Policy Research on Migration and Development

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Abstract

This is a survey and analysis—with commentary—of migration issues and the related development policies for the sending countries. "Migration and development" is considered an "unsettled" and "unresolved" area for good reason. The policy issues are surprisingly deep and run to basic issues such as the nature of development as opposed to simple poverty reduction. North-north migration (between developed countries), south-south migration (between or within developing countries), and north-south migration (from developing to developed countries) are all covered although most attention is on the north-south variety. Attention is paid to the question of the dynamic mechanism underlying migration being one of convergence or divergence. Very often the policy issues push one outside what would be narrowly considered as "migration studies." For example, policies to reduce the brain drain go directly to the issues of educational reform in developing countries while policies to increase the developmental impact of remittances quickly carry one into the nature of business development itself. Ronald Dore's ideas on educational reform are outlined as a policy approach to the brain drain problem. Jane Jacobs ideas on development are outlined in greater length as they are little known in development economics and yet directly address the policy issues raised by migration and development.

JEL: O1 (Economic Development); F2 (International Factor Movements and International Business); R1 (General Regional Economics); D2 (Production and Organizations).

Introduction: Scope of the Survey

In recent years, the already sizable literature on migration issues has grown with an accelerated pace. Migration, refugee, and asylum issues have pushed to the top of the policy agenda in Europe and North America, and policy research has grown apace. Our goal is to focus on a relatively small part of that policy literature that is of special concern to the World Bank and other development agencies. That is the literature on the development impact of (voluntary) migration in the home countries or regions. The relationship between international migration and development in the home country has been variously called an "unsettled" [Papademetriou and Martin 1991] or "unresolved" [Appleyard 1992] relationship. In the course of the survey, I will try to clarify some of the analytical issues and to indicate some of the potentially fruitful connections between migration research and development policies.

Opening Match: Harry Johnson Versus Don Patinkin

Harry Johnson's "Internationalist" Model

We might begin with a 1968 debate between two prominent economists, Harry Johnson and Don Patinkin, in an early anthology of papers on the "brain drain" [Adams 1968]. Johnson begins with one of the basic policy questions in the field: better or worse for whom? Is it the people of the home country or region (excluding those who might leave or have left) or the people of the world as a whole? Or is the policy commitment to a specific place or nation rather than an identifiable set of people?

Johnson staked out what he called the "cosmopolitan liberal position" noting that he expected "many educated international migrants would share this position" [Johnson 1968, 70] (Johnson was a Canadian who taught at the University of Chicago and London School of Economics). The basic assumption in this position is that the international flow of human capital is a beneficial process since "it reflects the free choices of the individuals who choose to migrate" (Johnson was not commenting on refugees or asylum-seekers).

The policy reference group is the world as a whole. Most people have a culturally conditioned attachment to their home country but, in a sense, that is an artificial path-dependent phenomenon. If "the individual [had] been born and grown up in another country" then he would have a similar attachment to that other country. With such "artificial barriers to migration" in operation, Johnson argued that less migration from low to high income countries occurs that is "economically optimal." Hence when such migration does occur, he put the burden of proof squarely on any argument against the migration being economically beneficial.

Voluntary migration—"like any profit-motivated international movement of factors of production—may be expected to raise total world output…[except] when the migrant's private calculation of gain from migration excludes certain social costs that his migration entails." [Johnson 1968, 75] Thus Johnson allows for one complication, namely, externalities which are not taken into account in the private calculations. Such externalities may or may not outweigh the benefits of the migration. Since the externalities associated with the brain drain might include positive ones in the receiving country as well as negative ones in the sending country, Johnson makes a *prima facie* case that the externalities will to some extent cancel out and will on the whole not outweigh the direct benefits to the migrants.

Even if the benefits overall outweigh the costs in the sense that with compensation it would be a Pareto improvement, there is in practice "no articulated machinery for compensation." There are remittances sent back by migrants and possibly return migration, but there is no systematic mechanism of compensation to the home country. However, the whole discussion of "compensation" tends to slip in an unwarranted assumption that citizens are "owned" by their home country and, thus, that home country is "due" compensation when citizens migrate. Setting aside any such assumption, Johnson does recognize a case where a more plausible argument might be made.

One case is where the home country financed the higher education of a citizen under at least an implicit expectation that the individual would then contribute back to the country. Johnson suggests that university loans might be a better policy than grants. Some of the alternatives such a period of required service or a tax or bounty paid by the receiving country or employer would be less in the liberal spirit and would be difficult to enforce internationally. Overall, he argues that there is a *prima facie* case for the countries of emigration to make it attractive for their educated citizens to stay (or to get the diaspora productively reinvolved in their home country)—rather than to expect countries of immigration to pay subsidies or compensation for the people who freely choose to immigrate.

Commentary on the Cosmopolitan Liberal Argument

Development as a Multi-Person Prisoners' Dilemma Situation

There seem to be two important weaknesses in Johnson's powerful statement of the cosmopolitan liberal position. One weakness is his rather implicit assumption that local value-increasing actions (e.g., factor movements) will yield global improvements—perhaps aside from various "externalities." Today, externalities in the form of interdependencies are seen as being rather ubiquitous. Game theory is the theory of interdependent decision-making. In the coordination problems popularized by the prisoners' dilemma game, the individually preferred strategies lead to an outcome that is Pareto dominated by the cooperative option.

If economic development in a developing country or region was modeled as a multi-person prisoners' dilemma game [see chapter 7 in Schelling 1978 or Appendix 3 below] where many people are more socialized or less mobile and thus take the "cooperate" option ("committing to make home better"), cosmopolitan liberalism would encourage less-socialized and more mobile people to take the "defect" option of migration ("exit to find a better home") because it would, indeed, benefit them individually. Yet, those gains would not be there if everyone defected and tried to migrate since the doors would close vastly raising the costs of migration (e.g., through illegal channels) and dissipating the benefits. All would end up at a low equilibrium, with neither the benefits of migration nor development, dominated by the option where all cooperated for development. In these we're-all-in-this-together situations, cosmopolitan liberalism does not seem justified to urge the defection option on the grounds that it would benefit the defectors—so long as most others don't take that option.

What is Second-Best to Liberalism-Except-for-Labor?

The other major weakness in the cosmopolitan liberal argument is that *in practice* it tends to argue more for a one-way door for movements in people. It is used to defend a right of out-migration more than a right of in-migration. It is used to attack countries trying to limit who leaves but it is less often used to attack countries trying to limit who comes in—which is taken as the "proper" exercise of national sovereignty.[1] How can cosmopolitan liberalism in developed countries push for two-way openness in goods and capital but not in people?

> So the short answer to the question posed above is that developed countries cannot have it both ways. Either they put their money where their mouth is, and include labor flows in the agenda of liberalization; or they recognize the need for national autonomy and space, in which case they must extend to the developing countries the same privileges in the areas of trade and capital flows. [Rodrik 2001, 3]

But if cosmopolitan liberalism is not applied *across the board*, then what is the second-best policy? Today we are much more attuned to the subtleties in second-best arguments. We are aware that we cannot simply assume that liberal policies applied to everything but labor are automatically second-best to 100% liberal policies.

Don Patinkin's "Nationalist" Model

Professor Patinkin of Hebrew University, Jerusalem, took the point of view of a middle-income developing country much concerned with possible brain drain, a concern that is "implicitly a rejection of the viewpoint that the 'world' should be considered as a single aggregate from the welfare viewpoint—and that the welfare of this unit is maximized by the free flow of resources between countries." [Patinkin 1968, 93] Patinkin pointedly noted that developed countries do not adopt this viewpoint about the "free flow of resources" when the resources are the "population masses of (say) Far Eastern Asia" and similarly underdeveloped countries also do not take this viewpoint when the resources are their own skilled members of the population. In short, developed and underdeveloped countries both take into account the "distribution effects" among nations. Neither group of countries really adopts the "free flow" view across the board.

While thus taking a "nationalist" viewpoint without apology, Patinkin nevertheless starts with the liberal assumption of "free emigration" and asks what developing countries can do to limit the brain drain. One approach would be to ask the more advanced countries to limit immigration of highly skilled people. But he rejects this as being impractical, if not quixotic, since the firms and scientific institutions of the developed world would persistently lobby for such immigration and the governments would tend to support it. Rather than ask the developed countries not to compete for this talent, Patinkin puts the emphasis on "what the underdeveloped countries can themselves do to diminish the 'brain drain.'" [Patinkin 1968, 95] This has three interrelated aspects:

1. the countries must encourage their trained scientific personnel to identify with the development of the country,

[1] Perhaps the phrase "Not In My Front Door" (NIMFD) will reach the legendary status of "Not In My Back Yard" (NIMBY). While the "Front Door" may be officially closed in some countries, the "Back Door" is another matter as one can see from the slack enforcement of laws about the employment of illegal immigrants.

2. the countries must show that these people can indeed fulfill a vital role in that development, and
3. the countries must provide at least minimally for them to fulfill their scientific aspirations.

Patinkin then goes on to suggest some concrete guidelines. When training abroad is necessary, then two years is probably a minimum period to get acclimatized and four years is a maximum period, after which there would be much attrition or readjustment problems upon return. The study should be at the graduate level, certainly post-BA and preferably post-MA. If there is an adequate PhD program at home, then specialized training should be post-doctoral. Greater advantages would flow from sending more mature, already employed, and preferably married people abroad. There might well be a follow-on function such as training others in what one had learned abroad. With these guidelines, the learner who goes abroad would have a "higher degree of identification with his home society and home institution." [Patinkin 1968, 97]

In Patinkin's opinion, if the percentage of students lost abroad was more than 10-15%, then there would be cause for alarm. But, he adds, if there was no brain drain at all, then the country would be underutilizing the opportunities for training abroad. And as to fellowships from the developed countries for students to come there, Patinkin notes that it would be better to fund instructors and professors to come to the developing countries so that more students could be reached. In a similar manner, U.S. firms might establish "subsidiary research-and-development plants abroad" to employ developing country scientists in their home countries and probably at much less expense that in the United States.

One of the themes that flows throughout the migration literature is Albert Hirschman's exit-voice dynamics [1970]. One common form of reasoning is the "safety valve" idea of migration. If jobs are not available in the home country, then some static efficiency is achieved, and some pressure is released, through the safety valve of migration or gastarbeiter arrangements. But then this may be dynamically inefficient by taking the pressure off of making the domestic reforms necessary for business development that would create jobs at home. But it will also not do simply to lock the exit door, particularly when the government is accustomed to turning a deaf ear to voice. Hence Patinkin makes the positive point that the brain drain exit opportunities show the government that the scientific community has other options and should not be taken for granted. The possibility and exercise of some exit is a type of voice that alerts the government to improve conditions at home for the domestic scientific community.

Finally Patinkin added an appendix to the published paper to reflect some of the discussion at the original conference where the papers were presented. The appendix reflects Patinkin's annoyance at Johnson's argument that the free flow of resources increases "world welfare" and that opposition to that free flow reflected illiberal nationalistic anachronism. Patinkin noted that welfare economics had not been able to produce a "world social welfare function." Moreover, the "free flow of resources" reflects the effective demand created by very nationalistic forces in the developed countries. He mentions the "U.S. government defense and space programs" and the American "nationalistic war in Vietnam" [Patinkin 1968, 106] and wonders how that would be reflected in a "world social welfare function."

One positive argument given in Patinkin's appendix is an argument for the sort of intellectual diversity that would result from having at least one good university in each developing country with a "developed educational and cultural life." He notes that the dynamics of agglomeration are at work in the formation or deformation of intellectual centers. There needs to be a "critical mass" of good people. Even within a developed country, "brain raids" of one university on another can lead to a process of decline that is hard to reverse. The same dynamics are even stronger between developed and developing countries. As soon as a scientist establishes some prominence in a developing country, hard-to-resist offers come in from the developed countries so that it is very difficult to maintain a top-flight university even in a mid-level developing country. The people who may just be a few more small jewels in the crown at a Harvard or a Cambridge may make all the difference in the "critical mass" in their home country.

Commentary on the Patinkin's Argument

The critical mass argument used by Patinkin is ubiquitous in the brain drain and broader development literature so it may be worthwhile to present a simple statement of the idea for later reference.[2]

One type of critical mass dynamic is driven by expectations. Suppose each scientist in some home country reference group will make their plans to stay or leave depending on their expectation about how many others will stay or leave. These expectations are summarized in a "reaction function." Given the information to all scientists in the group that X% are staying, then a Y% percentage will consider that sufficient for them to stay. Given X%, that Y% percentage who will stay is given by the reaction function.

If given that 40% were staying, only 35% considered that sufficient for them to stay, then 40% would not be an "equilibrium" (where expectations matched reality). The numbers would spiral downward to some low level equilibrium. If given that 75% would stay, then at least 80% considered that sufficient to stay themselves, then the dynamics would work the other way. The number staying would spiral upwards to a high level equilibrium. In between, there would be a "critical mass" number that would separate the downward and upward dynamics. At each point, the dynamics is indicated by comparing the reaction function to the upward-sloping 45^0 line as in Figure 1 below.

[2] See Schelling 1978 for an extensive treatment. Our reaction function model is a reinterpretation of his faculty meeting model in Chapter 3. This dynamics of divergence can operate between two populations or within one population to divide it into upper and lower strata. For instance, a virtuous circle of city growth might have a positive "spread effect" in a suburban neighborhood but a negative "backwash effect" in a nearby rural area. It is sometimes called the "Matthew Principle" after the Biblical reference: "For to every one who has will more be given, and he will have abundance; but from him who has not, even what he has will be taken away." [Matthew 25:29] Gunnar Myrdal [1957] did the most to popularize these dynamics in the economic development literature particularly to account for persistent and increasing national and international inequality.

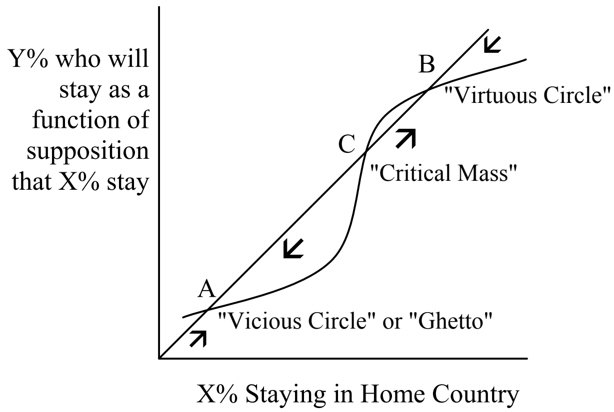

Figure 1: Critical mass dynamics

Above the critical mass C, "the-more, the-merrier" dynamics of agglomeration set in to drive towards the high-level equilibrium at B. Below the critical mass, the dynamics of disagglomeration work to "ghettoize" the scientific community in the country until the low level equilibrium is reached at A. Starting at B, if a few key people are "cherry-picked" or "poached" by the developed countries, then that may push the system down below the critical mass at C which would trigger the self-reinforcing downward spiral to A.

It should be particularly noted that the downward dynamics below the critical mass is not a self-equilibrating process between the sending (home) and receiving (host) countries. The more that leave the home country, the greater the push to leave and the greater the pull of the receiving developed countries. It 'snowballs' rather than equalizes.

There is no necessity that expectational dynamics work in this manner to drive toward an upper and lower equilibrium with a critical mass in between. Instead a "room for more" dynamic could dominate the low levels and a dynamic of over-crowding and congestion could dominate at the higher levels so that there was a single stable equilibrium in between at C (see Figure 2).

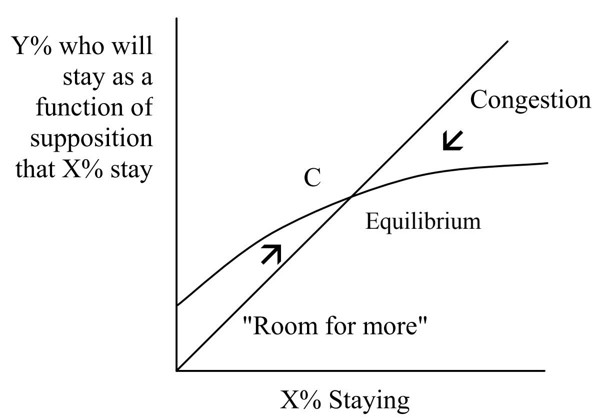

Figure 2: Equalizing dynamics

Mundane examples arise when people plan to go to a restaurant or to a nightclub. Many people would go to a restaurant that has "room for more" without being crowded but would avoid a crowded one. That would lead to the single equilibrium dynamics of Figure 2. However for a nightclub, they might want to be "where the action is" and that would lead to the critical mass dynamics of Figure 1.

Many discussions in the migration literature are based on rather uninspired neoclassical models that picture migration induced by wage differentials as equalizing the differentials between the countries or regions of origin and destination. But this is tantamount to just assuming that the equalizing dynamics are in operation (e.g., diminishing returns to labor within a static production function in each country)—when the question of the dynamics may be precisely the point at issue. In terms of the restaurant/nightclub example, when a group of people leave the waiting line at restaurant A to go to less-crowded restaurant B, that may help to equalize conditions between the two establishments. But when a group of people depart from one nightclub to go to another, that may induce even more migrations in the same direction.[3]

Clarity in migration policy research starts with understanding these two different dynamics. Are the migration flows part of a critical mass dynamics driving one region to a low equilibrium away from a high equilibrium—and perhaps doing the reverse for another region? Or are the flows part of an equilibrating dynamics reducing the push and pull factors between two countries or regions?

North-North Migration

We have already seen how the critical mass dynamics could arise in the context of migration. The equilibrating dynamics also occurs and is often the assumed mental model in policy discussions. If we consider the historical North-North migrations from a crowded Europe to a sparsely populated North America [e.g., Hatton and Williamson 1998; O'Rourke and Williamson 2000], then it might be represented by the equilibrating dynamics. If we took X% to represent Europe (or some part of it) in the 19th century, then the flow of the "tired and huddled masses" from those "teeming shores" to North America would relieve the crowding or congestion in the sending region and thus reduce the "push" factor. The "empty spaces" of North America would become less empty which would reduce the "pull" factor so the migration would equilibrate the pressures on both ends.

