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PUERTO RICANS IN THE U.S. LOW-WAGE LABOR MARKET: INTRODUCTION TO THE ISSUES, TRENDS, AND POLICIES

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ABSTRACT

Puerto Ricans are concentrated in low-wage jobs and experience higher rates of unemployment and poverty than other Hispanic subgroups. Through a cross-sectional data analysis from the American Community Survey, 2006– 2008, we examine the experience of Puerto Rican workers. Though educational attainment and language disparities play a role, structural factors such as concentration in low-wage service industries also explain the disadvantaged standing of Puerto Ricans in the labor market. This analysis highlights the importance of ethnic-specific studies and the need for research on factors that may influence Puerto Rican workers' mobility in and out of low-wage jobs.

IT IS ESTIMATED THAT OVER 40 MILLION JOBS IN THE UNITED

States—about one in three—are considered low wage (Boushey, Fremstad, Gragg, and Wall 2007). Research has shown that women, minorities, and non-college educated workers are overwhelmingly concentrated in this labor market sector (Applebaum, Berhardt, and Murnan 2006) and the probability of being a low-wage worker is ten times higher for minority populations even when wage impacts of changes in education, experience, occupation, and industry are taken into account (Anderson, Holzer and Lane 2005). Scholars have offered various explanations of the high levels of minority participation in this labor market, including labor market disadvantage theory, which argues that minorities are located in industries where structural economic factors, industrial restructuring, and the expansion of service jobs have led to a deterioration of working conditions and labor market outcomes for workers (Bauder 2001; Boyd 2000; Browne and Misha 2003; Corzine, Huff-Corzine and Creech 1988; Duncan and Hammond 1983). Such factors in conjunction with segmentation into low-wage jobs and discrimination have played a prominent role in perpetuating low-wage employment among minority population groups (Willis, Connelly and Degraff 2003).

Increasing rates of participation in the low-wage labor market have become a growing area of concern for researchers and policy makers, especially in relation to labor market outcomes. Employment in low-wage jobs is linked to salaries below the poverty line and work arrangements that do not offer benefits such as health insurance, retirement savings accounts, paid sick days or family leave. In addition, workers in these job sectors experience longer periods of joblessness, higher rates of job turnover, reduced earnings, and reduced opportunity for formal training (Kaye and Nightingale 2000). Such characteristics lead low-wage workers to experience downward trends over time, including poor work conditions and declining worker mobility (Boushey, Fremstad, Gragg and Waller 2007), which, in the wake of the deepest economic recession since World War II, presents significant implications for their future economic opportunity.

While research into the trends of participation in low-wage labor continue to grow, little is known about the specific profiles of these workers. For example, what are the key labor market indicators? What human capital characteristics do workers exhibit, and how do these vary across socio-economic backgrounds and population demographics? This paper seeks to contribute to this gap in the literature by examining the experience of Puerto Rican workers within low-wage labor markets in the U.S. and by describing recent trends in core labor market indicators. Using data from the American Community Survey (ACS) for 2006–2008, we undertake an analysis of the Puerto Rican population engaged in low-wage labor markets, the industries and occupations where they concentrate, and their human capital characteristics as compared to other population groups.

Consideration of the Puerto Rican case is an important area of study. Research has shown that Puerto Ricans are concentrated in low-wage jobs and experience higher rates of unemployment and poverty than other Hispanic subgroups (Congressional Budget Office 2006; American Community Survey 2007). The unique migration patterns and residency status of Puerto Ricans in the mainland U.S. makes this ethnic-specific consideration important given that it can illuminate challenges that Puerto Ricans often face that other population groups—even within the Hispanic community—do not (Pereira, Frase, and Mollenkopf 2008).

OUR ANALYSIS HIGHLIGHTS THE IMPORTANCE OF THE ETHNIC-SPECIFIC STUDY AND THE NEED FOR RESEARCH INTO FACTORS THAT MAY INFLUENCE WORKER MOBILITY OUT OF LOW-WAGE JOBS.

We begin by reviewing the literature on Puerto Ricans within the broader literature on Hispanics in the U.S. labor market and worker mobility in low-wage occupations. Then, through a cross-sectional data analysis, we provide a statistical profile of lowwage Puerto Ricans. We find that Puerto Rican workers differ from those of other Hispanic groups in that a lower percentage are engaged in the agricultural sector and production occupations. In addition, we find some differences across key human capital characteristics, including language fluency and educational attainment. Our analysis highlights the importance of the ethnic-specific study and the need for research into factors that may influence worker mobility out of low-wage jobs. Such factors include: structural elements that contribute to Puerto Ricans entering lowwage labor markets; the influence of migration to and from the island; and the role of policy initiatives such as the publicly-financed workforce investment system; and community responses to labor market policy. The final section of this essay examines how the authors contributing to this special issue of the CENTRO Journal advance our understanding of low-wage labor markets and the implications of such findings for the reevaluation of strategies to improve educational and career opportunities for Puerto Ricans.

