Sálvese Quien Pueda: Structural Adjustment and Emigration from Lima

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Abstract

Beginning in 1987, Peru imposed a regime of structural adjustment to transform its economy along neoliberal lines. This analysis suggests that a shift resulted in the odds of international migration and the motivations for leaving among inhabitants of Peru's largest labor market. Before 1987, under the regime of import substitution industrialization, jobs at wages capable of sustaining a basic standard of living were widely available; those few who left the country self-selected for higher human capital and moved abroad to improve their earnings. Under neoliberalism, however, both employment and wages fell to levels that made it difficult for families to sustain themselves. In response, households —with the assistance of friends and relatives with foreign experience—diversified their labor portfolios away from the local job market structural adjustment zones. The number of migrants then rose, the diversity of foreign destinations increased, and migration became less selective with respect to human capital.

Keywords

structural adjustment; Peru; neoliberalism; international migration; urban labor markets; networks; social capital

Two different economic theories of international migration have been advanced to account for the global movement of people in the twenty-first century (see Massey et al. 1998). The oldest and best known is neoclassical economics, which posits that individuals move from low-wage to high-wage nations to improve their returns to human capital and maximize expected earnings (Sjaastad 1962; Todaro and Maruszko 1987). According to this model, an individual considers his or her human capital endowments and estimates how those endowments are likely to be remunerated at various international destinations, taking account of the likelihood of being able to get a job at each place. The individual then estimates the earnings he or she could expect from emigration to various destinations. From them the individual subtracts the amount he or she would expect to earn by remaining at home. If any of the differentials are positive, the person chooses to emigrate abroad for work, picking the destination where expected earnings are greatest.

This model simply assumes that competitive markets exist and are well-functioning, with good information being processed by rational, utility-maximizing actors. Markets do not spring into existence fully formed, however, but are created by deliberate human actions (Fligstein 2001; Swedberg 2003). Markets always are socially embedded within a matrix of social, cultural, and political institutions (Granovetter 1985). Societies constitute markets by building an appropriate infrastructure to support and contain an ongoing competition that sets transparent prices for the exchange of goods and services. The infrastructure may include concrete facilities, but it is also made up of social structures, legal conventions, and cultural practices and expectations.

Creating well-functioning markets is not easy, and economic history is littered with recurrent market failures, especially during the early phases of a nation's economic growth and development. It takes considerable time and effort for a government to create the conditions within which effective markets for goods, services, labor, capital, insurance, futures, capital, and credit to emerge and become self-sustaining. At any point in time along the way to creating a fully developed market society, some markets may be missing, some may be accessible only to limited segments of the population, and others may periodically fail.

The new economics of labor migration was developed as an alternative to neoclassical economics to account for the behavior of migrants in the face of missing, failed, or ineffective markets (Stark 1991). Rather than simply assuming that competitive markets exist and deriving how rational, utility-maximizing actors would behave within them, this mode asks how people might rationally behave in the absence of certain markets (Massey et al. 1998). It also recognizes that people are not atomized, individual decision makers but inevitably are embedded within larger social structures—families, households, and larger communities.

The presence of multiple workers within households means that families can pursue collective rather than individual strategies to overcome missing or failed markets. If they wish to finance the acquisition of a home but mortgage markets do not exist, they can send a family member abroad to accumulate savings. If they wish to purchase consumer durables but lack a credit card, they can likewise send a worker abroad to generate savings to overcome missing credit markets. If the local labor market is unstable and characterized by periodic swings in employment rates and falling real wages, a family may self-insure by sending out members to work in different international labor markets to generate a return flow of remittances. In the same way that investors diversify their stock portfolios, households diversify their labor portfolios to hedge against risks to family income.

The two models are not mutually exclusive but yield very different predictions about migratory behavior. According to the neoclassical model, emigration to maximize earnings should only occur in the presence of international wage differentials and should be selective with respect to human capital: people move to increase returns to human capital by tapping into higher wages abroad. In contrast, because the new economics of labor migration sees people moving to overcome missing or failed markets, movements do not have to be selective with respect to human capital and may occur in the absence of wage differentials. To manage risks to household income, employment and wages abroad need only be uncorrelated or, better yet, negatively correlated with those at home. Finally, whereas neoclassical economics predicts a concentration of migration on foreign labor markets offering the highest wages, the new economic model predicts diversification of labor flows to a greater variety of markets, whatever their wages.

