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Migration for the benefit of all: Towards a new paradigm for economic immigration

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It is no exaggeration to say that migrant worker programmes (MWPs) have the potential to better the lives of all they touch. Such initiatives can increase productivity, decrease costs to consumers, promote cultural interchange, increase corporate profits (thus keeping employers from relocating to low-wage economies), establish close relationships between rich and poor nations, facilitate foreign direct investment and better the lives of workers from less fortunate economies. While few policy programmes are ever universally popular, many initiatives offering far fewer potential benefits have achieved broad levels of public support.

In view of this background, therefore, it is curious that temporary migrant worker programmes in the world's leading economies have generally been kept small, relative to the levels of interest expressed by both prospective migrants and host country employers. This interest is evident from the long queues of migrants seeking work visas and the employer groups' campaigns for the expansion of visa programmes giving firms the option to search for employees overseas. Given the potential they hold, the continuing small size of MWPs observed in the world's industrialized economies requires some explanation.

Despite their potential, however, it must be admitted that MWPs are often more resented than loved by the nationals of the receiving countries.[1] Ironically, whereas these migrant worker initiatives are often portrayed by their proponents as bettering society as a whole, they can prove difficult to "sell" because of their unpopularity with a majority

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[1] For a discussion of the politics of migration, see Teitelbaum and Winter (1998).

of the host country nationals they are supposed to benefit economically. As most of the world's wealthier nations are governed by some form of representative democracy, voter discomfort with migrant labour initiatives often translates into MWPs of modest or small size, which are highly concentrated in a few, targeted sectors of the host economy.

This purportedly irrational self-defeating obstructionism directed towards MWPs on the part of natives is often explained by the argument that the political polarization surrounding the topic of economic migrants is, at its essence, a non-economic reaction to the migrants themselves. From this perspective, widespread xenophobia is often suspected and viewed as an irrational non-economic force of sufficient strength to cause host country natives to rally against their own self-interest.

In fact, while simple bigotry is common enough throughout the industrialized world, such irrational opposition may have been overemphasized as an explanation by those impatient to reap the benefits that migrant labour offers. A strong hint that xenophobia is unlikely to be at the root of the opposition is that throughout labour history individuals have shown great willingness to put aside their own deep-seated personal prejudices when their self-interest has come into play. One need look no further than the slave trade in which the slavers' indifferent greed brought migrants forcibly across borders to nations as different as Brazil, Saudi Arabia and the United States. In fact, what can be gleaned empirically from the history of migrant labour is that xenophiles and xenophobes may be virtually indistinguishable in their enthusiasm for welcoming migrants, when doing so advances their self-interest.

As tolerance of slave labour continues to shrink in modern labour markets, the role of self-interest can now be seen in a more optimistic and positive light. Most employers view the hiring of migrants as a tool which can be counted upon to improve profit margins. Accordingly, one finds few (if any) employers who object to being given the freedom to recruit workers from abroad. Thus, unless xenophobia selectively afflicts workers and spares employers, such a division is much more likely to be a result of divergent economic interests. Thus, if it can be assumed that native workers are intrinsically no more nor less benighted than native employers, it is probably also safe to assume that the best way of combating resistance to migrants is to ensure that MWPs are in the clear self-interest of all host country nationals.

Though the sheer number of problems associated with MWPs can seem daunting at first, a review of migration programmes in various national contexts indicates that three main features of MWPs may be acting as wellsprings for these difficulties. In the first instance, the

tethering[2] of migrants to employer-sponsors creates a non-market system with a host of inefficiencies, as well as the potential for human rights violations. Second, naively opening markets to migrants from lower-income countries can act as a kind of "tax", redistributing native income away from workers and towards employers. Of course, it can be argued that any proposed redistribution is intrinsically neither good nor bad, yet such transfers can make it nearly impossible to reach broad consensus on many important migration issues within the host country electorate: rationality indicates that proposals which threaten to harm the majority of individuals are unlikely to be approved by a self-interested electorate. Supporting native wages can make inroads with host country workers, but does so by introducing inefficiencies which then threaten to erase the benefits that MWPs bring. Lastly, it must be appreciated that bringing in migrant workers incurs costs which have generally not been accurately incorporated into the fees paid by employers and entrants. Externalities of MWPs may include such factors as administrative costs, security considerations, impact on the environment or use of social services. Unsurprisingly, low fees which fail to accurately incorporate sizeable potential costs do little to encourage public confidence in these already controversial programmes. One manifestation of this concern is that public pressure to limit the impact of migration on the receiving country often results in the imposition of artificial quotas to control migrant impact. The inherent inefficiency of such exogenous bureaucratic limits can be expected to harm employers, limit productivity, and keep migrants from contributing maximally to host country welfare.

Some proponents of MWPs have suggested that current programmes can be adjusted to respond to these difficulties. Unfortunately, there is little in either practice or theory to suggest that small alterations will result in the desired outcomes. Ironically, many of the standard models for MWPs are revealed under scrutiny to be pitted against the very market forces they were expected to embrace. This article argues that what is needed is not another variation on existing themes, but rather a fundamental restructuring of MWPs so that they embrace truly market-based solutions. This new paradigm[3] can provide

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[2] It is rather surprising to the author that migrant labour programmes which explicitly withhold the freedom of employees to change employers are at times portrayed as "pro-market" or even "socially progressive" by some commentators. A little thought is usually sufficient to reveal the intellectual difficulties common to both arguments. Thus, the term "tethering" is used in this article precisely because it evokes both the economic and the social freedoms which are put at risk when a worker in an otherwise progressive market is inappropriately tied to even the most benevolent and well-intentioned of employers.

[3] Though this paper is concerned with temporary MWPs, i.e. economic migration which is both legal and temporary, it is recognized that some of the ideas evoked may have implications for other important migrant sectors (e.g. workers in the grey or black market, overstayers, accompanying families). In the interest of simplicity, such adaptations will not be explored here.

native employers with more migrants, migrants with more freedom, and native workers with a chance to feel secure while sharing in the good fortune that migrants can bring.

If one had the luxury of implementing a market solution of the kind proposed here in a world of pure economic theory, the solution might well have a naturally preferred structure.[4] In the real world of policy, account must be taken of the quality of the host nation's institutions, the distance from "perfect markets" and other details peculiar to local conditions. It is therefore impossible to create a one-size-fits-all guide for operationalizing the basic policy model put forward here. First-, second- and third-best solutions are therefore proposed in an attempt to indicate how implementation might vary in practice.

Problems and challenges facing current temporary MWPs

Given the wide variety of nations hosting temporary migrant workers, it is difficult to generalize about the state of current MWPs. Different national experiences reveal a range of approaches to importing labour, frustrating any simple model of a canonical MWP. However, if the approaches are varied, the problems created by these programmes are somewhat less so, as seemingly different programmes share a number of core problems. In fact, this article will argue that three general features of MWPs give rise to much of the controversy.

To begin with, programmes requiring employers to directly sponsor their foreign employees end up tethering migrants to their employer-sponsors. This creates a first set of problems, as migrant-sponsor tethering creates a significant risk of both market failure and rights abuse. Second, there are the consequences of wage depression. Though it is infrequently trumpeted by the architects of MWPs, salary depression *must* be a goal of generic MWPs if the programmes are to succeed in raising total native income. Nevertheless, depressing native wages creates a number of complications, ranging from alienation of the electorate, to phenomena of ghettoization and unhealthy levels of host-country dependence on external labour.

