A Definition of Migration Pressure Based on Demand Theory

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INTRODUCTION

Large international migrations are no longer limited to a few emigration and immigration countries. A recent United Nations publication (1989) on the percentage of foreign born residents in 130 countries demonstrates that large international migrations have become almost universal. Table 1 (page 69), for example, shows the stock of guest workers in the Federal Republic of Germany between 1968 and 1974. The governments of some receiving countries feel that they are losing, or have already lost, control over their borders. The drama of Albanians battling with police in Italy to avoid being sent back in August 1991 represents a struggle for such control. Some governments of sending countries, on the other hand, worry about the impact on their economies and long-term development prospects of the rapid loss of large numbers of citizens (e.g. Glaser, 1978). As the concept “migration pressure” is an expression of such concerns and fears, it is useful to give it precise meaning.

Although the term “migration pressure” has been used widely in discussions of international migration, no explicit definition of the concept has been offered except by Bruni and Venturini (1991) [BV, henceforth]. While the definition proposed in this paper shares some similarities with that of BV, it also differs in some important aspects. First, BV’s definition is based on the notion of excess labour supply; the one offered here is not. Second, their definition considers only emigration pressure whereas this paper offers definitions for both emigration and immigration pressure.

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DEFINING MIGRATION PRESSURE

The definitions "emigration and immigration pressure" presented in this paper are based on economic demand theory. Relevant demand is measured by opportunities to move from one country to another, excluding short term visitors. The word "pressure" nonetheless suggests a certain degree of subjectivity. How much pressure a country can bear depends on its circumstances. Objective factors such as wealth and current economic performance play important roles, as do such subjective factors as "political mood". For example, resistance against immigration increased in Switzerland in the 1960s and 1970s although unemployment rates were below one per cent (Imhof and Gaetano, 1989).

Migration pressure should not be confused with propensity to move, which is an objective assessment of the likelihood that an individual, drawn at random from a group with certain characteristics, will migrate. The two terms are, of course, related. If the propensity to move is zero, there is no migration pressure.

Pressures can be of two kinds. It can be the result of barriers, holding people back from moving. They in turn exercise pressure trying to overcome the barriers (emigration pressure). Pressure is also exercised on the destination countries, when the barriers no longer hold back immigrants (Donato et al., 1991). The word pressure therefore implies a dynamic process. Once pressure has succeeded in breaking down the barriers that hold it, it dissipates. The results may require policy measures to deal with the consequences.

Definition I: Emigration Pressure

Emigration pressure in country \( i \) is the demand for opportunities by residents to leave for another country for a prolonged period of time. The demand is expressed by the number of individuals and is defined for a period of time of length \( \Delta t \).

Emigration pressure in country \( i \) = 

\[
\text{Number of Individuals Expressing Demand to Leave Country } i \\
\Delta t
\]

Thus, emigration pressure is a function of the size of the demand and the length of the period during which it occurs.
**Definition 2: Relative Emigration Pressure**

Relative emigration pressure in country $i = \frac{\text{Emigration Pressure in Country } i}{\text{Population of Country } i}$

**Definition 3: Immigration Pressure**

Immigration pressure in country $i$ is the demand from residents in other countries for opportunities to enter country $i$ for a prolonged period of time.

Immigration pressure in country $i = \sum_{j=1, j\neq i}^{J} d_j \cdot (\text{Emigration Pressure in Country } j)$

where $d_j$ gives the proportion of the emigrants from country $j, j \neq i$, who wish to immigrate to country $i$.

**Definition 4: Relative Immigration Pressure**

Relative immigration pressure in country $i = \frac{\text{Immigration Pressure in Country } i}{\text{Population of Country } i}$

Note that a high emigration pressure country $j$ does not imply high relative immigration pressure in country $i$ if the latter is large relative to country $j$.

Further refinements of the definitions are possible by observing net migration streams. A country will accept new immigrants more readily if some current residents are leaving, thus “making room” for new arrivals. Thus,

**Definition 5: Net Migration Pressure**

Net Migration Pressure in Country $i = |\text{Emigration Pressure - Immigration Pressure}|$ in Country $i$

**Definition 6: Relative Net Migration Pressure**

Relative Net Migration Pressure in Country $i = \frac{\text{Net Migration Pressure in Country } i}{\text{Population of Country } i}$
**Definition 7: Excess Immigration Pressure**

The term pressure suggests a subjective feeling, not an objective measure. The perception of pressure depends on the demand for immigrants. A growing economy may not only welcome but seek to attract foreign workers.

\[
\text{Excess Immigration Pressure in Country } i = \text{Immigration Pressure in Country } i - \text{Demand for Immigrants in Country } i
\]

Further refinements may still be desirable, depending on the purpose of the analysis. For example, governments react differently to returning citizens than to immigrants from other countries. People with similar cultures are more readily welcomed than people with whom locals have less in common. Similarly, the emigration of citizens has different policy implications than does foreign workers leaving during a recession. For policy purposes we also have to distinguish migrations by intended duration. There are at least three categories: short-term migrants whom Rivera-Batiz (1983) has labeled “to and fro” migrants (e.g. seasonal workers); guest workers who, though intending to return to the country of origin, stay in the host country for a long time (Schaeffer, 1991); and permanent emigrants/immigrants. Finally, attitudes towards migrants, in both countries of origin and destination, differ according to their motivation. Refugees from natural disasters or violence are usually received differently than foreign workers. More elaborate definitions distinguish emigrants and immigrants by country of origin, destination, citizenship, intended duration of stay and motive for migrating.

