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Economic Theories of Low-Wage Work

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This article examines economic theories of the low-wage labor market to increase understanding of economic inequality and poverty in the United States, particularly related to the labor market. On the one hand, neoclassical, labor monopsony, and Harris-Todaro models explain how minimum wage policies are related to supply and demand of labor, human capital, employment, and unemployment. On the other hand, the efficiency wage model, the dual labor market theory, and technology development and globalization account for the causes of the wage differentials. This article includes a conceptual map that illustrates the interrelationships between these economic theories of low-wage work.

Keywords: Minimum wage, supply and demand, human capital, employment, unemployment

INTRODUCTION

The relationship between the labor market and employment conditions is a major issue for eradicating poverty and promoting the economic well-being of individuals and families. In the United States, poverty is clearly and primarily associated with economic inequality in the labor market. The restructuring of U.S. companies in the 1980s and 1990s led to changes in working conditions, increased wage inequality, and insecurity about employment status (Fligstein & Shin, 2004). In addition, the 1996 federal welfare reform emphasized personal responsibility and has drawn more attention to the low-wage labor market (Andersson, Holzer, & Lane, 2005). Moreover, the limited increase in the minimum wage expanded the income inequality (Fligstein & Shin, 2004). For insights into these marketplace changes, it is valuable to review economic and labor theories explanations about the transformation, especially in the low-wage sector.

This literature review of the economic theories related to low-wage work focuses on labor economics. From the macro-economics perspective, the neoclassical framework shows how the interactions of labor supply and demand affect low-wage work. Other theoretical frameworks (monopsony labor market model and the efficiency wage theory) show how minimum wage policies are applied and the relationship of dual labor market theory to low-wage work—in terms of human capital (e.g., skills and training), unemployment, technical change, and globalization. This review concludes with a conceptual framework to illustrate the interrelationships of different theoretical frameworks.
METHODS

This literature review included several methods. The primary search involved the University of California, Berkeley (UCB) library system’s Business Source Complete, EconLit, and CSA Illumina Social Sciences databases. The initial keyword search included “theor*” and “model*,” “low-wage,” “low wage,” “minimum wage,” and “living wage.” These terms were identified in the subject title of the journal articles. The Google and Google Scholar search engines were used to locate additional articles and working papers most relevant to specific labor market theories. While searching the databases, article abstracts were reviewed to identify the most relevant articles on the low-wage work. The references cited in some of the articles were also reviewed.

In addition, labor economists in the UCB department of economics were consulted for their recommendations on other scholars and books relevant to low-wage work. Although several different search methods were used, this review is not comprehensive because of the breadth and depth of the field of labor economics; as a result, this review focuses only on the major labor economic theories.

ECONOMIC THEORIES OF LOW-WAGE WORK

The study of labor markets in economics is based on an analysis of supply-and-demand interaction in the labor market. To explain the interaction in the low-wage labor market, economists developed theoretical models called “neoclassical models.” Besides these, this review describes other models: monopsony, efficiency wage theory, segmentation, Harris-Todaro, and the impact of globalization and technology. The review concludes with a conceptual framework that illustrates the interrelationships of these concepts and theories.

Effects of Minimum Wage (Neoclassical Models)

Neoclassical models refer to concepts of the supply-and-demand model and predictions on the degree to which wage increases reduce demand for labor (Burkhauser, Couch, & Wittenburg, 2000). Wages, it is assumed, are determined by the marginal productivity of labor in the competitive labor market. In economics, this typically means “increase in the amount of output from an additional unit of labor” (Mankiw, 2004, p. 394).