Lastly, there are the administrative costs and other externalities encountered in absorbing foreign nationals. When revenue collected proves insufficient to administer and supervise the presence of migrants, the quality of the hosting experience can be greatly diminished. Similarly, there are generally externalities, both positive and negative, that are not explicitly accounted for in MWP revenue structures.

[4] Solutions of the type considered here were first proposed in the celebrated work of Ronald Coase. While "perfect" in theory, they can require considerable ingenuity to implement at policy level.

If, for example, a country values the vibrancy of a migrant worker presence which incidentally brings greater cultural diversity, richness, and texture to the host society, then it is perfectly reasonable that fees should be lowered to take account of these positive externalities. However, any direct increase in population also involves negative effects and risks which cannot be completely prevented by improvements in the programmes' administration.

The following section examines the range of consequences that can be traced to these three features.

Consequences of direct sponsorship

In many MWPs, the host country employer sponsors the individual migrant seeking work abroad. This sponsorship generally entails several related responsibilities, such as visa fees, legal arrangements, repatriation guarantees, or employers' legal liability for the actions of the sponsored workers.

Given the costs and risks associated with direct employer sponsorship, it is both inequitable and politically infeasible to ask host country employers to tolerate free job searches by employees who they have brought into the country at considerable expense. As a result, sponsored migrants are often closely tethered to their host country employer-sponsors and are therefore not free to search for alternative employment opportunities in the host country. This has been seen to create a set of challenges for MWPs, the three most important of which are discussed below.

Market inefficiencies

Migrant workers are supposed to increase host country productivity by making the labour market more efficient. According to standard reasoning, when they are permitted to seek their maximum asking price across borders, workers can be expected to be employed where they are most useful. The gains derived from migrants' freedom to respond to wage signals and terms of employment are central to the economic argument in favour of transnational job search; indeed, it is often given as the *raison d'être* for the introduction of MWPs.

If migrants are not given the freedom to change employers within the host country, then this efficiency argument loses much of its appeal. The act of tethering migrants prevents their self-interest from achieving the efficiency that MWPs are created to provide. In short, if one accepts the simple economic argument for lowering international barriers to freedom of movement then, *mutatis mutandis*, one accepts the same argument for intranational job search within the sector to which the migrant worker was admitted.

Rights abuse arising from quasi-ownership

Perhaps the most obvious risk arising from MWPs is that they place migrants in employment situations where they can be vulnerable to exploitation by unscrupulous employers. This risk must be faced up to at some level for, since migrants are cut off from their own country's support structures, it is almost inevitable that they experience losses in voting rights, decreased language facility, and unfamiliarity with host country infrastructure. Thus it is often difficult for them to seek redress for reasonable grievances against their employers, should such problems arise.

When this occurs the most obvious remedy is for the worker to leave the employer, in search of better employment elsewhere. But when migrant workers are tethered to sponsors, they lose the option of "voting with their feet". It has proved quite difficult to construct an adequate regulatory system to substitute for "freedom of movement" within the labour market.

Preference for migrants, undercutting of natives

When migrant and native workers of comparable value to an employer are asked to compete, it is to be expected that the employer will take the applicant who costs him/her less. If, however, the respective terms of employment of the native and the migrant workers differ considerably, the employer may develop a preference between otherwise equal candidates. If migrant workers are not permitted to seek alternative work in the host country, then their "company loyalty" is reduced to a matter of law and regulation. In such circumstances, employers know that they will not have to earn migrant worker loyalty with the expenditure of resources that would be needed in the case of native workers.

Thus it is to be expected that in systems tethering migrant workers to their employer-sponsors, some migrants will out-compete natives of comparable or greater value simply by virtue of the terms of employment set by the MWP. Since this is precipitated by a rational market response on the part of native employers, this consequence must be seen as a natural, if unfortunate, by-product of direct migrant sponsorship.

The immigration surplus and the consequences of wage depression

Perhaps the single most uncomfortable fact about MWPs is that their ability to benefit the host economy hinges on their ability to lower wages in the host economy. The main benefit of MWPs presumed by economic theorists is that they allow employers to increase profits and

decrease prices *specifically* by lowering labour costs in those occupations under recruitment from abroad. As Borjas indicated in a now classic paper:

> Ironically, even though the debate over immigration policy views the possibility that immigrants lower the wage of native workers as a harmful consequence of immigration, the economic benefits from immigration arise only when immigrants *do* lower the wage of native workers[5] (Borjas, 1995, pp. 10-11).

In economic theory, it is nearly always presumed that increases in the supply of a commodity will lead to declines in its price. When that commodity is labour[6] and the price is its wage, it must be assumed that additional workers (whether native or foreign) will decrease the salary of existing workers.[7]

For our purposes, the pivotal points of the naive migration model proposed by Borjas are the principles involved, rather than the specific model parameters, as the theory is highly stylized for didactic purposes. Discussion of the specifics of the Borjas theory in the context of the model advanced by this article is therefore deferred to the appendix ("Immigration surpluses with and without native transfers of wealth"), where the two models are explained graphically and contrasted. The focus here is on the main implications, which include the following:

- In the absence of negative externalities, migration can be expected to provide a net economic benefit to the host country's economy.
- The redistribution of native income which accompanies an unstructured migration programme is likely to dominate a much smaller productivity benefit. Further, if the ownership of capital is concentrated, then the benefits of migration to natives will be correspondingly concentrated.
- Native workers in the sector concerned may experience none of the economic benefits of the migration programme. In fact, in the absence of any compensation measures, they may experience a substantial loss of income, as the benefit to the host society stems

[5] In his most basic model, Borjas' analysis is based on the simplifying assumption that foreign and native labour are nearly interchangeable, and thus ignores the possibility that migrants may sometimes bring rare skills not already present in the host economy. Such exceptional migrants can indeed create increased productivity for their host economy without a negative effect on wages. However, in large industrial economies, such rare skill sets are the exception rather than the rule.

[6] Editor's note: *Pace* the principle that "labour is not a commodity" upheld by the ILO's Declaration of Philadelphia, adopted in 1944.

[7] In the face of a standard downward-sloping demand curve for labour, the implication of an increase in the supply of labour is unambiguously to decrease wages in a theoretical labour model. While some empirical studies have failed to find this expected effect, this is probably explained by factors such as native flight to alternative sectors. In this article it is assumed that the econometrics will eventually be reconciled with standard economic theory and that the "immigration surplus" can be assumed as a real benefit.

from the ability to lower wages while simultaneously increasing the number of workers employed.

This implies that whether or not migration is seen as having a positive or negative effect on the host society hinges on the choice of measure used to indicate host country welfare. In effect, the Borjas model argues that the host nation's welfare will be increased if mean income is used as the gauge of national well-being. However, should a related statistic such as median income be used, the programme could well be expected to decrease national well-being, assuming that workers outnumber capitalists. Given these implications, Borjas' argument lends support to the idea that views on migration programmes divide over the redistribution of native income, rather than over resistance to the migrants themselves.

