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The impact of the U.S./Mexico border region and concentrations of Mexican-Americans on Mexican-American earnings

by

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THE PROBLEM AND OBJECTIVES

There is evidence that average nominal wages on the U.S. side of the southern border are lower than those of the nonborder regions of the U.S.[1] One possible explanation for this wage differential is that the border receives an inexhaustible flow of legal and illegal Mexican labor which bids wages down in this region. More importantly, the continuous shifts in supply due to this influx keeps this wage differential from narrowing, making it permanent in nature.

An alternative explanation of this wage differential is that border residents possess different socioeconomic characteristics (such as different educational and skill levels or average hours and weeks worked) than do nonborder residents. Characteristics which, when properly controlled for, should decrease or eliminate this differential.

The policy implications are different for both explanations. If Mexican labor is the major source of this wage differential, then further restrictions on Mexican labor entry might be justified. On the other hand, if this nominal wage differential is smaller or eliminated after controlling for differences in socioeconomic characteristics, then the argument for restricting illegal entry to narrow the wage differential in question is less persuasive.

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[1]Ericson (1970b) summarized research that has studied this phenomenon.

Very few studies to my knowledge have addressed the question of the border/nonborder wage differential, and only one, by Smith and Newman (1977), has empirically studied this wage differential by controlling for socioeconomic characteristics. Their methodology and empirical conclusions are very important to this thesis; therefore, their study is briefly reviewed here.

The data source they used is the Public Use Sample of the 1970 Census which provided them with a host of socioeconomic characteristics along with an annual earnings measure. To relate this measure to hourly "wages", they controlled for hours and weeks worked. This avoids a bias if wage differentials exist due to more hours or weeks being worked in one region relative to another.

Their research included three border SMSAs (Brownsville, Laredo, and Corpus Christi, Texas) and one nonborder SMSA (Houston, Texas).[1] The number of observations used in their sample is equal to 5945.

They used a dummy variable (border = 1) to distinguish between the two areas. The controls used in their multiple regression analysis are measures of race (dummy variables representing either Blacks or Mexican-Americans), sex, education, marital status, and tenure (if the individual lived

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[1]The 1970 Census of Populations defined regions are mostly SMSAs (Standard Metropolitan Statistical Areas) though counties are sometimes used also.

in the same house five years before; had no intercounty move, a dummy variable; or worked in the central city, another dummy variable). Specifically, their model is of the following form:

$$I_i = f(\text{Region; Marital Status; Race; Sex; Education; Occupation; Tenure; Hours Worked; Weeks Worked})$$

where I is earnings and Region is the border/nonborder dummy variable. All of the control variables are dummy variables except for hours worked and weeks worked.

Their first series of regressions substantiates the fact that there is a nominal wage differential between the two regions. In other words, nominal wages in the border region are lower ($1679 less a year) than nominal wages in the nonborder region, after controlling for various socioeconomic characteristics. These results were statistically significant.

Their next step was to compare real wages between the two regions. They did so by deflating their earnings measure by a cost of living index. Since the Brownsville area does not have a published measure of this index, they had to estimate it in a field study. The differential between the two regions fell to $684, implying that part of this differential can be attributed to cost of living differences between the border and nonborder areas. The dummy variable was also statistically significant.

Finally, when they subdivided their data into race (Mexican-American over non-Mexican-American), age, and occupational groups, they found that Mexican-Americans, the senior (ages 35-45 and 45-65), and the low wage occupational groups were the ones that exhibited the largest wage differentials when compared to their counterparts of the nonborder region. Some possible explanations which they suggest for this phenomenon are lack of mobility for the elderly and the supply oriented argument mentioned at the outset of this chapter for the remaining two groups.

Other than the above relevant conclusions, their major conclusion throughout their analysis is that the wage differential is smaller than was previously believed. In fact, they concluded:

> ...this differential is of the order of magnitude that it could represent the implicit premium that individuals along the border are willing to pay for non-pecuniary advantages such as remaining close to their cultural heritage (Smith and Newman, 1977, p. 63).

One major objective of this thesis is to contribute to the border/nonborder literature by overcoming some of the limitations of the Smith and Newman study. I do this by using more border and nonborder SMSAs in my sample, and by using the 1/1000 tape for the Southwest U.S. of the Public Use Sample (PUS) rather than the 1/100 tape for Texas that Smith and Newman used. This provided me with a wider variety of SMSAs, while maintaining data manageability. The

rationale behind including more SMSAs can be divided into two parts. First, the conclusions of Smith and Newman are only applicable to Texas and exclude California. It is thus interesting to ask how general their results are. These two regions may have different socioeconomic characteristics. Second, their study does not properly control for SMSA size. A comparison between Brownsville and Houston may be misleading since Houston is a much larger SMSA than Brownsville. In my sample, the border SMSAs range from the SMSA sizes of San Diego, California to that of Laredo, Texas, while my interior SMSAs range from the SMSA sizes of Pueblo, Colorado to that of Los Angeles, California. I also redefined "border" by including only those SMSAs which are within 10 miles of the border. This, I believe, is a better standard for selection since these SMSAs are not affected by legal Mexican workers who commute daily to work in the U.S. from Mexico.

Another way I contribute to the border/nonborder wage differential literature is that I look at the importance of compensating wage differentials in the wage equations of non-Mexican-Americans and Mexican-Americans. I hypothesize that a short distance from the border and higher levels of Mexican-American concentration areas are both seen as non-pecuniary benefits by Mexican-Americans since both give Mexican Americans proximity to their own people. These two

factors may explain, as suggested by Smith and Newman in the quote above, part of this wage differential between Houston and the other three border SMSAs, since these have both higher concentration levels of Mexican-Americans and are closer to the border. Similar tests are done on non-Mexican-Americans to see if the results are unique to Mexican-Americans.

This last contribution is also an attempt to "update" the border/nonborder wage differential literature with the general geographic wage differential literature. This point is explained more in the next chapter. It should be noted here, however, that these ideas are not new. Adam Smith (1973), in his Wealth of Nations, recognized compensating factors as a guise of many wage differentials. In the mid 1970s, economists have formalized the compensating wage differential idea by analyzing these differentials with the "hedonic model". This model incorporates both individual and firm behavior. Individuals are depicted as maximizing their utility, which is a function of higher wages and working conditions. The firms are viewed as offering a variety of packages of pecuniary and nonpecuniary characteristics. This model suggests that individuals having preference for a high wage and a "bad job" (as opposed to a low paying "good job") will take jobs with firms which offer such a compensation package. Consequently,

if you can measure and control for these differences in characteristics of jobs, it follows that net wage differentials should be smaller than gross wage differentials.

The hedonic model thus shows a theoretical explanation for the existence of a wage differential among Mexican-Americans that may arise due to their differing locations from the border. Furthermore, it theoretically explains any wage differential which may be attributable to favorable nonpecuniary characteristics which border residents value.

This thesis includes four more chapters. The second chapter reviews the literature dealing with geographic wage differentials and the border wage literature which preceded the Smith and Newman article and this thesis. The third chapter explains the hedonic model in more detail and also includes an industry model which shows how wages are equalized in the long-run among geographic regions. The fourth chapter describes the data sources, the models, and the tests used, as well as the empirical results of this thesis. The conclusions, including ideas for future research as well as policy implications, are presented in the fifth chapter.

REVIEW OF LITERATURE

As mentioned in the previous chapter, this thesis is an extension of Smith and Newman's (1977) study. Their research, in turn, is based on the "north-south" geographic wage differential literature and several of the descriptive studies that have considered border problems.

The north-south literature has focused on explaining why average nominal wages of the northern U.S. are higher than those of the southern U.S. Economists have found this phenomenon interesting due to its important theoretical, empirical, and policy decision implications. Theoretically, as will be shown in the next chapter, geographic wage differentials should be equalized in the long-run in a market system. Therefore, a persistent wage differential between the two regions might imply that the market mechanism does not operate efficiently. Empirically, an issue of interest has been the migration patterns of workers and how this is related to the north-south wage differential. Before the 1960s, there was a net outmigration of southern workers to the north, supporting the hypothesis that it was due to the higher northern wages. However, this relationship is not as clear if the recent migration patterns of workers from north to south are taken into account. In fact, this suggests that this wage differential may have reversed or that the migration decision of workers is due to other

factors. The policy implications of finding a wage differential, other things equal, are important too. If a wage differential does exist, then policy decisions to help the depressed region might be justified. These may take the form of helping the depressed region with manpower programs, or simply speeding up the outflow of workers from the region. Likewise, if this differential does not exist, then any policy prescription to change wages in one region may affect equilibrium conditions in the labor markets of both regions and, thus, may not be justifiable.

Earlier studies of the north-south wage differential were concerned with explaining the sources of this wage differential rather than investigating if this wage differential actually existed. The explanation primarily came from two sources: a different industrial mix between the two regions and an excess supply of labor in the south relative to the north. For example, Fuchs and Perlman (1960) found a disproportionate share of low wage industries in the south, as well as finding that the growth of population in the south exceeded the net outmigration. Similarly, Douty (1968) found this wage differential attributable to much the same characteristics as Fuchs and Perlman. He did, however, introduce other socioeconomic characteristics, which proved to be important in later geographic differential literature research, such as color, age, sex, education, and degree of

unionization, into the geographic wage differential analysis.

These studies were continued by other economists who tested other differences between the north and the south. Gallaway (1963), in one of these studies, looked at monopsony, deficient product demand, and differences in production functions between the two regions as sources of this differential. He found little empirical support in his study for these, however. In another study, Scully (1969) regressed earnings on the capital/labor ratio (as a proxy for an excess supply of labor earnings to capital), union activity, nonwhite production workers, and the percentage of females in the labor force. He found these characteristics to be of the right sign and significant contributors to the determination of earnings. This was an important contribution since he empirically tested some of the previously untested hypotheses.

Unlike these earlier studies, recent research has questioned the existence of this wage differential. The current trend has been to compare <u>real</u> wages instead of <u>nominal</u> wages between the north and the south. The argument is, simply, that individuals react to real earnings and not nominal earnings when choosing among alternative jobs. The major study testing this hypothesis was done by Coelho and Ghali (1971). They regressed nominal wages and real wages on several control variables which included industry composi-

tion between the two regions, race and sex variables, and a dummy variable (south = 1). The idea was then to test the size and significance of this dummy variable. They found that when nominal wages were used, the dummy variable was negative and significant and consistent with the wage differential that had been estimated in previous studies. However, when real wages were used, the size of this differential fell and became insignificant, thus supporting the hypothesis that real wages are equal between the two regions. Bellante (1979) supported Coelho and Ghali's (1971) study. Specifically, he determined that cost of living along with human capital characteristics like formal education, on the job training, and experience of labor between two regions explained the north-south wage differential.

The newest development in the geographic wage differential literature has been to test for differences in amenities between regions as possible sources of regional differentials. For example, Hanushek (1981) uses measures of crime rates and climate (among other compensating variables) and regresses earnings on these. He finds both the crime rate and climate variables to be significant determinants of earnings. However, it should be noted that the major point of his study is to show that more research should be done on determining the structure of the models used to estimate geographic wage differentials.

The literature discussed above provides a background for border/nonborder wage differential studies. A second set of studies has focused on the U.S.-Mexican border and provides important ideas for this study. Specifically, Ericson (1970), in studying the industrial structure of U.S. southern border cities, explains the different socioeconomic characteristics (employment, population, and industrial mix) of each one of these border cities. This is important since it shows that border regions should be studied as a heterogeneous region, a point which becomes very relevant later in this thesis.

Briggs (1975) has studied the characteristics of illegal aliens. And by analyzing these characteristics (they are mostly male, young, and illiterate), it is possible to isolate similar subgroups among border residents which are more likely to be affected by illegal migration. The importance of this point also becomes relevant later in this thesis.

The Smith and Newman (1977) study takes into account much of the progress of the geographic wage differential literature. This is evident by looking at their multiple regression analysis and noticing the control variables they used: race, sex, occupation, tenure, and cost of living. Nevertheless, there still remain important questions to be answered in the border/nonborder literature that have already been explored in other regional differential studies,

such as those being tested in this thesis and mentioned in the previous chapter. The objective of the following chapters is to attempt to answer some of these questions.

THEORY

Economic theory suggests that, if costless information and mobility exist in a perfectly competitive market, real wage differentials between regions of similar labor should disappear. There are three independent mechanisms which would bring this about: interregional trade in goods, mobility of capital, and mobility of labor. Interregional trade in goods would bring about a real wage equality if some regions can produce a good at a lower cost relative to other regions. This cost reduction could be due to differences in wages among different places. If transportation costs did not fully offset these savings, it follows that individuals of other regions would purchase the good from the lower priced region, thereby increasing the demand for the good and increasing the demand for labor in this region also. This process would continue until real wages between the regions and the relative cost advantage between regions would be eliminated.

Mobility of capital would occur since firms would want to take advantage of the cheaper resources of one region relative to another. An increase of capital in a region should have the effect of increasing the marginal product of labor and consequently increase the demand for labor. Some of this increase should be offset by a decrease in the product price, since output would expand as the input costs

go down. An extreme case would be when the decline in the product price offsets the increase in the marginal product. In the aggregate, however, as you sum up all labor demands in the defined region, the increase in capital should have the effect of increasing the demand for labor. Consequently, wages would be bid up in this region, a process which would again eliminate wage differentials among regions.

There also would be a migration incentive for workers when a real wage differential exists between regions. Workers considering the present value of their expected returns by migrating would match these with the costs of migration and, thus, would either decide to accept the higher paying job in another region or not. Again, this process would increase the supply of labor in the higher wage region and reduce it in the lower wage region until wage equality would be restored.

This process, however, abstracts from regional specialization of production of goods and the fact that workers also value nonpecuniary advantages of a job. With specialization of production among regions, the second mechanism above is not effective since consumers can only buy goods from a particular region. This is not such a serious problem since the other two mechanisms would still eliminate the wage differential. However, if individuals value nonpecuniary aspects of jobs, then it is possible to have a pecuniary wage differ-

ential among regions. This is so for two reasons. First, workers will not migrate if they believe that their pecuniary plus nonpecuniary benefits are equal to any other region. Second, the assumption of perfect geographic mobility of firms is unrealistic even in the long-run. Some firms may have geographic specific resources in their production process or may need a "pool" of qualified labor which may also be specific to only a select number of regions.

