

A Note on the Changes in the Relative Wages of LEP Hispanic Men between 1980 and 2000

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Using the Juhn-Murphy-Pierce (1993) wage decomposition technique, we analyzed changes in the earnings differential between Hispanic and non-Hispanic white men in the United States between 1980 and 2000. The empirical findings, based on decennial census data, indicate that limited-English-proficient (LEP) Hispanic men gained in their relative earnings position compared to English-fluent Hispanics during the 1990s. Our interpretation is that the relative demand for LEP Hispanic workers has risen in recent years.

RECENT DEMOGRAPHIC AND SOCIOECONOMIC SHIFTS—INCLUDING THE RAPID HISPANIC POPULATION GROWTH, expanding trade and production opportunities in the Spanish language, and changes in immigration policy and enforcement—have presumably affected the relative earnings of limited-English-proficient (LEP) Hispanic workers in the United States. Employing U.S. decennial census data from 1980, 1990, and 2000, this study investigates changes in the earnings structure of LEP Hispanic men vis-à-vis those fluent in the English language.

The population analyzed includes United States- and foreign-born Hispanic men aged 25–64 who reported wage and salary income, and who worked at least 20 hours a week for 32 weeks or more in the year prior to the census. We use the convention of identifying the LEP as those who do not speak the English language well. The base group of comparison contains men often considered the most “assimilated” in the United States—U.S.-born non-Hispanic whites who only speak English at home (e.g., McManus, Gould, and Welch 1983). A perusal of the sample summary statistics (details are available) indicates that the earnings gap between non-Hispanic White and Hispanic men has widened since 1980. The averages of the natural logarithm of hourly earnings (defined as annual wage and salary income divided by total hours worked) of non-Hispanic White, LEP Hispanic, and English-fluent Hispanic men in 1980 were 2.04, 1.44, and 1.81; by 2000, these earnings rose to 2.86, 2.19, and 2.55.

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These figures indicate a similar growth in the Hispanic/non-Hispanic White earnings gap for the LEP and the English-fluent between 1980 and 2000, despite the increasing returns to skill that occurred during this time (e.g., Welch 2000). Perhaps the relatively large increase in the mean education levels of the LEP helped counter some of the higher skill returns. Between 1980 and 2000, the average schooling of LEP Hispanics rose by 1.3 years (from 6.5 to 7.8 years), compared to 0.8 years (from 13.1 to 13.9 years) for non-Hispanic Whites, and 0.6 years (from 11.2 to 11.8) for English-fluent Hispanics.

Empirical Analysis

We now turn to the methodology developed by Juhn, Murphy, and Pierce (JMP) (1993) and applied to gender earnings gaps by Blau and Kahn (1994, 1997). The JMP technique allows for wage differentials to be analyzed over time, not only in terms of changes in observable characteristics, but also in underlying wage structures. Consider the following earnings function for non-Hispanic White (N) men in year t :

$$\ln(W)_t^N = X_t^N B_t^N + \sigma_t^N \theta_t^N \quad (1)$$

where $(W)_t^N$ equals the hourly earnings of non-Hispanic White men, and X_t^N and B_t^N represent vectors of observable characteristics and the returns to those characteristics. θ_t^N denotes a normal standardized residual, while σ_t^N is the standard deviation of non-Hispanic White residual earnings in year t .

The wage differential between Hispanics (H) and non-Hispanic Whites in t can be expressed as:

$$\Delta W_t \equiv \ln(W)_t^N - \ln(W)_t^H = \Delta X_t B_t^N + \sigma_t^N \Delta \theta_t \quad (2)$$

with Δ denoting the differences in the average variables in X and θ between Hispanics and non-Hispanic Whites. Extending equation (2) to explore shifts in the Hispanic/non-Hispanic White wage differential between two time periods ($t-1$ and t) yields:

$$\begin{aligned} \Delta W_t - \Delta W_{t-1} = & (\Delta X_t - \Delta X_{t-1}) B_t^N + \Delta X_{t-1} (B_t^N - B_{t-1}^N) \\ & + (\Delta \theta_t - \Delta \theta_{t-1}^N) \sigma_t^N + \Delta \theta_{t-1} (\sigma_t^N - \sigma_{t-1}^N) \end{aligned} \quad (3)$$

The four right-hand side terms measure the X effect, the B effect, the θ effect, and the σ effect. For specifics on these terms, see the note to Table 1.

