How Do Migrants from Latin America and the Caribbean Fare in the US Labour Market?

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1. INTRODUCTION

MIGRATION from Latin America and the Caribbean (LAC) to the United States has exploded in recent years. Since 1990, over 10 million migrants from the region have become residents of the United States, with three million of these settling in the country just in the period of 2000 to 2005. Inflows of legal immigrants have been at record levels, with an average of over 400,000 persons born in LAC admitted to the US each year as legal permanent residents over the last 15 years. To these, one must add the hundreds of thousands of undocumented workers – mostly from Mexico and Central America – who have successfully crossed the border. Estimates are that in recent years over 300,000 undocumented workers from the region have entered the United States on a net basis each year.

The money these migrants send to the region has become a major source of income for families back home. According to the World Bank (2007), more than $87 billion were received by Latin American and Caribbean countries in 2004 in the form of migrant remittances.[1] For some countries, the income received from the services of workers abroad (mostly in the US) is now a major item of the balance of payments. For El Salvador, for example, migrant remittances are equal to 78 per cent of merchandise exports. In Guatemala, the corresponding amount is 93 per cent, in the Dominican Republic it is 44 per cent and in Mexico nine per cent. The country with the heaviest reliance on income received from their migrant

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[1] This figure is expressed in PPP-adjusted international dollars.

employment abroad is Haiti, where migrant remittances are equal to 242 per cent of merchandise exports!

How much Latin America and the Caribbean earns from the globalisation of labour flows depends on the success of the migrants in the recipient countries. How do migrant workers from LAC fare in the United States? What is their labour market performance compared to that of migrants from other parts of the world? And how has that performance changed over time? It is the purpose of this paper to examine the latest evidence available on these questions.

A large body of research has now accumulated studying the labour market outcomes of immigrants (see, for example, the collection of research in Zimmermann and Constant, 2004; as well as Borjas, 1999b; Borjas and Katz, 2005; and Hanson, 2006). In the United States, the evidence appears to suggest that the economic outcomes of immigrants relative to natives have generally deteriorated since the 1960s. But there are differences among immigrant groups. On average, LAC immigrants have substantially lower earnings than those from other parts of the world. Furthermore, their economic outcomes have sharply deteriorated relative to other immigrants in recent decades. In 1980, Latin American and Caribbean migrants on average earned 76.1 per cent of the weekly wages received by other immigrants. By 2005, the corresponding percentage was 54.7 per cent, a drop of over 20 percentage points.

Why have the labour market outcomes of LAC migrants deteriorated relative to other migrants? Explanations vary but they include lower educational attainment among LAC migrants compared to other migrants, the presence of a larger cohort of recent lower-paid immigrants in the LAC migrant population, changes in US labour markets that have resulted in a reduction of the wages paid to the relatively unskilled workers sent by LAC to the United States, and the expansion of undocumented migration from that region, among other factors.

Which of these factors, then, is the most significant in explaining the trends in the economic outcomes of migrants from Latin America and the Caribbean in the United States? This paper examines the alternative explanations behind those changes, providing evidence on their relative importance. Section 2 presents the key trends in LAC migration to the US, as well as the changes in the economic outcomes of the migrants over time. Section 3 provides a discussion of the factors that may explain the changes in the economic performance of LAC migrants when compared to other migrants. Sections 4 and 5 then present estimates of the relative importance of these factors. Section 6 provides a set of conclusions.

2. TRENDS IN LATIN AMERICAN AND CARIBBEAN MIGRATION TO THE UNITED STATES

The migration from LAC to the US over the last century has been massive, although it has had its ups and downs. Table 1 shows the number of migrants

TABLE 1
Migrants from LAC Admitted to the US as Legal Permanent Residents

Decade	All Immigrants	Immigrants from Latin America and Caribbean	Percentage of Total
1900–09	8,202,388	154,742	1.9
1910–19	6,347,380	361,824	5.7
1920–29	4,295,510	641,992	14.9
1930–39	699,375	67,616	9.6
1940–49	856,608	167,524	19.6
1950–59	2,499,268	568,441	22.7
1960–69	3,213,749	1,241,044	38.6
1970–79	4,248,203	1,725,088	40.6
1980–89	6,244,379	2,539,016	40.7
1990–99	9,775,398	4,942,955	50.6
2000–05	5,743,058	2,341,036	40.8

Source: US Department of Homeland Security (2006).

from the region legally admitted to the US in the period of 1900 to 2005. The figure increases sharply in the first three decades of the twentieth century, but drops precipitously in the decade of the 1930s and the 1940s. Since then, emigration from LAC has gradually increased to become, by far, the largest migrant group entering the US every year. The migration flow peaked in the 1990s, when close to half a million immigrants from the region were accepted to the US as legal permanent residents on average each year. The figure declined to 390,172 per year in the period of 2000–2005, still a massive migration flow by historical standards.

a. Legal Migration Flows from LAC to the United States

The gyrations in the migration flows between LAC and the United States depicted by Table 1 have followed socioeconomic conditions in the two regions as well as the migration policies established by both the recipient and the sending countries. Migration to the US from LAC countries was virtually unimpeded until the 1920s. Very few restrictions on immigration were introduced until that time. Recorded migration statistics show that Latin American and Caribbean migration to the US expanded rapidly in the 1910s and 1920s. Most of this migrant flow originated in Mexico, where almost 700,000 people moved to the US between 1910 and 1929. This mass migration partly responded to the social turmoil and economic distress generated by the Mexican revolution in the period of 1910 to 1917, as well as its chaotic aftermath (Gamio, 1930). But it was also motivated by the expansion of labour demand in the US. With no effective

restrictions on immigration across the Southwest border at the time, hundreds of thousands of Mexican workers made their way to the US, lured by recruiters and contractors offering employment in labour-short farms, mining operations and railroad construction.

The onset of the Great Depression in the 1930s ended the first mass migration from Latin America to the US. The rising unemployment and declining wages in the US led many to seek easy scapegoats for the socioeconomic ills of the country. A popular target was the recently-arrived Mexican immigrant population, which was accused of taking jobs away from US citizens. As a result of pressures by nativists and various interest groups, severe restrictions on Mexican migration to the US were imposed. Furthermore, a policy of 'repatriation' of Mexican workers who had legally migrated to the United States in previous years was instituted. Approximately 500,000 Mexicans were deported from the US in the 1930s (Sanchez, 1993).

Migration from LAC to the US began to grow back in the 1940s and 1950s. Responding to pressures from agricultural growers and a wide range of industrialists facing labour shortages due to the expansion of the military during World War II, the US Congress began a reversal of its restrictive immigration policies towards Mexico. In August 1942, the two countries signed a bilateral agreement that allowed for the legal immigration of temporary Mexican labourers (called in Spanish *braceros*) into the country. By 1952, close to 200,000 Mexican labourers were contracted for work in the US and the numbers rose in the mid-1950s. The bracero programme peaked in 1959 but was sharply curtailed in the following years and terminated unilaterally by the US Congress in December 1964. The end of the bracero programme responded in part to a growing perception among policymakers that there was rampant exploitation and violation of the civil rights of the braceros (Craig, 1971).

The demise of the bracero programme did not end legal migration flows to the US but instead replaced what was effectively a guest worker programme with a growing immigration of legal permanent residents. The 1965 amendments to the 1952 Immigration and Nationality Act – which eliminated stringent quotas imposed on non-European countries – set the background for this switch. This immigration policy shift generated a process through which the composition of US legal permanent immigrant admissions shifted from one originating mainly in European countries to one dominated by Latin American and Caribbean (as well as Asian) nations. But the immigration policy shift was also helped by social and economic forces that have been intimately connected to the rising tide of LAC migrants entering the US.

Consider migration from the Caribbean to the United States, which took off on a massive scale in the 1960s. Cuban migration had already started to grow in the 1950s, as closer economic relations between the US and Cuba had risen in that decade. But it was the social and political upheaval of the Cuban revolution

that led to a massive exodus that raised the number of Cubans entering the US from 73,221 in the 1950s to 202,030 in the 1960s, and 256,497 in the 1970s. These flows have abated since that time, but continue to be substantial even to the present day. In the Dominican Republic, the restrictive migration policies of dictator Rafael Leónidas Trujillo, who ruled the country from 1930 to 1961, prevented any significant migration to the US. After Trujillo's death, Dominican migration began to rise at a gradual, but explosive growth. Motivated first by government policies that actively encouraged migration to the US, and later by economic stagnation that led to negative income growth between the late 1970s and the early 1990s, Dominican migration to the US grew from 83,552 in the decade of the 1960s to 139,249 in the 1970s, 221,552 in the 1980s and 359,818 in the 1990s (see Hernandez and Rivera-Batiz, 1997).