The case of Peru during the 1980s and 1990s offers a natural experiment to test the validity of both economic models. Structural adjustment was imposed rather abruptly during 1987, causing a quantum shift in economic conditions and widespread market failures. The failure of the urban labor market was particularly severe, with rising unemployment and underemployment, falling real wages, and growing informality. Thus, we expect migrants leaving Peru before this date to display patterns more consistent with neoclassical economics. Given a reasonably functioning labor market at home, they are likely to be moving to maximize earnings and thus will be positively selected with respect to human capital and direct themselves to a small number of high wage areas.

After 1987, however, migrants are more likely to be fleeing deteriorating labor market conditions at home than maximizing earnings abroad. Thus, they will be less selected with respect to human capital and proceed to a wider diversity of destinations. In short, the failure

of the labor market after the imposition of structural adjustment policies is predicted to produce a higher rate of out-migration to a larger number of areas by a wider cross-section of Peruvian society. In this article, we draw on data from the Latin American Migration Project to test this assertion.

Structural Adjustment in Peru

The timing of structural adjustment in Peru is clear from national economic indicators, all of which display obvious and pronounced discontinuities after 1987. Figure 1 presents data on annual inflation from Peru's Instituto Nacional de Estadística e Informática. Obviously something profound happened after this date. From 1980 through 1987, annual inflation in Peru averaged about 89 percent, high by international standards but nothing compared with what came afterward. After the introduction of structural adjustment policies in 1987, inflation surged to record levels, averaging more than 4,000 percent during 1988 through 1990 and peaking at more that 7,000 percent in the latter year.

These astounding rates of inflation had catastrophic effects on the real wages of Peruvian workers, as illustrated by Figure 2, which shows per capita income in constant 1994 *soles* (the Peruvian currency). The solid line shows average income from 1970 through 2000. The effect of Peru's hyperinflation on real income is immediately and brutally apparent. From a value of around 5,400 soles in 1988, real incomes plummet to bottom out at around 3,100 soles in 1992, a drop of more than 40 percent. In other words, the average worker in Peru saw two-fifths of his or her income vanish in the space of just three years. As inflation was brought under control after 1993 and the economy began to revive, real incomes rose to reach around 4,600 soles by the year 2000, still 15 percent below the 1987 value.

The economic recovery, however, did not yield a return to former levels of employment and was accompanied by higher rates of joblessness. If we condition annual incomes on the probability of employment (estimated from Peruvian unemployment statistics), we derive the expected annual income for the average Peruvian worker. This quantity is shown for 1984 through 1998, the years for which unemployment data were readily available. When this adjustment is made, we see that expected earnings did not come close to returning to their preadjustment level. Whereas expected annual income stood at 4,900 soles in 1987, by 1998 it had reached just 3,900, for a total deficit of 20 percent. Although incomes for employed Peruvians may have risen from the depths of the postadjustment crisis, fewer were employed and able to earn those incomes yielding lower "expected earnings" for the typical worker.

Data and Method

Our analysis relies on data gathered in Lima, Peru, by the Latin American Migration Project (LAMP), a project established to extend the data-gathering methods pioneered by the Mexican Migration Project (MMP) to other nations in Latin America and the Caribbean (see Massey and Sana 2004; Massey and Capoferro 2004). The purpose of both projects is to provide valid and reliable data on documented and undocumented migration to the United States from sending countries throughout the western hemisphere. In addition to one hundred community surveys carried out in Mexico, the LAMP to date has collected information on international migration from Puerto Rico, the Dominican Republic, Haiti, Nicaragua, Costa Rica, Guatemala, Paraguay, and Peru.

Both the MMP and the LAMP employ a combination of ethnographic and survey methods to compile information on the migratory behavior of people within sampled households within specific sending communities. The "ethnosurvey" uses flexible question order, variable question wordings, and naturalistic conversation to compile information on a standard set of variables listed on a semistructured interview schedule (Massey 1987). Each household head

and spouse provide detailed life histories that include a year-by-year account of trips taken internally and internationally, and additional information is collected on the first and last trips made by each son or daughter of the household head and other household members. Using these data, it is possible to reconstruct the characteristics of a household and its members during years leading up to first migration.