**ASSESSMENT AND INTERPRETATION OF DEFINITIONS**

In assessing definitions, major requirements are that they be compatible with important empirical phenomena and established theories of international migration. The purpose of this section is to show that the proposed definitions meet these requirements. Because definitions 2-7 are derived from Definition 1, this section is limited to a discussion of emigration pressure.

**Limits to Applicability of Definitions**

The proposed definition of emigration pressure has wide, but not unlimited, applicability. Demand theory is based on the assumption of
voluntary market participation. Forced removal from a country’s territory is not covered by the definition although many refugee movements are, a point that is discussed later in the paper.

**Emigration Pressure as Effective Demand**

The economist’s definition of demand implies willingness *and* ability to buy. Defining migration pressure by the number of those who express a desire to emigrate is no more useful than defining the demand for luxury sports cars by the number of those who declare they would like to own such a car. We wish to exclude those who either cannot afford to migrate to another country or choose to commit their resources to other uses. To be useful for policy purposes, the definition must recognize the effects of budget constraints on the allocation of individual or family resources among competing uses. A definition based on demand theory does that.

**Substitute Emigration Opportunities**

Demand theory is capable of dealing with relationships between markets. There is not one but several markets for emigration opportunities. At the very least, markets can be distinguished by destination, type of visa and the privileges that go with it. This includes the market for illegal migration. Opportunities offered in these different markets are substitutes, albeit imperfect ones, for each other.

In public discussions of immigration policies, it is often overlooked that markets for migration opportunities are interrelated, and that changes in one may affect others. The demand for migration opportunities depends on the cost of migration, the characteristics of the destination country, and the migrants’ expected economic, legal and social status there relative to that at home, as well as other variables. If one country refuses to take immigrants, or changes its rules of admission, other potential destination countries will feel the effect in the form of higher numbers of immigrants or an immigrant cohort with characteristics different from those of earlier cohorts (Borjas, 1990). This explains the relative homogeneity of immigration controls in countries in similar circumstances and with similar goals as well as why changes in immigration controls in one country are usually quickly followed by similar changes in other destination countries (Widgren, 1988).
Regulated Markets and Incompletely Defined Property Rights

Immigration opportunities are traded in highly regulated markets. Rarely are they sold at market clearing prices. For example, many countries provide favourable treatment for wealthy immigrants or immigrants with highly valued skills. The cost of immigration is usually set by the governments of destination countries at below the market clearing price. Because demand exceeds supply, queues of applicants waiting their turn are formed (Figure 1, page 69). The length of the queue relative to admissions ("serving speed") determines expected waiting time and, hence, the magnitude of benefits foregone while waiting. An equilibrium is reached when the cost of migration plus the opportunity cost of waiting equal the market clearing price. Since opportunity costs differ significantly among individuals, and since trading a place in a queue is not permitted, long queues may lead some persons to look to an alternative market for migration opportunities, including illegal migration. If migration permits could be traded like other commodities, illegal migration might actually be lower.

The presence of a large migrant population in the destination country often works to the advantage of prospective immigrants from the origin countries of previous immigrations. Borjas (1990) argues persuasively that the US Government’s priority of offering permits to encourage family reunification segments the market, making permits more readily available to individuals with less human capital (education, skills, professional experience) than comparable permits offered by Canada and Australia.

Hirschman’s work (1970) augments traditional demand theory’s almost exclusive reliance on quantity adjustments (exit) as the consumers’ response to suppliers’ actions, with the concepts of voice, and loyalty. These are useful additional tools for the analysis of regulated markets. In a large, anonymous, and highly competitive market for a homogeneous commodity, a buyer’s most reasonable reaction to unsatisfactory quality relative to price is to switch to another seller. Exit is also an economical strategy if a commodity is not very important to the buyer or if a close substitute is readily available. These are conditions that are not met in international migrations. Not only are opportunities traded in regulated markets, but the "sellers" are a small number of governments. There are only few acceptable substitutes available but many “buyers” (potential migrants). As
individuals they are unable to influence policies that affect the costs and benefits of migration.

Together, however, they can exercise pressure on the government of their native country. If emigrants send remittances, the government of the origin country may also have a fiscal self-interest to intervene on their behalf with the government of the host country. The small number of destination countries that receive most of the migrants from a particular origin country (e.g., most post-WWII Turkish emigration has been to Germany and most Algerian emigration to France), contributes to the feasibility of negotiations. Thus, rather than exiting from the market, migrants and prospective migrants may use voice through agents acting on their behalf. Bilateral agreements between governments of origin and destination countries were common in Europe in the 1960s when labour shortages in Northern Europe provided a relatively strong negotiating position for Mediterranean origin countries. The governments' (agents) interests are in harmony with that of their migrant citizens (principals) in most temporary migrations. The harmony of interests is much less clear, however, in the case of permanent emigration, when migrants are more interested in a set of rights and opportunities in the destination country that enhances their economic, social and legal integration. The government of the origin country is usually not interested in facilitating integration, as this would probably lead to a weakening of ties between migrants and origin country, and to a lesser commitment to remit money or bestow other benefits.

