



Are pay satisfaction and pay fairness the same construct?

A cross-country examination among the self-employed in Latvia, Germany, the UK, and the USA

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Pay satisfaction
and fairness

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Received April 2007
Revised October 2007
Accepted October 2007

Abstract

Purpose – The purpose of this study is to test the extent to which pay satisfaction is equivalent to perceptions of pay fairness in order to call to attention the need for care in designing instruments in order to lessen the likelihood of the confounding of concepts within measures as has been in numerous previous studies.

Design/methodology/approach – Questionnaire data were collected as part of a larger project seeking to understand the customer service behaviors of business owners for four groups of self-employed business owners from Latvia, Germany, the UK, and the USA.

Findings – It is found that while pay satisfaction and pay fairness are not the same construct, with the exception of internal pay comparisons, the self-employed may not distinguish between pay fairness and pay satisfaction in a meaningful manner.

Research limitations/implications – All four of the samples included in the current study had limited control over their compensation as the economy and industry are the most powerful influences on the income of the self-employed in small businesses. It might prove useful to examine whether these results hold true for individuals with highly variable compensation.

Practical implications – Organizations should not assume that individuals naturally differentiate between pay fairness and pay satisfaction. It also would appear that there are few differences in the perceptions between the self-employed based upon country of origin.

Originality/value – While many studies have been performed on pay fairness and pay satisfaction that have assumed that they are distinct constructs, this is the first study to use a multi-step process in order to systematically and empirically examine the degree to which they are similar. This is done across four countries and with a sample of self-employed business people – a group rarely examined in human resource research.

Keywords Pay, Self employed workers, Latvia, Germany, United Kingdom, United States of America

Paper type Research paper

For nearly 40 years, job satisfaction researchers have included the measurement of pay satisfaction in assessments of job satisfaction (Weiss *et al.*, 1967; Smith *et al.*, 1969). Since the 1970s considerable research has focused on assessing pay satisfaction independently of job satisfaction (Heneman, 1985; Miceli and Lane, 1991; Carraher and Buckley, 1996; Kinicki *et al.*, 2002; Currall *et al.*, 2005). Pay satisfaction researchers suggest that because labor costs comprise a major portion of business expenses, the determinants of pay satisfaction require independent research attention (Currall *et al.*, 2005).



Job satisfaction researchers (Bonache, 2005; Buckley *et al.*, 1992), pay satisfaction researchers (Kessler *et al.*, 2006), and employers often are interested in the equivalence of pay satisfaction and perceptions of pay fairness (i.e. equity). Among job and pay satisfaction researchers, it is often assumed that pay satisfaction and pay fairness are equivalent as an examination of pay satisfaction scales reveals that the scales include the measurement of pay fairness (Smith *et al.*, 1969; Motowidlo, 1982), or base the scale's items on the component parts of the compensation administration process (Heneman and Schwab, 1985). Although employers design and implement pay systems to provide fair pay rather than to satisfy employee desires for pay (Jones *et al.*, 1999) employers also seem to equate pay satisfaction to pay fairness (Deckop *et al.*, 2004). One way that employers assess employee acceptance of pay and benefit practices is through surveys measuring pay and benefit satisfaction. Despite the widely accepted assumption that pay satisfaction is equivalent to perceptions of pay fairness, the accuracy of this assumption has not been empirically verified.

The purpose of the present study is to test the extent to which pay satisfaction is equivalent to perceptions of pay fairness. This is done in order to call attention to the need for care in designing instruments in order to lessen the likelihood of the confounding of concepts within measures. Investigating the equivalence of pay satisfaction to pay fairness has implications for guiding future research and practice in the fields of compensation and human resource management. Failure to adequately distinguish the constructs may be problematic for both the practice and science of human resource management.

