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Regional Wage Inequality in the United States Furniture Industry

by

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(ABSTRACT)

This study investigates regional average hourly wage differences in the United States furniture industry. County level census data used to compare average wages in the South with average wages in the non-South showed a considerably lower wage structure in the South. Regression models suggest wage variation is strongly influenced by factors related to economic organization, and moderately influenced by labor market characteristics, urbanization, and product type; however, region provides the single best estimate of wages. Dividing the sample into South and non-South subsamples and constructing separate regression models increased the predictive power of the models in the non-South, but failed to predict wage rates in the South.

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Dedicated to my late grandfathers, Thomas Roger Pegram and Harley Beecher Webb, two men who knew the furniture industry.

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Chapter 1

STATEMENT OF PROBLEM

Of the many types of inequality sociologists traditionally investigate, one of the most obvious is income inequality, because a person's position in a stratified industrial society largely depends upon monetary income (Matras, 1984:32). In the United States, over three quarters of the income produced goes to those providing labor services, making the distribution of labor income the single most important determinant of overall income distribution (Reynolds, 1969:525). Since only a small percentage of the non-agricultural workforce is self-employed, for the vast majority labor income consists of wages or salary received from an employer (Stolzenberg, 1978:813). Yet, sociological theory and research explicitly addressing wage differentials have been "conspicuously scarce" (Bibb and Form, 1977:974). Investigations of wage inequality typically fall into the province of economics; however, it is not solely an economic problem. Bluestone et al. note "[t]here are literally thousands of economic, social, political, and psychological factors that impinge on the wage rates of a given individual" (1973:19).

Wage inequality can be divided analytically into two broad categories: differential renumeration for different types of work, and differential renumeration for similar types of work. Recent sociological studies on earnings differences have tended to focus on the first type of inequality (Beck et al., 1978, Bibb and Form, 1977; Hodson, 1983; Hodson and England, 1986; Stolzenberg, 1978; Tolbert et al., 1980). While this research yields insight into structural factors influencing wage rates across industries, it neglects wage differences within industries, or regional wage differences, which are related to the second type of inequality. This study will investigate this latter type of wage inequality, looking specifically at regional wage differences in the United States furniture industry.[1]

Data published by the Bureau of Labor Statistics (1963, 1966, 1970, 1973, 1976, 1981) on the wood household furniture, non-upholstered, industry[2] reveal that average hourly earnings in the three Southern regions,[3] the Southeast, the Southwest and the Border States, were consistently lower than the national average for the industry throughout the 1960s and 70s. The average hourly wage in the Southwest was 87 percent of the industry national average in 1962. In 1979, the Southwest average hourly furniture wage had improved to 95 percent of the industry national average. In the Southeast region the average hourly wage was 85 percent of the national average hourly wage in 1962. By 1979, the industry average hourly wage in the Southeast region had improved somewhat, but it still was almost 10 percent less than the national average hourly wage for the in-

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1 The furniture industry is defined as the furniture and fixtures major industry group (SIC 25), using the Standard Industrial Classification (SIC) codes published by the Bureau of Management and Budget.

2 The wood household furniture, non-upholstered, industry (SIC 2511) accounts for almost a third of the employment in the furniture and fixtures industry group (SIC 25).

3 The seven regions defined by the Bureau of Labor Statistics are: New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; Middle Atlantic: New Jersey, New York, and Pennsylvania; Border States: Delaware, District of Columbia, Kentucky, Maryland, Virginia, and West Virginia; Southeast: Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee; Southwest: Arkansas, Louisiana, Oklahoma, and Texas; Great Lakes: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; Pacific: California, Nevada, Oregon, and Washington.

dustry. Furthermore, in 1979 the average hourly wage in the Southeast was only 69 percent of the average hourly wage in the Pacific region (which consistently has the highest average hourly wage within the industry). Thus, while there has been some movement toward relative wage equality within the wood household furniture, non-upholstered, industry, significant regional differences persist.

Indeed, average wages in the Border States region, which ranked third among all regions in employment in 1979 (behind the Southeast and Great Lakes regions), actually lost ground compared to the industry average during the 1960s and 70s. In 1962, the average hourly wage in the Border States region was 90 percent of the national average, but by 1979 had declined to 85 percent of the national average. About 40 percent of the wage earners in the wood household furniture in the Border States region are located in Martinsville and Henry County, Virginia. Data released for this particular area show it consistently has had lower average hourly wages in the wood household furniture, non-upholstered, industry than any of the regions, or any of the other areas with high concentrations in the industry for which separate data are released. This pattern of wage inequality in the Martinsville and Henry County area persists in spite of several facts suggesting the opposite should have occurred. Furniture companies in the area are among the largest and most productive in the country (Skinner and Rogers, 1968). Moreover, it is the second most industrialized area in Virginia (behind Richmond) based on employment in manufacturing (Glazier, 1981). This study seeks to account for regional wage inequality in the furniture industry in general, but more specifically for why wages in relatively industrialized areas in the South continue to lag behind the rest of the country.

Chapter 2

REVIEW OF LITERATURE

A good deal of the literature on regional wage differences is in the field of economics, where neo-classical marginal productivity theory is the dominant model used in explaining wage differentials. But, economic approaches which "display an affinity for reclothed nineteenth century theories" (Bibb and Form, 1977:974) may not adequately address the sociological factors that impinge on wage rates. Although these sociological factors have not been unified into a single dominant paradigm, approaches which focus on segmentation in the economy and the labor market have particular relevance for understanding wage differentials. Two other sociological approaches which may aid in understanding wage patterns in the furniture industry are research into industrial paternalism and the World-System theory of development. The following literature review will detail some of the aspects of neo-classical economic theory, segmentation approaches, industrial paternalism, and World-System development which can be used to construct a model explaining regional wage differences in the U.S. furniture industry.

2.1 NEO-CLASSICAL ECONOMIC MODELS OF WAGE DETERMINATION

The neo-classical economic model of wage differentials is based on marginal productivity theory. "Put simply, this theory asserts that under conditions of perfect competition, the wages paid to workers equal the value of output attributable to that of the last person hired"(or "marginal man") (Bibb and Form, 1977:975). This model assumes the labor market, like any other commodity market, is a homogeneous, undifferentiated arena of exchange (Hodson, 1983), where workers seek employment at the highest possible wage while employers seek to pay the lowest possible wage (Bibb and Form, 1977). The "invisible hand" of the market is left to determine the wage rate.

This model also assumes perfect and costless information and mobility, plus long-term regional wage equalization. While short-term regional wage differences can be expected, the persistence of low wages in an area is a more perplexing problem. Yet, Newman notes there is no single, universally accepted explanation of why wages in the southern states tend to be chronically lower than in any of the other regions (Newman, 1982:109-110). Consequently, a great deal of neoclassical research efforts are spent explaining why the theoretical prediction of wage equality across regions has not occurred.

In the late 1950s and early 1960s, economic models of wage differentials shifted from an emphasis on the demand side, or industrial factors, which concern the effects of capital intensity, profits, concentration, and unionization on wage rates, to an emphasis on the supply side, or "human capital", which is concerned with the effects of education, skills, training, health, mobility, and attitudes of the labor force on wage rates (Bluestone et al., 1973). More recent investigations into regional wage differentials utilizing sophisti-

cated econometric techniques have been able to combine elements from both of these approaches and control for both industry and labor-quality variations across regions (Newman, 1982).

In a detailed study of South/non-South wage differentials, controlling for industry, sex, race, capital intensity, education and unionization, Scully (1969) found significant differences in earnings between the South and non-South, and concluded that the three largest contributers to wage differentials were: industry structure, which produced a 20 percent wage difference in favor of the non-South; wage discrimination against non-whites in the South, which produced a 12 percent differential in favor of the non-South; and human capital (education), which produced a 10 percent differential in favor of the non-South. According to Scully, these findings indicate that regional wage convergence depends on eliminating discrimination and human capital differences. "But, aside from the discrimination argument, most of the difference in wage rates between the South and the non-South can be accounted for by regional differences in the quality of the labor force and by the industry mix" (Newman, 1982:116).

As opposed to Scully's cross-sectional data set, Newman (1982) investigated the pattern of South/non-South differentials since 1960, and found that, while there had been a move towards regional wage convergence, males in the South still earn less per week than males in any other region. Also, in durable goods manufacturing, which includes the furniture industry, and where the predictive power of the neo-classical model should be strongest, this pattern of convergence has been less pronounced. In fact, males in certain age cohorts actually lost ground compared to other regions during the 1970s.

Recognizing that regional wage differences have not drastically decreased spurred the development of another neo-classical economic explanation of regional wage inequality

revolving around regional differences in the cost of living (Bellante, 1979; Coelho and Ghali, 1971; Sahling and Smith, 1982). While actual money wages may be lower in the South, real wages, which take cost-of-living differentials into account and represent what people can actually buy with their wages, will be relatively equal across regions. To test this hypothesis, Sahling and Smith (1982) compared wages for males and females in large urban labor markets in the South against comparable workers in the New York City area, the rest of the Northeast, the North Central region, and the West region. They found that the South did have lower money wages than any of the other regions except the Northeast, but that real wages were actually higher in the South than in any of the other regions.

These results, however, must be interpreted with caution. Their sample of the largest urban labor markets in the South (Atlanta, Dallas, Houston and Washington, D.C.) may not be indicative of the wage patterns in smaller urban labor markets in the South. A second problem lies in failing to recognize that "the lower cost of living may be a result of low wages, since many items in the consumption bundle are produced in co-operation with with local labor" (Newman, 1982:117). Furthermore, other items in the consumption bundle are produced outside the region, where their price would be influenced by the wage level in other areas. "Thus, a wage differential of, say, 10 percent between regions cannot produce a 10 percent difference in the cost of living" (Newman, 1982:117).

In short, the neo-classical economic prediction of regional wage equality has found only weak empirical support. Scully found substantial wage differentials between the South and non-South. Sahling and Smith also found regional earnings differences, with the South having the lowest levels of money wages. In a time-series analysis, Newman found

wage differences between the South and non-South, as well as an overall pattern of wage convergence; however, convergence failed to occur in durable goods manufacturing. The type of industry mix, racial discrimination, and differences in human capital appear to account for the bulk of the wage differences between the South and the non-South. Cost-of-living differences may also account for part of these wage differences, but it is unlikely that this factor alone can produce and perpetuate regional wage differentials.