The rise of Central and South American migration to the US in recent decades has also been marked by social and economic upheavals. To some extent or another, from El Salvador and Guatemala to Colombia and Peru, persistent insurgencies, internal social conflicts or economic crises have plagued countries in the region since the late 1970s. In Central America, the migration of legal permanent residents to the US rose from 40,201 in the 1950s to 120,274 in the 1970s, 339,376 in the 1980s and 610,189 in the 1990s. For South America, the corresponding out-migration increased from 78,418 in the 1950s to 250,754 in the 1960s, 273,608 in the 1970s, 398,862 in the 1980s and 570,624 in the 1990s.
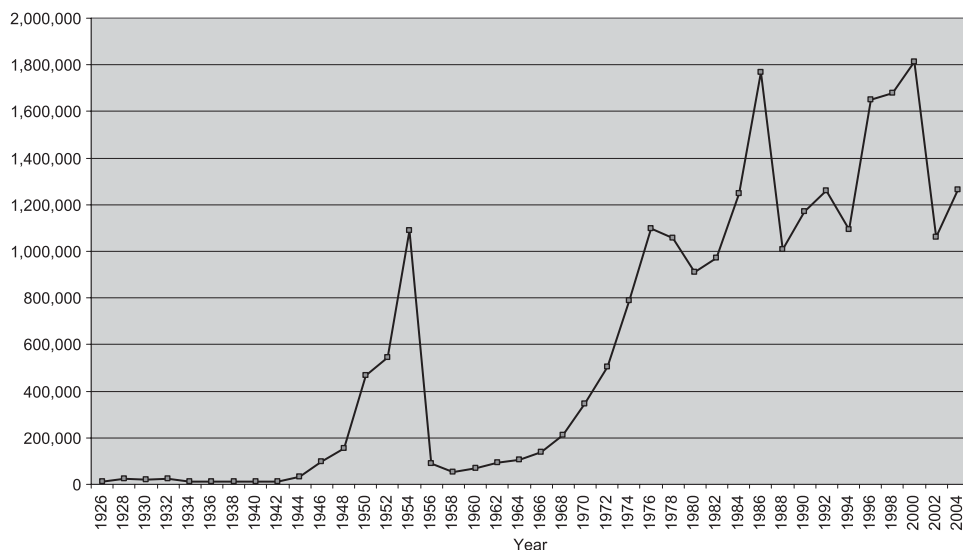
b. The Rise of Undocumented Migration

Up to this point, trends in the migration of legal permanent residents to the US have been presented. But equally important has been the rise of undocumented migration. By definition, the number of migrants moving from LAC to the US without legal documents is unknown. However, a rough picture of the ups and downs in these flows can be made on the basis of the migrants who are caught by authorities entering the US.[2] This is especially illuminating for LAC flows since most of the apprehended undocumented workers are detained crossing the Mexican border and are largely born in the region (96 per cent in fiscal year 2005).

Figure 1 plots the number of undocumented workers apprehended in the US from 1926 to 2004. The first period of rising undocumented migration to the US occurred in the 1940s and 1950s, when hundreds of thousands of migrants from LAC were attracted by a labour shortage in agriculture, construction and other sectors during World War II and its aftermath. However, the start of the bracero programme, combined with stringent border enforcement and interdiction policies, led to a sharp drop of undocumented migration in the following years.

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[2] Undocumented worker apprehensions is only a rough estimate of undocumented migration flows since it depends also on enforcement and interdiction efforts.

FIGURE 1
Apprehended Undocumented Immigrants in the US, 1926–2004

The end of the bracero programme then marked the start of a long-term, secular rebound of undocumented migration from Latin America to the US. In the 1960s, the average annual number of undocumented worker apprehensions was approximately 160,000. By the 1980s, the average number of immigrants apprehended each year had increased to 1,188,000, and in the 1990s, the annual apprehensions rose even more, to about 1,215,000. After 11 September, 2001, apprehensions have dropped, but continue at levels of over one million a year.

Although historically a large fraction of undocumented workers from LAC would stay in the US only temporarily, returning home after a certain period of time, the 1990s saw a major turnaround of this pattern. Paradoxically, the stricter border enforcement policies adopted by the US under the 1986 Immigration Reform and Control Act and especially the 1996 Illegal Immigration Reform and Responsibility Act have acted to increase the undocumented migrant population that stays across the border.[3] By increasing the difficulty of back-and-forth movements across the border, the policies have acted to reduce the likelihood of return

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[3] IRCA introduced employer-sanctions for employers that knowingly hire undocumented workers, allocated greater resources for border enforcement, and provided for an amnesty of undocumented immigrants who had been continuously residing in the US since 1 January, 1982. The Illegal Immigration Reform and Immigrant Responsibility Act of 1996 further extended the scope of IRCA by providing additional resources for border control, increasing penalties for illegal entry, reforming exclusion and deportation procedures, and placing restrictions on the public benefits available to immigrants; see Hoefer (1991) and Rivera-Batiz (2002).

migration to LAC. Indeed, the probability of return migration of the typical undocumented worker may have dropped to 10 per cent in the 1990s (see Massey et al., 2002).

The lower probability of return migration has acted to increase the net flow of undocumented migrants from LAC to the US, leading to an unprecedented rise in the number of these immigrants residing in the United States. It is estimated that 10.5 million undocumented immigrants resided in the US in 2005, up from 3.5 million in 1990.[4] The majority of these migrants are from LAC. Estimates are that 5,970,000 undocumented Mexican immigrants resided in the US in 2005, 470,000 from El Salvador, 370,000 from Guatemala, 180,000 from Honduras and 170,000 Haitians.

c. Mass Migration and its Consequences

The increased migration of legal permanent residents to the US, combined with a rise of the number of undocumented workers who remain as long-term residents in the US, has led to a massive increase of Latin American and Caribbean immigrants residing in the US. Table 2 shows that this number rose from

TABLE 2
Changes in the Number of Immigrants from LAC Residing in the United States, 1980–2005

	1980	1990	2000	2005
All Immigrants	15,260,400	21,595,271	32,922,052	38,292,252
LAC	4,543,700	8,760,664	16,336,554	19,671,641
Mexico	2,254,800	4,442,054	9,318,787	11,258,554
Caribbean	1,293,300	1,996,130	2,993,655	3,286,037
Central America	388,100	1,175,340	2,065,607	2,585,628
South America	607,500	1,147,140	1,958,445	2,541,422
El Salvador	95,500	453,745	833,803	1,001,180
Cuba	625,700	749,953	892,566	940,972
Dominican Republic	173,600	350,586	724,719	881,266
Guatemala	63,700	234,611	477,836	658,197
Jamaica	207,600	354,194	525,959	608,827
Colombia	159,000	298,806	513,397	574,720
Haiti	96,200	229,060	417,190	497,024
Peru	50,800	161,578	276,981	385,014
Honduras	36,300	110,838	258,065	397,094

Source: US Census of Population and American Community Survey data for various years; author's tabulations.

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[4] Estimates of the undocumented immigrant population are constructed using the so-called residual methodology, which calculates this population as the difference between the total number of immigrants who are counted in the US at any given moment in time (through census-type surveys) and the number of legal immigrants residing in the US at that time (determined from US immigration data); see Hoefer et al. (2006) and Pew Hispanic Centre (2006).

4,543,700 in 1980 to 19,671,641 in 2005, with the percentage of immigrants residing in the US accounted for by LAC climbing from 29.7 per cent in 1980 to 51.5 per cent in 2005.

The largest immigrant group from LAC residing in the US is from Mexico: there were 11,258,554 Mexican migrants in the US in 2005. In addition, there were 1,001,180 from El Salvador, 940,972 from Cuba, 881,266 from the Dominican Republic, 658,197 from Guatemala, 608,827 from Jamaica, 574,720 from Colombia, 497,024 from Haiti, 397,794 from Honduras and 385,014 from Peru.