Knowledge of the relationship between pay satisfaction and perceptions of pay fairness can aid in developing and testing theoretical models that include the major antecedents of pay satisfaction without confounding satisfaction and fairness. As with antecedents of job satisfaction (Scarpello and Campbell, 1983b), when examining pay satisfaction models it may be necessary to include factors that are not under the organization's direct control (e.g. desires for pay to satisfy life style wants). The equivalence of pay satisfaction to pay fairness perceptions has implications for the employing organization as well. If pay satisfaction is not equivalent to perceptions of pay fairness, then the organization must decide which type of information it wishes to obtain. For example, if the intent is to assess whether or not the organization is providing the intended "fair pay" then the criterion of interest is pay fairness (Carragher and Carragher, 2005). On the other hand, if the intent is to find out if employees are satisfied with the pay received, irrespective of whether or not they believe the pay to be fair, then the criterion of interest is pay satisfaction. We define pay fairness such that it is concerned with the "symbolic characteristics of social interactions and the social status information conveyed by the allocation process" (Jones *et al.*, 1999, p. 130) while pay satisfaction deals with the more immediate and emotional responses with respect to pay (Carragher *et al.*, 2004a, b, c).

Pay satisfaction and/or pay fairness

The examination of the equivalence of pay satisfaction to pay fairness requires a consideration of the presumed views of the individual recipient of pay, the employer allocating the pay, and the interaction between individual and employer views.

Individual views about pay

It is generally agreed that individuals view pay as a valued commodity. Pay satisfaction should result from “more” pay rather than just “fair” pay. Field research on pay satisfaction consistently finds that the most important determinant of satisfaction is the individual’s pay level (Lawler and Porter, 1966; Williams *et al.*, 2006). These findings are supported by social psychological and sociological experiments on pay satisfaction and pay fairness. Laboratory experiments indicate that the more the amount of pay exceeds the perceived market pay rate, the greater the satisfaction with pay (Austin *et al.*, 1980; Messe and Watts, 1983; Shepelak and Alwin, 1986).

Employer views of pay

Employers view compensation as a major cost factor of production and as a necessary inducement (Sturman *et al.*, 2003) for attracting suitable job applicants, retaining valued employees, and motivating performance and other desirable behaviors. Within budget constraints, employers attempt to provide fair pay with respect to the external labor market, the relative value of the job, and the “added-value” individuals produce for the organization. Within an industry, employers tend to experience similar business costs and require the services of similarly skilled individuals. To maintain competitive positions within product markets, employers typically control their compensation outlays by assessing the compensation practices of other employers within their industry. Pay outlays are generally controlled to industry labor market pay rates of “benchmark” jobs (i.e. jobs commonly found across organizations that are stable in terms of content and include a large number of incumbents). Some slack in the industry “benchmark” factor exists, however, for jobs that are priced in local labor markets (i.e. salaried non-exempt and hourly-paid jobs). The pay of jobs in local labor markets is controlled by comparing pay practices of employers across industries that are likely to be perceived as attractive employers to the organization’s current employees. Although employers may also attempt to maintain competitiveness with respect to benefit offerings (Carragher, 2006; Carragher *et al.*, 2003; Hart and Carragher, 1995), benefit offerings are more influenced by tax policy and legislation than they are by employer competition (Biggs *et al.*, 2006). Employer pay practices are intended to provide “fair” pay. The term “fair,” however, is defined by the pay system’s ability to balance competitive business interests through the cost control of compensation outlays with the compensation goals of attracting, retaining, motivating, and developing a competent workforce. Because employer business costs vary across industries, “fair” pay is a relative term. The pay level and pay treatment for employees with similar skills, performance, and valued behaviors is similar within an industry but may differ considerably across industries (Krueger and Summers, 1988; Haisken-DeNew and Schmidt, 1997).

Individual-employer interaction

Individuals trade their occupational skills and other work behaviors for compensation. As previously noted, pay level appears to be the major determinant of pay satisfaction. There is laboratory evidence, however, that individuals equate pay satisfaction and pay fairness when the amount of pay received meets or slightly exceeds perceived market pay rates (Austin *et al.*, 1980; Messe and Watts, 1983; Ordonoz *et al.*, 2000; Carr *et al.*, 2005; van den Bos *et al.*, n.d.). This suggests that individuals use external standards for assessing their pay situation. Within the world of work those standards

may be expected to be bounded by occupational and career expectations. Specifically, pay satisfaction and pay fairness perceptions may be equivalent for most people as the socialization processes within occupations and organizations serve to focus their attentions and expectations as to the levels and types of pay to be received (Jaques, 1961; Dupuy and Borghans, 2005). Furthermore, research has found that individuals whose primary source of income comes from either salaries or wages use the same pay determination processes to evaluate their pay satisfaction as employers use in the design of fair pay systems (Scarpello and Jones, 1996).