2.2 SEGMENTATION APPROACHES TO WAGE DETERMINATION

Notions of segmentation in the economy and in the labor market trace their "intellectual origins to a diverse set of theoretical and empirical works" (Tolbert, et al., 1980:1095). The common theme throughout the literature is "the importance of differences in economic organization" (1980:1096), which in some respects is similar to the industrial economics of the 1950s. But unlike the neo-classical model where differences in economic organization and the labor market are one of degree, in segmentation approaches these differences are structural in nature, serving to demarcate between sectors of the economy and the labor market. Instead of the single, homogeneous economy and labor market envisioned in orthodox economics, the economy and the labor market are divided into distinct sectors, or segments.[4] Although studies using notions of a segmented economy and labor market rarely explicitly address regional wage differences, they have compared worker outcomes, including wages, across industries and occupations and across various divisions of the labor market, and have identified some of the many factors influencing wage levels. These factors can be divided into two broad, inter-related,

[4] Segmented economy and/or labor market approaches recognize the importance of industrial differences, yet having made the distinction between core and periphery economies and primary and secondary labor markets, still tend to treat each sector as if they were homogenous.

categories: those related to segmentation in the economy and those related to segmentation in the labor market.

2.2.1 ECONOMIC SEGMENTATION

Following Averitt (1968), the most common division of the economy is into two sectors, or the idea of a "dual economy." Basically, Averitt divides the private economy into relatively large, bureaucratic, diversified, geographically disperse and vertically integrated "center" firms, and relatively small, specialized, "periphery" firms.[5] These early segmented economy approaches are largely descriptive in nature, with one of the best descriptions presented by Bluestone et al.

> The core economy includes those industries that comprise the muscle of American economic and political power...[T]he firms in the core economy are noted for high productivity, high profits, intensive utilization of capital, high incidence of monopoly elements, and a high degree of unionization. Workers who are able to secure employment in these industries are, in most cases, assured of relativly high wages and better than average working conditions and fringe benefits...
>
> Beyond the fringes of the core economy lies a set of industries that lack almost all of the advantages normally found in center firms...The periphery industries are noted for their small firm size, labor intensity, low productivity, intensive product market competition, lack of unionization, and low wages. Unlike core sector industries, the periphery lacks the assets, size and political power to take advantage of economies of scale or to spend large sums on research and development. (Bluestone et al., 1973:28-29)

More recent, and more empirically oriented, research into the segmented economy has variously used core/periphery, monopoly/competitive, and concentrated/unconcentrated to describe the divisions of the economy. Although the names have been changed, there has been basic agreement on the key characteristics which distinguish the two sectors. Perhaps the most critical distinction has been on the basis of market power. "Core firms are monopolists or oligopolists in their product markets, while periphery firms are com-

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[5] Although Averitt uses "firms" to differentiate between center and periphery economies, later researchers have substituted industries for firms, and use the term "industrial differences" to refer to the differences between industries in the organization of production (Tolbert et al., 1980).

petitors" (Hodson and Kaufman, 1982:728). Thus, market concentration, or the share of the product market controlled by powerful firms, is a commonly used empirical basis for distinguishing between sectors of the economy. Other quantifyable characteristics used in distinguishing economic sectors include: number of employees, economic scale (based on profits, assets and sales), capital intensity, conglomerate organization, long term planning capabilities, sales to government agencies, and unionization. Of these indicators, market concentration, capitalization and employment size recur throughout the literature, and appear to be the fundamental characteristics tapping the distinction between the core and periphery sectors of the economy.

The empirical specification of economic segments is an important problem in the economic segmentation approach, but it has by no means been resolved (see Hodson, 1983; Tolbert et al., 1980; Hodson and Kaufman, 1982; Horan et al., 1981; Oster, 1978). The whole notion of a segmented economy grew out of a recognition that the assumptions made in the neo-classical model fell short in explaining worker outcomes, such as earnings. Thus, the notion of a segmented economy is an investigative tool that can be used to better explain worker outcomes, including wage rates.

As expected from the description presented by Bluestone et al., wage rates in the periphery segment of the economy are significantly lower than in the core. Beck et al. found that annual average earnings in the periphery were about $3000 less than in the core. Similarly, Bibb and Form (1977) found that average annual earnings for operatives in the periphery were about $2000, or 27 percent less than average annual earnings for operatives in the core sector.

Perhaps more important than the actual earnings differences between sectors are the findings that earnings are related to the characteristics distinguishing between core and

periphery sectors. Capital intensity, market concentration, and organizational size all appear to have significant effects on earnings, although the relative strengths of these effects is still unsettled. Kalleberg et al. (1981) find that market concentration and establishment size have relatively strong positive effects on income, whereas capital intensity is weakly, but still positively, related to income. In contrast, Hodson (1983) finds that capital intensity is a stronger determinant of earnings than market concentration, while organizational size remains a strong determinant.

While capital intensity, market concentration and size are all significant determinants of wage earnings, which is what the organizational economists in the 1950s discovered, what is less clear is if, and how these effects differ across sectors of the economy. Using capital intensity, concentration and size to differentiate between core and periphery implicitly assumes they have different effects on earnings across economic sectors; however, the differences in the strengths of these effects remains largely unmeasured. Instead, research using the segmented approach has investigated differential returns to worker characteristics, or, in other words, the different effects of the labor market between sectors of the economy. In this sense the labor market can be viewed as an intervening variable between economic segmentation and worker outcomes.

2.2.2 SEGMENTED LABOR MARKETS

Labor market segmentation encompasses many different yet related issues. It includes distinctions between "blue collar" and "white collar," distinctions based on occupational skill levels, distinctions based on race, distinctions based on sex, distinctions between internal and external labor markets based in part on employment stability and oppor-

tunity for advancement (Doeringer and Piore, 1971; Kerr, 1954), distinctions between primary and secondary labor markets based on the prevalent system of labor control (Edwards, 1979), and the distinction between primary and secondary labor markets corresponding with core and periphery sectors of the economy. All of these distinctions are valid in their own right, and all may impinge on wage rates. However, the last distinction, where labor markets correspond to economic segmentation, appears to be the most critical.

According to segmented economy theorists, segmentation in labor markets is "a consequence of a more fundamental process of segmentation in the economic order" (Tolbert et al., 1980:1095). "The central theoretical assertion...is that behavior observed in the labor market...reflects more fundamental processes in production itself...To understand the labor market processes which produce group differences in incomes, unemployment, and mobility, then we must investigate the institutional arrangements governing production" (Edwards et al., 1975:4).

Assuming labor market segmentation occurs in response to economic segmentation, the obvious relation between economic segmentation and labor market segmentation is to pair the core sector of the economy with the primary labor market and the periphery sector with the secondary labor market.[6] One argument for why this would occur centers around the desire for core firms to retain skilled labor positions and reduce labor cost, so they provide higher wages and benefits (Hodson and Kaufman, 1982; Doeringer and Piore, 1971). Another argument is that the core develops "artificial inequalities and gradations between different fractions of the working class" to undermine development

[6] Although this is the obvious relation between labor market and economic segmentation, it is somewhat misleading since some workers for core firms may find themselves in the secondary labor market. On the other hand, it may be possible to assume that relatively few workers in the periphery sector of the economy find themselves in the primary labor market.

of working-class organizations which could increase the relative wages of the working-class and reduce long-term profits for capital (Hodson and Kaufman, 1982:730; Edwards, 1979). In both of these arguments the core pays higher wages in a desire to maximize profits. In contrast, the periphery, using an older mode of production and generally involving smaller organizational size, maximizes profits the old-fashioned way, by paying lower wages.

Therefore, some of the labor market factors influencing wage levels can be hypothesized to operate differently between the primary and secondary labor markets. In addition, differences in the labor force composition between primary and secondary labor markets can also be expected. Empirical studies incorporating economic and/or labor market segmentation into the earnings model have generally supported these hypotheses. Females, non-whites, less educated workers, and non-union workers are all over represented in the periphery economy and secondary labor market (Beck et al., 1978). While these characteristics put workers in the secondary labor market at a disadvantage vis-a-vis workers in the primary labor market, within the secondary labor market these negative effects are much smaller. For example, being female or being non-white has a significant negative effect on earnings in the primary labor market, but in the secondary labor market this effect is not significant (Beck et al., 1978). Likewise, the positive effect of being unionized is greater in the primary than in the secondary labor market. In addition, "human capital" yields higher returns in the primary labor market than in the secondary labor market, where employers "do not distinguish among workers; they all appear equally unskilled and unstable" (Osterman, 1975:519). However, Beck et al. (1978) find that additional years of schooling do have a significant positive effect on earnings in the secondary labor market.

In short, segmentation approaches posit embedded structural differences between the core and periphery, based mainly on market concentration, capital intensity and organizational size. These economic sectors give rise to segmentation in the labor market. The primary labor market corresponds with the core sector of the economy, and a higher wage rate and higher returns to human capital prevail. On the other hand, the secondary labor market, corresponding with the periphery sector of the economy, generally results in a lower wage rate, regardless of differences in worker characteristics or in human capital.

2.3 PATERNALISTIC CAPITALISM

A key aspect of labor markets is their local nature. Whereas capital may compete in regional, national or global marketplaces, labor is basically restricted to a labor market bounded by commuting distance and time. In some cases this allows a firm (or group of firms) to dominate the local labor market. In urban labor markets the odds are against a high labor market concentration into a few firms, and if this situation does occur, these firms are most likely to be in the core sector of the economy, for example in transportation or electrical equipment (Bunting, 1962). In rural labor markets concentration is not uncommon, and usually involves a firm in a periphery industry, such as textiles or lumber. Labor market concentration, in itself, does not necessarily affect wage levels; however, labor market concentration may be associated with "monopsony," which refers to a local labor market condition whereby employers collude to reduce the general wage level below the level that would occur if "those employers had been acting competitively" (Bunting, 1962:4-5). Perhaps the classic example of a

dominant employer (or employers) conspiring to reduce wage levels occurs under industrial paternalism.

"Paternalism is primarily an economic institution concerned with the manner of organizing a productive unit and regulating relationships between subordinates and the owners of the means of production" (Abercrombie and Hill, 1976:413). Along with this economic dimension, paternalism also has related political and ideological dimensions. Dependency leading to exploitation of the working class by the ownership class is the key element of paternalism in the economic and political dimensions, while the ideological dimension of paternalism serves to legitimate this relationship. Norris (1978) offers five essential characteristics of paternalistic capitalism: (1) an identifiable ownership class with a shared background; (2) members of the ownership class hold local political power; (3) the ownership class is involved in charitable acts toward the working class; (4) an underpinning ideology which emphasizes local ties; (5) and the existence of a docile workforce "which is the outcome, not the cause of successful paternalism" (Norris, 1978:473).

The last characteristic of paternalism, a docile labor force, may be an important factor in the study of wage patterns. Norris states that the structural bases of a deferential workforce involve face to face interaction between the employer and employees, a "continued economic dependence of workers on local employers" (1978:475), and a noticeable difference between local and non-local capital. Inside the workplace, labor control largely depends on personal contact between employer and employees. In this sense it is a system of labor control loosely corresponding to Edwards' definition of "direct control," typified by the open and arbitrary use of power, inherently exploitative of workers, and generating employment in the low wage secondary labor market

(Edwards, 1979). According to Edwards, direct control eventually evolves into technical control (based on machine pacing of work), and bureaucratic control (based on written rules and procedures) as firms get larger, and as employers seek to mask the differences in power to prevent working class organization. However, under paternalism the obvious power of capital is legitimated by the paternalist ideology which ensures a docile workforce. Thus, even in relatively large plants, "traditional modes of control can be maintained" (Norris, 1978:484). This suggests paternalism adds an additional layer of exploitation to workers who may already be exploited by virtue of being in the peripheral economy and the secondary labor market.