Review of Literature on Puerto Ricans in the U.S. Labor Market

Despite constituting a large and growing share of the U.S. workforce, Hispanic workers experience significant labor market disadvantages as compared to other population groups. These include: higher unemployment rates, lower wages, overrepresentation in low-level occupations, and limited worker mobility (Catazarite and Trimble 2009). Understanding how Hispanics fare in the labor market is complicated by the high level of diversity of the Latino population in terms of skill level, ethnic origin, class background, immigration, and geographic concentrations (Wang 2006). For example, numerous studies have highlighted that native-born Hispanic workers do better than immigrant Hispanics, and that higher levels of education positively influence labor market advantage (Fry and Lowell 2002; Mosisa 2002). In addition, variations among Latino subgroups have been identified: for example, Cuban and South Americans tend to experience far better employment outcomes than Central Americans, Mexicans, and Puerto Ricans (Catazarite and Trimble 2009). These varied labor market experiences of Latinos can be traced to a number of factors including: differences in human capital; discrimination; spatial and skills mismatch; occupational segregation; and access to and quality of social networks (Espino 2002; Falcón and Meléndez 2001; Kahn 1996; Meléndez and Falcón 2000; Ness 2005; Torres-Stone and McQuillan 2007). In addition, workers in these subgroups have divergent cultural histories, class backgrounds, skill sets, and modes of incorporation into the U.S. labor force (Catazarite and Trinble 2009).

Such divergences are thought to be especially important in the case of Puerto Ricans, whose unique citizenship status has significantly shaped their incorporation into the U.S. labor market (Catazarite and Trimble 2009). Puerto Ricans born on both the mainland and the island are relatively disadvantaged in terms of human capital and socio-economic backgrounds when compared to other Hispanic subgroups (Landale and Lichter 1997; Tienda 1983; Tienda and Mitchell 2006). Tienda and Mitchell (2006) note that the Puerto Rican population on the mainland is concentrated in the urban Northeast and has been historically overrepresented in low-wage manufacturing occupations. Cotter, Hermsen, and Vanneman (2004) find that Puerto Ricans experience a higher level of labor market segmentation across both occupations and industries than other Hispanic groups, contributing to a variety of labor market disadvantages beyond the impact of English proficiency and schooling (Catanzarite 2000; Catanzarite and Aguilera 2002).

Research suggests that Puerto Ricans in the U.S. face significant human capital barriers in the labor market. While Puerto Ricans have had better schooling over the last two decades, an educational deficit relative to whites continues to persist and significantly impacts wage outcomes for Puerto Ricans; and even when controlling for human capital characteristics, a sizeable gap in employment for Puerto Ricans remains (Duncan, Hotz and Trejo 2005). In addition, Puerto Ricans are less likely to be self-employed than the U.S. workforce as a whole (6 percent versus 9 percent). Part of the earnings gap can be explained by migration and the adaptation to new labor markets. Similar to other Latino groups, the earnings disparity between immigrants from the island and those born stateside decreases as individuals remain on the mainland over time (Mosisa 2002). Furthermore, it has been estimated that earning deficits decrease from around 48 percent for first-generation Puerto Ricans, to 31 percent for second-generation Puerto Ricans, to 16 percent for later generations (Duncan, Hotz, and Trejo 2005).

The variation in the labor market experience of Puerto Ricans from that of other Latinos has been attributed to both human capital and structural characteristics, leading to what some have called the "Puerto Rican Exception" (Briggs 2002; Chavez 1992; Falcón 1992; Gonzalez 2001). On the human capital side, it is believed that persistent segmentation into low-wage labor market sectors are directly attributable to low levels of human capital in the Puerto Rican community, leaving many to focus on improving education and promoting workforce development training (Meléndez 1994; Rodriguez and Meléndez 1992). In contrast, on the structural side, it has been argued that institutional factors in society significantly impact individuals' earnings and their ability to gain employment. Such factors include: structural changes in the labor market that have bifurcated the Puerto Rican community into the skilled and the unskilled (Falcón 1992; Hirschman 1992); variations in the dynamics of regional economies (Meléndez and Figueroa 1992); and residential segregation (Rodriguez and Meléndez 1998).

One of the most persistent and debated explanations for their experience in the U.S. labor market is that Puerto Ricans are part of an underclass in the U.S. While some have disputed this conceptionalization, the underclass is often defined as consisting of populations with high levels of poverty (Auletta 1995), social and political disenfranchisement, marginal participation in the labor market, and a high reliance on government transfers (Gilbert 1998; Williams, Sawyer and Whilstrom 2005). Throughout the late 1980s and early 1990s, scholars argued that because of high rates of poverty and other indicators of economic disadvantage, there was a tendency to describe all Puerto Ricans as members of an underclass (Massey and Bitterman 1985; Massey and Dento 1989; Massey and Eggers 1989; Rodriguez and Meléndez 1992; Torres and Rodrigues 1991). Linda Chavez (1992) claimed that persistent poverty among Puerto Ricans was a direct result of social dysfunction within the community, citing a high incidence of female-headed households, high numbers of children born out of wedlock, and high levels of welfare participation, which all contributed to low labor force attachment. Similarly, Tienda (1987) argued that the poor labor market experience of Puerto Ricans was a result of high rates of welfare, which lead to higher rates of unemployment.