The point is that, if due account is taken of these nonpecuniary characteristics, geographic wage differentials should be eliminated in the long-run. To formalize this discussion, two models are presented. The first, Bradfield's (1976) model, shows how compensation for workers should be equalized in the long-run. The difference between wages of similar labor can be due to either differences in efficiency between labor of different regions and to nonpecuniary aspects of jobs as judged by workers. The second model, the hedonic model, expands on the explanation of the wage differentials attributable to nonpecunicary characteristics. Both models have relevant empirical implications for this thesis. For one, border/nonborder wage differentials can be due to differences in socioeconomic characteristics such as education, age, and tenure. Also, distance from the border for Mexican-Americans may be an important nonpecuniary attribute to Mexican-American residents of the border.

The Bradfield Model

This is an industry model where the production function is homogeneous of degree one. Both product and factor markets are assumed to be competitive:

$$X = Px\ A\ Q^{\alpha}\ N^{1-\alpha} \tag{1}$$

where:

X = value added by industry

Px = price received by the firm for its output

A = neutral efficiency coefficient

Q = CK, C being the efficiency coefficient of capital, K

N = BL, B being the efficiency coefficient of labor, L. B also takes into account any nonpecuniary aspects of a job.

Since the input markets are competitive, both labor and capital receive their value of marginal product:

$$VMPk = rPk = \partial X/\partial K = \alpha Px\ A\ C^{\alpha}\ B^{1-\alpha}\ k^{\alpha-1} \tag{2}$$

where:

r = rate of interest

Pk = cost of capital

k = K/L

Solving for k, equation 2 can be rewritten as:

$$k = (rPk/\alpha Px\ A\ C^{\alpha}\ B^{1-\alpha})^{(1/\alpha-1)} \tag{3}$$

$$VMPL = W = \partial X/\partial L = (1-\alpha)\ Px\ AC^{\alpha}\ B^{1-\alpha}\ k^{\alpha} \tag{4}$$

$$W = (1-\alpha)\ (PxA)^{(1/1-\alpha)}(rPx)^{(\alpha/\alpha-1)}C^{(\alpha/1-\alpha)}B \tag{5}$$

If a comparison is made between the wages of two regions, say regions i and j, then the ratio of 5 between these two regions shows the factors that account for this differential:

$$Wij = (Pxij\ Aij)^{(1/1-\alpha)}(rij\ Pxij)^{(\alpha/\alpha-1)}Cij^{(\alpha/1-\alpha)}Bi_j \quad (6)$$

Now, if the following assumptions are made:

(a) Product prices are the same for the two regions (a reasonable assumption since goods are usually produced for a national market, making these the same for consumers of all regions);

(b) Interest rates are the same for the two regions (financial markets provide a consistent interest rate for all regions; if not, then individuals would lend or borrow money in the region which is more competitive for them);

(c) Efficiency of capital and technology is the same for the two regions (capital is bought in a national market making all firms equally competitive in this regard);

then equation 6 reduces to:

$$Wij = Bij \quad (7)$$

Equation 7 thus indicates the pecuniary and nonpecuniary reasons why wages may be different between regions i and j. In the case of the border and nonborder regions, this model

suggests that efficiency characteristics such as education and experience are important explanatory variables in this wage differential. It also suggests that amenities of the two areas also are important characteristics which should be taken into account in a study of the wage differential between the two areas.

The Hedonic Model

As mentioned in the introduction, Adam Smith (1973) was the first to introduce the idea of compensating wage differentials into economic thought. He described how jobs with different characteristics would receive different wages. Among the characteristics he mentioned is agreeableness of the job. In short, individuals with more agreeable jobs will accept lower paying jobs, other things equal, than those with less agreeable jobs.

Contemporary economists have developed the hedonic model to convey this idea of compensating wage differentials (see, for example, Ehrenberg and Smith, 1982). The assumptions of the model are three. First, workers seek to maximize their utility and not their income when choosing among alternative jobs; likewise, firms attempt to maximize their profits. Second, both workers and firms have perfect information. Third, workers are perfectly mobile enough to change jobs if they consider that a new job can attain a

higher utility level.

Workers' side of the market

The hedonic model is applicable to any nonpecuniary aspect. But the underlying idea behind the hedonic model, in the context of this thesis, is that some Mexican-American individuals dislike the idea of living away from the border. Living close to the border means that they are closer to their cultural heritage--Mexico. In order for these workers to remain at the same level of utility and live away from the border, they would have to be compensated with higher wages. Using graphical analysis, indifference curves can be used to trace combinations of wages and distance from the border which yield the same level of utility.

The indifference curves should be drawn to show that distance from the border is a "bad" and that wages are a "good"; and, also, that their slope reflects a diminishing marginal rate of substitution between distance and wages. This means that the first miles away from the border can easily be compensated with small increments in wages; however, as distance increases, greater increments of wages must be obtained in order for the worker to remain at the same level of utility. Indifference curves such as the ones presented in Figure 1 fill these requirements.

As shown in Figure 1, U2 represents a higher level of

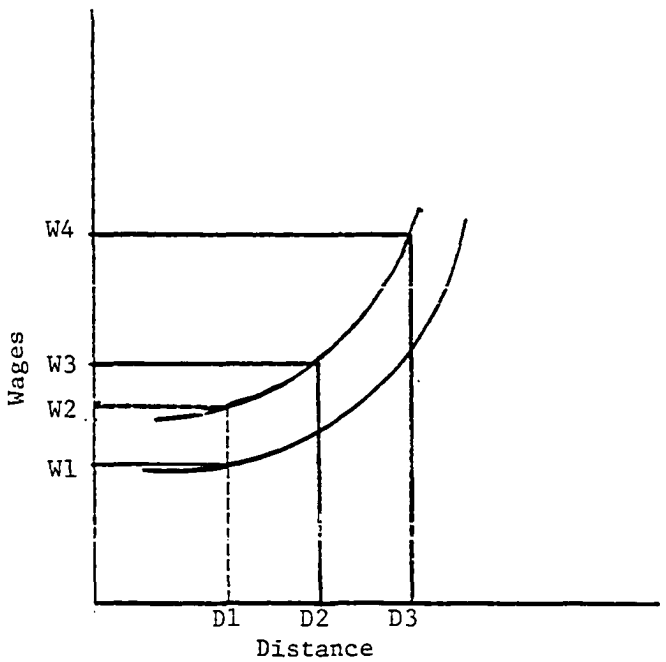

Figure 1. Indifference curves (distance/wages space)

utility than U1. This is so since at the same distance from the border (D1) the worker can attain higher wages at U2 (W2) than at U1 (W1). Also, the slope of U1 and U2 shows that greater increases in wages must be obtained by the worker the farther away he is from the border, i.e., $D3 - D2 = D4 - D3$, but $W4 - W3 > W3 - W2$.

Different indifference curves can be drawn for different individuals. This can be done by noting that some individuals differ as to their aversion to distance. The following cases are considered in Figure 2.

There are three individuals, A, B, and C, who have different aversions to distance from the border. A is more distance averse than B. B is more distance averse than C. This can be proved by looking at Figure 2. To move D2-D1 miles away from the border, individual A requires W3-W1 more in wages compared to W2-W1 which B requires (C is "distance neutral"--he requires no change in wages). It is obvious from Figure 2 that $W3 - W1 > W2 - W1$.

Firm's side of the market

On the firm's side of the market, there also are economic forces which show a trade-off between wages and distance from the border. The hedonic model incorporates firm behavior by using isoprofit curves. An isoprofit curve, in this particular case, is a locus of combinations between wages and distance from the border which shows the same level of profit

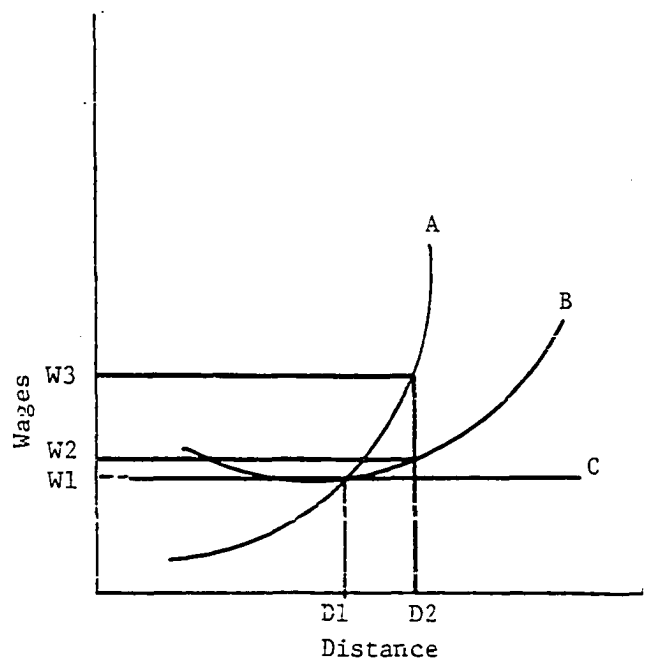

Figure 2. Different degrees of aversity to distance of individuals

for a firm. Given the assumption of zero long-run profits under perfect competition, the relevant isoprofit curve at which the firm will operate is that of zero profits.

For simplicity, two types of firms are considered here. One firm has no long-run costs in locating. The other does have long-run location costs.

The isoprofit curves, on the wages-distance space, of the first firm would be totally horizontal. Since moving to the border region does not create long-run costs to this firm, it need not lower wages to border workers to remain at the same profit level. In the long-run, this type of firm will offer the same wage rate in every region. Graphically, the isoprofit curves would look like those in Figure 3.

The other type of firm, having location costs, does have a trade-off between wages and distance. The source of these costs are two. First, there are costs due to specialized labor in the production process. Locating close to the border area would increase these costs since firms would have to recruit this labor (assuming firms cannot meet their labor needs in the border). These increased costs would have to be offset by lower wage offers to border workers to remain at the same profit level. Second, there are also costs due to fixed natural resources in production; for example, a mining firm. Since, for instance, it is costly for this type of firm to locate in regions of low-grade mining, it must also reduce job offers to border residents as in the case before.

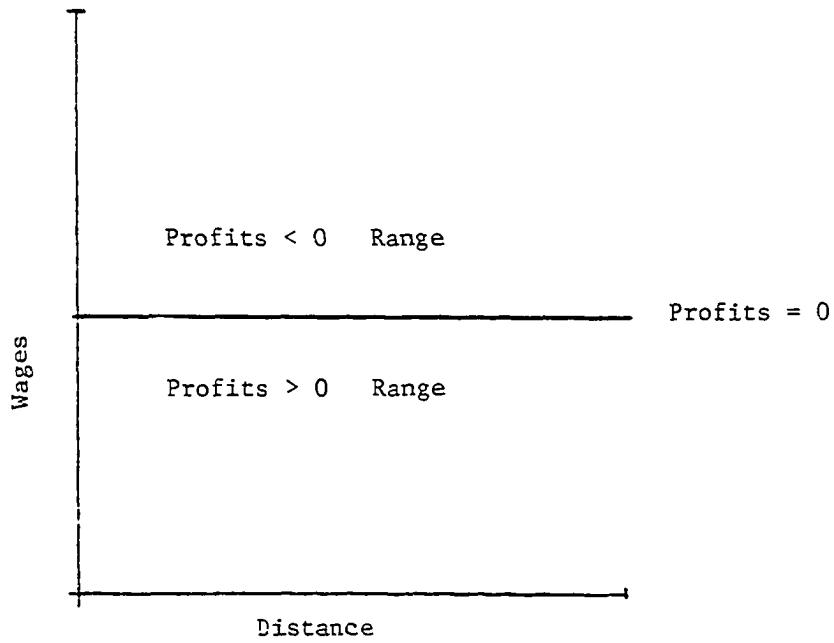

Figure 3. The isoprofit curve of a firm with no location costs

The isoprofit curves for this type of a firm look as those presented in Figure 4. Isoprofit curves that lie above the zero isoprofit curve have profits less than zero since wages are higher at every distance from the border. Isoprofit curves that lie below the zero isoprofit curve have profits greater than zero since wages are lower at every distance from the border.

The shape of the isoprofit curve for this type of firm reflects the increasing marginal cost of reducing distance by an additional unit of distance--say a mile. Specifically, the first miles of reduction in distance would entail small marginal costs and, thus, the reduction in wage offers is small. Consequently, for the firm, every mile reduced can only be attained at greater reduction of wages, i.e., $D3 - D2 = D2 - D1$, but $W2 - W1 > W3 - W2$.

Generalizing, there will be firms that have different mobility costs depending on their production process. Consequently, some firms will have greater marginal costs than others in locating close to the border. Consider three firms X, Y, and Z in Figure 5.

Firm X has greater relocation marginal costs than the other two firms. Firm Z has no location costs and thus its marginal costs are equal to zero. Firm X thus has to offer a greater reduction in wages ($W3 - W1 > W2 - W1$) than does Firm Y.