Norris suggests four measures that, if operationalized, would make it possible to identify localities "most likely to provide examples of paternalist capitalism" (1978:479). The first measure concerns the "work situation of the local working class." One method of measuring this would be to take the percentage of workers in small (less than 500 employees) plants, but this may be overly restrictive, since direct control may also be found in larger companies. The second measure involves labor market dominance by a firm or industry. Labor market concentration rates of over 12 percent in a single firm or industry suggests relatively high levels of local dependency. The third measure concerns the ownership of the firms in the area. A preponderance of locally owned firms with a high percentage of local employment is suggestive of paternalism. The fourth measure deals with the characteristics of the local capitalists, whether they control the local companies and whether they have links with the area. If so, then paternalism would be more likely in the area.

While these characteristics of paternalism lend themselves to empirical measurement, several of them would involve considerable effort if applied to labor markets in the U.S.

Nevertheless, Norris does show that at least the likelihood of paternalism can be captured quantitatively. Since paternalism is typically a Southern phenomenon, it may have a particular relevance to intra-industry studies of South/non-South wage differences.

2.4 WORLD SYSTEM THEORY AND WAGE DETERMINATION

Economic and segmentation approaches to wage determination share important similarities with the World-System theory of development. Both of these approaches recognize the importance of capital organization of production in producing differential worker outcomes. Both approaches also divide the economy and the labor market into sectors, with the dominant sector exploiting the subordinant sector. However, the research focus and units of analysis differ. In the World-System theory differences in the economic organization of areas (rather than industry or labor market differences) are the primary source of differential worker outcomes.

The "persistence of radical disparities in payments for parallel kinds of wage labor in different parts of the world" puzzled the Research Working Group on Households, Labor Force Formation and the World Economy of the Fernand Braudel Center (Smith, et al., 1984:8). To address this issue they turned their attention to the long term development of households. Much of the research was guided by Wallerstein's conception of a semi-proletarian household. Wallerstein uses the household rather than the individual as a unit of analysis because "under historical capitalism, as under previous historical systems, individuals have tended to live their lives within a framework of relatively stable structures which share a common fund of current income and accumulated capital," i.e. a household (Wallerstein, 1983:22). Even under capitalism, individuals

exist in income pooling arrangements with other individuals based on varying degrees of kinship and co-residential patterns. Taking this broad conception of households, which has stubbornly resisted attempts of more precise definition (Wong, 1984), Wallerstein divides them into three categories: subsistence; proletarian; and semi-proletarian.

By definition, subsistence households do not rely on wage earnings for primary reproduction, and are basically outside of the capitalist world-system. At the other extreme, proletarian households have had almost all areas of life commodified, that is they use their wages to buy almost everything required for primary reproduction. In this case, the reproduction of the workforce totally depends on the wages capital pays to labor.

Semi-proletarian households mix elements of these two types of households. Primary reproduction in semi-proletarian households depends on a combination of wage income and subsistence, or more generally, nonwage production. In this sense, the semi-proletarian household is an intermediate household formation. Caught between capitalist and pre-capitalist worlds, it is less well off materially than either of the other two types of households. In the World-System perspective, semi-proletarian households are located in less developed areas, where the dominant system of production is labor intensive, low-wage and unskilled. However, the concept of semi-proletarian households may have some applicability within developed areas as well, for example, within low wage sectors of the economy, and within less capital intensive, less skilled production systems.

In contrast to traditional Marxist theory which places wage labor at the cornerstone of capitalism, the notion of semi-proletarian households suggests non-wage labor is vital to continued capital accumulation of surplus value, and thus to the survival of

capitalism. Capital benefits from semi-proletarian households by paying workers less wages than are actually required for the reproduction of the workforce. "The level of surplus is not just the degree to which workers can be cajoled into producing beyond what is necessary, but the degree to which what is necessary can be met - all else being equal - by non-market structures" (Smith, 1984:68). Semi-proletarian households allow capital greater accumulation of surplus value precisely because capital ultimately benefits from the nonwage labor involved in the reproduction of the workforce. The potential for accumulation of surplus value due to nonwage production in semi-proletarian households is greatest for capital in labor intensive industries, such as textiles and furniture, where labor costs represent a high percentage of the cost of production.

The nonwage, subsistence production within semi-proletarian households is linked to the wage economy and to the world-system by virtue of its role in the reproduction of the wage labor force. Furthermore, the preservation or re-creation of these nonwage labor forms, that make sufficient quantities of wage labor available, are a necessary condition for the vast disparity in wages and products across geographic regions (Smith, et al., 1984:18).

2.5 SUMMARY OF LITERATURE REVIEW

In summary, four approaches to understanding regional wage differentials have been presented: the neo-classical economic model; the segmented economy and labor market approach; paternalistic capitalism; and semi-proletarian households presented in the World-System theory of development. The neo-classical approach posits regional wage differences should be disappearing, but existing empirical research provides only weak

support for this hypothesis. The lack of regional convergence has been traced to regional differences in industry mix and the quality of labor, and racial discrimination. The segmented economy approach has not explicitly explored regional variations in earnings, but based on inter-industry research one can conclude that product market concentration, capital intensity, and organization size should be associated with higher wages. The segmented labor market approach provides evidence that returns to unionization, and wage discrimination against females and nonwhites, should all be less in the secondary labor market. Labor markets are also susceptible to being dominated by a firm or an industry, and when combined with paternalism, labor market dominance can lead to a suppression of the wage rate. Finally, the World-System theory of development adds a significant twist to the study of regional wage differences by examining the influence of nonwage, subsistence labor within the household on regional wage differences. All of these approaches may aid in understanding wage patterns in the furniture industry, but before empirically testing the relative merits of each, it is advantageous to briefly examine the history and structure of the industry.

Chapter 3

HISTORY AND STRUCTURE OF THE FURNITURE INDUSTRY

3.1 HISTORY

The history of the U.S. furniture industry, like some others, involved the transition from handicraft to factory production. During the handicraft stage craft workers used hand-tools to fashion furniture for the upper and middle classes, while the lower class either did without, or relied upon the local carpenter (Bureau of Labor Statistics, 1940). The first "factory" in the U.S. was established in Connecticut in 1826, but it was not until the late 19th century that the factory system, utilizing power driven machinery, began to develop.

Early furniture factories were concentrated in New England and the middle Atlantic states with Philadelphia, New York City, and Jamestown, New York, being the major

centers of concentration. This pattern of clustering in certain localities has remained characteristic of the furniture industry. In detailing the state of the industry in the middle 1960s, Oliver notes "competition in the industry is severe, but this does not prevent manufacturers from co-existing in close proximity if they appeal to different needs, tastes, and income groups" (Oliver, 1966:120). Sources of raw materials and availability of markets are the two factors most responsible for this pattern of concentration in certain areas.

In the last decades of the 19th century the furniture industry shifted westward, following markets and lumber supplies. Grand Rapids, Michigan gained prominence as the industry leader. Between 1870 and 1910 the number of establishments increased from 8 to 54 while employment increased from 281 to 7250 (Oliver, 1966:91). After about 1900 the surrounding forests were depleted, and Grand Rapids began to lose some of its competitive advantage.

The turn of the century portended another industry shift as furniture companies were established in the South, notably in the Piedmont area of North Carolina, near High Point, again following markets and sources of hardwood lumber. Companies destined to become industry leaders, such as Hickory, Caldwell (later Broyhill), Drexel, Thomasville, and Bassett, were all established around 1900. This development in the industry in the South was not the result of capital flight, but rather the result of the efforts of local entrepreneurs. Oliver notes "the shift of much furniture manufacturing from north to south has been accomplished chiefly by southerners entering production rather than northerners migrating" (1966:117-118). Another important factor in the development of the industry in the South was the emphasis on mass production techniques, which are best suited to bedroom, kitchen, and novelty case goods. "At the time

that Henry Ford established the Ford Motor Company in 1903 for the mass production of automobiles, the brothers Bassett resolved to do likewise in the manufacture of furniture" (Oliver, 1966:122). By 1921 furniture had reversed the flow of a century as the South began shipping furniture to the North.

In 1937 the state leader in employment in furniture manufacturing was still New York, with Illinois second, North Carolina third, Indiana fourth and Michigan fifth (Bureau of Labor Statistics, 1940). By 1958, North Carolina had passed New York in employment, California was third (centered in Los Angeles and almost exclusively serving a West Coast market), Illinois was fourth (centered in Chicago and Rockford), and Virginia fifth (Oliver, 1966:114-115). In 1977, North Carolina continued to be the state leader in employment, accounting for nearly 20 percent of all employment in the U.S. furniture and fixtures industry. California was second, with New York, Virginia, Michigan, Tennessee, Indiana, Illinois, Pennsylvania, and Texas rounding out the top ten (U.S. Bureau of Labor Statistics, 1979).

3.2 STRUCTURE

The structure of the furniture industry can be summarized in one word: competitive. "The U.S. furniture industry as a whole is not vertically integrated. The large number of small producers, the many different types of materials used in construction, and the thousands of retailors generally inhibit vertical integration" (U.S. Department of Commerce, 1985:5). The type of market used by furniture manufacturers illustrates the competitive nature of the furniture industry. Major "markets" are held semi-annually in Chicago and High Point (and recently in Dallas) which bring together manufacturers

and buyers for retail outlets. Very little furniture is sold to wholesalers or to direct consumers. The manufacturers display their wares in showrooms and the buyers browse from one to another. With this type of market a low degree of market concentration could be expected, and indeed this is the case.

In 1977, the 20 largest wooden furniture producing companies only accounted for 40 percent of total shipment values (U.S. Department of Commerce, 1985:4). The remaining 60 percent of shipment values was produced by thousands of small producers. Although these figures reveal a relatively low degree of market concentration, the furniture industry is not exclusively composed of small producers. Large manufacturers have a significant impact on the structure of the industry. In 1929 only 232 out of the 3778 furniture making establishments had more than one factory (multi-unit). But this 6 percent of manufacturers employed 22 percent of the wage-earners and produced 23 percent of the total value (Bureau of Labor Statistics, 1937). In 1977, multi-unit establishments comprised 13 percent of all establishments in the furniture industry (SIC 25) but accounted for 57 percent of employees and 58 percent of shipment value. The top two companies in the furniture industry each produced about 8 percent of the total shipment value of the top 30 companies. The top 4 produced about 30 percent, and the top 8 about 50 percent of the shipment values of the top 30 companies (Ellefson and Stone, 1984:90-92). In a nutshell, the structure of the furniture industry is one where a relatively small number of the largest companies (around 30) control roughly half of the market, while the other half of the market is divided among thousands of small producers.