In Peru, investigators associated with the LAMP chose for study three geographically dispersed middle-/lower-middle-class neighborhoods of Lima and carried out a detailed census within each area, yielding a sampling frame with a total of 5,386 potential dwellings. From this list, 1,270 were randomly selected. Of these, 116 were found to be ineligible (usually because they were vacant or commercial rather than residential), and in 155 cases, interviewers failed to encounter anyone at home despite repeated visits. Out of the 999 households where contact was made, 493 interviews were completed while 506 were refusals, yielding a total response rate of 49 percent. This rate is among the lowest encountered in either the LAMP or the MMP and reflects the high degree of distrust and suspicion prevailing in Lima in the wake of the marked increase in crime and violence that followed the imposition of structural adjustment policies in 1987. At the time interviewing took place, many people were literally afraid to open their doors to strangers.

Drawing on the life histories gathered from household heads and spouses and the information on first international trips made by other household members, we constructed an event history for each household from the year of its formation (marriage between head and current spouse) up to the survey or the date of the first international trip made by a household member, whichever came first. For each household year dated 1970 or later, we coded the outcome variable as 0 in year t if no one in the household had migrated from the time of its formation to the present and 1 if someone from the household left in that year for a foreign destination. We then regressed this binary outcome on independent variables measured in year $t-1$ using a logit model.

The outcome was predicted from four sets of independent variables, all of which were time varying: *demographic characteristics* (whether spouse was present, age or duration of household, number of children ever born, and number of children younger than age eighteen), *human capital* (head's years of schooling, whether he or she had international migratory experience before marriage or prior to 1970, and head's occupational skill), *physical capital* (ownership of business, home, and other real estate), and *social capital* (whether a parent of the head had ever migrated internationally prior to household year, whether a sibling of the head had ever migrated, and the prevalence of international migratory experience in the community). The general strategy we employ is to estimate separate migration models before and after the imposition of structural adjustment policies in 1987.

Migration before and after Adjustment

Migration prevalence within each neighborhood was measured as the relative number of people who had ever been abroad by the household year in question. Following Massey, Goldring, and Durand (1994), we used information on the dates of sample members' first international trips to determine the number of community members who had been abroad by year t and then divided it by the number of people aged fifteen-plus in that year. Figure 3 shows average the prevalence ratio across the three communities by year from 1970 to 2000. This ratio can only increase if the number of people leaving on a foreign trip exceeds the number of people turning age fifteen during a given year.

As can be seen, before 1987 the prevalence ratio fluctuated around 4 percent. Following an increase roughly from just above 3 percent to nearly 4 percent between 1970 and 1973, the share of people with international experience did not stray far from the 4 percent level until

the imposition of structural adjustment policies. From then on the prevalence ratio steadily rose to peak at more than 7 percent by the year 2000, a 75 percent increase. In other words, the implementation of structural adjustment measures in Peru led to a sharp acceleration in the extent of international out-migration during the period 1988 to 2000. There was, it seems, a migratory response to the economic dislocations caused by neoliberal economic policies.

This increase in emigration was accompanied by a growing diversification by region of destination. Following Massey, Goldring, and Durand (1994), we used Thiel's (1972) entropy index to measure the diversity of regions shown in Table 1. Not only did the number of immigrants nearly double from 75 during 1970 to 1987 to 147 during 1988 to 2001, but the diversity of regional destinations likewise increased from 75.7 to 87.6 (maximum diversity is achieved when migrants are equally distributed across regions). Both before and after structural adjustment around half of all migrants went to North America, primarily to the United States but also to Canada. The real shift was in the share of emigrants going to elsewhere in Latin America or the Caribbean, which fell from 36 to 24 percent. Instead of going to other Latin-origin countries in the Western hemisphere (which were also suffering the fallout from structural adjustment), flows of emigrants were redirected toward nations in the European Union (especially Spain, Italy, and France), whose share of migrants went from 11 to 18 percent, and to Asia and the Pacific (especially Japan and to a lesser extent Australia), which went from 3 to 9 percent.