Although US immigration policy changes and the social and political situations in many countries have been partly linked to the mass migration that we have just documented, the stronger, underlying force is economic. Both documented and undocumented migration flows have been found to be strongly correlated with the relative economic conditions in the US and in LAC (see, for instance, Passel and Suro, 2005; and Hanson and Spilimbergo, 1999). Figure 2 shows the behaviour of GDP per capita for the US relative to GDP per capita for LAC between

FIGURE 2
The Growing Income Gap between the US and LAC
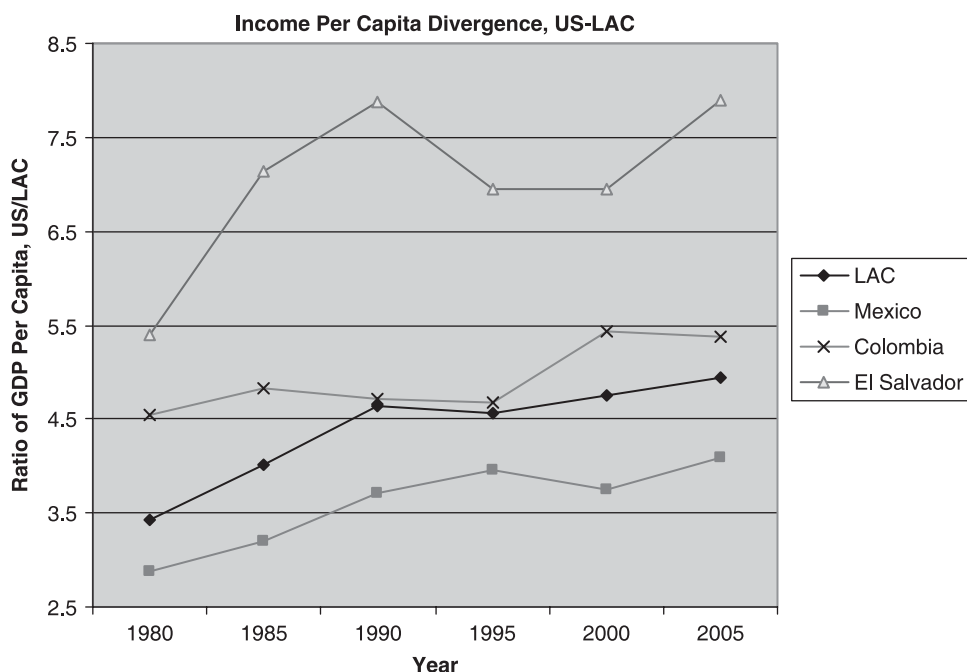
Notes:
The ratio in the vertical axis is that of gross domestic product (GDP) per capita in the US divided by the equivalent for countries in LAC (LAC), where the source data are PPP-adjusted, expressed in constant 2000 international dollars.

Source: World Bank (2007).

1980 and 2005. As can be seen, there has been a divergence of income per capita levels between the US and the region. In 1980, the ratio of GDP per capita of the US relative to LAC overall was 3.43. By 2005, this ratio had risen to 4.94. The greatest divergence is that of Haiti: the GDP per capita of the US relative to Haiti rose from 7.18 in 1980 to 22.8 in 2005. The US-Mexico ratio of GDP per capita also increased, from 2.87 in 1980 to 4.09 in 2005.

These trends are a consequence of sluggish economic growth in LAC. For some countries, such as Haiti, GDP per capita has declined almost continuously since 1980. For others, stagnation was almost uniform in the 1980s (the so-called 'lost decade' in the region) and in the second half of the 1990s. This was despite the implementation of drastic neoliberal economic policies across the region, which had the goal of revitalising economic growth. In Mexico, for instance, major structural changes in the economy in the 1980s and 1990s – including privatisation, trade liberalisation, etc. – have not been associated yet with an expansion of long-term economic growth, while igniting increased income and regional inequalities that may have heightened emigration (see Massey et al., 2002; and Cornelius and Marcelli, 2000).

The divergence in economic progress between LAC and the United States was also fuelled by the US economic boom of the 1980s and 1990s. While many countries in the region struggled through the two decades, the United States sailed through it (only temporarily interrupted by the 1989–1992 recession), with an average growth rate of real GDP per capita of 2.5 per cent per year in the period of 1980 to 2005.

The broad – and widening – gap in employment opportunities and wages between the US and the LAC region lies behind the continuous expansion of migration flows from the latter to the former over the last 25 years. And the most visible impact of the migrants south of the border is connected to the remittances that they send back home. Table 3 presents the value of these remittances in 2004. That year, Latin American and Caribbean countries received $41 billion in remittances from their migrants abroad, up from $4.5 billion in 1980 (adjusted for inflation and expressed in 2000 dollars). But the real value of these remittances is greater since each dollar buys much more in LAC than in the US. Therefore, when one adjusts the $41 billion for differences in purchasing power, one obtains that the value of the remittances in 2004 was $87 billion. This was equal to nine per cent of the value of merchandise exports that the region produced that year. But for some countries, remittances are even more significant. The PPP-adjusted value of remittances received by Colombia in 2004 was $10.9 billion, or 20 per cent of merchandise exports, for Guatemala remittances were equal to 93 per cent of exports, for El Salvador it was 78 per cent, for the Dominican Republic 44 per cent and for Haiti, 242 per cent.

Remittances clearly constitute an improvement in the standard of living for family members who are recipients of such income. And recent evidence suggests

TABLE 3
Migrant Remittances to LAC, 2004
(In millions of US dollars)

Country/Region	Remittances in Current $	Remittances in PPP-adjusted $	Remittances as a Percentage of Merchandise Exports
Overall Latin America and the Caribbean	$41,042	$87,328	9
Mexico	16,613	23,533	9
Brazil	3,576	9,281	4
Colombia	3,190	10,877	20
Guatemala	2,592	5,037	93
El Salvador	2,564	5,432	78
Dominican Republic	2,471	8,019	44
Ecuador	1,610	2,725	21
Peru	1,440	3,276	12
Honduras	1,142	3,004	73
Haiti	876	3,773	242

Source: Data for remittances in current $ are taken from World Bank (2007); other indicators are author's calculations using PPP adjustments and exports from World Bank (2007).

that remittances are connected to lower poverty levels in LAC (see Acosta et al., 2006; and Adams, 2007). Some questions have been raised over the years as to the extent to which the remittances simply raise current consumption instead of stimulating investment and future economic growth (see, for example, Reichert, 1982). Recently, however, a number of studies have documented that, first, a significant portion of so-called consumption spending consists of household investments in housing, automobiles and durable goods, whose long-term wealth-raising capacities are substantial; second, the use of remittances for community investment projects is not insignificant and also acts to stimulate local development; and, third, the multiplier effects of the increased consumption spending in generating local economic activity may be substantial (see, for example, de la Garza and Lowell, 2002; Parrado, 2004; and Adams, 2007).

The positive contribution of migrant remittances for economic development must be weighted against any negative consequences of the migration flows. Because the process of migration is costly and sometimes dangerous, migrants have been known to be positively selected from the general population in the source country, having above-average motivation and/or skills (Chiswick, 1999). The loss of such a group of workers can result in negative externalities for those communities suffering from substantial emigration. In addition, local labour shortages may result in rising local wages, increased prices of services, and a growing spiral of dependency on migration as a source of income (see Rivera-Batiz, 1982 and 1986; Hanson, 2005b; and Mishra, 2006). Remittances may or may not offset these potentially negative effects.

d. How Have LAC Migrants Fared in US Labour Markets?

The volume of remittances received by sending countries partly depends on the economic success of the migrants across the border. How have migrant workers from LAC fared?

Table 4 shows the labour force participation rate of migrants from LAC in the United States, in 1980 and in 2005. This rate has increased from 66.2 to 70.4 per cent and it is higher than that prevailing among other immigrants in the US and the native population. Table 4 also presents unemployment rates. As can be seen, Latin American and Caribbean immigrants do display higher unemployment rates than other immigrants and natives. In 1980, migrants from the region had unemployment rates of 8.5 per cent in 1980, compared to 5.8 per cent among other immigrants and 6.4 per cent for non-immigrants. Note, however, that unemployment rates for Latin American and Caribbean migrants have declined over time, approaching the levels prevailing among non-immigrants. In 2005, migrants from the region had an unemployment rate of 7.5 per cent while non-immigrants had unemployment of 6.9 per cent.