Using asset concentration, growth and profit rates, conglomeration, multi-nationality, economic size, and capital intensity of production as the key structural characteristics

of capital, Hodson (1983) proposes a six sector classification of labor markets, adding that certain industries still lie in the boundary where two sectors overlap. Hodson's classification places the furniture industry in the small-shop sector, which is basically a less concentrated sector of the periphery. This classification overlooks the fact that the furniture industry does have some large firms (especially producers of wooden household furniture), even though they are overshadowed in the aggregate by large numbers of small firms. This may indicate that the furniture industry may lie on the boundary area where the periphery and small shop sectors overlap. But this classification does not explain regional differences within the industry, or why low wages persist in areas with industry giants.

The unionization structure in the furniture industry was examined by Cornfield (1986) in order to test what he calls the "replenishment thesis" as an explanation of union decline in the U.S. since the 1930s. The replenishment thesis basically suggests that unions are limited to organizing small firms that are more likely to go out of business. Workers in larger firms are already receiving the fringe benefits unions use as incentives, and therefore have less reason for organizing. His rationale for using furniture industry data is that unionization has declined at the same time employment has increased, and employment concentration among firms has increased. These trends are not atypical of the manufacturing sector as a whole.

However, other characteristics of the structure of the furniture industry do distinguish it from other manufacturing industries. One characteristic is the low wage structure in the furniture industry compared to total durable goods manufacturing.[7] In 1950, furni-

[7] Durable goods manufacturing includes the following industry groups: lumber and wood products; furniture and fixtures; stone, clay, and glass products; primary metals; fabricated metals; machinery, except electric; electric and electronic equipment; transportation equipment; instruments and related products; and miscellaneous manufacturing.

ture workers made 89 percent of the average hourly wage for production and non-supervisory workers in durable goods manufacturing, by 1982 this percentage had dropped to 70 percent (Bureau of Labor Statistics, 1979, 1984). Additional data released by the Department of Commerce for the wood household furniture, non-upholstered industry shows that in 1972 the average hourly wage was 62 percent of the national average for durable goods manufacturing, and by 1981 the ratio had dropped to 58 percent. Thus, comparisons of the furniture industry with durable goods manufacturing indicate these wage differentials are widening over time.

Another characteristic presenting a problem in Cornfield's test of the replenishment thesis is that average hourly wages in the wood household furniture industry are about 10 percent higher in plants with 20-249 workers than they are in plants with more than 250 workers, and this trend has remained relatively constant from 1961 to 1979 (Bureau of Labor Statistics, 1963, 1966, 1970, 1973, 1976, 1981). Although Cornfield notes the lack of unionization in larger plants, especially in the South, he does not address this negative effect of firm size on wages, and thus does not explain how fringe benefits might be more important than wages in predicting the outcome of union elections. A final problem with Cornfield's analysis is that he does not address regional wage differentials. Oliver writes:

> to employers the immediate advantage of establishment in an area of lower wages is a real gain. To employees, fringe benefits accruing from work and life in the more rural environment of the Piedmont hills to some extent compensate for lower pay. But British experience shows that labour cost differentials tend to disappear. (1966:169)

To some extent Oliver is correct. Wage differentials in the industry have become slightly more uniform as high wage areas drop closer to the industry average and low wage areas rise to the industry average. Even so, the historical pattern of low wages in the South has yet to be broken, despite the high degree of industry concentration in the Southeastern states. In fact, part of the narrowing of wage differentials that has occurred

could be attributed to an increase of employment share in the low wage South and a decrease in employment in the higher wage non-South; a trend that may also be related to the overall decline of furniture industry wages compared to wages in the durable goods manufacturing sector. The following section presents a method for investigating the extent and possible explanations for regional wage differentials.

Chapter 4

METHODS

4.1 STATEMENT OF OBJECTIVES

Based on the literature review and on the history and structure of the industry, this investigation of regional wage differences within the furniture industry is guided by the following questions:

1. What is the difference, if any, between average hourly wages in the South and in the non-South?

2. Are there differences in the economic organization of capital between the non-South and the South, and what is the impact of economic organization on average wages in each region?

3. Does the labor market have different characteristics across regions, and what is the association between labor market characteristics and average wages?

4. Are "extra-economic" factors such as paternalism and subsistence production related to average wages, and might they account for part of any regional wage disparity?

5. What is the effect of urbanization and principal product type produced on average wages?

In short, economic organization, labor market characteristics, paternalism, subsistence production, region, urbanization, and product type are all suspected of influencing wage rates.

The control variables of region, urbanization, and product type are included because they all are documented as having a strong effect on wages. As noted before, wages in the South have historically been lower than in the non-South. Likewise, wages in urban areas have historically been greater than wages in rural areas. Within the furniture industry, wages in the wooden household furniture category are generally lower than the rest of the industry.

Subsistence production within semi-proletarian households should have a negative effect on wages since capital must only pay part of the cost required for reproduction of the workforce. Paternalistic capitalism also should drive wages down because of its monopolistic position over the local labor market. Besides the obvious monopoly advantage this allows in setting wage rates, this control over the labor market is felt within

the workplace as well, and is associated with what Edwards (1979) calls simple control of the workforce, a less bureaucratized, more personal management system, where wages can be less simply because management does not have to buy a docile labor force.

Economic organization and characteristics of the labor market are also hypothesized to influence wages, but predicting the effect of these factors is problematic. While size, sales, and capitalization are theoretically (and usually empirically) positively related to wages in the core sector of the economy, outside the core, and in the highly competitive furniture industry, their effect may be less. Within the furniture industry, plant employment size may possibly be negatively related to wages. Similarly, labor market characteristics positively related to wages in the primary labor market, such as amount of education, percent male, percent white, and labor demand, may have little or no effect within this industry, where the effects of worker characteristics and the returns to "human capital" are less than in the primary labor market.

To answer these questions about wage patterns in the furniture industry, a sample of counties with significant employment in the furniture industry was derived, and data collected on economic organization, labor market characteristics, industrial paternalist capitalism, semi-proletarian household formation, urbanization, and product type was tested to weigh their effects on average wages within the furniture industry.

4.2 SAMPLE

The sample consists of the 125 counties and three independent cities throughout the U.S. which have detailed data for the furniture and fixtures industry group (SIC 25) listed in the 1982 Census of Manufactures. Although this excludes counties with employment in

the furniture industry which failed the Bureau of the Census disclosure criteria, the sample should not be severely biased, as the furniture industry tends to be clustered in certain localities (Oliver, 1966), and these localities are included. The sample contains 62 percent of the total furniture industry employees listed in the 1982 Census of Manufactures.

4.3 VARIABLES

The dependent variable is average hourly wages paid to production workers (HRWAGE) calculated by dividing total wages paid to production workers (including bonuses, shift differentials, overtime and vacation pay) by the number of hours worked by production workers. While the average hourly wage is just one variable in the total earnings equation, this measure enjoys the advantage of instant recognition, and this method of calculating average hourly earnings has been used in previous research (Department of Commerce, 1985, table 3). To check the accuracy of this measure a mean average hourly wage by states was calculated using the sample counties, and compared to the state average hourly wage for the furniture industry released by the Bureau of Labor Statistics (1984). The sample counties averaged about three percent (about twenty cents) more per hour than the released state averages, with a standard deviation of nine percent. So this measure of average hourly wages should be fairly indicative of the actual wages in the furniture industry in 1982.

The independent variables can be divided into four categories: measures of economic organization; labor market characteristics; indicators of paternalism and subsistence production; and control variables for urbanization and type of furniture produced.

The three measures of economic organization roughly represent size, sales, and labor intensity, and are all derived from data for 1982 released in the *Census of Manufactures: 1982* for the furniture and fixtures industry (SIC 25).

Size encompasses many dimensions, one of which deals with how many people work for a particular firm or establishment. In this study employment size (EST100) is measured as the percentage of furniture establishments in each county with more than a hundred employees, including part time employees.[8]

Sales (VOSPEST) is measured by dividing the total volume of furniture shipments (in million of dollars) in each county by the number of furniture establishments to arrive at an average sales volume per establishment.

Labor intensity (WAGEPVAM) is measured as the percentage of wages paid to production furniture workers of total value added in furniture manufacturing for each county.

The labor market characteristics selected for study are education, race, unemployment, female employment, and unionization.

Education (EDUC) is measured by the percentage of adults 25 and older with 12 or more years of school in 1980, taken from the *County and City Data Book: 1983.*

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[8] One alternative measure of employment size is the average number of workers per establishment; however, this measure creates problems associated with large positive outliers. Performing a logarithmic transformation on this value reduces outlier problems, but complicates interpretation of the results. In addition, these two measures of employment size were so highly correlated with the average value of shipments per establishment that tolerance levels in the regression equations fell below acceptable levels (< .3). Workers per establishment and the natural log of workers per establishment have about the same standardized regression coefficients as the percentage of large establishments, and since the latter created fewer statistical problems, it was selected for the analyses.

Race is operationalized as the percentage of black population in each county in 1980, taken from the *County and City Data Book: 1983.*

Unemployment (UNEMP80)is the county unemployment rate for April, 1980, listed in the *County and City Data Book: 1983*, which should provide a more accurate estimate of the demand for labor in each county than the recession influenced rate of April 1982.

Because gender specific data by county are not released in the *Census of Manufactures*, female employment (FEMFURN) is measured as the percentage of women employed in the furniture and lumber and wood products industries combined (SIC 25 and 24) in 1980, taken from the 1980 *Census of Population* (Bureau of the Census, 1983).

Data for unionization rates by industry by county are unavailable and so a proxy measure using a dummy variable named LOCAL was created. Since the majority of all unionized furniture workers are in either the Furniture Workers, Upholsterers, or Carpenters Unions (Ellefson and Stone, 1984), counties with at least one local of these three unions listed in the *Register of Reporting Labor Organizations: 1980* were coded 1, counties without a local were coded 0.

Another characteristic of the labor market is the dependence of the workforce on a single employer or industry. Single industry dominance of the labor market, which is one aspect of paternalistic capitalism, can be operationalized as the percentage of the civilian workforce employed in the furniture industry (CLFFURN), measured by dividing the number of employees in the furniture industry in 1982 listed in the *Census of Manufactures: 1982* by the total civilian labor force in 1980 in the *County and City Data Book: 1983*, and multiplying by 100. Although this measure involves two separate years of data, given the sizes and stability of the respective workforces, it should still be reason-

ably accurate. One probable source of error is an under-representation of the workforce in the furniture industry, since 1982 furniture employment was influenced by a recession, and for this study, this represents the conservative estimate.