In North-North migration, the sending country or region is relatively developed so the question of the migration being detrimental to the sending region tends not to arise. The migration equilibrates pressures (like water flowing between two containers) and does not start a disequilibrating downward spiral to a low-level "trap" equilibrium. If all migration was of this type then it would be much less of a developmental issue.

[3] The dynamics between two groups will be treated in a "reaction square" diagram in Appendix 2.

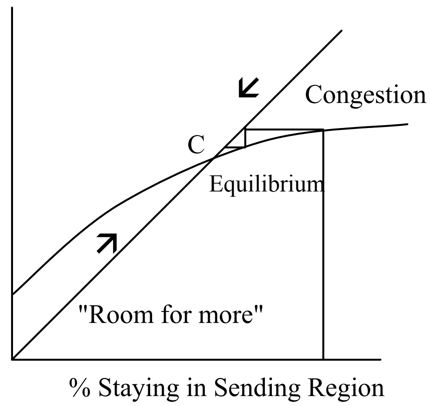

Figure 3: "Normal" Migration

South-South Migration

We will use "South-South" migration to refer to flows between or within relatively underdeveloped regions or countries (even if the migration is geographically in the North). For instance, an "excess" population was artificially subsidized in the arctic north of the former Soviet Union. The Russian government no longer has reason to subsidize the arctic cities so (in a World Bank supported project) out-migration is being initiated and encouraged.

A reduction in subsidies and aid given to those who stay will tend to unambiguously shift the reaction function downward. At each given percentage, less will be willing to stay than before the subsidy reduction. Thus with either dynamics, there will be dynamics pushing for a lower equilibrium.

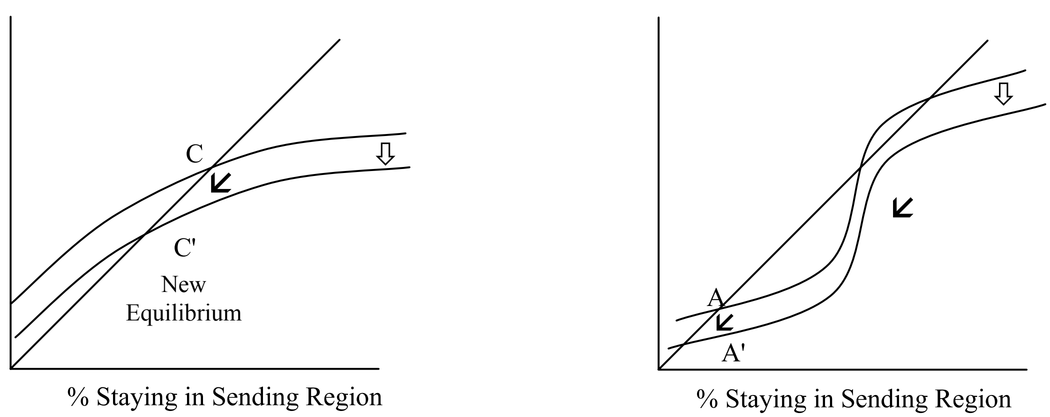

Figure 4: A Downward Shift in the Reaction Curve in the Two Cases

In the case of the "normal" equilibrating dynamics, a downward shift in the reaction curve would lead to a continuous transition to a lower equilibrium (e.g., from C to C' in Figure 4). However, in the case of the critical mass dynamics, a sufficient downward shift in the reaction function could eliminate the high equilibrium and critical mass so that everything would gravitate to a new low equilibrium.

At the other extreme of temperatures, desert regions of Africa in the Sahel often seem to be unable to support their current populations without a continuing infusion of aid and relief. A better use of the aid may be to initiate and encourage the out-migration of most of the population from the unviable region. Such a downward shift in the reaction curve would, under either dynamic, lead to a lower equilibrium.

Rural-urban migration and interior-coast migration might also be seen as south-south migration. From a policy viewpoint, the two cases, equilibrating or critical mass dynamics, are somewhat different. If the sending region was seen as viable but simply as having too many people for what the region could support, then some out-migration might be encouraged in the equilibrating dynamics scenario. But if the region was essentially unviable and yet most people were staying there due to some weak agglomeration effects sustained perhaps by subsidies and aid, then the underlying policy model is a downward shift in the reaction curve in the critical mass dynamics model. If the arctic north or Sahel are seen as being unviable, then action might be based on the critical mass dynamics model. This will have a detrimental effort on any expectations of development in those regions, but that effect is deliberate. However, policies to promote out-migration from rural or interior regions to the cities or coastal area might be based on the equilibrating dynamics.

This is related to the policy question of "people or places" [e.g., Ravallion and Wodon 1997]. Ultimately it would seem that the policy commitment is always to people, not places *per se*. But policy questions might come unavoidably packaged as "place" questions as long as governments are geographically defined. For instance, we noted how a deliberate out-migration policy might take all or most of the population out of an unviable region. But suppose that "place" was not just a desolate region but a whole country? Then the out-migration would entail people moving to another country and essentially depopulating the given country.

In the period of decolonization in Africa following WWII, many rather haphazardly drawn colonial borders hardened into state boundaries. Where previously people had been able to migrate and settle in a better place, now they were tagged with citizenship in a state and migration might carry them across a state boundary. Since they were not "from" the receiving country, citizenship might not be readily available. Even if not treated as refugees, then as "aliens" they would be less likely to make the sort of economic investment that would make the migration a positive developmental force [see Chapter 8: The Politics of Migration and Citizenship in Herbst 2000].

It might be useful in this regard to carry out the thought-experiment of supposing that all the states in the United States during the 18th and 19th centuries had been separate countries. All the migratory flows across the continent would have been from one country to another with the migrants perhaps denied citizenship and treated as aliens in the receiving states. It seems clear that such disunited states would have greatly retarded the economic development of the North American continent. A multilateral development agency, which was part of the given system of states, would be ill-positioned to address this basic developmental problem. The agency could encourage the free movement of goods and capital between the disunited states, but the free flow of people (with quick and secure citizenship granted in the receiving states) would be quite another matter. This thought-experiment about the "disunited states" is a device to gain some perspective on the policy questions of south-south migration in Africa today.

North-South Migration in General

The labels "north-north" and "south-south" were used to label migrations between regions that were either both relatively developed or both relatively underdeveloped. Either the out-migration was not detrimental to development in the sending region (e.g., in the north-north case) or the negative effect was a conscious by-product of the attempt to de-populate unviable areas (e.g., desert or arctic regions) or to concentrate people where there were agglomeration effects (e.g., in urban areas or coastal regions).

North-south migration is migration to a relatively developed region or country ("north") from a relatively undeveloped one ("south")—where the development of the sending region is still a policy goal. The economic differential between the sending and receiving ends is the main determinant of north-south migration. It should not be assumed that push factors such as lack of local jobs are predominant; it is the differential that counts.[4] From the policy viewpoint, the label "north-south" will be applied to migrations where there is a presumption that the development of the "south" is still a policy goal (e.g., of the national government or international development agencies). There is no presumption that any detrimental effect on the sending region is an intended goal or an acceptable by-product of other policy goals.

North-south migration causes many of the migration-related problems in the world today both in the sending and receiving areas—although our focus is on the developmental impact in the sending areas. Powerful economic forces drive the north-south migration. The communication and transportation revolutions that are part of globalization have quickened the pace and expanded the flows. It is the interaction and perhaps collision of these globalizing forces with the policy goal of the development of the sending area that has generated much commentary and speculation about the long run effects.

- Is the out-migration part of an equalizing dynamic that will improve conditions (e.g., relieve "over-population") in the sending region?
- Is the out-migration a temporary negative factor that might, however, be more than compensated for by the backflow of remittances and skills that will together with other developmental forces drive the area from a low to high equilibrium and thus eventually reduce the out-migration?
- Or does the out-migration largely feed and sustain a low-level equilibrium notwithstanding the backflow of remittances and returnees?
- Perhaps a "happy face" should be put on the whole question by seeing the "production and export" of unskilled and skilled labor as a comparative advantage of the sending area which might be "promoted" as an export industry?

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[4] A manager of a tire factory in Ecuador reports "We don't have a labour market here any more…. They finish their education and they go" He now requires neither prior experience nor a high school diploma, and he has had to double the salary offered to new workers. [Economist 2002a, 42]

These are some of the basic policy questions and perspectives that run through the current policy literature on north-south migration.

Unskilled North-South Migration

"Temporary" Labor Migration as a Permanent Way of Life

Gastarbeiters or guestworkers from Turkey and the Balkans to post-WWII Germany were originally seen as potential drivers of development for the sending regions. The workers could learn industrial skills and new technologies that could then drive development in their home countries. They would see societies with more economic development and with different laws, institutions, and habits of the people.[5] Remittances and the savings of returnees would provide the capital for a developmental "lift-off" in the less developed regions.

None of this was impossible. Yet the gastarbeiter phenomenon has not, on the whole, driven development in the sending regions. It may be useful to explore some of the reasons.

Historically, temporary work elsewhere might well be a way to acquire a capital stake. During the "Gold Rush" in mid-19th century America, people from across the country "rushed" to the West Coast to try to make some quick money. Some made money directly from the gold and silver, and many others made money from the high prices for provisions. But diminishing returns soon set in as the rich veins of gold and silver dwindled. Then many of the miners and provisioners returned home with their capital stake—all to the benefit of the sending regions. One of the key elements was the time limit on the Gold Rush. It was not available as a permanent way of life.

Temporary work abroad can also be a means of technology transfer. When the Axis powers occupied Yugoslavia during WWII, a sizable number of technically trained workers and engineers—particularly from the more Germanized part of the country, Slovenia—were taken to Germany to work in the advanced industries. When the "forced migrants" returned after the War, Slovenia made a concerted effort to use that new knowledge to build a group of electrical and electronics companies, the *Iskra* (Spark) group. That laid the foundation for the modern high technology industry in Slovenia, and it may account, in no small part, for Slovenia being the leading transition economy today. Here again, the labor migration was by nature temporary.

A similar story can be told for some internal rural to urban migration and return. During the Chinese Civil War, some peasants moved to the industrial cities such as Shanghai to escape the chaos in the countryside. After the Revolution, they returned home with enough industrial skills to begin some off-farm rural industrial workshops that laid the foundations for the success of the township-village enterprises (TVEs) many years later.

Thus it is not impossible for temporary labor migration to provide the capital stake and technological knowledge to drive development in the sending region. But is that an accurate

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[5] "It is hardly possible to overrate the value, in the present low state of human improvement, of placing human beings in contact with persons dissimilar to themselves, and with modes of thought and action unlike those with which they are familiar.... Such communication has always been, and is peculiarly in the present age, one of the primary sources of progress." [John Stuart Mill 1899, Vol. II, 99-100; Book III, Chapter 17, para. 5].

description of the gastarbeiter and other temporary labor migrations between the less and more developed parts of the world today? So far, it would seem the answer is negative. The uses of remittances will be considered in more detail below, so other aspects will be considered first.

The very name "gastarbeiter" connotes a temporary guest. In German industry after WWII, as in the oil-rich countries of the Middle East or in the American south-west today, there was little intention that the visiting workers would become permanent residents or citizens. Yet as a number of people have quipped, “there is nothing more permanent than ‘temporary’ migration.” Some family members will go abroad to work, not as a temporary measure to acquire capital or knowledge, but as a career choice that will increase and diversify the income of the whole family.

Some researchers have entertained and promoted the idea of gastarbeiters returning home during the economically active part of their lives (i.e., before retirement) and then using their capital and knowledge for economic development. However, this proposed development strategy may conflict with the migrant worker psychology [e.g., Bovenkerk 1974; 1982]. Being a gastarbeiter is often their chosen career so coming home to work (before retirement) is to be a failure in their chosen career. It would mean "not being good enough to keep their job or find another job in Germany." It is hard to build a development strategy on people doing what they, their families, and their peers perceive as being a failure! Many of the speculations about the potential developmental role in the South of remittances and returnees fail to take into account the social and self-perceptions of the gastarbeiters and other "temporary" labor migrants about their careers.

It is compatible with the self-perceptions of gastarbeiters to successfully complete their "careers," to return home, and to ease into semi-retirement by starting a small life-style business such as a shop, café, or small boarding-house. But that is far from being an engine of development.

Any rethinking should start with the idea that "temporary" should mean limited to a fixed total time period of several years. Migrants from Asia to the Gulf States are called "temporary" because each episode is limited in time and they may not immigrate. But this "temporary migration" is nevertheless a permanent way of life. There is no sum-of-episodes time limit of a fixed number of years. Hence it is not "temporary" in the sense of being "time-limited." That would entail some form of a fixed time limitation (like "term limits" for politicians) so that the temporary job cannot become a "career." Such a time limit would change the expectations. Like a student who receives some education abroad and then returns home for a career at home, a worker would see the time-limited migration as the chance to receive an on-the-job education abroad and build up a capital stake to then return home to make a career.

Best and Brightest Migration as Perpetuating the North-South Development Divide

We have noted that “temporary unskilled labor migration” is usually not temporary. It is important to note that “unskilled” may apply to the sort of jobs the migrants have in the host country, but it is not necessarily a good description of the migrants in their home country. The poorest of the poor are not the typical migrants. Usually migrants have some considerable entrepreneurial drive towards self-betterment (of which the labor migration is testimony), some complement of skills, and some resources in order to finance the trip or trips. Remittances may lead to more migration because they show that migration works, they finance other family members' trips, and they show what the neighbors have to do to "keep up with the Jones."

This highlights another way in which labor migration can be detrimental to development. Many of “the best and the brightest” of the blue-collar workers—as well as the college-educated “brain workers” to be considered later—leave their home region so that their real talents and capabilities are not brought to bear on overcoming the barriers to development at home.[6] The question of the developmental impact of remittances will be considered below; our point here is the withdrawal of the “human capital” from the home region—not the return of financial capital.

This is a variation on the old theme about how a meritocracy works to perpetuate a stratified society.[7] For the sake of illustrative simplicity, we could consider a society divided into two classes, strata, or castes, say, an upper class and a lower class.[8] The “smart” way to organize such a stratified society is as a meritocracy where the best and brightest from the lower strata can be recruited without prejudice into the upper strata.[9] Moreover, that should be the very definition of “success” for someone born into the lower strata—that they should capitalize on the opportunities offered by the meritocratic structure to achieve individual success in the sense of ascent "out of the ghetto" and into the higher strata or class. Such individual cases of worthy ascent into the upper strata should be celebrated far and wide as examples to which any ambitious young person of low and unfortunate birth might aspire. And with every success story, those in the upper class might pat themselves on the back for sponsoring a society that allows such social mobility that is based on merit and is blind to the accidents of birth.

In this manner, the talents devoted to maintaining the stratification and the privileges of the upper portion of society are constantly renewed by the meritocratic recruitment from below. For example the mandarin-dominated structure of ancient China was both rather static and long-lived, in part, because it operated on such a meritocratic basis.

The problem is that such a dynamics may well be at work in the south-to-north migration of “unskilled” as well as skilled migration in today’s globalized world. The “development divide” may be perpetuated by the “successes” of the best and the brightest from the South making their careers in the North. This is a broad brush argument; there are individual Moses-like exceptions, such as Gandhi or Martin Luther King, who return to help organize structural change—but the typical case is unfortunately rather different.

Migration as a Safety Valve to Relieve Pressing Social Problems

In the last section, we reviewed the argument that migration provides "the best and brightest" with an exit option and thus that their talents were considerably less available, if not unavailable,

[6] Using a production function such as $Y = AK^aL^b$, there are two effects: 1) the reduction in L, and 2) the retardation in the processes to increase the residual coefficient A. The second effect is the more important one from the developmental viewpoint.

[7] The classic satire about such is society is Michael Young’s *The Rise of the Meritocracy* [1962].

[8] The stratification can also be spatialized with the lower strata identified with a "ghetto."

[9] There might also be some social mobility the other way as in various quips about “rags to riches and back to rags in three generations.”

to any domestic developmental efforts. The flip side of increased exit is that there is decreased voice, or, in more general terms, decreased pressure to break through the barriers to structural change. Hirschman's original example [1970] about exit-voice dynamics started with the conventional wisdom that increased competition to the Nigerian railroads from trucking would bring pressure on the railroads to reform. However, it had the opposite effect since the "best and brightest" of the client base, i.e., the discriminating customers who needed to get their goods to a given place at a certain time, exited the railroad system and switched their business to trucking. However, since the railroads could not be just shut down, the state continued to subsidize them so, in all, there was even less pressure to break through the barriers required for difficult reforms in the railroad system.[10]

There are many ways that the pressure of problems that demand social change can be relieved without being resolved. One is to discover oil or gas deposits in one's backyard and then to soften the rough edge of pressing problems with the natural resource rents. Another way is to misuse external aid or loans to "buy time" and postpone real changes—to pay the costs of not changing rather than paying the costs of change [see Stern 2001].[11]

Migration often seems to work in a similar way as a safety valve to relieve the pressure of a pressing problem rather than to resolve it. When yesterday's elites use their power to lock in their position and thus to stifle innovation which can always be threatening, then the economy will stagnate and young people will not be able to find jobs that will utilize their skills and engage their ambitions. Migration provides the ambitious and skilled with individual exits. It helps to "export" the unemployment problem. Overall, it relieves the pressure to change the structural barriers to improving the business climate. It would be ill-advised to think that a whole society can go "bankrupt" like an individual company that stagnates. Unfortunately history is abundant with quite long-lived stagnant societies where the elites have found ways to constantly suppress or bleed off the pressure for change.

