International Migration and Human Development: A Cross-National Analysis of Less-Developed Countries, 1970-2005

A paper submitted for presentation at the Annual Meeting of the Population Association of America

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EXTENDED ABSTRACT

Description of the Topic

Historically, international migration in developing countries has been directed predominately toward developed countries. More recently, however, international migration in developing countries has become more globalized to the extent that migrant flows now include a broader variety of both sending and receiving countries (Castles and Miller 2003; Nyberg-Sorenson, Hear, and Engberg-Pedersen 2002). The globalization of migration has coincided with a trend toward more prevalent South-to-South movements, with persons increasingly moving between developing countries (Nyberg-Sorenson, Hear, and Engberg-Pedersen 2002). Indeed, one-half of all migrants from developing countries now move to another developing country (Ratha and Shaw 2007), and South-to-South migration has become as prevalent as South-to-North migration (Martin and Widgren 2002).

The present level of international migration in developing countries has raised new and important questions regarding the impact of these movements for development outcomes. In a world in which international migration is produced in large part by persistent cross-national differences in income levels (Hatton and Williamson 2006), policymakers and development practitioners are searching for ways to utilize the mobility of people to raise income levels and promote development in both sending and receiving countries (Annan 2006; UN 2006; WB 2006).

However, there is little systematic cross-national evidence regarding whether or how international migration affects development outcomes in migrant-receiving countries in the developing world. Previous cross-national studies (Frey and Al-Roumi 1999; Frey and Field 2000; Lena and London 1993; London 1988; London and Williams 1988; 1990; Moon 1991; Moon and Dixon 1985; Nolan 1988; Nolan and White 1983; 1984; Shandra, Nobles, London, and Williamson 2004; Shandra, Nobles, London, and Williamson 2005; Shen and Williamson 1997; 1999; 2001; Wimberley 1990; 1991; Wimberley and Bello 1992) have neglected the role of international migration as an explanation of variation in development levels. Moreover, when it has been studied, the development implications of international migration have been examined almost exclusively in terms of the effects of remittances on

migrant-sending countries (Adams Jr. and Page 2005; Cohen 2005; Durand, Parrado, and Massey 1996; Gammeltoft 2002; Haas 2005; Martin and Straubhaar 2002; Massey and Parrado 1998; Stark 2004; Taylor 1999; Taylor, Arango, Hugo, Kouaouchi, Massey, and Pellegrino 1996a; 1996b; WB 2006). The impact of international migration on development outcomes in migrant- receiving countries has not been addressed systematically across countries and over time.

Theoretical Focus

My aim is to assess whether and how international migration affects development levels in migrant-receiving countries in the developing world. Population dynamics (fertility, mortality, and migration) are vital to the prospects for development (Barlow 1994; Crenshaw, Ameen, and Christenson 1997; Kelley and Schmidt 1995; Preston 1986). The relationship between population dynamics and development is commonly expressed in terms of the demographic transition, which describes the shift from high fertility and mortality toward lower fertility and mortality that occurs with economic development and modernizing social structures (Kirk 1996). The historical experience of developed countries generally demonstrates that persistently elevated fertility and mortality rates are impediments in the demographic transition toward advances in development, including improvements in economic development, literacy, and longevity (Lee 2003).

In this respect, international migration is important because it is a population dynamic that can affect the factors that promote or impede the demographic transition toward improvements in human development: "Immigration is the wild card: it can hasten or slow these trends" (Kent and Haub 2005: 7).

Despite its potential importance, the study of migration remains a relatively undertheorized area of research (Portes 1997) compared to the attention given to fertility and mortality as explanations of development. Yet as a component of population change, migration may indeed impact fertility and mortality rates, each of which is known to be associated with the demographic transition toward improved living standards.