Though the underclass theory was used by some to explain high levels of Puerto Rican poverty, others argued that overemphasizing the behavior and individual traits of workers downplays the role of discrimination and the functions of the labor market in the analysis of labor market outcomes of Puerto Ricans (Rodriguez and Meléndez 1992). These scholars have suggested that the "Puerto Rican Exception" is rooted in structural characteristics, such as lack of access to education and training opportunities, employment in industries concentrated in geographical areas that have experienced extreme economic dislocation, and labor market discrimination (Meléndez 1994; Torres 1992).

While research continues to suggest that Puerto Ricans are more likely than other Latinos to be disadvantaged in the labor market, mobility out of low-wage occupations and into higher paid jobs is possible and closely related to employer characteristics. Holzer (2004) argues that a successful transition out of low-wage work typically depends on: access to high-wage employment, job training or career ladders in the given industry, and individual efforts to seek high-wage employment. However, while these three factors have been identified as improving and creating career pathways out of low-wage jobs, evidence remains thin on what constitutes effective practices and policies (Kazis 2001).

Research suggests that employment success requires that individuals stay in jobs and careers for an adequate period of time. Longer employment increases the opportunity to gain experience, training, personal contacts for networking (Acs, Phillops and McKenzie 2001; Kazis 2001). Strewn and Martinson (2001) argue for the strategies of connecting low-wage workers with better jobs and providing unemployed as well as working individuals with opportunities to upgrade their skills. A variety of institutions—community colleges, second-chance training programs, unions, and employers themselves—are important in creating work-related education and training programs that can provide individuals with tools needed to advance within their careers (Ahlstrand, Armbruster, Bassi, McMurrer and Van Buren 2001; Grubb 2001; Holzer 2004; Meléndez and Suárez 2001; Turner 2001).

Regardless of the various explanations for their disadvantaged labor market position in the U.S., Puerto Ricans, like most Latinos, experience human capital deficits, employer discrimination, and structural disadvantages that make them more likely to engage in low-wage labor and thus to potentially benefit from pathways out of these labor markets. While these aspects may not uniformly affect the labor market outcomes of Puerto Ricans, such outcomes are a result of both supply-side and demand-side influences, so examining the long-term labor market rates of participation as well as the industries and occupations in which Puerto Ricans are concentrated is important. Such an examination provides the basis for our analysis of Puerto Ricans in low-wage jobs and labor markets.

Data and Concepts for a Profile of Puerto Rican Workers

Data from the 2006–2008 American Community Survey (ACS) estimates were used to undertake a cross-tabulation analysis to generate a statistical profile of Puerto Ricans concentrated in low-wage jobs based on both wage and human capital characteristics and to compare them to the low-wage labor force of the U.S. as a whole, other population groups, and other Hispanic subgroups. The ACS data provide key information on human capital, employment, and geographic characteristics of individuals and allows us to identify industries in which Puerto Ricans are concentrated,while simultaneously controlling for context, such as cost of living, by utilizing the unique metropolitan area identifier variable.

Definitions of what constitutes low-wage work varies throughout the literature. However, the definitions can be broadly categorized into two types: job-based and workerbased. Job-based definitions of low-wage work focus on the segmentation of labor markets and wage contours, conceptualizing the low-wage market as consisting of jobs that lead to poverty, have little to no mobility, are not unionized, and offer no benefits to workers (Borras 2007; Lerman, Loprest, and Rattcliffeee 1999; Spriggs and Klein 1994; Spriggs and Schmitt 1996). In contrast, worker-based definitions tend to focus on jobs that command below a certain wage and human capital characteristics such as low education and skills (Applebaum, Bernhardt, and Murnane 2003; Blank Danziger and Schoeni 2006; Boushey, Fremstad, Gragg, and Waller 2007; Carnavale and Rose 2001; Congressional Budget Office 2007; Kaye and Nightingale 2000; U.S. Department of Labor 2008).