Indirect evidence also suggests that employees may limit their desires for pay to the possibilities inherent in their employment situations. For example, pay satisfaction instruments that measure non-job related pay facets (e.g. Job Descriptive Index) correlate highly with pay satisfaction instruments (e.g. Minnesota Satisfaction Questionnaire) that only measure job-related pay facets (Gillett and Schwab, 1975). If personal desires for pay were relatively independent of employment situations, then pay scales that measure non-job related facets should not correlate highly with pay scales that measure only job-related pay facets. Allowing for the presence of random individual differences, even if pay satisfaction and pay fairness are not equivalent, previous research would appear to support that there may be considerable overlap between the two constructs (Berkowitz *et al.*, 1987; Jones *et al.*, 1999).

In summary, there is reason to expect that for most salary and wage earners, pay satisfaction and pay fairness may be equivalent. The equivalence of the two constructs, however, has not been empirically verified. Although evidence for overlap between pay satisfaction and pay fairness perceptions exists, the extent of the overlap is the critical factor in determining the equivalence of the two constructs. It is unclear as to how these two constructs would be perceived among the self-employed (Jaques, 1961).

Testing the equivalence of the two constructs

Statistical assessments of construct equivalence are the norm in the social sciences. Such assessments are indirect assessments of equivalence and thus, the resulting evidence for equivalence is really evidence for “essential” rather than “actual” equivalence. The strongest test for inferring equivalence of pay satisfaction and pay fairness perceptions requires that measures of each construct be identical with respect to item wording and rating format. If this condition holds, then the difference between constructs can be assessed by comparing responses to identical items anchored with either “fairness” or “satisfaction” referents (Cronbach and Meehl, 1955; Campbell, 1982; Cooper and Richardson, 1986; Edgar and Geare, 2005). In this research, construct equivalence is assessed indirectly and directly (Sturman and Carraher, 2007). Indirect assessments serve three purposes. First, they provide evidence typically used to infer construct equivalence and thus, are useful means for relating the results of known procedures for inferring construct equivalence to results obtained from a direct assessment of equivalence. Second, indirect assessments provide a means of inferring the extent to which common method variance may explain the findings. Third, if equivalence between the two constructs is indicated by the direct test for equivalence, then evidence against common method variance increases the strength of the equivalence inference.

Four questions were asked to assess construct equivalence: Question 1: does a common construct underlie responses to pay fairness and pay satisfaction questions?

If pay fairness and pay satisfaction are essentially equivalent, then the results of principal components analysis should result in one general dimension. This expectation is based on research on the dimensionality of pay satisfaction (Heneman and Schwab, 1985; Scarpello *et al.*, 1988; Carraher and Buckley, 1996; Carraher *et al.*, 2004a, b, c). Owing to potential common method variance, the factor analytic findings for equivalence should be interpreted in view of other evidence. Question 2: if it is found that a common construct underlies responses to pay fairness and pay satisfaction questions, how likely is it that this finding is due to common method variance? This can be assessed through the use of Harman's (1967) one-factor test. Question 3: to what extent do responses to pay satisfaction questions result in the same means and standard deviations as obtained from responses to identical pay fairness questions? If pay satisfaction and pay fairness are essentially equivalent, then responses to pay satisfaction questions and identical pay fairness questions should result in obtaining "essentially" identical sample means and standard deviations. Although common method variance may produce "similar" results, it should not produce identical results. This will be assessed through the use of *t*-tests. Question 4: do respondents give the same numerical rating to items anchored with the fairness referent as they do to identical items anchored with the satisfaction referent? The answer to this question provides a direct test for equivalence of pay satisfaction to pay fairness because it allows direct observation of response distributions. If pay fairness and pay satisfaction are equivalent then the majority of respondents should provide the same numerical rating for the item anchored with the fairness referent as they do for the identical item anchored with the satisfaction referent. Conceptual equivalence can also be inferred if the numerical rating given one referent does not differ from the numerical rating given the other referent by more than one rating value. For example, using a 1-5 Likert-like rating format, conceptual equivalence can be inferred if, for each identical item, the respondents who rate satisfaction a "3" also rate fairness either a "2" or "4". The difference between the responses is one rating value. The "one" rating value difference allows for response variability that may be caused by the presence of perceived unequal distances between the rating scale anchors. It also allows for random response variability due to individual differences in base line responses. In summary, the extent of equivalence between pay satisfaction and pay fairness perceptions can be directly determined from examining:

- the proportion of subjects with identical ratings for the two referents;
- the proportion of subjects with only one numerical rating difference for the two referents; and
- the proportion of subjects with more than one numerical rating difference for the two referents.

In the current paper we shall examine these issues among a special group of organizational employees – the self-employed. Little research has been done examining issues related to human resource management practices among business owners (Carraher, 2006) and this is the first empirical study to systematically and empirically examine the degree to which pay satisfaction and pay fairness are equivalent constructs. This could be considered a mid-range test of the relationship between pay fairness and satisfaction as the self-employed tend to have a greater level of control over their compensation than salaried and hourly workers but less control than those who are paid

by commission or other types of performance-based pay (Carragher, 2006). Previous research has found that when it comes to their reactions to compensation issues that self-employed individuals in small businesses are predisposed to respond in a manner similar to that of managers with a similar span of control (Carragher, 2005, 2006; Carragher and Buckley, 2005; Carragher and Carragher, 2006).

Method

Research sites and subjects

Four samples of self-employed family business owners in Latvia, the USA, the UK, and Germany were used. The samples of self-employed family business owners included 369 from Riga, Latvia; 589 from San Diego, USA; 380 from London, UK; and 434 from Frankfurt, Germany. Once again the entire populations in the area were sampled with proportionate stratified sampling with a target of 20-40 percent females in order to match the gender proportions from previous research done in this area as previous research has found that gender may be related to satisfaction and fairness perceptions (Carragher *et al.*, 2006b; Jones *et al.*, 1999). The samples of self-employed individuals ranged from 63.5 (Latvia) to 81.0 (UK) males and had similar median ages (between 31 and 35 years of age), median educational levels (some college or technical training after high school), and median organizational tenures (between five and ten years).

Procedure

Questionnaire data were collected as part of a larger project seeking to understand the customer service behaviors of business owners for the self-employed. The survey consisted of over 100 randomly distributed questions. This study uses a subset of the data from the questionnaires. The surveys were completed at the individuals' places of business. Confidentiality was assured and the data were collected for research purposes only.

Measures

Six pay items were used to assess the equivalence of overall pay satisfaction and fairness. Two items:

- (1) my current wage or salary; and
- (2) how my raises are determined

are items contained in the PSQ. The third and fourth items, "differences in pay levels or rates among jobs in the company," and "my overall pay level or rate" were also adapted from the PSQ. The difference between the PSQ items and the present items is the added words "or rate." This addition was required to be consistent with the terminology used by hourly-paid employees to refer to their pay level and thus allow these items to be used across a wide range of compensation systems. The fifth item "my pay for the effort I have to exert" is similar to the MSQ item "amount of pay for the work I do," and the sixth item "my pay compared to similar jobs in other companies" is similar to MSQ item "how my pay compares with that for similar jobs in other companies." Following Gorsuch (1983, p. 332), who has noted that it is "generally difficult to replicate factors with fewer than five or six salient variables per factor," we used six items for each construct (fairness and satisfaction referents). Including six items per construct greatly decreases

the likelihood that any one-dimensional solution would occur by chance (Buckley *et al.*, 1992; Carraher *et al.*, 2002, 1999, 2000). Benefit satisfaction was also measured. The PSQ's four-item benefit satisfaction scale was used to help determine whether common method variance is a problem in the current sample. The benefit items have been shown to be relatively independent of the pay items with this and other samples (Scarpello *et al.*, 1988; Carraher, 1991a, b; Carraher and Buckley, 1996; Carraher *et al.*, 2004a, b, c, 2006a). All pay items used a five-point Likert-like rating format with fairness and satisfaction options. For the German sample the items were translated into German by a translation expert and then back translated by an additional language expert. For the Latvian sample a back translation procedure was used as well.

