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# ***Cultural Clustering, Skills, and International Labour Mobility***

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Reliable statistical information on the phenomenon of brain drain or gain is extremely difficult to find and, when it exists, is available only after long delays and often provides inconclusive or contradictory results. Data on overall migration flows between pairs of countries, however, are more readily available, and even though they do not say much about brain drain directly, some interesting indirect hypotheses can be investigated.

In this essay, we focus on the role of clusters of migrants by their place of origin in receiving countries as a determinant of the destinations of newcomers. We argue that the existence of a community of the same origin contributes to segmenting the labour market, thereby generating options that are more attractive for new migrants. As a consequence, new immigrants may flock to places where nationals of their country are already established.

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Such clustering occurs because it reduces information costs among culturally alike immigrants, which may permit them to do better than the native born, independently of individual characteristics. Various frameworks may help to explain this advantage. For example, cultural clusters may make it easier, and therefore cheaper, for immigrants than for the native born to identify whether new immigrants are likely to be cooperative or noncooperative in trade relationships (Stark 1995). Lower information costs among culturally alike immigrants then generate a higher proportion of the cooperative type among immigrants than among nonimmigrants (provided each agent deals only with his or her own type). Alternatively, immigrants may operate more efficiently in their community and thus generate an efficiency premium from employers of the same origin (Gross and Schmitt 2003). In other words, repeated interactions among employers and immigrants with common characteristics may help to sustain a higher wage within cultural communities than in the rest of the economy.<sup>1</sup>

Why is this argument relevant for the brain gain issue? Simply, the cultural clustering hypothesis is likely to be more relevant for some types of migrants than for others. Indeed, if it is important at all, it is for low-skilled migrants, since more highly skilled migrants tend to place more weight on individual attributes in their migration decision. Highly skilled migrants may also cluster geographically, but the determinants of their location decisions are likely to be associated more with professional and industry characteristics than with cultural identity. We find that, although the lack of significance of cultural clustering in migration decisions cannot be directly attributed to the skill level of migrants and, thus, to a brain drain, the results are clear enough to indicate that migrants' skills are likely to be a significant source of the difference between cases where cultural clustering matters and where it does not.

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1 This argument may be associated with the literature on social capital (Krauth 2004; Kolm and Larsen 2003; Ikeda, 2002). Lower information costs associated with cultural clustering may also have other benefits, such as shorter periods of unemployment. It should also be noted that higher wages may be indirect, through solidarity and family based transfers, rather than direct.

To show that common characteristics among immigrants may help to sustain a higher wage within cultural communities than in the rest of the economy, we develop a simple model based on a noncooperative repeated game between employers and immigrants for which the effect of cultural clustering can be tested. Simply, if the quality of information about workers' nonobservable characteristics is endogenous to the size of the market and, thus, the incentive to shirk is endogenous, a high wage is sustainable in a small labour market but not in a large market. Within a given country, such segmentation of the labour market can hold provided informal barriers such as cultural characteristics matter. As a consequence, everything else being equal, and without constraint on settlement location, migrants will have an incentive to cluster. This framework allows for a straightforward testing of the role of cultural communities as a determinant of immigration flows. A consequence of our hypothesis is the prediction that the incentive to cluster exists only when the size of these communities is within some range.

The role of cultural clustering in attracting newcomers is broadly supported by analysis of migration flows to major countries that are members of the Organisation for Economic Co-operation and Development (OECD) from the mid-1980s to the mid-1990s. Moreover, the pull that cultural communities exert is specific to certain combinations of source countries and destination countries. In fact, it is significantly weaker for migrations between OECD countries. The result that cultural communities are more attractive for immigrants from non-OECD countries suggests that cultural clustering may be linked to skills. In effect, for migrants between industrialized countries, the information advantage does not matter. Alternatively, the match between the characteristics of jobs and those of workers is closer within the OECD than between non-OECD source countries and industrialized destination countries, and cultural communities do not generate a compensating premium.

The rest of the essay is organized in the following way. The next section provides a somewhat technical summary of the theoretical framework. In the following section, we survey some related

empirical results and discuss the links between cultural clustering and skills. In the final section, we draw some conclusions for the brain drain issue.