Table 5 focuses on the wages received by employed workers. Immigrants from LAC earn substantially less than other immigrants in the US, whether one measures wages by the week or on an hourly basis. In 2005, for example, migrants from the region earned an average hourly wage rate of $14, compared to $24 among other immigrants, and $20.4 for non-immigrants. Furthermore, when one examines wage trends over time, one finds that the earnings of Latin American and Caribbean migrants have been sharply declining relative to the earnings of other immigrants as well as natives. In 1980, the hourly wage rate received by the region's immigrants was equal to 76.9 per cent of the average wage of other immigrants and 82.6 per cent of the wage rate of non-immigrants. By 2005, this ratio had declined to 58.3 per cent relative to other immigrants and 68.6 per cent when compared to non-immigrants. In fact, the absolute value of the wages received on average by immigrants from LAC in the US hardly increased at all between 1980 and 2005, when measured in real terms.

TABLE 4
Labour Market Status of LAC Immigrants
(Persons 16 years of age or older)

Category	In the Labour Force (Per cent)		Unemployment Rate (Per cent)	
	1980	2005	1980	2005
Immigrants from Latin America and the Caribbean	66.2	70.4	8.5	7.5
Other Immigrants	53.3	63.5	5.8	5.6
Non-immigrants in the US	63.5	65.7	6.4	6.9

Source: Data from 1980 US Census of Population and 2005 American Community Survey; author's tabulations.

TABLE 5
The Wages of Immigrants from LAC in the US, 1980–2005
(Persons 18 to 64 years of age with positive wages and hours of work)

Category	Weekly Wage		Hourly Wage	
	1980	2005	1980	2005
Overall Immigrant Population	$626	$767	15.9	18.6
Immigrants from Latin America and the Caribbean	521	565	13.3	14.0
Other Immigrants	684	1,002	17.3	24.0
Non-immigrants in the US	644	850	16.1	20.4
Ratio of Wages in Per Cent LAC Immigrants/Other Immigrants	76.1	54.9	76.9	58.3
Ratio of Wages in Per Cent LAC Immigrants/Non-immigrants	80.9	66.5	82.6	68.6

Note:
The wages for 1980 have been adjusted for inflation and expressed in 2005 dollars.

Source: Data from 1980 US Census of Population and 2005 American Community Survey; author's tabulations.

In 1980, migrants from the region earned an average of $13.3 per hour (measured in 2005 dollars) while in 2005 it was $14.0, an increase of just five per cent in 15 years! During the same time period, the average wages received by immigrants from other regions rose by close to 40 per cent and among natives by 27 per cent.

What explains the relative shortfall in the labour market outcomes of Latin American and Caribbean migrants in the US, compared to other immigrants? Why have the relative wages of migrants from the region deteriorated so sharply over the last 25 years compared to other migrants in the US? The next sections seek to answer these questions.

3. EXPLAINING THE LABOUR MARKET OUTCOMES OF LATIN AMERICAN AND CARIBBEAN MIGRANTS

There are a number of forces that can explain the relative deterioration in the labour market outcomes of Latin American and Caribbean immigrants. These range from demographic factors and changes in the characteristics of the migrants to changes in the structure of the US economy and the economic opportunities it offers Latin American migrants relative to other migrants.

a. Cohort Effects

It is clear that because of the drastic increase in migration flows since the 1960s, there is a larger cohort of recent Latin American and Caribbean immigrants when

compared to other immigrants. In 1980, for example, only 17.3 per cent of immigrants 16 years of age or older from the region had been in the US for more than 20 years. Among other immigrants, the equivalent percentage was 49.1 per cent. This pattern was still maintained in 2005, but it was not as sharp as before: 32.6 per cent of immigrants from LAC had been in the US for more than 20 years, compared to 44 per cent of other immigrants.

The presence of a cohort of immigrants that has been in the US for a shorter period of time tends to push down average wages. The research of Chiswick (1978 and 1999) and Duleep and Regets (1999) has suggested that immigrants face an initial shortfall or dip in their labour market performance after they arrive in the country. This dip is the result of the adjustment costs that immigrants suffer as they enter the US. With limited knowledge about labour market institutions in the US – and a compelling need to obtain employment – recent migrants may accept jobs with wage offers lower than those they would otherwise accept given their skills. As their stay increases and they are able to search for better-paying jobs, earnings will rise and they will be paid wages that correspond more closely to their skill endowments.

The comparatively poorer labour market performance of recent immigrants may be compounded by another phenomenon. Because of the effort required by – and the costs involved in – the process of migrating from one country to another, migrants tend to be a favourably selected group of people. They tend to be highly-motivated people who are willing to face great challenges and make great efforts to improve their well-being and that of their families. One expects the first newcomers in any migration process to be the most motivated and driven of all the persons willing to leave their homeland to seek better opportunities abroad. As a result, one would also expect these migrants to perform at a very high level in their destinations, perhaps even eventually obtaining better labour market outcomes than natives (see Chiswick, 1978). But as the migration process of a country grows, especially in situations of mass migrations, as in the case of LAC migrations to the US, the positive selectivity of migrants relative to the rest of the population in the home country may decline. As a result, over time, recent migrants may not perform as well as their earlier cohorts (see Borjas, 1987 and 1995; Chiquiar and Hanson, 2005; and Hernandez-Huertas, 2007). If this phenomenon does affect Latin American and Caribbean migrants, it would also contribute to their lower wages compared to those of other regions who have not displayed mass migration to the US.

b. Declining Relative Educational Attainment

A second hypothesis that could potentially explain the relative deterioration of the earnings of Latin American and Caribbean immigrants is if their skills, particularly educational attainment, have declined over time relative to other

TABLE 6
The Comparative Educational Attainment of Latin American and Caribbean Migrants,
1980–2005

Group	Less than High School (Per cent)	High School (Per cent)	Some College (Per cent)	College or More (Per cent)
1980				
Immigrants from Latin America and the Caribbean	58.3	21.2	11.3	9.3
Other Immigrants	41.4	26.1	13.7	18.9
Overall Immigrants	45.9	24.7	13.0	16.3
Non-immigrants	31.9	35.7	16.0	16.3
2005				
Immigrants from Latin America and the Caribbean	43.3	29.6	15.6	11.5
Other Immigrants	12.2	23.3	21.8	42.7
Overall Immigrants	27.7	26.5	18.7	27.1
Non-immigrants (Natives)	10.7	32.9	29.7	27.2

Source: Data from 1980 US Census of Population and 2005 American Community Survey; author's tabulations.

immigrants and natives (see Borjas, 1999a and 2000). Indeed, the relative educational attainment of immigrants from LAC has dropped sharply. Table 6 shows the distribution of educational attainment for persons aged 25 or older residing in the US in 1980 and 2005. It is clear that migrants from LAC have lower educational attainment than other immigrants and natives. In 1980, 58.3 per cent of all immigrants from the region had less than a 12th-grade (high school) education, compared to 41.4 per cent among other immigrants and 31.9 per cent among natives. In 2005, 43.3 per cent of Latin American and Caribbean immigrants had less than a high school education, compared to 12.2 per cent among other immigrants and 10.7 per cent among non-immigrants.

Although schooling is rising for all groups being considered, including Latin American and Caribbean immigrants, it is also clear that these figures show a deterioration of the relative educational attainment of the latter. In 1980, for example, the percentage of migrants from LAC with less than a 12th-grade (high school) education was almost twice the corresponding figure for natives in the US and 140 per cent when compared to immigrants from other regions. By 2005, the percentage of immigrants from the region with less than a 12th-grade schooling was about four times the equivalent percentage for natives and 3.5 times the percentage for other immigrants. Since greater schooling is richly rewarded in the labour market, this relative decline of educational attainment could explain the comparatively sluggish increase in earnings of Latin American and Caribbean immigrants relative to other migrants.

c. Changes in US Labour Markets

Changes in US labour markets have been postulated as another possible factor explaining the deteriorating economic outcomes of Latin America and Caribbean immigrants relative to other immigrants. Since the early 1980s, rates of return to education have skyrocketed in the US while the employment opportunities and wages of workers with relatively lower skills have worsened in relative terms (see, for example, the surveys by Katz and Autor, 1999; and Acemoglu, 2002). This trend continues to the present time, although some research finds that in recent years the demand for workers at the very lowest levels and the very highest levels of the educational distribution may be increasing relative to workers in the middle, thus still maintaining the rising trend in inequality but now also leading to a polarisation of the labour market (see Autor et al., 2006).