Elasticities of Demand

For empirical and policy analyses, the definition should provide the theoretical foundation for measures or indicators, particularly measures that do not place too great a demand on data. Data are seldom adequate to estimate demand functions for emigration opportunities. For policy purposes it is often sufficient, however, to know what variables most strongly affect migration behaviours. The concept of elasticity of demand is very useful in this regard and provides the theoretical justification to focus on a few variables only.

Economists usually limit their attention to price elasticity of demand, defined by

\[ \varepsilon_p = \frac{\delta m}{\delta p} ; \]
and income elasticity of demand, defined by

\[ v_Y = \frac{\delta m}{\delta Y} m. \]

The symbols \( p \) and \( Y \) stand for price and income, respectively; \( m \) denotes demand for emigration opportunities. The price or, more appropriately, the cost to the migrant of migration, is influenced by destination and origin countries. In particular, in countries where freedom of movement is not the norm, significant penalties, economic and other, are not unusual.

In considering income elasticity, we need to distinguish between elasticities with respect to incomes in origin and destination countries respectively. If income-induced demand for emigration opportunities depends only on the difference between the incomes of the two countries, we could limit our attention to the elasticity of demand with respect to this difference only. In reality, however, the influence of income on demand is more complex.

The demand for emigration opportunities by refugees fearing for their safety is price inelastic, just like, for example, the demand for medical assistance in an accident. It is, however, based on “free choice,” even if the alternative of staying is very unattractive. Thus, the definitions cover most types of international migrations.

**Supply and Demand**

One of the advantages of defining migration pressure in terms of demand is that it draws attention also to the supply (particularly in definition 7). The term migration pressure as commonly used seems to be focused on individuals wishing to move. Judging by newspaper reports of government responses to current immigration pressures in the industrialized nations of North America and Western Europe, there is insufficient realization that policies aimed at controlling entry do more than control the numbers of immigrants. Most policies qualitatively alter the market for migration opportunities, discouraging some from migrating altogether, and driving others into other markets, including illegal migration (Borjas, 1990).

European countries have used foreign workers as buffers against high unemployment of native workers during recessions. It is therefore not surprising that these countries attract mostly workers into comparatively unskilled professions. First, layoffs among unskilled workers
are more common, so the uncertainty imposed by policies towards recent immigrants in destination countries is nothing new to them. It discourages their immigration less than that of skilled workers for whom the opportunity costs of unemployment are higher. A policy that initially grants work permits for one year only (e.g. Switzerland) is also more likely to discourage skilled than unskilled potential immigrants. Such a policy discourages migrants who seek to immigrate permanently and be integrated. It is a rational policy for countries not wishing to receive large numbers of permanent immigrants, but it also severely limits their ability to attract skilled immigrants when they are needed.

**Relationship to Existing Literature**

It is important that the proposed definition not be in conflict with the established literature. Defining migration pressure in terms of demand for opportunities to move to another country is compatible with human capital theory which views migration as an investment. The investment analogy is particularly appealing in, but not limited to, international labour migration. The definition of migration pressure is also compatible with other theoretical approaches, including the view that migration is triggered not by individual choices and decisions, but occurs in response to structural changes.

**Summary**

The proposed definition of migration pressure covers most types of international migrations and is compatible with established theoretical frameworks and empirical observations. It allows for a theory-based definition of a measure of sensitivity to changes in parameters of the ability to contain migration pressure, and it permits the use of the well-tested tools of demand analysis. These are strong arguments in favour of the proposed definition.

**DETERMINANTS OF DEMAND FOR MIGRATION OPPORTUNITIES**

The purpose of this section is to provide general background information for a discussion of empirical determinants of changes in the demand for migration opportunities. For a comprehensive treatment of labour migration see Stark (1991); Schaeffer (1990) provides a
comprehensive list of references to the international migration literature.

Why do people move? It is useful to start with a hypothetical initial equilibrium, when the individual is satisfied with his or her location. Only if conditions change will the individual consider the possibility of moving. In this view, migration is an equilibrating force, a response to changes that upset an existing personal equilibrium. Changes in conditions may be internal to the migrant or external. Internal changes include reaching adulthood, marriage, completion of formal schooling or training and retirement. All of these are important stages in life when aspirations and responsibilities, and society’s expectations of the individual, change significantly. The relative frequency of migration is highest at such important junctures.

External changes are important because they affect the availability and attractiveness of migration opportunities. Such changes can be political, economic, legal, environmental, social and technical in nature. A current example is ongoing political, constitutional/legal and economic changes in eastern Europe which have resulted in dramatically increased emigration from that region.

Economic changes are among the best explored causes of migration. Much has been written about economically motivated contemporary international migrations (see Schaeffer, 1990). Only recently, however, has the quality and safety of the natural environment received attention as another important factor. The potential of environmental degradation and natural or man-made disasters in domestic and international migrations is witnessed by the displacement of hundreds of thousands of people as a result of the nuclear accident in Chernobyl or the continuing expansion of the Sahara desert (Jacobson, 1988; Lazarus, 1990; ILO, 1990; Swiss Federal Government, 1989: 31-32; Walsh, 1991).

Social changes such as the increasing labour market participation of women have also affected the value systems and aspirations of individuals and families. When men were working mainly outside the household, the return to the emigration of the whole family was different than when husband and wife are working for wages (Mincer, 1978).