## **A Theoretical Framework for Cultural Clustering**

People who consider migrating to a new country usually have several choices of destination. These choices, however, are not independent of the structure of the labour market and of perceived job opportunities in possible destinations. For instance, some countries may have relatively small and homogeneous markets for migrants from particular ethnic backgrounds that depend on a specific characteristic such as language. In a country where labour markets are effectively segmented, wages may be higher in small, ethnic-specific submarkets than in the large, anonymous submarket. As a consequence, all else being equal, such migrants have an incentive to cluster relatively in countries that have effective labour market segmentation.

Two characteristics are key elements of the sustainability of segmented labour markets and the existence of different wages in the two types of submarkets: specific job attributes, which naturally generate a segmentation of the market (for instance, the need for contacts with migrants' home country or language requirements), and the availability of better information in the smaller ethnic submarkets. Given these two characteristics, it may be profitable for employers in the smaller submarkets to offer relatively higher wages because they will elicit higher productivity from their workers despite the risk of shirking.

To understand why this argument holds and why such forces are more likely to matter for migrations from non-OECD to OECD countries than for migrations between OECD countries, consider two groups of potential employers in a host country: a small group from the same cultural background as the new migrant and a large group without defined cultural attributes. The wage in the large labour market is competitive and is the best outside alternative earning in the host country, while the wage offered in the small

labour submarket is higher than the large labour market's competitive wage. For given skills, migrants differ in the level of effort they are willing to put into a job. This is not directly observable, however, and upon arrival in the host country a new migrant can always find a job with an employer in the small labour market that pays the higher wage. In a sense, the newcomer gets the benefit of the doubt about individual productivity. Only after the migrant has worked for some time is his or her output observable and the employer knows whether or not the higher wage is deserved.<sup>2</sup>

If the worker turns out to be a shirker and is laid off, the likelihood of his or her finding another high-wage job diminishes depending on the extent to which information about the migrant becomes known to other employers in the small submarket. The quality of that information depends, in turn, on the size of the labour submarket. The larger the submarket, the more difficult it becomes for employers to obtain information about particular workers and the easier it is for a shirker to fool potential employers. It may be possible for a poor performer to earn a high wage for a brief period; indeed, if the migrant cares only about the present, the best strategy is to provide low effort for a high wage upon arrival. The eventual cost of shirking, however, is such that the migrant who cares sufficiently about the future will choose to offer a high level of effort. Employers, for their part, will pay high wages for only as long as the benefit from the migrant's high productivity more than offsets costs, while those in a large submarket, even one in which ethnic characteristics are considered important, will be disinclined to take chances with possible shirkers and will offer a competitive wage instead. Hence, while clusters of culturally alike migrants can form, there is a limit to their effective size.<sup>3</sup>

Does human capital matter in relation to cultural clusters or, equivalently, is cultural clustering equally important for highly

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2 It is important to note that wages cannot be made contingent on the *ex post* level of output due to lack of an enforcement mechanism.

3 The nonlinear impact of cultural clustering is analyzed in detail and confirmed empirically in Gross and Schmitt (2003).

skilled and for low-skilled migrants? One way to answer the question is to consider that cultural clusters offer migrants characteristics that are largely substitutes for human capital. In other words, cultural clusters allow migrants to earn rents because of their having specific characteristics that differentiate them from workers in the large competitive market, just as human capital in the form of particular skills and training allows individuals to differentiate themselves from others in the broader labour market. Cultural clustering differs from human capital, however, in that the former works as a collective, rather than an individual, attribute. It is therefore likely that those with relatively low human capital will place greater value on cultural clusters than those with relatively high human capital. As a consequence, cultural clustering, as a form of marketable specificity, is likely to emerge among migrants with little human capital rather than among those with a significant level of marketable human capital.