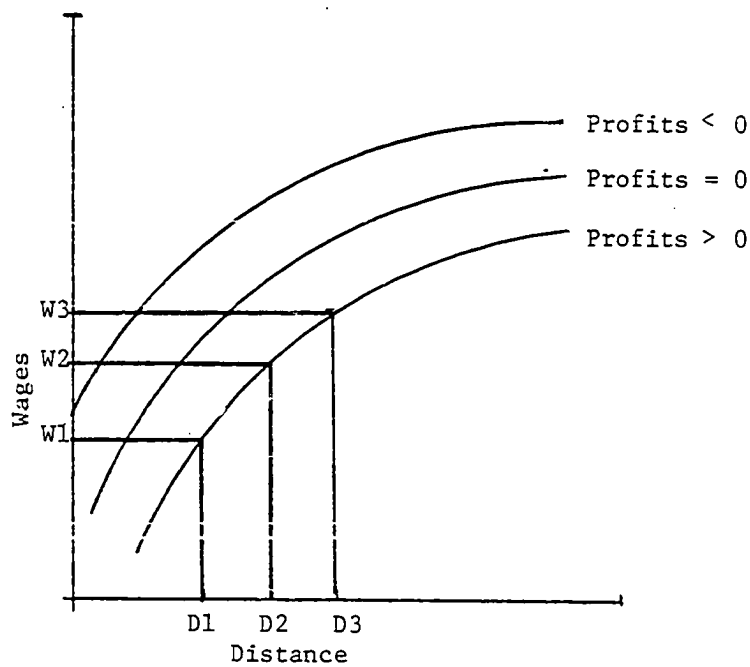

Figure 4. The isoprofit curves of a firm with location costs

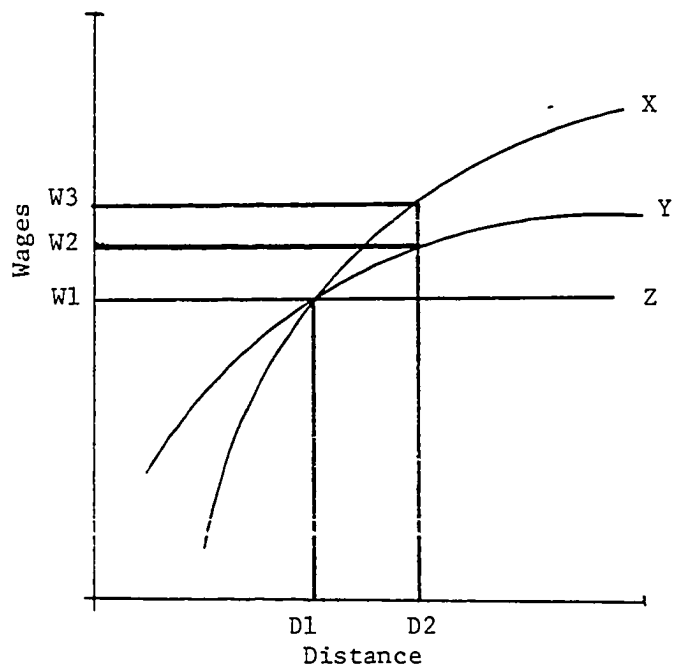

Figure 5. Different location costs of firms

Matching of workers and firms

The goal of workers is to maximize utility. However, they are constrained by the offers made by firms. Firms seek also to maximize profits, being also constrained by two forces. First, they cannot make too lucrative wage offers since these would entail higher costs and thus lower profits. Second, if their wage offers are too low, workers would simply not be attracted to these jobs. Graphically, the relevant "offer curve" for the worker and firm is the darker line of Figure 6.

It follows that workers maximizing their utility will only agree to work for the firm that offers the highest wage for a given distance from the border.

Combining workers and firms in the same distance/wage space, individuals with preferences similar to A's will work for firm Y at Dy, Wy. Likewise, individuals with preferences similar to B's will work for firm X at Dx, Wx. The compensating wage differential for individual B for being Dx-Dy miles farther from the border is then Wx-Wy.

Predictions from the model

This model gives a theoretical prediction that one important source of the wage differential among Mexican-Americans, after controlling for all other possible sources, in the border and nonborder regions is distance from the border. Mexican-Americans thus accept jobs in different

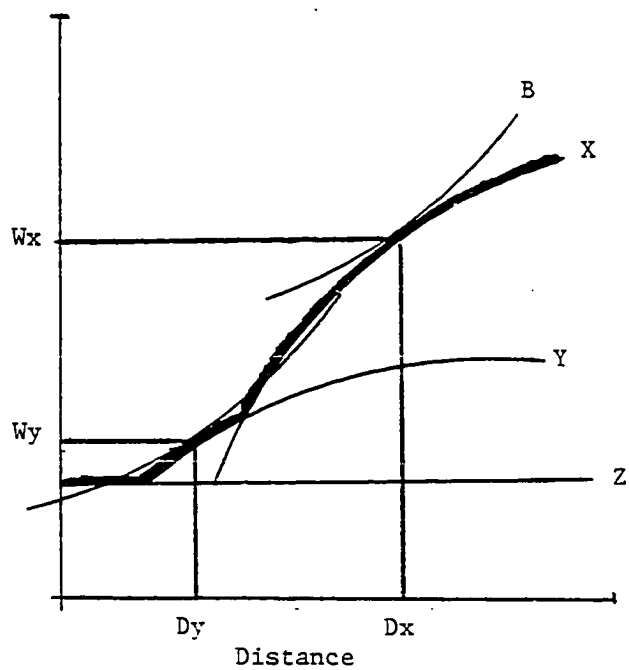

Figure 6. Matching workers with firms

firms by considering how far these are from the border. Those with high preferences (Type A individuals) for the border will locate close to the border at a lower wage than those that have a low preference (Type B individuals). This wage differential thus represents (Wx-Wy), a compensating wage differential to being closer to the border (Dx-Dy).

It should be noted that distance from the border may not be the only locational consideration for Mexican-Americans. They may also be attracted to regions which have high concentration levels of Mexican-Americans. In this event, the analysis above still applies, since Mexican-Americans value the closeness of "their own people" much in the same way as they do distance from the border. A test of this possibility is considered in the empirical chapter of this thesis.

It should also be noted that other amenities may be present in the border such as a more favorable climate or possible lower crime rates. The analysis of these two variables follow the same idea as above. These two are briefly considered in the empirical section of this thesis also.

Referring to Figure 6, there is an implication that only Z type firms will locate in the border area, in the intermediate run. These firms, as mentioned before, <u>do not</u> require either specialized labor or capital, symptomatic of firms which are low skill labor intensive. Firms of this

type will tend to locate closer to this pool of unskilled labor near the border, while the more capital specialized intensive firms will locate outside the border area. In the long-run, Mexican-Americans will have an incentive to upgrade their education. Hence, in the long-run, firms which require more highly trained labor will find it advantageous to locate in the border area.

It should be stressed, however, that the period of time for educational advancement could take generations. Thus, it is still of interest to empirically study the predictions of wages and distance of the hedonic model for the border region.

In summary, this theoretical analysis suggests that any empirical analysis of geographic wage differentials should consider both pecuniary and nonpecuniary variables. The next chapter deals with testing these theoretical results with multiple-regression analysis.

PROCEDURE AND EMPIRICAL RESULTS

The major data source used in this study is the 1/1000 Public Use Sample (PUS) data of the 1970 Census of Population. It is convenient at this point to mention the major advantage and disadvantage of using this data set (other data sources are discussed later in this chapter).

The advantage is that it contains a variety of socio-economic characteristics, along with an annual earnings measure, for each individual in the sample. This is advantageous since it is possible to test, using multiple-regression analysis, the effect of the border/nonborder wage differential when some of these characteristics are used as control variables.

The disadvantage, however, is that only annual earnings are available rather than hourly or weekly earnings. This is a problem since workers' annual earnings could be different between individuals due to a difference in hours worked per week and weeks worked per year. This problem is identical to that faced by Smith and Newman (1977) in their study, as mentioned in chapter 1. And as mentioned in chapter 1, they used controls for hours worked per week and weeks worked per year in their multiple regression model. The problem with doing this, however, is that the PUS measure of annual earnings, as well as weeks worked per year, are for the year of 1969. But the measure of hours worked per week

is for the census week of 1970. To use these data, an assumption that has to be made is that individuals in the sample worked approximately the same number of hours in 1969 as they did in 1970. This, however, is not a crucial assumption for the results obtained in this thesis since this measure is only used as a control variable.

It is also important to note at the outset two additional points about the data. First, the annual earnings measure includes earnings from wages, salary commissions, bonuses, or tips from all jobs and excludes earnings from non-farm business, professional practice or partnership, farm business, income from social security or railroad retirement, and public assistance or welfare. Second, the data were reduced to 1149 observations which included observations from five southwestern states: Texas, New Mexico, Arizona, California, and Colorado (see Appendix A for a listing of these SMSAS). The reduction was done to save computing costs. In doing so, only employed males, heads of household, were chosen. This was done to avoid any biases in the results that may have occurred by including secondary workers such as females or teenagers. In addition, rather than just take a random sample, I used all of the Mexican-Americans in order to have the largest possible number of observations of this group. A comparable number of non-Mexican-Americans was chosen. This was done by randomly selecting individuals from

this group (using a random identification number at the beginning of each observation) and then matching as closely as possible the occupations of this group to that of Mexican-Americans.

To test the two major hypotheses of this thesis, this chapter is divided into two parts. First I ask, Is there a U.S./Mexico, border/nonborder wage differential? Second, Are compensating wage differentials important in the wage structure of Mexican-Americans?

Is There a U.S./Mexico, Border/Nonborder Wage Differential?

Looking at the mean annual earnings between the two regions

Table 1 shows the mean annual earnings between the border and nonborder regions for the aggregate data as well as the same data broken into two regional areas, east and west, and between Mexican and non-Mexican-Americans.[1] The rationale for comparing means is that these provide first approximations of actual differentials which may exist between regions and races. It also serves as a base for interpreting the differentials estimated by using multiple regression analysis.

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[1]The west region includes only California SMSAS while the east region includes the SMSAs of the other four states. This division was made to separate the San Diego border SMSA from the other SMSAs due to its different size relative to these other border SMSAs. A listing of these SMSAs is in Appendix A.

Table 1. Border/nonborder mean earnings[a]

	Border (WB)	Nonborder (WN)	(WN-WB)/WB
Nominal earnings			
All data	$8785(246)[b]	$9470(903)	.0780
East	7338 (94)	9156(445)	.2478
West	9713(152)	9879(458)	.0171
Mexican-American	5164 (73)	6642(368)	.2862
East	4704 (56)	6196(141)	.3163
West	6671 (17)	6920(227)	.0373
Non-Mexican-American	9807(173)	9771(535)	-.0004
East	9405 (38)	9431(304)	.0003
West	9920(135)	10217(231)	.0299
Real earnings			
All data	9104(246)	9343(903)	.0263
East	8304 (94)	9380(445)	.1296
West	9732(152)	9305(458)	-.0439
Mexican-American	5684 (73)	6453(368)	.1353
East	5385 (56)	6304(141)	.1707
West	6671 (17)	6546(227)	-.0187
Non-Mexican-American	10070(173)	9650(535)	-.0417
East	10600 (38)	9680(304)	-.0868
West	9920(135)	9620(231)	-.0302

[a]The aggregate mean measures were estimated as follows: Aggregate Mean Earnings = Non-Mexican-American Mean Earnings x (MA) + Non-Mexican-American Mean Earnings x (1-MA); where i = All Data, East and West. The MA variable is the percent Mexican-American for each SMSA. This was obtained from 1970 Census Reports (1970a,b) by considering only male Mexican-Americans in the labor force. A weighted average was then used to estimate this percentage by the regions defined above, by taking into account different population sizes of SMSAs. This procedure had to be used since the sample of this thesis, as mentioned in the text above, oversamples the number of Mexican-Americans in each region.

[b]The number in parentheses represents number of individuals in each division.

Specifically, Table 1 shows the nominal earnings differentials. There are several points of interest here. First, when the aggregate border/nonborder comparison is made, a 7.8% differential is found. But this differential can, for the most part, be attributed to a 22.8% differential found in the east compared to only a 1.71% differential found in the west. Second, this differential is greater for all divisions of Mexican-Americans relative to non-Mexican-Americans. And, for the Mexican-American group, the east differential is, as above, much larger than that found for the west. In addition, for the non-Mexican-American group, there is little or no differential when the aggregate differential is estimated. The wage differential is essentially zero in the east while it is small (2.99%) in the west.

From Table 1, implications could be drawn (much like those made by other border studies mentioned in the review of literature chapter). Specifically, this differential can be due to the depressing effects of legal and illegal Mexican labor on the border region. If so, it appears that Mexican-Americans are the most affected by this entry. We may also note that these differentials fail to control for cost of living differences.

To explore this possibility, Table 1 also shows these same differentials but using real rather than nominal earnings. The procedure here was to divide nominal earnings by

a cost of living measure.[1] This, as expected, provides us with different results. First, the differential between the border and nonborder regions falls to 2.6% when the aggregate data are used. Second, non-Mexican-American real earnings are actually higher along the border than in the nonborder region, while the border/nonborder real earning differentials of Mexican-Americans fall relative to the comparable nominal earnings differential. By region, the real earnings differentials also fall relative to the nominal earnings differentials.

The difference in results found by using real rather than nominal earnings suggests that there are other possible sources of this earnings differential. More importantly, implications drawn from mean differentials may be misleading. It does, however, suggest that the eastern region has lower annual earnings than the west. It also suggests that Mexican-Americans possibly have greater wage differentials than do non-Mexican-Americans. The next step is to submit these data to a more rigorous investigation.

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[1]These were obtained from Liu (1974). The advantage of this data source is that it provides a consistent set of cost of living measures with the SMSAs of the 1970 Census. The disadvantage is that some of these are estimates. Liu estimated living costs for cities not surveyed by taking either the cost of living of neighboring SMSAs or by computing regional averages of similar sized SMSAs from that area.

Controlling for socioeconomic characteristics[1]

A better approach to analyzing the border/nonborder differential is to control for socioeconomic characteristics. This enables us to isolate effects which are not specific to a region and which bias the differential obtained with the means approach above. In doing so, a convenient technique to use is multiple regression analysis. And since the PUS data contain a wide variety of characteristics, it is possible to regress annual earnings on these characteristics, after controlling for hours worked in a week and weeks worked in a year.

This part presents such analyses. Two general models are presented. One uses nominal earnings and the other real earnings as dependent variables. Table 2a contains a list of abbreviations used in the regression tables in this thesis.

Before presenting the analyses, it should be noted that the multiple regression analyses follow the basic model of Smith and Newman (1977). After controlling for relevant socioeconomic characteristics, a border/nonborder dummy variable is used to estimate this wage differential. The results are compared to those of Smith and Newman where applicable.

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[1] In the analysis that follows, there is a potential problem with using HOURS AND WEEKS WORKED as a control variable. This variable can be considered as an endogenous variable since individuals consider earnings to determine their hours supplied to the labor market. This also is a problem with the INDUSTRY and OCCUPATION control variables since these can also be seen as being endogenously determined. Future research should address this problem.

Table 2a. List of abbreviations used in the regression tables

Abbreviation	Explanation
INT	Intercept
BOR	Border
MAR	Not married
HRS	Hours worked
WKS	Weeks worked
E1	7 years or less of education
E2	7 to 8 years of education
E3	9 to 11 years of education
E4	13 to 16 years of education
E5	17 years of education
E6	More than 17 years of education
EM	E2 + E3
EN	E4 + E5 + E6
01	Professional, technical and kindred workers
02	Managers and administrators, except farm
03	Sales workers
04	Clerical and kindred workers
05	Craftsmen and kindred workers
06	Operators, except transport
07	Transport equipment operators
08	Farmers, farm laborers and farm foremen
09	Service workers
010	Private household workers
I1	Agriculture, forestry and fisheries
I2	Mining
I3	Construction
I4	Manufacturing
I5	Transportation, communications, and other public utilities
I6	Wholesale trade
I7	Retail trade
I8	Finance, insurance and real estate
I9	Services
I10	Professional services
OH	01 + 02
OW	03 + 04
EX	Experience
EX1	EX^2
BL	Black
ME	Mexican-American
CP	Cost of living index
MAP	Percent Mexican-Americans
DIST	Distance from the border

Nominal earnings This regression model has the following form:

$$Ii = f(BORDER;UNMARRIED;EDUCATION;OCCUPATION;INDUSTRY;\ EXPERIENCE;RACE;HOURS\ WORKED;WEEKS\ WORKED) \quad (1)$$

where Ii are annual nominal earnings for each individual in the sample. All of the variables used in this model are dummy variables except for EXPERIENCE, HOURS WORKED, and WEEKS WORKED which are continuous variables.