Another aspect of paternalism involves the social relations of production within workplace. Paternalistic labor control is less bureaucraticized, and one indicator of bureaucratization is the percentage of workers engaged in nonproduction related activities, measured by dividing the number of production workers by the number of all employees listed in the *Census of Manufactures: 1982*, subtracting that number from one, and multiplying by 100. A low percentage of staff positions would indicate lower bureaucratization, and is consistent with Edwards' conception of "direct control" of the labor force (Edwards, 1979) and Norris' description of "traditional modes of control" (Norris, 1978) typified by somewhat paternalistic interpersonal relationships between employers and employees.

The World-System theory of development points to the importance of nonmarket oriented subsistence production within households in the perpetuation of regional wage disparities. In the relatively warm and rural South, subsistence food production, in the form of garden plots and livestock has been illustrated in case studies of Southern textile company towns, and may be related to wages. Unfortunatly this study is limited to archival data sources, and subsistence production is almost by definition "off the books." It can be argued, however, that household production is at least partly a function of household size, therefore the average persons per household will be used as an indicator of household production. A higher average of persons per household will be assumed to be consistent with a higher amount of subsistence household production, and thus negatively related to wages.

Wage suppression in the South has long been traced in part to the South being more rural, and workers in rural areas receiving less cash wages. To avoid problems created by ongoing changes in the Department of Census definitions, and different county groupings in different publications, the following coding scheme was used based on data for 1980 listed in the 1983 *County and City Data Book*. A county is rural (coded 0) if it failed to meet the criteria of a Standard Metropolitan Statistical Area. Counties classified as Metropolitan Statistical Areas (MSA) , that is (roughly) with a population between 25,000 and one million, are coded 1, and Primary Metropolitan Statistical Areas (PMSA), with a population greater than one million, are coded 2.

Another key control variable may be product type, measured as the percentage of employees engaged in wooden household furniture production (SIC 251) of all furniture and fixture (SIC 25) employees in the county. Although household furniture is the largest subcategory, it is traditionally also the lowest paying (U.S. Department of Commerce, 1985), and the percentage of employment in household furniture is believed to be negatively related to wages.

The final control variable is based on region, and a dummy variable named SOUTH was constructed to divide the United States into two regions. Counties in California, New York, Michigan, Indiana, Illinois, Pennsylvania, Ohio, New Jersey, Wisconsin, Missouri, Massachusetts, Connecticut, Washington, Colorado, Utah, Arizona, Nebraska, Kansas, Oregon, New Hampshire, and Rhode Island are classified as non-South (coded 0). The South (coded 1) includes counties in North Carolina, Virginia, Tennessee, Texas, Mississippi, Florida, Georgia, Arkansas, South Carolina, Maryland, and Alabama.

The variables are listed with a brief description in Table 1.

Table 1.

List and Description of Variables

Variable Name	Description
Economic Organization	
EST100	% establishments with more than 100 employees
VOSPEST	Value of shipments per establishment (in $ millions)
WAGEPVAM	Wages as % of value added in manufacturing
Labor Market Characteristics	
EDUC	% of adults with 12+ years of school
BLACK	% of black population
UNEMP80	Unemployment rate (April, 1980)
FEMFURN	% of female workers in the furniture and wood products industries
LOCAL	Existence of a furniture union local
Paternalism and Subsistence Production	
CLFFURN	% of civilian labor force employed in the furniture industry
NPWRKS	% of nonproduction related employees
PPH	Average persons per household
Controls	
HOFURN	% of furniture employees engaged primarily in household furniture production
MSACODE	Based on Census classificaions of Metropolitan Statistical Areas, and Primary Metropolitan Statistical Areas
SOUTH	NC, VA, TN, TX, MS, FL, GA, AR, SC, MD, AL

4.4 ANALYTIC STRATEGY

To ascertain the extent of regional wage inequality, average hourly wages for each region, controlling for degree of urbanization, were tabulated, and analysis of variance used to test for significant differences between groups. To aid in understanding the factors influencing hourly wages, and possible causes of regional wage differences, multiple regression equations testing the relative effects of economic organization, labor market characteristics, paternalistic capitalism, subsistence production, urbanization, product type, and region on average wages were constructed using the REGRESSION procedures available in SPSSX. In addition, to further investigate factors influencing hourly wages, the sample was split into South and non-South, and regression equations estimated for each subsample. The regression coefficients were also tested for significant differences between subsamples. The results of these analyses are presented in the next chapter.

Chapter 5

RESULTS

Table 2. shows the results of cross tabulating average hourly wages by region and urbanization. The average hourly wage in the South is $1.69, or 23 percent, lower than the average wage in the non-South. Rural and MSA counties in the non-South average about $1.70 more per hour than their counterparts in the South, while PMSA counties in the non-South enjoy a $1.22 wage advantage over PMSA counties in the South. The highest paid counties in the South, those that are part of a PMSA, average about six dollars per hour, which is about 80 cents less than the lowest paying rural counties in the non-South. The difference between the highest paying MSA counties in the non-South and the lowest paying rural counties in the South is a sizable $2.35 per hour. The effect of urbanization on average hourly wages is also notable, but less dramatic and statistically significant than regional effects. Overall, PMSA counties average about 70 cents more MSA counties, which average about 70 cents more than rural counties. Within regions this urbanization effect is less pronounced with Southern PMSA counties averaging about 25 cents more than Southern MSA counties, and non-Southern PMSA

Table 2.
Average Hourly Wage (in Dollars) by Region by MSA code

Region	MSA code: Rural	MSA	PMSA	Row Total
South	5.17 (20)	5.76 (28)	6.02 (05)	5.56 (53)
Non-South	6.83 (10)	7.52 (18)	7.24 (47)	7.25 (75)
Column Total	5.73 (30)	6.45 (46)	7.12 (52)	6.55 (128)

Note: Number of cases shown in parentheses

Analysis of Variance

Source of Variation	Sum of Squares	F
Main effects	95.97	22.07***
Region	58.06	40.05***
MSA code	7.20	2.48*
Interaction	0.93	0.32
Explained	96.89	13.37***
Residual	176.84	
Total	273.73	

*p < .05 ** p < .01 *** p < .001 (two-tailed tests)

counties about 25 cents less than non-Southern MSA counties. Still, rural counties in both regions are disadvantaged compared to the next highest paying category, in the South this difference is about 50 cents, and in the non-South about 40 cents.

Analysis of variance shows that the effect of region on average hourly wages is significant at the .001 level of probability. The effect of urbanization is also significant, but only at the .05 level of probability. The interaction effects are not statistically significant.

5.1 REGRESSION RESULTS FOR THE TOTAL SAMPLE

To aid in understanding the factors influencing regional wage inequality, regression models using each group of variables, all variables except region, and all variables, were constructed. Listwise deletion of missing data in the regression analysis results in seven missing cases, or a tolerable five percent of the total cases. Table 3. shows the means and standard deviations of the remaining 121 sample counties, which have an average hourly wage of $6.48.

Table 4. shows the zero-order correlation coefficients for all variables in the sample. The control variables have the the highest correlations with average hourly furniture wages (HRWAGE), with an r of -.569 for region (SOUTH), followed by the percentage of employment in household furniture production (HOFURN) (r = -.429), and urbanization (MSACODE) (r = .358). Of the variables related to economic organization, only the percentage of large establishments (EST100) is significantly correlated with average hourly wages (r = -.213). In contrast, all of the labor market characteristics are significantly related to hourly wages, led by education (EDUC) with an r equal to .422. The

Table 3.

Means and Standard Deviations of Variables in the Total Sample (N=121)

Variable	Mean	Standard Deviation
Dependent		
HRWAGE	6.48	1.44
Independent		
Economic Organization		
EST100	20.86	22.53
VOSPEST	4.31	4.32
WAGEPVAM	33.77	7.95
Labor Market Characteristics		
EDUC	63.21	10.59
BLACK	12.34	11.85
UNEMP80	6.19	2.05
FEMFURN	26.93	7.24
LOCAL	0.38	0.49
Indicators of Paternalism and Subsistence Production		
CLFFURN	3.79	6.76
NPWRKS	20.90	8.41
PPH	2.74	0.19
Controls		
HOFURN	63.86	27.46
MSACODE	1.16	0.79

Note: Listwise deletion of missing data, missing cases=7

other characteristics are correlated slightly below the .2 level, with the percentage of blacks (BLACK) and the percentage of female employment in furniture (FEMFURN) negatively correlated to wages, while the unemployment rate (UNEMP80) and the presence of a union local (LOCAL) are positively correlated with hourly wages. The indicators of paternalism are also significantly correlated with hourly wages, with the percentage of nonproduction workers (NPWRKS) positively related to hourly wages (r=.332), and the percentage of the civilian labor force in furniture (CLFFURN) negatively related to hourly wages (r=-.230). The average persons per household (PPH) is not significantly correlated with hourly wages.

For the most part, intercorrelations between the independent variables are generally low, with the percentage of large establishments and value of shipments per establishment (VOSPEST) having the only correlation greater than .6 (r=.762). Other notable intercorrelations involving economic organization variables are between the percentage of large establishments and urbanization (r=-.535), value of shipments per establishment and urbanization (r=-.476), the percentage of large establishments and education (r=-.467), and the value of shipments per establishment and the percentage of the labor force in furniture (r=.452). Education is rather strongly positively correlated with urbanization (r=.546) and the percentage of nonproduction workers, and rather strongly negatively related to the percentage of the labor force in furniture (r=-.598) and region (-.552). The only other intercorrelation greater than .5 involving a labor market characteristic is between the percentage of female employment in furniture and the labor force in furniture (r=.532). As could be expected, the percentage of the labor force in furniture is also negatively correlated with urbanization (r=-.541). Intercorrelations among the control variables are sizable, the largest is between the percentage of workers in household furniture production and region (r=.526), followed by urbanization and

Table 4.

Zero-order Correlation Coefficients for all Variables in the Total Sample (N-121)

VARIABLE	HRWAGE	EST100	VOSPEST	WAGEPVAM	EDUC	BLACK	UNEMP80	FEMFURN	LOCAL	CLFFURN	NPWRKS	PPH	HOFURN	MSACODE
HRWAGE														
EST100	-.213***													
VOSPEST	.049	.762***												
WAGEPVAM	-.019	.311***	.096											
EDUC	.422***	-.467***	-.331***	-.331***										
BLACK	-.178**	-.088	-.062	.016	-.253***									
UNEMP80	.173**	-.013	-.030	.010	-.108	.234***								
FEMFURN	-.185**	.411***	.440***	.205**	-.450***	-.094	-.165**							
LOCAL	.181**	-.170**	-.132*	-.048	.203**	.064	.017	-.084						
CLFFURN	-.230***	.446***	.452***	.218***	-.598***	-.066	-.125*	.532***	-.188**					
NPWRKS	.332***	-.308***	-.148*	-.362***	.512***	.000	.105	-.242***	-.010	-.397***				
PPH	-.092	.236***	.286***	-.054	-.095	-.171**	.022	.141*	-.136*	.243***	-.065			
HOFURN	-.429***	.419***	.284***	.207**	-.456***	-.068	-.178**	.377***	-.211***	.420***	-.425***	.113		
MSACODE	.358***	-.535***	-.476***	-.283***	.546***	.052	-.027	-.379***	.191**	-.541***	.362***	-.207**	-.487***	
SOUTH	-.569***	.300***	.228***	.143*	-.552***	.332***	-.321***	.337***	-.130*	.349***	-.401***	-.071	.526***	-.473***

* p < .1 ** p < .05 *** p < .01

the percentage of workers in household furniture (r = -.487) and urbanization and region (r = -.473).

