Notes and Commentary

“Reconsidering the Study of International Migration: A Way Forward for Macrostructural Migration Research”

Matthew R. Sanderson*

ABSTRACT

The “globalization of migration” has raised new and important questions about the macrostructural or global determinants of international population movements (Castles and Miller, 2003). Yet there remains a dearth of cross-national, empirical research in this area (Portes, 1997). In one of the earliest attempts to empirically identify macrostructural determinants of migration, Amankwaa makes an important contribution to the literature (1995). There are, however, some conceptual, analytical, and methodological shortcomings in Amankwaa’s analysis of migration. These deficiencies merit comment because Amankwaa’s paper could become an increasingly important source of information for public policies and analytical research efforts, particularly as international migration continues to garner increased attention from public policy practitioners and academic researchers. I address key deficiencies in Amankwaa’s study and describe a more robust analytical framework and more rigorous methodological techniques for future research inquiries into the relationship between globalization and international migration.

INTRODUCTION

As international migration streams expand to include a wider geography of sources and destinations than ever before (UN, 2006), the impacts of population movements are experienced across a broader and more diverse

* Assistant Professor of Sociology, Lehigh University.
array of places (Castles and Miller, 2003). As a result, international migration is garnering increased attention from public policy practitioners, who are particularly interested in utilizing migration to foster economic development in less-developed countries (LDCs) (World Bank, 2006).

There is growing acknowledgement among both academic researchers and public policy practitioners that globalization is associated with the increasing scale and scope of international migration:

...large-scale movements of people arise from the accelerating process of global integration...migrations are not an isolated phenomenon: movements of commodities and capital almost always give rise to movements of people (Castles and Miller, 2003: 4).

...globalization has increased the number of people with the desire and capacity to move to other places...international migration today cries out for a global discussion (Annan, 2006).

Yet despite increasing recognition of the relationship, it has become apparent that relatively little is known about the fundamental structural causes of international migration. This deficiency in the knowledge base is often expressed as an appeal for a better understanding of the basic, underlying, “root” causes of international migration: “It is essential to address the root causes of international migration to ensure that people migrate out of choice, rather than necessity” (Sheikha Haya Rashed Al Khalifa, 2006).

Our knowledge of the structural root causes of international migration is impeded by the paucity of cross-national, empirical analyses. The study of international migration has been critiqued as being theoretically-deficient and “data-driven” (Portes, 1997: 803). Recently, migration theories have been synthesized into a coherent analytical framework, but empirical research has not yet caught up with theoretical advances (Massey, 1999). As a result, our knowledge of international migration continues to be derived largely from country-specific case-studies, despite the recognition that migration is increasingly a global, or supra-national, phenomenon; “...what we have today is mostly an amorphous mass of data on immigration to different countries and a series of concepts whose scope seldom exceeds those of a particular nation-state” (Portes, 1997: 19).

The limited scope of previous analyses has left fundamental questions about the structural determinants of international migration
unanswered. The response to this gap in our knowledge base is clear: “Needed are explicitly comparative projects...that employ a common cross-national methodology” (Portes 1997: 819). In one of the first attempts to empirically identify macrostructural determinants of migration, Amankwaa makes an important contribution to the literature (1995). There are, however, some conceptual, analytical, and methodological shortcomings in Amankwaa’s analysis of migration. I address key deficiencies in Amankwaa’s study and provide a more robust analytical framework and more rigorous methodology for future research inquiries into the relationship between globalization and international migration.

GLOBALIZATION AND INTERNATIONAL MIGRATION IN LDCS

Amankwaa’s “Ecological Approach”

Amankwaa’s central argument is that the level of international migration in a LDC is at least in part determined by global-level economic factors, which structure the national political-economic context and influence the level of migration. Amankwaa utilizes world-systems theory (WST) and theoretical concepts from human ecology to construct an analytical framework for the empirical analyses. Amankwaa focuses most explicitly on the impacts of multinational corporate penetration, or “net capital outflows” (CAPF), international trade (EXP), and economic development (GNP) as structural explanations of international migration, but the theoretical discussion and empirical analyses also include the impacts of production technology (value added in agriculture and manufacturing; and energy consumption), and labour force structure (unemployment and the percentage of the labour force in agriculture).

The theoretical discussion is primarily concerned with explaining the prevalence of emigration, or the rate of migration out of the country. For example, Amankwaa refers to the penetration of foreign capital as having the capacity to “…compel persons to emigrate” (ibid: 94). Similarly, economic development is contended to result in the “…dislocation of labor in many LDCs,” and “…a slight depression in the world economy” generates conditions in which the “…predisposition to emigrate is rather acute” (ibid: 95).