Since an aggregate framework aims at explaining flows of migrants, rather than the decisions of individuals, we now must embed the cultural clustering framework into a standard model for immigration flows, which necessitates a somewhat technical explanation. The number of people deciding to migrate from a source country,  $m$ , to a destination country,  $k$ , can be expressed as the product of the probability to migrate,  $f$ , and the size of the population in the source country,  $POP_m$ , of which only a proportion,  $g_k$ , is accepted by the destination country. Thus,

$$IFL_{m,k} = f * POP_m * g_k. \quad (1)$$

The segmented labour framework can then be reconciled with a traditional model of migration decisions, which identifies the factors determining  $f$ . In a model such as the one developed by Harris and Todaro (1970), the decision to migrate depends on the relative expected incomes in both the source and destination countries ( $y_m$ ,  $y_k$ ), and other exogenous factors — such as the cost of migrating,  $Z$ . As shown above, through clustering, new migrants may earn more than the average wage in the destination country, and the expected

income in the country of immigration is now made of two components, income from the large competitive market,  $y_k$ , and possibly a premium that varies with the size of the cultural community,  $s_k^m$ . The share of accepted applicants,  $g_k$ , is determined mostly by factors related to the parameters of the immigration policy,  $V_k$ . Hence, the flow of migrants,  $IFL_{m,k}$ , from source country  $m$  to destination country  $k$ , is

$$IFL_{m,k} = h[y_m, y_k, s_k^m, Z, POP_m, V_k]. \quad (2)$$

Thus, when a traditional migration decision framework is augmented by the cultural community effect, a migrant's choice of destination is no longer simply a function of the average relative incomes in the source and destination countries but also of the size of the population from the migrant's home country that is resident in any given destination country,  $smk$ , which represents the possibility of earning a premium.

## Empirical Implementation and Results

Clearly, equation (2) does not explicitly differentiate between the decisions of highly skilled and less-skilled migrants, mostly because separate observations on aggregate flows of the two categories are not available. Nevertheless, one can draw some general conclusions about agglomeration decisions of the two groups.

Assuming that an unskilled migrant is more likely than a skilled migrant to receive a wage premium for cultural characteristics, one can expect cultural clustering to play a larger role in the unskilled migrant's location decision. In fact, some studies have shown that better-educated immigrants tend to be less geographically concentrated than their less-educated compatriots (see, for example, Izyumov et al. 2002; Newbold 1999). The brain drain phenomenon is, after all, linked to the existence of a world market for some competencies, rather than to specific communities. This observation implies that cultural clustering is more likely to happen in

destination countries in which immigrants are, on average, less skilled, which raises the following question: Do combinations of source and destination countries exist for which the cultural effect is irrelevant and, if so, are those combinations likely to involve flows of migrants with higher skill levels?

We can investigate this question by testing the role of cultural agglomeration for migrations between OECD countries. Although information on the skill content of migration flows is scant and not directly comparable (see for example, Guillec and Cervantes 2001), a recent collection of country studies (OECD 2001) provides some evidence to support the hypothesis that people who migrate from one OECD country to another tend to be more highly skilled than those who migrate from the rest of the world to OECD countries. For example, as Table 1 shows for immigrants to the United States between 1990 and 1996, only 3 percent of those from China and 12.9 percent from the Philippines were highly skilled. Of immigrants from India, 24.7 percent were highly skilled, although that percentage is likely to have risen in more recent years as a result of the rising demand for highly skilled workers by the information technology sector and changes in U.S. immigration policy.<sup>4</sup>

In contrast, 72.7 percent of newcomers to the United States from Australia over the 1994–2000 period were highly skilled. Similarly, 91.1 percent of U.S. and 86.8 percent of Canadian immigrants to France from 1990 to 1996 were highly skilled. Gaillard (2001, figure 3) reports that, except for refugees from the former Yugoslavia, the largest contingents of science and technology workers entering Sweden between 1987 and 1998 were all from OECD countries. Additional supporting evidence can be found in the percentage of immigrants employed in highly skilled occupations in sample EU countries in 1998, shown in Table 2. In every case, the percentage

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4 The number of H1-B visas the United States issued to skilled workers from some developing countries, including India, rose from fewer than 40,000 during the 1992–95 period to almost 150,000 during the 1996–99 period (Martin 2001, table 3).