Table 5. presents the results of regression equations for each group of variables. Model 1 is a regression of average hourly wages on factors related to economic organization, and reveals that the percentage of establishments with more than 100 employees has the strongest effect on hourly wages. A one percent increase in large establishments reduces hourly wages by 4.3 cents. The average value of shipments per establishment also has a strong influence on hourly wages (beta = .551), but in the positive direction, with an increase of one million dollars in the average value of shipments per establishment yielding an 18 cent increase in average hourly wages. Wages as a percent of value added in manufacturing does not have a significant effect on average hourly wages. Economic organizational factors can account for about 15 percent of the variation of average hourly wages across counties.

Characteristics of the labor market (Model 2) do a slightly better job of explaining hourly wages (R squared = .223), but only education and unemployment have a statistically significant effect. A one percent increase in the percentage of adults with 12 or more years of school is associated with about a nickel increase in the average hourly wage. Oddly, the unemployment rate is also positively related to hourly wages, with a one percent increase in unemployment yielding an 18 cent increase in average hourly wages.

Only one of the indicators of paternalistic capitalism is significantly related to average hourly wages (Model 3). A one percent increase in the percentage of nonproduction related employees yields a nickel increase in average hourly wages. The percentage of the civilian workforce in the furniture industry is not significantly related to average

Table 5.
Regression of Average Hourly Wages for each set of Variables in the Total Sample (N=121)

Variables	b	standard error	beta
Model 1. Economic Organization			
EST100	-0.043***	0.009	.676
VOSPEST	0.183***	0.044	.551
WAGEPVAM	0.025	0.016	.138
Constant	5.751		
Standard error	1.325		
Adjusted R squared	.147		
Model 2. Labor Market Characteristics			
EDUC	0.055***	0.013	.408
BLACK	-0.017	0.011	-.137
UNEMP80	0.178***	0.059	.253
FEMFURN	0.007	0.019	.038
LOCAL	0.341	0.244	.116
Constant	1.759		
Standard error	1.264		
Adjusted R squared	.223		
Model 3. Indicators of Paternalism and Subsistence Production			
CLFFURN	-0.022	0.020	-.105
NPWRKS	0.049***	0.016	.288
PPH	-0.363	0.677	-.048
Constant	6.537		
Standard error	1.360		
Adjusted R squared	.102		
Model 4. Control Variables			
HOFURN	-0.017***	0.005	-.334
MSACODE	0.357**	0.171	.195
Constant	7.186		
Standard error	1.283		
Adjusted R squared	.200		
Model 5. Region			
SOUTH	-1.643***	0.217	-.569
Constant	7.190		
Standard error	1.185		
Adjusted R squared	.318		

* p<.1 ** p<.05 *** p<.01 (two-tailed tests)

hourly wages. The indicator of subsistence production, the average persons per household, is not significantly related to average hourly wages. Together, these factors only explain about ten percent of the variation in wages.

The control variables incorporating product type and urbanization are both related to wages (Model 4). A one percent increase in the percentage of employees engaged in household furniture production reduces wages by almost two cents. Urbanization, on the other hand, is positively related to wages, and each increase in the MSA code is associated with a 36 cent increase in wages. Product type and urbanization account for about 20 percent of the variation in wage rates, which is less than the percentage accounted for by regressing average hourly wages by region (Model 5). Wages in the South are $1.64 lower than wages in the non-South, and region alone can explain almost 32 percent of the variation in average hourly wages.

Including all variables except region in a regression model (Table 6., Model 6) for the most part echos the previous models. The percentage of establishments with 100 or more employees is rather strongly negatively related to wage rates, while the average value of shipments per establishment is strongly positively related to wage rates. In addition, the other economic organization factor, wages as a percent of value added in manufacturing, has a moderate, positive effect on wages. Education remains positively related to wages, but not as strongly as when labor market characteristics are considered separately. Unemployment also remains positively related to hourly wages, and the effect of race becomes significant, with a moderate negative association between the percentage of population black and wage rates. The percentage of employees in household furniture has a slight negative effect on wages, while the effect of urbanization is a little stronger than when these two control variables are considered separately.

Table 6.

Regression of Hourly Wages by all Variables Except Region, and by all Variables Including Region (N=121)

	Model 6			Model 7		
Variables	b	s.e	beta	b	s.e	beta
EST100	-0.026***	0.008	-.676	-0.026***	0.007	-.411
VOSPEST	0.208***	0.039	.628	0.206***	0.038	.621
WAGEPVAM	0.048***	0.014	.264	0.041	0.014	.230
EDUC	0.027*	0.015	.202	0.016	0.016	.118
BLACK	-0.028***	0.009	-.231	-0.014	0.010	-.115
UNEMP80	0.158***	0.052	.226	0.071	0.060	.102
FEMFURN	-0.013	0.017	-.068	-0.009	0.017	-.047
LOCAL	0.280	0.213	.095	0.257	0.207	.087
CLFFURN	0.019	0.021	.090	0.011	0.021	.053
NPWRKS	0.018	0.015	.105	0.013	0.015	.075
PPH	-0.751	0.558	-.099	-1.003*	0.550	-.132
HOFURN	-0.009*	0.005	-.172	-0.005	0.005	-.100
MSACODE	0.512***	0.174	.280	0.338*	0.180	.185
SOUTH				-0.906***	0.333	-.314
Constant	4.010			6.380		
Standard error	1.066			1.035		
Adjusted R squared	.448			.479		

* p < .1 ** p < .05 *** p < .01 (two-tailed tests)

Adding the effect of region to this model (Model 7) increases the explained variance from about 45 percent to about 48 percent, but not in a strictly additive fashion. While the influence of the economic organizational factors remains virtually identical, the labor market characteristics become statistically insignificant, as does product type, and the influence of urbanization is reduced by about a third. In addition, the average persons per household becomes slightly significant with a negative effect on wages.

5.2 MEANS AND CORRELATIONS FOR THE SUBSAMPLES

To further investigate the effect of region on the structural factors which may influence wage rates, the sample was divided into non-South and South subsamples, and each region analyzed separately to see if the independent variables affect wages differently across regions. Table 7. presents the means, standard deviations, and t statistics for difference in means across groups.

The average hourly wage in the non-South is $7.19 with a standard deviation of $1.36, which is about 19 percent of the average hourly wage. In contrast, the average hourly wage in the South is $5.55 (which is more than one standard deviation less than the wage rate in the non-South) with a standard deviation of only $0.19, or less than four percent of the average hourly wage in the South.

The percentage of firms with more than one hundred employees is significantly higher in the South, with the South having almost twice the percentage of large establishments. The South also has a significantly higher average value of shipments per establishment. Wages consume a slightly higher percentage of value added in manufacturing in the South, but this difference is not statistically significant.

Table 7.

Means and Standard Deviations for Variables in the South and Non-South Subsamples

Variable	Non-South Mean	Non-South S.D.	South Mean	South S.D.	t-test for difference of means
Dependent					
HRWAGE	7.19	1.36	5.55	0.19	8.66**
Independent					
EST100	15.01	17.16	28.62	26.35	-3.43**
VOSPEST	3.46	3.36	5.44	5.17	-2.55*
WAGEPVAM	32.78	8.11	35.10	7.60	-1.60
EDUC	68.26	8.06	56.50	9.84	7.22**
BLACK	8.94	9.65	16.85	13.03	-3.84**
UNEMP80	6.76	2.13	5.44	1.68	3.69**
FEMFURN	24.82	6.73	29.73	7.01	-3.90**
LOCAL	0.38	0.49	0.31	0.47	1.24
CLFFURN	1.75	3.69	6.50	8.74	-4.06**
NPWRKS	23.82	8.01	17.03	7.35	4.78**
PPH	2.75	0.20	2.72	0.17	0.87
Controls					
HOFURN	51.36	23.14	80.44	23.83	-6.76**
MSACODE	1.48	0.74	0.73	0.63	5.88**
N	69		52		

* $p < .05$ ** $p < .01$
(two-tailed tests, pooled variance estimate)

Characteristics of the labor market also differ across regions, with the South averaging a lower percentage of adults with 12 or more years of school, a higher percentage of black population, a lower unemployment rate, and a higher percentage of female employment in the furniture industry. Although the non-South has a slightly higher percentage of counties with a furniture industry related union local, somewhat surprisingly, this difference is not statistically significant.

The indicators of paternalistic capitalism are also significantly different across regions. In the non-Southern sample counties, less than two percent of the civilian workforce works in the furniture and fixtures industry, compared to over six percent in the Southern sample counties. In addition, the percentage of nonproduction related employees is about six percent greater in the non-South. The average number of persons per household is slightly higher in the non-South, but this difference is not significant.

In the non-South, about half of all furniture employment is the household furniture category, compared to over 80 percent in the South. Urbanization also differs across regions, which can also be seen in the cell frequencies in Table 1. The average sample county in the non-South is part of a PMSA while in the South the average county part of an MSA.

Some of the zero-order correlation coefficients with hourly wages differ between the non-South and the South (see Table 8). In the non-South there is a positive correlation ($r = .361$) between value of shipments per establishment and average hourly wages, but in the South these two variables are unrelated. Wages as a percent of value added in manufacturing is positively correlated with average hourly wages in the non-South ($r = .208$), while in the South the correlation is about the same, but in the negative direction ($r = -.197$). The correlations between average hourly wages and unemployment

also differ across regions, in the South the correlation is negative (r = -.316) while in the non-South the correlation is slightly positive (r = .108). The correlation between the percentage of nonproduction workers and average hourly wages is significantly positive in the South (r = -.316), but not significant in the non-South. Similarly, there is a significant negative correlation between average persons per household and average hourly wages in the non-South, but this correlation is not significant in the South. In the non-South, the percent of employees in household furniture production is negatively correlated with average hourly wages (r = -.267) while urbanization and average hourly wages are unrelated. In the South the opposite occurs. Urbanization is positively correlated with average hourly wages (r = .364) while the percent of employees in household furniture production and average hourly wages are not significantly correlated.

Intercorrelations between variables also differ across regions, but for the most part these differences are of degree rather than direction. The highest intercorrelation is between the percentage of large establishments and value of shipments per establishment in the South (r = .828), while in the non-South this intercorrelation is more modest (r = .605). Likewise, the correlations between wages as a percent of value added in manufacturing and the percentage of large establishments, and wages as a percent of value added in manufacturing and value of shipments per establishment are stronger in the South (r = .424 and .197 respectively).

