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The relationship between pay and job satisfaction: A meta-analysis of the literature

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ABSTRACT

Whereas the motivational aspects of pay are well-documented, the notion that high pay leads to high levels of satisfaction is not without debate. The current study used meta-analysis to estimate the population correlation between pay level and measures of pay and job satisfaction. Cumulating across 115 correlations from 92 independent samples, results suggested that pay level was correlated .15 with job satisfaction and .23 with pay satisfaction. Various moderators of the relationship were investigated. Despite the popular theorizing, results suggest that pay level is only marginally related to satisfaction. Theoretical and practical implications of the results are discussed.

Most individuals choose to spend the majority of their adult lives in paid employment. The reasons individuals so devote themselves to work are varied, and for many, self-concept factors are cited (i.e., one's job is a source of one's identity; Hulin, 2002). When individuals are asked *why* they work, however, money is one of the most commonly-cited reasons (Jurgensen, 1978). Locke, Feren, McCaleb, Shaw, and Denny (1980) went so far as to argue, “No other incentive or motivational technique comes even close to money with respect to its instrumental value” (p. 379). For most, the choice to work may not be seen as much of a choice at all, since money provides sustenance, security, and privilege. To no small extent, people work to live, and the pecuniary aspect of the work is what sustains the living.

In the area of money as a means to live, comparatively speaking, Americans are well off. Of the roughly 192 sovereign nations, the United States is arguably the wealthiest (its Gross Domestic Product [GDP] is highest in the world). Thus, for many Americans and the citizens of other wealthy nations, the question generally is not between working and starving (in America, of those who work, “only” 13.2% are below the poverty line [U.S. Census Bureau, 2009]), but rather of working for how much money. People *do* differ widely in the pay they receive from their work; income dispersion is relatively high in the United States and has grown over time (Lee, 1999). Thus, it becomes interesting to ask whether this extrinsic motive “pays off” in terms of happiness. How does the pay we receive from our work contribute to our feelings about our jobs and lives?

Indeed, there is a substantial literature on the relationship between income and subjective well-being. Although U. S. Gross National Product (GNP) has increased threefold over the past 50 years, levels of life satisfaction have remained constant since the 1940's (Diener & Oishi, 2000), a finding which has been replicated in Japan (Diener & Biswas-Diener, 2002). Moreover, after a relatively short period of time (i.e., 1 year), lottery winners are no happier than before they won the lottery (Brickman, Coates, & Janoff-Bulman, 1978). These findings suggest that income is unimportant to happiness. On the other hand, the richest Americans

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are happier than the average American (Diener, Horwitz, & Emmons, 1985), and the average individual is happier than the very poor (Cummins, 2000). Moreover, across nations, the correlation between average well-being and average per capita income ranges from $\hat{r}=.50$ to $\hat{r}=.70$ (Diener & Biswas-Diener, 2002). However, the relationship appears to diminish substantially when the analysis is confined to wealthy nations (Helliwell, 2003). Thus, at the macro level, results suggest contradictory conclusions regarding the importance of income to life satisfaction.

Studies at the individual level reveal similarly indeterminate findings. Diener and Seligman (2004) concluded, "Dozens of cross-sectional studies reveal that there is a positive correlation between individuals' incomes and their reports of well-being" (p. 7). On the other hand, in the U. S., Diener, Sandvik, Seidlitz, and Diener (1993) reported the average correlation between income and well-being to be quite modest ($\overline{r}=.13$). In an international study, Suh, Diener, Oishi, and Triandis (1998) found the same result ($\hat{r}=.13$). On the other hand, Cummins (2000) concluded, "There are numerous empirical reports indicating that people who are rich have a level of subjective well-being that is substantially higher than people who are poor" (p. 133). Thus, though the data tend to indicate a small, positive correlation between income and subjective well-being, this conclusion cannot be proffered with much confidence.