In the labor market, the simple supply-and-demand model provides the basis for the standard minimum wage model (Partridge & Partridge, 1999). In the basic neoclassical model, the price of labor is determined at the equilibrium of labor supply and demand (equilibrium wage), where no more marginal productivity of labor exists. Thus, in a fully competitive market as assumed in the neoclassical model, full employment is possible at the equilibrium wage level. However, when an imposed wage floor (minimum wage), the lowest wage employers can legally pay, is set at the level above the market equilibrium wage, the wage floor reduces labor demand, or employment. For example, Partridge and Partridge (1999) examine the influence of minimum wage on employment growth in the low-wage retail sector and find that a higher minimum wage rate has a negative impact. They acknowledge that states tend to raise their minimum wage because they are expecting high economic growth. However, they also point out that standard labor market theory suggests that a higher minimum wage can bring about increased long-term unemployment (Partridge & Partridge). In other words, employers would hire less-skilled workers to pay lower wages—not hire less-skilled workers at wages greater than minimum wage.
Positive Effect of Minimum Wage (Monopsony Labor Market Models)

*Monopsony* literally means “a market with a single buyer,” but today, “labor monopsony” is defined more broadly as related to any model where individual companies encounter increasing labor supply (Boal & Ransom, 1997, p. 86). In contrast to the arguments of the neoclassical models that expect negative employment effects if the minimum wage is higher than equilibrium wage, the monopsony model explains that minimum wage has slightly positive (or zero) effects on employment (Edwards & Gilman, 1999). The monopsony models have supported the findings of Card and Krueger’s (1995) studies in the fast-food restaurants as a low-wage sector. In essence, firms possess *market power* that allows them to reduce *wages below* the real market rates. The minimum wage would simply offer workers a wage that is closer to the reduced wage level set by firms with market power even if firms can purchase their labor with a higher wage than the minimum level. The empirical study of Card and Krueger demonstrates the following key points (as cited in Shepherd, 2000): (1) While employment growth in the fast-food industry can be affected by an increased minimum wage, fast-food restaurants generally are not affected by the wage increase; (2) a higher minimum wage does not reduce non-wage benefits; and (3) the higher labor costs are often passed on to consumers in the form of higher product prices.

Economists generally agree that monopsony exists to some extent in any labor market, but they predict that higher minimum wages would decrease employment. Monopsony theory mainly focuses on the *price of labor*, or *labor power*, that is defined as the price of the capacity to work. Yet the model does not address the role of wages as “a tool of motivation and control” (Edwards & Gilman, 1999, p. 21). Edwards and Gilman emphasize that the monopsony model suggests that the nature of labor supply interacts with the behaviors of employers even though economic theory still focuses on supply and demand of labor. In essence, Card and Krueger’s findings aptly explain the effects of minimum wage in the short-run perspective, but in the long run, the negative relationship between minimum wage and employment is more likely to be acceptable (Adilov, 2008). This conclusion also reflects the fact that the effects of the minimum wage tend to be small in the short run (Adilov, 2008).

Efficiency Wage Models

Efficiency wage models have been used to account for normal unemployment in labor economics. These approaches provide rationales to address the importance of *wage rigidity* and the existence of *involuntary unemployment* as variables during the course of a business cycle (Katz, 1986). Economists also use the efficiency wage models to explain persistent “noncompetitive” wage differentials across industries for workforces with similar labor productivity (Katz, 1986, p. 236). In essence, as Edwards and Gilman (1999) note, the efficiency models support the argument that employers can determine a certain wage level for their employees, not passively accept an equilibrium wage level in the labor market. Efficiency wage models assume that wage is positively related to the productivity of labor in wage determination, at some level. Thus, firms may set up the wage level that exceeds the point of market equilibrium because they think that such strategy is more profitable.

In sum, theoretical models explaining minimum wage in the low-wage labor market assume the dual role of the wage rate (Romaguera, 1991). As Romaguera notes, in the neoclassical model, wages set at the equilibrium level of supply and demand for labor plays a role in allocating jobs. On the other hand, in the efficiency wage models, wages have additional functions, and these are defined based on the hypotheses of each model, such as nutritional, shrinking, and turnover models (Romaguera).
Nutritional Model

The fundamental efficiency model was developed by Leibenstein (1957). This framework is focused on the relationships between wages, nutrition, and health in less-developed countries and based on the hypothesis that wages determine consumption levels of workers. Following Leibenstein, Solow (1979) developed formulations to demonstrate a similar model for the developed economies. Both studies suggest the argument that wage increases enhance morale and worker effort that can lead to growth in productivity and profit.