> The relatively small size of the immigration surplus[8] – particularly when compared to the very large wealth transfers caused by immigration – probably explains why the debate over immigration policy has usually focused on the potentially harmful labor market impacts rather than on the overall increase in native income. In other words, the debate stresses the distributional issues (the transfer of wealth away from workers) rather than the efficiency gains (the positive immigration surplus). If the social welfare function depends on *both* efficiency gains and the distributional impact of immigration, the slight benefits arising from the immigration surplus may well be outweighed by the substantial wealth redistribution that takes place, particularly since the redistribution goes from workers to owners of capital (or other users of immigrant services) (Borjas, 1995, pp. 8-9).

Whether or not a small productivity gain justifies a large transfer of wealth does not come within the purview of this article. However, even if one argues that such a transfer is desirable, one should recognize that the redistribution of income is the cause of several well-known problems.

Ghettoization

It is common for MWPs to be targeted on particular occupations or sub-occupations where employers complain of difficulties in attracting sufficient numbers of natives. When this occurs, the effects of wage depression must be expected to be occupation specific. It is thus a near certainty that if MWPs target occupations already failing to attract native workers, those occupations will become even less attractive to native workers, as wage growth is depressed relative to non-targeted sectors. Since the occupations recruiting migrant workers may provide one of the few portals into the host economy, migrants may conversely be expected to flock to these entry occupations, even if their eventual

[8] The so-called "immigration surplus" referred to by Borjas is the increase in total income experienced by the total host country population, i.e. the increase in total productivity of the host country less the amount earned by migrants.

goal is to move on to non-targeted occupations after spending some time in the host country.

These two effects, when combined, lead to the phenomenon of "native flight" or "ghettoization". This is generally seen as a problem for nations which are striving for a migrant presence to complement, not displace, native workers.

Long-term native shortages

As discussed above, wage depression in targeted occupations can set up a positive feedback loop. As more migrants move in to a particular field which is failing to attract native workers, wages will fall increasingly short of competitive offerings, causing an acceleration of native flight towards non-targeted fields. This curious cycle is sometimes seen as a "native worker shortage," though the term seems particularly ill-suited to describe a problem experienced by employers which is ultimately self-inflicted. In fact, what may start as a simple temporary "spot shortage" of trained native workers can be rendered rather more permanent by attempts at a quick-fix solution through migrant labour.

Any programme which imports migrants into a sector whose employers are complaining of insufficient trained natives can be expected to exacerbate (rather than alleviate) its native "shortage". Rather than increasing incentives to entice new workers to seek training in order to fill the vacancies, visas are likely to be used to avoid the necessary market response. Even if visa fees are put towards training programmes to bring more native workers into the sector, those already there may respond by fleeing the sector even faster, leading to a greater spot shortage.

Administrative and social considerations: Costs and risks

Because the presence of migrant workers entails a range of different impacts, the administration of an MWP creates numerous costs, benefits and risks, and raises related issues which are incidental to the purpose of the programme. Creating a proper welcoming environment for migrant workers means not only ensuring that the net impact created by the migrant programme does not exceed the revenue it generates (i.e. taxes and fees paid by migrant workers and employers), but also that existing social contracts between natives are not reordered without their consent and appropriate compensation.

If the fees paid by employers and migrants are set at an appropriate level, the full expected cost of the migrants' presence will be compensated by payments within the programme. Setting fees too high (or too low) leads to a sub-optimal number of migrants at a level below (or above) the carrying capacity which would most benefit the host society. However, given that employers are particularly keen to keep

fees low during the design of MWPs, the more likely result is that fees are not high enough to meet the full cost of hosting migrant workers. In such a situation, the programme's inability to cover its costs will tend to make it even more vulnerable to criticism.

From time to time, efforts are made to recover the direct cost of processing migrants. This is necessary because the income tax schedule applicable to host country nationals cannot simply be extended to apply to migrants in order to defray expenses, as the costs of running the MWP are truly migrant specific. Moreover, migrants have very varied impacts on important aspects of society in their host countries, e.g. on national security, cultural diversity, local environmental issues, and the use of public services. Unfortunately, because these indirect effects of migration are extremely complex (e.g. non-linear impacts on the environment), few MWPs have tried to set revenue schedules by really attempting to total the full extent of these impacts. Thus, the resources needed to lessen the negative effects of migration on host countries are frequently not provided by the programme itself. This means either that resources are drawn away from other programmes in order to subsidize MWPs, or that there are insufficient resources to make the migrant presence a clear net benefit to the host society.

Even when adequate revenue is generated to offset the impact of the MWP, it must be recognized that natives are involved in pre-existing social contracts which can become inadvertently restructured by the introduction of migrants. In particular, the rights of citizens to preferential access to their own labour market are generally woven into the fabric of a social contract which includes numerous counterbalancing responsibilities. It is thus critical to recognize that native workers are entitled to consultation, consent and compensation, if social contracts are to be rewritten rather than abrogated.

Direct costs of administering an MWP

Like any government programme, an MWP entails a number of direct costs which should be paid for out of revenue generated by the programme (i.e. programme-related fees and migrant income taxes). Many of the resources needed to run such a programme present no particular costing difficulties beyond what is needed by any other government programme incurring expenses while processing applications and issuing documents.

If anything distinguishes MWPs in this regard, it is likely to be the unusual infrastructure costs needed to fund proper monitoring and control of employers, migrants, and workplaces to ensure that the programme is functioning as intended. However, inadequate supervision and administration often result from an initial failure to incorporate adequate funding for programme enforcement into the MWP revenue structure. Two examples illustrate this point.

One well-known problem associated with MWPs is that workers who enter the host country legally can drift into an "irregular" status. When the initial visa fees do not fully cover the monitoring and enforcement costs needed to ensure that migrants do not violate the terms of their admission, MWPs can quickly lose the ability to ensure that they remain "in status". In such cases, migrants drift out of the control of the MWP, exposing the programme to problems less direct and more costly than the original monitoring costs. A second example concerns repatriation, where transportation costs can be particularly important. When migrants come from distant countries, it is important to plan ahead for possible repatriation expenses, as the cost of a migrant worker's return home can fall to the State. If there is a possibility that the cost of return will not be borne by the employer or the migrant worker, it is important to ensure that funds are collected at the time of admission, if the State is not to be placed in a needless bind.

Though it may be objected that such fees can dampen enthusiasm for hiring workers from abroad, they are critical to ensuring that the MWP is administered responsibly, in a self-funding fashion, so that it is respected as a net contributor to the economic engine of the host nation. In short, fair fees may be viewed as less discouraging than the low fixed quotas which may be imposed to limit the consequences of poor administration.

Indirect costs and externalities associated with MWPs

Both critics and proponents of MWPs agree that migrant workers have an impact on various aspects of the host society. If an MWP is to provide an unambiguous benefit, it must do more than simply tally direct costs, in order to anticipate which negative impacts can be reasonably prevented while compensating host country nationals for the unavoidable losses involved. Additionally, if migrants are viewed as making a positive social contribution, that positive externality must be subtracted from fees as a kind of "negative cost" which reflects the migrants' contribution to host society diversity.

When migrants pay income and other taxes to their host countries, many of the indirect costs of hosting are defrayed by simply considering migrants as if they were additional tax-paying nationals. Such costs therefore require no special consideration. In many situations, however, the expansion of an MWP can entail costs which are not properly dealt with by general taxes. A few important examples which serve to illustrate the point are infrastructure, environmental, and security issues.