Technical changes have contributed to migration in direct and indirect ways. Improved transportation technology has reduced the cost and
risks of migration. A disappointing migration experience is more easily reversed today than in the past. Improved communication technologies have resulted in more, and more current, information about other places; they have also lowered the cost of staying in touch with family and friends left behind. Advances in medical technology have reduced infant mortality rates, contributing to a surge in the absolute and relative size of young adult populations in developing countries. Since most important changes internal to the individual occur between adulthood and thirty to thirty-five years of age, this has dramatically increased the pool of those most likely to migrate. In developed countries, altered child-bearing patterns and longer life expectancies have resulted in large cohorts of elderly people, smaller cohorts of labour market entrants, and hence a greater demand for foreign workers to fill entry-level and other relatively unskilled positions.

What is more important in triggering large-scale migrations, changes internal to the individual or external changes? In my opinion, external changes are more important. Individuals have always experienced life-cycle changes. Migration in response to such changes therefore does not imply departure from an existing macroeconomic equilibrium. The effects of movements in different directions could cancel each other out. Changes internal to the individual therefore do not explain the sometimes sudden emergence of large new international migration flows. These are the result of departures from conditions and trends of the past, especially the emergence of favourable demographic conditions. The presence of a pool of potential migrants is, however, only a contributing factor, not a sufficient condition, a view clearly expressed by Manfrass (1974): “The beginning industrialization and rationalization of agriculture, and the destruction of traditional work structures, cause the further increase of unemployment.” (Manfrass, 1974: 32, translation from German by author).

There are factors contributing to migration pressure that can be anticipated relatively easily and those that cannot. Demographic changes cast a long shadow. We can predict increases in the young population when birth rates increase and infant and child mortality rates decrease. Political changes, on the other hand, often surprise us, and long-term economic trends are difficult to predict (Papademetriou, 1991).
ELASTICITIES OF DEMAND FOR MIGRATION OPPORTUNITIES

This section addresses factors that seem to have a significant impact on the magnitude of demand for emigration opportunities and which are therefore of special interest for both further analysis and migration policy. The factors are distinguished into those that affect the price or cost (the two terms will be used interchangeably) of migration opportunities and those that affect the present value of income of potential migrants. The price of migration opportunities includes the monetary, social and psychological costs of obtaining permission to migrate and of moving itself. In the case of illegal migration there is no cost of obtaining permission, but the cost of moving and the psychological cost will generally be higher. Reductions in the legal rights and recourse open to migrants can have the effect of lowering the “quality” of the commodity migration opportunity, which will be interpreted as an increase in the effective price (same cost for a lesser commodity). It is also likely that reductions in migrants’ rights will result in a lower present value of income stream.

In line with the discussion in the previous section of this paper, we focus on external changes and view demographic conditions favourable to migration (e.g., high percentage of young people) as not creating sufficient conditions for migration to occur.

The Effect of Income on Emigration Pressure

One of the most common emigration motivations is economic. Mendonsa provides a case study from a district in Portugal. Focussing on job opportunities for those who choose migration, he claims that “... lack of opportunity at home is forcing them to seek work outside of Nazaré since they actually earn less than the average income of those who do not migrate at all” (Mendonsa, 1982: 640). This sentiment is echoed by Bradshaw and Frisbie who argue that “efforts to anticipate and account for future migration patterns would seem to hinge on an examination of the potential for supply, demand and replacement of labor” (Bradshaw and Frisbie, 1983: 395). “In Mexico, the projected number of entrants to the labor force ages will be about 48% larger in the 1980s than the number that entered in the 1970s, ...” (Bradshaw and Frisbie, 1983: 404). These statements are representative of others (e.g. Arizpe, 1981; Briquets, 1983; Evans and James, 1979; Gillespie and Browning, 1979; Ugalde et al., 1979) who also identify lack of opportunity, defined as underemployment and
unemployment, not income differences, as a major factor in labour migrations. Delia (1982), using data from Malta for the period 1958-67, found that the elasticity of migration with respect to economic activities in Malta, measured by investment in construction, was high (-1.24). More generally, the results indicated that migration was more sensitive to changes in unemployment than income. The study needs to be interpreted with caution, however, because of its small sample size ($n = 43$). The results noted above support the theoretical argument that expected income is a better predictor for migration behaviour than reported wage rates of the income that could be earned if a person experienced full employment.

The Effect of Risk and Uncertainty on Income

Migration is risky and those who move first assume the largest risk. Those who follow benefit from the knowledge that earlier migrants communicate back home and from the assistance that they provide to newcomers. The longer a migration movement has lasted, the more reliable the information will be. Massey and Schnabel observe that "... the geographic distribution of Hispanic immigration corresponds closely to that of the U.S. Hispanic population in general" (Massey and Schnabel, 1983: 236). Richmond and Verma (1978) show that the non random distribution of immigrants in Canada applies not only to their location but also to their occupations. This could indicate the importance of information networks in identifying destinations and opportunities. Further evidence for such a conclusion comes from findings that the origins of immigrants are also not distributed randomly. Dagodag (1975) showed that illegal Mexican immigrants between 1963 and 1973 came mainly from the western edge of the mesa central.

The channelization of labour migration may be explained through recourse to job search theory. A worker will engage in a job search only if the expected return of the search is higher than the expected cost. A prospective migrant will explore the most promising leads first and these are likely to be leads about job openings that have been communicated by earlier emigrants. If the migrant’s expectations are met there, he may not consider other possible destinations, especially since search costs can be fairly high. A different but related idea has been explored by Sassen-Koob (1984) and Sassen (1988). She argued that direct foreign investment may work to encourage emigration, partly by providing opportunities in modern industries similar to those in industrialized countries, and by making available information

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about the country where the headquarters of the branch plant is located.