The UNMARRIED variable controls for the lower annual earnings generally found for individuals who are not married. The expected sign of this variable is negative since, in the following tests, unmarried individuals have a dummy variable equal to 1.

There was a choice between using the EDUCATION variable as a continuous variable or a set of dummy variables. The latter was chosen since additional years of education may have different effects on earnings depending on the level of schooling. For example, an additional four years in college may have a different marginal effect than four years in high school. Consequently, the EDUCATION variable is divided into seven categories (see Table 2a[1]). But this division is not ideal when race and geographic region divisions are made, since some categories do not have very many observations. This makes the statistical results for the category with

[1]Table 2a does not include the deleted category. The deleted category for this, and for the other references later in this chapter, are mentioned in the body of this chapter.

insufficient observations subject to large sampling errors and difficult to interpret. Therefore, only four categories are used when subdivisions are made (see Table 2a). These subdivisions were defined with two things in mind: that each category had more than 15 observations and/or that the same categories were chosen for all subdivisions.

Another important control is the occupation of an individual (the occupations selected are two digit code occupations). Occupations vary in skill and possess different compensating characteristics (for example, risk levels). This leads to earnings differentials among occupations. In these tests, the OCCUPATION variable presented the same problem as did the EDUCATION variable when subdivisions were made. In this case, the solution was to reduce the categories for this characteristic from ten to four (see Table 2a). The rationale for this aggregation was based on the reasons mentioned above for EDUCATION and also on the fact that these divisions proved to be convenient for data manageability, when analyzing compensating differentials later in this chapter.

And just as occupational categories lead to different average earnings, the industry in which an individual works is also an important consideration in earnings differentials. It was decided, in this case, to use the two digit code industrial classifications as provided in the PUS data for the INDUSTRY variables. This was done since it was difficult to create broader categories with the eleven that were

originally selected. And though some of the results may be misleading due to the small sample size, it was judged that this set of variables was important to control for effects that the other variables did not pick up. For example, two individuals may work in the same occupation but in different industries and have different earnings. This could be due, again, to compensating differentials.

Three races are distinguished: Anglo, Black (Dummy = 1, 0 otherwise), and Mexican-American (Dummy = 1, 0 otherwise). The rationale for making these divisions, in this context, is to identify the effect of discrimination on earnings. These controls are used where applicable. Specifically, when running the aggregate sample, it was necessary to include both the Black and Mexican-American dummy variables. But when running the non-Mexican-American sample, only the Black variable was entered.

The EXPERIENCE variable (Age - Number of schooling years - 5) is used in a quadratic form. This was done to capture the effect of diminishing returns of additional earnings due to additional years of experience. If this hypothesis is true, then the linear term should be positive and the squared term should be negative.

Finally, as explained before, HOURS WORKED and WEEKS WORKED are entered due to the fact that I only have data on annual earnings. A problem with annual earnings is likely

if some individuals, on average, work more hours a week and/or more weeks a year than other individuals, other things equal.

Table 2b shows the regressions estimated using the appregate data for all races and both regions. The first thing to note is the border variable in column 1. This says that after controlling for the socioeconomic characteristics of model 1, border residents earn, on average, approximately $500 less than nonborder residents. This is a 5.5% differential using nonborder means as a base.

When compared to the 20% differential Smith and Newman (1977) estimated for nominal earnings, this differential shows a marked reduction. This suggests that my broader selection of border and nonborder regions, as well as the differing sizes of these regions, is an improvement over Smith and Newman's limited sample.

Another important point here is that the border variable loses its statistical significance. This raises questions of the existence of this differential in the first place.

Columns 2 and 3 of Table 2b suggest some interesting results as well. Smith and Newman did a test on the heterogeneity of the border region by comparing earnings of the three border regions to Houston. They found these differentials to be different and concluded that "There are likely to be substantial differences between areas along the U.S.-

Table 2b. Mexican-American and non-Mexican-American nominal earnings[a]

Variable	DF	All data		East		West	
		Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
		(1)		(2)		(3)	
INT	1	14.58	1.36	13.96	0.87	11.15	0.76
BOR	1	-5.00	-1.46	-8.90	-1.50	-0.79	-0.18
MAR	1	-13.97	-2.96**	-24.77	-2.96**	-9.69	-1.75
HRS	1	0.47	0.45	1.66	1.01	1.15	0.85
WKS	1	7.40	5.48**	5.93	2.61**	8.48	5.17**
E1	1	-22.79	-4.57**	-27.04	-3.41**	-11.90	-1.86*
E2	1	-16.00	-2.59**	-24.04	-2.50*	-4.84	-0.61
E3	1	-11.88	-2.78**	-12.97	-1.91	-7.59	-1.40
E4	1	5.60	1.34	1.86	0.27	6.98	1.38
E5	1	44.33	4.77**	64.88	4.47**	24.41	-2.06*
E6	1	62.07	7.16**	55.01	4.02**	69.58	6.40**
01	1	28.95	3.79**	28.24	2.41**	29.24	-2.86*
02	1	25.75	3.71**	32.19	3.15**	20.03	-2.09*
03	1	5.29	0.64	22.99	1.84	-12.15	-1.09
04	1	-1.75	-0.23	0.09	0.01	-2.73	-0.24
05	1	4.34	0.71	4.01	0.45	3.41	0.40
06	1	3.94	0.58	5.65	0.54	0.82	0.09
07	1	0.61	0.08	-1.89	-0.18	1.29	0.12
08	1	-9.17	-0.89	-5.85	-0.36	-16.64	-1.21
09	1	-5.67	-0.75	-10.79	-0.94	-3.72	-0.38
EX	1	2.97	8.85**	2.96	5.74**	2.88	6.54**
EX1	1	-0.05	-7.46**	-0.04	-4.78**	-0.05	-5.54**
I2	1	6.89	0.55	5.25	0.33	24.36	0.95
I3	1	9.96	1.51	6.58	0.65	11.79	1.37
I4	1	8.30	1.42	8.23	0.92	4.47	0.58
I5	1	8.78	1.34	-4.58	-0.48	25.88	2.89**
I6	1	6.76	0.93	5.74	0.53	6.06	0.63
I7	1	3.43	0.54	-2.22	-0.23	5.15	0.62
I8	1	16.09	-1.74*	15.97	1.13	12.52	1.04
I9	1	-1.68	-0.24	9.80	0.94	-15.04	-1.65*
I10	1	-10.98	-1.46	3.29	0.27	-20.96	-2.21*
ME	1	-13.97	-4.13**	-14.27	-2.65**	-13.74	-3.08**
BL	1	-28.63	-4.05**	-28.10	-2.98**	-25.77	-2.31*
R^2		.364		.396		.398	
N		1149		539		610	

[a]All coefficients should be interpreted in hundreds of dollars in this table and Tables 3 through 8.

*,**Significant at the 5 and 1% levels, respectively.

Mexican border.... A regional development program designed to solve this problem which exists in this area should seriously consider this fact" (Smith and Newman, 1977, p. 59). Since their test only includes Texas border SMSAs, it was of interest to see if a broader set which includes more SMSAs (such as that of this thesis) along the border region gave the same results.

In column 2, the east differential is $890 while the west differential is $79. These results show a large difference, supporting Smith and Newman's statement that border regions are different and that due account should be taken of this fact.

However, two important points should be made here. First, both of these coefficients are statistically insignificant, raising questions as to the existence of any wage differentials. Second, there is only one border region in the west sample, San Diego, California. The relative size of San Diego compared to the SMSAs of the western region may have biased these results. But other similar sized SMSAs were also chosen in the nonborder sample such as San Francisco and Los Angeles, California, minimizing this possibility.

Tables 3 and 4 separate the data into two racial groups: Mexican-Americans and non-Mexican-Americans. This subdivision was made to test which of the two groups is affected

Table 3. Non-Mexican-American nominal earnings

Variable	DF	All data		East		West	
		Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
		(1)		(2)		(3)	
INT	1	3.33	0.22	-11.97	-0.49	11.72	0.57
BOR	1	-2.42	-0.49	-2.70	-0.26	-3.00	-0.52
MAR	1	-17.21	-2.21*	-24.42	-1.92	-12.42	-1.27
HRS	1	-1.76	-1.12	0.01	0.00	-0.74	-0.35
WKS	1	8.68	3.80**	6.83	1.81*	8.75	3.04**
O5	1	7.41	1.21	11.88	1.30	1.67	0.20
OH	1	36.61	5.98**	44.61	4.75**	32.30	4.02**
OW	1	2.96	0.40	23.12	1.95*	-11.00	-1.19
EX	1	3.94	7.71**	4.29	5.70**	3.88	5.46**
EX1	1	-0.07	-6.89**	-0.07	-4.82**	-0.07	-5.09**
I1	1	-21.52	-1.02	-1.11	-0.04	-41.37	-1.46
I2	1	13.00	0.84	14.75	0.78	25.28	0.80
I3	1	8.71	0.85	15.23	0.98	5.42	0.40
I4	1	14.42	1.69	21.86	1.75*	6.45	0.56
I5	1	13.72	1.43	0.45	0.03	30.42	2.30*
I6	1	17.93	1.70*	22.08	1.42	9.17	0.65
I7	1	8.08	0.85	4.76	0.33	5.81	0.46
I8	1	29.45	2.34*	37.25	1.95*	14.57	0.87
I9	1	4.80	0.45	22.15	1.47	-16.65	-1.08
I10	1	-1.29	-0.12	26.15	1.41	-17.74	-1.31
E1	1	-14.20	-1.50	-30.97	-2.32*	14.77	1.02
EM	1	-13.36	-2.20*	-20.24	-2.21*	-1.94	-0.24
EN	1	11.95	2.17*	10.31	1.18	12.31	1.77*
BL	1	-28.36	-3.29**	-23.86	-2.07*	-35.19	-2.58**
R^2		.274		.320		.303	
N		708		342		366	

*,**Significant at the 5 and 1% levels, respectively.

Table 4. Mexican-American nominal earnings

Variable	DF	All data		East		West	
		Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
		(1)		(2)		(3)	
INT	1	6.69	0.70	15.07	0.96	-3.65	-0.29
BOR	1	-11.04	-2.76**	-9.83	-1.82*	0.83	0.12
MAR	1	-12.78	-2.86**	-29.34	-3.35**	-8.55	-1.76*
HRS	1	2.51	-2.26*	3.44	1.90*	2.19	1.59
WKS	1	6.45	5.16**	5.92	2.72**	7.34	4.92**
O5	1	3.31	0.87	-2.00	-0.31	8.29	1.84*
OH	1	23.99	4.83**	31.80	3.85**	19.16	3.08**
OW	1	0.14	0.03	-2.66	-0.31	8.06	1.14
EX	1	1.57	4.31**	0.46	0.74	2.12	4.87**
EX1	1	-0.02	-3.35**	-0.01	-0.56	-0.03	-3.48**
I3	1	15.09	-2.29*	4.63	0.49	23.04	-2.54*
I4	1	11.17	1.91*	11.86	1.32	10.22	1.24
I5	1	4.64	0.66	-2.39	-0.24	15.58	1.51
I6	1	-0.64	-0.08	-7.01	-0.60	7.58	0.70
I7	1	-0.10	-0.02	-0.57	-0.06	-2.55	-0.28
I8	1	-0.65	-0.05	0.83	0.05	2.24	0.13
I9	1	-3.24	-0.45	1.27	0.11	-7.15	-0.77
I10	1	3.89	0.46	-9.12	-0.75	19.55	1.67*
I1	1	-5.88	-0.77	-10.14	-0.85	-3.02	-0.29
E1	1	-19.53	-4.22**	-10.12	-1.22	-20.57	-3.83**
EM	1	-5.18	-1.20	-1.16	-0.15	-7.02	-1.43
EN	1	18.05	3.27**	12.42	1.23	21.20	3.44**
R^2		.352		.354		.451	
N		441		197		244	

*,**Significant at the 5 and 1% levels, respectively.

the most by this wage differential. One hypothesis is that Mexican-Americans are more adversely affected by Mexican migration than are non-Mexican-Americans, since illegal aliens compete for jobs against this group the most. The other hypothesis is that the Mexican-American group values this proximity to the border more than the non-Mexican-American group. And that is the subject of part 3 of this chapter.

Column 1 of Tables 3 and 4 (3 for non-Mexican-Americans and 4 for Mexican-Americans) has the border/nonborder differential for these two racial groups. This column suggests a differential of $1,104 for Mexican-Americans and only a $242 differential for non-Mexican-Americans. Furthermore, the coefficient of the Mexican-American group is significant at the 5% level while that of the non-Mexican-American group is not statistically significant. This suggests that Mexican-Americans <u>are</u> more adversely affected by this wage differential. Again, this idea is pursued further in part 3 of this chapter.

By looking at the remaining two columns of Tables 3 and 4, it is possible to investigate whether these wage differentials are the same in each region for each racial group. Table 4, column 2, shows that Mexican-Americans from the east are the ones with the greatest wage differential relative to the wage differential for Mexican-Americans in the

west which is a positive wage differential (Mexican-Americans along the western border earn more than Mexican-Americans in the nonborder western region). The former is significant at the 10% level while the latter is insignificant. Non-Mexican-Americans, both east and west, have approximately the same differential ($270 east and $300 west), but both are statistically insignificant.

The conclusion from this analysis is clear: The Mexican-American group, in general, has depressed nominal earnings along the border, but this is largely due to the eastern border effect as evidenced by the lack of a differential for Mexican-Americans in the west. The non-Mexican American group shows no significant wage differential. Smith and Newman's (1977) comparable analysis is presented in real earnings; therefore, the comparisons between the numbers of this thesis and their results are discussed in the section which follows.