We will consider the important topic of remittances next, but in the context of the safety valve argument, remittances amplify the deleterious effect of migration by relieving the pressure of pressing problems. Many governments in developing countries have now discovered the "oil well" of remittances which will help them to paper over problems and pay the costs of not changing.

All this does not deny the fact (which Hirschman also noted) that exit *can* be itself a form of voice independent of any bankruptcy mechanism. National pride cannot be long sustained if young people seek to obtain college degrees largely as exit visas. This is why the deleterious effects of migration (exit of best and brightest, and relieving of pressures for change) operate with greatest force in a country, region, or area with the collective self-image of a ghetto. The out-migration is a key part of the self-perpetuating ghettoization mechanism (i.e., the self-

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[10] Hirschman notes other examples where exit undercuts voice. For instance, Latin American powerholders have long encouraged the voluntary exile for political opponents where they would not cause as much trouble [Hirschman 1970, 61]. This takes the pressure off of internal reforms. Another interesting example is the tendency of Indian industrial companies to get their own electrical generators where the public supply is so unreliable. This takes the pressure off the public suppliers to reform the old system so the situation is self-reinforcing.

[11] Both examples are discussed in chapter 7 of the World Development Report for 2003 [World Bank, 2003].

reinforcing low equilibrium in the critical mass dynamics). A "ghetto" will never find collective success as long as the internalized definition of "success" is individual exit.

Remittances: Streamlining Transmission and Increasing Developmental Impact

Remittances from north-south labor migration have received great attention in the migration literature [See Athukorala 1993; Massey et al. 1998; Woodruff and Zenteno 2001; Rapoport and Docquier 2002]. There is much concern about the developmental impact of aid transfers from the North to the South, and yet, on the whole, remittances are even larger that all aid transfers. Thus the potential developmental role of remittances should be an important topic for policy research and experimentation.

For example, the Multilateral Investment Fund (MIF) of the Inter-American Development Bank (IADB) has extensively studied remittances. During 2002, there were $32 billion in remittances sent to the countries of Latin America and the Caribbean, an increase of 17.6% over the previous year. The United States accounted for 78% of the total. In 2002, the amount far exceeded the Official Development Assistance (ODI) received by the region and were only slightly less than foreign direct investment. The IADB has held a number of conferences and conducted many studies on remittances with the following policy targets.

> These trends have led to a general consensus focused on the following three objectives: (i) To reduce the costs of transferring remittances; (ii) To continuously improve the ease and accessibility of remittance transmission; and, (iii) To mobilize and channel savings via the increased involvement of formal financial institutions in the process.[12]

In a comprehensive survey, Lowell and de la Garza [2000] covered the range of issues concerning the developmental use of remittances. The volume of remittances is growing rapidly so that the market for remittance transfers is attracting more for-profit and non-profit competition. Costs now seem to be falling as a result of these market forces so the expenditure of scarce government attention and resources may not be necessary to reduce transmission costs.

Perhaps public policy attention should focus on increasing the developmental impact of remittances. There is an old stylized fact that most remittances are spent on consumption, health care, education, land, and the like, but that there is little expenditure or investment in direct productive uses. Many authors have argued that even if remittances are spent non-productively, there is still a pro-development multiplier effect particularly if the expenditures are used locally instead of on imports. There are two problems in this multiplier argument, at least if it is used to argue that further policy initiatives are unnecessary.

The first problem in the multiplier argument is that the multiplier is a double-edged sword. As is evident in a recession, reductions in expenditure have a downward multiplier effect. Thus any volatility in remittances will be amplified through the multiplier effect in the home economy. Businesses depending not just for their start but for their continuation on remittances will create a vested interest in the economy for continued migration and remittances as a way of life.

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[12] See: http://www.iadb.org/mif/website/static/en/remit1.asp and for updates, see www.iadb.org/mif.

The second problem in the multiplier argument is a more subtle distinction between expenditures that are essentially sterile for development and expenditures that bring forth development that is soon independent of reliance on remittances.[13] Jane Jacobs has forcefully developed this distinction [Jacobs 1969; 1984] which will be treated separately in an appendix (so as not to digress here). [For a discussion of migration, see box on: Jane Jacobs on Regions Workers Abandon]

Box 1. Jane Jacobs on Regions Workers Abandon

Jacobs [1984] considers the problems of rural settlements or regions that workers abandon to migrate to jobs in cities. After World War II, workers from Turkey, Yugoslavia, and a number of other countries in southern Europe and North Africa were welcomed into northern Europe and particularly in West Germany. The remittances sent back were sizable, in some countries the single largest source of foreign exchange. Yet when unemployment rose abruptly in northern Europe (e.g., 1974 and 1980), hundreds of thousands of guest workers lost their jobs and returned to "the same unemployment and underemployment they had left." [Jacobs 1984, 74] The remittances, in the mean time, had not put their home regions on the road to development.

> Remittances, while they last, do alleviate poverty in abandoned regions, just as any forms of transfer payments from rich to poor regions alleviate poverty while they last. The money buys imports for people and institutions which they would otherwise have to go without, but that is all it does. [Jacobs 1984, 75]

Jacobs tells the story of a small Mexican village, Napizaro, that for forty years has been dependent on remittances largely from migrant workers in the Los Angeles area.

> Today Napizaro is as prosperous a settlement as can be found in its entire region. The village's twelve hundred people live, for the most part, in comfortable brick houses with pretty patios and TV antennas. The community has street lights, a modern infirmary, a community center, and a new bull ring named The North Hollywood in honor of the industrial section of Los Angeles, some fifteen hundred miles away, from which this prosperity comes. [Jacobs 1984, 75]

The road between Napizaro and North Hollywood is now well-trodden; it has become a way of life. When boys get to working age, they are trained by retired returnees about what to expect in the American factories, and other villagers working in Los Angeles help to find them jobs. Over the years, it seems that many of men have considered starting their own company at home since they had acquired most of the skills necessary. But they have abandoned the idea as it seemed that their village was too isolated.

> The skills and experience the men have acquired in Los Angeles are usable only in the context of a city economy with its symbiotic nests of suppliers and its markets, not in this economically barren region. One and the same lack—a vigorous city right in the region—forces the men to find work far away and also makes it impossible for them to start an industrial plant of their own, at home. [Jacobs 1984, 76]

There are two points here that need to be teased apart. The need for ties to vigorous cities are still key to rural

[13] Many argue that the education of the young financed by remittances is a merit good (an end in itself). But that is quite different than arguing that remittances are used for education so that the next generation does not have to migrate—indeed, there is considerable evidence to the contrary. Where migration has become a "way of life," education is seen as the road to a better migratory outcome (perhaps with permanence) rather than local development without migration.

industrial development. However, there has been a communications and logistics revolution in the last twenty years since Jacobs' assessment so today there may be better chances for various subcontracting *maquila* operations funded by migrants as has been promoted by a state-sponsored program in Guanajuato, Mexico [See box on: The *Mi Comunidad* Program in the Mexican state of Guanajuato].

> In Mexico, the spread of maquilas to the whole country following NAFTA has created booms in rural employment in regions like the Gulf with extensive direct benefits for the rural poor. These maquilas are in turn sources of local linkages for services and the production of regional non-tradables, adding indirect benefits to the direct employment effects. Communities and regions can have highly pro-active roles in attracting these investments and maximizing local linkage effects. [de Janvry and Sadoulet 2001, 6]

The multiplier effects are not enough. Other means need to be found to increase the development impact of remittances. Lowell and de la Garza [2000] consider four ways of "leveraging remittances."

1. "Capturing a Share of the Flow of Remittances": Governments might try to intercept part of remittances through duties or levies, or for investment in a national development fund, but, aside from some success in Korea, this idea seems to have little support as the effect would be to drive remittances into costly informal channels. Otherwise there might be a voluntary check-off for charitable purposes, but that does not promise much developmental impact.

2. "Financial Instruments on Remittances": One strategy is to attract more remittances into formal banking deposits which can give migrant families better interest rates as well as improve the domestic banking sector and the national balance of payments. Another strategy is for financial institutions to offer remittance bonds which the families can cash in when they need the money. Or banks might offer foreign currency accounts to reduce the foreign exchange risk borne by the migrant families. However, in the case of the remittance bonds or foreign exchange accounts, the assets might well be invested by the banks in foreign assets which would seem to defeat the developmental goal of "capturing the remittances" in the formal banking institutions. And even when the banks invest the remitted funds domestically, there is little likelihood that the investments or loans will be in poor communities or have a direct (non-trickle-down) effect on the development of the communities sending the migrants.[14]

3. "Channeling Individual Migrant Labor Earnings": The idea is create incentives for more direct productive investments of remittances. Under this heading might be included micro-finance schemes or credit unions particularly when the latter can make business loans [see ILO 2000]. Remittances put into micro-finance associations or credit unions could be expected to have more of a local pro-poor development impact. To encourage migrants to return and start businesses, governments might offer tax breaks on imported equipment, training programs on skills needed (beyond those acquired by the work abroad), and small enterprise loans.

[14] "Studies in many countries have shown how the banking system, if not regulated to act differently, tends to become an instrument for siphoning off the savings from the poorer regions to the richer and more progressive ones where returns on capital are high and secure." [Myrdal 1957, 28]

4. "Migrant-Sending Government Outreach to Migrant Collectives": In Latin America, the associations or collectives of migrants from a town or even a small region are called "hometown associations" (HTAs). While the HTA may have a political and social role in the host country, they are increasingly serving as a channel for the collective investment of remittances in the home state or town [e.g., Smith 2001; Susan Martin 2001]. Ordinarily the funds are expended in various community projects which may help build social capital but may or may not have a local developmental impact (e.g., retirement homes, community halls, sports fields, and even rodeo and bull rings).

Box 2. Migrants' Associations

Associations or clubs of Latin American migrants in the United States had a remarkable development during the nineties due to three main factors: a) the strong increase of migration flows caused by the economic bonanza; b) the hardening of United States migratory laws, which encouraged migrants to become better organized for the defense of their civil and labor rights; and c) the effort of several Latin American governments to initiate a constructive dialogue with their migrants and give them a better support through their consular procedures.

At present, there are in the United States a large number of migrants' associations from El Salvador, Guatemala, Honduras, Mexico and the Dominican Republic. They amount to thousands and cover a large part of the country, although the larger number are located in Los Angeles, Chicago, Dallas, Miami, Atlanta, Houston, New York, Washington D.C., San Francisco and Seattle.

Migrants' associations perform a series of cultural and social activities on behalf of their members. They also have supported all sorts of trades with their home countries or communities and have sponsored their cultural, religious or civic festivities. An important number of clubs have gone further in order to support their hometowns with donations and investments for community projects and local development. In El Salvador, Guatemala and Mexico, the positive impact of the activities of this kind of associations is already visible and widely acknowledged.

Either for festivities, scholarships or community projects or as support in emergency situations (as with the Hurricane Mitch), migrants associations regularly send donations to their home countries. These flows have been called collective or community remittances.

The amount of these donations has not been documented in a systematic way and it is difficult to make aggregate estimates on the subject. A middle size Salvadorian group, from the Los Angeles area, reported that during 1997 they managed to collect 10 thousand dollars. That amount was donated to several charity or cultural institutions in the hometown. A smaller Salvadorian association, in Washington D.C., reported donations of 37 thousand dollars in 6 years (CEPAL 2000, p. 57). These figures are similar to those found in the case of Zacatecas, Mexico, where the clubs regularly send annual donations in the range of 5 thousand to 25 thousand dollars, depending on the size of the club, its degree of development and the project to be sponsored.

In Mexico, clubs have begun to get organized also to exchange information on possible investment projects in their hometowns, to pool resources from their members and to channel them to such projects. [World Bank 2002, 14]

In the Mexican state of Zacatecas, the federal and state governments will each match every dollar donated to local projects by HTAs (a two-for-one match which sometimes becomes three-for-one or "3 x 1" with a municipal match). These projects (e.g., in 1995, $600,000 in 56 projects in 34 towns) are usually investments in local public goods or small-scale infrastructure: water treatment, schools, roads, recreational facilities, parks, and the like.

> Through this program, more than 400 projects have been completed in eight years in Zacatecas. The total investment made by migrants on those project amounts to around 4.5 million dollars. Of that total, 2.7 million dollars were invested in the last two years. [World Bank 2002, iii]

In the Mexican state of Guanajuato, the government has special office to help its migrants form HTAs (*Casas de Guanajuato*) and it has also helped create a number of small garment factories (*maquiladoras*) when $60,000 or more is first put up by the local community [see box on: The *Mi Comunidad* Program in the Mexican state of Guanajuato].

Box 3. The Mi Comunidad *Program in the Mexican state of Guanajuato*

Guanajuato's program "Mi Comunidad" aims at attracting migrants' savings to a business (a maquiladora) that has also a targeted social impact in the home community. The members of a particular HTA, along with local investors, are stockholders in that enterprise and have a business motivation, but at the same time they keep a social concern for their hometown development. This combination is one of the most interesting features of the program….

Maquiladoras in Guanajuato's program were originally planned as joint public-private ventures, with the migrants or local investors contributing half of the capital (from 60 to 100 thousand dollars) and the state government the other half. In the end the state government participated only as a facilitator, developing the business plan, putting up two months of wages and training courses for the new workers and making low-cost loans available. Other government officials offered legal, administrative and technical advice, when necessary.

The program started in 1996 with a promotion for the establishment of ten maquiladoras in seven municipalities and it was well received and accepted by migrants from Guanajuato and their clubs (Casas de Guanajuato). Up to June 2000, 12 maquiladoras had been completed and put into operation and nine more were under way. The capital contributed by the migrants is estimated at around 2.2 million dollars for the 21 firms. The 12 firms in operation employed around 500 people. The Casas participating in the program have been mainly from Illinois and California. [World Bank 2002, 19]

Lowell and de la Garza conclude their study with a number of useful cautionary notes. Even where families and HTAs are focused on the development of poor communities, the financial institutions who may hold the deposited funds might have quite different goals. The families of the migrants may also other desires and needs (consumption and health care) that do not necessarily bode well for local development. In light of the downward multiplier effect, it is not clear that remittances will always be stable or increasing. Remittances are largely driven by *recent* immigration. As migrants spend more time in the host country and adjust, remittances fall. "As yesterday's new arrivals adjust, and as today's number of new arrivals falls, the combined effect may be that remittances have peaked." [Lowell and de la Garza 2000, 24]

Box 4. Family Remittances, Migrants' Capital and Local Development

Yuriria and Jerez are two Mexican municipalities which have traditionally been labor exporters to the United States. Yuriria, in the state of Guanajuato, is a municipality of 74 thousand inhabitants, of a rural nature, with little employment opportunities and mostly dedicated to agriculture and cattle activities. Only

23% of its active population has a job and two thirds of those who have it make less than 8 dollars a day.

Jerez, in Zacatecas, has a smaller population but of a more urban character. The municipal capital, with over 27,500 inhabitants, concentrates 69% of the population of the municipality and is an agricultural and commercial center of regional importance. In Jerez, 29% of the active population has an economic occupation but, as in Yuriria, they make less than 8 dollars a day. Urban activities offer more jobs in relative terms, but equally underpaid.

In those circumstances, it is not strange that the majority of young adults in both municipalities, specially men, migrate to the United States in search of a better life. In that country, with a little luck, they soon come to earn in one hour more than they could get at their hometowns in a whole day of work. In the nineties, the out-migration of native workers from both municipalities increased rapidly and led to an absolute decrease of the population during the decade. In Yuriria the population decreased at an annual rate of 0.5% and in Jerez at a 0.6%.

As the local population diminished, the flows of family remittances started to increase rapidly. At present, each municipality has an annual revenue of at least 25 million dollars from that source. This amounts to a per capita income from remittances of 339 dollars for Yuriria and 457 dollars for Jerez, considerable figures if one takes into account that the per capita GDP in Guanajuato is 4,100 dollars and in Zacatecas 3,300 dollars.

Apart from family remittances, other dollar revenues started to flow during the nineties into this municipalities. Such flows come from the clubs that migrants have established in several cities of the United States, mainly in California, to help their hometowns. Since long ago, the migrants' clubs have sent donations to their home towns to finance civic and religious festivities or community projects. But in the nineties they started to do it more regularly and in a greater scale, when specific programs were set up by the state governments to attract such donations and channel them to specific projects. In 1993, Zacatecas took the first step with the program "3 x 1". In 1996, the government of Guanajuato launched an alternative program, oriented to attract savings from Guanajuato's migrants to finance the establishment of textile maquiladoras in localities of high out-migration.

The response of Jerez and Yuriria's migrants to these initiatives was very enthusiastic. Natives from Jerez have at least 5 active clubs in California. Since 1993 these clubs have contributed around more than 300 thousand dollars in donations or collective remittances which have helped to promote community projects for over 1 million dollars in their native hometowns. The grants have been growing every year. In the last two years they sent over 160 thousand dollars for the paving of streets and the construction of public buildings and schools.

In California, migrants from Yuriria joined the Casas Guanajuato in response to the government of Guanajuato's program and pooled resources to set up 3 textile maquiladoras in their native municipality, totally financed with migrants' capital. For that purpose, they invested a total of 220 thousand dollars. The state government provided them with the project's technical design and, above all, helped them to get organized. Two of these enterprises have 20 partners or more. The maquiladoras were in operation when this study was done and had generated over 100 permanent jobs.

Apart from their financial contribution, migrants have supported the projects with their managerial and entrepreneurial skills, especially in the case of maquiladoras, which had serious problems in their original design that the migrants had to overcome.

Migrants' capital in Yuriria and collective remittances in Jerez are two early manifestations of the enormous economic potential that the Mexican community is developing in the United States. Both constitute resources of great importance for local economies. Mobilized at a larger scale and with innovative schemes, such resources offer the possibility of contributing to the development of vast rural zones that are in a difficult phase of transition towards modernity. [World Bank 2002, 6]

Commentary on the Remittances Literature

Increased Income is Not Increased Development

Overall, the remittance literature seems too sanguine about the expenditure of remittances. Much of the expenditure is sterile for developmental purposes, e.g., non-local expenditures on conspicuous consumption.[15] At a recent World Bank conference, Manolo Abella, the head of the ILO's Migration Program, voiced some of the skepticism.