Because of uncertainty and risk, it is incorrect to compare wages in the home country with wages in the destination country. In two studies of labour mobility in the United States, Fields (1976, 1979) found that “... destinations with higher rates of quits and lower rates of layoffs attract more migrants than do places with less favorable labour market conditions” (Fields, 1979: 29). Schaeffer (1984) used probabilities of employment and expected income in a model of international labour migrations (see also Todaro, 1986). Djajic (1989) showed that the comparison can be even more complex. Under certain conditions, temporary migration from one country to another with lower real, but higher nominal, wages, may yield a positive return.

Of course, large earnings differentials can make migration attractive even for the employed. Stoddard found that “Coupled with a consistently high birth rate and low wage scale for agricultural laborers in Mexico, the IMA (illegal Mexican alien, the author) wages in the U.S. (even though often below minimum wage standards) are three to four times higher than for equivalent work in their own nation” (Stoddard, 1976: 164-165). Cuthbert and Steven (1981) also estimated net earnings of agricultural migrant workers in the US to be about three times what they could have earned in Mexico.

The human capital approach to migration offers an explanation for the relationship between incomes in different regions and the demand for emigration opportunities. Let \( Y_D \) and \( Y_O \) be the prevailing incomes in the destination and origin country, respectively. The parameter \( \rho \) denotes the discount rate with the subscript \( t \) indexing the period. \( U_{OD} \) is the change in utility from moving from \( O \) to \( D \). The locational characteristics of the two countries are represented by a vector of attributes \( L_D \) and \( L_O \), respectively. \( U(Y_D, L_D, \ldots) \) and \( U(Y_O, L_O, \ldots) \) are the utilities of living in country \( D \) or \( O \), respectively. The formulation \( U(Y_i, L_i, \ldots), i = D \ and \ O, \) is chosen to indicate that other variables influencing the utility are assumed to remain constant. Finally, \( C_{OD} \) is the monetary cost of moving, and \( E \) is the expectations operator. Then,

\[
U_{OD} = \sum_{t=1}^{T} \rho_t E \left\{ \left[ U \left( \left[ Y_D - C_{OD} \right], L_D, \ldots \right) \right] - U \left( Y_O, L_O, \ldots \right) \right\}
\]
The effect of "psychic cost" is captured by the vectors of locational attributes $L_D$ and $L_O$, respectively. For a good description and analysis of the non-monetary costs of migration for women in the United States, see McCollum (1990). Many of her insights also apply in international migrations.

The formulation does not imply that migration demand is extremely sensitive to even small changes in relative incomes. To attract a migrant for economic reasons, the expected income in the destination country must be high enough to compensate for the monetary and non-monetary costs of migration. In addition, potential migrants, particularly those from poor households, may shy away even from opportunities offering a high expected income gain, if the risk is also high (Pratt, 1964; Yaari, 1969).

The impact of income on emigration pressure is therefore unlikely to be monotonic. As Chaney notes, modest increases in income in the origin country may encourage emigration "... since more people can afford the journey" (Chaney, 1979: 204). In a study of a rural Mexican town, Dinerman found that the poorest households were not as likely to sponsor an international migrant. This could be a rational response because "... immigration requires a cash investment with no guarantee of return, ..." (Dinerman, 1978: 497). Poor households may be very reluctant to take such risks. This opinion is supported by Dinerman's observation that poor households sponsor migrants to Mexico City, an investment with a lower expected return but also with lower up-front costs and risk (Stark and Taylor, 1989, made the same observation). For a fuller discussion of risk in migration decision making see Clark and Whiteman (1983) and David (1974).

The observations of Dinerman (1978) and the statistical results of Stark and Taylor (1989) point to the importance of the family as a decision unit in migration. The family provides funds, a support and information network, and protection from uncertainty (Caces et al., 1985; Schaeffer, 1987, 1988). The family will select the person or persons to migrate such that the return to the family is optimized. Stark and Taylor (1989) found that the returns to education and Mexican job experience in the United States were low (see also the comments by Borjas, 1990, mentioned above). A relatively less educated Mexican immigrant would not do much worse than one better educated. In the Mexican labour market, however, the difference between two such workers was significant. Clearly, a family aiming at maximizing returns may find it best to sponsor the domestic migration of skilled family members and the international migration of less skilled ones.
To illustrate the potential effect of uncertainty and risk aversion, consider the following example. A household is assumed to have a utility function

\[ U(W_{t+1} + Y_t) = \ln \left( W_{t+1} + Y_t \right) \]

where \( W_{t+1} \) is the household's wealth at the beginning of period \( t \) and \( Y_t \) its income during period \( t \). Suppose that this household has members in a labour market that is characterized by the following outcomes.

\[ Y_t = 3,000 \quad \text{with probability} = 0.7 \]
\[ Y_t = 1,000 \quad \text{with probability} = 0.3 \]

If \( W_{t+1} = 0 \), the expected financial status in period \( t \) is \( E[W_{t+1} + Y_t] = 2,400 \) but the expected utility is \( E[U(W_{t+1} + Y_t)] = \ln 2,158 \). The difference of 242 between expected income and expected utility shows that the individual is willing to sacrifice 10 per cent of expected income in return for certainty of the outcome \( Y = 2,158 \). If \( W_{t+1} = 5,000 \), then the same labour market conditions result in an expected financial status \( E[W_{t+1} + Y_t] = 7,400 \) and an expected utility \( E[U(W_{t+1} + Y_t)] = \ln 7,339 \). Thus, the wealthier household is willing to pay a much smaller absolute and relative risk premium of 61. Using the result of Pratt (1964), we can show that in this example the degree of risk aversion \( r(W_{t+1} + Y_t) = 1/[W_{t+1} + Y_t] \). Thus, the higher the initial wealth \( W_{t+1} \) of a household, the lower the risk aversion.