There are a number of hypotheses seeking to explain these changes. The most popular is that skill-biased technical change has increased the relative demand for highly-educated workers. Since the introduction of computers in the early 1980s coincides with the trend towards higher demand for skilled labour, some research suggests that the growing use of computers in the workplace may have been connected to the rising demand for skilled labour (see, for instance, Krueger, 1993; and Levy and Murnane, 2004). There are other hypotheses as well, including the decline of high-paying manufacturing jobs in the US, de-unionisation and a collapse in the real value of minimum wages (see Bernard and Bradford Jensen, 2000).

Whatever the nature of the processes that have led to a rising rate of return to education, the growing skill premium would have impacted more forcefully immigrants from LAC, who – as noted earlier – tend to have lower schooling than other immigrants. The clustering of many Latin American immigrants in relatively unskilled jobs in agriculture, construction and service industries would mean that they have borne a disproportionate burden of the impact of the lower relative wages of less-skilled workers. For example, in the late 1990s, close to 90 per cent of California's farm labour force was Mexican-born. Although not as high, the Mexican presence in California's highly-unskilled occupations such as gardening, restaurant cook, household childcare, electronics assembling and construction labourer all hovered above 50 per cent in the late 1990s (Cornelius and Marcelli, 2000).

d. Undocumented Migration

Another factor that may account for the deterioration of the relative economic status of Latin American and Caribbean immigrants in the US is the expansion of undocumented migration from that region. Over 70 per cent of undocumented

workers residing in the US in 2005 were born in LAC. These migrants often operate in underground labour markets that yield employment opportunities offering lower wages and limited upward mobility. For instance, Rivera-Batiz (1999 and 2001) analysed the earnings of Mexican undocumented immigrants in the US labour market using a nationally-representative sample of these immigrants obtained from the 1989/1992 Legalised Population Survey (LPS). This research confirms that Mexican undocumented workers receive substantially lower earnings relative to legal immigrants in the US. Comparing data on legal immigrants with data on undocumented immigrants for 1987/1988, the study shows that, on an hourly basis, male Mexican legal immigrants in the US earned 41.8 per cent more than undocumented workers while female legal immigrants earned 40.8 per cent more. Undocumented immigrants have lower average educational attainment than legal immigrants, lower English-language proficiency and a smaller number of years of residence in the US, all of which reduce their relative wages. There is also evidence consistent with exploitation of the migrants, meaning that they receive substantially lower wages when compared with other workers who have the same productive characteristics, such as schooling, age, etc.[5]

Since undocumented immigrants have expanded within the Latin American and Caribbean immigrant contingent in the US, particularly since 1990, they are an increasingly significant factor in determining the overall characteristics of the migrants from the region. The lower wages of the undocumented migrants may have pulled down the overall relative socioeconomic status of the Latin American and Caribbean immigrant population in the US.

Which of the factors discussed in this section, then, is the most significant in explaining the trends in the economic outcomes of migrants from LAC in the United States? The next sections develop an empirical framework that studies the factors that explain the relative wages of immigrants and how these have changed over time, determining their importance in accounting for the deterioration in the relative wages of Latin American and Caribbean immigrants in the United States.

4. THE EARNINGS OF IMMIGRANTS: AN EMPIRICAL ANALYSIS

The framework adopted in this paper to examine the determinants of wages follows the standard empirical human capital literature in postulating that the natural logarithm of the wage rate of a worker i of sex j is given by:

$$\log W_{ij} = \beta' X_{ij} + U_{ij}, \tag{1}$$

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[5] See Valenzuela and Melendez (2003) and Rivera-Batiz (2004), for a discussion of this issue in relation to undocumented Mexican immigrants in New York City.

where W_{ij} is the hourly wage rate received by the worker, β is a vector of coefficients to be estimated, X_{ij} is a vector of individual human capital, occupational and demographic characteristics affecting wages, and U_{ij} is a stochastic disturbance term.

a. Explanatory Variables Included

The human capital variables in the vector X_{ij} include, first of all, years of schooling, represented by the dummy variables HIGHSC, equal to 1 if the person has 12 years of schooling (a high school education) and 0 otherwise, SOMECO, equal to 1 if the worker has between 13 and 15 years of schooling (some college education) and 0 otherwise, and COLLEGE, equal to 1 if the person has 16 or more years of schooling and 0 otherwise. In addition, English language proficiency has been found to be a key human capital variable influencing the earnings of immigrants. Employment opportunities may be severely limited if the immigrant's knowledge of the English language is not sufficient. On the other hand, ethnic enclaves can allow broad leeway for immigrants to find jobs even if their English proficiency is absent. The measure of English proficiency utilised in this paper is symbolised by the variable ENGLISH, which is an index that ranges from 0 to 4, where the value of 0 means the worker does not speak English at all, a value of 4 means the worker only speaks English, and the intermediate values, 1 to 3, imply the person knows English 'not well', 'well' and 'very well', respectively. The existing research examining the role played by English-language proficiency on labour market outcomes generally finds a positive impact of English proficiency on earnings (see, for example, Rivera-Batiz, 1990; and Chiswick and Miller, 2004).

To reflect the skills acquired by the worker through seniority and ageing in the labour market, the equation includes years of on-the-job experience, proxied by the variable EXPER (measured as age minus years of schooling completed minus six). The variable EXPERSQ, equal to the square of years of on-the-job experience, is also introduced in the equation to reflect variable returns to experience. On the assumption of positive, but diminishing, returns to on-the-job experience, it is anticipated that the variable EXPER would have a positive coefficient and EXPERSQ a negative coefficient in the earnings equation.

Workers supply various amounts of hours per week on their jobs. Labour supply can influence earnings, not only because increasing the number of hours worked per week, at a given hourly wage rate, will increase weekly earnings, but also because the hourly rate for overtime work may be higher than for the regular workday. To incorporate this, the analysis includes a variable denoted by HOURS, equal to the number of hours per week that the person supplies in the labour market. It can be expected that, holding other things constant, increased hours of work per week will be associated with higher weekly wages.

As discussed earlier, the longer immigrants reside in a country, the higher their earnings. To incorporate the impact of recency of immigration into the analysis, we define a set of dummy variables: COHORT1, equal to one if the immigrant moved to stay as a resident of the US in the five years previous to interview, and zero otherwise, COHORT2, equal to one if the immigrant moved between 6 and 10 years before the interview, COHORT3, equal to one if the migrant moved between 11 and 20 years before, and COHORT4, equal to one if the immigrant arrived in the US more than 20 years before the sampling. One expects the coefficients on the variables COHORT1, COHORT2 and COHORT3 to be negative, reflecting lower earnings relative to COHORT4.

The presence of undocumented workers is expected to generate a strong, negative impact on the wages of immigrants, as was discussed earlier. The data used in this research are based on US Census survey data that include all US residents – including undocumented workers – but do not identify the latter. As a proxy, since undocumented immigrants have a greater concentration among Mexican immigrants, the equation introduces a dummy variable MEXICAN, equal to one if the immigrant was born in Mexico and zero otherwise. The coefficient on this variable is expected to be negative.

The discussion so far suggests that the wage equation to be estimated should be given by:

$$\log W_{ij} = \beta_0 + \beta_1 \text{MEXICAN}_{ij} + \beta_2 \text{HIGHSC}_{ij} + \beta_3 \text{SOMECO}_{ij} + \beta_4 \text{COLLEGE}_{ij}$$
$$+ \beta_5 \text{ENGLISH}_{ij} + \beta_6 \text{EXPER}_{ij} + \beta_7 \text{EXPERSQ}_{ij} + \beta_8 \text{COHORT1}_{ij}$$
$$+ \beta_9 \text{COHORT2}_{ij} + \beta_{10} \text{COHORT3}_{ij} + \beta_{11} \text{HOURS}_{ij} + U_{ij}, \tag{2}$$

where all the variables are as defined above.