Migration into less-developed countries might undermine human development levels by placing additional stress on already over-burdened infrastructures. Urban areas in many less-developed countries provide evidence of this relationship. While cities were once considered, "islands of privilege" (Harrison 1982: 145), with lower fertility and mortality rates and higher standards of living for residents, they are increasingly becoming "unhealthy islands" (Stephens 1996: 9) as the advantages of urban life for health outcomes deteriorates. Indeed, there is renewed concern over an emerging "urban penalty" (Harpham and Molyneux 2001: 119) associated with health outcomes in urban areas of many developing countries.

Migration ostensibly plays an important role. Persistently elevated infant mortality rates in urban areas (Brockerhoff and Brennan 1998) are attributable, at least in part, to the spread of infectious diseases in the cities of developing countries. Immigration is important here because human mobility, by definition, increases the risk of transmitting infectious disease: "The frequency of contact, the density of the population and the concentration and proximity of infective and susceptible people in an urban population promote the transmission of the infective organisms. The constant influx of migrants susceptible to infection and possible carriers of the new virulent strains of infective agents, together with the inevitable increase in household numbers, foster the transfer of...microorganisms" (Satterthwaite 1993: 91). Hence the growing literature that documents the relationship

between migration and HIV/AIDS (Brewer, Hasbun, and Ryan 1998; Decosas and Adrien 1997; Hunt 1989; Lurie, Williams, Zuma, Mkaya-Mwamburi, Garnett, and Sturm 2003; Mabey and Mayaud 1997; Quinn 1994).

In addition to being detrimental to infant mortality, immigration may also be detrimental to human development if it is associated with higher fertility rates. This may occur in one of two ways. First, to the extent that it promotes increases in infant mortality rates, immigration will place upward pressure on fertility rates. Persistently elevated infant mortality rates promote high fertility rates because families want to ensure that an appropriate number of children survive. Second, immigrants generally exhibit higher fertility rates, particularly when they originate in rural areas (Brockerhoff 1995; Hirschman 1994; Zarate and de Zarate 1975). These fertility patterns are embedded in cultural norms and expectations and can be resistant to change, at least in the short-term: "traditional values are typically rooted in rural environments and among recent migrants to urban areas. Cultural values, however, may persist long after the structural conditions in which they originated have eroded" (Hirschman 1994: 216). Thus, immigration may raise fertility rates, slowing the demographic transition, and potentially impeding human development.

Data and Method

I conduct a series of cross-national panel analyses that examine the effect of international migration on development outcomes over the period, 1970-2005. I begin the analysis by examining the impact of international migration on the human development index (UNDP 1990), a weighted composite index comprised of literacy rates, per capita incomes, and life expectancies. In an attempt to understand more thoroughly how international migration impacts human development, I then examine two demographic components of human development: infant mortality rates and total fertility rates.

The focal independent variable is international migration, which is operationalized as the total stock of foreign born in the country. The analyses control for a broad array of variables that measure important political, economic, and demographic factors known to be associated with development, including female enrollment rates, the prevalence of healthcare entities, labor force participation rates, democratic development, the spatial distribution of the population, the age distribution of the population, the level of international trade, foreign investment rates, and the level of domestic investment.

Data are drawn from the World Bank's (2007) *World Development Indicators*, the United Nations' (2005) *Population, Resources, and Environment Database*, the United Nations' (2006) *World Population Prospects*, and the International Monetary Fund's (2007) *Balance of Payments Yearbook*. The period 1970-2005 reflects the broadest time horizon that is possible with current data. As is common in cross-national methodology, the sample is limited to less-developed countries in order to avoid confounding divergent social processes. A total of 34 less-developed countries are included in the analysis. Countries are included in the analysis if they have complete information on each of the variables.

The analyses employ random and fixed effects panel estimation techniques to model unobserved heterogeneity, which allows for more precise estimates in the presence of unobserved, time-constant, country-specific effects (Frees 2004; Halaby 2004).