As the structural adjustment of the Peruvian economy proceeded, in other words, residents of Lima reacted by leaving in greater numbers and going to a greater diversity of destinations. The diversification of receiving country labor markets is an outcome specifically predicted by the new economics of labor migration and suggests that migrants indeed were seeking to overcome domestic market failures rather leaving to maximize earnings by garnering higher returns to human capital. This interpretation is explored further in Table 2, which shows the results of a discrete-time event history analysis estimated to predict emigration before and after the implementation of structural adjustment measures.

We undertook the analysis in two phases. First, we estimated the model over all household years to determine which variables were significant in predicting the odds of international out-migration. We then restricted the model only to variables that proved significant and reestimated it separately before and after structural adjustment. When we tried to estimate the full equation separately during each period, the model would not converge owing to a lack of degrees of freedom. Reducing the total number of predictors in this fashion solved the problem.

As the middle two columns of Table 2 indicate, international migration during the period leading up to structural adjustment was largely rooted in the demographic circumstances of households and their human capital endowments. The odds of migration generally rose as the number of children older than eighteen grew (the most frequent kind of migration involved the departure of an older, unmarried son or daughter) and increased with each additional year of education and was higher among those who had been abroad prior to the observation period (a measure of migration-specific human capital—see Massey and Espinosa 1997). Those holding a professional job were much less likely than others to emigrate. Together, these findings suggest that under import substitution industrialization older children left parental households for international destinations in search of higher returns to human capital, as expected under neoclassical economics given functioning international and foreign labor markets.

After the imposition of structural adjustment policies, however, the picture changes. Although the effect of household demographic characteristics remains much the same, human capital variables drop to insignificance and a professional occupation does not exert quite the holding

power it once did. Instead of human capital, the likelihood of out-migration is now related strongly to social capital. As the prevalence of international migrants in the neighborhood increases (making it more likely that an aspiring migrant knows someone with prior international experience to draw upon for assistance), the odds of leaving Lima for a foreign destination rise accordingly. Given the ongoing failure of Lima's labor market after 1987, older sons and daughters ceased making strategic moves to maximize the returns to human capital and became much less selected according to age and prior migratory experience. Instead they turned to their social networks to take advantage of any connection to a migrant to move to any possible location outside of Peru and, as the diversification of destinations suggests, preferably out of Latin America, many of whose nations were themselves experiencing market failures under structural adjustment policies.

Conclusion

The foregoing analysis suggests there was a shift both in the odds of international migration and the motivations for leaving among inhabitants of Peru's largest labor market after the imposition of structural adjustment policies in 1987. Before this date, under the regime of import substitution industrialization, jobs at wages capable of sustaining a basic standard of living were widely available, and those few who left the country were self-selected for higher human capital and were moving abroad to improve their earnings. Under neoliberalism, however, both employment and wages fell to levels that made it difficult for families to sustain themselves, and in response households sought to diversify their labor portfolios away from an exclusive reliance on the local job market. A growing number of families turned to social connections to enlist the assistance of friends and relatives with foreign experience to help them relocate to labor markets away from zones undergoing structural adjustment. As a result, the number of migrants rose, the diversity of foreign destinations increased, and migration became less selective with respect to human capital.

As the Peruvian questionnaires were being completed and being turned in to the coinvestigator in charge of field research, Jorge Durand, he marveled at the relatively large share of households involved in international migration (at least for a major urban area) and the truly remarkable array of destinations. Across all countries studied to date by the MMP and LAMP, he had never seen so many migrants going to so many different international locations. In the aftermath of structural adjustment, he remarked, the operative principle in Lima seemed to be "*Sálvese quien pueda*" or, roughly translated, "every man for himself." To him, a native Limeño, it looked as though families throughout Lima had simply decided to abandon ship.