Throughout the literature, the definition of what low wage is at the aggregate level focuses on absolute wage levels thought to incorporate structural and human capital characteristics that influence an individual's labor market experience. Such approaches designate a specific wage threshold. If this threshold is not met by an individual's earnings, the work is considered low wage. These wage levels are based upon the estimated income necessary to purchase a minimal bundle of goods and services needed for daily living and researchers often utilize the official U.S. poverty formula (Bernstein 2000). Typically, this approach defines a low-wage job as one in which a full-time year-round worker earns less than the poverty threshold, or some

	AGES 18-25	AGES 26 AND UP
Puerto Rican	78.70	50.75
White	81.99	22.37
Black	75.64	33.99
Asian	78.37	28.15
Hispanic	77.89	41.34
Cuban	70.60	43.25
Dominican	70.69	52.49
Mexican	81.56	26.53

TABLE 1. PERCENT OF WORKERS ENGAGED IN LOW-WAGE WORK BY POPULATION GROUP AND AGE

percentage of the federal poverty level: for a family of two adults and two children, \$20, 444 in 2007 (about \$9.82 an hour) or for a single person under the age of 65, less than \$10,488 (Kaye and Nightingale 2000; Kim 2000; Mishel, Berstein and Allgretto 2007; Shulman 2002; U.S. Census Bureau 2006).

While this approach is widely used, critics have noted its inadequacy in measuring the income necessary to meet basic needs in light of increased costs of living and changes in basic consumption needs, as the measure was originally designed to determine the minimum income needed to avoid extreme deprivation (Bernstein, Brocht and Spade-Aguilar 2000; Boushey, Fremstad, Gragg and Waller 2007). Moreover, such a definition fails to capture local environmental factors such as cost of living, which may significantly impact whether or not earnings can satisfy need. Such limitations are specific at the aggregate level, where the use of an absolute wage does not account for whether or not it is "sufficient" to cover the basic needs of the household (Mishel, Berstein and Allegretto 2007). For example, a worker in New York City who by definition is "low wage" does not command the same spending power as does a worker in Texas where the cost of living is significantly lower. Controlling for the local context is important, as research has shown that structural changes across industries and occupations have had a pronounced effect on lowwage workers at the local level and that the incidence and concentrations of lowwage work vary significantly across metropolitan areas (Berube and Kneebon 2006; Mishel, Berstein, and Allegretto 2007; Pereira, Frase and Mollenkopf 2008).

Understanding these challenges, we designate the status of non-low-wage or lowwage individuals by whether or not their employment commands earnings above 2/3 the median wage of workers in a given metropolitan area. We combine the absolute wage measure, one of the most effective ways of identifying low-wage work at the aggregate level, with a measure that allows for regional differences in cost of living. We use the metropolitan area identifier from the ACS to identify the median wage to designate low-wage or non-low-wage status for each individual in the data set. In the ACS, the metropolitan area identifier is defined as "an area consisting of a large population center and adjacent communities (usually counties) that have a high degree of economic and social interaction with that center" (IPUMS 2008). These are geographic areas that function as a region and can either be metropolitan areas (urban areas of at least 50,000) or micropolitan areas that contain an urban center of at least 10,000. This identifier is central to our approach in defining low-wage work and is used to determine the median wage of workers, and thus in defining low wage.

To identify individuals as Puerto Rican, we use a two-step approach. We define individuals as Puerto Rican if they self-identify as such in the Hispanic Origin question on the ACS. However, using this variable alone can lead to an undercount of the Puerto Rican population. Thus, we also identify individuals as Puerto Rican if they indicate "other" on the Hispanic Origin question, but report Puerto Rican in their response to the self-reported ancestry or ethnic origin question on the U.S. Census: "What is this person's ancestry or ethnic origin?"

Using these defined variables, we estimate the percentage of Puerto Ricans in the U.S. who are working in low-wage jobs and labor markets. We begin by estimating the percentage of workers engaged in low-wage employment for 2006–2008 for the U.S. population as a whole: Puerto Ricans, as well as other groups, including whites, blacks, Asians, Hispanics, Dominicans, Cubans, and Mexicans. We then disaggregate the composition of the Puerto Rican low-wage labor market by the designation of low wage, by various demographic and human capital characteristics, as well as by industry and occupation.

	LESS THAN HIGH SCHOOL	HIGH SCHOOL	SOME COLLEGE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S DEGREE	PROFESSIONAL OR DOCTORATE DEGREE
Puerto Rican	26.94	35.01	28.60	28.60	5.10	0.38	0.18
White	26.09	28.13	31.75	31.75	8.31	0.57	0.15
Black	23.92	34.50	32.04	32.04	5.26	0.35	0.07
Asian	13.82	22.53	37.89	37.89	17.59	2.06	0.41
Hispanic	35.39	33.66	23.51	23.51	3.61	0.24	0.11
Cuban	25.63	31.68	30.35	30.35	6.36	0.25	0.13
Dominican	20.97	30.70	32.20	32.20	8.90	0.66	0.18
Mexican	37.81	34.66	21.53	21.53	2.69	0.14	0.10
All U.S.	26.13	29.08	31.36	31.36	7.92	0.57	0.15

TABLE 2a. PERCENT OF LOW-WAGE WORKERS AGES 18-25 BY POPULATION GROUP AND EDUCATIONAL ATTAINMENT

TABLE 28. PERCENT OF LOW-WAGE WORKERS AGES 26 AND UP BY POPULATION GROUP AND EDUCATIONAL ATTAINMEN	т
TABLE 25. TERCENT OF LOW WAGE WORRERS AGES 20 AND OF DITION CROOF AND EDUCATIONAL ATTAINMENT	