With the exception of presence of a furniture union local, intercorrelations involving labor market characteristics are similar across regions. The biggest discrepancy is the correlation between education and urbanization. In the South this correlation is quite large (r = .696) whereas in the non-South it is barely significant (r = .159). Correlations with union local tend to differ by sign between the non-South and South. In the South,

Table 8.

Zero-order Correlation Coefficients for all Variables in the South (N=52) and Non-South (N=69) Subsamples

Variable	HRWAGE	EST100	VOSPEST	WAGEPVAM	EDUC	BLACK	UNEMP80	FEMFURN	LOCAL	CLFFURN	NPWRKS	PPH	HOFURN	MSACODE
EST100	-.125 (Non-South) .028 (South)													
VOSPEST	.361** .087*	.605*** .828***												
WAGEPVAM	.208** -.197*	.149 .424***	-.072 .197											
EDUC	.101 .268**	-.327*** -.419***	-.166* -.326***	-.191* -.445***										
BLACK	.048 -.034	-.360*** -.112	.300*** -.053	.063 -.137	-.363*** .132									
UNEMP80	.108 -.316**	.166* .022	.043 .057	.152 -.108	-.500*** -.190*	.472*** .297**								
FEMFURN	.017 -.005	.433*** .284**	.402*** .408***	.092 .273**	-.266** -.412***	-.224** -.242**	-.018 -.142							
LOCAL	.191* .050	-.035 -.243**	.011 -.222*	.008 -.086	.023 .321***	-.004 .244**	-.161 .218*	.064 -.191*						
CLFFURN	-.038 -.062	.582*** .318**	.493*** .388***	.069 .278**	-.363*** -.627***	-.277** -.184*	.129 .121	.297*** .620***	-.021 -.259**					
NPWRKS	.093 .240**	-.196* -.248**	-.001 -.128	-.200** -.546***	.305*** .478***	.112 .205*	-.078 .068	-.093 -.189	-.021 -.190*	-.159* -.437***				
PPH	-.201** -.070	.184* .391***	.242** .414***	-.110 .068	.103 -.516***	-.311*** .018	-.112 .227**	.091 .311**	-.203** -.053	.189* .417***	.009 -.292**			
HOFURN	-.267** -.039	.214** .424***	.082 .305***	-.024 .403***	.021 -.505***	-.190* -.417***	.094 -.186*	.160* .359***	-.140 -.212*	.182* .396***	-.288*** -.366***	.086 .322***		
MSACODE	.021 .364***	-.625*** -.349***	-.530*** -.364***	-.251** -.241**	.159* .696***	.453*** .035	-.152 -.337***	-.275** -.251**	.066 .288**	-.614*** -.448***	.148 .343***	-.200** -.412***	-.185* -.521***	

* p < .1 ** p < .05 *** p < .01 (one-tailed test)

union local is negatively related to value of shipments per establishment (r=-.222), female employment in furniture (r=-.191), the civilian labor force in furniture (r=-.259), and positively related to education (r=.321), percent of black population (r=.244) and urbanization (r=.288). In the non-South these correlations are either in the opposite direction, or non-significant. Intercorrelations involving indicators of paternalism are also similar across regions, although the correlation between the percent of nonproduction workers and urbanization in the South (r=.343) is somewhat stronger than in the non-South (r=.148). The correlation between persons per household and education is strongly negative in the South (r=-.516), but not so in the non-South (r=.103). Among the control variables, there is a strong negative correlation between the percent of workers in household furniture production and urbanization in the South (r=-.521), but not in the non-South (r=-.185).

5.3 REGRESSION RESULTS FOR THE SUBSAMPLES

Regressing average hourly wages on each set of variables for each region yields the following results, presented in Table 9. Economic organization variables (Model 1) are good predictors of average hourly earnings in the non-South. The strongest predictor is the average value of shipments per establishment (beta=.782) where each million dollar increase in the average value of shipments per establishment is associated with a 31 cent increase in average hourly wages. The percentage of establishments with more than 100 employees is also a strong predictor of average hourly earnings (beta=-.652), but in the negative direction. For each percentage increase in large establishments, wages decrease by about a nickel. Wages as a percent of value added in manufacturing has a medium, positive influence on wages (beta=.362), with a one percent increase in this

variable associated with a six cent increase in average hourly wages. Together, these factors of economic organization explain about 40 percent of the variation in average hourly wages in the non-Southern counties. In contrast, economic variables are extremely poor predictors of average hourly wages in the South. None of the three are statistically significant, and indeed, only wages as a percent of value added in manufacturing has a regression coefficient greater than its standard error (b = -.028). Testing the difference in regression coefficients underscores the strong predictive power of economic organizational factors in the non-South and the lack of an effect in the South, with each t-test statistic significant at the 0.01 level of probability.

Labor market characteristics are relatively poor predictors of average hourly earnings in both regions. In the non-South, education is the strongest predictor (beta = .262) with a one percent increase in the percentage of adults with 12 or more years of schooling associated with about a four cent increase in average hourly wages. The unemployment rate has a slight positive effect on wages, with a one percent rise in the unemployment rate associated with about a 16 cent increase in average hourly wages. The presence of a furniture union local in the county also has a positive effect on wages, with a wage advantage of about 60 cents accruing to counties with a local. The other labor market characteristics, the percentage of the population black, and the percentage of female employment in furniture have regression coefficients less than their standard errors. Altogether, this model explains less than three percent of the wage variation in the non-Southern counties. The labor market characteristics model also does a poor job of predicting wage rates in the South, explaining less than six percent of the variation. Only the unemployment rate is a significant predictor at the 0.1 level of probability, with a one percent rise in unemployment associated with a 15 cent decrease in average hourly wages. Education is the next best predictor, but it has a regression coefficient only

Table 9.

Regression of Average Hourly Wages for each set of Variables for South (N=52) and Non-South (N=69) Subsamples

Variables	Non-South b	Non-South s.e.	Non-South beta	South b	South s.e.	South beta	t-test for difference in b's (d.f.=117)
Model 1. Economic Organization							
EST100	-0.051***	0.009	-.652	0.002	0.010	.055	-5.57***
VOSPEST	0.316***	0.048	.782	0.015	0.046	.088	6.33***
WAGEPVAM	0.060***	0.016	.362	-0.028	0.019	-.237	5.03***
Constant		4.887			6.399		
Standard error		1.038			0.909		
Adjusted R squared		.413			-.003		
Model 2. Labor Market Characteristics							
EDUC	0.044*	0.025	.262	0.020	0.015	.221	1.12
BLACK	0.006	0.020	.043	0.002	0.010	.024	0.24
UNEMP80	0.162*	0.096	.255	-0.153*	0.083	-.282	3.45**
FEMFURN	0.017	0.027	.087	0.008	0.020	.060	0.37
LOCAL	0.598*	0.331	.220	0.089	0.295	.046	1.60
Constant		2.329			4.941		
Standard error		1.337			0.881		
Adjusted R squared		.028			.057		
Model 3. Indicators of Paternalism and Subsistence Production							
CLFFURN	0.007	0.046	.018	0.006	0.017	.060	0.03
NPWRKS	0.016	0.021	.097	0.032*	0.019	.261	-0.79
PPH	-1.366	0.822	-.205	-0.098	0.835	-.018	-1.52
Constant		10.545			5.224		
Standard error		1.352			0.907		
Adjusted R squared		.006			.002		
Model 4. Controls							
HOFURN	-0.016**	0.007	-.273	0.008	0.006	.207	-3.61***
MSACODE	-0.055	0.221	-.030	0.680***	0.220	.472	-3.30**
Constant		8.092			4.418		
Standard error		1.326			0.847		
Adjusted R squared		.044			.129		

* p < .1 ** p < .05 *** p < .01 (two-tailed tests)

slightly higher than its standard error. The remaining factors have regression coefficients less than their standard errors.

Testing the correlation coefficients across regions shows that the t-test statistic for difference between the positive effect of unemployment on wages in the non-South and the negative effect in the South is significant at the 0.01 level of probability. The t-test statistic for the difference between the strong positive effect of a union local in the non-South and the minimal effect in the South is relatively high, but is not quite significant at the 0.1 level of probability. Comparisons of the remaining regression coefficients involve relatively small differentials and are not statistically significant.

As expected, the indicators of paternalism do not predict wage rates in the non-South. In the Southern counties, the percentage of the workforce employed in the furniture industry does not seem to influence wage rates; however, the percentage of nonproduction employees does have a slight positive effect on wages, with a percentage point increase associated with about a three cent increase in average hourly wages. The average number of persons per household also fails to predict average hourly wages, but interestingly its influence is higher in the non-South than it is in the South. In all, this model fails to predict wage rates in either the non-South or the South, and the regression coefficients do not differ significantly across regions.

The model incorporating the control variables does a better job of predicting wage rates in both regions, but for different reasons. In the South, the percentage of employees in the household furniture industry has no effect on wage rates. Urbanization, on the other hand, has a relatively large positive effect on wages (beta = .472), evidenced by a 68 cent increase in wages for each increase in the urbanization category. This model explains about 13 percent of wage variation in the South. In the non-South, this control model

only accounts for about four percent of the variation in average hourly wages. Unlike the South, urbanization seems to have little influence on wages, and instead the percentage of employees in household furniture is the best predictor. A one percent increase in the percentage of employees in household furniture results in a 1.6 cent decrease in average hourly wages. The regression coefficients for both product type and urbanization differ across regions at the 0.01 level of significance.

Because of the small subsample sizes compared to the number of variables, a stepwise regression procedure, where variables which fail to enter the equation at a 0.1 level of probability are excluded, was used in the model incorporating all the variables (see Table 10.). In the non-South, this complete model explains about 58 percent of the variation in average hourly earnings. The best predictors remain the factors related to economic organization, with each variable having about the same effect on earnings as when these variables were regressed together. Education level also has about the same effect as when labor market characteristics were run together. The absolute influence of unemployment rate on wages increases by about a dime for each percentage point increase in the unemployment rate in this complete model. The percentage of the population that is black enters this model with about a three cent decrease in wages associated with a one percent increase in the black population. The presence of a union local fails to enter this complete model, as does the percentage of females in furniture, the percentage of the labor force in furniture, and the percentage of non- production related employees. The percentage of employees in household furniture has about the same effect as in the control variable model, but in the complete model, urbanization effects become significant, with a 57 cent increase in average hourly wages associated with each increase in the urbanization code.

Table 10.