> There is general agreement among observers that by itself labour migration is unlikely to significantly improve the development potential of a sending country. While individual migrants and their families tend to gain from migration (in terms of greater economic security), the same cannot be claimed for the countries, as a whole. There is little evidence to indicate that labour migration and flows of remittances have generated sustained growth….
>
> Take a look at the variation in recent development performance of major labour-sending countries—Mexico, Turkey, the Philippines, Pakistan, Yemen, Egypt, Morocco, Lesotho, Burkina Faso, Jamaica, etc. Which countries have managed to sustain high rates of economic growth? [Abella 2002]

In a community now largely dependent on income from migrant remittances, development would mean building local enterprises that would *not* live off remittances directly or indirectly (via the multiplier) so that local jobs could be sustained *without* continuing migration and remittances. While the initial investment funds or even initial sales might come from remittances (a pump-priming effect), the idea is that the products should be largely exported from the community to satisfy demand unrelated to the community's remittances (see the appendix on Jane Jacobs). Remittances could jump-start the local engines of development but should not supply the on-going fuel.

Changing the Psychology of Labor Migration

Today there is increasing policy interest in the developmental impact of labor migration on the home region. Yet much of the policy discussion takes as a "given" that the labor migration is essentially a way of life for the local communities. Instead of seeing the temporary "export of labor" as a means to get a capital stake or as a learning experience, the export of labor, no matter how it is nominally called "temporary," is the way of life of the communities.

Box 5. Ahmeti's Village

A detailed case study [ESI 2002] of an ethnic Albanian village (Zajas) in Macedonia provides an example of a community where living off of remittances has become a way of life. The local Albanian economy runs almost entirely on remittances.

[15] Some researchers have even noted that conspicuous consumption by some migrant families may spur other families to send out migrants: "migration may represent an effort to 'keep up with the neighbors'—if migrant families have better homes and TVs, then non-migrant families may be motivated to send a migrant abroad to earn money to overcome their relative deprivation" [Martin and Straubhaar 2001, 3; see also Stark 1991].

> There are 184 shops crammed into the Albanian end of Aleksandar Makedonski Street, selling carpets, furniture, jewellery and wedding gowns. The shops make most of their annual turnover during the summer months, when thousands of Albanian migrants return to get married or build houses in their villages. In this period, the Albanian quarter bustles with activity, and Cadillacs and other impressive cars with Chicago and Alaska license plates are parked along the sidewalks. Many of Kicevo's 300 private taxi drivers make a living shuttling the diaspora to and from Skopje airport. The heart of the Albanian economy is made up of traders, restaurateurs, construction workers, money changers, tradesmen and a few lawyers and private doctors. [ESI 2002, 8]

The social expenditures of the Albanian diaspora tend to be unrelated to local development, e.g., a hall for social functions such as weddings and even a new soccer stadium. The researchers illustrated the social structure and expectations by taking the entering 1989 class in a high school in the neighboring mixed town of Kicevo and then looking at what they were doing a decade later. Of the ethnic Albanians, all except one were working abroad and the one's father was working in Germany. Of the ethnic Macedonians, all continued to live in the immediate region. This illustrates the self-reinforcing critical mass dynamics of the labor migration for the ethnic Albanians and the lack of migration for the ethnic Macedonians.

> Emigration tends to be a cumulative process. Its incidence is a positive function of the number of earlier emigrants who provide money, information and support for newcomers. If Kicevo's ethnic Macedonians have relatives abroad, they usually emigrated for Australia in the 1950s and no longer maintain close links with family who remained. There is no equivalent of the dense networks which Albanian have constructed between Kicevo and the outside world over the past two decades. [ESI 2002, 25]

There was one interesting exception to the rule of non-productive expenditure of the remittances from the Albanian diaspora [concerning Albania itself, see Martin et al. 2000 and Nicholson 2001, 2002]. An ethnic Albanian with a clothing company in France set up a cut-and-sew subcontracting company in Kicevo with about 100 workers (ironically, all but two of them are ethnic Macedonians who worked for a former Yugoslav textile company). Cloth is trucked in from France and the finished product is sent back with the company in France acting as the contractor. While this is not an example of a migrant returning permanently to run a business at home, it is a case reminiscent of the small garment factories (*maquiladoras*) in Guanajuato, Mexico where the company is a labor-intensive part of a value chain based in the North.

I would argue that the local developmental project is lost if this labor migration continues as a way of life. There are two related arguments here. One argument is that the static-efficiency option of increased earnings through semi-permanent labor migration is dynamically inefficient in the sense of foreclosing on the option of local development. Martin and Straubhaar noted this when commenting on studies such as Abadan-Unat [1976] about the Turkish experience with *gastarbeiters*.

> These studies concluded that Turkish areas of origin were not primed for an economic take off before emigration began, and that remittances and returning migrants reinforced trends that prevented a take-off rather than fueling the take off for reasons that included …:
>
> - nonproductive use of remittances, e.g., to speculate on real estate or to imitate a successful service such as a delivery service, taxi, or a shop

- the retirement of many migrants, so that skills acquired abroad are not used to promote development
- some distortion of local incentives, as when children do not stay in school because the wage for unskilled work abroad is several times the wage for skilled work at home.

> In sum, the conclusion of the leading study of the 1970s was that labor emigration is "cumulative and self-perpetuating" (Abadan-Unat, et al. 1976, p. 384)—migrants leave an area because it is less developed, and remittances and returns reinforce the dependence of the areas on an external labor market. [Martin and Straubhaar 2001, 18]

In depressed and under-developed regions, if the pressures of local unemployment and poverty are routinely released by labor migration, then the various barriers to development will probably not be surmounted and the regions' lack of development will be perpetuated.

The second argument is that the psychology of labor migration as a way of life does not bode well for local development. As noted previously, returning home to make one's living there (before retirement) is seen as a failure to sustain one's "career" as a labor migrant.

In any case, developmental policies that take that psychology as a "given" would have little chance of success. In terms of the critical mass dynamics, the local area is at the low equilibrium and the critical mass necessary to move to the high equilibrium will not materialize as long as the expectations are based on the possibility of semi-permanent labor migration. One strategy to change that psychology would be temporary labor migration schemes that were really temporary—that had a "cap" or "term limit" on the time spent using the scheme.

We will meet this question of reversing the psychology of escape-valve labor migration again in the discussion of skilled labor migration or the brain drain. As we saw in the "debate" between Harry Johnson and Don Patinkin, this is one of the contentious issues beneath the surface in migration research. Much of the policy focus in migration studies is to grease the wheels of semi-permanent migration which in the case of the critical mass dynamics would only perpetuate the low equilibrium trap in the home country or region. In a few cases, this policy outcome is intended as when the sending region is unviable (e.g., desert, arctic, or disease-ridden regions). Otherwise, there seems to be a policy conflict which might be addressed with genuinely temporary labor migration arrangements.

Temporary Worker Schemes

Here "temporary" means a time-limited closed-ended arrangement that cannot go on indefinitely. For instance, during and after World War II for two decades, the *Bracero* program in the United States allowed six month visas (but was stopped, in part, because of the slippage). Today in Europe, temporary agricultural workers in the EU have 3 month limits per year and construction workers are limited to the duration of the specific project [see Boeri and Brücker 2000]. The idea of fixed-time temporary migration schemes is receiving increasing policy attention as it addresses some policy goals in both the north and south [e.g., Werner 1996; Gilbreath 2001; Meyers 2002].

> One potentially Pareto-efficient solution is to institute a system of temporary contract employment in the host countries, with various penalties on the migrant and/or his employer to ensure that there is repatriation after a set number of years. In principle, the return migrants would then be in an even better position to contribute to the development of their home economies. [Rodrik 2001, 2]

Since the workers are entering the host country for a fixed time period (perhaps in a special visa category), there are no immigration implications, and since the workers are not accompanied by families, there are virtually no social implications. There might be other arrangements, but the goals of this sort of arrangement are solely earning to acquire a "nest-egg" which can then be used back in the home country perhaps to capitalize a small business—as well as learning new skills and new ways of doing business which can be applied in the home country. In some cases, the host company may decide to help guest-workers to set up a subcontracting operation back in their home country to produce a low-end product that the guest-workers learned to produce during the temporary work at the company. Thus the temporary labor arrangements might pave the way for exports and FDI for the home country.

From the viewpoint of the home country, the regularization of this sort of scheme would help to reset psychological expectations so that work abroad would be seen as a path to local development rather than an escape from local under-development. Regularization itself would also help to take business away from the smugglers and traffickers who prosper with ever tighter restrictions on labor migration. The idea of a temporary labor scheme will be illustrated with an example that grew rather spontaneously out of a World Bank project [see box on Moldova-Slovenia Temporary Labor Scheme].

Box 6. The Moldova-Slovenia Temporary Labor Scheme

In Moldova, the poorest of the former Soviet republics, a rather successful restructuring agency, ARIA, was set up with the help of a World Bank private sector development loan [Ellerman and Kreacic 2002]. Part of the program was for managers and skilled blue-collar workers to spend some time working in enterprises in more advanced countries. In these programs, it is important that the more advanced countries not be too advanced; otherwise the experience will have little applicability back in the home country. In the case of Moldova, this meant selecting a country not in the west, but in the "near-west" of central Europe such as Hungary, Poland, or Slovenia.

In the case of Slovenia, ARIA had consulting services from a Slovene organization with restructuring experience. Out of that relationship, a temporary labor migration scheme emerged that proved to be commercially viable on its own. Groups of skilled blue-collar workers would be selected in Moldova according to certain criteria. They would be financed by their companies to be placed for six months working in Slovene companies and living together in apartments. The workers would be paid at minimum Slovene rates which were over five times their usual wages. At the end of the six months, they would have acquired not only industrial and technical skills but also a nest-egg of savings. Some workers would buy a cheap used car in Slovenia and then drive back to Moldova. Others would use their savings for investments back in Moldova.

Another consequence of the program was some subcontracting and investment of Slovene companies back into Moldova. Some workers came for several six month periods. Eventually the Slovene hosts realized that they could subcontract some of the low-end items to be produced back in Moldova by the workers they had trained—perhaps with some special machinery supplied from Slovenia. Thus the "trade" in the form of temporary fixed-term migration leads to trade in goods and eventually to capital investment. Worker placements were so successful for both parties that a company was formed in Slovenia to run the program entirely on a private basis.

Lant Pritchett has argued [2002] that temporary worker schemes offer perhaps the best way to reap the development potential of migrant labor (e.g., remittances, increased skills, trade and business linkages, and a broadened view of alternative ways of doing things) in a way that is politically feasible in view of stiffening political resistance to unskilled immigration in many countries in the North.

> An alternative [to the current system] is to allow permission for a certain number of workers in a certain industry and then allow hiring firms to locate and hire workers of their own choosing but give workers a conditional entry permit and allow individuals and firms/employers to find their own matches. This has the benefit of not linking workers to specific jobs but makes enforcement of the numerical quotas difficult.
>
> Another is to allow "labor mobility brokers" to have licenses to supply a given number of workers for specific occupations. In this way the recruiting, matching to jobs and transport are the responsibility of a "firm" not individuals and the matching is done in the sending country. But the employment relationship is with a domestic firm. In many cases this is how it is done currently in practice, but the fact that it is mostly illegal means that workers are even at more risk of being exploited and abused ….
>
> A third approach is to follow the model of "services trade" and have sending country firms enter into agreements to provide certain services, with the right to bring in their own employees to do the work. In this case the recruiting, matching to jobs are done in the sending country and the employment relationship is between a sending country firm and the workers and the host country firm enters into a contracting relationship with the sending country firm only (and has no "employment" relationship with workers).
>
> I think the intermediate approach of having "labor mobility brokers" is the most attractive, for several reasons, the primary of which is it makes it easier to control flows for the sending countries and to protect worker rights in the host countries. [Pritchett 2002, 13]

The example of the Moldova-Slovenia company would also fit into the category of labor mobility brokers.

Return Migration and Spin-offs in Rural Towns

It was previously noted that when migration is essentially seen as a career, then return migration before retirement may be seen as a sign of failure. This may be why various host country programs [e.g., low-interest loans to start a company back in the home country; see Lowell and de la Garza 2000; Weil 2001; Martin and Straubhaar 2001] sponsoring return migration have not so far been a great success. However there are some examples, not usually associated with the migration literature, where return migration has played an important role in non-farm rural development. In contrast to the Guanajuato example where continuing migrants were partly funding enterprises in their home regions, the focus in this section is enterprises set up by returning migrants which may be spin-offs or subcontractors to the firms that employed the workers as migrants.

One of the most remarkable growth episodes in recent history was due to the rise of the township-village enterprises (TVEs) in China over the last twenty years. It might be useful to look briefly at their origins. The TVEs did not drop from heaven as soon as conditions were liberalized. One source can be traced back to the immediate post-revolutionary period. To escape the fighting during the Civil War, a number of peasants had migrated to the industrial cities, principally Shanghai. Years later, after the Revolution, they return-migrated to their villages hoping to get land ownership. But their years of industrial work in the cities left them ill-suited to work the land—which was collectivized anyway—so many of these peasants started small off-farm workshops to apply their industrial skills, particularly in the region around Shanghai (Jiangsu Province).

In the decades that followed, large-scale political movements swept over China: the Great Leap Forward, the Cultural Revolution, and the Sino-Soviet Split. All these movements had the effect of pushing to decentralize and deconcentrate industry from the cities to the countryside. The initial successes around Shanghai provided some models but, on the whole, the state-directed efforts were not very successful. Yet the failures in the collective-brigade enterprises were instructive. When the agricultural reforms got underway in the late 70s, this provided the demand and workers for an 'educated' rebirth of the commune-brigade enterprises as township-village enterprises. As the cellular structure of the economy left over from the Maoist experiments broke down, the TVEs could further reap the benefits of trade and specialization.

This evolution of the TVEs was historically specific so policy lessons cannot be directly drawn. But it is nevertheless instructive and it corroborates a fundamental point emphasized by Jane Jacobs based on western experience. Rural development starts in the cities; "city economies create new kinds of work for the rural world, and by doing so also invent and reinvent new rural economies." [Jacobs 1969, 39] Rural development schemes should focus on urban-rural linkages which includes "imports" into rural areas of industrial skills and inputs for production as well as "exports" back to urban areas if the rural off-farm firms are to grow beyond micro-shops servicing local needs.

Some of the north-south dynamics seen between the advanced and developing countries were reproduced between urban and rural areas in China. For a variety of reasons (e.g., scarce urban housing space), urban factories would sub-contract labor-intensive jobs [as in the Mexican *maquilas*] to rural areas instead of staffing up to have them done in-house. This started vigorous import-export trade between urban and rural areas so that rural off-farm firms could grow beyond small shops for local needs.

Moreover, just as Chinese factories might buy old machinery from developed countries, so rural industries in China might get their start using old machinery from urban Chinese factories. To help shed urban labor and deconcentrate industry, some urban factory workers from a small region not too far from an urban center, might be encouraged to take some of the older machinery and set up a TVE in their old village and then subcontract to their old factory.

Throughout the developing world, people are leaving rural areas and migrating to mega-cities and the north in search of jobs. But the older industrial model of large urban factories engaged in mass production is now being replaced with another model favoring more decentralization and rural development.

> This new system of subcontracting with a large number of small, decentralized workshops (*maquilas*) and household units is well adapted to the 1990s' environment of market uncertainties and the tremendous growth during the 1980s of the informal economy….
>
> Wood products, textiles and clothing, and shoes and leather goods are commonly produced under subcontract by such enterprises. The shoe industries around Nova Hamburgo in Brazil (Sabel [1986]) and León in Mexico (de Janvry and others 1989) are organized on that basis, with many subcontracting workshops and households located in the surrounding rural areas.
>
> Support to these enterprises in the form of credit, infrastructure, simple technology, and the development of skills may be one of the most effective way of promoting the revival of competitive industries and their location in rural areas. [de Janvry and Sadoulet 1993, 269]

The Chinese experience with TVEs also suggests such a program to spur rural off-farm development and help alleviate urban congestion at the same time. Middle managers and groups of workers from a certain region could be encouraged to spin-off some of the older machinery and set up a subcontracting operation in their home region or town. The subcontracting work would help get it going, but it could also diversify into other niches to spur local development. At present, urban factories have little incentive to encourage such a program. As long as workers show up at their doors, urban factories do not bear the costs of urban congestion or rural decay. Public action is required. This would not only sponsor some return-migration but would, of greater importance, reduce the migration flows to the mega-cities as some rural industry took root in the countryside.

Skilled North-South Migration: The Brain Drain

Globalization and the Brain Drain

In the immediate post-WWII period, the brain drain was seen as a problem [e.g., the Johnson-Patinkin debate and the other papers in Adams 1958] like a "bad cold" that might hinder the activities of developing countries. Today, with the quickening of international processes that is called "globalization," the brain drain has become more like a "pneumonia" (or "SARS") crippling the activities of some countries, e.g., in sub-Sahara Africa and particularly in South Africa. Some policy ideas suggested in the past period of focus on the brain drain, such as legal restrictions on exit[16] or a "departure tax" paid by receiving countries to sending countries, are

[16] Until 1824, England had restrictions on the out-migration of skilled artisans but it was not for fear of brain drain from England but for fear of brain gain to competing countries on the Continent. But the effect then (as now) was less to prevent out-migration as to discourage return-migration: "Restriction on emigration of artisans failed to prevent their departure, but did inhibit their return." [Kindleberger 1978, 47] A similar perverse side-effect has been noted for strengthened restrictions on unskilled in-migration as noted by Wayne Cornelius: "The current strategy of

now seen as archaic and unimplementable. Other ideas, such as a "transnational" community of scientists and engineers helping both the receiving and sending countries, may be even more feasible due to globalization. Thus while globalization might aggravate some old problems, it might also entrain some new solutions.