**Table 1: Skill Distribution in  
Flows of Permanent Migrant Workers**

	Total	Highly Skilled	Share of Highly Skilled (%)
<i>1990–96: to the United States from</i>			
China	300,500	9,153 <sup>a</sup>	3.0
India	267,200	65,989	24.7
Mexico (1992–96)	705,300	15,256	2.2
Philippines	412,300	53,049	12.9
Russia (1992–96)	70,500	7,239	10.3
<i>1990–96: to France from</i>			
European Union	43,980	18,168 <sup>b</sup>	41.3
Japan	2,773	2,408	86.8
United States	5,132	4,673	91.1
Canada	1,204	999	83.0
Total	157,548	38,571	24.5
<i>1994–2000: from Australia to</i>			
Europe	19,456	12,429 <sup>c</sup>	63.9
Germany	2,677	1,933	72.2
France	1,934	1,369	70.7
Japan	7,418	5,855	78.9
United States	31,199	22,686	72.7

*a* Defined as those holding an H-1B visa, which requires at least a university first degree. The total is for all types of permanent settlers (authors' calculations from Martin 2001, table 3; OECD 2001).

*b* Consists of "cadres et techniciens" (managers and technicians); the EU data do not include Portugal (OMI, various years).

*c* Consists of "managers, professionals, and para-professionals" (authors' calculations from Hugo 2001, tables 12–13).

from developed countries is substantially higher than that from developing countries.

Although it is not possible to compute correlation statistics because of a lack of consistent observations across countries and time, the evidence suggests there is a relationship between the country of origin and the skill content of immigration flows to OECD countries, and that flows between OECD countries are much more highly skilled than flows from other countries to OECD countries. Furthermore, this relationship enables us to draw some inferences

**Table 2: Employment of Immigrants in Highly Skilled Occupations, Selected EU Countries, 1998**

	Other EU and Developed Countries	Developing Countries	Total (incl. Nationals)
	<i>(thousands)</i>		
Austria	61 (1.7%)	0	3,626
Belgium	89 (2.3%)	10 (0.3%)	3,857
France	155 (0.7%)	89 (0.4%)	22,469
Germany	486 (1.4%)	132 (0.2%)	35,537
Netherlands	74 (1.0%)	14 (0.2%)	7,401
Sweden	46 (1.2%)	0	3,946
United Kingdom	361 (1.3%)	97 (0.4%)	26,882

Note: "Highly skilled" as defined by the International Labour Organization, International Standard Classification of Occupations, ISCO 1-3.

Source: Authors' calculations from Auriol and Sexton 2001, table 4.

from a possible difference in the role of cultural communities in attracting new migrants from various source countries.

Our observations measure the number of people from particular source countries that legally entered one of the sample OECD countries between 1988 and 1996. In all, our sample contains 134 immigration flows from anywhere between six and twelve sources — representing a wide variety of cultures and countries, both OECD and non-OECD — to twelve destination countries (see Table 3). Furthermore, as Table 4 shows, there is a wide variation in the mix of immigrants from OECD and non-OECD countries. For example, countries such as Canada and the United States, which have a long tradition of immigration based on factors other than ethnic background,