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Biographies

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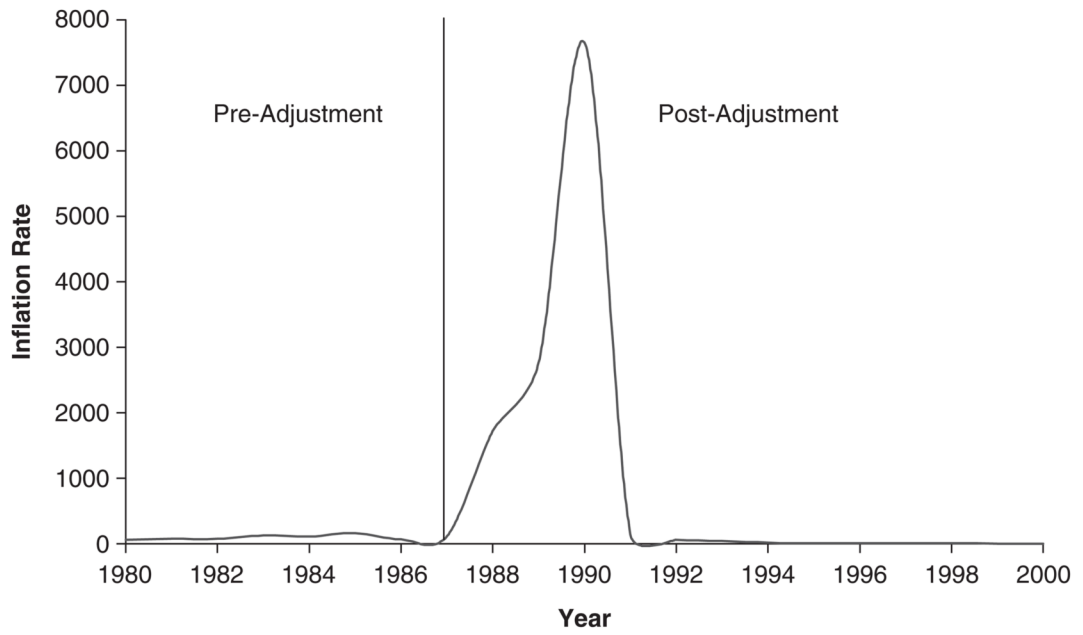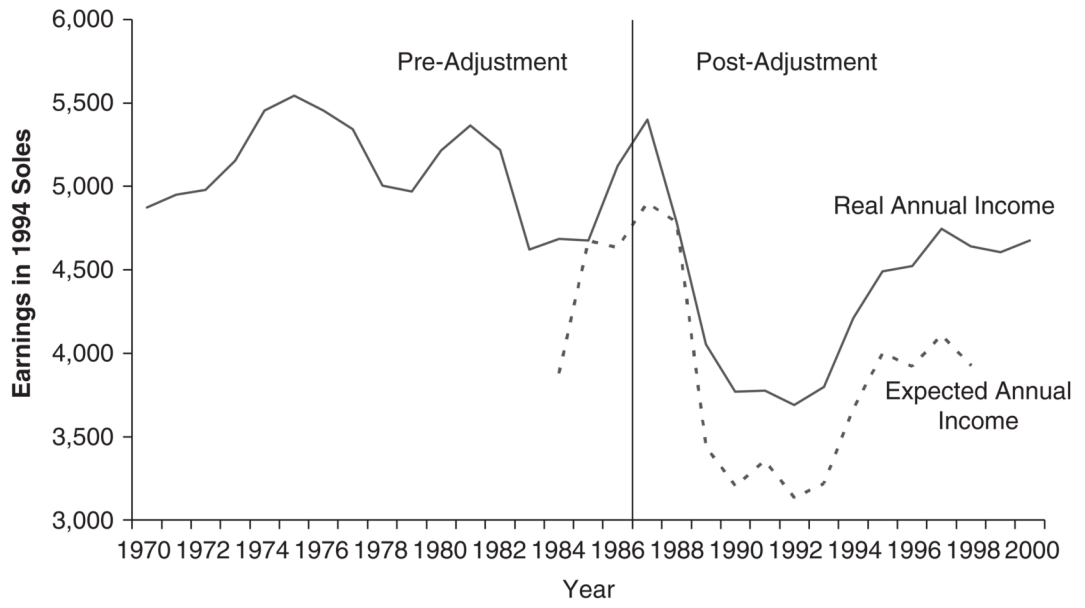
FIGURE 1.
ANNUAL INFLATION IN PERU, 1980–2000