In the same vein, the nutrition model implies that the efficiency wage should be stable for workers who are part of an oversupply in the labor market as a way to promote their morale and work efforts (Romaguera, 1991). This argument is highly notable in relation to the low-wage labor market, because low-wage workers often face excess labor supply.

Shirking Model

The shirking model developed by Shapiro and Stiglitz (1984), Calvo (1985), Sparks (1986), and Bulow and Summers (1986) is based on the premise that the information about employees’ behavior is limited and that workers have some discretion about their work performance, requiring employers to assume the financial burden of worker supervision and monitoring. Companies have a limited capacity to monitor the job performance of their employees, so workers can decide whether to shirk or work (Shapiro & Stiglitz, 1984). As a result, companies may need to offer above-market wages in order to encourage good worker behaviors and prevent workers from leaving their jobs. According to economists who support the shirking model, this approach to increased wages means an increase in the cost of job turnover for the employees, who will assume the cost of finding another job if they shirk work. In other words, the shirking model explains how employers raise not only wages but also the opportunity costs of workers (missed or forfeited opportunity) by valuing their employees’ jobs and by promoting productivity with the threat of termination (Katz, 1986).

Under the shirking model, full employment and no cost due to shirking may be possible if the same wages (market clearing wage) are offered to workers in all firms, since workers can change their jobs or, immediately find a new job when they are fired, maintaining the equivalent wage level (Katz, 1986). However, other scholars have criticized this wage model because shirking can be deterred by means other than wage incentives from firms (Basu & Felkey, 2008; Romaguera, 1991). Ultimately, the fitness of the shirking model is constrained by factors that limit the ability of employers to check and control workers’ behaviors. Based on this weakness, if companies have monitoring difficulties, they tend to avoid hiring workers who exhibit high turnover behaviors in order to maintain long-term employment relationships (Katz, 1986).

Turnover Model

Similar to the shirking model, the turnover model hypothesizes that employee turnover is a financial burden to firms; thus, employers tend to use their wage policy to reduce the cost and raise the overall labor productivity (Carmichael, 1990; Romaguera, 1991). The model assumes that workers would compare the current wage rates and benefits of alternative positions and would not leave current positions that pay relatively high wages (Carmichael, 1990; Yellen, 1984). The turnover model assumes that the market wage will be determined at the point that hiring and training costs are high enough that companies earn no profit with further wage increases (Carmichael, 1990; Katz, 1986). However, Salop (1979) points out that the turnover model lacks sufficient rationalization for offering the same wage to the trained workers and to the untrained or the newly hired.
In sum, many of these different attributes of the efficiency wage models (nutritional, shirking, and turnover) generally support wage differentials inside and outside of firms, depending on the characteristics of the firms and individual workers. Wage differentials are also anticipated when different wage contracts are involved, based on long-term versus short-term employment (Romaguera, 1991). Thus, to reduce turnover rate and secure stable labor, the employers themselves may prefer a high-wage policy for long-term employment.

In addition, Grimshaw and Rubery (as cited in Edwards & Gilman, 1999) stress that the efficiency wage theory may explain the participation of women in low-wage jobs as well as gender pay inequality. It especially explains women’s experience in the low-wage care sector where they are paid less than male workers for jobs that require less responsibility and easier performance monitoring as compared with other male-dominated job sectors (as cited in Edwards & Gilman, 1999).

Segmented Labor Market: Dual Labor Market Theory

In the early stage of introducing the idea of segmentation as an approach to the labor market, Pigou (1945) recognized that labor markets are fragmented because of gaps in individual job-related attributes, such as skills and work experience. Moreover, such differentials in work capacity limit labor mobility between and within industries or between different segments of the labor market (Pigou). Since then, Dunlop (as cited in Leontaridi, 1998) introduced concepts of job clusters within firms and wage contours throughout the labor market, as he sought to examine the association between wage structure and the internal labor market.