Contributions of the Study

This study advances our knowledge of development in several ways. First, by assessing the impact of international migration, I incorporate a new explanation of development into previous models. Second, I analyze the impact of international migration alongside a variety of other potential domestic and international explanations of development identified in previous studies. Third, I examine the effects of international migration on a more extensive set of outcomes that incorporates both economic and non-economic factors. Fourth, I use more recent data on developing countries and employ more modern estimation techniques that address some of the methodological concerns identified in previous studies. Finally, I examine the impacts of international migration on development outcomes across countries and over time. This allows a more comprehensive understanding of the relationship between international migration and development compared to previous studies.

Preliminary Findings and Timeline

As of September 2008, I have gathered and cleaned the data and conducted preliminary analyses. There are three central findings from these preliminary analyses. First, higher levels of international migration are associated with lower scores on the human development index over ten-year periods, net of all controls. The subsequent analyses investigate possible paths through which international migration might lower human development. These analyses indicate that international migration is associated both with higher rates of infant mortality and with higher fertility rates.

I am currently exploring whether the impacts of migration on development is moderated by several factors, including state institutional capacity, geographical region, and population growth rates. The analyses will be finalized by the end of October 2008. The final draft of the paper will be completed by February 2009.

REFERENCES

- Adams Jr., Richard H. and John Page. 2005. "Do International Migration and Remittances Reduce Poverty in Developing Countries?" *World Development* 33:1645-1669.
- Annan, Kofi. 2006. "Address of Mr. Kofi Annan, Secretary-General, to the High-Level Dialogue of the United Nations General Assembly on International Migration and Development." *International Migration Review* 40:963-965.
- Barlow, Robin. 1994. "Population Growth and Economic Growth: Some More Correlations." *Population and Development Review* 20:153-165.
- Brewer, Toye H., Julia Hasbun, and Caroline A. Ryan. 1998. "Migration, ethnicity, and environment: HIV risk factors for women on the sugar cane plantations of the Dominican Republic." *AIDS* 12:1879-1887.
- Brockerhoff, Martin. 1995. "Child survival in big cities: The disadvantages of migrants." *Social Science and Medicine* 40:1371-1383.
- Brockerhoff, Martin and Ellen Brennan. 1998. "The Poverty of Cities in Developing Regions." *Population and Development Review* 24:75-114.
- Castles, Stephen and Mark J. Miller. 2003. *The Age of Migration, Third Edition*. New York: The Guilford Press.
- Cohen, Jeffrey. 2005. "Remittance Outcomes and Migration: Theoretical Contests, Real Opportunities." *Studies in Comparative International Development* 40:88-112.