The empirical model in equation (2) is applied to examine separately the weekly wages of immigrants from LAC and those of other immigrants in the United States. The analysis is carried out separately for male and female workers. The data sets used are the 1980 US Census of Population's one per cent PUMS and the 2005 American Community Survey, as distributed by IPUMS. Individuals with no responses on the relevant questions used to determine individual characteristics (such as earnings, educational attainment, etc.) were eliminated from the analysis. In addition, following the custom in the literature, the sample was circumscribed to persons 18 to 64 years of age, the age group most likely to be fully involved in the labour market.

The surveys utilised in this research provide information on the annual wages of persons in the year before they were sampled as well as the average number of weeks they worked during the year and the usual hours worked per week. The annual wages were divided by the number of weeks worked to obtain weekly wages. The data for weekly wages in 1980 were then adjusted for inflation and

converted to 2005 constant dollars. Only workers with positive hours of work in the year before the sample was taken were considered in the analysis.

b. Sample Means

Tables 7 and 8 present the sample means for the variables introduced in the wage equations, by immigrant origin (place of birth) and gender. The first row shows the average values for weekly wages and the second row presents the average value of the dependent variable, the logarithm of the weekly wage. As noted earlier, the average weekly wages of Latin American and Caribbean migrants are substantially lower than those received by other immigrants, both in 1980 and in 2005. In addition, the weekly wages of men are substantially higher than those received by women, for both LAC and other immigrants.

The lower wages received by immigrants from LAC compared to other immigrant workers may be a reflection of mean differences in the characteristics of the two groups. Tables 7 and 8 document some of these key differences.

The main difference in characteristics between LAC and other immigrants is that the former have substantially lower levels of education than the latter. For instance, the sample means for the variable COLLEGE show that 9.9 per cent of Latin American and Caribbean immigrant male workers had 16 years of schooling

TABLE 7
Sample Means for Immigrants from LAC and Other Immigrants, Males

	LAC Immigrants		Other Immigrants	
	1980	*2005*	*1980*	*2005*
Weekly Wage Mean	610.8	624.2	870.6	1,217.5
Log of Weekly Wage	6.1670	6.2135	6.5062	6.7647
HIGHSCH (If person has 12 years of schooling)	0.210	0.319	0.257	0.206
SOMECO (If person has 13–15 years of schooling)	0.134	0.146	0.184	0.229
COLLEGE (If person has 16 years of schooling or more)	0.099	0.097	0.306	0.499
ENGLISH (Index of English proficiency from 0 to 4)	1.99	1.81	2.95	2.84
EXPER (Age minus years of schooling minus 6)	19.7	20.0	20.3	20.4
EXPERSQ (EXPER squared)	551.1	536.2	593.3	551.1
COHORT1 (If has resided in US for 5 years or less)	0.246	0.235	0.201	0.177
COHORT2 (If has resided in US between 6 and 10 years)	0.254	0.190	0.150	0.167
COHORT3 (If has resided in US between 11 and 20 years)	0.334	0.303	0.245	0.274
HOURS (Weekly hours of work)	41.5	42.2	42.3	43.2
MEXICAN (If person was born in Mexico)	0.529	0.618	–	–
Number of Observations	13,369	51,249	23,226	47,901

Note:
The wages for 1980 have been adjusted for inflation and expressed in 2005 dollars.

Source: Data from 1980 US Census of Population and 2005 American Community Survey; author's tabulations.

TABLE 8
Sample Means for Immigrants from LAC and Other Immigrants, Females

	LAC Immigrants		Other Immigrants	
	1980	2005	1980	2005
Weekly Wage Mean	420.7	502.9	479.3	816.0
Log of Weekly Wage	5.8047	5.9570	5.9247	6.3567
HIGHSCH (If person has 12 years of schooling)	0.275	0.313	0.337	0.215
SOMECO (If person has 13–15 years of schooling)	0.162	0.218	0.206	0.267
COLLEGE (If person has 16 years of schooling or more)	0.086	0.148	0.202	0.450
ENGLISH (Index of English proficiency from 0 to 4)	2.12	2.06	2.96	2.84
EXPER (Age minus years of schooling minus 6)	19.5	20.9	20.2	20.6
EXPERSQ (EXPER squared)	545.8	577.5	594.1	565.4
COHORT1 (If has resided in US for 5 years or less)	0.192	0.165	0.174	0.154
COHORT2 (If has resided in US between 6 and 10 years)	0.253	0.162	0.152	0.155
COHORT3 (If has resided in US between 11 and 20 years)	0.391	0.329	0.262	0.283
HOURS (Weekly hours of work)	38.0	37.9	36.7	38.3
MEXICAN (If person was born in Mexico)	0.376	0.480	–	–
Number of Observations	9,285	34,701	19,132	43,478

Note:
The wages for 1980 have been adjusted for inflation and expressed in 2005 dollars.

Source: Data from 1980 US Census of Population and 2005 American Community Survey; author's tabulations.

or more in 1980 and 9.7 per cent in 2005. By comparison, male immigrants from other regions had a substantially higher proportion of college graduates, equal to 30.6 per cent in 1980 and 49.9 per cent in 2005. Similar gaps hold for female workers.

Tables 7 and 8 confirm that although schooling has increased for all groups, the relative educational attainment of immigrants from LAC has been lagging relative to other immigrants. For males, for example, the proportion with a college degree stayed basically unchanged between 1980 and 2005 at slightly less than 10 per cent. By comparison, the corresponding proportion for other male immigrants rose from 30.6 per cent in 1980 to close to 50 per cent in 2005. Among women, the proportion of college graduates among LAC immigrants rose from 8.6 per cent to 14.8 per cent between 1980 and 2005, but for other immigrants it climbed from 20.2 to 45.0 per cent.

The data on educational attainment are consistent with the sample means for English-language proficiency, which show much lower proficiency levels among immigrants from LAC. In an index that ranges from 0 to 4, with 0 implying no knowledge of English at all and 4 only knowledge of English, immigrants from LAC had a value of around 1.8 to 2.1, depending on gender and the year, but for other immigrants, the values range from 2.8 to 3.0.

c. Results

Tables 9 and 10 present the key results of the empirical analysis. Table 9 shows the OLS coefficients of the estimated wage regression equations for men while Table 10 depicts the results for women. Note that the signs of the regression coefficients on the explanatory variables are generally identical in the four equations. Furthermore, the signs are in line with the theoretical expectations, as stated earlier. On the other hand, there are some significant differences in the magnitude of the coefficients across equations.

Tables 9 and 10 show rates of return to a college education that have been increasing at a very sluggish rate among immigrants from LAC when compared to other immigrants. In fact, the rate of return to a college degree in 1980 was higher among LAC male immigrants than among other immigrants. But this gap turns around by 2005, when the rate of return to a college education was lower among male immigrants from LAC. Among women, immigrants from the region had lower rates of return to a college education both in 1980 and 2005, and the increase in rates of return between 1980 and 2005 again lags behind that displayed by other immigrants.

These differences in the behaviour of rates of return to schooling may be connected to a wide array of factors. Quality of schooling can influence rates of return to education and it is possible that reductions in the quality of schooling of Latin American and Caribbean migrants relative to that of other immigrants (mostly European and Asian) is the factor that lies behind their lower rates of return to education.[6] These differences in quality do not need to be associated exclusively with characteristics of schools but could also be due to socioeconomic differences between the families of the immigrants (with migrants from LAC on average coming from families with lower socioeconomic status).

An alternative explanation is that the sluggish increase of the rate of return to education among Latin American and Caribbean immigrants reflects a lower level of schooling within the COLLEGE category. Since this category includes college graduates only, it is possible that immigrants from outside the region have an increasing proportion of master's and doctorates when compared to immigrants from LAC. Since greater levels of schooling would result in higher earnings, this discrepancy would result in higher observed rates of return among immigrants from outside LAC.

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[6] Hanushek and Kimko (2000) have calculated differences in quality of schooling among various countries, based on the results of international educational assessments that test students in maths and science at a certain grade level in various countries. The average index of school quality calculated by these authors for LAC in the period of 1965 to 1991 was substantially below that of the world average. The world mean index was 48.6 while it was 35.4 for LAC, more than a full standard deviation below the mean.

