Compensating differentials, labor market segmentation, and wage inequality

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ABSTRACT

Two literatures on work and the labor market draw attention to the importance of non-pecuniary job amenities. Social psychological perspectives on work suggest that workers have preferences for a range of job amenities (e.g. Halaby, 2003). The compensating differentials hypothesis predicts that workers navigate tradeoffs among different job amenities such that wage inequality overstates inequality in utility (Smith, 1979). This paper joins these perspectives by constructing a new measure of labor market success that evaluates the degree to which workers' job amenity preferences and outcomes match. This measure of subjective success is used to predict workers' job satisfaction and to test the hypothesis that some degree of labor force inequality in wages is due to preference-based tradeoffs among all job amenities. Findings demonstrate that the new measure predicts workers' job satisfaction and provides evidence for the presence of compensating differentials in the primary and intermediate, but not secondary, labor markets.

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1. Introduction

Among Adam Smith's more influential ideas in *The Wealth of Nations* is the compensating differentials hypothesis, which predicts that labor market inequality is close to nil when labor force utility—the set of rewards both monetary and otherwise which attend one's fulfillment of labor force duties—is considered (Smith, 1979). Economic theorists argue that this is the result of a balancing process whereby every job amenity has a value for which monetary trade-offs may be evaluated. This approach has been extremely influential in studies of the labor market; Rosen (1986) claims that the theory of compensating differentials is "*the* fundamental... market equilibrium construct in labor economics" (641).

The theory of compensating differentials influences research on the labor market because it calls into question the means by which social scientists evaluate labor force success and inequality. It suggests, as have several works in the social psychological and inequality literatures (e.g., Halaby, 2003; Jencks et al., 1988; Johnson et al., 2007; Kalleberg, 1977), that job rewards should be assessed along multiple axes, incorporating not just pay and prestige, but also other job characteristics for which individuals may be willing to effectively 'trade' wages to obtain. Examples include health benefits and pension, the ability to spend more time at home, job security, and cleanliness. Yet the theory of compensating differentials, as an explanation of inequality, falls short on two accounts.

First, the theory of compensating differentials and empirical tests of its validity have failed to incorporate worker-specific preferences for job amenities, instead evaluating the presence of compensating differentials by regressing wages on some job amenity or disamenity across the entire labor market. Research in the social psychology of work has demonstrated that individuals hold different preferences for a range of job rewards (Halaby, 2003; Johnson, 2002; Johnson et al., 2007). Each job has

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a subjective value, or utility, to each worker, which depends on some combination of the suite of amenities offered and the worker's preferences for them (e.g., Michalos, 1985; Lang and Majumdar, 2004). We argue that any attempt to measure labor force utility must account for heterogeneous preferences for multiple job characteristics, in order to capture the full diverse rewards workers derive from their jobs. Measuring utility properly is crucial to the question because, as Smith (1904 [1776]) originally argued, compensating differentials are observed when inequality in utility is less than that in wages. Conversely, to the degree that labor force utility inequality exceeds wage inequality, wage inequality may mask underlying variation in labor force utility inequality (e.g., Doeringer and Piore, 1975; Jencks et al., 1988).

Second, the theory of compensating differentials rests upon problematic assumptions that sociological research has called into question, particularly for the low-wage labor market (Damaske, 2009; Neumark et al., 1996; Pager, 2003). Choosing jobs based on non-pecuniary rewards may be a luxury reserved for those in the upper strata of the labor market, while low-wage workers may be unable to do so. Some previous research supports this view, showing that the degree to which compensating differentials operate in the labor market varies by socioeconomic strata (Fernandez and Nordman, 2009; Graham and Shakow, 1990) and bargaining power (Daniel and Sofer, 1998). Yet no study has thus far examined differences in the degree to which workers obtain their preferences by labor market segment.

