, or augment, the magnitude of the effects of immigration on destination countries. For example, if remittances are found to increase per capita incomes in origin countries, then the inequality-exacerbating effects of immigration documented in this study will be lessened in magnitude. However, if remittances are found to decrease, or have no effect on, per capita incomes in origin countries, then it will become clearer that international migration cannot ameliorate cross-national inequalities. Extant research is inconclusive on the issue of remittances and development, but to my knowledge there are no international-comparative studies that investigate this relationship. This is certainly another worthwhile area for future research.

REFERENCES


Baum, Christopher. 2006. *An Introduction to Modern Econometrics Using Stata*. College Station, TX: Stata Press.


NOTE

1. Inequality is commonly examined using the Gini coefficient, a single measure of the relative distribution of income, or wealth in a population. The purpose here is not to assess the relationship between international migration and inequality, as measured by the Gini coefficient. Rather, this paper investigates the relationship between international migration and economic development levels within countries, and the analysis has implications for understanding cross-national inequalities.