Based on the concepts of internal and external labor market, the segmented labor market (SLM) theories emerged in the 1960s when social reform associated with the “war on poverty” emphasized the economic forces (Cain, 1976). The SLM theories bring up major labor market policy issues that go unexplained by neoclassical and classical economics. Classical economics mainly studies how to maximize behaviors of individuals and firms; neoclassical labor economics focuses on studies of supply and demand theories—which are based on maximizing profit behaviors of employers on the demand side and maximized utility of workers on the supply side (Leontaridi, 1998). Thus, central issues in neoclassical labor economics include decisions on investment in human capital, for example, skills, health, and values; allocation for labor and leisure; and differentiation of wage structures based on workers’ behaviors (Leontaridi, 1998).

On the other hand, segmentation theory raises questions about the classical and neoclassical approaches that do not explain the distribution of wages, unemployment, and discrimination in the labor market. One distinction between these two different views is the assumption in neoclassical theory that individual workers have free choices in the labor market and receive rewards determined by their human capital, or skills and values. Segmentation theory, by contrast, shows the problems of the labor market as dynamics factors. Thus, scholars who use the segmentation theory contend that the labor market is made up of many noncompetitive segments with different rules and policies for employment and wage determination (Dickens & Lang, 1992; Leontaridi, 1998). In other words, according to the segmentation theory, beyond analyzing equilibrium between supply and demand in the labor market, distinct, critical wage determination mechanisms and employment relations factors define labor market segments. Under the segmentation theory, rewarding human capital is difficult due to institutional barriers (Leontaridi, 1998). Also, scholars who promote the segmented theory argue that disadvantaged groups of workers are generally confined to the lower segment that limits their upward job mobility.

Since the emergence of the segmented labor market approach, the following three new theories that address the nature of the labor market have been developed: dual labor market theory, radical theory, and job competition theory. As noted in the next section, these new theories underscore
the importance of institutional and social impact on wage and employment as well as on the segmented nature in the labor market.

**Dual Labor Market Theory**

Doeringer and Piore (1971) developed the idea of market segmentation and the dual labor market theory where the labor market is divided into a primary and a secondary market. Good jobs are offered by large firms in the primary labor market that feature stability, high wages, substantial responsibility, better working conditions, and more possibilities for promotion through the firms’ internal labor market (Bulow & Summers, 1986; Cain, 1975, 1976). However, the good jobs in the primary labor market tend to be limited to sectors that are capital intensive and where wages are determined by classification, career experience, and seniority. In contrast, the secondary market refers to the lower-wage, lower-skill sectors that are labor-intensive and based on menial jobs characterized by poor working conditions and low wages (Bulow & Summers, 1986). In essence, low-wage workers with fewer skills face barriers to moving upward from the secondary to the primary labor markets and overall economic well-being.

In terms of the dual theory, Bulow and Summers (1986) developed the model of involuntary unemployment where firms in the primary sector check wages in the secondary sector in order to set wages high enough to prevent turnover. In analyzing the relationship between the optimal wage policy in a dual labor market model and efficiency model, Jellal and Wolff (2003) argue that primary sector jobs are more complex than those in the secondary sector, so it is more difficult to monitor worker performance in the former—or justify differential wages in comparison to the latter (Bulow & Summers, 1986). Thus, the dual labor market theory and efficiency model explain the wage differential in the labor market that impacts the future of low-wage workers.

In explaining the dual labor market theory and low-wage work, it is important to note attempts to address gender, race, and other discrimination issues; it was expected in the early development of the economic theories that discrimination in the labor market would be eliminated by competition (Becker & Arrow, as cited in Bulow & Summers, 1986), but these theories did not provide sufficient explanation for the persistent discrimination or occupational segregation (Bulow & Summers, 1986).