Table 3: *Sample Destination and Source Countries*

Destination Countries	Source Countries
Australia	China, Fiji, Hong Kong, India, Malaysia, New Zealand <sup>a</sup> , Philippines, South Africa, Taiwan, United Kingdom <sup>a</sup> , United States <sup>a</sup> , former USSR, Vietnam, former Yugoslavia
Canada	China, Hong Kong, India, Philippines, Poland <sup>a</sup> , Sri Lanka, Taiwan, United Kingdom <sup>a</sup> , United States <sup>a</sup> , Vietnam
United States	Canada <sup>a</sup> , China, Columbia, Cuba, Dominican Republic, El Salvador, Haiti, India, Jamaica, Mexico <sup>a</sup> , Philippines, Poland <sup>a</sup> , South Korea, former USSR, Vietnam
Belgium	Democratic Republic of Congo, Italy <sup>a</sup> , Morocco, Portugal <sup>a</sup> , Spain <sup>a</sup> , Turkey <sup>a</sup> , former Yugoslavia
France	Algeria, Morocco, Poland <sup>a</sup> , Tunisia, Turkey <sup>a</sup> , former Yugoslavia
Germany	Greece <sup>a</sup> , Hungary, Italy <sup>a</sup> , Morocco, Portugal <sup>a</sup> , Romania, Spain <sup>a</sup> , Turkey <sup>a</sup> , United States <sup>a</sup> , former Yugoslavia
Hungary	China, Germany <sup>a</sup> , Greece <sup>a</sup> , Israel, Poland <sup>a</sup> , Romania, Russia, Slovakia, Ukraine, United Kingdom <sup>a</sup> , Vietnam, former Yugoslavia
Japan	Brazil, Canada <sup>a</sup> , China, Germany <sup>a</sup> , Peru, Philippines, South Korea <sup>a</sup> , Taiwan, Thailand, United Kingdom <sup>a</sup> , United States <sup>a</sup>
Netherlands	Belgium <sup>a</sup> , France <sup>a</sup> , Germany <sup>a</sup> , Italy <sup>a</sup> , Morocco, Poland <sup>a</sup> , Suriname, Turkey <sup>a</sup> , United Kingdom <sup>a</sup> , United States <sup>a</sup>
Norway	Denmark <sup>a</sup> , Germany <sup>a</sup> , Iran, Pakistan, Philippines, Poland <sup>a</sup> , Somalia, Sri Lanka, Sweden <sup>a</sup> , Turkey <sup>a</sup> , United Kingdom <sup>a</sup> , United States <sup>a</sup> , former Yugoslavia
Sweden	Chile, Denmark <sup>a</sup> , Ethiopia, Finland <sup>a</sup> , Iraq, Iran, Lebanon, Norway <sup>a</sup> , Poland <sup>a</sup> , Turkey <sup>a</sup> , United Kingdom <sup>a</sup> , United States <sup>a</sup> , former Yugoslavia
Switzerland	Austria <sup>a</sup> , Canada <sup>a</sup> , France <sup>a</sup> , Germany <sup>a</sup> , Italy <sup>a</sup> , Netherlands <sup>a</sup> , Portugal <sup>a</sup> , Spain <sup>a</sup> , Turkey <sup>a</sup> , United Kingdom <sup>a</sup> , United States <sup>a</sup> , former Yugoslavia

<sup>a</sup> Destination and source country are both OECD members — Mexico since 1994, Hungary, Poland, and South Korea since 1996.

**Table 4: Share of Sample Immigrants from OECD and Non-OECD Source Countries, 1988–96**

Destination Country	Source Country	
	Non-OECD	OECD
Australia	60.8	39.2
Canada	92.9	7.1
United States	92.0	8.0
Belgium	48.7	51.3
France	93.3	6.7
Germany	18.3	82.7
Hungary	89.9	10.1
Japan	65.4	34.5
Netherlands	31.5	68.4
Norway	39.2	61.8
Sweden	42.0	58.0
Switzerland	32.0	68.0

Note: Hungary became a member of the OECD during the last year covered by the sample.

have a much smaller share of immigrants from OECD countries (7.1 percent and 8 percent, respectively) than do European members of the OECD.<sup>5</sup> These characteristics suggest that we have enough statistical information to test the relevance of cultural communities for migration between OECD countries as well as from the rest of the world to OECD countries.

Following equation (2), the explanatory variables include income per capita in the source country,  $Ly_{m,t}$  and in the destination country,  $Ly_{k,t}$  which enables us to capture the relative average financial attractiveness of migrating. The additional advantage that may be gained from working in a culturally alike environment, *cultural cluster* $_{k,t}$  is captured by the share of residents from the same culture

<sup>5</sup> The OECD countries are Canada, the United States, Finland, Norway, Poland, Denmark, the United Kingdom, Germany, and France. The former Yugoslavia comes second behind Canada and the United States combined.

in the foreign population of the destination country.<sup>6</sup> Hence, income per capita captures the average opportunities, while the cultural variable captures the possibility of higher reward. In addition, the level of population in the source country,  $Lpop_{m,t}$  and in the destination country,  $Lpop_{k,t}$ , captures the size effect and the probability of being accepted in a given destination country. We approximate changes in immigration policies in receiving countries by a time trend and a trend squared. Finally, since some destination countries included in their statistics the temporary immigration of refugees from the former Yugoslavia during the period of strife in that region between 1991 and 1995, we introduce a dummy variable, *Boswar*. These immigrants benefited from a special status, which was to be accepted for an unknown length of time but on a temporary basis.