As regards infrastructure (e.g. hospitals, housing, roads, schools, fire departments, etc.), tax revenue calibrated only for the needs of the host country nationals can prove insufficient to defray the impact of migrants fully. For example, when an MWP expands in a society whose

infrastructure is functioning either at or near capacity, there may be a need for new public expenditure projects to ensure that basic social institutions are not over-burdened.[9] Failure to recover such considerable costs can leave the host society's infrastructure overtaxed if the migrant worker population is not kept small.

If additional individuals present a non-linear impact on the quality of the environment, additional fees may be needed to ensure that natural resources are not unduly strained or that the host society is properly compensated. Viewed on a case-by-case basis, it may seem awkward to ask how many extra gallons of fresh water a single migrant requires or how that migrant changes the population density, since it is impossible to detect the migrant's presence from the resource use of one individual. It is thus tempting to set the cost of such a nebulous impact to zero. When calculated for large numbers of migrants, however, these issues can become more important, and failing to address them with adequate resources can be a source of friction when programmes grow large. Failure to provide adequate revenue in these areas can lead to quite general suspicions that migrants are somehow at fault for host society ills, when the true culprit is actually poor planning.

In the case of security, the risks posed by migrants and natives are usually somewhat dissimilar. To be sure, like most natives, most individual migrants generally have a negligible impact (if any) on the security climate in the host country. Imposing a security surcharge on the admission of such law-abiding individuals can seem quite absurd, when considered on a case-by-case basis. Nevertheless, when even a tiny minority of migrants has posed a genuine threat to the security environment in their host country greater than that presented by natives, the risks have shown themselves to be potentially quite serious. Thus, since the host country has no sure way of initially distinguishing the unwanted minority from the desirable majority of migrants, a diffuse security fee must be incorporated to cover the concentrated costs and risks posed by that minority, until such time as it can be identified, controlled and removed. Curiously, many programmes do not make a real attempt to quantify this impact, when doing so can provide the funds needed to make the migrant presence as safe and beneficial as possible to the host population.[10]

In summary, a programme that makes clear its estimates of these impacts will be well positioned to explain its funding needs. A programme that concentrates only on general migrant benefits and direct

[9] By the same token, if the society is functioning below capacity, tax revenue may well be sufficient to accommodate the migrant cohort.

[10] Of course, failure to incorporate such a fee can be quite rational if the expected security impact of the migrant population is thought to be negligible.

programme costs leaves itself open to potentially serious allegations of negligence in a variety of important spheres.

Visa trading on black markets

MWPs are often set up to help particular employers with respect to specific complaints. However, when the working papers of a migrant are more valuable to a second employer than the employee is to the original sponsor, there is a temptation to sell the migrant's work authorization papers to a higher bidder. Alternatively, the migrant may wish to buy back his/her obligations to the initial employer, in order to seek work elsewhere in the host country's economy. These and other considerations can lead to black market trading in visas.

Such trading in documents is extremely difficult to monitor as it necessarily occurs in an informal, unregulated environment. In addition to circumventing the letter of the initial applications to bring in migrant workers, these markets in paperwork can drift perilously close to markets in the workers themselves. Naturally, such markets must be prevented.

A new paradigm for MWPs

The previous section highlighted some of the problems encountered by MWPs. A major challenge for MWPs is to find solutions to these many problems and thus to foster wider public enthusiasm in the host country population for the presence of contributing foreign workers. All too often, however, this has been approached by policy-makers and analysts working problem by problem in an effort to patch up existing MWPs. As the remedies themselves run the risk of introducing still more unexpected consequences, it is perhaps unsurprising that the success of such efforts has been limited at best.

It is argued here that, rather than addressing each problem individually, what is needed is fundamental structural reform of current MWPs. Though the stated intention of many current MWPs is to provide market solutions to boost productivity, these programmes have proved strikingly ambivalent about the very market forces they set out to embrace (e.g. wage depression, native flight to untargeted occupations, economic freedom of movement for migrants, etc.). As a result of this basic equivocation, current MWPs have adopted a seemingly inconsistent combination of market and non-market objectives, which have thus far proved resistant to reconciliation. The perspective explored in this article is that such failures are the result not of over-marketization, but of inadequate marketization. By proposing a truly market-based model, this article attempts to show that it should be possible to create an efficiently functioning MWP while directly addressing the causes of the three sets of problems described.

The paradigm described here may have several possible implementations. The basic idea, however, is to move away from a system of sponsored work visas to one which openly embraces the "immigration surplus" identified by Borjas. This section shows that market considerations naturally lead to a search for a new kind of MWP, based on a *self-funding market system for the licensing of tradeable work permits* (to be described in the subsequent subsections). Such systems of licensed-tradeable-work-permits will be referred to as LTWPs.

Before putting forward the mechanisms constituting an LTWP, some of the major differences in orientation between LTWPs and the (ordinary) MWPs under discussion are examined. Adopting an LTWP means that arbitrary employer quotas for hiring migrants are abolished, and that the total number of migrants set by the market does not exceed the hosting capacity of the country concerned. In such a self-funding system, employers are free to follow market signals in their quest to boost productivity and control wage pressures. For the first time, the interests of workers and citizens are aligned with those of employers, since total programme revenue, in the form of permit fees and migrant income taxes, is more than sufficient to defray both the concentrated costs of wage loss to workers, and the costs of diffuse societal impact to the host country nationals. Moreover, migrants benefit substantially, as the tradeability of permits guarantees their right to flee abusive or unsatisfactory employment, and they receive equal wages for equal work.[11]

It should be noted that though shifting the goal of an MWP to an LTWP system represents a critical change in orientation, it is really the first of two major challenges which must be met for a well-functioning migrant labour force to emerge. Once the necessity of structural reform is accepted, the remaining difficulty is to find a workable way of implementing the LTWP concept. Though the principal purpose of this article is to explain the need for a new theory of MWPs, one strategy for finding an optimal practical implementation will be discussed. As is common when a preferred "benchmark" model exists, a standard approach is to start with the benchmark case and to attenuate it in stages until it reaches a form that can be practically implemented in the context of established national institutions. For the purpose of illustration, one such series will be discussed, though presumably there are others.

[11] This refers to migrant gross income. To be precise, for the programme to be naturally self-financing, migrant net income may need to be adjusted by the amount needed to cover additional external costs incurred above those needed to pay for native labour (e.g. transportation or administrative costs). Thus, as will be seen in the model under discussion, there is always equal gross pay for equal work. In the zero-externality limit, there is equal net pay for equal work as well.

Restructuring MWPs: Core reforms

Though there are many ways of implementing reforms, we will argue here that current MWPs must be structurally altered in three critical areas in order to achieve an unequivocal benefit for both natives and migrant workers. All the means of implementation considered in the section on implementing the essential reforms are effectively different schemes for accomplishing the same structural reforms discussed below.

Untethering

Reform 1. **Migrant workers must be permitted freedom of movement within the admitting sector of the host labour market, by shifting employer outlays away from direct visa sponsorship towards a system of tradeable work permits.**

As noted, direct migrant sponsorship is intrinsically problematic for three main reasons:

- Migrants who are not free to respond to wage signals inevitably create inefficiencies, lowering productivity growth.
- Tethering migrants directly to a sponsoring employer creates a kind of "ownership" which invites serious abuse. In addition to being an obvious danger to migrants, the practice gives an unwarranted competitive advantage to unscrupulous employers over those ethical employers who are forced to compete with them.
- If migrants lack the freedom to change employers, they can be expected to out-compete native workers of equal ability, whose company loyalty must be earned rather than mandated, thus giving the tethered employees a perverse advantage over their free counterparts.