Skilled Labor as an "Export"

Previously we made the distinction between guest-worker migration as a career and as a time-limited means to obtain skills, knowledge, and capital to be applied at home. From the developmental viewpoint, it was not the migration itself that could be adjudged a help or hindrance but the whole pattern of behavior involving the migration.

A similar distinction can be carried over to skilled migration and the brain drain. When a young doctor goes abroad for some work, is that to acquire first-hand knowledge of medical practices in industrialized countries (like an internship) to improve practices at home and perhaps to obtain enough capital to open up an independent practice at home? Or is the purpose to make a rather permanent exit by finding long-term employment in the North? The evidence seems clear that the bulk of the cases fit the second profile.

One policy response is to "make the best of it" by treating the training of skilled people as essentially an export industry where the "payments" will come back as remittances. The training of medical personnel in the Philippines, the Caribbean, and a number of other countries would seem to fit this model. This training might take place at privately financed institutions where public policy would have little purchase. If the training was at public expense, then it would seem, at least at first, that this was a clear waste of public expenditure. There is a multiple loss, the human capital, the public monies that funded the training, and the later fiscal loss.

> To the loss of productive potential, add the fiscal loss from migration. Taxpayers in developing countries have paid to educate many of those who leave (and who may well end up working in jobs below the level their qualifications would justify at home). And emigration leaves behind fewer workers to pay the cost of looking after the old. …A recent study of the fiscal effects of the Indian brain drain, by Mihir Desai of Harvard University and two colleagues [Desai et al. 2001], points out that the 1m Indians in the United States accounted for a mere 0.1% of India's population but earned the equivalent of a staggering 10% of India's national income. [Economist 2002b, 25]

Any remittances in return for this "exported human capital" would go privately to the families of the skilled migrants which would hardly justify public expenditure.

One argument is that the costs of higher public education should be treated as a loan (secured in some fashion) unless the graduates satisfy certain minimal requirements of public service after graduation. This policy would seem to be fair but it may be difficult to implement. Travel abroad would have a broadening effect, and further study abroad might greatly enhance the value

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border enforcement is keeping more unauthorised migrants *in* the US that it is keeping *out*." [quoted in Economist 2002c, 6] of the graduate's education. "Hard" requirements to enforce the education loans, such as exit bonds[17] or liens against family assets, might have the effect of crowding out the graduate's intrinsic commitment to and identification with the country and thus lead to perverse consequences. If one's obligation to one's home country was thus represented simply as the need to pay off a bank loan, then, once "paid in full," the graduate would have little compunction in seeking opportunities elsewhere. Public service obligations might have some of this crowding out effect but probably much less so than a monetized obligation.

There is one counter-argument against seeing public grant funding of education for export as a clear loss. The argument is that if students see higher education, say in medicine or the sciences, as a means to out-migrate, then so many more students might be attracted into these professions that the country will have a net increase in supply even after subtracting off the successful emigrants. Due to the ease of immigrating to the US as a doctor, Jamaica loses four out of every five doctors trained but, according to this argument, it at least gets one out of five!

It is surely true that where a professional degree is seen as an exit visa, then the demand for such degrees will be increased. After the financial collapse in Russia in 1998, there was an increase in enrollments in science and technology. The initial delight of educators was somewhat tempered when interviews showed that since the "getting rich" exit door was then closed, many students saw a science and technology education as the best road out of Russia. The net result of this "natural experiment" may well be that Russia will end up with more trained scientists and engineers than would otherwise have been the case.

While this mechanism might thus operate willy-nilly, the author finds the idea of promoting it as a deliberate policy to be rather bizarre. Even leaving aside the substantial waste of national educational resources, how could any country that takes pride in its scientific, engineering, or medical professions urge students to become educated in those professions as a means to exit the country? If that were officially promoted as the goal of science education in the country, then the "National Academy of Science" would soon be seen as a ghettoized "National Academy of Second- and Third-Rate Science"—whose members are those who were not good enough to get job offers in the advanced industrialized countries.[18] But, at least, this policy idea has the 'virtue' that if accepted by the developing countries, then the developed countries could continue their poaching of the best and brightest of the trained scientists and professionals with a clear conscience.[19]

[17] In establishing the University of Naples in 1224, Frederick II tried to entice students by arranging for creditors to supply loans. The students could not leave the city unless the loans were paid back or valuable "pawns" were left with the creditor.

[18] This has a rough empirical check. Even where not touted as a rationale for science education, one might surmise that in countries such as India which have significant emigration of scientists, the scientists who remain home for whatever reason will still labor under the stigma of being seen as second-rate. There are also some programs to top up the salaries or extend other enticements to professionals who return—which are duly resented by those professionals who never emigrated or those who returned without bribes.

[19] In biological terms, the poaching would have advanced from a form of 'parasitism' to a form of 'symbiosis.'

Organizing the Diaspora

One meta-principle of development assistance is to look at what spontaneous or unassisted social processes have helped development, and then figure out how to catalyze those processes in other countries or regions. Look at where water flows naturally, and where it is flowing in the right direction, deepen the channel so that a stream might swell to a river.[20]

The re-involvement of the diaspora in the home country—not necessarily permanent return but through investment and integration in networks—is such a historical process that many countries and agencies are now trying to catalyze. This policy idea of organizing the diaspora is complementary to efforts within the home country to increase retention of scientists, engineers, and professionals; one can do both. The point is not to treat émigrés as being irreparably lost to the home country; they can play a very positive transnational[21] role.

> More likely to succeed [than a retention strategy] is a Diaspora model, which integrates past and present citizens into a web of rights and obligations in the extended community defined with the home country as the center. [Bhagwati 2003]

One major historical model of diaspora-assisted development[22] is the role of the 50 million overseas Chinese in China [Weidenbaum and Hughes 1996]. The overseas Chinese have been remarkably successful in business so they can bring considerable experience, network connections, and capital back to benefit investment in China. Moreover, their common language, culture, and family networks gave them *guanxi* or connections that non-Chinese investors did not have. The example might be tempered by the argument [Naughton 1999] that the bulk of the Chinese diaspora investment into China was by the Hong-Kong Chinese who, in the face of Hong-Kong's reabsorption into China, had special incentives to gain favor from the Chinese authorities.

India governments at the state and national level and various expatriate groups have now become quite active to re-involve the extensive Indian scientific and business diaspora back in India [see Saxenian 2000 and Kapur 2001]. The Y2K problem in the late 1990s provided the sudden need for much re-programming in 'archaic' computer languages which provided, in turn, for many outsourced 'body-shop' deals for Bangalore. The experience and trust built-up from that episode spilled over into substantive business deals during the dot.com boom at the virtual level supplemented by the temporary migration of many Indian software engineers and programmers to the West.[23] In addition to this trade in services, the Indian high-tech diaspora in Silicon

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[20] And, recalling our earlier discussion of unskilled migration, where the water is flowing in the 'wrong' direction, then instead of trying to build a dam, it is better to try to rechannel the water into acceptable nearby channels.

[21] "Transnational" has become a popular term that connotes more globalization-enhanced betweeness, circularity, back-and-forthness, or toing-and-froing than old-fashioned terms like "international." See Portes 1999.

[22] The case of modern Israel could be mentioned but policy lessons are hard to draw because it is such a special case.

[23] After the dot.com bust, the joke was that "B2B" stood for "Back to Bangalore."

Valley and other technology centers in the U.S. has become much more organized to form a transnational community that brings experience, connections, capital, and deals to India.[24]

Similar initiatives are at work today from the side of governments and the side of expatriate groups to form mutually beneficial transnational communities centered around countries that have sizable diasporas such as South Africa, Argentina, Armenia, Pakistan, and Israel in addition to India and China.

In addition to these broader efforts to organize a country-diaspora relationship, there are many Internet-based networks that specialize in the sciences and engineering. These networks build upon the older experience of the UNDP's Transfer Of Knowledge Through Expatriate Nationals (TOKTEN) program. The South African Network of Skills Abroad (SANSA) has identified some 40-odd networks such as the Colombian Red Caldas network, the Global Korean Network, the Philippines Brain Gain Network, the Polish Scientists Abroad, the Association of Thai Professionals in North America and Canada, the Iranian Scientific Information Network, the Tunisian Scientific Consortium, and the Arab Scientists and Technologists Abroad [see Brown 2000; Solimano 2002].

There is a menu of policy options associated with catalyzing the organization of skilled and professional diasporas starting with supporting use of the Internet by expatriates to build organized groups and by agencies in the home countries to build relationships with the centers of expatriate activity. The transnational relationship might start with discussion and information exchange. The problem is usually to develop transactions and business deals all of which might lead to the investment of diaspora expertise and capital in the development of the home country. Expatriate groups and ministries in the home country can collaborate on investment fairs in developed countries and tours of investors in the home country. Business incubators might have a role in both countries—home-country exporters needing a base in a developed country, e.g., the International Business Incubator in San Jose (Silicon Valley), or for fledgling businesses in the home country sponsored or mentored by expatriates.

Educational Policies to Reduce the Brain Drain

In the previous section, we discussed the strategy of organizing relationships with the diaspora into more of a transnational community working to develop the home country. That takes the diaspora as a given. That strategy is quite compatible with other policies to reform the public higher education system (including programs for study abroad) so as to reduce the incidence of the brain drain in the first place.

We might approach this policy question by considering the analogy with worker training in the private sector. If a company pays for upgrading a worker's skills (which are always to some extent transferable), then another company could offer a higher wage to try to poach the already

[24] One part of the "transnational diaspora community" idea is to downplay the role of return migration to obtain these outcomes. Various programs to facilitate permanent return migration for highly skilled professionals have become notorious for their meager outcomes, and that seems unlikely to change in the countries which need help the most.

trained worker.[25] One strategy would be to "privatize" worker training by having each worker pay for his or her own training. This is analogous to a country privatizing its higher education system so that no public resources would be expended on those who might exit. In both the case of a company and a country, this policy would tend to restrict the education to those who already had the required resources or else loans would be generously provided, in which case we are back to the collection problem for those who exit.

Another corporate strategy is to provide for worker education but at the same time try to build a corporate culture that would increase worker identification with the company and reduce exit. "In particular, identification becomes an important means for removing or reducing those inefficiencies that are labeled by the terms 'moral hazard' and 'opportunism.'" [Simon 1991, 41] This is one of the keystones of human resource policies in Japanese or other "high-road" firms using Japanese-style policies [e.g., Kagono and Kobayashi 1994]. Invest heavily in worker training along with a culture of identification to reduce opportunistic exits. Moreover, as each firm develops its own routines and procedures in a path-dependent manner, an increasing proportion of worker training may be firm-specific so that retention becomes self-reinforcing over time. The following table summarizes some of the contrasts between a firm organized on the "logic of exit" (high labor mobility between firms) or on the "logic of commitment" (low labor mobility between firms).

Table 1: Two Logics of Work Organization

Area of Comparison	Logic of Exit	Logic of Commitment
Efficiency	Allocative efficiency: Move given resource to highest value use. Efficiency (allocative) enhanced by mobility.	X-efficiency: Get highest value out of resources in given use. X-efficiency (effort) enhanced by immobility (cannot easily jump ship). [Leibenstein 1984]
Results of education	Universal certification to maximize mobility and thus efficiency of allocation.	Knowledge is local, embedded, partly tacit, and shown in practice, not in certificates.
Identity	Mobility enhanced by identifying with profession or other universal category.	Identifies with social group; village, company, institution, and motivated to better it.
Labor mobility	High mobility so changes take place primarily by replacing old with new workers embodying new knowledge.	Low mobility so changes take place primarily by commitment to workers learning new knowledge.
Process improvement	Deskill to standard repetitive tasks so that workers are replaceable. Skills change exogenously. Expertise is exogenous or located in management so staff can be more deskilled and replaceable. Staff thus do not identify with firm or institution.	PDSA (Plan-Do-Study-Act) cycle of continuous improvement. Learning as scientific method in the small. Expertise develops as embedded local and tacit knowledge of staff involved in continuous improvement. Encourages staff identification with firm.
Payment system	Paid "going rate" for certified skills. Equal pay for equal work. Payment attached to job. Individual-based payment by results.	Paid according to seniority and skills shown in firm-specific jobs. Payment attached to person (probably under going-rate at beginning and over it at end—all an incentive to stay).

[25] Peter Williams [2000] notes the analogy between the brain drain problem and training inside of firms that may result in the lost of already-trained people. This would lead to an underinvestment in non-firm-specific firm-sponsored training since it is a positive externality. It seems there are vocational education subsidies in the UK to try to overcome that underinvestment problem.

Area of Comparison	Logic of Exit	Logic of Commitment
Motivation	Workers expected to be motivated by individual material self-interest	Members expected to identify with organization & have shared group interest.
Stability and trust in relationships.	Low trust relationships ⇒ highly explicit contracts with competitive arm's length exit-oriented relationships so no need to invest in building trust or loyalty ⇒ low trust relationships. Individual pays for learning.	High trust relationships ⇒ incomplete relational contracts with voice-oriented relationships requiring investment in building trust and loyalty ⇒ high trust relationships. Company pays for learning.
Entry in firm	Entry in all levels (logic of exit at all levels)	Entry at lower levels and then development from within (logic of commitment)
Style of interpersonal relationships.	Standardized, professionalized behavior as a means of coordinating people. Low interpersonal knowledge associated with high turnover.	Familiarity, intimacy in long-term relationships as means of coordinating people. High interpersonal knowledge associated with low turnover.
Application to Migration	Exit to find a better home.	Commit to making home better.

Our strategy is to see if these ideas of Japanese-style human resource management ("logic of commitment") could be carried over by analogy into ways to reform higher public education in a developing country to reduce the incidence of the brain drain. But first it might be useful to take note of an earlier set of educational reforms proposed by Ronald Dore [1976, 1997] (an economic sociologist with a specialization, incidentally, on the Japanese economy).

Although Dore was concerned with educational reform for its own sake, his suggestions would have the indirect effect of helping to reduce the brain drain in developing countries (and thus there is a partial overlap with Patinkin's suggestions considered before). Dore's *diploma disease* critique focused on the effects of the obsession with educational credentials and with the escalation of the credentials required for jobs. In developing countries where there are more graduates than jobs, the level of credentials is used as a filter for job applicants. Hence students strive to get even more credentials, and those offering jobs need to escalate the requirements still further. The original purposes of education, e.g., the learning needed to *do* a job, are crowded out by the focus on (crammable) exams and diplomas, e.g., the credentials needed to *get* a job. The original content of the education systems are often aimed at foreign goals (e.g., yesterday's standards from the colonial center or today's globalized standards) of little relevance to local jobs, and even that content is sacrificed in the rat-race of the diploma disease.

Dore's proposals would require a coordinated transformation in the tertiary educational system and in the organizations providing jobs. Individuals should be taken into jobs at an earlier age and learning (part-time in tertiary educational institutions as well as on the job) becomes a life-long process guided by the requirements and opportunities of the work.[26] The company or work organization would pay for the continuing tertiary education. Filtering would be based on the

[26] This is similar to the Japanese-style firm with entry at a young age and continuing education promoted by the firm. For instance, with changing technologies, the workers "require formal training at regular intervals in a quasi-school environment that complements the informal training they receive on the job in order to systematize their experiences on the job." [Aoki 1988, 52]

demonstrated ability to continue to learn and to do the job, not on the acquisition of universal certificates.[27] Dore gives some detailed and slightly playful suggestions for more flavor.

> The civil service, for instance, would no longer recruit graduates. There would, instead, be a single major entry port for all grades at the age of 16 (or whatever were fixed as the school leaving age) and everyone would start as a clerk; some, on the results of internal tests, or on the basis of work performance, would be promoted fairly quickly to the executive grades and given such further training as was necessary, and some of those would similarly be selected—and educated/trained—for administrative posts. The same pattern could apply to other professions. Future engineers could train first as craftsmen; some of the craftsmen could be trained as technicians, and the ablest of those sent off for full training as engineers. Doctors could begin as medical assistants; teachers as pupil-teachers; university teachers as research assistants or secretaries or schoolteachers; architects and accountants and quantity surveyors could begin as clerks and be selected for professional training… . [Dore 1976, 143]

Co-op education programs (alternating terms studying and working in a company) are a step in this direction. When study abroad is appropriate, it would be financed by the company and would probably take place at an older age when the individual not only had a job waiting upon return but had a family and other roots in the home country.

Although addressing the brain drain was not an explicit goal of Dore's program, it is clear the suggestions would also have that effect. A national system of education/work designed along these lines would maximize the retention of the best and brightest just as these Japanese-style people development ("human resource management") policies have that effect in the context of a firm. Thus Dore's suggestions stand in sharp contrast to the "globalization of education" described as follows:

> The proportion of foreign students studying for professional degrees or doctorates in the university systems of the major industrialized countries, in particular the United States, is large and more than two-thirds simply stay on. The situation is similar in Europe albeit on a smaller scale. At the same time, centres of excellence in higher education in labour-exporting developing countries are increasingly adopting curricula that conform to international patterns and standards. Given the facility of language, such people are employable almost anywhere. [Nayyar 2002, 164]

[27] Similarly, the Japanese-style firm "can identify slow learning, low productivity, low motivation, and uncooperative workers by actual observation and differentiate them in pay and status over the long run, while attempting to lock in fast-learning, highly productive, highly motivated, cooperative workers by discouraging them from quitting in midcareer." [Aoki 1988, 50] Hence this system emphasizes the X-efficiency of retaining and developing "the best and brightest" as opposed to a system designed to equip people with universal credentials so they would have the greatest mobility to seek the highest paid opportunities on an allocatively efficient global labor market.

Thus without reforms such as those suggested by Dore, the "centres of excellence in higher education" in the brain drain countries seem almost designed to perpetuate their status as brain exporters.