The basic estimated specification is in log,  $L$ , except for the percentage variable, such that

$$LIFL_{m,k,t} = c_{m,k} + \alpha_1 Lpop_{m,t} + \alpha_2 Lpop_{k,t} + \alpha_3 Ly_{m,t} + \alpha_4 Ly_{k,t} \\ + \alpha_5 Cultural\ cluster_{k,t} + \alpha_6 Time + \alpha_7 Time^2 + \alpha_8 Boswar + e_{m,k,t}.$$

We use a standard technique for panel data, including a fixed effect,  $c_{m,k}$ , for each combination of immigration flow and destination country that accounts for factors specific to each pair of countries, such as special ties due to former colonial relations or a common language. To avoid zeros, we sum annual flows for three subperiods, 1988–90, 1991–93, and 1994–96. We present the results in Table 5.

Our general hypothesis that the size of the community of the same origin in the destination country matters is clearly supported

6 A source country can have many different cultures depending how narrowly one defines “culture.” It is also a fact, however, that, in some countries where ethnic communities are very small, these differences tend to matter less and people from the same country cluster together. Hence, we use the population from the same country of origin as the measure of “cultural clustering,” which is also the standard approach in the literature on networks (see Gross and Schmitt 2003).

Table 5: *The Role of Cultural Clustering in Immigration Flows*

	<i>LIFL</i> <sub>m,k,t</sub> (1)	<i>LIFL</i> <sub>m,k,t</sub> (2)	<i>LIFL</i> <sub>m,k,t</sub> (3)	<i>LIFL</i> <sub>m,k,t</sub> (4)
<i>Ly</i> <sub>k,t</sub> (destination) <sup>a</sup>	.181 (0.3)	.207 (0.3)	.171 (0.3)	.237 (0.4)
<i>Ly</i> <sub>m,t</sub> (source)	-.408 (1.7)	-.402 (1.6)	-.410 (1.7)	-.445 (1.8)
<i>Lpop</i> <sub>k,t</sub> (destination)	.924 (1.5)	.923 (1.5)	.966 (1.6)	.896 (1.5)
<i>Lpop</i> <sub>m,t</sub> (source)	-1.076 (1.7)	-.967 (1.5)	-1.018 (1.6)	-1.140 (1.7)
<i>Time</i>	.437 (2.5)	.418 (2.4)	.442 (2.5)	.416 (2.3)
<i>Time</i> <sup>2</sup>	-.125 (3.2)	-.122 (3.1)	-.128 (3.3)	-.120 (3.1)
<i>Cultural cluster</i> <sub>k,t</sub>	.037 (2.0)	.044 (2.1)	.039 (2.0)	.032 (1.4)
<i>Boswar</i>	.666 (2.5)	.663 (2.4)	.730 (2.6)	.662 (2.4)
<i>EU</i> * <i>Cultural cluster</i> <sub>k,t</sub>			.014 (1.2)	
<i>OECD</i> * <i>Cultural cluster</i> <sub>k,t</sub>		-.030 (2.2)		.008 (0.3)
<i>OECD</i> * <i>AUS-CAN-USA</i> * <i>Cultural cluster</i> <sub>k,t</sub>				-.059 (1.8)
<i>AUS-CAN-USA</i> * <i>Cultural cluster</i> <sub>k,t</sub>				.147 (2.4)
Adj. R <sup>2</sup>	.934	.934	.934	.935
N (d.f.)	402 (260)	402 (257)	402 (259)	402 (259)
F-test ( $H_0: c_{m,k} = c$ ) <sup>b</sup>	12.7 (.00)c/	12.7 (.00)	12.6 (.00)	11.4 (.00)

a Absolute t-values in parentheses. Calculated from heteroscedastic-consistent standard errors. The critical values are 1.28, 1.65 and 2.33 at 10%, 5% and 1% significance, respectively, for one-tail tests.

b The hypothesis is that all intercepts are equal vs fixed-effect model. The Hausman test of  $H_0$ : Random effect vs fixed effect is  $\chi^2(5) = 6.52$  and the random effect model is rejected.