- Crenshaw, Edward M., Ansari Z. Ameen, and Matthew Christenson. 1997. "Population Dynamics and Economic Development: Age-Specific Population Growth Rates and Economic Growth in Developing Countries, 1965-1990." *American Sociological Review* 62:974-984.
- Decosas, J. and A. Adrien. 1997. "Migration and HIV." AIDS 11:S77-S84.
- Durand, Jorge, Emilio A. Parrado, and Douglas S. Massey. 1996. "Migradollars and Development: A Reconsideration of the Mexican Case." *International Migration Review* 30:423-444.
- Frees, Edward W. 2004. *Longitudinal and Panel Data*. Cambridge: University of Cambridge Press.
- Frey, R. Scott and Ali Al-Roumi. 1999. "Political Democracy and the Physical Quality of Life: The Cross-National Evidence." *Social Indicators Research* 47:73-97.
- Frey, R. Scott and Carolyn Field. 2000. "The Determinants of Infant Mortality in the Less Developed Countries: A Cross-National Test of Five Theories." *Social Indicators Research* 52:213-234.
- Gammeltoft, Peter. 2002. "Remittances and Other Financial Flows to Developing Countries." *International Migration* 40:181-212.
- Haas, Hein de. 2005. "International Migration, Remittances, and Development: Myths and Facts." *Third World Quarterly* 26:1269-1284.
- Halaby, Charles N. 2004. "Panel Models in Sociological Research: Theory into Practice." *Annual Review of Sociology* 30:507-544.
- Harpham, Trudy and Catherine Molyneux. 2001. "Urban health in developing countries: A review." *Progress in Development Studies* 1:113-137.
- Harrison, Paul. 1982. Inside the Third World. Harmondsworth, UK: Penguin.
- Hatton, Timothy J. and Jeffrey G. Williamson. 2006. *Global Migration and the World Economy: Two Centuries of Policy and Performance*. Cambridge, MA: MIT Press.
- Hirschman, Charles. 1994. "Why Fertility Changes." *Annual Review of Sociology* 20:203-233.
- Hunt, Charles W. 1989. "Migrant labor and sexually-transmitted disease: AIDS in Africa." *Journal of Health and Social Behavior* 30:353-373.
- ILO. 2002. Meeting Report 3: Technical Workshop on Population Mobility, Migration, and HIV/AIDS. Geneva: International Labor Organization.
- IMF. 2007. "Balance of Payment Statistics Yearbook, 2007." International Monetary Fund, Washington, D.C.
- Kelley, Allen C. and Robert M. Schmidt. 1995. "Aggregate Population and Economic Growth Correlations: The Role of the Components of Demographic Change." *Demography* 32:543-555.
- Kent, Mary M. and Carl Haub. 2005. "Global Demographic Divide." *Population Bulletin* 60:1-24.
- Kirk, Dudley. 1996. "Demographic Transition Theory." Population Studies 50:361-387.
- Lamptey, Peter R., Jami L. Johnson, and Marya Khan. 2006. "The Global Challenge of HIV and AIDS." *Population Bulletin* 61:1-24.
- Lee, Ronald. 2003. "The Demographic Transition: Three Centuries of Fundamental Change." Journal of Economic Perspectives 17:167-190.
- Lena, Hugh F. and Bruce London. 1993. "The Political and Economic Determinants of Health Outcomes: A Cross-National Analysis." *International Journal of Health Services* 23:585-602.

- London, Bruce. 1988. "Dependence, Distorted Development, and Fertility Trends in Noncore Nations: A Structural Analysis of Cross-National Data." *American Sociological Review* 53:606-618.
- London, Bruce and Bruce A. Williams. 1988. "Multinational corporate penetration, protest, and basic needs provision in non-core nations: A cross-national analysis." *Social Forces* 66:747-773.
- —. 1990. "National Politics, International Dependency, and Basic Needs Provision: A Cross-National Analysis." *Social Forces* 69:565-584.
- Lurie, M. 2006. "The epidemiology of migration and HIV/AIDS in South Africa." *Journal of Ethnic and Migration Studies* 32:649-666.
- Lurie, M., B. Williams, K. Zuma, D. Mkaya-Mwamburi, G. P. Garnett, and A. W. Sturm. 2003. "The impact of migration on HIV-1 transmission: A study of migrant and non-migrant men and their partners." *Sexually Transmitted Diseases* 10:149-156.
- Mabey, D. and P. Mayaud. 1997. "Sexually transmitted diseases in mobile populations." *Genitourinary Medicine* 73:18-22.
- Martin, Philip and Thomas Straubhaar. 2002. "Best Practices to Reduce Migration Pressures." *International Migration* 40:5-23.
- Martin, Philip and Jonas Widgren. 2002. "International migration: Facing the challenge." *Population Bulletin* 57:1-40.
- Massey, Douglas S. and Emilio A. Parrado. 1998. "International Migration and Business Formation in Mexico." *Social Science Quarterly* 79:1-20.
- Moon, Bruce E. 1991. *The Political Economy of Basic Human Needs*. Ithaca, NY: Cornell University Press.
- Moon, Bruce E. and William J. Dixon. 1985. "Politics, the state, and basic human needs: A cross-national study." *American Journal of Political Science* 29:661-694.
- Nolan, Patrick D. 1988. "World system status, techno-economic heritage, and fertility." *Sociological Focus* 21:9-33.
- Nolan, Patrick D. and Ralph B. White. 1983. "Demographic differentials in the world system: A research note." *Social Forces* 62:1-8.
- —. 1984. "Structural explanations of fertility change: The demographic transition, economic status of women, and the world system." *Comparative Social Research* 7:81-109.
- Nyberg-Sorenson, Ninna, Nicholas van Hear, and Poul Engberg-Pedersen. 2002. "The Migration-Development Nexus: Evidence and Policy Options State of the Art Overview." *International Migration* 40:3-43.
- Portes, Alejandro. 1997. "Immigration Theory for a New Century: Some Problems and Opportunities." *International Migration Review* 31:799-825.
- Preston, Samuel H. 1986. "Population Growth and Economic Development." *Environment* 28:6-12.
- Quinn, Thomas C. 1994. "Population migration and the spread of types 1 and 2 human immunodeficiency viruses." *Proceedings of the National Academy of Sciences of the United States of America* 91:2407-2414.
- Ratha, Dilip and William Shaw. 2007. "South-South Migration and Remittances." World Bank, New York, NY.
- Satterthwaite, D. 1993. "The impact on health of urban environments." *Environment and Urbanization* 5:87-111.