TABLE 9
Regression Estimates, Male Wage Equations

Independent Variable	Equations for LAC		Equations for Non-LAC	
	1980 Parameter Estimate (s.e.) t-Statistic	2005 Parameter Estimate (s.e.) t-Statistic	1980 Parameter Estimate (s.e.) t-Statistic	2005 Parameter Estimate (s.e.) t-Statistic
INTERCEPT	5.0626* (0.0433) 116.8	5.0071 (0.0188) 265.8	4.8893* (0.0288) 169.8	4.5175* (0.0244) 184.9
MEXICAN	0.0258 (0.0138) 1.9	−0.0247* (0.0059) −4.2	–	–
HIGHSC	0.1671* (0.0169) 9.9	0.1170* (0.0067) 17.5	0.1103* (0.0131) 8.4	0.0535* (0.0161) 3.3
SOMECO	0.2558* (0.0206) 12.4	0.2637* (0.0087) 30.4	0.2163* (0.0146) 14.8	0.2157* (0.0161) 13.4
COLLEGE	0.5122* (0.0228) 22.4	0.6266* (0.0098) 63.7	0.4862* (0.0132) 36.9	0.7337* (0.0155) 47.4
ENGLISH	0.0641* (0.0059) 10.9	0.0727* (0.0026) 27.7	0.0869* (0.0050) 17.4	0.1224* (0.0040) 31.0
EXPER	0.0390* (0.0016) 23.7	0.0356* (0.0008) 43.1	0.0577* (0.0012) 47.1	0.0571* (0.0011) 52.0
EXPERSQ	−0.00066* (0.00003) −19.8	−0.00061* (0.00002) −38.7	−0.00092* (0.00003) −35.5	−0.00099* (0.00002) −41.2
COHORT1	−0.2755* (0.0219) −12.6	−0.2537* (0.0092) −27.7	−0.1830* (0.0139) −13.1	−0.1570* (0.0111) −14.1
COHORT2	−0.1716* (0.0205) −8.4	−0.1858* (0.0089) −20.9	−0.0671* (0.0139) −13.2	−0.0415* (0.0107) −3.9
COHORT3	−0.0638* (0.0188) −3.4	−0.1257* (0.0072) −17.5	−0.0025 (0.0118) −0.2	−0.0544* (0.0089) −6.1
HOURS	0.0137* (0.0007) 20.5	0.0158* (0.0003) 57.0	0.0134* (0.0004) 30.8	0.0122* (0.0003) 66.9
R-SQ	0.18	0.28	0.26	0.34

Notes:
* = Statistically significant at the 99 per cent confidence level; ** = 95 per cent confidence level.

TABLE 10
Regression Estimates, Female Wage Equations

Independent Variable	Equations for LAC		Equations for Non-LAC	
	1980 Parameter Estimate (s.e.) t-Statistic	2005 Parameter Estimate (s.e) t-Statistic	1980 Parameter Estimate (s.e.) t-Statistic	2005 Parameter Estimate (s.e.) t-Statistic
INTERCEPT	4.7721* (0.0471) 101.3	4.4385 (0.0224) 198.3	4.4276* (0.0302) 146.5	4.3253* (0.0242) 178.9
MEXICAN	−0.0263 (0.0156) 1.7	−0.0809* (0.0073) −11.1	–	–
HIGHSC	0.1286* (0.0183) 7.1	0.0919* (0.0092) 10.0	0.1360* (0.0133) 10.3	0.0681* (0.0160) 4.4
SOMECO	0.2413* (0.0227) 10.7	0.2712* (0.0106) 25.6	0.2933* (0.0152) 19.4	0.2656* (0.0161) 16.5
COLLEGE	0.4639* (0.0274) 17.0	0.5917* (0.0118) 50.0	0.5512* (0.0153) 36.1	0.7176* (0.0158) 45.5
ENGLISH	0.0518* (0.0062) 8.3	0.0991* (0.0033) 30.5	0.0153* (0.0052) 2.9	0.0661* (0.0040) 16.7
EXPER	0.0221* (0.0019) 12.0	0.0250* (0.0010) 25.9	0.0244* (0.0012) 19.8	0.0359* (0.0010) 34.7
EXPERSQ	−0.00044* (0.00004) −11.5	−0.00042* (0.00002) −21.5	−0.00039* (0.00003) −14.8	−0.00066* (0.00002) −28.9
COHORT1	−0.2141* (0.0252) −8.5	−0.2236* (0.0117) −19.1	−0.1048* (0.0155) −6.8	−0.2727* (0.0117) −23.4
COHORT2	−0.1113* (0.0231) −4.8	−0.1798* (0.0110) −16.4	−0.0172 (0.0154) −1.1	−0.1431* (0.0111) −12.9
COHORT3	−0.0718* (0.0207) −3.5	−0.1276* (0.0085) −15.1	0.0026 (0.0122) 0.2	−0.0835* (0.0088) −9.5
HOURS	0.0191* (0.0007) 24.8	0.0259* (0.0003) 76.5	0.0269* (0.0005) 57.3	0.0297* (0.0003) 98.9
R-SQ	0.15	0.35	0.26	0.36

Notes:
* = Statistically significant at the 99 per cent confidence level; ** = 95 per cent confidence level.

Another trend that can be discerned from Tables 9 and 10 is that the rate of return to a high school education has been sharply declining for all groups analysed. Among immigrants from LAC, the rate of return to a high school education declines from 16.7 per cent in 1980 to 11.7 per cent in 2005 for men and from 12.9 per cent to 9.2 per cent among women. For other immigrants, the decline is from 11.0 per cent to 5.3 per cent for men and from 13.6 per cent to 6.8 per cent among women. These changes are consistent with a US labour market that is becoming increasingly polarised. In this case, the wages of workers with very low levels of schooling would rise relative to workers with average levels of schooling. In the analysis above, the rates of return have as a basis of comparison workers with less than a high school education (the excluded dummy variable in equation (2)). Hence, when the rate of return to a high school education declines, it means that salaries of these workers have dropped relative to workers with less than a high school education. Since the rates of return to college graduates are also rising in relation to high school graduates, the implication is that it is those at the middle of the educational distribution (those with a high school education) that are exhibiting slower wage growth relative to those at the extremes (those with less than a high school education and those with a college education). This is precisely what a polarised labour market looks like.

The economic returns to labour market experience also vary across the various groups considered. Women tend to have lower rates to return to experience than men, a pattern that is obtained for non-immigrants in the US economy as well. Also, as with the rates of return to education, the rate of return to experience among both men and women is substantially lower for LAC immigrants. To understand this result, note that the years of residence in the US, as represented by the COHORT dummy variables, is being held constant while changes in EXPER and EXPERSQ are considered. Given the number of years that an immigrant has been residing in the US, changes in the EXPER variable are directly related to changes in the number of years of experience the worker has had abroad. One way to interpret the higher EXPER coefficient in the non-LAC equation is that it shows that the returns in the US labour market of an increase in years of experience abroad are proportionally higher for these workers than for LAC migrants. This pattern, in turn, may be determined by the relative success of immigrants from other parts of the world in matching their occupational experience abroad with that in the United States.

The results in Tables 9 and 10 confirm that, holding other things constant, Mexican immigrants tend to have lower wages than other immigrants. This effect, however, has been emerging over time and was not significant back in 1980. In fact, at that time, Mexican male immigrants had higher wages than other immigrants from LAC (other things held constant), but this result was not statistically significant. By 2005, the negative sign on the Mexican dummy variable is statistically significant, for both men and women. These results are consistent

with the hypothesis stated earlier, to the effect that a greater presence of un-documented workers will be associated with lower immigrant wages, all else held constant. Undocumented migration to the US has been particularly important among Mexican migrants and such migration exploded after 1980, particularly in the 1990s.

Tables 9 and 10 show that more recent immigrants face a substantial penalty in wages relative to earlier immigrants. In 2005, male immigrants from LAC who had been in the US for five years or less had 25.4 per cent lower wages while female immigrants from that region had 22.4 per cent lower wages. For other immigrants, the most recent cohort had 15.7 per cent lower wages for men and 27.3 per cent lower wages for females. But the results in Tables 9 and 10 do not confirm any systematic changes in the costs of recency of migration, whether for Latin American and Caribbean immigrants or other migrants. For Latin American and Caribbean immigrants, the penalties of being a recent migrant actually decline between 1980 and 2005 for men, but they slightly rise for women. For other immigrants, men also appear to face lower costs from being a recent immigrant, but women face substantially greater penalties.