Summary of Conceptual Issues

The Dilemmas of Migration and Development

Throughout this survey, the focus has been on the home country developmental impact of migration and on the policies to improve that impact. No attempt was made to be solely descriptive; arguments for and against certain policies were presented.[28] As one who has thought about and worked on broader development issues for some time but is relatively new to migration issues, my impression is that much of the literature is excessively optimistic about the impact of north-south migration on the South. Some of the literature has the Pollyannaish (if not Panglossian) flavor of almost ignoring strong first-order effects that are negative in the determined search for second- or third-order effects that might be positive. Examples would include the literature that sees remittance income as tantamount to "development" or that suggests promoting the brain drain as a positive inducement for young people to seek scientific or professional education in the South.

When due account is taken of the negative developmental impacts of north-south migration, then it would seem that the field of "migration and development" is unsettled and unresolved for good reason. The dilemmas are surprisingly basic and fundamental. Seemingly good arguments can be made on both sides of major issues; intelligent people (like Harry Johnson and Don Patinkin) can differ on the issues. And some of the issues are but the reflection in the sphere of migration studies of larger issues that rend the field of development studies. Perhaps it would be appropriate in closing to summarize some of those basic issues.

The Dynamics of Convergence or Divergence?

One basic issue is the question of the underlying dynamic mechanisms. Here the contrast is between negative feedback self-limiting mechanisms (equalizing dynamics) and positive feedback self-reinforcing mechanisms (critical mass dynamics). Almost all neoclassical economics is based on a diminishing returns assumption. As factors move from a low return use to a higher return use, the high return is diminished and the low return is increased which tends to eliminate the discrepancy. But the opposite case of positive feedback ("increasing returns") is now receiving increasing attention in the literature of economics [Myrdal 1957 was an early example] and the complexity sciences. This leads to multiple equilibria perhaps of a "high" and "low" variety (the "twin peaks" dynamics of divergence). This is the dynamics of the Matthew Principle whereas the equalizing dynamics represents the opposite principle—"From those who have, some will be taken away and given to those who have not."

It seems clear that the north-north migration from Europe to America during the 18th and 19th centuries was for the most part an equalizing dynamics mechanism.[29] But part of the controversy today is about whether north-south migration is part of an equalizing dynamics of convergence

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[28] Unless expressly attributed to others, the views expressed are the author's own.

[29] An argument could be made that migration out of some regions such as Southern Italy and Sicily then and now was not an equalizing dynamic but contributed to the continuing poverty of those regions.

or part of a critical mass dynamics of divergence. Time and again, one finds unguarded and unstated assumptions in the literature that a factor movement from a low to high return will tend to equalize the returns rather than aggravate the discrepancy—as if the flight of human and financial capital out of a country could be expected to improve development prospects in the country.

This argument can also be stated in terms of Hirschmanian inducement or pressure mechanisms and his exit/voice dynamics. Suppose there are two groups A and B. If problems and bottlenecks appear in group B, then the exit of some members from B to A could have either a positive or negative effect on B. It might be that the exit or defection of some members of B would alert the other members or their leaders that changes needed to be made to resolve problems and overcome bottlenecks. That would lead to an equalizing dynamics between A and B. But it might work the other way. The members exiting from B might be the most articulate or capable members, so that their exit made it even less likely that vested interests could be overcome to resolve the problems. This would lead to the dynamics of divergence.

It could work either way. When the entrenched elites in a developing countries see the highly educated young people emigrating, does that steel their resolve to make the changes necessary to stanch the brain drain or does it just reduce the pressure on them to give up the privileges that are barriers to development and that lead to the brain drain in the first place? Is it exit or non-exit-cum-voice that would create the most pressure and inducement for change? This is not a question that can be settled *a priori*. But it can be said that there should be no *a priori* assumption that exit ("switch rather than fight") rather than non-exit ("fight rather than switch") is best way to induce reforms, i.e., no assumption that exit will be equalize the difference rather than aggravate the problem.

There are a number of social mechanisms that are designed to mitigate, if not defeat, the dynamics of divergence of the Matthew Principle. Anti-trust policy tries to break the "size begets size" dynamics in the merger market so that companies will maintain some parity and rivalry. Separation of powers, term limits,[30] and other constitutional limitations are designed to mitigate the "power begets power" dynamics in the political sphere. And similarly in an economy where only wealth begot wealth independently of effort and innovation, then the breakdown of primogeniture and the enactment of progressive income taxes and inheritance taxes would help to mitigate that dynamics. In professional sports, the practice of having the worst teams get first choice in the draft of new players is aimed to defeat the dynamics of divergence and maintain some competitive parity.

Universal public schooling aims to disrupt the dynamics of educational divergence across generations. The proposals for school vouchers are often criticized as attempts to reintroduce the logic of exit and individual visions of success as getting one's kids into a better school—instead of the other collective-action logic of working to make the kids' school better. Proponents of voucher plans routinely make the assumption that the underlying dynamics are equalizing and convergent rather than the opposite. If the primary sources of pressure for betterment were the

[30] For similar reasons, term limits were suggested above for "temporary" labor migration schemes to defeat the self-reinforcing rut-deepening habits of such schemes.

articulate and concerned parents who would also be the first to exit under a voucher plan, then the underlying dynamics are those of divergence and ghettoization.[31]

The Logic of Exit/Replacement Versus the Logic of Commitment/Transformation

Two logics cut across human affairs. If the characteristics of resources and structures (or uses) are taken as fixed, then efficiency is seen through the logic of exit and replacement. Resources should exit or be replaced in a given use if there are feasible higher-valued allocations of resources to uses. That leads to allocative efficiency. If, however, the location of the resources in a use is taken as essentially fixed ("commitment") but the characteristics of the resources and structures are taken as variable, then efficiency is seen through the logic of commitment and transformation. How can the given resources and surrounding structures be transformed to reach a higher value outcome? That is the domain of what has been called "X-efficiency". In some formulations, the contrast between allocative and X efficiency might be rendered as static (fixed characteristics of resources and uses but variable allocation of resources to uses) versus dynamic efficiency. The two logics are elaborations of Hirschman's treatment of exit versus voice [1970] and the choice of taking characteristics as fixed or variable is analyzed by Hirschman as "trait-taking" or "trait-making" [1967].

Box 7. The Two Logics Elsewhere

It might be useful to see the problem of finding the best combinations of the two logics in other contexts. When optimizing in a multi-peaked but cloudy landscape, there is the logic of commitment to climbing the hill you are on (fight rather than switch), and there is the logic of exit to try to jump to another hill that might be the true peak (and not waste time climbing the wrong foothill, i.e., switch rather than fight). In evolution (including its mathematical versions in genetic algorithms), there is the process of selection which, as it were, starts with the commitment to the existing set of genetic possibilities and then exploiting or refining them to determine the fittest, or there is the process of variation (e.g., mutation and crossover or sexual reproduction) which works to exit the given hill on the fitness landscape and explore other possibilities. In searching a tree of possible paths, the two logics become the choice of breadth-first versus depth-first search. Is it best to commit to a branch and exploit it in depth or should one emphasize breadth by exploring many branches but with less depth? Does a detective spend more time following up a given clue or searching for more clues? Should a manager make a commitment to a given team and focus on developing the capabilities of the team, or should the manager take those characteristics as given and focus of shuffling in and out different team members trying to get a better combination?

Every potential migrant faces a similar situation: to make a commitment to staying home and trying to better it, or to take its characteristics as given and search elsewhere for a new and better home. Commit to making home better, or exit to find a better home. Economic models of migrant behavior tend to model only the exit option and ignore the other possible logic of commitment with its inherent uncertainties about the possibilities of transformation.

[31] For instance, New Zealand tried an thorough-going voucher program, Tomorrow's Schools, in the early 1990s. But the better schools soon filled with hand-picked students and turned away the hard to teach poor or minority students who then had no alternative but return to their now more depleted old schools. Thus the dynamics of divergence left the schools even more stratified along socioeconomic and ethnic lines. [see "Vouchsafe?" in Letters, *The Economist*, May 31, 2003]

The stylized models of the American firm versus the Japanese firm, e.g., Aoki's distinction [1988] between the A-firm and the J-firm, are based on these two logics. The manager in the A-firm sees the organizational problem in terms of the market logic of exit and replacement. How to find the best resources on the market, buying and selling or hiring and firing as necessary, to obtained the highest valued allocation of resources in the firm? Management in the J-firm sees the organizational problem in terms of a "community model" [Dore 1987] of commitment to an essentially "given" set of people. How can their skills and capabilities be developed and transformed along with the surrounding organizational structures to obtain the highest valued outcome?

What the exit logic sees as inflexibility or rigidity (e.g., taking the allocation of people to an organization as a "given"), the other logic sees as commitment and loyalty. Some organizational mechanisms such as "barriers to exit" [Kagono and Kobayashi 1994] are seen as irrational by one logic but as quite rational by the other logic. For instance, the organizational norm of expecting the "captain to go down with the ship" or the "failed manager to fall on his sword" is designed to close off the logic of exit and to promote the logic of commitment and transformation. For instance, since the Chinese TVEs faced a hard budget constraint (i.e., were like a ship that could sink), the relative immobility of labor was seen by the logic of exit as "allocative inefficiency" but was seen by the other logic as promoting the commitment, voice, and effort (i.e., X-efficiency) of the workers and managers to make sure that their TVE stayed afloat.

It is these two logics that cut across the analysis of migration and development. If a worker in a developing country takes the characteristics of the "place" as fixed, then he or she will see advancement through the logic of exit. Commitment and voice are pointless if transformation is seen as impossible at least within the relevant future. Hence they are looking for the best exit in search of a higher valued use of their human resources. This is the market-based logic exemplified in the cosmopolitan liberalism of Harry Johnson.

However development policy-makers in the developing country, e.g., Don Patinkin, take the people as essentially given. Starting with that commitment, they face the task of finding out how the skills and capabilities of the people and the surrounding structures can be best transformed and developed. It is this common logic of commitment and transformation that recommended similar policies for Japanese-style firms, Dore's educational reforms, and development-oriented policy-makers in a developing country.

Individual Versus Collective Visions of Success

The prisoners' dilemma game is a well-known example where the individual strategy for success is not the best collective strategy for success. An individual vision of success comports well with the logic of exit (defection) while a collective, group, or community vision of success evokes the logic of commitment.[32] Consider a situation where there are essentially two companies, countries, or groups A and B, and that currently group A is "Number 1." A person in group B with an individual vision of success might well be using the logic of exit to find a way

[32] See the related "ego-focused" and "group-focused" visions of change in Chapter 1 of Hirschman 1958 as well as the analysis of individual versus collective action in Hirschman 1982.

to migrate from B to A. A person in group B with a collective vision of success might well be using the logic of commitment to find a way to transform B so that it became "Number 1" or at least comparable with group A.

The dynamics of migration by the best and brightest from B to A might well be the dynamics of divergence. Group A might be able to sustain and increase its advantage over B by poaching the most capable people from B. One subtle way for group A to promote that outcome would be to promote the universal adoption of the objective meritocratic standard: "success" on the basis of one's merits means individually joining the currently best group—not working to make your group best. As was forcefully shown in Michael Young's *The Rise of the Meritocracy* [1962], such a meritocratic structure would tend to perpetuate the supremacy of whatever is "group A."

Increased Income Versus Increased Development: The 3 D's Deal

Debates about migration and development also may surface basic differences about the goals of development assistance. Some see the goal of development assistance as "putting resources in the hands of the poor"—a certain kind of "poverty reduction." They see "increased income" and "increased living standards" as being "development." Others see increased income for the poor as a worthy goal, but it is not itself "development." Indeed, depending on how it is done, "poverty reduction" (e.g., in the form of long-term charitable relief) may even be inimical to development. They see development in a country or region as being based on developing and diversifying the skills and capabilities of the people in the country so that they can earn the "increased income" as their value-added (as opposed to mere natural resource extraction) in an autonomous and sustainable way.

A question might help to frame the issue. Suppose a poor and undeveloped country discovers a large deposit of oil and gas so that the average income is substantially increased and living standards are improved. Is that by itself development?[33]

Now reframe the question where the "large deposit of oil and gas" is replaced by long-term north-south unskilled migration with the ensuing flow of remittances back to the sending country. That, by itself, reduces poverty, increases incomes, and improves living standards so why not take that, by itself, as one form of successful development? Why should the jobs be in the same physical region as the family homes in today's world of globalized transportation and communication? We do not say that a suburban bedroom community is "underdeveloped" because it contains no internal sources of income since the jobs are in the nearby city. Why should our judgment be different when the bedroom community is hundreds or thousands miles away?

A "deal"—some would say a "devil's deal"—is being proposed between the North and South. In the developed North, many jobs, described by the three D's dirty, difficult, and dangerous, are not being filled by native workers. For unskilled migrants, these jobs would pay many times over (e.g., 400%+) of what they could make in their home country in the South. Hence there is a deal to be struck. The North will be the primary site of development in the sense of jobs

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[33] The aggregate growth models of development economics give remarkably little insight into these questions. The author finds some of the best and most accessible thinking on this topic in the works of Jane Jacobs [1969, 1984] so her ideas are outlined in Appendix 1.

including the low-end jobs that native workers don't want to fill. The South will be a kind of long-distance bedroom community furnishing workers for these jobs. This arrangement will satisfy many of the conventional criteria for development in the South: "increased income," "poverty reduction," and "improvements in living standards."

There seems to be a subterranean fault line running under the field of "migration and development" concerning this "3 D's deal" between North and South. Usually the deal is not stated in such bald terms—euphemisms, blinkered vision, and Pollyanna scenarios abound. Some supporters of the 3 D's deal emphasize the benefits to governments in the South; they can export their unemployment problems and import the hard currency to relieve their balance of payments problems. Some keep their eyes riveted on the improved living standards of the individual temporary migrants and their families, and ignore the lock-in to a pattern of economically sterile bedroom communities in the South. Some ignore decades of disappointed hopes for *gastarbeiter*-remittance-led development in order to embellish the lingering hope that these patterns "could" lead to real development in the South. Others cut that Gordian knot and in effect redefine "development" in terms of "poverty reduction" and "improvements in living standards."

To this reviewer, the debate, implicit or explicit, over the 3 D's deal is fundamental to policy questions in the field of migration and development.

Complicating the Discourse on Migration and Globalization

Needless to say, globalization is a complex issue that needs to be approached from many sides. Often globalization is praised as being unambiguously positive on the grounds of the market-driven logic of exit, the equalizing dynamics of convergence, and individual visions of success. The brunt of the conceptual framework used here is to complicate the discourse and to show that the usual approach to globalization is rather one-sided. The logic of commitment and transformation which embodies a group-focused or collective-action vision of success has an equal claim as a strategy for social improvement. Moreover, to the extent that the underlying mechanism for the north-south interaction is the dynamics of divergence, then the logic of exit to obtain individual success will work to perpetuate and aggravate the North-South Divide.

Summary of Policy Research Issues

South-South Migration

Overall the brunt of the message on migration and development is that "migration studies" is not an isolated field with separate developmental solutions. The development issues that arise with migration are basic to the issues facing late-developing countries as a whole.

In the case of south-south migration, the principal issues arise when the economically beneficial migration cuts across post-colonial boundaries. Such boundaries, when originally laid out, paid little attention to the future economics of agglomeration that might drive, say, interior-to-coast migration across borders that nation-states are trying to "harden." Here policy research quickly spills over into political questions of changing immigration and citizenship restrictions and of broader regional cooperation.

Unskilled North-South Migration

Current approaches to streamline the transmission of remittances seem to have at best a neutral impact on development issues. If one of the fundamental issues is the permanence of "temporary labor migration" (e.g., as part of the 3 D's deal) then facilitating remittances does not address the problem of reversing that migration-as-career psychology.

A related area of some controversy is the overall "view" of remittances. The question is not whether or not remittances are "good" but how they affect development. Surely remittances serve many positive social and individual functions such as reducing poverty. But it has been argued here that remittances by themselves are economically barren unless they are used to spark local businesses that become largely independent of getting still more remittances. Thus it would seem a mistake to narrow the focus of development assistance to economically sterile "poverty reduction."

A more promising approach seems to be authorized but time-limited labor assignments that would help provide the capital and knowledge for developmental efforts at home. These truly-temporary labor migration schemes will also mesh well with the current increasing restrictions on unskilled immigration in the North. But limiting the "pull" circles us back to the "push" problem that partly drives the migration, the lack of development opportunities at home.

Since the field of local economic development is already well-plowed, I would only emphasize a topic that seems under-explored and yet central to capturing the developmental possibilities of temporary migration. This is the spin-off conundrum (see box in Appendix 1).

- A low-end product now produced in a congested urban factory might be spun off into a small operation in the surrounding rural or peri-urban area—and similarly between North and South.
- Instead of inhaling and exhaling migratory workers in a peripheral part of a company according to fluctuations in demand, the peripheral operation might be spun off as a separate operation near to the workers' home which could then diversify to stabilize its demand.
- Old machinery to be replaced might be used to endow a spun-off shop in a rural region.
- A technology, once learned, can usually be used to produce an adjacent product that could be the sharp focus of a spin-off rather than a blurring of focus in the original company.

In all these cases, the developmental impact of the spin-off is a positive externality of the original operation and thus such spin-offs tend to be under-supplied. This spin-off conundrum offers a clear role for policy experimentation by public development authorities.

Skilled North-South Migration

Several points emerged from the survey and commentary on the brain drain issues. Arguments were presented against using the idea of "education as an exit-visa" as a deliberate marketing ploy to attract more young people into the sciences, engineering, and the professions. Some people may, nonetheless, go into these fields in order to emigrate, but it would hardly be coherent or dignified for a country to adopt that stance as a national policy.

Since there is already a diaspora for the countries where the brain drain has been a problem, one strategy is to foster transnational communities that will re-connect the diaspora in a positive manner—rather than try to apply pressure for a binary return-or-not decision.