Results

In answer to Question 1, we used limited information confirmatory factor analysis (Sethi and Carraher, 1993) as suggested by Schoenfeldt and Mendoza (1994). Limited information factor analysis is a confirmatory factor analysis method used in estimating the parameters of a structural equation model one equation at a time. It is also called "piecemeal fitting" by Bollen (1989). Limited information factor analysis allows direct testing for unidimensionality with an unrotated factor pattern for the six items with both frames of reference (shown in Table I). Limited information factor analysis, indicates that one general factor does underlie pay satisfaction and perceptions of pay fairness for all four samples.

The first dimension accounts for 59.6 percent (Latvia – eigenvalue = 7.15) to 64.4 percent (UK – eigenvalue = 7.73) of the total variance while the second dimension would have accounted for only 6.9 percent (Germany – eigenvalue = 0.823) to 7.8 percent (USA and UK self-employed – eigenvalue = 0.936) of the variance. The eigenvalue greater than one criterion, screen test, and Horn's (1965) parallel analysis criterion all agreed that only one dimension was appropriate for these items for all four samples. To assess whether this finding may be due to common method variance

Items	Self employed Loadings of the items on the first unrotated factor			
	Latvian	USA	UK	Germany
Sat1 – My current wage or salary	0.88	0.87	0.89	0.89
Sat2 – How my raises are determined	0.67	0.68	0.74	0.72
Sat3 – Differences in pay levels or rates among jobs in the company	0.57	0.60	0.66	0.64
Sat4 – My overall pay level or rate	0.88	0.88	0.90	0.90
Sat5 – My pay for the effort I have to exert	0.81	0.79	0.81	0.81
Sat6 – My pay compared to similar jobs in other companies	0.81	0.79	0.77	0.80
Fair1 – My current wage or salary	0.86	0.88	0.87	0.88
Fair2 – How my raises are determined	0.72	0.73	0.74	0.72
Fair3 – Differences in pay levels or rates among jobs in the company	0.58	0.64	0.66	0.66
Fair4 – My overall pay level or rate	0.84	0.86	0.88	0.86
Fair5 – My pay for the effort I have to exert	0.82	0.81	0.84	0.82
Fair6 – My pay compared to similar jobs in other companies	0.74	0.77	0.82	0.79
Eigenvalues	7.15	7.31	7.73	7.57

Table I.
Limited information
factor analytic results

(Question 2), we used a modified version of Harman's (1967) one-factor test designed for this study. In this test, all variables under examination are typically entered into factor analysis. If only one factor emerges in the unrotated factor solution then it is assumed that common method variance may be the primary source of variance observed in the data. Conversely, the greater the number of factors extracted the less likely common method variance is a systematic source of any variability (Podsakoff *et al.*, 2003). In the current situation, the question is whether or not a single factor is appropriate for the two constructs examined. To answer that question, we used a modified version of Harman's one-factor test. Specifically, pairs of items from hypothetically independent scales were entered into a factor analysis until a one-factor solution was not optimal. Theoretically, the number of pairs of items (one from one hypothetically independent scale and one from the other hypothetically independent scale) could range from two to an infinite number. In this study, we used a hierarchical search procedure to enter the dyads of pay satisfaction (or pay fairness) and benefit satisfaction items into a factor analysis. This was done to determine the minimum number of dyads necessary for a one-factor solution to be non-optimal. The first dyad consisted of the items "my current wage or salary" and "my benefit package." The second dyad consisted of the items "how my raises are determined," and "amount the company pays toward my benefits." We found that only the first two dyads (see above) were necessary to have a two-factor solution be preferable to a one-factor solution. These results were invariant regardless of which of the pay items were used in the dyads. As discussed by Velicer (1976), the minimum number of items that may define an independent factor in data with correlations other than 0.00 is two. Thus, as two is the minimum number of item pairs possible for two separate factors to exist, it is unlikely that common method variance is causing the results shown in Table I.