What qualitative conclusions may be drawn concerning the responsiveness of emigration pressure to changes in income opportunities at home or abroad? Empirical results indicate that small changes in the nominal income difference between countries have little effect. Changes in opportunities and the associated probabilities of employment and layoff, that is, the expected income difference and the risk associated with an investment in migration, are much more significant. This explains the sensitivity of international labour migration to business cycles, already noted and documented by Jerome (1926). If new immigrants are employed in industries that react strongly to downturns in the economy, as is the case in many destination countries, the expected income for potential migrants drops significantly and risk increases, even if the average unemployment rate for the nation changes but a little. Conversely, enhanced employment opportunities in origin countries, even at wage rates below those in destination countries, should lead to a slow-down, if not the disappearance,
of emigration pressure from that country. This is intuitively understood by scholars such as Bradshaw and Frisbie who state “Thus, efforts to anticipate and account for future migration patterns would seem to hinge on an examination of the potential for the supply, demand and replacement of labor.” (Bradshaw, 1983: 395)

Thus, because of the apparent risk averse behaviour of households, especially poor households, the demand for migration opportunities is inelastic with respect to income differentials. That is, changes in income differentials between countries, if they are not corrected for the probability of obtaining and keeping a job, are unlikely to alter economically motivated migration pressure noticeably unless the changes are very large. The government of a destination country wishing to discourage immigration has a better chance at success if it manipulates probabilities of obtaining and keeping a job. Policies limiting the rights of recent immigrants are rational in that they have a significant potential effect. For example, an immigration and work permit that has to be renewed annually and is subject to cancellation if economic conditions in the destination country deteriorate, imposes much greater risk on a migrant than a guaranteed permit of long duration.

If emigration opportunities are priced such that excess demand results in long waiting times, prospective migrants may prefer the greater uncertainty of illegal migration to waiting and suffering significant opportunity cost. If many individuals make this choice, the probability of detection and the risk of illegal migration will decrease. The granting of amnesties in some destination countries in the past (e.g. Italy, United States) may further reduce the perceived risk of such a choice. Illegal immigration will then become a more attractive substitute to legal migration.

**Elasticity of Emigration Pressure With Respect to Price/Cost of Migration**

For the same reasons that relatively small changes in income differences are unlikely to have much impact, economically motivated emigration pressure will not respond strongly to moderate changes in the monetary cost of migration, because the labour migrant looks at net income gains. A significant increase in monetary migration cost should affect short-term migration more than permanent migration, according to the implications of human capital theory.
The cost of migration includes more than out-of-pocket costs, however. These other costs may be more important, particularly for affluent households, for whom the monetary costs represent a modest investment. Thus, a policy that leaves immigrants at a disadvantage socially and economically may be more effective in discouraging immigration than raising its monetary cost. In this light, the long residency required in some recent immigration countries before an immigrant can even apply for citizenship and full participation in the host society (e.g. Kuwait, Switzerland) is rational since those countries do not regard themselves as immigrant societies and encourage the rotation of foreign residents. It should be noted that approaches such as these are more likely to discourage the immigration of wealthy or skilled than of poor or unskilled individuals. The latter do not enjoy a high social status in the country of origin. Thus, their opportunity costs relative to social status are low. Similarly, in countries wishing to control emigration, the fear of reprisals against relatives left behind seems to have been an effective, though unacceptable, way to establish such controls.

Refugees

The primary reason for becoming a refugee is to gain greater safety and security. While economically motivated migration occurs in response to the pull of much better opportunities elsewhere, refugee movements are triggered by the push of conditions in the origin country. In the terminology of demand theory we can say that for refugees the cost of staying has become very high or, equivalently, the opportunity cost of migration has greatly decreased.

Some will argue that refugee movements are not voluntary, and in some sense they are right. Refugees may not feel that they really have a choice. But we should not be misled and exclude them from our discussion simply because the alternative of staying is so clearly undesirable. The fact is, in many critical situations, some people do make the choice to stay even when, to most, this does not appear a wise choice. Only in cases of forced removal or explicit threats to the person’s health and life (e.g., of Asians from Amin’s Uganda in the early 1970s, Ghanaian workers from Nigeria in the 1980s, or Yemenis from Saudi Arabia in the autumn of 1991) are individuals without a choice. In other situations, however, even if they are dangerous, the individual can be said to have a choice.
Flight from violence or disasters is easy to understand and can often be reversed once the war is over or the consequences of disaster addressed. The international community is generally willing to help in these cases. The problem with recent refugee movements stems from the simultaneous presence of political or environmental push factors in the origin countries, and economic pull factors in the destination countries.

There is agreement that people who are in immediate danger deserve help. The acceptance of this principle is strong enough that even deep ideological differences between regimes do not eliminate it, as witnessed by the food aid given by conservative western countries to Marxist Ethiopia. The interesting political question rests, therefore, not with the “classical” refugees but with those where a mix of push and pull factors seems to be at work. The question there goes to the heart of who is a refugee.