Real earnings In the review of literature chapter, it was shown that Coelho and Ghali (1971) and Bellante (1979) were among the first to test geographic wage differentials using real rather than nominal earnings. Their rationale was that workers attempt to maximize their real purchasing power when choosing among alternative jobs. Their tests were done between the north and south regions and they concluded that there was no evidence of a differential. Smith and

Newman (1977) did a similar test for the border/nonborder differential. However, though this differential narrowed (thus consistent with this hypothesis), it did not disappear.

To test the real versus nominal hypothesis using the data of this thesis, the same tests done for nominal earnings were performed here. Two models were used.

The first model, model 2, is similar to model 1 with the only exception that the dependent variable is I/P or real earnings, rather than I, nominal earnings. P is the cost of living measure used in the means approach above. Specifically,

$$I/P = f(X) \qquad (2)$$

where X includes the variables of model 1.

The second model controls for cost of living as an explanatory variable. Specifically,

$$I = f(X;P) \qquad (3)$$

where X and P are as defined in model 2.

For the aggregate data as well as for the regional divisions, east and west, the results of model 1 are presented in Table 5 and the results of model 2 are in Table 6. In column 1 of both of these tables, we can see that the estimate of the BORDER earnings differential for the aggregate data is small and insignificant. This suggests that there is no real earnings differential between the border and nonborder regions when socioeconomic characteristics are controlled for.

Table 5. Mexican-Americans and non-Mexican-Americans real earnings (Model 2)

Variable	DF	All data		East		West	
		Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
		(1)		(2)		(3)	
INT	1	11.64	1.09	10.13	0.61	9.33	0.67
BOR	1	-0.34	-0.10	-1.58	-0.26	4.65	1.12
MAR	1	-14.88	-3.16**	-26.07	-3.00**	-9.36	-1.78*
HRS	1	0.95	0.91	2.25	1.32	1.09	0.85
WKS	1	7.42	5.52**	5.99	2.54*	8.19	5.24**
E1	1	-20.48	-4.12**	-26.83	-3.26**	-11.14	-1.83*
E2	1	-14.30	-2.32*	-22.99	-2.30*	-4.45	-0.59
E3	1	-10.04	-2.36*	-12.09	-1.72*	-6.68	-1.30
E4	1	5.73	1.38	3.10	0.43	6.92	1.44
E5	1	42.75	4.61**	62.12	4.12**	22.57	2.00**
E6	1	63.08	7.30**	57.35	4.04**	68.81	6.66**
01	1	27.21	3.58**	29.36	2.41*	25.48	2.62**
02	1	24.98	3.61**	29.93	2.82**	19.95	2.12*
03	1	6.25	0.76	23.46	1.84*	-11.85	-1.12
04	1	-2.64	-0.34	0.70	0.05	-3.57	-0.37
05	1	3.95	0.65	4.09	0.44	3.18	0.39
06	1	4.02	0.59	7.02	0.65	0.74	0.08
07	1	0.99	0.14	-1.12	-0.11	1.85	0.19
08	1	-9.46	-0.92	-7.14	-0.45	-13.11	-1.00
09	1	-7.05	-0.94	-13.09	-1.09	-3.96	-0.42**
EX	1	2.98	8.91**	3.21	5.99**	2.75	6.58**
EX1	1	-0.05	-7.55**	-0.05	-5.00**	-0.04	-5.58**
I2	1	14.66	1.17	9.78	0.60	28.05	1.15
I3	1	8.62	1.31	6.40	0.61	10.91	1.33
I4	1	6.22	1.07	8.07	0.87	3.46	0.47
I5	1	7.92	1.21	-5.02	-0.50	24.66	2.90**
I6	1	5.86	0.81	5.48	0.48	5.73	0.63
I7	1	3.04	0.48	-1.09	-0.11	4.66	0.60
I8	1	17.00	1.85*	19.61	1.34	12.38	1.08
I9	1	-3.10	-0.45	7.70	0.71	-15.10	-1.74
I10	1	-11.60	-1.55	3.78	0.30	-19.71	-2.18*
ME	1	-14.50	-4.30**	-15.88	-2.84**	-12.77	-3.01**
BL	1	-26.98	-3.83**	-27.94	-2.85**	-24.28	-2.29*
R^2		.3615		.386		.404	
N		1149		539		610	

*,**Significant at the 5 and 1% levels, respectively.

Table 6. Mexican-Americans and non-Mexican-Americans real earnings (Model 3)

Variable	DF	All data		East		West	
		Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
		(1)		(2)		(3)	
INT	1	-57.57	-2.46*	-16.25	-0.47	-102.27	-2.02*
BOR	1	-0.58	-0.16	-5.89	-0.88	5.63	1.09
MAR	1	-15.37	-3.26**	-25.27	-3.01**	-10.41	-1.89*
HRS	1	0.74	0.71	1.83	1.11	1.07	0.80
WKS	1	7.39	5.50**	5.75	2.52*	8.44	5.16**
01	1	28.09	3.69**	28.20	2.41*	27.80	2.73**
02	1	25.62	3.71**	31.71	3.10**	21.41	2.24*
03	1	5.55	0.67	23.12	1.88*	-11.74	-1.06
04	1	-2.81	-0.36	0.13	0.01	-3.53	-0.35
05	1	4.11	0.68	4.22	0.48	3.88	0.46
06	1	3.62	0.54	6.18	0.59	1.08	0.12
07	1	1.15	0.18	-1.59	-0.15	2.87	0.27
08	1	-6.03	-0.58	-4.76	-0.31	-8.18	-0.58**
09	1	-6.07	-0.81	-10.93	-0.95	-2.89	-0.29**
EX	1	3.00	8.97**	3.02	5.81**	2.87	6.58
EX1	1	-0.05	-7.60**	-0.04	-4.86**	-0.05	-5.53
I2	1	12.69	1.01	6.93	0.44	29.27	1.14
I3	1	9.83	1.50	6.88	0.68	11.39	1.33
I4	1	7.75	1.34	8.66	0.97	4.06	0.53
I5	1	9.73	1.49	-4.05	-0.42	26.32	2.95**
I6	1	6.84	0.94	5.99	0.55	6.30	0.66
I7	1	3.84	0.61	-1.71	-0.18	5.68	0.69
I8	1	16.62	1.81	16.26	1.15	13.68	1.14
I9	1	-2.14	-0.31	9.76	0.93	-15.69	-1.73*
I10	1	-11.36	-1.52	3.65	0.30	-20.90	-2.21*
E1	1	-20.41	-4.07**	-26.26	-3.29**	-12.03	-1.88*
E2	1	-14.87	-2.41*	-23.55	-2.44*	-5.06	-0.64
E3	1	-10.56	-2.47*	-12.58	-1.85*	-6.77	-1.25
E4	1	5.64	1.36	2.05	0.30	7.05	1.40
E5	1	43.88	4.74**	64.32	4.43**	24.07	2.04*
E6	1	63.09	7.31**	55.32	4.04**	70.89	6.54**
ME	1	-14.60	-4.33**	-14.69	-2.72**	-13.67	-3.08**
BL	1	-26.32	-3.73**	-27.28	-2.88**	-24.98	-2.25*
CP	1	69.12	3.46**	30.34	0.95	107.05	2.34**
R^2		.371		.397		.404	
N		1149		539		610	

*,**Significant at the 5 and 1% levels, respectively.

Recalling Smith and Newman's (1977) estimated differential in chapter 1, the differential obtained here is both smaller in size and insignificant. This again suggests that their estimate is difficult to generalize due to their limited selection of border and nonborder regions.

For the regional divisions, the east differential for both models is presented in column 2 of Table 5 (model 2) and Table 6 (model 3). Similarly, the west differential is in column 3 of these same tables for models 2 and 3, respectively. The east differential is insignificant for both models; however, the sizes of these differentials are different. When model 2 is used, a $158 differential is found. When model 3 is used, a $589 differential is found. Two important points should be made about this difference, however. First, the size of both is small relative to the mean earnings of the east. Second, the cost of living (CP) variable of model 3 is insignificant, although of the expected positive sign.

The west border differential is positive for both models (though both are statistically insignificant). Note that the cost of living variable (CP) is positive as expected and statistically significant.

The racial subdivisions are presented in Tables 7 and 8. Having obtained similar results from models 2 and 3, only model 2 is used in this analysis. One important point to

Table 7. Non-Mexican-American Real earnings

Variable		All data		East		West	
		Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
		(1)		(2)		(3)	
INT	1	0.13	0.01	-15.66	-0.66	9.54	0.49
BOR	1	1.35	0.27	6.55	0.62	3.12	0.56
MAR	1	-18.08	-2.33*	-25.83	-1.97*	-12.02	-1.29
HRS	1	-1.32	-0.84	0.27	0.11	-0.66	-0.33
WKS	1	8.66	3.80**	6.69	1.72*	8.50	3.10**
05	1	7.11	1.17	11.83	1.26	1.39	0.18
OH	1	34.89	5.71**	42.41	4.38**	30.13	3.93**
OW	1	2.74	0.37	23.70	1.94*	-11.76	-1.34
EX	1	4.00	7.84**	4.64	5.98**	3.71	5.47**
EX1	1	-0.07	-7.04**	-0.07	-5.09**	-0.07	-5.11**
I1	1	-23.61	-1.12	-7.25	-0.23	-35.69	-1.32
I2	1	20.64	1.34	21.44	1.09	28.62	0.94
I3	1	7.26	0.71	14.69	0.92	5.08	0.39
I4	1	12.21	1.44	22.48	1.74*	4.29	0.39
I5	1	13.16	1.37	1.52	0.11	28.96	2.29*
I6	1	17.36	1.65*	22.42	1.40	9.05	0.67
I7	1	8.13	0.86	6.94	0.47	5.62	0.46
I8	1	30.81	2.46*	42.87	2.18*	14.57	0.91
I9	1	3.54	0.33	20.24	1.31	-16.77	-1.14
I10	1	-1.91	-0.18	27.92	1.46	-16.43	-1.28
E1	1	-10.89	-1.15	-29.16	-2.12*	14.14	1.02
EM	1	-10.72	-1.77*	-17.89	-1.89*	-1.18	-0.15
EN	1	12.82	2.33*	12.83	1.42	12.10	1.83*
BL	1	-27.04	-3.14**	-23.51	-1.98*	-33.52	-2.57*
R^2		.270		.317		.302	
N		708		342		366	

*,**Significant at the 5 and 1% levels, respectively.

Table 8. Mexican-American real earnings

Variable	DF	All date		East		West	
		Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
		(1)		(2)		(3)	
INT	1	2.90	0.30	10.02	0.61	-3.16	-0.27
BCR	1	-4.31	-1.09	-4.18	-0.74	4.39	0.67
MAR	1	-13.55	-3.05**	-30.88	-3.35**	-8.19	-1.79*
HRS	1	3.08	2.79**	4.49	2.35*	2.15	1.65*
WKS	1	6.60	5.31**	6.04	2.64**	6.97	4.93**
05	1	2.85	0.75	-2.36	-0.35	7.61	1.79*
OH	1	24.49	4.96**	32.23	3.71**	18.22	3.09**
OW	1	0.48	0.09	-2.13	-0.23	7.14	1.07
EX	1	1.54	4.25**	0.61	0.93	2.02	4.90**
EX1	1	-0.02	-3.33**	-0.01	-0.76	-0.03	-3.48**
I3	1	14.37	2.20	6.12	0.61	20.65	2.40*
I4	1	10.08	1.73*	14.02	1.48	8.98	1.15
I5	1	3.68	0.52	-2.67	-0.25	14.34	1.46
I6	1	-0.57	-0.07	-5.98	-0.49	6.50	0.63
I7	1	-0.77	-0.12	0.07	0.01	-3.49	-0.40
I8	1	-0.41	-0.03	0.26	0.01	5.32	0.32
I9	1	-5.38	-0.76	0.03	0.00	-8.38	-0.95
I10	1	1.67	0.20	-9.28	-0.73	15.77	1.42
I1	1	-5.78	-0.76	-9.03	-0.72	-1.99	-0.20
E1	1	-18.16	-3.95**	-11.45	-1.31	-19.76	-3.88**
EM	1	-4.88	-1.14	-2.60	-0.32	-6.68	-1.44
EN	1	15.86	2.89**	9.60	0.90	19.58	3.36**
R^2		.339		.337		.450	
N		441		197		244	

*,**Significant at the 5 and 1% levels, respectively.

note about these results is that the border earnings differentials become positive for all groups except for the aggregate and east samples of the Mexican-American population. This means that the annual earnings for Mexican-Americans of the west as well as the earnings of all non-Mexican-Americans are higher along the border than in the nonborder region, after socioeconomic characteristics are controlled for. And though these results are statistically insignificant, these results are consistent with the aggregate data in Table 5. Namely, the border/nonborder wage differential disappears when real earnings are used rather than nominal earnings.[1]

A more important point for this thesis, however, is that the east Mexican-American population continues to show a negative earnings differential (though this differential is smaller than that estimated by Smith and Newman, 1977, $719). It is of interest, thus, to relate this finding to the fact that border regions of the east have the highest concentration levels of Mexican-Americans in the country. It is possible that Mexican-Americans from the east border value the proximity of Mexico (closeness to their cultural heritage) and/or these concentration levels (closeness to their "own people") as nonpecuniary advantages of locating along this border region. This is tested in the following

[1]A point should be made, however, that though the aggregate data do not show a border/nonborder differential, it is possible that occupational or educational subgroups may.

section. However, before doing this, a brief note on the control variables is presented.

A note on the control variables used in the multiple regression models Most of the variables in the regression models presented are dummy variables. To avoid collinearity, a deleted group occurs for each one of the sets of dummy categories which represents each variable. Specifically, for EDUCATION, 12 years of education was used; for OCCUPATION, the two digit occupational code category of "LABORERS, EXCEPT FARM" was used for the aggregate data, and all laborers for the region and race divisions; for INDUSTRY, the two digit industrial code of "PUBLIC ADMINISTRATION" was used. Similarly, the other variables which have only one category have as their counterpart the deleted group (for example, UNMARRIED has married individuals as the deleted group). With this in mind, the hypothesis mentioned at the beginning of the chapter for each one of these variables can now be explored.

The EDUCATION categories all have the expected sign except for non-Mexican-Americans of the west region. This is so, since this category had few observations (17), suggesting a possible bias due to such a small sample size. Of interest here is to note that, although in general these results suggest that more schooling years lead to higher earnings, this is not strictly the case, as evidenced by some

of the results obtained for regional divisions. In addition, the returns to education proved to be different between Mexican and non-Mexican-Americans. In particular, the payoff to education is greater for Mexican-Americans than for non-Mexican-Americans. This is evident by looking at the payoff for schooling years beyond high school (EM) for Mexican-Americans and contrasting this to the payoff for non-Mexican-Americans for the same education. This is also evident by making the same comparison between the payoffs to education for individuals that have an elementary education that have not graduated from high school (EN), and by noticing that the Mexican-American group is hurt the most by not having an elementary education (E1).