	LESS THAN HIGH SCHOOL	HIGH SCHOOL	SOME COLLEGE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S DEGREE	PROFESSIONAL OR DOCTORATE DEGREE
Puerto Rican	24.86	36.26	20.72	7.54	8.15	1.90	0.57
White	14.45	35.95	22.51	8.07	13.67	4.00	1.35
Black	18.99	40.86	23.45	7.01	7.09	1.97	0.65
Asian	19.25	24.04	14.49	7.39	23.70	8.15	2.98
Hispanic	46.50	28.68	12.87	4.16	5.76	1.21	0.83
Cuban	37.92	30.53	14.77	5.86	8.35	1.08	1.48
Dominican	22.57	35.02	15.27	8.29	13.16	3.19	2.50
Mexican	53.67	27.42	10.91	3.11	3.73	0.70	0.46
All U.S.	17.78	35.40	21.54	7.60	12.67	3.72	1.29

Profile of the Puerto Rican Low-Wage Workforce in the U.S.

Table 1 reports the percentage of the Puerto Rican population engaged in low-wage work as compared to other groups. We divide the working-age population into two categories for our analysis. The first category includes adults 26 and older and the second includes adults 18 to 25. Research suggests that considering young adults separately from older adults is significant since many young workers delay entry into the labor market to pursue higher education, often hold multiple jobs or misreport their employment status and wage earnings (Pereira, Frase and Mollenkopf 2008). As shown in Table 1, while Puerto Ricans ages 18 to 25 appear to be doing similarly as other populations groups, those Puerto Ricans 26 and older exhibit the second highest percentage for workers engaged in low-wage work across population groups. At 50.75 percent Puerto Ricans in this age group are second only to Dominicans in the percentage of low-wage workers. In addition, the percentage of Puerto Rican low-wage workers is almost two times that of white, Asian, and Mexican workers, and still significantly higher than black, and all Hispanic workers.

	DOES NOT SPEAK ENGLISH	DOES NOT SPEAK ENGLISH WELL	SPEAKS ENGLISH WELL OR VERY WELL	SPEAKS ONLY ENGLISH
Puerto Rican	0.67	2.63	54.12	42.58
White	1.23	1.80	10.28	86.69
Black	0.14	0.85	8.30	90.71
Asian	0.32	3.41	62.83	33.44
Hispanic	9.80	11.52	52.86	25.81
Cuban	3.27	7.37	80.86	8.50
Dominican	1.85	4.06	62.60	31.48
Mexican	11.68	12.94	51.59	23.79
All U.S.	1.64	2.48	15.65	80.23

TABLE 3A. PERCENT OF LOW-WAGE WORKERS AGES 18-25 BY POPULATION GROUP AND ENGLISH LANGUAGE PROFICIENCY

TABLE 3B. PERCENT OF LOW-WAGE WORKERS AGES 26 AND UP BY POPULATION GROUP ENGLISH LANGUAGE PROFICIENCY

	DOES NOT SPEAK ENGLISH	DOES NOT SPEAK ENGLISH WELL	SPEAKS ENGLISH WELL OR VERY WELL	SPEAKS ONLY ENGLISH
Puerto Rican	1.75	8.71	67.57	21.98
White	2.14	3.80	9.40	84.66
Black	0.38	1.76	8.32	89.54
Asian	4.61	22.19	57.49	15.70
Hispanic	15.73	26.84	44.58	12.85
Cuban	15.20	36.19	45.08	3.54
Dominican	18.43	25.02	46.01	10.53
Mexican	18.38	28.50	40.62	12.48
All U.S.	2.96	6.26	14.83	75.96

Tables 2(a) and 2(b) compare the educational levels of Puerto Rican low-wage workers to those of workers of other population groups and the entire U.S. low-wage labor force. Previous research has shown that low educational attainment contributes to employment in low-wage jobs and may influence labor market attachment, worker mobility, and advancement (DiMaggio and Mohr 1985; Duncan and Brooks-Gunn 1997; Reynolds, Temple, Robertson and Mann 2001). Most interesting are the results for workers 26 and older displayed in Table 2(b). As shown in the table, Puerto Ricans with less than a high school education demonstrate a higher level of participation in the low-wage labor force than the U.S. over all (24.86 percent versus 17.78 percent), as well as compared to whites, blacks, and Asians. Yet, these older Puerto Rican workers comprise a lower percentage of low-wage workers than the Hispanic community as a whole, including Dominicans and Mexicans.