It is increasingly clear that vulnerable populations are often trapped in the secondary sector (Doeringer & Piore, 1971). In examining labor market models to identify wage differentials not related to productivity differences, Bulow and Summers (1986) found that employers can reduce the wages offered to the disadvantaged workers without concern about their shirking. The known gender, race, and other group discrimination enable competitive employers to hire labor as inexpensively as they can. In essence, the dual labor market model accounts for such discrimination, based on the assumption of existing group differences that are unrelated to productivity. In fact, Reich, Gordon, and Edwards (1973) developed an additional level of segmentation by defining “independent” primary sector jobs as work that requires creativity, problem solving, and initiating ability and “subordinate” primary sector jobs as work that is characterized by routine, dependability, discipline, and passive acceptance of rules and authority (Reich et al., p. 360). They also note that particular jobs are classified as “race-type” work and “gender-type” work.

Another segmentation theory called “radical theory” was developed by Wachtel, Edwards, Reich, and Gordon (as cited in Leontaridi, 1998) and regards “institutional change and behavioral rules as the most important elements determining the nature of the labor market and the process of employment” (Leontaridi, 1998, p. 73). In essence, the radical theorists focus on class conflict as part of their critique of capitalism and argue that market segmentation comes from the exercise of labor power, not from market forces themselves (Edwards & Gilman, 1999, as cited in Leontaridi, 1998). In this sense, the radical theorists focus on examining the key divisions and income
inequalities in the working class as elements based on the evolution of capitalism in the United States (Leontaridi, 1998).

In contrast, the job competition theoretical model is different from the wage competition model. In the job competition model, wages are determined by social and institutional factors, not by the number and type of job positions, and worker assessments are based on workers’ trainability and adaptability (Cain, 1976; Leontaridi, 1998). Thus, the job competition theory focuses on internal labor markets and on-the-job training (Cain, 1976; Leontaridi, 1998).

In summary, the segmented labor market theory in relation to low-wage work addresses poverty, income inequality, the failure of education and training programs, labor market discrimination, and structural unemployment.

**Human Capital, Minimum Wage, and Unemployment: Harris-Todaro Model**

In researching labor markets in urban and rural areas and examining the association between minimum wage in urban and rural unemployment, Harris and Todaro (1970) developed a theoretical model that is related to human capital, minimum wage, and unemployment. The Harris-Todaro (H-T) model seeks to explain that high minimum wage, continual rural-urban migration, and urban unemployment involve an economically rational choice; that the use of “shadow prices” (such as wage subsidies or direct government hiring) does not bring about improved welfare; and that generating an additional job at the minimum wage will increase the expected wage and induce rural-urban migration (Bhagwati & Srinivasan, 1974; Harris & Todaro, 1970).

Based on the structure of the H-T model, Djajić (1985) examines the association between the minimum wage and unemployment in the circumstance of an open-economy model that emphasizes human capital in the economy where both domestic and international transactions and finance can be involved. Djajić notes that the institutionally defined minimum wage can be a reflection of the considerably higher unemployment rate among the unskilled workers than among the skilled workers. For unskilled labor, the minimum wage is determined by the upper level of the market wage as defined by the labor supply and demand, and it is determined to be below the market wage for the skilled workers (Djajić). In defining skills as productive human capital, Djajić classifies unskilled labor as part of the non-traded goods associated with the service sector and skilled labor as part of the traded-goods sector.

The H-T model was broadened by Corden and Findlay (1975), who noted mobility of both capital and labor between the two sectors (service and goods) and developed a model that assumes that labor is not transferable between sectors in the short term but fully transferable in the long term (Djajić, 1985). Djajić found that a simple linking of minimum wage work to the unskilled labor market may enhance the well-being of individuals engaging in low-wage work because in the short run, the lack of human capital, or skills, tends to be a barrier to mobility between labor markets. Djajić argues that the decline in well-being of low-wage workers results from the unemployment induced by minimum wage and from the inefficient use of unskilled labor.