The measures included in the analysis are worth noting. Amankwaa examines international migration by evaluating the level of net migration.
in each country. Net migration is derived using the “vital statistics approach,” which uses information on population levels at two time points, births, and deaths from national population registers to estimate the change in the population after accounting for the rate of natural increase in the population (ibid: 97):

\[ M_{(net)} = \frac{P^1}{P^0} - B - D \]

where \( M_{(net)} \) is the level of net migration, \( P^0 \) is the census population in 1980, \( P^1 \) is the census population in 1984, \( B \) is the number of births between 1980-1984, and \( D \) is the number of deaths between 1980-1984. This residual method of calculating net migration is commonly employed by international agencies such as the United Nations and the World Bank.

Amankwaa operationalizes net capital outflows, or multinational corporate penetration (CAPF) as “net taxes paid in the country in which the investment is located” (98). CAPF includes, “interest, dividends, and remittances of earnings of foreign firms (branches)” (ibid). Amankwaa hypothesizes a positive relationship between CAPF and net migration: higher levels of CAPF will increase the level of net migration (ibid: 96). CAPF is also posited to be indirectly related to net migration through its effects on the labour force structure and unemployment. International trade (EXP) is measured as the increase in exports between 1970-1981 and is posited to have a negative relationship with net migration: lower levels of EXP will increase the level of net migration (ibid). Amankwaa also explains net migration as an outcome of the level of economic development, which is operationalized as the level of gross national product (GNP). GNP is posited to have a positive effect on net migration: higher levels of GNP will increase the level of net migration. GNP is also expected to be indirectly related to net migration through its effects on labour force structure and unemployment levels.

Reconsidering Amankwaa’s Study

Amankwaa uses information from a sample of fifty-five LDCs to construct a path model of hypothesized relationships. The analysis seems to support the hypotheses. CAPF is directly and positively related to net migration, and exerts statistically significant indirect effects on net migration through the labour force structure and unemployment. EXP increases the level of net migration, and has indirect effects on net migration through the level of production technology, the labour force
structure, and unemployment levels. GNP is found to have positive indirect effects on net migration through its effects on unemployment levels and labour force structures. GNP, however, has a negative direct effect on net migration, a finding that runs contrary to the hypothesized direction of the relationship.

While the analysis seems to empirically demonstrate the efficacy of global-structural explanations of international migration in LDCs, there are some conceptual, analytical, and methodological shortcomings in Amankwaa’s analysis of migration that require comment.

First, the empirical results are misinterpreted. The problem stems from a misunderstanding of the measure of net migration employed in the analysis. As it is derived, a positive number for net migration means that, on balance, more people entered the country than left the country. Similarly, a negative number for net migration means that, on balance, more people left the country than entered the country. For example, if a country had a population of 1,000,000 in 1980 ($P_0$), a population of 1,200,000 in 1984 ($P_1$), and there were 100,000 births ($B$) and 50,000 deaths ($D$) between 1980 and 1984, then the estimate of net migration would equal 150,000. However, if the country only had a population of 900,000 in 1984, then the estimate of net migration would equal -150,000.

This method of producing international migration figures has important implications for interpreting the empirical results. A positive relationship with net migration would mean that an increase in the explanatory variable is associated with an increase in the number of people (migrants), on balance, who entered the country after accounting for the natural increase in the population ($B-D$). A negative relationship with net migration would mean that an increase in the explanatory variable is associated with a decrease in the number of people (migrants), on balance, who entered the country after accounting for the natural increase in the population ($B-D$).

Given Amankwaa’s interest in explaining emigration, or out-migration, the following interpretations are warranted. Where a positive relationship with net migration was found, it would be appropriate to conclude that the explanatory variable is associated with a decrease in the level of emigration. Where a negative relationship with net migration was found, it would be appropriate to conclude that the explanatory variable is associated with an increase in the level of emigration.
It is clear that Amankwaa misinterprets the findings. Amankwaa reports a positive relationship between CAPF and net migration and interprets this effect as evidence of the tendency of foreign capital to promote emigration: “…net capital outflows positively influence (the) net migration rate directly…This trend….may account for the higher predisposition to emigrate” (ibid: 100-101). The negative indirect relationship between EXP, production technology in manufacturing (VAM), and net migration is interpreted in terms of the ability of production technology for reducing emigration: “The effects of exports on (the) net migration rate demonstrate the advantages of value added…(to)…subsequently mitigate movement abroad in the long run” (ibid: 101). The misunderstanding of net migration is clearest when Amankwaa interprets a positive relationship between the employment rate and the level of net migration: “As expected, an increase in the percentage of persons (who are) economically active has a positive direct influence on (the) net migration rate, implying that an increase in the proportion economically active increases the likelihood of emigrating” (ibid.).