When estimating equation (3) for the two pairs of consecutive censuses, we separate LEP Hispanic men from those fluent in English, as Table 1 demonstrates. The first column shows that the earnings disparity between LEP Hispanics and non-Hispanic Whites widened by 0.039 log points (from

TABLE 1

JUHN-MURPHY-PIERCE WAGE DECOMPOSITION RESULTS FOR HISPANIC AND U.S.-BORN MONOLINGUAL ENGLISH NON-HISPANIC WHITE MEN DURING THE 1980s AND THE 1990s

Effect	Changes between 1980 ($t - 1$) and 1990 (t)		Changes between 1990 ($t - 1$) and 2000 (t)	
	LEP Hispanics	English-fluent Hispanics	LEP Hispanics	English-fluent Hispanics
$\Delta W_{t-1} \equiv \ln(W)_{t-1}^N - \ln(W)_{t-1}^H$	0.600	0.230	0.639	0.250
$\Delta W_t \equiv \ln(W)_t^N - \ln(W)_t^H$	0.639	0.250	0.676	0.310
$\Delta W_t - \Delta W_{t-1}$	0.039	0.020	0.037	0.060
X effect	0.007	0.007	0.020	0.049
B effect	0.109	0.037	0.135	0.030
θ effect	-0.059	-0.015	-0.128	-0.021
σ effect	-0.018	-0.008	0.009	0.004

SOURCE: The U.S. decennial census data used in this analysis are from the 1980 and 1990 1 percent Integrated Public Use Microdata Series (IPUMS) provided by Ruggles and Sobek (2003), and the 2000 1 percent Public Use Microdata Sample (PUMS) from the U.S. Census Bureau (2003). The sample includes both Hispanic (H) and U.S.-born monolingual-English non-Hispanic White men (N) between the ages of 25 and 64 who worked 20 hours or more per week for at least 32 weeks. For non-Hispanic Whites, we randomly selected a 25-percent subsample for each year, and accordingly adjusted their sampling weights by a factor of four. The sample sizes used here are 97,099 in 1980, 120,494 in 1990, and 147,363 in 2000.

NOTES: Earnings are measured by annual wage and salary income divided by total annual hours worked. The control variables in the non-Hispanic White earnings function for each year (results available from the authors) include education, experience (age-education-5), experience-squared, geographic region, residence outside of metropolitan areas, and a constant term. The X effect reflects how changes in average observable characteristics between two censuses contributed to the increase in the Hispanic/non-Hispanic White wage differential. The B effect accounts for changes in the returns to these characteristics, holding constant differences in the average characteristics at their levels in the earlier census. The θ effect measures changes in unobservable skills and characteristics between two censuses, and the σ effect captures changes in the returns to unobservable characteristics between Hispanics and non-Hispanic Whites. See Juhn, Murphy, and Pierce (1993) and Blau and Kahn (1997, 1994) for more details.

0.60 to 0.639) in the 1980s. The returns to observable skills observed in the B effect of 0.109 comprised the largest component of this growing differential. This finding is consistent with the increasing returns to skill characterizing the 1980s (e.g., Juhn, Murphy, and Pierce 1993; Welch 2000). The negative θ effects in Table 1, however, indicate that Hispanics—particularly the LEP—were able to offset some of the rising observable-skill returns through improvements in their *unobservable* characteristics between 1980 and 1990.

This tendency was more pronounced for LEP Hispanic men during the 1990s. The wage differential between LEP Hispanics and non-Hispanic Whites widened by 0.037 log points between 1990 and 2000, and the magnitude of the B effect (0.135) exceeded that of the 1980s. *Ceteris paribus*, these higher-skill returns suggest the earnings gap between LEP Hispanic and non-Hispanic White men should have increased by 0.135 log points (instead of 0.037) during the 1990s. LEP Hispanics, however, gained in unobservable skills relative to non-Hispanic Whites, as reflected in the sizeable θ effect of -0.128. These unobservable improvements seemingly offset part of the impact that rising

returns to observable skills had on the LEP Hispanic/non-Hispanic White earnings differential in the 1990s. Such unobservables could reflect factors related to expanded ethnic networking, increased trade and employment opportunities in the Spanish language, and reduced statistical discrimination against the LEP following a weakening of immigration enforcement.

Table 1 further indicates that this tendency was particular to the LEP. Between 1990 and 2000, the earnings gap between English-fluent Hispanic and non-Hispanic White men rose by *more* than wage-gap increase between LEP Hispanics and non-Hispanic Whites (0.060 versus 0.039 log points), and the θ effect of -0.021 for those who are English proficient, while negative, was small. Combined, these results indicate that LEP Hispanic men gained in their relative earnings position compared to their English-fluent counterparts during the 1990s.

Concluding Remarks

The primary empirical observation reported here is that LEP Hispanic men moved up in the earnings distribution relative to English-proficient Hispanics between 1990 and 2000. A simple relative demand and supply analysis would suggest that this effect reflects comparatively strong relative demand for the LEP, possibly stemming from the recent demographic and socioeconomic changes in the United States, such as strengthening ethnic (or Spanish-language) networks, rising Spanish-language employment opportunities, and waning immigration enforcement. This interpretation, however, does not imply that the LEP will continue to experience earnings improvements; future events impacting immigration policy or xenophobia in this country could enhance the labor market value of English-language fluency.

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