These findings suggest that Mexican-Americans benefit more than do non-Mexican-Americans from additional schooling years, but are more adversely affected if (possibly due to a stronger discrimination effect) they have little education. This can be rationalized by observing that educated Mexican-Americans are fewer in numbers and thus are able to command higher wages with firms that seek to employ Mexican-Americans (due to possible pressures from Affirmative Action programs).

The UNMARRIED coefficient was also statistically significant in all of the regressions and of the right sign. More interesting, however, is to note the Mexican-American and the Black coefficients in these tests. They are both statistically significant and of the right signs throughout. Furthermore, the BLACK coefficient is larger in absolute value than the Mexican-American coefficient, suggesting that pay discrimination is larger for Blacks than it is for Mexican-Americans.

The occupational categories were mostly of the right sign, too. Professional occupations as well as crafts and managerial occupations are all positive, suggesting that these occupations have higher earnings (due to their higher skill levels), other things constant, than the laborer occupations. Not so clear, however, are the signs of the white collar occupations that traditionally require lower skill levels. For these occupations (such as clerical and sales), the coefficients changed signs, as evidenced by some of the region and race divisions regressions. This is not inconsistent, however, since not all of these occupations are high paying occupations. On the other hand, the results also indicate that other low-skill occupations earn less than laborers such as service workers and farm laborers when the aggregate data are used. The statistical significance of these coefficients is mixed since some of these

categories had few observations, creating the same problem as that mentioned for the EDUCATION categories above.

Overall, with respect to the INDUSTRY dummy variable, the results imply that individuals working in the Public Administration industry (the deleted industry) have lower annual earnings relative to most other industries, the exceptions being the service industries as well as the "TRANSPORTATION, COMMUNICATIONS, AND OTHER PUBLIC UTILITIES" industries. As with the OCCUPATION categories, the statistical significance of some of these coefficients was probably affected by the small number of observations in some of these categories.

The continuous variables, EXPERIENCE, HOURS WORKED, and WEEKS WORKED, can also be explored. EXPERIENCE has the right signs in both the linear and quadratic terms as expected. In addition, it is highly significant in most cases. Of interest is to note that the payoff to additional years of experience is greater for non-Mexican-Americans (up to approximately 28 years of experience) than for Mexican-Americans. After 28 years, however, the Mexican-American payoff is still positive for additional years up to approximately 40 years of experience, while that for non-Mexican-Americans is negative for this same range of years. Although not the focus of this thesis, this finding may be of interest to human capital researchers and worthy of

future research.

HOURS WORKED has the wrong sign only for the non-Mexican-American west region division (however, it is statistically insignificant). But this could be attributed to how these data are presented in the sample, as mentioned before. Finally, WEEKS WORKED is both of the right sign and statistically significant in all of the tests mentioned here.

Are Compensating Wage Differentials Important in the Wage Structure of Mexican-Americans?

Of primary interest here is to test if Mexican-Americans value proximity to other Mexican-Americans as a compensating wage differential. Two measures are used to test this possibility: the distance they are located from the U.S./ Mexico border and the concentration of Mexican-Americans in the SMSAs in which they work. The model used to test this hypothesis has the form of model 4:

$$J = f(Y;MA;DISTANCE)$$

where J = I (as defined before) when nominal earnings are being compared and J = I/P (also as defined before) when real earnings are compared. Y = X (X as defined before) deleting the BORDER variable and adding a variable "SIZE". There are

two reasons for deleting the BORDER variable.[1] First, including both MA and BORDER in the same regression affected other control variables (i.e., EDUCATION and EXPERIENCE) such that a possible collinearity between these two variables was apparent. For example, some evidence of this possible collinearity can be shown by comparing the Brownsville, Texas SMSA (along the border) which has a concentration of Mexican-Americans (MA) of approximately 62% with the Dallas, Texas SMSA (further inland) that has a 4% concentration of Mexican-Americans. Second, it was judged that the objectives of this section were to see the effect of the concentration of Mexican-Americans in an SMSA and the distance of an SMSA from the border (DISTANCE) on earnings, rather than to see if a border/nonborder differential existed.

A variable that was added, however, is SIZE. This measures the population of each SMSA as presented in the 1970 Census Reports. The reason for including it is that the SMSAs of the sample in this thesis fluctuate considerably in size. Thus, it was deemed appropriate to control for any

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[1]The general results of including both the MA and the BORDER variables were that the BORDER coefficient became positive (but still small in absolute value) in some instances (mostly for non-Mexican-Americans) and smaller in absolute value (for Mexican-Americans) in others. These coefficients were also statistically insignificant. In addition, DISTANCE is viewed as substituting for the BORDER variable.

earnings differential inherently due to this factor, allowing me to better isolate the effects of the MA and DISTANCE variables. A more complete discussion of DISTANCE and MA follows.

DISTANCE is measured as the number of miles from the major city of an SMSA to the closest border city. The reason for using the major city is that in some cases the PUS geographic definition of an SMSA is too broad, making the individual's exact location within a particular SMSA uncertain. The test here is to see if longer distances will be positively correlated with earnings for Mexican-Americans but not for non-Mexican-Americans. This comparison is made because a similar non-Mexican-American correlation would indicate that this effect for Mexican-Americans may not be related to their need to locate closer to the border but for other reasons.

MA is the ratio of male Mexican-Americans in the labor force to all males in the labor force of an SMSA. It is expected that higher concentrations of Mexican-Americans will be negatively correlated with earnings for Mexican-Americans, but not for non-Mexican-Americans, at least with respect to the cultural heritage argument made above. It should be noted here that the MA variable is subject to a number of other interpretations. A full discussion of this problem is presented in the empirical discussion of this

variable.

An additional point should be made before the empirical results are presented. Both the DISTANCE and the MA variables are entered with both a linear and quadratic term. This was done to allow for a nonlinear impact of these variables on earnings.

The DISTANCE variable

Table 9 shows the results of this variable on Mexican-Americans and non-Mexican-Americans (see Appendix B for full regressions). The elasticities suggest that there is no distance effect for either of these two groups. This is evident by looking at the small absolute value of these elasticities as well as by noticing that these values are statistically insignificant. Furthermore, it should be pointed out that the elasticities for Mexican-Americans are of the wrong sign.

The conclusion obtained from these results is that the hypothesis of Mexican-Americans willingness to accept lower pay to locate closer to the border is not substantiated. Nevertheless, two problems exist with refuting this hypothesis altogether. First, the data do not permit us to trace

Table 9. Distance elasticities[a]

	Nominal	Real
Mexican-American	-.060	-.149
	(.948)	(.00001)
Non-Mexican-American	.018	.024
	(.319)	(.314)

[a]F-statistics are shown in parentheses. None are signigicant.

the Mexican-American's actual regional "tie" to Mexico. For example, a Mexican-American working in San Antonio, Texas may be closer to his nearest Mexican relative than one who works along the border. Second, some Mexican-Americans of this sample may not be first-generation Mexican-Americans and thus do not see Mexico as a "homeland" but as their parents' or grandparents' "homeland". Ideally, data for first-generation Mexican-Americans along with information on the location of their origin in Mexico (to better judge the proximity of their "cultural heritage") would provide a better test for this hypothesis.

The MA variable

As mentioned above, this variable may not be measuring a compensating wage differential effect alone. First, higher concentrations of Mexican-Americans in a region may lead to

higher levels of discrimination as well as higher Mexican alien inflows. The discrimination effect may be rationalized (see G. Becker, 1971, Economics of Discrimination) on the ground that non-Mexican-Americans are more prone to discriminate against Mexican-Americans the more identifiable and noticeable they are in a region. The illegal alien effect may be due to the fact that illegal aliens may have an incentive to work in regions where they can "blend in" and be more invisible to avoid detection. The regions with a high concentration of Mexican-Americans permit them to do this.

The major finding can be found by looking at the elasticities for both Mexican-Americans and non-Mexican-Americans in the "All occupations" category in Table 10. These elasticities for Mexican-Americans are both negative as expected and are significant for both nominal and real earnings. More surprising is that the elasticities of MA are negative for non-Mexican-Americans, although only significant at the 10% level for real earnings for this group.

This is an important finding since it is consistent with the compensating, illegal alien, and discrimination effects discussed above for Mexican-Americans. It is also important to note that the elasticities are larger in absolute value for Mexican-Americans than those for non-Mexican-Americans. It may be that this differential is

Table 10. MA elasticities[a]

	Nominal	Real
Mexican-American		
All occupations	-.195** (7.804)	-.149* (3.555)
Professional and managers	-.120 (.740)	-.112 (.299)
Sales and clerical	-.054 (.022)	+.035 (.257)
Crafts	-.238 (3.041)	-.203 (1.885)
Laborers and service	-.231* (4.289)	-.197 (2.086)
Non-Mexican-Americans		
All occupations	-.094 (2.239)	-.102 (2.729)
Professional and managers	-.087 (.671)	-.109 (1.531)
Sales and clerical	-.354 (3.010)	-.388* (4.238)
Crafts	.067 (1.217)	.049 (.536)
Laborers and service	-.146* (3.760)	-.132* (3.114)

[a]F-statistics are shown in parentheses.

*,**Significant at the 5 and 1% levels, respectively.

due to the compensating effect hypothesized here, or to a differential impact of illegal aliens on both groups (consistent with the hypothesis that Mexican-Americans are affected the most by illegal aliens), or to the discrimination effect also mentioned above, or to a combination of these effects.

Nevertheless, two additional points must be made. These points are of considerable importance in interpreting these results. First, these results could also be due to the fact that high concentrations of Mexican-Americans are associated with SMSAs with low cost of living levels. And although this problem is recognized by comparing real earnings, it should be noted that the cost of living measure used in this analysis is not entirely satisfactory. These measures, as mentioned in the footnote on page 38, were sometimes estimated, raising questions of their effectiveness at controlling precisely for the cost of living differences among regions.

How major is this problem? There is no way of knowing with the available data. But closer inspection of two previous results may give some indication. First, recalling models 2 and 3, it was shown that for the aggregate data, the cost of living index was significant and of the right sign. However, when the data were divided into east and west, the cost of living control for the east was of the

right sign but statistically insignificant. Second, referring back to Table 10, for the Mexican-American elasticities there is a drop in the absolute value of the elasticities, as expected, from nominal to real earnings. However, this is not the case for non-Mexican-Americans. Consequently, the safest thing that can be said about this problem is that though it is probably not controlling for cost of living differences between SMSAs as efficiently as it should, it does control for some of this problem. And, although these results should be analyzed with caution, the evidence does not suggest that the MA effect is solely due to a cost of living differential between SMSAs.

Another important point in interpreting these results is that the concentration of Mexican-Americans in an SMSA may have a differential impact among occupations. To attempt to isolate these impacts, the data were divided into occupational groups. Recalling the study by Briggs (1975) in the review of literature chapter on the characteristics of illegal aliens, it is expected that the lower skilled groups would be the most likely to be affected by illegal aliens. Another argument that could be made, although perhaps not as compelling, is that these same (low skilled) occupational groups may be the ones most affected by discrimination. Therefore, the test is to see if all Mexican-American

occupational groups are equally affected by this variable. If this is true, then this would suggest that a compensating effect may exist due to higher concentrations of Mexican-Americans. Likewise, these same occupational divisions were made for non-Mexican-Americans to provide a stronger test for the idea above: if a compensating effect exists (of the nature described in this thesis), it should be unique to Mexican-Americans. Referring back to Table 10 these occupational subdivisions are listed.

The LABORERS AND SERVICE occupational subdivision is negative and statistically significant three out of four times (with the F-statistic for the real earnings of Mexican-Americans coming close to being statistically significant at the 10% level). This is (as with the "ALL OCCUPATIONS" subdivision) consistent with the hypothesis mentioned above for the compensating, discrimination, and illegal alien effects for Mexican-Americans. For non-Mexican-Americans, this result is consistent with the illegal alien hypothesis in that this differential could be due to an excess supply caused by illegal entry. Furthermore, the absolute value of this differential is larger for Mexican-Americans than for non-Mexican-Americans. This again is consistent with Mexican-Americans having the three hypothesized effects mentioned above.

The CRAFTS subdivision is very different for both racial

groups. While it is small, positive, and insignificant for non-Mexican-Americans in both real and nominal earnings, it is larger in absolute value, negative, and significant for nominal earnings for the Mexican-American group. Real earnings are also larger in absolute value for Mexican-Americans. What does this mean? It means that, again, for Mexican-Americans any one of or a combination of the three hypothesized effects may be present to create this differential. The fact that the non-Mexican-American group is not affected suggests that this effect is unique to Mexican-Americans. It further suggests that for non-Mexican-Americans this occupational group is not affected by the illegal alien effect.

The SALES AND CLERICAL results are the most surprising. For non-Mexican-Americans, they are negative and significant for both real and nominal earnings. In addition, they are the largest effects relative to the other elasticities for non-Mexican-Americans. On the other hand, this same subdivision for Mexican-Americans is statistically insignificant and is the smallest of the elasticities relative to the other elasticities for Mexican-Americans. A possible explanation for this result can be given, however. These occupations are <u>service</u> occupations. In other words, they require contact with individuals of the community. Taking this into account, then, what this result suggests is that non-Mexican-

Americans in regions with high concentrations of Mexican-Americans are not as productive (possibly due to a language problem) than in areas with low concentrations of Mexican-Americans. Furthermore, the SMSAs in the sample which have the highest concentration of Mexican-Americans are along the border, and these border areas have a commercial base which caters to Mexican nationals. Again, non-Mexican-Americans in sales and clerical occupations may find it more difficult to service these customers, due to language problems, than Mexican-Americans who are more likely to communicate in Spanish.

However, this raises a question as to the small and insignificant effect of this elasticity for Mexican-Americans. For this result suggests that Mexican-Americans in this subdivision earn the same regardless of the concentration of Mexican-Americans. It would be expected that their bicultural advantage would lead to higher earnings in areas along the border and in areas with high concentrations of Mexican-Americans in general. An explanation for this not being so may be in the offsetting effects of the illegal alien, the discrimination and the compensating effects mentioned above.