Thus, from a pro-market perspective, it is essential to end the practice of preventing migrants from changing employers. However, effecting such a basic change in orientation requires a considerable shift in policy structures if the change is to be equitable for employers.

When a migrant is permitted to move from one employer to another within the host economy, it then becomes unfair to ask an initial sponsor to assume the costs of transport, processing, and repatriation associated with the migrant's total stay. An equitable solution would mandate each employer to assume a portion of the cost to the host country of the migrant's stay, in proportion to the length of time the migrant was in his/her employ. Perhaps the most natural and effective way of implementing such a time-sharing arrangement is to create a system of tradeable work permits and require employers to purchase the necessary amount of permits in proportion to their level of intended

migrant labour usage. When an employer needs to hire an additional migrant worker, he/she would be required to purchase an additional work permit. Should the migrant or the employer later terminate the relationship, the remaining time left on the work permit would be resold into a pool from which other employers wishing to hire migrants would purchase the necessary documents. This is what is defined here as a system of tradeable work permits.

Free market licensing

Reform 2. **MWPs must be allowed to lower wage costs if productivity gains are to be achieved; in turn, such programmes must honour pre-existing social contracts and recognize native workers as the natural licensors of the above-mentioned work permits.**

The phenomenon of wage depression has brought about an unfortunate situation in which proponents of MWPs are forced to argue to sceptical native workers that the programmes they favour increase productivity without placing downward pressure on native salaries. Though politically expedient, this line of reasoning gives the impression that an honest case for migrant labour cannot be made. Happily, this is not the case.

While it is true that wage depression is the principal source of increased productivity for the host economy, native worker support presumably pivots not on wage income, but on total income. That is, native workers should be expected to accept lower wages if, and only if, their *total* compensation increases. When wages are native workers' only income source, total income and wage income become conflated. If, however, these workers begin to receive income from additional revenue streams, their attitude to wage-depressing programmes can change abruptly. Thus it is critical that the MWP generate concrete payouts to native workers which more than compensate for their loss of wage income.

Since the main source of disparity between native workers' salaries and the home-country salaries of prospective migrants is likely to be a right of preferential labour market access held by native workers within the structure of a sovereign nation's social contracts, it must be recognized that this is precisely the valuable right that is transferred when an MWP is started or expanded. If this transfer is to take place within a market context, such a valuable right must be licensed for a fair price. Thus, a true market for tradeable work permits must be a licensed one, with the employers the canonical licensees and the native workers the canonical licensors.

The only natural pool of money available for the purpose of licence payments is the income drawn from the initial sale of work permits to employers. As long as money spent on the purchase of work permits can

be distributed to native workers in a way that outweighs wage depression effects, the presence of migrant workers, together with their effects on wages and productivity, will provide a benefit to the native workers affected. The main question is therefore how to ensure that the price of the work permits and the licence payments are sufficiently high to avoid workers being harmed by the expected redistribution of wage income.

Determining the number of migrants through total cost recovery

Reform 3. **The total number of migrants should be set by the ability of the MWP to recover the expected total impact according to the detailed requirements and preferences publicly presented by the host government.**

In the debate over migration, it is sometimes claimed that economic analysis conclusively shows that host countries benefit from immigration. Sadly, nothing so sweeping is true in either theory or practice. Whether migrants help or hurt a country remains as much an issue of national particularity as it is an issue of general effects.

Even though migrants (in manageable numbers) can generally be expected to produce a net economic benefit, their presence entails a variety of costs to the host economy. The most obvious are the direct and indirect costs of hosting migrants such as those discussed earlier. Critically, these involve important non-financial effects for which a financial equivalent must be estimated on the basis of societal preferences. As stated above, this last category of costs and benefits may include, for example, the adverse impact of additional individuals on the natural environment, greater risks to national or domestic security, and both positive and negative effects of a migrant presence on national culture and identity.

Within this last category, it is important to realize the influence of the character of the receiving country on its assessment of these costs and benefits. For example, a nation which tends to view migrants as diluting its national identity may attach high costs to importing even small numbers of migrants because of their cultural impact. Another, more assimilative nation may consider that the presence of moderate numbers of migrants brings great cultural benefit and may initially assign negative costs (i.e. benefits), to indicate the benefit of hosting migrants from different cultures. In either event, such assignments are matters of national sovereignty and must be handled internally within each country.

Once the government has calculated the financial cost of hosting an immigrant worker as a function of the total number of migrants accepted, the curve described by this function is expected to be ultimately upward sloping, if the sovereign nation attaches a high cost to the

influx of massive numbers of migrant workers.[12] By incorporating the necessity of recovering such escalating costs, the MWP will naturally be limited in size by market forces without the need for artificial quotas, which tend to produce sub-optimal and arbitrary results for employers and native workers alike.

It should be noted that in a true market model, the government should be strongly insulated from pressure by groups objecting that fees must be kept low in order not to interfere with the free market's ability to host migrant workers. This is simply a misunderstanding of the function of a well-structured market; such fees are *supposed* to limit the importation of migrants by agents who reap benefits out of proportion to the full costs of migrant hosting. The whole point of the fees is indeed to ensure that the price of the work permits (together with migrant income taxes) fully compensates for the total expected impact of the migrants. While it is true that market solutions require fees to be set no higher than the true cost of defraying impacts, the failure to incorporate external costs fully is generally regarded by analysts as a principal source of "market failure" in the administration of such programmes.

Implementing the essential reforms

Even once the importance of these goals has been accepted, there remains the task of finding a means of implementing them.

In effect there is, at least within economic theory, a class of preferred natural models for handling the allocation of migrant labour. This collection of possible solutions to the MWP question may be described as belonging to the class of "Coasian models" – a concept familiar to economists, though simple to understand as a two-stage idea in the context of this article (see Coase, 1960).

In the first stage, an attempt is made to locate inefficiencies stemming from "intrinsic rights" within the social contract and, where possible, to convert those entitlements into tradeable "property rights". A key idea is that most rights can be counted upon to become more valuable when they are rendered tradeable. This is because the owner of the right retains the option to refuse any and all offers (which is equivalent to the earlier situation). In the second stage, a market is created which allows those who hold the rights to trade with those whose fortunes have been unnecessarily limited by the original and inefficient arrangement.

A famous example is the right of a citizenry to forbid the pollution of its air, lakes and streams. If the society's right not to have the local environment polluted is converted into a property right entitling the

[12] Though it is indeed quite possible to imagine a country that wishes to relinquish control of its sovereign borders over to unchecked market forces, we will assume that this is as yet a largely theoretical scenario which should not concern us unduly in the remainder of this article.

citizenry to license a tolerably low level of pollution in exchange for compensating fees, the citizens and the polluting industries will negotiate terms which should be better than the zero-pollution solution for both parties. Solutions of this general type will be called "Coasian".

Since a tradeable right is intrinsically more valuable than one which is not tradeable, those initially holding the rights are made better off. Conversely, since those whose fortunes and aspirations were frustrated by the (previously) inalienable "social contract" rights now have the opportunity to purchase those rights fairly, they too are made better off. In short, equity is preserved and welfare is maximally improved for the total group. It is easy to see why these solutions are generally thought to be the "best possible".