In this paper, we use data from the Wisconsin Longitudinal Study of 1957 (WLS) to construct a multidimensional measure of labor force utility which incorporates both monetary and non-monetary job preferences and characteristics. We refer to this measure as "subjective success" because it evaluates the degree to which individuals achieve the job rewards they prefer. To the extent that inequality in subjective success is less than that for wages, this suggests that labor market participants balance their preferences for pay and other amenities when navigating the labor market, and that a compensating differentials process is operating. After describing the data, we test the validity of our measure of labor market utility, using it to predict job satisfaction among our sample. We then use this measure to evaluate the compensating differentials hypothesis by comparing inequality in subjective success to that of wages. Finally, we test whether the presence of compensating differentials varies by labor market segment. We find that subjective success predicts worker satisfaction, and that compensating differentials account for some inequality in the primary and intermediate, but not secondary, labor market segments.

2. Theoretical background

2.1. Compensating differentials: theory and research

The theory of compensating differentials suggests that workers make trade-offs when selecting jobs, balancing their preferences for wages against other job amenities. Smith (1904 [1776]) nominated five non-pecuniary characteristics upon which jobs may be evaluated: (1) the conditions surrounding the work; (2) job qualifications; (3) job stability; (4) prestige; and (5) the difficulty of success. Furthermore, health, retirement, and other benefits can provide substantial financial security to workers and may matter as much as wages when individuals look for employment (Gustman and Steinmeier, 2000; Halaby, 2003; Kalleberg et al., 2000). On these grounds researchers have argued that evaluating inequality using only wages overestimates the degree of inequality present in the labor market because it does not account for tradeoffs between wages and other job amenities (Rosen, 1986). Compensating differentials are present in the labor force (or a segment of the labor force) when inequality in utility is lower than wage inequality as a result of these tradeoffs.

Testing the compensating differentials hypothesis requires making assumptions about the nature and determinants of labor force utility because compensating differentials fundamentally concern the inequality between wages and total utility. The most popular approach to measuring utility in the compensating differentials literature is through the use of (logged) wages, an approach known as the hedonic wage model (Daniel and Sofer, 1998; Fernandez and Nordman, 2009; Hersch and Kip Viscusi, 1990; Hwang et al., 1998; Rosen, 1974; Villanueva, 2007).[1] In this approach, positive regression coefficients associating disamenities with wages provide evidence in favor of compensating differentials (Böckerman and Ilmakunnas, 2006). For example, jobs in which workers carry a risk of physical harm should be positively associated with wages, net of other factors such as workers' human capital, suggesting that workers are paid more to compensate for the job disamenity (risk of physical harm) they encounter.

To see the reasoning behind this approach, consider the role of job values in the labor market. If workers navigate trade-offs between alternative job amenities when selecting jobs and potential careers, then, all things equal, those at the bottom of the wage distribution will disproportionately have 'hidden' sources of labor force utility derived from non-monetary job characteristics. Conversely, the opposite pattern is theorized at the top end of the wage distribution. This pattern is indicative of compensating differentials and would result in a positive amenity–wage relationship in the hedonic wage model.

Using this approach, much prior research has argued in favor of the compensating differentials hypothesis, particularly when examining compensation for jobs that carry a risk of injury or death (Cousineau et al., 1992; DeLeire and Levy, 2004; Dale-Olsen, 2006; Garen, 1988; Grazier and Sloane, 2008; Hersch, 1998; Lalive, 2003; Smith, 1979; Thaler and Rosen, 1975; Viscusi, 1978, 1993). There is also support for compensating wage differentials for seasonal and shift work (Del Bono and Weber, 2008; Kostiuk, 1990), hours worked (Blau, 1991; Doepke and Zilibotti, 2005; Watson, 2005; Chen and Chevalier,

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[1] A related literature has substituted job or life satisfaction as the dependent variable in place of logged wages, arguing that this measure is a better approximation of labor force utility than wages (Böckerman and Ilmakunnas, 2006; Helliwell and Huang, 2006; Stutzer and Frey, 2008).