Second, in addition to the misinterpreted findings, some of Amankwaa’s empirical results are clearly antithetical to those that would be posited by WST – an analytical framework he uses to develop hypotheses for the empirical analysis. This problem results from a lack of analytical rigor in constructing the analytical framework, which leads to a misspecified empirical model. For example, contrary to his interpretation of the findings, Amankwaa actually finds that foreign investment (CAPF) is associated with an increase in the level of immigration, or alternatively, a reduction in the level of emigration. From the perspective of WST, however, CAPF should actually increase the level of emigration (Portes, 1978, 1979; Sassen, 1988). Because the results are not correctly interpreted, however, Amankwaa cannot address the inconsistencies between the hypotheses drawn from the analytical framework and the empirical results. Similarly, a more rigorous application of WST to the empirical model would lead to a more appropriate specification of the empirical model. However, because the model is misspecified, the empirical results lack analytical credence.

**A WAY FORWARD FOR MACROSTRUCTURAL MIGRATION RESEARCH**

Amankwaa’s study is an important initial attempt at grasping the complex causal mechanisms that link globalization and international
migration. Future studies could contribute to this important area by developing a more robust analytical framework and utilizing more rigorous methodological techniques.

The importance of foreign capital for international migration

International capital flows in the form of foreign direct investment (FDI) are a central component of globalization. International capital flows are synchronizing economic and financial markets for goods and services, and integrating the world’s economies, polities and cultures into a single, shared space (Dicken, 2006; Gilpin, 2001; Held et al., 1999). Global political economy (GPE) theory recognizes the importance of FDI for globalization, and provides an analytical framework for understanding the relationship between FDI and international migration. GPE specifies the specific causal mechanisms through which FDI influences population movements, and emphasizes that the impacts of FDI on migration can vary over time, and across economic sectors of the host economy.

In using “net taxes paid,” Amankwaa ignores a rich theoretical and empirical literature that operationalizes foreign capital penetration in terms of FDI (Bornschier and Chase-Dunn, 1985; Bornschier, Chase-Dunn, and Rubinson, 1978; Boswell and Dixon, 1990, Chase-Dunn 1975; 1998; Dixon and Boswell 1996; Jorgenson 2006; Kentor 1981; 1998; 2000, 2001, 2003; London, 1988; London and Robinson, 1989; London and Williams, 1990; Timberlake and Kentor, 1983). Traditionally, researchers have made an analytical and empirical distinction between the short-term flow of FDI and the long-term stock (accumulated flows) of FDI because the effects of FDI on host social structures have been shown to change over time (Bornschier and Chase-Dunn, 1985; Chase-Dunn, 1975; Kentor, 1998).

This research has consistently demonstrated that the effects of FDI on host social structures become evident over a long-term period of time; short-term time horizons are not adequate to capture the impact of FDI on host social structures. Although never explicitly stated, CAPF is presumably measured in 1983 (Amankwaa1998). Given that net migration is measured as a residual of population change between 1980 and 1984, Amankwaa’s CAPF measure essentially estimates the short-term effect of foreign capital penetration on net migration. This is a potentially useful finding. Operationalizing foreign capital penetration in terms of FDI would allow future research to directly address the more important
question of how FDI impacts the prevalence of international migration over time.

GPE theory also emphasizes that the effects of FDI on international migration can vary across sectors of the host economy. Sassen provides the most comprehensive theoretical treatment of the relationship between FDI and international migration (1988). From this perspective, FDI can have uprooting, or mobilizing, effects on population structures in LDCs. FDI in the export manufacturing and export agricultural sectors disrupts “traditional work structures,” which increases emigration from LDCs (Sassen, 1988: 97).