The PROFESSIONAL AND MANAGERS subdivision is insignificant for both Mexican-Americans and non-Mexican-Americans. Their magnitudes are similar also. This suggests that this effect is the same for both groups and thus is not strong evidence to suggest that Mexican-Americans, in this category,

are more affected than non-Mexican-Americans with high concentrations of Mexican-Americans. Conclusions about the three hypothesized effects for Mexican-Americans are thus not evident for this group. A point could be made that both the Mexican-American and the non-Mexican-American groups are equally affected by illegal alien entry, but this does not seem reasonable since, as mentioned before, it is expected that this impact is more prevalent for the lower occupational groups. Another possible explanation is that this differential impact is due to different underlying reasons for both racial groups. Specifically, the Mexican-American group effect may be due to a compensating effect and/or a discrimination effect, while the non-Mexican-American effect may be due to an explanation similar to that for the SALES AND CLERICAL group mentioned above. Arguments to substantiate this hypothesis, however, cannot be tested with the available data.

The breakdown of occupational categories for both Mexican-Americans and non-Mexican-Americans leads to an important finding. This is that the MA variable has a different effect on the occupational categories of both groups. Specifically, for the Mexican-American group, the LABORERS AND SERVICES and CRAFTS categories are the major categories affected by the MA variable, versus the LABORERS AND SERVICES and the SALES AND CLERICAL occupations for non-Mexican-

Americans. For both groups, the MA variable had an insignificant impact on the PROFESSIONAL AND MANAGERS occupational category.

Consequently, this latter conclusion raises questions regarding the validity of the importance of compensating wage differentials in the earnings equations of Mexican-Americans. These questions arise when the following two points are considered. First, it is evident that the blue-collar occupations are the ones most affected by the MA variable for the Mexican-American group, both in significance and relative absolute size, relative to the white-collar occupations. This is more consistent with the illegal alien hypothesis than it is with the compensating effect hypothesis. Second, an argument in favor of compensating differentials is that the PROFESSIONAL AND MANAGERS and SALES AND CLERICAL occupationsl categories (except for SALES AND CLERICAL real earnings) are also negative for Mexican-Americans and that these categories are not affected by illegal entry.[1] But this argument is valid only if Mexican-Americans are considered alone. This argument becomes less

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[1]Though it is not totally clear that the SALES AND CLERICAL occupations are not affected by illegal entry, since some of these jobs are of the low skill nature, this possibility becomes more evident if we remember that these occupations require some fluency in English which is not likely to be prevalent among illegal aliens.

persuasive when the non-Mexican-American group is included in the analysis. As mentioned above, the white-collar occupations have the same or a larger absolute effect for non-Mexican-Americans than for Mexican-Americans. Furthermore, the LABORERS AND SERVICES occupations are also negative and significant suggesting an illegal alien entry effect for both groups (and ruling out the possibility of a sole discrimination effect for Mexican-Americans in this category).

In concluding this section, the evidence presented here does not provide us with enough support to state that Mexican-Americans value a high concentration of Mexican-Americans as a compensating wage differential. At best what can be said is that the MA variable may pick up a compensating effect along with other effects. Ideally, if the discrimination and the illegal alien effects could be controlled for, then a stronger test would be possible to test compensating effects due to this variable.

A brief note on other compensating variables

To see the impact of other compensating variables on earnings for both Mexican-Americans and non-Mexican-Americans, two variables were chosen: CLIMATE and CRIME RATE. After doing several tests, CLIMATE did not show evidence of being an important determinant of earnings for either of the two racial groups. CRIME RATE, on the other hand, did prove to be important for Mexican-Americans, but its sign was

different than expected. Specifically, higher crime rates led to lower earnings. This was judged to be a problem of reverse causation, i.e., areas with low earnings are also areas with high crime rates. This problem was not judged to be of direct importance to this thesis and was not explored further. However, future research dealing with a related point may want to explore this point fully.

CONCLUSIONS

The findings of this thesis suggest no evidence of a real or nominal border/nonborder earnings differential when socioeconomic characteristics are controlled for. However, when subdivisions are made on the aggregate data, a nominal earnings differential is found for Mexican-Americans, in particular for Mexican-Americans from the east. This differential, however, disappears when real earnings are studied. These findings suggest that Smith and Newman's (1977) study may have been misleading due to the limited number of border and nonborder SMSAs they used.

There is no clear evidence that compensating wage differentials are important in the wage structure of Mexican-Americans. Distance from the border shows no effect as a compensating differential. The concentration of Mexican-Americans in an SMSA is negative as expected, but there are conflicting interpretations of this result. Specifically, this variable may pick up other noncompensating effects such as discrimination and illegal alien effects. Discrimination effects are suggested when the data are broken down by occupation and the impact of the variable on Mexican-Americans and non-Mexican-Americans is compared. Mexican-Americans (in the majority of the cases) are more affected than non-Mexican-Americans, which is consistent with the discrimination effect hypothesis. Illegal alien effects are

also suggested, when these breakdowns are made, by noting that the low skill occupations are most affected by the MA variable. This is consistent with the illegal alien hypothesis.

This study does have several limitations. First, the cost of living index measure proved to be crucial in the conclusions mentioned above for both the border/nonborder differential and the compensating differentials. A better measure should provide better estimates of the effect of using real rather than nominal earnings. It would also have permitted a better estimate of the MA effect (areas which have high concentrations of Mexican-Americans may also have a low cost of living) as mentioned in the previous chapter.

Second, there is a limited amount of information on the characteristics of Mexican-Americans. This problem was more evident when measuring compensating effects. In particular, better information on the origin of Mexican-Americans (are they first, second, or third generation Mexican-Americans?) as well as their specific location within a region (the disadvantage of the PUS sample in this regard was mentioned in the previous chapter) could be useful in analyzing the effect of the distance variable. The specific location of an individual within a region would also help in interpreting the MA variable since SMSAs may have subcities which have different concentrations of Mexican-Americans.

Likewise, more data on the illegal alien population may help isolate the illegal alien effect on earnings captured by the MA variable. Collecting these data, however, is a difficult task, due to the nature of the illegal alien problem. The discrimination effect might also be isolated by collecting data on firm attitudes toward workers of different races. The importance of isolating these two effects is that it would be possible to make a clearer interpretation of the MA effect on earnings due to a compensating effect.

Third, an improvement on this research would be to increase the sample size to increase the number of subdivisions of the data. This would permit further investigation on the occupational impacts suggested in this thesis by the MA variable.

Finally, it would also be of interest to see how these results apply to other groups. Specifically, are these results applicable to females and males nonheads of households?

The policy implications can be discussed by noting an important point of these findings. The MA variable is more important in explaining depressed earnings than is the border/nonborder dummy variable. In previous research, emphasis has been placed on the proximity of a city to the Mexican border to judge if this city has depressed wages. I suggest in this research that the more important characteristic is the con-

centration of Mexican-Americans in a city and show evidence to support this conclusion. A point should be made, however, that these two variables are highly correlated. In other words, the areas which have the highest concentration of Mexican-Americans tend to be the areas located along the border. But there are other areas which have high concentrations of Mexican-Americans which are not along the border. In this sense, there is a distinction between the two.

The policy implications are very different depending on the emphasis that is being placed (concentration of Mexican-Americans or the border/nonborder differential). If a border/nonborder differential criterion is to be used, then the policy implications of this thesis would suggest that any program designed to increase earnings along the border may be counterproductive since it would be raising wages which otherwise appear to be in approximate balance. On the other hand, if SMSAs with high concentrations of Mexican-Americans are used, then future research should be geared to determining the sources of the negative MA effect on earnings. If this is primarily a compensating effect, then, again, any programs to help the depressed area would disturb an equilibrium balance. If this effect is due, on the other hand, to an illegal alien or discrimination effect, then the policy actions might be to restrict entry in the former case or to increase programs such as Affirmative Action programs to reduce discrimination in the latter case.

BIBLIOGRAPHY

Becker, Gary. The Economics of Discrimination (2nd edition). Chicago: The University of Chicago Press, 1971.

Bellante, Don. "The North-South Differential and the Migration of Heterogeneous Labor." American Economic Review 69 (March 1979): 166-175.

Bradfield, Michael. "Necessary and Sufficient Conditions to Explain Equilibrium Regional Wage Differentials." Journal of Regional Science 16 (August 1976): 247-255.

Briggs, Vernon. "Mexican Workers in the U.S. Labor Market." International Labour Review 112 (November 1975): 351-368.

Coelho, Philip R. P., and Moheb A. Ghali. "The End of the North-South Wage Differential." American Economic Review 61 (December 1971): 932-937.

Douty, Harry. "Wage Differentials: Forces and Counterforces." Monthly Labor Review 91 (March 1968): 74-81.

Ehrenberg, Ronald G., and Robert S. Smith. Modern Labor Economics. Glenview: Scott, Foresman and Company, 1982.

Ericson, Anna-Stina. "An Analysis of Mexico's Border Industrialization Program." Monthly Labor Review 93 (May 1970): 33-40. (a)

Ericson, Anna-Stina. "The Impact of Commuters on the Mexican-American Border Area." Monthly Labor Review 93 (August 1970): 18-27. (b)

Fuchs, Victor and Richard Perlman. "Recent Trends in Southern Wage Differentials." Review of Economics and Statistics 42 (August 1960): 292-300.

Gallaway, Lowell. "The North-South Wage Differential." Review of Economics and Statistics 45 (August 1963): 264-272.

Hanushek, Eric H. "Alternative Models of Earnings Determinants and Labor Market Structures." Journal of Human Resources 16 (Spring 1981): 238-259.

Liu, Ben-Chieh. Quality of Life Indicators in the U.S. Metropolitan Areas, 1970. Washington, D.C.: Washington Environmental Research Center, U.S. Environmental Protection Agency, 1974.

Scully, Gerald. "Interstate Wage Differentials: A Cross Section Analysis. American Economic Review 59 (December 1969): 757-773.

Smith, Adam. An Inquiry into the Nature and Causes of the Wealth of Nations. New York: Random House, 1973.

Smith, Barton and Robert Newman. "Depressed Wages Along the U.S.-Mexico Border: An Empirical Analysis." Economic Inquiry 15 (January 1977): 51-66.

U.S. Bureau of the Census. Census of Population: 1970. Subject Reports, Final Report PC(2)-1C, Persons of Spanish Origin. Washington, D.C.: Government Printing Office, 1970. (a)

U.S. Bureau of the Census. Census of Population: 1970. General Social and Economic Characteristics, Final Report PC(1)-C4, Arizona, New Mexico, Colorado, Texas, California. Washington, D.C.: Government Printing Bureau, 1970. (b)

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APPENDIX A

List of SMSAs (E - SMSAs in East sample; W - SMSAs in West sample; C - two SMSAs combined in the PUS sample; B - border SMSAs):

1. Alameda, California (W)
2. Albuquerque, New Mexico (E)
3. Anaheim-Santa Ana-Garden Grove, California (W)
4. Austin, Texas (E)
5. Bakersfield, California (W)
6. Beaumont-Port Arthur-Orange, Texas (E)
7. Brownsville-Harlingen-San Benito/McAllen-Pharr-Edinburg, Texas (E) (C) (B)
8. Corpus Christi, Texas (E)
9. Dallas, Texas (E)
10. Denver, Colorado (E)
11. El Paso, Texas/Las Cruces, New Mexico (E) (C) (B)
12. Fresno, California (W)
13. Galveston-Texas City, Texas (E)
14. Houston, Texas (E)
15. Laredo, Texas (E) (B)
16. Los Angeles, California (W)
17. Lubbock, Texas (E)
18. Modesto, California (W)
19. Odessa, Texas (E)
20. Phoenix, Arizona (E)
21. Pueblo, Colorado (E)
22. Sacramento, California (W)
23. San Angelo, California (W)
24. San Antonio, Texas (E)
25. San Bernadino-Riverside-Ontario, California (W)
26. San Diego, California (W) (B)
27. San Francisco-Oakland, California (W)
28. San Jose, California (W)
29. Santa Barbara, California (W)
30. Santa Rosa, California (W)
31. Stockton, California (W)
32. Tucson, Arizona (E)
33. Vallejo-Napa, California (W)

APPENDIX B

Table B1. Mexican-American earnings, all data

		Nominal		Real	
Variable	df	Coeff.	t-value	Coeff.	t-value
INT	1	14.20	1.26	9.58	0.84
MAR	1	-13.96	-3.18**	-13.65	-3.08**
HRS	1	2.90	2.67**	3.38	3.09**
WKS	1	6.69	5.47**	6.71	5.44**
EX	1	1.74	4.84**	1.68	4.63**
EX1	1	-0.02	-3.59**	-0.02	-3.45**
01	1	35.93	4.48**	12.51	2.01*
02	1	20.26	-0.41	4.83	0.82
03	1	-4.29	-0.42	-4.63	-0.67
04	1	9.62	1.37	-7.12	-0.92
05	1	7.04	1.36	-1.72	-0.27
06	1	4.54	0.79	3.63	0.30
07	1	17.98	2.65**	-8.90	-1.19
08	1	-5.13	-0.63	3.11	0.38
09	1	-5.48	-0.85	37.01	4.58**
I3	1	12.85	2.08	20.01	2.82**
I4	1	4.80	0.83	-5.54	-0.54
I5	1	-4.27	-0.62	9.33	1.33
I6	1	-7.83	-1.04	6.65	1.27
I7	1	-2.48	-0.39	4.42	0.77
I8	1	0.51	0.04	18.35	2.68**
I9	1	-7.24	-1.07	-5.50	-0.67
I10	1	5.20	0.64	-5.50	-0.85
E1	1	-17.93	-3.92**	-17.61	-3.82**
EM	1	-3.80	-0.90	-4.03	-0.96
EN	1	17.85	3.31**	15.03	2.77**
SIZE	1	6.4×10^{-7}	1.07	2.4×10^{-7}	0.39
DIST	1	-0.04	-1.38	-0.03	-0.98
S	1	6.0×10^{-5}	1.30	4.0×10^{-5}	0.87
MAP	1	-97.93	-2.60**	-81.51	-2.15*
T	1	76.55	1.44	79.50	1.49
R^2		.4128		.3840	
N		441		441	

*,**Significant at the 5% and 1% levels, respectively, in this and subsequent tables in this appendix. "S" is equal to $(DIST)^2$ and "T" is equal to $(MAP)^2$.