Question 3 asked to what extent responses to pay satisfaction questions result in the same means and standard deviations as obtained from responses to identical pay fairness questions. Table II shows that the means of the identical items using different frames of reference (fairness or satisfaction) are not significantly different for one-half of the items (items 3, 5, 6). However, they are significantly different for the other half of the items (items 1, 2, 4) with the pay satisfaction means being smaller than the pay fairness means. Given the mixed results, more importance should be placed on the direct tests of equivalence.

Direct matching of responses to identical satisfaction and fairness items revealed that the majority of subjects gave the same numerical rating to five of the six "fairness" anchored items as they did to the "satisfaction" anchored items. Data in Table III show that the mean percentage of subjects who gave identical ratings to the 6 "fairness" and 6 "satisfaction" items ranged from 47.3 to 74.4 percent. However, excluding the item "differences in pay levels or rates among jobs in the company" (the item with the lowest level of equivalence within all four of the samples) from the mean percent calculation shows that between 57.4 and 74.4 percent of the subjects gave equivalent ratings to the 5 "fairness" and "satisfaction" anchored items. Fewer than 9.9 percent of the self-employed deviated in their ratings by more than one numerical value for any one item. Across the six items, the mean percentage of subjects whose satisfaction and fairness ratings differed by more than one value ranged from 0.7 to 9.9 percent.

Items	<i>n</i>	Fairness Mean	(SD)	Satisfaction Mean	(SD)	<i>t</i> (means)	Sig. <i>t</i>
<i>Latvian self-employed</i>							
1. My current wage or salary	364	3.6923	0.874	3.5934	0.909	3.48	0.001
2. How my raises are determined	359	3.1838	1.014	2.9944	1.091	5.22	0.001
3. Differences in pay levels. . .	357	3.2297	0.941	3.2045	0.900	0.50	0.620
4. My overall pay level or rate	360	3.7444	0.906	3.5611	0.921	5.92	0.001
5. My pay for the effort I have to exert	362	3.5414	0.884	3.5470	0.832	0.17	0.864
6. My pay compared to similar jobs. . .	357	3.5854	0.925	3.5854	0.967	1.18	0.240
<i>USA self-employed</i>							
1. My current wage or salary	579	3.7478	0.814	3.6684	0.857	3.48	0.001
2. How my raises are determined	575	3.2678	0.987	3.0626	1.026	7.07	0.001
3. Differences in pay levels. . .	574	3.3031	0.932	3.2561	0.886	1.17	0.242
4. My overall pay level or rate	572	3.7622	0.889	3.6364	0.864	5.07	0.001
5. My pay for the effort I have to exert	576	3.6094	0.856	3.5903	0.821	0.73	0.468
6. My pay compared to similar jobs. . .	573	3.6091	0.901	3.6056	0.919	0.11	0.912
<i>UK self-employed</i>							
1. My current wage or salary	375	3.7120	0.851	3.6160	0.891	3.36	0.001
2. How my raises are determined	373	3.2145	1.059	3.0402	1.066	4.76	0.001
3. Differences in pay levels. . .	367	3.3025	0.957	3.2289	0.942	1.51	0.131
4. My overall pay level or rate	373	3.7051	0.912	3.6113	0.920	3.40	0.001
5. My pay for the effort I have to exert	374	3.6043	0.872	3.5936	0.870	0.33	0.741
6. My pay compared to similar jobs. . .	370	3.6189	0.927	3.6135	0.954	0.14	0.887
<i>Germany self-employed</i>							
1. My current wage or salary	429	3.7459	0.836	3.6643	0.862	3.24	0.001
2. How my raises are determined	425	3.2471	1.011	3.1106	1.028	3.98	0.001
3. Differences in pay levels. . .	422	3.3081	0.957	3.3152	0.908	0.15	0.879
4. My overall pay level or rate	425	3.7459	0.909	3.6376	0.874	3.84	0.001
5. My pay for the effort I have to exert	424	3.6108	0.882	3.6226	0.816	0.38	0.706
6. My pay compared to similar jobs. . .	426	3.6455	0.908	3.6455	0.930	0.80	0.425