FIGURE 2.
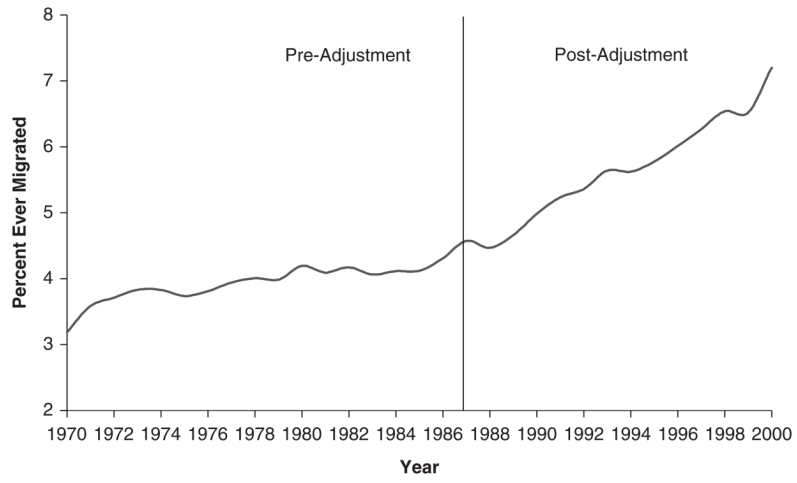REAL AND EXPECTED ANNUAL EARNINGS IN PERU, 1970–2000

FIGURE 3.
MIGRATION PREVALENCE RATIO: LIMA, PERU, 1970–2000

TABLE 1

DISTRIBUTION OF EMIGRANTS FROM LIMA, PERU, BY PERIOD AND PLACE OF DESTINATION

Region of Destination	1970–1987	1988–2001
United States–Canada	50.7	49.3
Latin America–Caribbean	36.0	23.9
European Union	10.7	17.8
Asia-Pacific	2.7	8.9
Diversity of destination regions	75.7	87.6
Number of emigrants	75	147

TABLE 2

EFFECT OF SELECTED VARIABLES ON THE RELATIVELY LIKELIHOOD OF EMIGRATION FROM HOUSEHOLDS IN LIMA, PERU, 1970–2001

Independent Variable	All Years		Preadjustment		Postadjustment	
	B	SE	B	SE	B	SE
Household demographics						
Spouse present	−0.158	0.301	—	—	—	—
Age of household	0.015	0.012	—	—	—	—
Number of children ever born	0.309****	0.068	0.415****	0.102	0.322****	0.064
Number of children younger than eighteen	−0.256***	0.094	−0.399****	0.125	−0.327***	0.114
Human capital						
Years of schooling	0.066*	0.038	0.091*	0.069	0.039	0.044
Prior migratory experience	0.556*	0.331	1.366***	0.493	0.153	0.435
Occupational skill						
Unskilled	—	—	—	—	—	—
Skilled	−0.167	0.461	—	—	—	—
Services	−0.583*	0.336	−0.306	0.534	−0.527*	0.339
Professional	−1.016***	0.369	−1.500**	0.687	−0.800**	0.365
Unemployed	−0.637**	0.366	−0.260	0.567	−0.617*	0.362
Physical capital						
Owns home	0.149	0.230	—	—	—	—
Owns other real estate	0.306	0.406	—	—	—	—
Owns business	0.141	0.244	—	—	—	—
Social capital						
Parent ever migrated	0.270	0.458	—	—	—	—
Sibling ever migrated	0.119	0.230	—	—	—	—
Migration prevalence	0.243**	0.101	0.098	0.179	0.330***	0.126
Period						
Postadjustment (1988–2001)	0.087	0.292	—	—	—	—
Intercept	−7.092****	0.799	−6.831****	1.377	−6.645****	1.0474

Independent Variable	All Years		Preadjustment		Postadjustment	
	B	*SE*	*B*	*SE*	*B*	*SE*
−2 log-likelihood	1,166.573		359.453		786.399	
Number of household years	9,142		4,427		4,715	

*
p < .10.

**
p < .05.

***
p < .01.

****
p < .001.