In practice, however, implementing Coasian solutions can be quite exigent in a variety of situations. When such exact solutions prove to be prohibitively challenging, it may be necessary to settle for the spirit, if not the letter, of the Coasian solution. It is therefore important to consider second-best, third-best, or lesser solutions. While failing to maximize social welfare, these may nevertheless manage to make all parties somewhat better off than they were before. Thus the discussion begins by identifying an implementation of the best-case Coasian solution, and considers a few of the modifications of this natural model which may more realistically suit the capacity of the institutions implementing the programme.

Natural market solution: Fully endogenous Coasian MWPs

Natural Coasian solutions are distinguished by their attempt to entrust as many policy parameters as possible to market forces. Thus, a true Coasian solution would seek to determine the size of the programme endogenously from supply and demand profiles of the three pivotal groups in the host population: workers, employers, and government.

In effect, the government would assume all the administrative and transport costs for a group of migrants, as well as calculating the additional external impacts of hosting them. To indicate these costs, the government would calculate the expected migrant impact cost as a function of the number of migrants. Such a function would be expected not only to grow as the number of migrants increased, but also to do so in accelerating fashion, because of concern for the environment, monitoring costs, societal stress, and security risks.

The active native workers in a particular sector would then establish their licensing schedule for migrant work permits as a function of the number sought by employers. As long as the government's cost curve is upward sloping with respect to the number of migrants, the exact shape of this curve will not matter over much for the purposes of the model proposed here.

Lastly, the employers in the sector under consideration would indicate the maximum price they would individually be willing to pay for any number of permits. Naturally, the curve describing this function would be expected to be downward sloping.

At this point the curves for the government and workers are combined to see how much revenue would need to be generated from the sale of permits to employers, so that both native workers and government receive acceptable compensation according to their supply schedules. This should result in an upward-sloping aggregate supply curve.

After this has been accomplished, the aggregate supply curve is intersected with the employers' demand schedule to identify all the values where the number of permits requested equals the number that can be supplied.[13] When this value is selected, the group representing the employers of a given sector pays the government for the permits. The government deducts its costs and pays the native workers the remainder as their licensing fees. The groups representing the workers distribute the payments and provide the permits to the government, which issues them to the employers in an initial distribution. The government then aids the employers by transporting and processing the migrant workers concerned. The migrants enter an initial work agreement as free agents, with the right to shift to working for any employer with a valid migrant work permit. The total wages of both native and migrant workers come to equilibrium, with the proviso that the extra migrant impact cost represented in the cost of the work permit must then be deducted from the pay of the migrant, because of the asymmetric expense presented by the MWP.

A central exchange is then set up to accommodate a secondary market in migrant work permits. The permits are traded on this central exchange at a price that fluctuates according to shifting supply and demand. By this procedure all our main goals have accomplished:

- Native flight is reversed, as enterprising native workers are attracted to fields in which migrant workers predominate (since those fields will have the least diluted licensing fees). Native workers are also likely to leave fields with few migrant workers as this means relinquishing licensing income. Both phenomena work together to prevent ghettoization.
- Migrant labour is no longer allocated inefficiently, as migrant workers can change jobs within their host sector in response to wage signals.

[13] One should expect the number of such equilibrium points to be small and to depend on the shape of the curve representing the cost of the migrant impact. If there are multiple equilibrium points, one of them should be selected by the government agency overseeing the programme.

- Migrants are in no way beholden to their initial employers, and have the right to leave abusive workplaces without having to cut short their stay in the host country.
- Unethical, illegal markets in working permits (and/or the migrants to whom they belong) have been replaced by an ethical secondary market for used work permits.
- Workers see from licensing checks that a migrant presence is benefiting all the host population, leading to a more positive view of migrants.
- Employers are no longer blocked by native workers from hiring needed migrant workers, as a market mechanism ensures adequate access based on demonstrated need.
- Quotas are abolished, while the number of migrants is set by the extent of migrant impact and the interests of both employers and workers.
- Wage depression can be freely admitted and the immigration surplus embraced, without divisive effects on the host society owing to the presence of compensating licensing fees.
- Migrants receive equal pay for equal work, with a fair deduction needed to cover the cost of the programme which hosts them.
- If the government can anticipate migrant impact, the programme is automatically self-supporting, with adequate funding to ensure that the temporary stays of migrants are safe, legal, and enriching to the host nation.
- Citizens become involved in ensuring that an illegal migrant presence does not spring up alongside the legal programme, as illegal migrants detract from wage income without making a contribution to licensing income. This decreases the likelihood of migrants falling out of status.

In short, the model offers what is likely to be one of the best possible options for a truly efficient and ethical market solution.

Second-best solutions: Command and control

One of the greatest difficulties in implementing a Coasian solution is likely to be the problem of representing diverse groups of individuals equitably. First, the native workers in a given sector do not all earn the same wage or work the same number of hours. And second, it may not prove readily feasible to represent workers' groups with one voice[14] if

[14] Of course, the institutions responsible for representing the interests of each of the three groups may fall short of what can be reasonably expected of them given their respective charters. In such situations, one should think seriously about whether it would be best to defer *any* contemplated MWP until after the quality of the institutions in question has first been strengthened and satisfactorily addressed. In short, the necessity of achieving high institutional quality of domestic institutions should generally be a higher priority than the privilege of migrant hosting.

the members of those groups enter the process with widely differing beliefs and preferences about the expected extent of wage depression.

In such situations, it may be necessary to estimate the wage impact of any given MWP on native workers in the sector affected. The government would then attempt to simulate what would happen in the tripartite regime of employers, workers and government *as if* it were feasible to hold a Coasian negotiation between rational, self-interested actors. Here the government agency would estimate the benefit to employers and the damage to workers in addition to the external migrant impact cost. The government would put forward imputed aggregate supply and demand schedules, and publish the methodology used.

A period of public commentary would follow. After receiving comments and input from workers and employers, and relevant government agencies, the government agency in charge of running the MWP would modify the schedules to reflect the concerns of all stakeholders.

If workers or employers or other government agencies saw that their concerns were largely being ignored, the requirement that the comment period and methodology be open would presumably put the necessary pressure on the migrant agency to explain its actions as being within reason. The rest of the system could then proceed as before, the difference being that the number and price of the permits had been imputed from analysis tutored by feedback, rather than directly from workers' and employers' preferences and beliefs.

Third-best solutions

Implementing either of these natural solutions can be expected to challenge the ingenuity of host country planners. For nations whose institutions lack the ability to implement the core reforms fairly, it may be worthwhile opting for yet weaker solutions which may be honestly implemented without harming native workers through redistribution.

One possibility is to extract the *de facto* low-wage ghettoized model implicit within current MWPs, and to upgrade it to an equitable model which still leaves employers, migrant workers and native workers better off. If a country is willing to turn over entire sectors of low-skill work to migrant labour (e.g. domestic work, agricultural labour, sanitation work, taxi driving, etc.), it is possible to offer existing native workers employed in those sectors one-time retraining and placement opportunities, in order to encourage them towards employment in specific, non-targeted occupations with better wages and working conditions. Native workers who accept would be no worse off, while those who stay would do so of their own free will. Since low-skilled workers do not generally need careful screening by employers, fees paid by employers for permits can be used to bring in groups of migrants, thereby eliminating individual sponsorship. With no need for

tethering, migrants who enter can be given the freedom to move between employers within the wholly migrant sector, without tethering them to employers. Since, by assumption, all native workers have previously been given the opportunity to leave the targeted sector for improved opportunities elsewhere, the number of migrants can be set between employers and the government without needing to structure a strong role for native workers.