Puerto Rican workers appear to be doing as well if not better than other groups as education attainment increases. For example, we see that Puerto Ricans 26 and older with a high school degree comprise a lower percentage of low-wage

	PUERTO RICAN	WHITE	BLACK	ASIAN	HISPANIC	DOMINICAN	CUBAN	MEXICAN	ALL U.S.
Agriculture	0.38	1.84	0.26	0.31	2.82	0.31	0.42	3.74	1.67
Mining	0	0.17	0.04	0.07	0.17	0.06	0.06	0.21	0.16
Construction	0.24	5.60	2.22	1.29	11.21	3.21	0.24	0.20	0.19
Utilities	3.18	0.19	0.20	0.08	0.21	0	5.08	12.65	5.51
Manufacturing	4.13	4.64	4.75	4.29	6.87	3.90	3.58	7.70	4.81
Wholesale Trade	2.00	1.84	1.55	1.76	2.60	2.08	2.27	2.79	1.86
Retail Trade	26.53	22.96	24.91	23.31	19.40	27.52	24.07	18.21	22.91
Transportation	2.69	1.67	3.56	1.80	2.30	4.28	2.51	2.14	1.92
Finance	2.17	3.95	4.32	2.74	1.63	2.64	22.27	1.44	4.12
Professional Services	5.28	6.69	7.08	6.74	4.26	6.73	6.09	3.83	6.87
Educational Services	8.01	6.91	6.40	7.55	8.52	6.17	9.80	4.37	6.94
Medical Services	5.63	6.11	8.96	13.75	4.51	2.08	8.78	1.55	6.33
Social Services	7.47	2.51	3.43	7.13	4.87	18.45	7.05	1.55	2.53
Entertainment	21.74	26.01	24.05	20.96	22.21	25.42	20.43	22.34	25.37
Public Administration	1.52	1.24	2.09	1.42	0.95	0.88	1225	0.87	1.33
Military	0.77	0.57	0.59	0.85	1.00	0.88	0.48	1.07	0.61

TABLE 4A. PERCENT OF LOW-WAGE WORKERS AGES 26 AND UP BY INDUSTRY AND POPULATION GROUP

TABLE 48. PERCENT OF LOW-WAGE WORKERS AGES 18-25 BY POPULATION GROUP AND ENGLISH LANGUAGE PROFICIENCY

	PUERTO RICAN	WHITE	BLACK	ASIAN	HISPANIC	DOMINICAN	CUBAN	MEXICAN	ALL U.S.
Agriculture	0.44	2.77	0.67	0.58	4.02	0.26	0.90	5.74	2.48
Mining	0.05	0.16	0.08	0.03	0.13	0	0	0.16	0.15
Construction	0.22	0.25	0.28	0.12	0.17	0.09	0.12	0.18	0.24
Utilities	5.23	6.83	3.93	2.19	11.84	3.47	8.70	13.27	6.65
Manufacturing	8.39	6.47	7.42	10.22	11.16	9.83	8.29	12.40	7.16
Wholesale Trade	3.33	2.44	1.97	3.91	3.44	3.31	14.40	3.63	2.49
Retail Trade	13.83	15.35	11.32	14.91	10.23	12.97	5.25	9.52	14.43
Transportation	4.80	3.03	5.35	3.14	3.06	6.75	1.00	2.42	3.33
Finance	6.40	1.75	1.44	1.53	0.85	4.17	5.86	0.72	4.87
Professional Services	9.74	5.15	4.30	4.90	3.24	8.40	10.36	2.50	9.30
Educational Services	8.51	9.29	9.33	7.76	10.64	4.13	7.93	10.54	9.87
Medical Services	11.81	10.58	17.48	7.91	5.71	13.67	8.51	5.28	10.60
Social Services	6.10	9.98	6.22	16.78	6.81	7.04	3.50	5.78	4.36
Entertainment	10.18	10.73	10.05	10.61	13.63	11.35	10.04	14.44	11.25
Public Administration	2.16	1.83	3.22	1.45	1.11	0.94	1.24	0.99	8.20
Military	1.46	0.95	0.88	1.95	1.62	2.72	1.26	1.60	1.05

workers than blacks, but a higher percentage than Asians and Hispanics. Across Hispanic subgroups, Puerto Ricans with a high school degree make up a higher percentage of low-wage workers than all Hispanics, Dominicans, and Mexicans with similar educational achievement. Yet as we consider the percentage totals across educational levels above high school, in each category of higher educational attainment, Puerto Ricans appear to show similar or lower percentages of low-wage workers than other groups and the entire U.S. population as a whole. While it may

	PROFESSIONALS AND MANAGERS	PROFESSIONAL SUPPORT OCCUPATIONS	SERVICE	SALES AND OFFICE	FARMING FISHING AND FORESTRY		PRODUCTION AND TRANSPORTATION
Puerto Rican	8.03	2.08	29.53	43.82	0.34	5.20	10.99
White	10.50	2.11	33.29	34.41	1.67	7.29	10.72
Black	11.79	2.92	38.08	24.09	0.61	5.34	17.23
Asian	19.23	3.67	23.65	43.39	0.26	2.53	7.26
Hispanic	6.18	1.63	29.05	33.02	2.76	12.93	14.42
Cuban	7.75	2.08	26.01	48.74	0.19	4.16	11.08
Dominican	12.07	2.51	24.37	44.92	0.36	7.29	8.48
Mexican	5.29	1.55	29.14	30.27	3.64	14.42	15.69
All U.S.	10.23	2.11	32.44	35.49	1.53	7.15	11.05