- Shandra, John M., Jenna Nobles, Bruce London, and John B. Williamson. 2004.

 "Dependency, Democracy, and Infant Mortality: A Quantitative, Cross-National Analysis of Less Developed Countries." *Social Science and Medicine* 59:321-333.
- —. 2005. "Multinational Corporations, Democracy, and Child Mortality: A Quantitative, Cross-National Analysis of Developing Countries." *Social Indicators Research* 73:267-293.
- Shen, Ce and John B. Williamson. 1997. "Child Mortality, Women's Status, Economic Dependency and State Strength: A Cross-National Study of Less Developed Countries." *Social Forces* 76:667-694.
- —. 1999. "Maternal Mortality, Women's Status, and Economic Dependency in Less Developed Countries: A Cross National Analysis." *Social Science and Medicine* 49:197-214.
- —. 2001. "Accounting for Cross-National Differences in Infant Mortality Decline (1965-1991) Among Less Developed Countries: Effects of Women's Status, Economic Dependency, and State Strength." Social Indicators Research 53:257-288.
- Stark, Oded J. 2004. "Rethinking the Brain Drain." World Development 32:15-22.
- Stephens, Carolyn. 1996. "Healthy Cities or Unhealthy Islands? The Health and Social Implications of Urban Inequality." *Environment and Urbanization* 8:9-30.
- Taylor, J. Edward. 1999. "The New Economics of Labour Migration and the Role of Remittances in the Migration Process." *International Migration* 37:63-88.
- Taylor, J. Edward, Joaquin Arango, Graeme Hugo, Ali Kouaouchi, Douglas S. Massey, and Adela Pellegrino. 1996a. "International Migration and Community Development." *Population Index* 62:397-413.
- —. 1996b. "International Migration and National Development." *Population Index* 62:181-212
- UN. 2005. "Population, Resources, and Environment Database, Version 4." United Nations Department of Economic and Social Affairs, Population Division, New York, NY.
- —. 2006. "International Migration and Development: Report of the Secretary-General." United Nations, New York, NY.
- UNDP. 1990. *Human Development Report*. New York, NY: United Nations Development Programme.
- WB. 2006. "Global Economic Prospects: Economic Implications of Remittances and Migration." World Bank, New York, NY.
- —. 2007. World Development Indicators, 2007. New York, NY: World Bank.
- Wimberley, Dale W. 1990. "Investment Dependence and Alternative Explanations of Third World Mortality: A Cross-National Study." *American Sociological Review* 55:75-91.
- —. 1991. "Transnational Corporate Investment and Food Consumption in the Third World: A Cross-National Analysis." *Rural Sociology* 56:406-431.
- Wimberley, Dale W. and Rosario Bello. 1992. "Effects of Foreign Investment, Exports, and Economic Growth on Third World Food Consumption." *Social Forces* 70:895-921.
- Zarate, Alvan and Alicia Unger de Zarate. 1975. "On the reconciliation of research findings of migrant-nonmigrant fertility differentials in urban areas." *International Migration Review* 9:115-156.