Since the temporary acceptance of individuals fleeing from wars, violence and disaster is usually not an insurmountable problem, we will concentrate on the more difficult question of who is a refugee, that is, the motive for migrating. This is a particularly difficult question for an immigration official in a destination country who must make a decision that may, literally, affect a person’s life. For our purposes, which are to provide insights helpful in predicting the emergence of migration pressure, the question concerns not individuals but a group or groups of potential migrants.

Would those who seek refugee status have migrated if the difference in the number and qualities of economic opportunities between their home and destination countries were not so large? This question is very difficult to answer, but we shall try to offer some insight, using the economic approach implied by our definitions.

A person who leaves the home country not because of immediate and explicit threats to his or her life, but in response to despair about oppressive policies, often pays a high price for that decision. In extreme cases, family members and friends left behind may be subject to reprisals, and return may be barred for as long as the current regime stays in power. Thus, if there are other migration opportunities implying no negative political statement, the individual achieves all goals at a much lower personal cost. For example, Widgren (1989) seems to imply that guest worker migration has been used by some as a substitute for seeking refugee status. Alpalhao and Pereira Da Rosa
(1979) argue that under General Franco of Spain and General Salazar of Portugal, some guest workers leaving for Northern Europe were motivated by political considerations. This does not mean that economic factors did not also play a role. Similarly, Kurds from Turkey who leave as guest workers escape a government that is fighting a separatist movement by Kurds, but preserve their option to return for holidays, and protect family and friends from reprisals. Constantinou and Diamantides (1985) found in their empirical study that the 1936-40 Metaxas dictatorship in Greece seems to have contributed to emigration to the United States, but not the 1967-76 military junta. In a study of migration from Jamaica, Cooper (1985) found some evidence that political change associated with the election of a new government may have contributed to the emigration of educated persons, although this effect seems to have been short-lived.

When the host economies no longer accept new immigrants, this substitute to applying for refugee status disappears. The dramatic increase of refugees and asylum seekers in western Europe since the late 1970s coincides with slower economies in the destination countries. The sheer magnitude of the increase (Snowden, 1991) lends support to those who regard the majority of recent asylum seekers as economically motivated. The problem lies in the “copy effect”. If “true” refugees obtain access to destinations no longer available to others, then more individuals will claim to be refugees, even if their interest in migrating is purely economic. An asylum seeker who has nothing to fear from returning to the origin country has no incentive to reveal the truth. A government persecuting members of certain groups also has no interest in telling the truth. It will claim that nobody is being threatened. Thus the government of the destination country cannot easily obtain reliable information to distinguish between the “true” and the “economic” refugee. This causes a serious policy dilemma that so far has escaped a satisfactory solution.

The frustration of this situation has led several destination countries to take drastic measures. Mass repatriations are no longer uncommon (Associated Press, 1991). In many countries, asylum seekers are not permitted to work for months to discourage economically motivated immigration. Generally, there exists a mood to make illegal immigration under the guise of seeking refugee status very difficult (Hug, 1991). Hong Kong’s Refugee Co-ordinator recently stated, “We have adopted a very hard - deliberately hard - policy towards illegal immigration from China, because otherwise we would simply be swamped and the local community accepted this. For the same reason,
we maintain a policy of detaining asylum seekers from Viet Nam” (Imhof and Gaetano, Interview with Clinton Leeks, 1991: 36-38). Increasingly, this is the attitude of developed countries which have found no other way to “stem the tide.”

We should not assume that refugee streams cease to exist when political situations improve. The opposite may happen, depending on expectations. Thus, the liberalization of emigration rules in the Soviet Union seems to have triggered more, not less politically motivated emigration, particularly by Jews (Associated Press, 1990). The fear that liberalization might be short-lived encouraged them to use it to emigrate while the opportunity existed. Thus, expectations play a role in economically and politically motivated migrations. Only lasting structural changes in the political or economic arena will lead to long-term improvements that significantly change expectations.

SUMMARY

Definitions are not unique but reflect a specific need and purpose. Since the term “migration pressure” is used to express a fear relative to the effectiveness of migration policies, the definitions proposed in this paper have been formulated to provide insights and measures useful to policy. In particular, the market approach proposed in this paper attracts attention to the differential effects of migration policies on different prospective migrant groups. A careful immigration policy should not stop at controlling the number of migrants, but also their composition. Although the discussion showed the relationship between migration pressure and economic structures, it points, once again, to the still under explored link between development and migration.

The topic of this paper was suggested to me by W. R. Böhning. Work began in June 1990, when I was a visitor at the ILO in Geneva. I am grateful for the hospitality of, and the discussions with, W. R. Böhning and the comments of Jonas Widgren. An earlier version of this paper was presented at the 1991 Association of American Geographers Annual Meeting. I have benefited from the comments of the participants at my session, especially Erick Howenstine. While the help I received has certainly improved the paper, I am solely responsible for any errors.
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TABLE 1

NUMBER OF FOREIGN WORKERS EMPLOYED IN THE FEDERAL REPUBLIC OF GERMANY, 1968-74

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>%-change</th>
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<tr>
<td>1968</td>
<td>1,089,873</td>
<td></td>
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<tr>
<td>1969</td>
<td>1,501,409</td>
<td>37.8</td>
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<tr>
<td>1970</td>
<td>1,948,951</td>
<td>29.8</td>
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<tr>
<td>1971</td>
<td>2,240,793</td>
<td>15.0</td>
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<td>1972</td>
<td>2,354,200</td>
<td>5.1</td>
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<tr>
<td>1973</td>
<td>2,595,000</td>
<td>10.2</td>
</tr>
<tr>
<td>1974</td>
<td>2,350,000</td>
<td>-9.4</td>
</tr>
</tbody>
</table>