TABLE 58. PERCENT OF LOW-WAGE WORKERS AGES 26 AND UP BY POPULATION GROUP AND OCCUPATION

	PROFESSIONALS AND MANAGERS	PROFESSIONAL SUPPORT OCCUPATIONS	SERVICE	SALES AND OFFICE	FARMING FISHING AND FORESTRY		PRODUCTION AND TRANSPORTATION
Puerto Rican	11.53	3.87	31.33	28.93	0.51	6.88	16.95
White	17.45	3.72	25.68	31.02	2.30	7.61	12.22
Black	11.79	2.92	38.02	24.09	0.61	5.34	17.23
Asian	20.28	2.19	29.54	27.81	0.50	3.31	16.37
Hispanic	7.09	1.98	35.08	17.63	3.94	13.78	20.51
Cuban	6.36	1.74	42.66	20.17	0.26	5.21	23.62
Dominican	12.38	2.99	28.84	26.22	0.78	10.63	18.17
Mexican	5.66	1.73	34.49	15.59	5.63	15.26	21.65
All U.S.	16.05	3.41	28.14	28.93	2.11	7.62	13.75

seem that Puerto Ricans with higher educational levels may not experience the same labor market segmentation as those who participate in low-wage work, these findings should be interpreted in the context of low rates of educational attainment of Puerto Ricans when compared to other groups. According to the 2007 ACS, 62 percent of Puerto Ricans have a high school education or lower. Additionally, the national college completion rate of Puerto Ricans, approximately 15 percent, is lower than both the average for all Latinos and the national average (Belfield 2008). Thus, taken together, these findings indicate that the relatively small portion of Puerto Ricans that attain some college education do better than the average American worker. However, the vast portion of Puerto Rican workers with less than a high school education do worse than the average worker (including white, black, Asian, and Cuban) but relatively better than other Latinos (including Mexicans and Dominicans).

Tables 3(a) and 3(b) show the percentage of low-wage workers across population groups by English language proficiency levels. Considering language fluency levels, 89.55 percent of low-wage Puerto Rican workers report that they speak English well or very well or that English is their only language while about only 10 percent of low-wage Puerto Rican workers report not speaking English or not speaking English well. For the 18 to 25 age group, only less than 4 percent report not to speak English well or not at all. As shown in the table, these percentage patterns are similar to those seen in the entire U.S. workforce and within the white and black communities. Interestingly though, this is quite different from the Hispanic population as a whole where about 60 percent of low-wage workers report higher levels of English language fluency. In addition, this is in direct contrast with the Hispanic subgroups, which show almost an even split within the low-wage population group between workers who report higher levels of language fluency and those who report lower levels.

While these are simply descriptive statistics, the percentages do underscore the uniqueness of the Puerto Rican case. Research has shown that human capital characteristics can determine the labor market outcomes of Hispanic workers, and that English language fluency is an important factor in impacting outcomes (Chiswick and Miller 1990; Dustmann 1994; Dustmann and Fabbri 2003; McManus, Gould and Welch 1983). However, this does not appear to the be the case for Puerto Ricans in that they appear to exhibit characteristics closer to whites and blacks in the segmentation of workers by language. Such a reality highlights a variation in the Puerto Rican case from the literature on Hispanics in the workplace. This variation may be due to their unique citizenship status, migratory patterns experienced by a large portion of second-generation migrants and beyond, differences in perception of what constitutes English fluency among respondents to the survey, as the island's political relationship with the U.S., which promotes the teaching of English in schools, providing a minimum of language proficiency at the time of migration.

Tables 4(a) and 4(b) include a disaggregation of the percentage of the low-wage labor force as compared to the U.S. low-wage labor force and other population groups for both adults ages 26 and up as well as adults ages 18 to 25 by industrial sector. Again the results indicate few disparities between the Puerto Rican work force and that in the U.S. overall. What is interesting, however, is that Puerto Ricans comprise a much smaller percentage of low-wage workers in the agricultural sector. It is important to note that much of the research on Hispanic workers has focused on the agricultural sector, generally, and in industries that employ a significant percentage of Latino low-wage workers in the western and mid-western regions of the country.

Many of these studies on Latino low-wage workers incorporate Mexicans, and the large number of Mexican and recent Mexican immigrant workers in the agricultural sector may mask Hispanic participation in other sectors. Table 5 shows a much smaller concentration of Puerto Ricans in the agricultural sector, suggesting that they may not experience the same labor market segmentation patterns as other Latinos. Such differentiation may be due to the geographic concentrations of the Puerto Rican communities (e.g., in New York, Connecticut, Illinois), which may induce Puerto Rican workers to participate in certain industries over others. Most importantly, these findings indicate that the literature on Hispanic low-wage workers may be skewed to include the experience of specific groups, thus omitting the unique labor market experience of Latino subgroups such as Puerto Ricans and Dominicans, which can lead to inappropriate policy responses.