In addition to productively involving the existing diaspora, a country can try to reduce the amount of the brain drain in the first place. Here the policy discussion focused not on "hard" (legal or financial) restrictions but on educational reforms in analogy with Japanese-style human resource policies. Countries, like companies, need to increase the retention of own-trained people, so these policy analogies are not surprising. Along the lines of the educational reforms suggested by Ronald Dore [1976; 1997] for their own sake independently of the brain drain problem, the general idea is to bring students earlier into public or private work organizations (e.g., co-op programs) and then for further training, at home or abroad, to be undertaken or financed by the organizations—ideas in broad agreement with those of Don Patinkin [1968].

Appendix 1: The Process of Development According to Jane Jacobs

Growth Versus Development

Development is not just "growth" in the sense increased GDP income from remittances or natural resources or even more inputs leading to more outputs. Development involves change through differentiation, diversification, and transformation in the products and in the underlying processes of production—all of which might be hidden in the black box of increased "total factor productivity." Similarly, a vibrant city is not just a town with many more people and buildings on a larger land area.

The notions of "growth" and "development" are sometimes used almost interchangeably, but it would be useful to our purposes to make a sharp distinction. Jane Jacobs points out that there was a sharp distinction even in biology. In the history of embryology, there were two schools about the process of change from an embryo to a mature organism. The "preformation" school (e.g., Aristotle) saw the embryo as just a tiny version of the mature organism so the process of change was one of quantitative growth. The epigenesis school saw (correctly, as we now know) the process of change as a qualitative process of differentiation and transformation.

Aggregate growth theory in economics does a disservice to the understanding of *development* by abstracting away from the difference between growth and development. A similar "theory" of biological growth as the increase in inputs leading to the increase in, say, body weight—plus unspecified changes in something called "total input productivity"—would not distinguish between preformation (growth) and epigenesis (development).

Figure A1: "Growth"

Figure A2: "Development"

The biologist, C. H. Waddington, described the "epigenetic landscape" of development through diversification as being more like a river delta than just a wider and deeper river.

> One visual illustration would be the very final edge between the land and the sea in a great river delta like those of the Mississippi and the Nile—there are almost innumerable little separate rivulets of the fresh water running down to the sea, separated quite definitely but only by low banks of mud. [Waddington 1977, 116]

Thus development involves not just "growth" but diversification and ramification of different products and different kinds of work which might take place, in part, within firms but also through spin-offs, break-aways, split-ups, and the like. This "river delta" metaphor does not picture all the web-like connections between the diversified parts (e.g., as in an industrial district or cluster) but it does carry us beyond the picture of "growth" in aggregate output.

On a preformation theory of city growth, a "city" would just be a quantitatively bigger version of a small town, like a number of towns located together in a geographical area. But that is not what vibrant cities are or how cities grow. According to Jane Jacobs [1969, 1984], it is more like the process of epigenetic transformation, not blowing up a small balloon—with more K and L—to make a big balloon. Although economists usually think in terms of the wealth of nations, she takes cities and their regions as the units of economic development.

When is a Settlement like a Rain Forest or like a Desert?

A rain forest and a desert at the same latitude would have about the same amount of solar energy arriving per unit area. In the case of the desert, it is essentially a sterile conduit; the energy comes in during the day and is dissipated at night. Little is captured; it is a through-put operation. The opposite is the case for the rain forest. Much energy is captured through the photosynthesis of its plants. Then the stored energy is passed around in a complex web of relationships until it is finally dissipated. Plants die and decay to feed other plants. Plants are eaten by animals who are eaten by other animals, who give off waste products, or who die and decay to feed other organisms.

If we think of the imports coming into a settlement as being analogous to the incoming energy, then, lacking the free energy of the sun, there must be some exports of commodities or services to fund the imports. The exports could be natural resource-based as with oil, gas, or minerals or they could be derived from agriculture. The exports could be manufactured goods which might ranged all the way from just the assembly of imported parts/kits to goods that result from an extensive chain of domestic value-added operations. Or the exports could be some form of services as in: (1) a community supported by migrant workers, (2) a community supported by tourism, (3) a military base (seen as providing a public service), (4) a retirement community living off of pension income (past services), or (5) a Bangalore-type operation (selling software services) which might be part of a more complex operation of products and by-products.

Vibrant cities and the regions surrounding them are more like rain forests while some other economic settlements are more like deserts. A settlement is more like a 'desert' when the imports are dissipated in consumption or are incorporated directly into the production of what is exported. The settlement is a rather straightforward economic conduit.

A settlement is more like a 'rain forest' when the imports feed into a diversified web of local value chains—some products being inputs into many other products and so forth. The imports spread out like a river delta to directly and indirectly feed a diverse 'ecology' of economic activities.

The most sterile or inert desert-like settlements are the settlements based essentially on direct consumption of imports such as communities living off of migrant worker remittances, retirement communities living off pensions (and income from capital invested elsewhere), and military bases. Not far behind are the settlements based on one stage of production with little local value-added and negligible local consumption such as agricultural or natural resource-based towns, tourist centers, casinos on Indian reservations in the United States, company towns, and labor-intensive assembly or processing enclaves. These are more like economic deserts (with one type of cactus) than economic rain forests.

To become more ramified and complex, an economic settlement should have multiple uses for imports to produce diversified and multi-staged products with a significant part for local use. In a complex environment, growth is not just an amplified through-put operation; it can lead to development. Each specialization to achieve efficiency will soon lead to diversification of outputs into various product niches, to backward integration to produce previously imported inputs, and perhaps to unexpected 'matings' with nearby processes and products to produce novel offspring.

Box 8. How Innovation turns "Growth" into Development

Jane Jacobs uses the development of the 3M company to illustrate how innovation turns mere growth ("expanding old work") into diversified and ramified development ("adding new work") in a process where "one sort of work leads to another" [1969, 53]. The Minnesota Mining and Manufacturing Company started with two proprietors and some workers gathering and processing sands used for abrasive purposes. Then they decided to make sandpaper but had trouble with the adhesives to stick the sand to the paper. After experimenting with adhesives, they developed a gummed paper to use as masking tape for painters and eventually a whole line of tapes: "shoe tape, electrical tape, acetate tape, pressure-sensitive adhesive tape (better know as Scotch tape), acetate fiber tape, cellophane tape, printed cellophane tape, plastic tape, filament tape, sound recording magnetic tape, nonwoven synthetic fibers." [1969, 53] Today we could add a host of other spin-off products such as the Post-it notes and magnetic disks for computers.[34]

Other uses of adhesives were not forgotten. The diversification continued with "sandblasting stencils, automotive adhesives, industrial adhesives, marine adhesives, marine calking compounds, tile and construction adhesives, construction compounds." [1969, 53] The original product of sand also sent out its branches on the ramifying tree of products: "coated sand for polishing, then wax and varnish coatings, finely ground paint pigments, roofing granules, nonslip cleats and strips, abrasive cloth, reflective sheeting, reflective compounds, paving materials, and welding fluxes." [1969, 53]

> This process in which one sort of work leads to another must have happened millions of times in the whole history of human economic development. [Jacobs 1969, 53]

This is the sort of innovation that tends to happen when diverse people with various skills and complementary

[34] See Collins and Porras 1994 to update the story of 3M as the "Mutation Machine from Minnesota."

knowledge jostle together in companies, and companies jostle together in cities. This is an example of the dynamics of agglomeration that goes beyond increases in "L" and "K" and that goes on inside the expanding black box of "total factor productivity."

The sideways jumps from deepened old work to new work in a nearby field were key to the contagious innovation that made the industrial revolution.

> All these gains, plus the invention of machines to build machines, came together in the last third of the eighteenth century—a period of contagious novelty. Some of this merging stream of innovation may have been a lucky harvest. But no. Innovation was catching because the principles that underlay a given technique could take many forms, find many uses. If one could bore cannon, one could bore the cylinders of steam engines. If one could print fabrics by means of cylinders (as against the much slower block printing), one could also print wallpaper that way; or print word text far faster than by the up-and-down strokes of a press and turn out penny tabloids and cheap novels by the tens and hundreds of thousands. Similarly, a modified cotton-spinning machine could spin wool and flax.... [Landes 1998, 191-2][35]

Adam Smith didn't get it right in *The Wealth of Nations*. Deepening the division of labor increases operating efficiency and thus may expand old work but it is not the dynamics of development of new work.

> Dividing existing work into tasks is by no means confined to advancing economies. It is also practiced in the most stagnant economies, where men and women spend their entire working lives at very specialized tasks: tapping rubber trees, or herding goats, or loading bananas, or twisting fibers, or dancing in temples, or mining salt, or crushing ore, or carrying baskets of dirt for public works, or cultivating corn and beans. A stagnant economy may lack almost everything, but not division of labor. [Jacobs 1969, 83]

One key to dynamics is when the process of deepening the division of labor in the old work leads to a new type of work, a new branch on the tree. Jacobs illustrates with Smith's own example of pin-making [Smith 1994, Chapter 1]. The story of the improvements in pin-making started on an earlier branch of the tree, the making of wire bristles to card wool. Specialization in making carding combs lead to people "who bought iron ingots from smiths, drew them into wire, made the wire into bristles and sold the bristles to cardmakers" [Jacobs 1969, 82]. But the operations of making the shaft of the wire bristle were the same as those needed to make the shaft of a pin. Hence some bristle makers could branch off with the further steps to add heads to the wire bristles to make pins. "They were adding a new complexity, pin making, to an older simplicity, bristle making. From this addition came the rest of the divisions of labor in pin making that Smith describes" [Jacobs 1969, 82].

The story of the *dynamics* of development is not the static efficiency of greater specialization but the branching off of new kinds of work. Carrying the pin-making story further, about fifty years after Smith's exposition, the hand-making of pins was rendered obsolete in a stroke by a pin-making machine. But that machine did not develop from the specialization of labor in the pin-making business but from a new branch on another tree, a new application made by a designer of machines for other industries.

[35] The problem of using new knowledge (either an innovation or new imported knowledge) to produce other products off the main line of business is related to what Norbert Wiener called the "inverse process of invention." Ordinarily we think of starting with a problem and then making an innovation or invention to solve the problem. But with the new "solution" in hand, we might then search for what other problems it might be able to solve. "It is just as truly a work of invention or discovery to find out what we are able to accomplish by the use of these new tools as it is to search for the tools which will make possible a specific new device or method." [Wiener 1993, 91]

Piecemeal Reconstruction to Acquire Technologies

How have late developers acquired technologies from first developers in such a way that the latecomers can control the technology and develop it into the future? Control over the development of technologies used in foreign-owned enclave operations is not by any means automatically transferred to the host country. One way to acquire and adapt a technology is "the hard way" instead of trying to leapfrog to an advanced stage by buying it whole from elsewhere or inviting in a foreign operation. Acquiring technologies through piecemeal reconstruction creates the sort of rooted and 'owned' knowledge that would maximize the potential for multiple off-shoots.

The development of the bicycle industry in Japan provides an example. When bicycles were imported into Japan around the turn of the 20th century, the first business was the repair business based on cannibalizing some bicycles for spare parts [Jacobs 1969; 1984]. This was followed by manufacturing some needed parts locally and then the manufacture of enough parts so that whole bicycles could be assembled there.

> Not only did Japan acquire bicycle manufacturing and develop its own producers' goods for the purpose as it went along, it also acquired an improvised method for reproducing other types of complex imported goods symbiotically in groups of individual small and simple factories, a method put to use for manufacturing sewing machines, for example, and later radios and electrical goods. [Jacobs 1984, 148]

This shows how a late developer can acquire and adapt a technology in what at first looks like "the hard way" but that it can then use what it has "learned how to learn" for other industries as well. This is the longer term benefit of not taking the short-cut of importing a factory.

> At the time when the Japanese developed their own bicycle manufacturing, the bicycles they imported were being made in highly integrated, huge, complete factories in America, as the sewing machines also were. Had the Japanese tried to import complete factories for these purposes, whether by buying them outright or obtaining them on credit, they would have lost the opportunity of developing their own producers' goods and production methods, and the bicycles, sewing machines, and so on, would have been more expensive as well, probably too expensive for Japanese to buy. Instead they used their trade with currently more advanced economies only as a springboard for their own development. [Jacobs 1984, 148-9]

In contrast, importing the technology as a whole (e.g., through foreign direct investment) may give a headstart but only down a narrow road. Given the normal inertia of companies to continue doing what worked in the past, spin-offs may facilitate diversification into product niches, input replacement, or the production of novel products. Growth in volume will lead to further specialization and then perhaps to more diversification, replacement, and offspring, i.e., to development. But the original companies, including foreign branch operations in a developing country, usually do not reap all the gains from such spin-offs and break-aways so such development will tend to be under-supplied [see box "The Spin-Off Conundrum"].

> If Japan had replaced its imports of sewing machines merely by receiving branch plants of the Singer Sewing Machine Co., Japan would not now be a great exporter of sewing machines, nor of producers' good and services that started by serving local sewing machine manufacturers. Locally originated production of former imports is often a slower way for a city to acquire new exports from the replacement work itself, but it is potentially productive of greater and more various export work. [Jacobs 1969, 201]

Box 9. The Spin-Off Conundrum

Spin-offs and break-aways to fill nearby product niches are a positive externality of the mother firm and hence under *laissez-faire* conditions may well be under-supplied.

Ordinarily the owners or managers of a large firm would like to own or control a new product line to reap the rewards. But the nearby product is "off" of their original line of products. Expertise in rather new or different products is not what got the managers where they are so they may have limited enthusiasm for such new directions. It may require attention to a new set of customers and may require some unfamiliar knowledge and inputs. Managers would rather "stick to their knitting" in the business they know (e.g., bristle-making) than "wander off" into some other business (e.g., pin-making).

> Picture, for example, a large manufacturer of metal dies whose abrasive-sand department has taken on the work of making sandpaper and masking tape. The personnel department has added the service of supplying part-time office workers to banks and publishers. One group of machinists has added the manufacturing of toy cars. Another group of machinists has added the manufacturing of surgical instruments. Still another group is working on a machine to improve bookbinding. The shipping department has added the manufacturing of crate linings made from foam rubber and is also making shoe inner-soles from the scraps. [Jacobs 1969, 72]

Management would become a nightmare in this "strange hive." Each new kind of work would have its own customers, input and space needs, financing and staffing requirements, and growth rate all not in any coordination with the original work of the company. It probably is not worth the distraction to the original company. If the company is a subsidiary or branch of a foreign or multinational firm and is intended to produce the foreign company's products for the local market, then this sort of "irrelevant diversification" is even more unlikely. But it is a different story to some local middle managers and skilled workers who could see the new work as their own break-away enterprise.

This is the "spin-off conundrum" at the heart of the problem of business innovation and development. Under conventional conditions, spin-offs to pursue new work and to fill adjacent product niches will tend to be under-supplied—even though they will still occur willy-nilly. This is a problem even in developed economies, but it is particularly severe in developing countries where business conditions may be less welcoming but where such spin-offs would be important spillover effects of otherwise enclave operations. Regions, countries, and cities that provide the investment climate and business environment to alleviate the spin-off conundrum will have taken large strides along the road to development.

Climbing Jacobs' Ladder: Cities Developing on Each Other's Shoulders

Cities can grow through a process of dynamic interaction with each other through direct or indirect rivalry. To play in the "game," a city must produce something which it can export—perhaps based on its natural endowment. That is its "challenge" to other cities. The export earnings can then buy imports from other cities that were not produced in the given city—which is its challenge. If the other cities were not too advanced, then the import will present a plausible challenge to be replaced through learning and improvisation and perhaps improved upon by the city. Since the wealth to buy the imports might have been earned productively (not a gift), the city might already have some productive capacity that might begin to improvise and differentiate to produce and replace the import [see box on "How Innovation turns 'Growth' into Development"].

In the meantime, the other cities might be replacing the original exports of the city; its temporary advantage might be competed away. Now the domestic and perhaps improved version of the originally imported products can then be re-exported perhaps to the original supplier city or more likely to other cities that are less developed or have different specializations. The new export earnings will then purchase other more challenging imports, and the process can repeat itself ratcheted up at a higher level. In this matter, a diversified group of innovative cities can through trade learn from each other and not only grow but *develop* "on each other's shoulders"—climbing Jacobs' ladder.

It should be particularly noted that the Jacobs' ladder mechanism works best between competitors at roughly the same level of development. "Science fiction" imports from advanced countries would stop the rivalrous process in the same way that allowing a heavyweight to box in a lightweight class would stop the rivalry and stop the associated process of learning and improvement through competition—leaving aside any other damages.[36] Enforcing "level playing field" competition between "heavyweights" and "lightweights"—that is, between advanced and underdeveloped countries—would be tantamount to "kicking away the ladder" [Chang 2002] that the developing countries could climb.

Using Temporary Migration to Kickstart Development

How might temporary migration help local development get started rather than serve to perpetuate an economically barren "bedroom" community living off of remittances? The Jacobs' ladder mechanism starts with some export such as labor or a natural resource which can then fund imports that serve as a challenge to local production. For instance, temporary labor migration might result in a number of workers having the funds to buy building materials for new homes. But instead of the through-put operation of remittances going back out to buy imported building materials, the opportunity might be used to supply some of the initial demand from a local operation producing bricks or lumber or some other materials for the homes. But the remittances should fund only the capital and the *initial* demand to bootstrap the business. The operation should seek to quickly re-export building materials to nearby towns to wean the operation away from the temporary remittances.

It would be helpful if the temporary labor migration served not only to supply an initial demand and capital but the knowledge to run the operation. This is why migration to a slightly more advanced region might be more helpful than migration to a "science fiction" region where the learning might have less application back home.

[36] See Chapter 10 "Why Backward Cities Need One Another" in Jacobs 1984.