Table II.
t-tests for items using
different frames of
reference

Discussion and conclusions

The results of this study indicate that across the countries surveyed that pay satisfaction may be equivalent to pay fairness. Results also showed that a large minority of the sample provided different rating values for the satisfaction referent than they did for the fairness referent. The response tendency was to provide a lower rating for satisfaction than for fairness. The composition of the samples suggests that the results may be generalizable to other organizations as well as across countries.

Given the demonstrated equivalence of pay satisfaction and pay fairness, the question that requires answering is: should we measure pay satisfaction or pay fairness? Both constructs deserve research attention. However, researchers interested in measuring pay satisfaction may be cautioned to use measures that do not confound pay satisfaction with pay fairness as they are not true surrogates for one another (Dalton *et al.*, 1999). The patterning of responses for individuals who provided one numerical rating value higher or lower for satisfaction than provided for the fairness referent suggests that the responses may be due to some unknown cause(s) rather than to unequal distances between the numerical scale anchors or to random individual differences in base line responses. One possible explanation for the lower satisfaction ratings is that personal goals for career progress rather than occupational expectations

Table III.
Mean percentage of direct
matches of satisfaction
and fairness responses

Items	n	Satisfaction equals fairness	Satisfaction 1 point higher than fairness	Satisfaction 1 point lower than fairness	Fairness and satisfaction differ by more than 1 point
<i>North America – self-employed</i>					
1. My current wage or salary	364	72.3	9.3	17.6	0.8
2. How my raises are determined	359	59.9	10.3	26.7	3.1
3. Differences in pay levels...	357	47.3	18.2	25.5	9.0
4. My overall pay level or rate	360	67.8	7.2	23.6	1.4
5. My pay for the effort I have to exert	362	67.4	14.1	16.9	1.6
6. My pay compared to similar jobs...	357	57.4	17.1	20.2	5.3
<i>USA – self-employed</i>					
1. My current wage or salary	579	72.9	9.8	16.1	1.2
2. How my raises are determined	575	59.7	9.7	27.1	3.4
3. Differences in pay levels...	574	49.5	16.4	24.2	9.9
4. My overall pay level or rate	572	70.5	8.2	19.2	2.1
5. My pay for the effort I have to exert	576	64.9	14.6	18.9	1.6
6. My pay compared to similar jobs...	373	61.3	15.7	17.5	5.7
<i>UK – self-employed</i>					
1. My current wage or salary	375	72.5	9.1	17.1	1.4
2. How my raises are determined	373	60.9	9.4	26.5	3.2
3. Differences in pay levels...	367	49.9	18.3	23.6	8.2
4. My overall pay level or rate	373	74.0	7.8	17.2	1.0
5. My pay for the effort I have to exert	374	65.8	15.2	17.4	1.6
6. My pay compared to similar jobs...	370	64.3	15.1	15.7	5.0
<i>Germany – self-employed</i>					
1. My current wage or salary	429	74.4	9.1	15.9	0.7
2. How my raises are determined	425	60.9	11.5	24.5	3.1
3. Differences in pay levels...	422	48.8	18.2	23.2	9.8
4. My overall pay level or rate	425	71.5	8.5	17.9	2.1
5. My pay for the effort I have to exert	424	65.8	14.6	17.2	2.4
6. My pay compared to similar jobs...	426	62.9	17.9	14.3	4.9