Tables 5(a) and 5(b) show the percentage of low-wage Puerto Rican workers by occupational category and age group. We use the occupational categories provided by the U.S. Census and compare the percentage of the Puerto Rican low-wage population to that of the low-wage population in the U.S. as a whole and across other

population groups. While there appears to be no large difference in percentages within occupations between the various groups, almost two-thirds of the low-wage population in both age categories hold occupations in service, sales, and office occupations. For Puerto Ricans alone, these two sectors account for jobs of over 70 percent of low-wage workers ages 18 to 25 and around 60 percent for Puerto Rican low-wage workers 26 and older. This finding corroborates previous research (Boushey, Fremstad, Gragg, and Wall 2007) noting the concentration of low-wage work across retail sales and service (e.g., cleaning, child care, and restaurant work), underscoring the need to understand working conditions and opportunities within these occupational sectors.

Discussion of Findings

This labor market study aims to understand the composition of the low-wage Puerto Rican workforce in the U.S. and how the composition compares to other population groups and Hispanic subgroups across the labor market as a whole, as well as across the four key industries. Using data from the American Community Survey, we estimate that from 2006 to 2008, about 50 percent of all employed Puerto Ricans ages 26 and older and about 80 percent of all employed Puerto Ricans ages 18 to 25 living in the U.S. were employed in low-wage jobs, that is, jobs that command wages less than two-thirds the median wage in their metropolitan area. We also see that more than 90 percent of those Puerto Ricans employed in low-wage jobs held no college degree while about 41 percent of all Puerto Ricans ages 26 and up had not earned a high school diploma.

In addition, we find that the low-wage labor market composition of Puerto Ricans differs from that of the Hispanic population as a whole. Our data suggests that the majority of Puerto Ricans employed in low-wage jobs are concentrated in service, sales, and office occupations, similar to the dispersion of low-wage jobs among the U.S. population as a whole. The concentration of Puerto Ricans in these sectors is different from the high concentrations of Hispanics in the construction, extraction, and production occupations, where previous research has focused on low-wage Latinos. Furthermore, we see lower concentrations of Puerto Ricans in industries such as agriculture, mining, and construction, sectors that previous studies have shown to have large concentrations of Latino workers. Such a profile underscores the uniqueness of the Puerto Rican case in the context of the U.S. and holds significant implications for the design of policy initiatives targeting Puerto Ricans employment.

Current research on the Hispanic low-wage workforce continues to focus on industries such as agriculture and Latino populations in the western regions of the U.S., thus overlooking the different experience of subgroups such as Puerto Ricans. The singularity of the Puerto Rican case in the low-wage labor market recommends a shift in the research from an emphasis on Hispanics' participation in the construction, extraction, and production occupations. Without such a shift, the implementation of policy designed to improve the labor market mobility of low-wage Hispanics will fail to help the Puerto Rican community, whose migration patterns, geographic locations, and residency status influence work and life in the U.S.

Policy makers in the U.S. have become increasingly concerned about the growing low-wage labor force, prompting a variety of policy initiatives over the last twenty years. Government and community responses have focused primarily on training that teaches job-search strategies, increases worker competitiveness and mobility, and promotes access to higher-paying jobs. thus providing a direct benefit to lowwage workers by mitigating the negative effects of their historical exclusion within labor markets (Kaye and Nightingale 2000). A more subtle understanding of the composition of the low-wage labor market and the variety of experiences across and within population groups could make the difference in shaping more effective and meaningful policy responses.

As our analysis shows, and as previous research has highlighted, given the unique profile of the low-wage Puerto Rican labor force, creating policy responses to support the mobility of Puerto Ricans requires a consideration of human capital characteristics as well as structural determinants that influence the labor market outcomes. Our statistical profile shows that some attributes of the Puerto Rican workforce closely match that of non-Hispanic population groups, some are more consistent with other Hispanic subgroups, and some are unique to the Puerto Rican population. Such realities require further examination of the relative importance of structural changes in labor markets, migration flows, institutions servicing the needs of low-wage workers, and the development of career ladders in key industries in the low-wage labor market where Puerto Ricans are concentrated.

At the same time, policy responses must also consider the local context. Research is needed to better understand the variations in low-wage labor markets that occur across regions and in geographical areas with a concentration of Puerto Ricans; one such variation is suggested by the percentage of low-wage education workers. Research must further explain the variations in industrial change, government policy, and the institutional strength of Puerto Rican communities. Such information could identify factors that contribute to the labor market insertion of Puerto Ricans in low-wage jobs and key areas of intervention, thus helping to create effective programs that will improve the economic opportunity of Puerto Ricans in the United States.

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