It should be noted that the twin keys to such a model are the willingness of the host country to become almost wholly dependent on migrant labour in sectors without any native workers, together with the will to impose significant fees on employers to fund the one-time cost of improving the lot of resettled native workers. Both of these issues involve taking some uncomfortable decisions, which may explain why this modification of current MWPs has yet to be widely pursued. Nevertheless, it is important to note that simply making explicit and equitable what has long been implicit and redistributive within MWPs can result in an equitable market.

Conclusion

Migrant workers are currently making a considerable contribution to world productivity; but this is probably a fraction of what could be achieved if resistance to migrant labour could be decreased at a systemic level. While there are many legitimate reasons to be concerned about unexpected effects, chief among these are likely to be concerns over native wage depression, security and sovereignty. Unfortunately, without a fundamental shift in policies concerning migrant labour, the potential benefit of MWPs will probably be held hostage to continuing concerns over their unadvertised consequences for the citizens of host countries.

This article proposes a positive vision for creating a healthy market for migrant labour. In this model, markets do what they are supposed to do by making migrant workers, employers and native workers better off than they were before. Programmes of the type described can afford to be more honest about the expected effects of migrants on the host economy and society. In short, the paradigm shift appears beneficial on almost every important level. Though it may take some time to find the best practical means of implementation, there are many reasons to think that the investment will reward countries with a deep interest in markets and migrants.

As discussed in this article, MWPs in their current form bring both riches and trouble to the host societies involved. If we are honest, the pattern of support and resistance to these programmes among natives closely mirrors the native sectors most likely to “win” and “lose” from the MWPs respectively. Currently, many of the world’s more advanced

host economies are run by democratically elected governments, leaving little question that productivity increases achieved through migrant labour will not be welcomed by electorates, unless they are achieved without regressive redistributive effects. Furthermore, eliminating poor, under-funded administration, along with a climate propitious to rights abuse, can only enhance the standing of these programmes and their potential for an expanded contribution.

Most important is the recognition that in this age of nation states, markets are the tools of nations, rather than the reverse. When legitimate questions of sovereignty raised by MWPs are dismissed by analysts as market inefficiencies to be excised, there is generally cause for concern about the quality of the analysis. Analysts who truly favour an expanded role for MWPs could likely make a greater contribution to public acceptance of migrants by putting forward new initiatives, rather than defending what are ultimately the rather dubious merits of current programmes. In the end, when migration programmes are made safe, beneficial and enriching to all the actors involved, there is every reason to believe that these valuable tools will not need to be sold, since they will finally be able to sell themselves.

Appendix: Immigration surpluses with and without native transfers of wealth

At the time of writing, the modelling of migration appears to be under active development, with no completely standard mathematical model yet dominating the field. Migration in the real world of today's decision-makers almost always involves numerous complications, including:

- Multiple sectors
- Combinations of temporary and permanent migration/change of status issues
- Remittances
- Enforcement difficulties
- The political economy of migration legislation/trade unions/employers'organizations
- Heterogeneous skill-sets
- Numerous sending and receiving countries
- Migrant networks/information issues/search costs
- Use of social services/dependants

In practice, however, migration models have only recently begun to explore these issues in interaction and few, if any, take on most of the major issues at one time. Thus, part of the challenge in proposing a robust general policy model such as the one set out here is that it must be restricted to the most robust features of international migration and not become dependent on any particular model.

Happily, some of the most important effects of migration are already in evidence in simple economic models of the demand and supply for labour. Perhaps the simplest

economic model exhibiting several of the more robust economic features of employment-based migration central to the approach taken in this article, is the first of several examples given in Borjas (1995). The model in question is a two-country, single-sector model without transaction costs or other complications.[15] Within these simple assumptions, this model exhibits a dependable net benefit to natives from the presence of migrants, that is marked by a small increase in productivity relative to a much larger redistribution of native income. This model will be referred to as the "immigration surplus" model or the "Borjas model" for short.

Borjas begins with a set of extreme simplifying assumptions. The host economy is assumed to produce one good through a single production process F(K,L) exhibiting constant returns to scale relative to the two inputs capital K and labour L (which are assumed uniform). Labour is partitioned into M units of labour supplied by migrants and N units of labour supplied by natives, while all capital K is provided by natives.

Consider the picture in figure 1 provided (essentially) by Borjas (1995) and echoing earlier work by Berry and Soligo (1969).

Given any particular number M=M*, we can consider the two supply curves S_0 and S_{M^*} that would exist for labour in the host economy in the absence and presence of M* migrants. We would of course expect that, barring exotic effects, S_{M^*} would represent an outward shift of the curve S_0. If we let W_M (respectively $\hat{W}_M$) be the wage that accrues to labour in the host (respectively sending) country when there is an inflow of M migrants, we see that in the absence of forced migration, W_{M^*} should be expected to lie below the level of W_0 and above the level of $\hat{W}_0$.

Should a country in such a paradigm with N native workers and no significant migrant worker presence suddenly embark upon a programme to host M* migrant workers, we see that there would be three basic effects: gains to migrating workers, net changes in native income, transfers between natives.

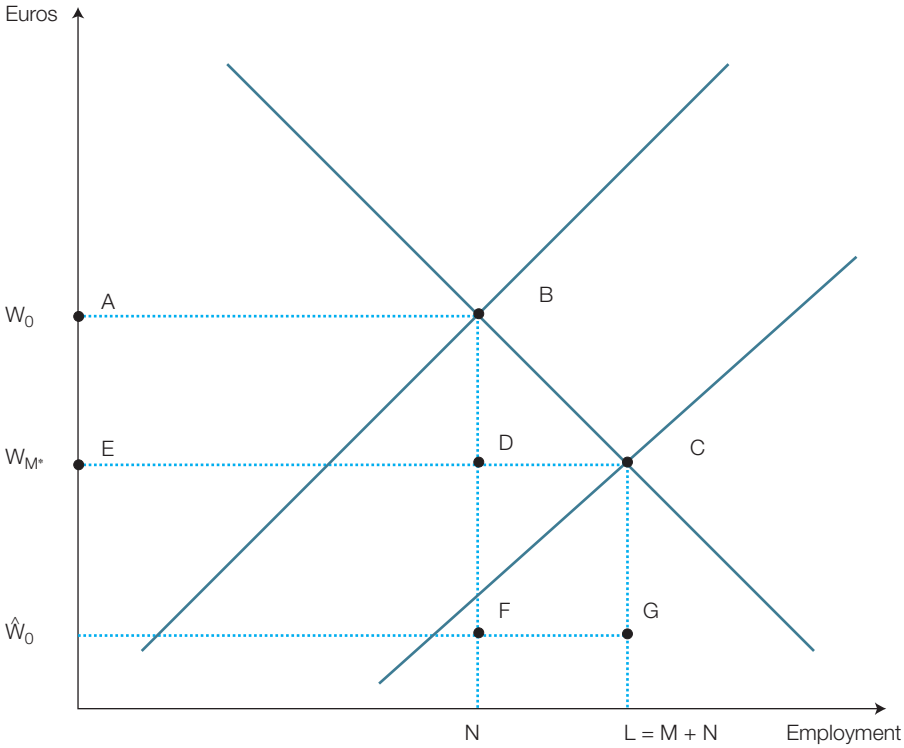
According to Borjas' "immigration surplus" analysis, the effect of adding an additional M migrants and shifting the supply curve for labour outwards transfers the income represented by rectangle ABDE from native workers to the native providers of capital. There are also two productivity effects. The increased productivity of the native economy is represented by the trapezoid under the line BC. The migrant workers pick up the income represented by the rectangle DCGF, while the only productivity effect that benefits natives is the triangle BCD. This income goes to the native providers of capital over and above the redistribution already mentioned. These effects are summarized in table 1.