Source: OECD 1973-75

FIGURE 1

COST OF MIGRATION AND MIGRANT QUEUES
UNE DEFINITION DE LA PRESSION MIGRATOIRE
FONDEE SUR LA THEORIE DE LA DEMANDE

On rencontre de plus en plus souvent dans la littérature le terme “pression migratoire”. Bien que peu de définitions en aient été données, ce concept traduit l’inquiétude que suscite le contrôle des flux migratoires. La présente communication a pour but de donner à ce concept une signification précise. En se fondant sur la littérature existante dans ce domaine, l’auteur propose des définitions en signalant leurs avantages et leurs inconvénients respectifs.

Les mots “pression migratoire” comportent un certain degré de subjectivité. La pression qu’un pays donné est en mesure de supporter dépend des conditions régnant à l’intérieur. S’il est un fait que les facteurs objectifs tels que la richesse du pays ou sa situation économique du moment jouent un rôle important, il en va de même pour des facteurs moins tangibles tels que “l’humeur politique”.

On distingue deux types de pression migratoire. L’un est le résultat des obstacles mis aux déplacements des personnes. A leur tour, les candidats à l’émigration exercent une pression en s’efforçant de contourner ces obstacles : c’est ce que l’on appelle la pression à l’émigration. La pression migratoire s’exerce également à l’endroit des pays de destination lorsque les obstacles évoqués plus haut ne remplissent plus leur rôle : c’est ce que l’on appelle la pression à l’immigration. Le mot “pression” sous-entend un processus dynamique. Lorsque la pression est venue à bout des obstacles, elle se dissipe.

La pression à l’émigration dans un pays i se définit comme la demande, de la part des résidents de ce pays, en termes de possibilités de départ pour un autre pays dans le but de s’y installer pour longtemps. La demande est le reflet du nombre de demandeurs et se définit sur une période de temps Δt. La pression à l’immigration dans un pays j se définit comme la demande émanant des résidents d’autres pays désireux d’entrer dans le pays j pour un séjour de longue durée. La pression à l’immigration s’accompagne nécessairement d’une pression à l’émigration.

Le document comporte six chapitres. Après une brève introduction, le chapitre 2 donne des définitions de base de la pression à l’émigration et de la pression à l’immigration, ainsi que de l’émigration relative, de l’immigration relative, de la migration nette et de la pression
excedentaire à l’immigration. Le chapitre 3 présente les forces et les faiblesses respectives des définitions ainsi proposées. Le chapitre 4 consiste en un rappel des facteurs déterminants empiriques des changements qui se produisent sur le plan de la demande en termes de possibilités de migration, ces facteurs étant débattus au chapitre 5. Le chapitre 6 résume brièvement le tout.

DEFINICION DE LA PRESION MIGRATORIA BASADA EN LA TEORIA DE LA DEMANDA

El término “presión migratoria” está siendo utilizado cada vez más en distintos artículos y escritos. Si bien se han ofrecido pocas definiciones a este respecto, el concepto es un término relacionado con el control de las corrientes migratorias. Este artículo tiene por objeto dar un significado preciso de este concepto. Basándose en el material impreso existente, este artículo propone definiciones y debate sus ventajas y limitaciones.

El término “presión migratoria” implica cierto grado de subjetividad. La cantidad de presión que puede soportar un país depende de las circunstancias y, si bien los factores objetivos como la riqueza y el rendimiento económico actual, desempeñan un papel esencial, también son importantes los factores menos tangibles como “el estado de ánimo político”.

Existen dos tipos de presiones migratorias. El primero es consecuencia de las barreras que impiden la circulación de personas. Los posibles emigrantes, a su vez, ejercen una presión al tratar de vencer estas barreras; esto se denomina “presión emigratoria”. También se ejerce presión sobre los países de destino cuando las barreras no son lo suficientemente sólidas; esto se denomina “presión inmigratoria”. El término presión implica un proceso dinámico. Una vez que la presión ha logrado vencer las barreras, se disipa.

La presión emigratoria en un país $i$ se define como la demanda de oportunidades por parte de los residentes para partir hacia otro país durante un periodo de tiempo prolongado. La demanda se expresa por el número de individuos y se define durante un periodo de tiempo $\Delta t$. La presión inmigratoria en un país $j$ se define como la demanda de los residentes en otros países para entrar al país $j$ durante un periodo de
tiempo prolongado. Si no existe presión emigratoria en ningún país, tampoco puede existir una presión inmigratoria.

Este artículo se divide en seis capítulos. Tras una corta introducción, el capítulo 2 trata de las definiciones elementales de la presión emigratoria e inmigratoria, así como de las presiones relativas de emigración, de inmigración, de migración neta, y la excesiva presión de inmigración. El capítulo 3 trata de los puntos a favor y en contra de las definiciones propuestas. El capítulo 4 comprende los antecedentes generales para el debate, el capítulo 5 las determinantes empíricas de los cambios en la demanda de oportunidades de migración y, para concluir, el capítulo 6 ofrece un breve resumen.