The mobilizing effects of FDI, however, are qualitatively different across economic sectors of the host economy. On the one hand, FDI in export agriculture increases capital-intensive production methods and displaces labour. Displaced labour is either transformed directly into wage-labour in commercial agriculture, or indirectly into wage-labour to be employed in the industrializing cities (Sassen, 1988). On the other hand, foreign investment in the export manufacturing sector tends to expand employment because it is usually directed toward labour-intensive industries such as textile and garment or electronics production. Rising employment in the export manufacturing sector, however, does not necessarily provide employment for labour displaced by agricultural commercialization. Instead, development of the export manufacturing sector incorporates new labour into the workforce, particularly female labour, which is considered to be more amenable to the type of work characterized by export manufacturing (Sassen, 1988: 107). Females increasingly comprise an increasing share of the rural-urban migration stream in developing LDCs with industrializing urban export manufacturing sectors. Thus, the disruptive effects of FDI on traditional work structures are twofold: “Young men are left without mates and partners, [and] the households are left without a key labour factor” (ibid: 97). Without viable employment opportunities in the industrializing urban areas, males displaced from rural regions are therefore compelled to search for work abroad.

Concomitant with the breakdown of traditional work structures, FDI can promote emigration from LDCs by creating material and cultural-ideological linkages with the investing country (Sassen, 1988). As a fixed capital investment, foreign investment typically promotes the development of transportation and communication infrastructure. While built to move goods, capital, and information, this infrastructure also facilitates the movement of people. The material linkage between countries is
clear where transportation infrastructures cross national boundaries, as in the case of railroads and highways that link Mexican communities to the United States. However, roads connecting manufacturing plants to seaports and rail lines linking mineral mines in remote interior areas to urban areas provide similar linkages with developed countries, making emigration from LDCs more likely than would be the case in their absence.

Along with material linkages, FDI generates cultural-ideological linkages between developed and less-developed countries through the “long recognized” westernizing effect of “large-scale” foreign investment on inhabitants on LDCs:

“These workers are using their labor power in the production of goods or services demanded by people and firms in the U.S. or any other highly developed country. The distance between a job in the off-shore plant or office and in the on-shore plant or office is subjectively reduced. Under these conditions emigration may begin to emerge as an option actually felt by individuals” (Sassen 1988: 19-20).

Sassen, however, places more emphasis on the influence of FDI on labourers employed in export production: “These cultural, or ideological, linkages connect the relatively small portion of the populace that works in foreign investment-sponsored facilities to developed countries” (20). However, the effects of such linkages on emigration are broader, as such individuals also create a “linkage for potential migrants” through social networks (ibid).

Incorporating these analytical insights from GPE theory into future studies would improve model specification by refining empirical measures and clarifying the causal mechanisms through which FDI impacts social structures in LDCs.

Maximizing the utility of panel data

Methodologically, future studies could contribute to this area by developing a more analytically robust measure of international migration, and by maximizing the use of cross-national panel data.

Amankwaa’s use of the net migration measure is problematic because it potentially confounds the potentially divergent causal processes that generate immigration and emigration. A more conceptually and
An empirically sound approach would be to distinguish between countries with net immigration and countries with net emigration and conduct an empirical analysis on the sample of countries that is consistent with the theoretical interest. For example, Amankwaa’s interest in explaining emigration would require including in the sample countries with net emigration, and excluding countries with net immigration. While this strategy could potentially conceal internal migration and some international migrations into and out of the country, it would be more consistent with theory and would avoid confounding causal processes.

Empirical analyses of international migration could also be strengthened by better incorporating time into the models. Causality is the central aim of quantitative research (Finkel, 1995; Halaby, 2004; McClendon, 1994). Although causality can never be proven with the nonrandomized, or observational, data that are common in sociological research (Chatterjee, Hadi, and Price, 2000) panel data “allow analytical leverage” in demonstrating causality (Halaby, 2004: 508). Panel data provide an advantage over cross-sectional data in the areas of non-spuriousness and time precedence, and are therefore more suitable for establishing causality with nonrandomized data (Finkel, 1995; Wooldridge, 2006).

Unobserved effects are central to the problem of causal inference, and panel data provide a distinct advantage over cross-sectional data in addressing the issue of unobservable influences (Halaby, 2004). There are two types of unobserved effects: time-constant, unit-specific unobserved effects; and time-varying, unit-specific unobserved effects (ibid). Three different approaches are commonly used to address the problem of unobserved effects using panel data: OLS-dynamic models (OLSD), random effects models (REM), and fixed effects models (FEM). These three approaches differ in terms of how each deals with the problem of unobserved heterogeneity.