Table 1. Migration for the benefit of some: Borjas' non-Coasian model of migration

Economic effect present in model	Geometric representation
Net gain to native economy	Triangle BCD
Loss experienced by native workers	Rectangle ABDE
Gain experienced by native capitalists	Rectangle ABDE + triangle BCD
Gain experienced by migrant workers	Rectangle DCGF

[15] This simple model has the virtue of having been expanded in several predictable directions. Borjas' paper in fact incorporates variations that deal with issues such as the existence of externalities, and heterogeneous skill sets. For example, additional sectors, and considerations of trade and long-run behaviour have been incorporated in work by Trefler (1997) in several models that attempt to test the robustness of the immigration surplus in trade theory.

Figure 1. Migration for the benefit of *some*: Gains and transfers in the presence of migration

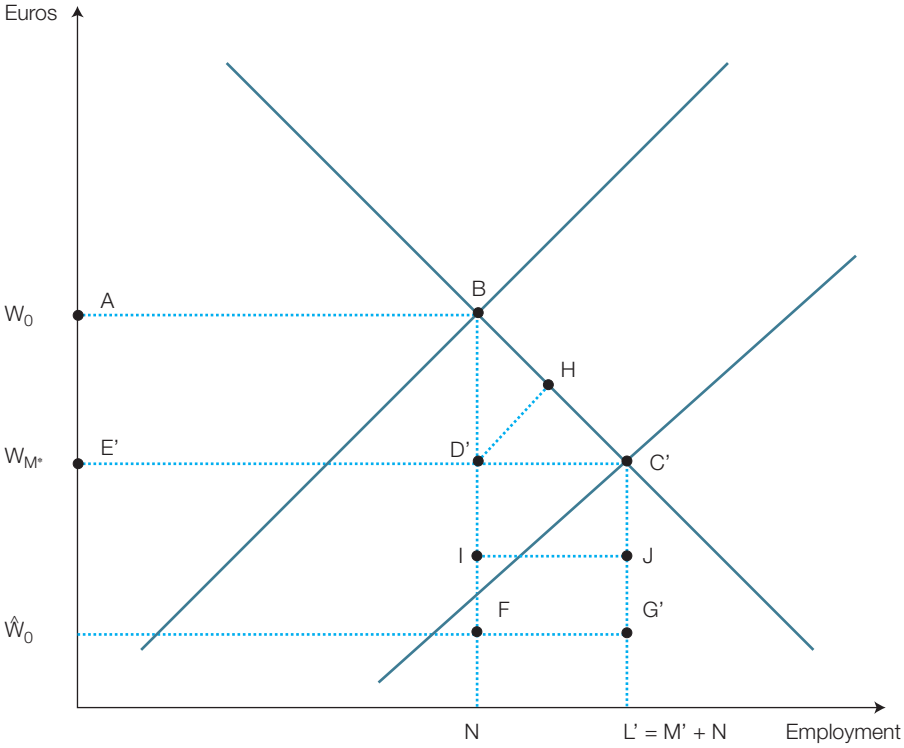


Note: The "immigration surplus" of Borjas (triangle BCD) is gained by the host economy as a result of the admission of M migrants, while the rectangle ABDE is transferred among natives.

Were we to implement the model of this paper as a Coasian modification of the Borjas model, it is reasonable to ask what its geometric interpretation might be. To this end, consider the picture in figure 2 based on the model proposed in this article.

Some of the features of the model can now be seen more concretely. All four stakeholder groups (native capitalists, native workers, migrant workers, the government) start off with some benefits. The native capitalists start with a boost in productivity and a decrease in labour costs. The native workers start with a new licensing fee. The migrant workers start with a large nominal wage gain, while the government begins with a new revenue stream from the sale of migrant permits. With this stated, all four groups incur costs which temper their benefits. The native workers have their wages reduced. The native capitalists must pay the licensing fees. The migrant workers must accept true wages that have been garnished (either directly or indirectly) to pay for the purchase of permits intended to reimburse the costs of the labour programme, while the government must pay the various external costs. Happily, however, these losses are still small enough, relative to the gains of each group, to leave all stakeholders with a net benefit. The effects are sketched in table 2.

Figure 2. Migration for the benefit of *all*: Economic gains under the new market model of licensed tradeable work permits



Note: An enlarged immigration surplus (triangle BC'D') is now shared by natives as the result of the admission of M' migrants. The immigration transfer is now neutralized by market mechanisms through permit purchases and licensing fees.

Two final points bear mentioning here.It should be noted that the total number of immigrants determining the point C' in this model can generically be expected to be larger than in the previous Borjas model, as here the number is set endogenously. The reason is that when workers are more numerous than capitalists, it is difficult to push forward the maximum feasible migrant population, as the median individual is expected to suffer economically. Since in this model the numerous workers have an incentive to import the maximally beneficial number of migrant workers, the number C' will tend to be larger than the number C which would have had to have been imposed upon them against their economic self-interest.

Another aspect that can be seen diagrammatically is that any point between B and C' could be chosen to be H and would result in benefits for all parties. In short, the point H is determined by the characteristics of the institutions respectively representing workers, capitalists and citizens. As such institutions differ markedly in different countries and circumstances, they have been treated within the theoretical model as unspecified agents representing their constituencies to be plugged into the general framework. So long as such agents are capable of fairly producing the necessary data needed to

Table 2. Migration for the benefit of all: Coasian migration model

Economic effect present in model	Geometric representation
Net gain to native economy	Triangle BD'C'
Wage loss experienced by native workers	Rectangle ABD'E'
Market gain experienced by native capitalists	Trapezoid E'ABC'
Licensing fees paid to native workers by native capitalists	Obelisk ABHD'E'
Net gain to native capitalists	Triangle D'HC'
Net gain to native workers	Triangle BHD'
Programme revenue	Rectangle JID'C'
Nominal wage gain of migrants	Rectangle G'FD'C'
External programme costs	Rectangle JID'C'
Net gain experienced by migrant workers after programme fees	Rectangle IJG'F

operate the model, the inner mechanics of the institutions can be left to their constituencies to determine. Note, however, that any intermediate value for H will return a true Pareto improvement rather than the weak-Pareto improvement of today's models.[16]

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[16] A true Pareto improvement means a policy change which genuinely leaves all stakeholders better off economically than they were before. By contrast, a weak Pareto improvement is a policy change which, while increasing the total income of the society, may be expected to hurt some stakeholders economically if the government does not intercede to tax winners on their gains, in order to compensate losers for their losses. Curiously, many economists refer to weak Pareto improvements as being "economically beneficial" without regard to the number and nature of the individual losses created by the policy shift. Such shorthand is likely to be confusing to the general public, however, and should be reserved for true Pareto improvements only.