The correlation among minimum wage, unemployment, and human capital is a major focus of low-wage labor market research. In analyzing minimum wage related to unskilled and skilled labor in the international context, Flug and Galor (1986) found that minimum wage is related to unskilled labor in developed countries and less-developed countries, that minimum wage is related to levels of education, and that the pattern of trade depends on the skills of the workforce. Flug and Galor also found that implementing minimum wage laws for unskilled workers will generate unemployment of unskilled workers in the short term. In a similar way, Stewart (2007) maintains that low-wage work plays a substantial role in recurring unemployment where the probability of low-wage workers being unemployed is three times greater than for those who make higher wages.
TECHNOLOGY AND GLOBALIZATION

In discussing low-wage work, it is valuable to look at some other crucial concepts underlying the relevant theories. Acemoglu (2002) indicates that “skill-biased” technical change benefits the more skilled workers by replacing unskilled work positions with skilled positions and thereby increasing the inequality between workers. Based on these hypotheses, Acemoglu notes that the steady-demand hypothesis means that the demand for skills continuously expands and thereby contributes to inequality. In contrast, the acceleration hypothesis involves acceleration in the skill bias that is driven by information technology and computers, causing the continual increase in the demand for skills. It is clear that the introduction of new technology is more favorable to skilled labor than to unskilled labor.

In terms of technology change, Schmookler (1966) stresses the significance of demand-pull in the technology development when the demand for profit and various forms of technologies can determine the extent of skill bias (Acemoglu, 2002). At the same time, rapid technology change can be a cause of the declining productivity of unskilled workers (Galor & Moav, 2000).

Acemoglu (2002) also notes that a wage decrease for low-skill labor is related to three major issues: (1) the change in the organizational structure of firms affects the labor market; (2) change in the labor market “institution” contributes to wage decrease for low-wage labor (e.g., de-unionization affects the bargaining power of low-skill labor); and (3) international trade and its interaction with technology innovation and transfer put downward pressures to maintain low wages for low-skill work. Most of all, the change in technology encourages high-skill workers to seek work in the high-skill labor market, rather than working in the same organizations as the unskilled workers. This organizational change integrated with technology transformation implies that skill dispersion brings about the wage decline in the low-wage labor market.

Globalization provides another explanation for increasing inequality in wage and unemployment between the skilled and the unskilled workforce. Wood (1998) uses the Heckscher-Ohlin model to analyze the effects of trade on wage gaps between the developed (North) and the developing countries (South) and found that international trade boosts the specialization of the northern developed countries while decreasing the labor-intensive work, thereby expanding the wage gap between the skilled and the unskilled labor. At the same time, as the skill-intensive work tends to grow and expand in northern developed countries, the labor-intensive work tends to be reduced in northern countries by the low-wage imports from the southern developing countries. As a result, the unskilled workers in northern developed countries are displaced in the labor market, by reducing their relative wage or increasing their unemployment.

CONCLUSION

As noted in this analysis, there are different theoretical models to explain low-wage work in relationship to the minimum wage policy, human capital, and unemployment. The neoclassical approach focuses primarily on the relationship between the supply and demand of labor in the competitive marketplace and how minimum wage policies influence the employment growth in the low-wage labor market. Also, the monopsony labor market model examines the effect of minimum wage on employment in a low-wage labor market, and the Harris-Todaro model explains the relationship between minimum wage, unemployment, and human capital.

Other theoretical models, such as the efficiency wage theory (justifying high wages for certain work) and the dual labor market theory (different labor market structures causing wage differentials), seek to explain the causes of the wage differentials and their impact on worker well-being. As Katz (1986) points out, the efficient wage model, particularly the shirking model, explains the appropriateness of different optimal wages across labor market sectors. Also, Becker (as
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Figure 1 highlights the key concepts in each theoretical model and the interrelationships between minimum wage, human capital, unemployment, and wage differential.

In conclusion, the economic theories of low-wage work focus primarily on examining wage differentials in the labor market and identifying the limitations of the different theoretical models. However, the theoretical concepts of labor economics help to expand our understanding of low-wage work within the labor market. Future research will, no doubt, expand the economic theories of low-wage work.

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