The initial business might start as a relocation of a low-end *maquila* operation that had employed the temporary migrants in a more advanced region. Or it might start by using old machinery that was being replaced in the more advanced region. Here again, the goal should be to gain control over the operation so that the sources of demand and the products could be diversified away from dependence on being just a link in a value chain based elsewhere.

Once an operation is mastered, then the town should seek to diversify into related products where the same or similar knowledge and skills could be used. A temporary labor stint in a similar operation elsewhere might be helpful. Climbing this first rung on the ladder is more feasible if the town is relatively close[37] to a thriving city so that volume can grow and new diversified products will find a ready market.

Appendix 2: Picturing the Dynamics of Convergence and Divergence

Picturing the Dynamics of Convergence

A diagram using two labor demand curves can represent an equalizing dynamics between two regions ("rich" and "poor") that is driven by wage differentials.

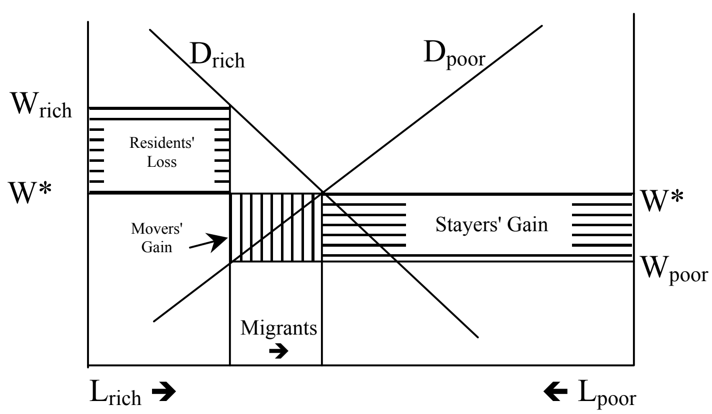

Figure A3: "How World Migration Reduces Poverty"
[Source: Figure 1 in Williamson 2003]

The vertical axis on the right is the wage scale in the poor country and the labor L_{poor} is represented on the horizontal axis as increasing right to left. Thus the demand curve for labor D_{poor} in the poor country is represented "backwards" sloping "downward" right to left. The total labor between the two countries is the length of the horizontal axis. At the initial pre-migration equilibrium, the wage is W_{rich} in the rich country and W_{poor} in the poor country. When the gate between the two labor reservoirs is opened, then the equalizing flow of labor from poor to rich country is the indicated migration that equalizes the wage rate in both countries at W*. By comparing the equilibrium wages before and after the migration, we can compute the "Residents' Loss" for the original workers in the rich country, the "Movers' Gain" for the migrants, and the "Stayers' Gain" for the workers who stay in the poor country.

[37] As we see from Bangalore, "close" need not be interpreted in physical terms when the imported inputs and exported products are informational.

This illustration of the "dynamics" of convergence is a comparative statics diagram that represents two equilibria (and not the dynamics in between). From the viewpoint of our discussion, the key assumption is that there are no economies of agglomeration or disagglomeration in either country, an assumption embodied in the "partial equilibrium" representation of the demand for labor curves being the same in spite of a significant medium-term shift in population from one country to the other. The alternative assumption will be considered in the next section.

Another dynamics of convergence is that given by the reaction curve model. Let us model a two-location world, say group A and group B. Each of a fixed number of individuals is in one group or the other. The reaction function gives the information, given that X% are in group B, Y% are willing to be in group B. But in a two-group world, the reaction function can also be read as saying, given (100–X)% in A, (100–Y)% are willing to be in group A. Then the reaction function dynamics between the two groups can be represented in a box or, in this case, square diagram reminiscent of the Edgeworth box diagram. The reaction curve from group A's point of view has its origin at the northeast corner of the square.

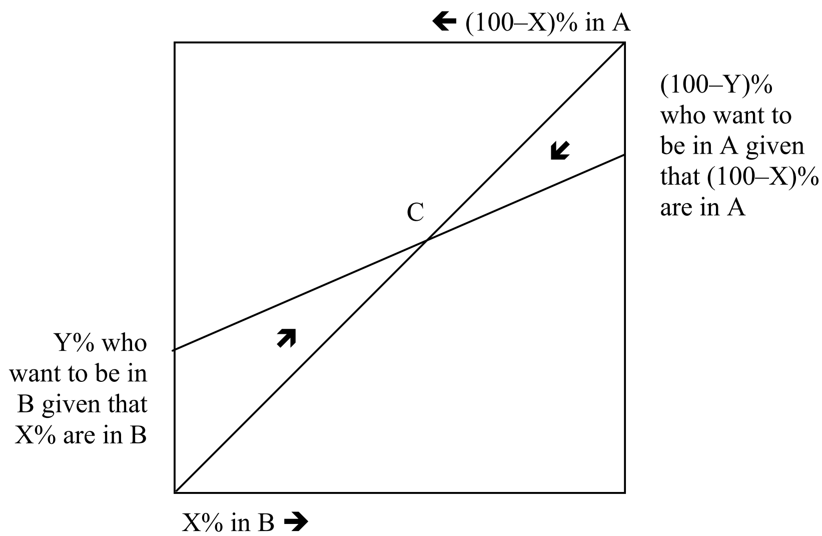

Figure A4: Reaction Square with Dynamics of Convergence

Whether looked at from the viewpoint of group A or group B, there is a unique and stable equilibrium where the reaction curve crosses the 45^0 line. Given an exogenous shock that moves it away from the equilibrium, the dynamics will restore it.

Picturing the Dynamics of Divergence

It was previously noted that the comparative statics model pictured in Figure A3 assumes no economies of agglomeration or disagglomeration as the labor shifts from one country to the other. These economies and diseconomies go beyond the general equilibrium multiplier effects that are usually ignored in the partial equilibrium comparative statics approach. Cities (or Marshall's industrial districts) may exhibit such economies. As labor comes in to satisfy demand, other medium-term dynamics are set in motion. As firms expand volume, they may diversify into new product lines which would shift the demand for labor. Or some operations may spin off from expanding large firms, and the renewed vigor of the spin-offs may shift the demand for labor.[38] Some "resident" workers as well as some migrants may decide to go into business for themselves which also shifts demand. Those are some of the dynamics of agglomeration [see box "How Innovation turns 'Growth' into Development" in Appendix 1 for examples of the dynamics of development to which in-migration can be a contributing factor].

On the sending side, there may also be medium-term dynamic effects. Some firms might collapse in the face of rising costs or the loss of key personnel to the North which, in turn, may have a knock-on effect on the viability of related firms (suppliers or customers). In fact, some migrants may have themselves been proprietors of micro-businesses. These effects would shift the labor demand downward in the sending country, part of the dynamics of disagglomeration or ghettoization. Remittances would have an opposing multiplier effect to induce an increase in labor demand (at least where the money is spent). But that demand would collapse if workers returned to take remittance-funded jobs unless the remittances were used in some Jacobs' ladder manner to create jobs not dependent on remittances. Remittances might also have the negative effect of inspiring and funding the migration of additional family members. In the absence of positive developmental changes, one would expect remittances to only mitigate and not reverse the downward shift.

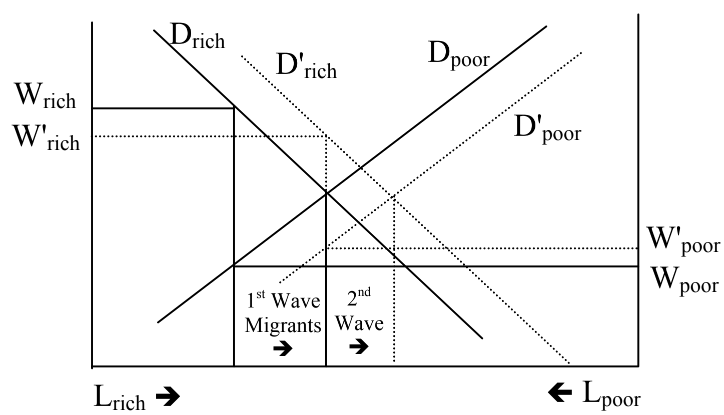

Figure A5: How North-South Migration Might Worsen the North-South Divide

Figure A5 represents three equilibria. When the labor gates are opened, the separate equilibria given by W_{rich} and W_{poor} would lead to the first wave of migrants from the poor to the rich country. But the dynamic agglomerative effects of the migration would shift the labor demand curve D_{rich} outward to D'_{rich} in the rich country, and the ghettoizing effect in the poor country would shift the labor demand curve D_{poor} downward to D'_{poor}. This would still leave the wage differential between W'_{rich} and W'_{poor} so there would be a second wave of migrants, and so forth. The size of the shifts is drawn so that the wage in the poor country W'_{poor} after the 1st wave of migration is still higher than the original wage W_{poor}. The ghettoizing effect in the South is shown by the lower level of labor demand at each wage level, i.e., the overall drop in economic

[38] Nature thrives by having old growth constantly seeding new growth rather than just expanding the old growth.

activity, even though the remaining workers may get higher wages.[39] Long before this dynamics of divergence worked its way out, politics in the rich country would probably close the gates. The net effect of the intervening migration episodes would be agglomeration in the rich country and ghettoization in the poor country leaving the North-South divide worse than before—a contributing factor to "divergence, big time" [Pritchett 1997].

Our other model of dynamics, the reaction function model, might also illustrate the dynamics of divergence.

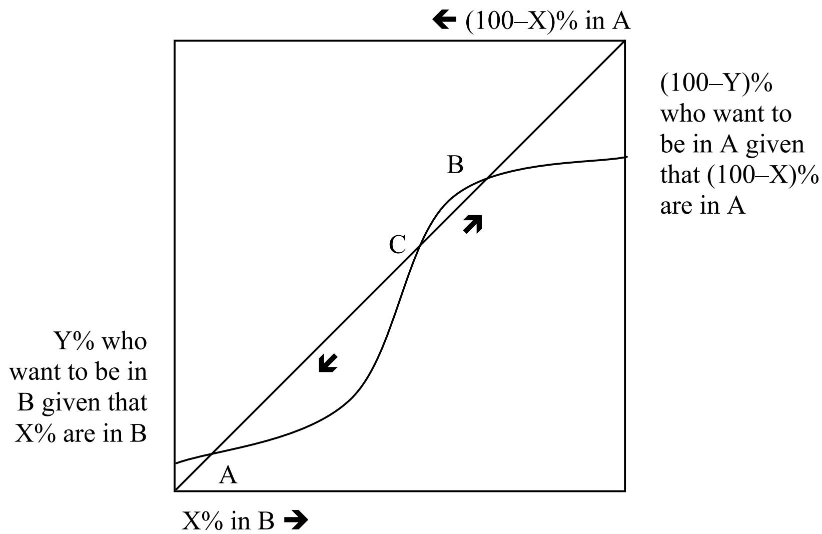

Figure A6: Reaction Square with Dynamics of Divergence

There are two stable equilibria: A, where most everyone is in group A, and B where the groups are more evenly split but with the most in B. If the system was at B, then a large enough exogenous shock such as enough poaching by group A from group B would increase the percentage in group A (and correspondingly decrease it in group B) to beyond the critical mass point C, so that mass migration is sponsored to push the system to the new equilibrium at A. Most everyone is in group A, and group B has been ghettoized to a small remnant of diehards.

Appendix 3: Multi-Person Prisoners' Dilemma Games

The standard two-person prisoners' dilemma game illustrates a symmetrical situation where each play has a choice of "cooperate" or "defect" and that no matter what the other player does it is best for each play to defect. Thus both would defect; yet the outcome of both defecting is worse for both of them than the outcome of both cooperating.

Illustrative payoffs are given in the following figure.

[39] For a dramatic example, suppose a group of doctors in a hospital are attracted away to hospitals in the North in a package deal. Although the hospital may be nearly collapsing around the remaining doctors, the immobile wealthy in the town or city would then be willing to pay more to guarantee their services.

Player 2 \ Player 1	Cooperate	Defect
Cooperate	1 / 1	3 / -1
Defect	-1 / 3	0 / 0

Figure A7: Two-Person Prisoners' Dilemma Game

The game can be "regraphed" in a way that can then be generalized to a multi-person game.

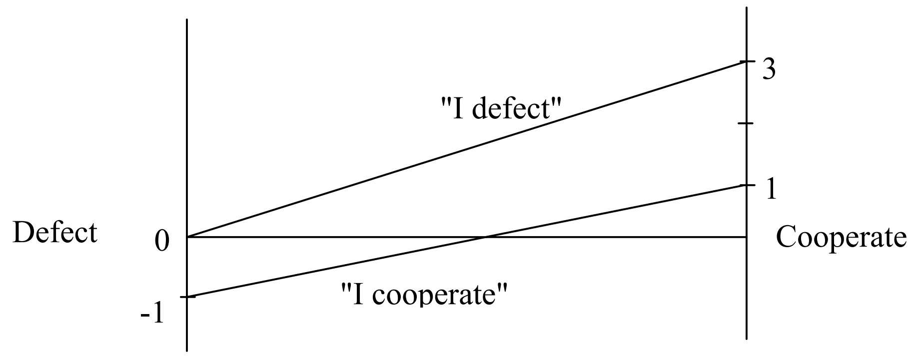

Figure A8: Re-Graphed Two-Person Prisoners' Dilemma Game

The two sloping lines "I defect" and "I cooperate" give the results from either player's viewpoint depending on what the other player does. The other player is either at the left end (Defect) or the right end (Cooperate) of the horizontal line. The fact that no matter what the other player does, it is better for a player to defect is indicated by the "I defect" curve being always above the "I cooperate" curve. Yet if both defect, each gets 0, whereas if both cooperate, each would get a payoff of 1.

In figure A9 representing a multi-person game with n+1 players, the horizontal line is of length n. A point such as m along the line represents the players who cooperate—so that n-m are the number of defectors. The two sloping lines give the payoffs to any player given the assumed number of other players who defect or cooperate. Thus the vertical line at m intersects the "I cooperate" and "I defect" lines at the points giving the payoffs to the "marginal player" (which could be any player). Since the "I defect" curve still dominates the "I cooperate" curve no matter what the other m players do, it is still in the interest of each player to defect. But that gives them each a payoff of 0 whereas universal cooperation would give each a payoff of 1.

The universal defection point is arbitrarily taken as the origin. The point k is significant; it is the minimum "coalition of the cooperating" so that their payoff will exceed the universal defection payoff no matter what the other players do.

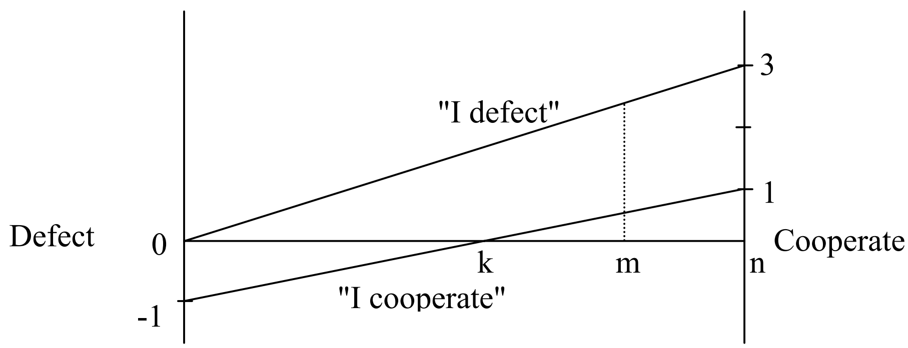

Figure A9: Multi-Person Prisoners' Dilemma Game

There is no need for the payoff curves to be straight lines but we will keep that just for simplicity. The "dilemma" is in the game as long as the "I defect" curve is always above the "I cooperate" curve.

In the next figure, the migration decision in some region is interpreted as a multi-person prisoners' dilemma game. This model is about a simple stay or leave decision. There are no remittances or return migrations. The payoff curves give a simple economic return to the individuals (or families).

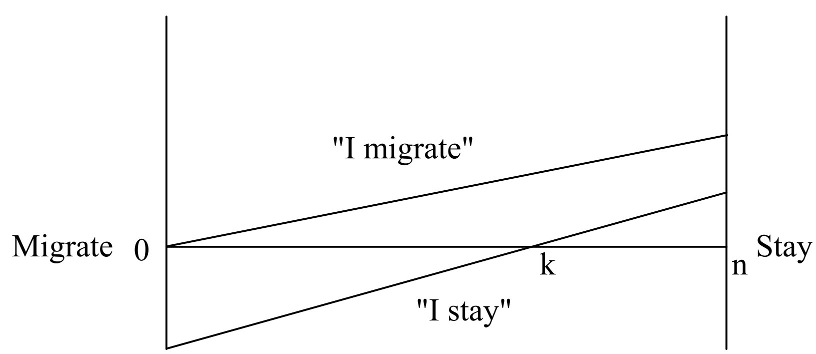

Figure A10: Migration as a Multi-Person Prisoners' Dilemma Game

Note that we have assumed diminishing returns to migration. As more migrate, the payoff to each is reduced—which could be interpreted as a tightening of controls at the receiving end and thus a raising of the costs of migration. The payoff to each when all migrate is taken as the zero point. Then k represents the minimum number of stayers so that each stayer got at least the universal migration payoff. But with each proportion of stayers and migrants, it is always in the individual interest of the marginal player to migrate. Yet the result of all migrating is dominated by the outcome where all stay.

These prisoners' dilemma models of collective action situations typically do not represent the whole situation since collective action does take place [see Hirschman 1982]. The game might represent the situation absent a law to require cooperation (e.g., paying taxes) or absent some social sanction against defection or some social preference for cooperative action. For instance, the migration example might represent the individual economic payoffs absent any social disapprobation against leaving. Different individuals might have different susceptibilities to social sanctions so analysis quickly becomes complicated.

The migration version of the multi-person prisoners' dilemma game is used here only to make a simple point about the cosmopolitan liberal position that each individual should choose the option that betters the individual's position. That is not good policy advice in a prisoners' dilemma situation.

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