Despite the considerable focus that the income–happiness relationship has garnered in psychology (see Diener & Seligman, 2004 and Diener, Suh, Lucas, & Smith, 1999 for reviews), in organizational psychology, little attention has been focused specifically on the relationship between pay level and job satisfaction. Some studies have found positive, significant relationships between pay level and job satisfaction ($\hat{r}=.27$, $p<.01$ (Beutell & Wittig-Berman, 1999); $\hat{r}=.27$, $p<.01$ (Sanchez & Brock, 1996)). Other research has revealed a weak relationship between the variables ($\hat{r}=.01$, *ns* (Dunham & Hawk, 1977); $\hat{r}=.07$, *ns* (Adams & Beehr, 1998)). Still other research has suggested moderators of the relationship. Malka and Chatman (2003) found that income and job satisfaction were positively correlated ($\hat{r}=.17$, $p=.06$), and the relationship was stronger for individuals with extrinsic value orientations. Overall, though, there is a dearth of research specifically focused on the relationship between pay level and job satisfaction. Gerhart and Rynes (2003) concluded, "One curious feature of the pay level–pay satisfaction literature is that there are virtually no studies that correlate pay level with general job satisfaction" (p. 63).

Theoretically, there are reasons to expect a positive or a negative relationship between pay level and job satisfaction. Most models of pay satisfaction stipulate a positive relationship between pay level and pay satisfaction, and pay satisfaction is one of the core components of overall job satisfaction (Smith, Kendall, & Hulin, 1969). Heneman and Judge (2000) noted, "Models of pay satisfaction all suggest that the amount of pay itself should have a direct impact on pay satisfaction" (p. 71). For example, Hulin's (1991) integrative model predicts that all else equal, role outcomes—such as pay—will result in higher levels of job satisfaction. Similarly, Lawler's discrepancy model—where pay satisfaction is a function of what one receives relative to what one thinks one should receive—hypothesizes that pay level should be satisfying to individuals (see Heneman [1985], Fig. 8).

On the other hand, self-determination theory (Deci & Ryan, 1985) suggests that extrinsic rewards are ultimately demotivating and dissatisfying to individuals. Because they have a negative effect on intrinsic interest in a task or job, extrinsic motivations tend to undermine perceived autonomy (Deci & Ryan, 2000). Moreover, goals for financial success have been argued to undermine well-being, because these goals represent a controlled orientation that interferes with the fulfillment of more enduring needs such as self-acceptance or affiliation (Kasser & Ryan, 1993), a view that has not gone unchallenged (Svrivasta, Locke, & Bartol, 2001). Thus, relevant theories are at odds with respect to whether or not pay level and other forms of extrinsic rewards should be positively related to job satisfaction.

Beyond the empirical results and theoretical support, a final source of confusion with respect to the pay level—job satisfaction relationship comes from reviews of the literature. Heneman (1985) concluded, "The consistency of the pay level–pay satisfaction relationship is probably the most robust (though hardly surprising) finding regarding the causes of pay satisfaction" (p. 131). Gerhart and Milkovich (1992) noted, "Pay level is a key attribute of compensation design and strategy because of its consequences for…attitudinal objectives" (p. 495). Spector (1997), conversely, concluded, "Pay itself is not a very strong factor in job satisfaction" (p. 42). Pfeffer (1998) lamented, "Literally hundreds of studies and scores of systematic reviews of incentive studies consistently document the ineffectiveness of external rewards" (p. 216).

The purpose of the present study is to perform a meta-analysis of the relationship between pay level and job satisfaction. Heneman and Judge (2000) called for more research on the relationship between pay level and job and pay satisfaction. One way to further investigate this relationship is through meta-analysis. Qualitative or narrative reviews have many limitations (potentially misleading conclusions, over- or under-weighting of particular studies, failure to take into account study artifacts and measurement error; Hunter & Schmidt, 1990). As Judge, Piccolo, and Ilies (2004) noted, "Although there is nothing wrong with qualitative reviews per se, they are subject to various errors, including the fact that subjective accounting of study results often leads to inaccurate conclusions" (p. 44). Thus, it is worthwhile to consider the actual size of the relationship of pay level to job and pay satisfaction once sampling and measurement error have been taken into account. Given the conflicting theoretical arguments and empirical data, we do not offer formal hypotheses. However, we do address the following research questions:

Q-1: At the individual level, is pay level related to: (a) pay satisfaction or (b) overall job satisfaction?
Q-2: At the organization/sample level, are average levels of pay level related to: (a) pay satisfaction or (b) overall job satisfaction?

Because at the sample level various factors may affect the relationship between pay level and job and pay satisfaction, we also investigate several moderators of the relationship. It has been speculated that the relationship between pay level and job satisfaction is lower in the U. S. given that it is the wealthiest nation (Diener & Biswas-Diener, 2002). Thus, we compare the relationships of pay level with job and pay satisfaction for U. S. vs. international samples. We also investigate whether the