OLSD models are often referred to simply as “panel models” or “panel regression analysis” (Chase-Dunn, 1975; Jenkins and Scanlan, 2001; Kentor and Boswell, 2003; London, 1988; Shandra, London, and Williamson, 2003). OLSD models are considered “dynamic” because they include a lagged endogenous variable (LEV) on the right hand side of the equation. Including the LEV is considered to at least partially control for the unobserved effects of omitted variables on the dependent variable (Finkel, 1995). The LEV is thought to capture historical, or inertial, factors that may influence the current level of the dependent variable (Wooldridge, 2006: 315). These unobserved, inertial, or
historical factors may be correlated with the independent variables, leading to biased estimates if the LEV is omitted (ibid). With respect to the study of international migration, a LEV is justified on the basis of cumulative causation theory (Massey, 1990; Massey et al., 2005), which posits that past migrations make future migrations more likely through a network effect. Failing to include a LEV, therefore, would omit the important pull influence of past migrations on present migrations.

FEM and REM are more sophisticated approaches to the problem of unobserved heterogeneity. Between-unit variation is the source of heterogeneity bias in OLS (Stimson, 1985: 921). While OLS cannot address this problem, FEM and REM can correct for heterogeneity bias by "simulating" time-invariant country-specific effects (Alderson and Nielsen, 1999: 616). The two approaches differ, however, in how each treats country-specific effects. FEM introduces a series of dummy variables to allow each country to have a unique effect (Wooldridge, 2006). It treats the country-specific effects as fixed while retaining the classic OLS error structure. Fitting individual intercepts effectively removes all between-unit variation from the data, thereby removing the source of heterogeneity bias (Stimson, 1985). REM treats the country-specific intercepts as part of the error term and considers them as random draws from a larger population (Wooldridge, 2006). Because the country-specific effects are considered to be random, the distribution parameters (mean and variance) are of more interest than the individual fixed country-specific effects (Stimson, 1985: 923). REM corrects for unobserved heterogeneity by specifying the bias and modelling it as part of a complex error structure.

Utilizing a more analytically robust measure of international migration, and incorporating time into empirical analyses of migration using contemporary panel data methods would build upon Amankwaa’s initial analysis and could provide novel insights into the relationship between globalization and international migration.

CONCLUDING COMMENTS

Despite its shortcomings, Amankwaa’s paper deserves merit as an initial attempt to further our understanding of the political economy of international migration. Amankwaa recognized relatively early on what many researchers and policy practitioners are only belatedly acknowledging that international flows of people are related to globalization.
Indeed, international migration streams now encompass a wider geography of sources and destinations than ever before; migration is becoming “globalized” (Castles and Miller, 2003). On the other hand, the globalization of trade, production, and finance is integrating the world’s peoples, polities, and markets into an increasingly shared space (Gilpin, 2001; Held et al., 1999; Sassen, 2006). Amankwaa’s paper should indicate the need to take more seriously the interrelations between globalization and international population movements.

As international migration becomes a salient issue for public policies constructed at the national and international levels, the need for sound empirical research will become even more acute (UN, 2006; World Bank, 2006). Further development in our understanding of international migration will likely require moving beyond localized case studies toward investigations into the global political-economic context. Cross-national, empirical analyses are particularly well-suited for these sorts of research inquiries.

REFERENCES

Alderson, A.S., and F. Nielsen

Amankwaa, A.A.

Annan, K.

Bornschier, V., and C. Chase-Dunn

Bornschier, V., C. Chase-Dunn, and R. Rubinson

Boswell, T., and W.J. Dixon
Castles, S., and M.J. Miller  

Chase-Dunn, C  

Chatterjee, S., A.S. Hadi, and B. Price  

Dicken, P.  

Dixon, W.J., and T. Boswell  

Finkel, S.E.  

Gilpin, R.  

Halaby, C.N.  

Held, D. at el.  

Jenkins, J.C., and S.J. Scanlan  

Jorgenson, A.  

Kentor, J.  


Kentor, J., and T. Boswell

London, B.

London, B., and T. D. Robinson

London, B., and B.A. Williams

Massey, D.S.

Massey, D.S., et al.

McClendon, M.J.
1994 Multiple Regression and Causal Analysis, Waveland Press, Prospect Heights, IL.

Portes, A.

Sassen, S.
Shandra, J.M., B. London, and J.B. Williamso
Sheikha Haya Rashed Al Khalifa, H.E.
Stimson, J.A.
Timberlake, M., and J. Kentor
UN
World Bank
Wooldridge, J.M.