Table B2. Non-Mexican-American earnings, all data

Variable	DF	Nominal		Real	
		Coeff.	t-value	Coeff.	t-value
INT	1	17.78	0.94	18.22	0.96
MAR	1	-16.50	-2.11*	-16.92	-2.18*
HRS	1	-1.53	-0.96	-1.34	-0.84
WKS	1	8.64	3.76**	8.83	3.85**
EX	1	3.95	7.68**	4.03	7.86**
EX1	1	-0.07	-6.80**	-0.07	-6.95**
BL	1	-29.97	-3.38**	-29.86	-3.38**
01	1	38.95	3.07**	-12.09	-0.22**
02	1	31.50	2.63**	9.46	0.58
03	1	6.41	0.48	1.12	0.10
04	1	-7.47	-0.56	5.36	0.58
05	1	6.14	0.54	8.09	0.80
06	1	2.12	0.17	10.16	0.91
07	1	-4.91	-0.39	3.93	0.39
08	1	-27.71	-0.46	24.89	1.89*
09	1	-8.88	-0.64	-0.85	-0.08
I1	1	-2.71	-0.05	-4.88	-0.44
I2	1	6.40	0.39	34.73	2.75**
I3	1	3.33	0.31	28.93	2.43*
I4	1	8.19	0.88	6.69	0.50
I5	1	10.32	1.01	-9.43	-0.71
I6	1	11.09	0.98	4.47	0.40
I7	1	4.83	0.48	2.02	0.16
I8	1	25.44	1.93*	-5.66	-0.45
I9	1	0.64	0.06	-24.02	-0.40
I10	1	-4.60	-0.41	-12.25	-0.89
E1	1	-14.85	-1.55	-13.11	-1.38
EM	1	-15.29	-2.49*	-13.13	-2.15*
EN	1	9.66	1.71*	10.71	1.90*
SIZE	1	-5.3×10^{-6}	-0.50	-1.1×10^{-6}	-1.12
DIST	1	4.0×10^{-3}	0.12	0.02	0.76
S	1	9.6×10^{-6}	0.18	-3.2×10^{-5}	-0.61
MAP	1	-115.59	-1.91*	-139.49	-2.32*
T	1	150.25	1.52	225.13	2.28*
R^2		.2845		.2819	
N		708		708	

Table B3. Non-Mexican-American earnings, professional and managers

		Nominal		Real	
Variable	DF	Coeff.	t-value	Coeff.	t-value
INT	1	56.52	1.36	58.62	1.43
MAR	1	-22.59	-1.36	-21.60	-1.32
HRS	1	-6.50	-1.66*	-5.89	-1.52
WKS	1	5.44	0.89	5.12	0.85
EX	1	6.17	4.92**	6.25	5.05**
EX1	1	-0.09	-3.48**	-0.10	-3.61**
BL	1	-76.24	-2.77**	-73.02	-2.69**
I2	1	11.40	0.36	7.56	0.24
I3	1	-12.30	-0.42	-11.67	-0.40
I4	1	5.31	0.28	-1.39	-0.07
I5	1	11.20	0.54	5.43	0.26
I6	1	11.34	0.72	16.71	0.66
I7	1	17.43	0.77	14.32	0.64
I8	1	31.53	1.11	30.05	1.08
I9	1	4.39	0.18	-2.80	-0.11
I10	1	-13.02	-0.62	-17.14	-0.83
E1	1	-2.70	-0.06	5.30	0.11
EM	1	-47.16	-2.67**	-41.39	-2.39*
EN	1	20.37	1.76*	22.58	1.98*
SIZE	1	2.5×10^{-7}	1.15	1.7×10^{-7}	0.80
DIST	1	-0.03	-0.97	-0.04	-0.48
S	1	2.2×10^{-5}	1.50	1.2×10^{-5}	0.85
MAP	1	-153.63	-1.12	-202.54	-1.50
T	1	243.53	1.16	354.17	1.70*
R^2		.2707		.2707	
N		229		229	

Table B4. Non-Mexican-American earnings, sales and clerical

Variable	DF	Nominal		Real	
		Coeff.	t-value	Coeff.	t-value
INT	1	-6.72	-0.15	-2.29	-0.05
MAR	1	-30.73	-1.35	-35.61	-1.49
HRS	1	-0.59	-0.13	-0.56	-0.12
WKS	1	12.30	1.77*	11.70	1.61*
EX	1	5.10	2.97**	5.29	2.94**
EX1	1	-0.04	-2.46*	-0.09	-2.42*
BL	1	-22.46	-0.63	-20.94	-0.56
I2	1	-11.58	-0.17	-9.78	-0.14
I3	1	-2.57	-0.07	-3.21	-0.08
I4	1	20.12	0.81	19.23	0.74
I5	1	8.78	0.29	6.67	0.21
I6	1	25.19	0.97	23.53	0.87
I7	1	1.13	0.05	-0.24	-0.01
I8	1	31.78	1.28	30.45	1.17
I9	1	25.73	0.35	26.17	0.34
I10	1	73.57	1.87	77.04	1.87*
E1	1	-50.22	-1.03	-48.65	-0.96
EM	1	-25.34	-1.23	-24.27	-1.12
EN	1	19.01	1.20	21.34	1.28
SIZE	1	-4.3×10^{-7}	-1.34	-5.1×10^{-6}	-1.50
DIST	1	0.24	2.59*	0.27	2.75**
S	1	-4.1×10^{-5}	-2.48*	4.6×10^{-4}	-2.67*
MAP	1	-485.04	-2.44*	-562.47	-2.70**
T	1	807.96	2.41*	1016.49	2.90**
R^2		.2958		.3143	
N		116		116	

Table B5. Non-Mexican-American earnings, crafts

Variable	DF	Nominal		Real	
		Coeff.	t-value	Coeff.	t-value
INT	1	-7.87	-0.28	-15.46	-0.56
MAR	1	-13.57	-0.99	-11.79	-0.90
HRS	1	-0.56	-0.22	-0.66	-0.27
WKS	1	11.23	3.08**	12.44	3.52**
EX	1	1.83	2.04*	2.02	2.32*
EX1	1	-0.03	-1.73*	-0.04	-1.98*
BL	1	-23.78	-1.16	-27.26	-1.37
I2	1	42.72	1.53	43.44	1.60*
I3	1	20.11	1.21	20.26	1.26
I4	1	19.74	1.20	20.83	1.31
I5	1	13.81	0.80	16.60	0.98
I6	1	2.73	0.14	5.73	0.30
I7	1	33.77	1.82*	36.29	2.02
I8	1	-13.79	-0.30	-0.80	-0.22
I9	1	10.36	0.56	13.50	0.75
I10	1	7.84	0.31	10.49	0.42
E1	1	-7.07	-0.54	-4.62	-0.37
EM	1	3.14	0.37	5.60	0.68
EN	1	5.84	0.67	5.47	0.65
SIZE	1	1.8×10^{-6}	1.12	8.1×10^{-7}	0.53
DIST	1	0.01	0.20	0.04	0.74
S	1	8.5×10^{-6}	0.10	-4.9×10^{-5}	-0.61
MAP	1	103.09	1.10	72.29	0.80
T	1	-221.17	-1.41	-148.05	-0.97
R^2		.2369		.2467	
N		160		160	

Table B6. Non-Mexican-American earnings, laborers and service, all data

		Nominal		Real	
Variable	DF	Coeff.	t-value	Coeff.	t-value
INT	1	37.44	1.70*	35.32	1.66*
MAR	1	-15.51	-1.24	-17.94	-1.49
HRS	1	1.59	0.66	1.52	0.65
WKS	1	7.50	2.41*	7.73	2.56*
EX	1	2.29	3.11**	2.27	3.17**
EX1	1	-0.05	-3.92**	-0.05	-4.03**
I1	1	-13.78	-0.70	-15.48	-0.82
I2	1	17.12	0.83	27.95	1.40
I3	1	8.09	0.55	8.74	0.62
I4	1	10.77	0.91	10.71	0.94
I5	1	27.27	2.01*	26.92	2.05*
I6	1	4.66	0.28	4.07	0.25
I7	1	5.88	0.43	5.62	0.43
I9	1	15.61	1.12	15.54	1.15
I10	1	-3.99	-0.24	-3.85	-0.24
BL	1	-20.23	-2.19*	-18.98	-2.12*
E1	1	-0.21	-0.02	1.54	0.15
EM	1	0.35	0.04	2.01	0.26
EN	1	-3.47	-0.35	-1.90	-0.20
SIZE	1	-1.2×10^{-6}	-0.69	-1.8×10^{-7}	-1.05
DIST	1	-0.12	-2.47*	-0.11	-2.31*
S	1	1.7×10^{-4}	2.34*	1.5×10^{-5}	2.15*
MAP	1	-102.51	-1.13	-94.24	-1.07
T	1	25.39	0.17	29.68	0.20
R^2		.2731		.2868	
N		203		203	

Table B7. Mexican-American earnings, professional and managers

		Nominal		Real	
Variable	DF	Coeff.	t-value	Coeff.	t-value
INT	1	32.80	0.40	43.07	0.57
MAR	1	-26.13	-1.21	-23.38	-1.10
HRS	1	3.34	0.43	2.24	0.29
WKS	1	10.05	0.88	8.12	0.72
EX	1	1.53	0.71	1.69	0.80
EX1	1	-0.02	-0.47	-0.02	-0.54
I3	1	48.19	1.39	40.62	1.19
I4	1	4.25	0.19	7.59	0.34
I5	1	-13.17	-0.34	-12.47	-0.32
I6	1	1.99	0.04	-0.01	-0.0002
I7	1	19.27	0.61	25.50	0.82
I8	1	-5.69	-0.15	-1.91	-0.05
I9	1	12.47	0.42	12.68	0.43
E1	1	-21.38	-0.57	-26.48	-0.72
EM	1	-28.66	-1.09	-30.31	-1.16
EN	1	39.99	2.02	36.34	1.86*
SIZE	1	8.9×10^{-8}	0.03	-8.0×10^{-7}	-0.24
DIST	1	-0.14	-0.79	-0.11	-0.59
S	1	1.2×10^{-4}	0.40	6.2×10^{-5}	0.21
MAP	1	-58.97	-0.25	-78.82	-0.35
T	1	-24.14	-0.07	50.58	0.15
R^2		.3407		.3243	
N		61		61	

Table B8. Mexican-American earnings, sales and clerical

Variable	DF	Nominal		Real	
		Coeff.	t-value	Coeff.	t-value
INT	1	-17.94	-0.82	-23.62	-1.05
MAR	1	-13.48	-1.36	-15.97	-1.50
HRS	1	1.65	0.66	2.97	1.09
WKS	1	6.96	1.98*	7.63	2.10*
EX	1	3.76	4.34**	3.51	3.92**
EX1	1	-0.06	-3.08**	-0.05	-2.75*
I3	1	13.63	0.95	12.38	0.84
I4	1	9.42	0.91	7.45	0.70
I5	1	11.27	0.56	3.93	0.19
I6	1	-0.09	-0.01	-3.01	-0.19
I7	1	-2.65	-0.27	-6.37	-0.63
I8	1	-11.14	-0.82	-13.63	-0.97
E1	1	-35.82	-3.05**	-37.87	-3.13**
EM	1	-11.14	-1.32	-11.00	-1.26
EN	1	3.31	0.40	-0.65	-0.08
SIZE	1	1.5×10^{-7}	0.94	1.4×10^{-6}	0.85
DIST	1	0.09	1.09	0.07	0.89
S	1	1.4×10^{-6}	-0.65	-3.9×10^{-5}	-0.36
MAP	1	-0.81	-0.01	18.76	0.21
T	1	-27.09	-0.25	-20.77	-0.19
R^2		.8049		.7915	
N		41		41	

Table B9. Mexican-American earnings, crafts

Variable	DF	Nominal Coeff.	Nominal t-value	Real Coeff.	Real t-value
INT	1	54.86	2.32*	50.53	2.19**
MAR	1	-26.27	-2.73**	-24.59	-2.62**
HRS	1	5.42	1.78	5.91	2.00*
WKS	1	2.99	0.98	2.30	0.77
EX	1	0.26	0.29	0.38	0.43
EX1	1	0.002	0.14	-5.0×10^{-4}	-0.03
I3	1	-2.39	-0.23	-4.67	-0.45
I4	1	-19.49	-1.72	-21.36	-1.93
I5	1	-8.46	-0.70	-7.16	-0.60
I6	1	-22.43	-1.31	-24.88	-1.49
I7	1	-38.97	-2.66**	-37.71	-2.64
I9	1	-20.52	-1.67	-22.81	-1.90
E1	1	-11.16	-1.51	-9.59	-1.33
EM	1	8.87	1.14	8.90	1.17
EN	1	12.90	1.14	11.59	1.05
SIZE	1	2.5×10^{-7}	2.14*	2.0×10^{-7}	1.81
DIST	1	-0.01	-0.22	0.01	0.22
S	1	-1.1×10^{-6}	-0.10	-6.4×10^{-6}	-0.61
MAP	1	-143.90	-1.77	-130.23	-1.64
T	1	130.63	1.06	141.47	1.17
R^2		.3713		.3306	
N		100		100	

Table B10. Mexican-American earnings, laborers and service, all data

		Nominal		Real	
Variable	DF	Coeff.	t-value	Coeff.	t-value
INT	1	16.07	1.10	12.66	0.84
MAR	1	-7.57	-1.40	-7.52	-1.34
HRS	1	2.47	1.96*	2.92	2.25*
WKS	1	7.89	5.87**	8.13	5.85**
EX	1	1.34	3.17**	1.18	2.71**
EX1	1	-0.02	-2.47*	-0.02	-2.13*
I1	1	-5.84	-0.61	-6.19	-0.63
I3	1	14.17	1.45	15.97	1.58
I4	1	9.52	1.07	9.09	0.99
I5	1	3.91	0.40	3.24	0.32
I6	1	3.65	0.34	5.06	0.46
I7	1	0.46	0.05	0.002	0.00
I9	1	-11.12	-1.08	-11.64	-1.09
I10	1	-7.01	-0.62	-8.76	-0.74
E1	1	-18.70	-3.07**	-17.49	-2.77**
EM	1	-7.25	-1.27	-7.47	-1.26
EN	1	4.55	0.53	1.18	0.13
SIZE	1	4.9×10^{-7}	0.63	9.5×10^{-8}	0.13
DIST	1	2.0×10^{-3}	0.05	0.014	0.33
S	1	1.3×10^{-5}	-0.22	3.3×10^{-5}	-0.54
MAP	1	-116.49	-2.41*	-107.60	-2.15*
T	1	121.10	1.76	128.81	1.81
R^2		.3772		.3346	
N		245		245	