Note: P-values are in parentheses.

Source: Gross and Schmitt 2003.

by the empirical results (shown in column 1 of Table 5). Indeed, we find that each percentage point increase in the stock of the culturally similar resident population increases the flow of newcomers by about 0.04 of a percentage point, a result consistent with that of Zimmermann (1996), who finds a network effect for broadly defined regions in the case of asylum seekers in European countries.

In the next step, we must determine whether cultural communities are uniformly relevant for OECD and non-OECD source countries. Starting from the hypothesis that the migration of highly skilled people occurs because of better job opportunities for a

given skill level and not because of some cultural advantage, one can infer that, for migrations between OECD countries, which tend to be dominated by highly skilled people, only relative average income matters. Hence, we introduce an additional dummy in the specification, OECD, which takes the value of 1 when both the source and destination countries are OECD members and zero otherwise. We then interact this variable with the *cultural cluster*<sub>k,t</sub> variable. In column 2 of Table 5, the coefficients of the cultural variable and that of the interacting OECD dummy are close in value with opposite signs. This result implies that the general clustering effect is cancelled for OECD source countries — that is, the appropriate t-test = 0.9 confirms that the absolute values are not significantly different — and that immigration flows between OECD countries are insensitive to the presence of cultural communities. Note that, when the set of countries is limited to members of the EU (column 3), the same result holds.

From these estimations, we can conclude that, although the existence of a cultural community is a factor of agglomeration for migrants from developing to developed countries, the same is not true for migrants from one developed country to another. Put another way, cultural ties are less important for migrants between developed countries than for migrants from developing to developed countries. We interpret this as evidence of the existence of a better match between skills and labour market characteristics in developed countries, which is typical of global markets that encourage a brain drain effect.

We can test the robustness of this result by exploiting another feature of the dataset. The nature and goals of the immigration policies of the destination countries in the sample are quite different. In particular, the three major traditional immigrant-receiving countries — Australia, Canada, and the United States — have active immigration policies, unlike those of European countries and Japan. Do our results hold independently across the two sets of countries, even though flows to Australia, Canada, and the United States are dominated by immigrants from developing countries?

To answer this question, we conduct the same exercise as before but introduce the dummy variable *AUS-CAN-USA* and interact it with the *cultural cluster<sub>k,t</sub>* variable. We also compare the *AUS-CAN-US* and *OECD* variables. The results (Table 5, column 4) show that cultural communities matter in all destination countries but much more so when the destination is one of the three traditional immigrant-receiving countries. Also, the cultural clustering effect is much stronger in those countries for migrants from developing countries.

To summarize, the existence of cultural communities in a destination OECD country may offer a labour market advantage to those who migrate there from a developing country, but not to migrants from other developed countries. Given the correlation between the skill content of migrant flows and the source country, one can infer that the presence of a cultural community does not play a role in the location decisions of skilled migrants. This finding is consistent with the existence of a world market for highly skilled labour and the ensuing consequences for the brain drain phenomenon.

## Conclusion

It is often observed casually that migrants tend to cluster in groups that are ethnically homogenous. We have shown that, although this observation is empirically correct, it tends to apply more to less-skilled migrants than to those who are highly skilled. One reason for this clustering is that the existence of segmented, culturally specific labour markets in immigrant-receiving countries allows for higher wages to be paid to new arrivals than they would receive in the general labour market, where the lack of complete information about individuals inhibits employers from taking chances with potentially underperforming workers. Our cross-country empirical analysis supports the role of cultural communities in attracting new migrants except when the source and destination countries are OECD members. Also, the clustering effect is much stronger in

Australia, Canada, and the United States — reflecting the long-standing immigration objectives of these countries — than in Europe or Japan.

That very different clustering effects exist for migrants from developed countries and for those from the rest of world suggests that clustering is a response to some migrant characteristics with respect to the job market. Differences in migrants' skills are the most likely source. Simply, because of their ability to compete in the world market for employment, skilled migrants need the support of cultural communities less than do unskilled migrants.

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