Stepwise Regression of Average Hourly Wages by all Variables for South (N=52) and Non-South (N=69) Subsamples (Probability to Enter Equation Less than .1)

	Non-South			South		
Variables	b	s.e.	beta	b	s.e.	beta
EST100	-0.040***	0.009	-.502	-	-	-
VOSPEST	0.360***	0.043	.891	0.044*	0.024	.254
WAGEPVAM	0.066***	0.014	-.397	-	-	-
EDUC	0.040**	0.017	.237	-	-	-
BLACK	-0.034*	0.018	-.240	-	-	-
UNEMP80	0.232***	0.068	.108	-	-	-
FEMFURN	-	-	-	-	-	-
LOCAL	-	-	-	-	-	-
CLFFURN	-	-	-	-	-	-
NPWRKS	-	-	-	-	-	-
PPH	-1.713***	0.560	-.257	-	-	-
HOFURN	-0.013***	0.005	-.228	-	-	-
MSACODE	0.572**	0.221	.312	0.657***	0.199	.456
Constant		4.926		4.824		
Standard error		0.876		0.834		
Adjusted R squared		.583		.155		

* p < .1 ** p < .05 *** p < .01 (two-tailed tests)

In contrast with the relatively strong predictive power of the complete model for the non-Southern sample counties, the complete model only explains about 15 percent of wage variation in the Southern counties. Indeed, only two variables enter the equation. The average value of shipments per firm has a weak, but positive influence on wages, with an increase of a million dollars in the average value of shipments per firm associated with only a 4 cent increase in average hourly wages. As with the control model, the best predictor of average wages in the South is the level of urbanization, with about a 66 cent increase in wages associated with each one unit increase in the urbanization classification code.

Chapter 6

DISCUSSION AND CONCLUSION

6.1 DISCUSSION

In regard to the first question presented in the statement of objectives, there does appear to be a sizable difference in average hourly furniture wages across regions. Hourly wages in the South are $1.69, or 24 percent lower than wages in the non-South. In regression models, the gross effect of region on hourly wages reduces wages by $1.64, and can account for almost 32 percent of the wage variation across counties. The effect of region on wages net of all other variables in this study is over 90 cents per hour. In addition, average hourly wages in the South are uniformly low. While there is considerable wage variation among the counties classified as non-Southern (which include not only the Northeast, but the Great Lakes and Pacific regions as well), average hourly wages in the South exhibit little variation. This may account for part of the inability of standard industrial models to predict hourly wage rates in the South.

6.1.1 ECONOMIC FACTORS

In the total sample, and especially the non-South subsample, factors related to economic organization are the best estimaters of wage rates; however, possibly due to the position of the furniture industry in the peripheral sector of the economy, the effect of these factors on wages is somewhat ambiguous. Contrary to conventional industrial models which suggests size and sales are positively related to wages, the South averages more sales per establishment, and has a higher percentage of large establishments than the non-South, but has lower overall wages. The South does have a slightly higher measure of labor intensity, but this difference is not statistically significant. With the exception of labor intensity, which has an expected negative (but small) effect on average wages, economic factors fail to predict wages in the South.

In contrast, economic factors adequately predict wages in the non-South, where their influence can account for over 40 percent of the wage variation. Sales has a large positive effect on wages, which is consistent with conventional models. On the other hand, size seems to have a relatively large negative effect on wages, and labor intensity has moderate positive effect on wages. It appears economic organization has a differential effect on wages between the non-South and the South, since all of the regression coefficients are significantly different across regions. While labor intensity may not adversely affect wages in the non-South, it may in the South. Furthermore, whereas large establishments drive wages down in the non-South, size appears not to affect wages in the South. Sales volume has a positive influence on wages in the non-South but also appears not to affect Southern furniture wages.

The effect of economic variables on wages in the total sample follows the same basic pattern as in the non-South subsample, but the strengths of these relationships are not as strong. Nevertheless, net of all other variables, sales shows the largest positive effect on wage rates, while size shows the largest single negative influence. Interestingly, the relative effects of these factors is not greatly diminished when region is added to the model.

6.1.2 LABOR MARKET CHARACTERISTICS

In contrast, the influences of characteristics of the labor market on average wages in the total sample, net of all variables except region, are reduced when region is added to the regression equation. This suggests region can account for a small part of the predictive power of labor market characteristics. Education levels, which are usually positively related to wages, are significantly higher in the non-South. The percentage of the population that is black, and the percentage of female employment, which are usually negatively related to wages, are significantly higher in the South. This may partially explain why labor market characteristics, when considered alone, account for over 20 percent of the wage variation in the total sample.

But within regions the predictive power of labor market characteristics is rather weak. In the South subsample, labor market characteristics alone account for less than six percent of the wage variation. Unemployment has the only significant effect on wages and that is a small, negative effect. In the non-South subsample, characteristics of the labor market explain less than three percent of the wage variation. Education, unionization and unemployment all have a small positive influence on wages. The in-

fluence of education and unemployment remains about the same when the other variables are added to the equation, while unionization becomes insignificant, and the percentage of the black population becomes slightly significant with a negative influence on earnings.

Only one characteristic of the labor market appears to operate differently on wages between the non-South and the South based on a comparison of the regression coefficients. The unemployment rate is one of the strongest labor market characteristics related to wage rates. Insofar as it represents the demand for labor, the unemployment rate can be expected to be negatively related to wages, and in the South this seems to be the case, although this relationship is small. In the non-South, unemployment rates are higher overall, but seem to have a small positive influence on wages. Unlike Southern counties, higher unemployment rates in non-Southern counties do not necessarily result in lower wages in the furniture industry.

The remaining regression coefficients based on labor market characteristics differ across regions by degree, but not substantially. Education has a small positive effect on wages in the non-South, and although education is positively correlated with wages in the South, when controlling for other variables the effect of education on wages is insignificant. The influence of race on wage rates appears to be stronger in the non-South, where the percentage of black population has negative influence on wages when all significant variables are entered into the model. In the South, race does not appear to influence wage rates. With the exception of unemployment rates, labor market characteristics fail to discriminate the wage rate structure between the non-South and South. This lends some support to the theory of a secondary labor market, where the

wage disadvantage of being less educated, black, subject to sporadic employment, female, or nonunionized is less than in the primary labor market.

6.1.3 PATERNALISM AND SUBSISTENCE PRODUCTION

Although the percentage of the labor force in furniture is significantly higher in the South, this measure of labor market dominance does not appear to affect wage rates. The other indicator of paternalism, the percentage of nonproduction employees, is positively related to wage rates in the total sample, explaining about ten percent of the wage variation. In the non-South, where the degree of paternalism is assumed to be less, there is no relation between nonproduction employees and wage rates. In the South, there is a small positive relation between nonproduction employees and wage rates, but, as in the total sample, this relation does not hold up net of other variables. Nevertheless, this measure of bureaucracy and the mode of supervision within the workplace, is stronger in the South, as expected, and influences wage rates in the expected direction.

The average number of persons per household, which was thought to indicate subsistence household production, fails to predict wage rates in the total sample and in the South. In fact the predictive power of this variable is actually stronger in the non-South. When wages in the non-South are regressed by all variables, wages decrease as the average persons per household increase. This relation is in the expected direction, but unexpectedly, occurs only in the non-South. All measures of paternalism and subsistence production tested did not differ significantly between regions when related to average hourly wages.

6.1.4 CONTROL VARIABLES

The effects of urbanization and product type did appear to operate significantly different in the South and non-South. In the total sample the percentage of household furniture production workers has a negative effect on wage rates until region is added to the model, which renders this relation insignificant. This may be partly because household furniture production is more prevalent in the South. But, the wage disadvantage involved in higher levels of household furniture production only occurs in the non-South sub-sample, and not in the South. Conversely, urbanization in the non-South has a small positive relation to wage rates, whereas in the South, urbanization is the single best predictor of wage rates. Simply knowing whether a county was rural, part of an MSA, or part of an PMSA can account for over ten percent of the wage variation in the South, a figure no other variable or set of variables can approximate.

Overall, outside of urbanization, the lower wage rates in the South stubbornly resist explanation. The wage variation in the total sample is strongly influenced by variables related to economic organization, and moderately influenced by labor market characteristics, product type and urbanization. Still, the effects of region outweigh all other effects. In order to explore why region produces such a wage gap, the sample was split, and the non-South and South analyzed separately to measure the effect of the other variables on wage rates. The results show again show that economic organization, labor market characteristics, and product type can do a fairly good job of predicting wage rates in the non-South (explained variance nearly 60 percent), but these same variables fail to explain even part of the smaller wage variation in the South.

6.2 CONCLUSION

The failure to account for furniture wage variation in the South with models utilizing factors related to the economic organization of capital and characteristics of the labor market, while explaining a good deal of the wage variation in the non-South using the same variables, is similar to the differential earnings returns for economic organization and worker characteristics prevalent in segmentation research (Bibb and Form, 1977; Kalleberg et al., 1981; Hodson, 1983; Beck et al., 1978; Oster, 1978). Instead of distinctions cutting across product or labor markets, here, within a single industry, there is a wide discrepancy in the ability of regression models to predict wages based on a geographic distinction. One solution to this puzzle would be to place the furniture industry in the non-South in the core sector of the economy and drawing from a primary labor market, and the furniture industry in the South in a secondary sector of the economy and drawing from a secondary labor market. This might explain why the influence of economic organization and characteristics of the labor market are stronger in the non-South.

This solution presents several problems. First, while the sales volume dimension of economic organization has a strong positive influence on wages in the non-South, as would be expected of a core firms, the percentage of large firms has a negative effect on wages, and labor intensity has a positive effect on wages, which are not typical of a core firm. Also, labor market characteristics by themselves explain little wage variation in either the non-South or South which suggests furniture workers do compete in the relatively less discriminatory secondary labor market. A final problem with this solution concerns the structure of the industry. The average furniture establishment in the South is larger in employment size and sales volume and employs a higher percentage of the

workforce, which in some respects makes furniture establishments in the South more core like than their non-Southern counterparts, and because of smaller local labor markets, perhaps more vital to the local economy.

Almost a hundred years have passed since the furniture industry first developed in the rolling Piedmont, and while styles have come and gone, one thing has remained constant, and that is furniture workers in this area are among the lowest paid in the country in spite of the fact they are employed for some of the industry leaders in an area known for its furniture. No ready explanation for the apparent wage suppression in the South, particularly the rural South, presents itself in this analysis. Perhaps the most significant finding is the inability of conventional industrial and labor market variables to predict wage rates in the South.

This suggests some possible ways to improve this study. One problem is the level of analysis deals only with aggregate measures. While this approach has revealed distinctions within the furniture industry, it lacks the precision to link income with the many individual (and household) factors influencing income. Reducing the unit of analysis to the individual level would allow the inclusion of more factors related to income, such as subsistence production within semi-proletarian households, which may be a part of differentials in the cost-of-living across regions.

Another, more feasible improvement that could be made keeping the same, county level, unit of analysis would be to analyze data for other industries, especially textiles, to see if they exhibit similar regional variations in wage rates. In addition, new census data will be available soon, presenting the possibility of a current picture of the furniture industry as well as a chance to see what changes in the wage structure have occurred in the last decade. Given the ongoing changes in the world, and the possibility that vast

new market-oriented economies will soon develop, understanding the factors influencing wage rates presents a great challenge. Based on the findings in this study, more research into the causes and consequences of regional wage differences is needed.

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