Ability to speak English, as reflected by the variable ENGLISH, has a consistently positive influence on earnings, for all groups examined. And as was the case with rates of return to a college education, rates of return to English-language skills have also risen sharply between 1980 and 2005. Furthermore, the rates of return to English proficiency are lower among immigrants from LAC. Hours worked are also significantly related to weekly earnings.

5. ACCOUNTING FOR THE DECLINE IN RELATIVE WAGES OF LAC MIGRANTS

Having examined the factors determining the earnings of LAC and other immigrants, what does this analysis suggest are the main factors that have been connected to the deterioration of the earnings of LAC immigrants relative to other migrants? In order to calculate the relative weight of the various factors explaining wages, labour economists utilise a so-called Blinder-Oaxaca wage decomposition (see Blinder, 1973; Oaxaca, 1973; and Oaxaca and Ransom, 1996).

The Blinder-Oaxaca wage decomposition for the case of immigrants from LAC and other immigrants is based on a comparison of the means of the log-wages for these two groups of workers. Using equation (1) yields the following equations for the means of the log-wages of LAC and other immigrants:

$$\overline{\log W_L} = \beta_L' \bar{X}_L \tag{3}$$

$$\overline{\log W_O} = \beta_O' \bar{X}_O, \tag{4}$$

where the subscript L represents LAC immigrants, O denotes other immigrants, and bars over variables denote mean values. Subtracting equation (4) from (3) results in:

$$
\begin{aligned}
\overline{\log W_L} - \overline{\log W_O} &= \beta'_L \bar{X}_L - \beta'_O \bar{X}_O \\
&= (\bar{X}_L - \bar{X}_O)(\beta'_L + \beta'_O)/2 \\
&\quad + (\beta'_L - \beta'_O)(\bar{X}_O + \bar{X}_L)/2.
\end{aligned} \tag{5}
$$

Equation (5) decomposes the log-wage difference between LAC and other immigrants (equal to the percentage difference in the geometric means of the observed wage rates for the two groups) into two components: (1) a part due to differences in the average characteristics of LAC and other immigrants, as represented by the vectors of human capital and demographic variables in X_L and X_O, shown in the second row of equation (5); and (2) a part due to differences in the parameters of the wage equations for the two groups (such as differences in rates of return to education), as symbolised by β'_L and β'_O, shown in the third row of equation (5).

An analysis of the differences in the wages of LAC and other immigrants was carried out for both 1980 and 2005. As was examined earlier, the log-wage difference in wages between these two immigrant groups widened during this time period, with the shortfall in the wages of LAC migrants growing from −0.34 in 1980 to −0.55 in 2005 for men, and from −0.12 to −0.40 for women. By determining the relative weight of the factors that explain these wage gaps for each year, one can then determine what factors account for the expansion of the relative wage shortfall facing LAC migrants in 2005 compared to 1980.

This analysis shows that the lower relative wages of LAC migrants are largely explained by the sluggish rise in the educational attainment of these migrants compared to other immigrants. For instance, the proportion of college graduates in the LAC immigrant contingent rose between 1980 and 2005, but it increased much more among other immigrants. For men, this deterioration of the supply of college graduates among LAC migrants compared to other migrants explains as much as 45 per cent of the deterioration in the relative wages of LAC workers. For women, the relative deterioration in the supply of college graduates explains 50 per cent of the relative wage loss of LAC migrants.

The second major factor accounting for the comparative earnings losses of LAC migrants is the relative decline in English-language proficiency of LAC workers when compared to other immigrants. A third force that is also significant for both men and women is the tepid increase in the rates of return to a college education and to English proficiency among LAC immigrants when compared to other immigrants. Other factors, such as cohort and time-in-the-US effects, differences in experience and/or rates of return to experience, the greater proportion

of Mexican workers (as a proxy for undocumented workers), differences in hours of work, etc., just do not explain a significant fraction of the deteriorating relative wages.

6. CONCLUSIONS

The last 25 years have seen a marked increase in the migration of people from LAC to the United States, both documented and undocumented. As a result, the number of Latin America and Caribbean immigrants residing in the US rose from 4,543,700 in 1980 to 19,671,641 in 2005, and the percentage of all immigrants residing in the US accounted for by LAC countries leaped from 29.7 per cent in 1980 to 51.5 per cent in 2005.

This paper has discussed the forces behind this mass migration, including the most significant US immigration policy changes over time as well as the social and economic forces connected to some of the most significant migration bursts. Underlying the migration process is the growing divergence between the per capita income of most LAC countries and that of the United States. Between 1980 and 2005, the ratio of GDP per capita of the US relative to LAC overall rose from 3.43 to 4.94.

How do migrants from LAC fare in US labour markets? The evidence presented in this paper shows that LAC migrants have substantially lower wages than other migrants. In 2005, for instance, migrants from the region earned an average hourly wage rate of $14, compared to $24 among other immigrants, and $20.4 for non-immigrants. Furthermore, the earnings of LAC migrants have been sharply declining relative to the earnings of other immigrants as well as natives. In 1980, the hourly wage rate received by the region's immigrants was equal to 76.9 per cent of the average wage of other immigrants and 82.6 per cent of the wage rate of non-immigrants. By 2005, this ratio had declined to 58.3 per cent relative to other immigrants and 68.6 per cent when compared to non-immigrants. In fact, the absolute value of the wages received on average by immigrants from LAC in the US hardly increased at all between 1980 and 2005, when measured in real terms, but the average wages received by immigrants from other regions rose by close to 40 per cent and among natives the increase was equal to 27 per cent.

The empirical work presented in this paper shows that the most significant factor explaining both the lower relative wages of LAC migrants and the deterioration of those wages relative to other migrants is the comparatively low – and declining – educational attainment of these migrants relative to other immigrants and natives in the US. In 1980, for example, the percentage of migrants from LAC with less than a 12th-grade (high school) education was equal to 58.3 per cent, which was almost twice the corresponding figure for natives in the US and

140 per cent higher than for immigrants from other regions. By 2005, the percentage of Latin America and Caribbean immigrants with less than a 12th-grade schooling was 43.3 per cent, which was about four times the equivalent percentage for natives and 3.5 times the percentage for other immigrants. This relative skill deterioration among LAC migrants accounts for 45 per cent of the relative wage loss of these migrants between 1980 and 2005 for men and 50 per cent of the loss for women.

Compounding the declining relative skills of LAC migrants are changes in US labour markets since the early 1980s that have made rates of return to education skyrocket while the wages of workers with relatively lower skills have worsened. The research presented in this paper also shows that rates of return to education among LAC migrants are lower than those of other migrants and have not increased in line with those of other immigrant groups.

English-language proficiency was found to be another important force explaining the declining wages of LAC migrants relative to other migrants. Indeed, immigrants from LAC countries tend to have substantially lower English-language proficiency. In addition, rates of return to English-language skills have risen sharply between 1980 and 2005.

The paper also presents evidence examining the role played by cohort effects in explaining the lower wages of LAC migrants. There is a substantial penalty in wages paid by recent LAC migrants. In 2005, male immigrants from LAC who had been in the US for five years or less had 25.4 per cent lower wages while female immigrants from that region had 22.4 per cent lower wages. But the data do not confirm any systematic changes in the costs of recency of migration, whether for LAC migrants or other immigrants. This factor does not appear to be significant in explaining the declining relative wage of LAC migrants.

These issues have significant policy relevance. In absolute magnitude, migration to the US will continue to provide massive economic rewards for LAC in the foreseeable future. But if migrants were to lose some of their economic power, their benefits to sending countries may eventually stagnate. Given the reliance of many countries on the income that migrants provide to supplement their own income, the social and economic ripples of such a trend could be significant.

But even more importantly, if migrants from LAC were to become an underclass of workers in the United States, with persistently low earnings, lack of upward mobility and rising poverty rates, perceptions about the economic benefits of these migrants among natives in the US may turn against them. The result could be a rise of anti-immigrant feelings that could have a negative impact on US immigration policies towards the region (see Hanson, 2005a). In the past, US immigration policies have in fact followed perceptions (or misperceptions) about the economic effects of immigrants. As noted in this paper, massive deportations of both legal and undocumented Mexican immigrants were undertaken by the United States in the midst of the Great Depression in the 1930s, in response to

the popular perceptions among policymakers and the public that the migrants were taking jobs away from natives. It is hard to avoid the implication that the relative success of the migrants themselves may determine the future of migration policies towards them.

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