for progress may moderate pay satisfaction. Such a possibility is suggested by research that finds that individuals use pay as the major criterion for judging their career progress (Scarpello and Campbell, 1983a, b; Scarpello and Vandenberg, 1992). The present data also suggest that organizational interests may be better served by measuring pay fairness rather than pay satisfaction. The pay fairness scale used in this research was developed to measure perceptions of fairness with respect to the three equity concerns compensation administrators assess in designing a pay system (external equity, internal job equity, and employee equity; Scarpello *et al.*, 1988). Measuring pay fairness instead of pay satisfaction may not decrease the explanatory power obtained from measuring pay satisfaction. Moreover, since a large minority of individuals tend to provide lower satisfaction ratings than fairness ratings, assessments of pay fairness would probably result in higher “scores” for the organization and be more in line with the process criterion of interest, i.e. does our pay system provide the intended “fair pay” (Carragher and Carragher, 2005). In summary, the present study suggests that researchers continue to study both pay satisfaction and pay fairness issues, but distinguish the two constructs in their measurements and studies. The organization’s interests may be better served by the measurement of pay fairness perceptions rather than the measurement of pay satisfaction.

The results of this work suggest that additional basic research should be performed in order to facilitate the development of new theories about pay fairness and satisfaction. The discrepancy theory of Heneman and Schwab (1985) recognizes 4 (or 5) static dimensions of pay satisfaction. In their review of prior research, Williams and Brower (1996) have found solid support for only two of the dimensions – satisfaction with pay levels and benefits. They further suggested that the poor results for the other dimensions might occur due to problems with the items used to measure them. They suggested that the items might inadequately sample the content domain for the constructs of satisfaction with raises, pay structures, and pay administration. This hypothesis has led some (Williams and Brower, 1996) to alter and add to the items for the PSQ. The development of theories to explain optimal dimensionalities will require the sampling of large numbers of diverse populations in order to determine how individuals actually conceive of pay fairness and satisfaction, and the development of items and questionnaires which clearly measure the construct of interest.

Another vein for research would focus on examining how similar or different the results found here might be across other cultures and regions of the world (Carragher, 2003; Carragher *et al.*, 2003a, b). It might also be useful, for example, to examine whether individuals from different countries perceive performance and reward problems in the same manner (Carragher and Buckley, 1996) and whether cultural differences influence the effectiveness of socialization processes, and subsequent performance, of new employees (Buckley *et al.*, 1998, 2002) and internal hires (Bradley, 2006). For instance, how might the results differ if Estonian, Chinese, Ukrainian, Nigerian, Bulgarian, Russian, Korean, or French samples were added (Alas and Vadi, 2006; Carragher, 2005; Carragher *et al.*, 2006b; Dickerson *et al.*, 2006; Vadi and Vershagin, 2006)?

It could also prove interesting to examine the influence that levels of pay fairness and satisfaction can have in terms of the identification, recruitment, selection, reward, and retention of high-performing professionals, educators, expatriates, hospitality workers, managers, or temporary workers (Kidd and Green, 2006; Kazlauskaitė *et al.*, 2006; Kuttunen, 2006; Mihhailova, 2006) and on individuals’ intentions and behaviors

such as intentions to search for a new job, be absent, or quit – and actual turnover, absenteeism, tardiness, and job performance (Carragher, 2006). The influence that each of the dimensions of pay satisfaction and pay fairness has on overall job satisfaction and life satisfaction could also be examined. Finally, the influence and changes in the importance of the dimensions of pay fairness and satisfaction could be examined across time and stages in life in order to examine whether their influence on organizational and life variables differed across life and career stages (Baruch, 2004).

Assuming that pay fairness and pay satisfaction are distinct concepts, the possibility exists that the equivalence found with the present sample may not be found with subjects whose earnings are more variable. It is possible that those who work primarily for commission or other forms of pay incentives may distinguish between pay fairness and pay satisfaction (Sturman and Short, 2000). Owing to the increasing variability of work options (e.g. self-employment, short-term, long-term employment), and increasing organizational use of incentive pay programs, future research may find it fruitful to examine the equivalence of the pay fairness and pay satisfaction constructs with subjects whose incomes are more variable. It may also be possible that organizational trust issues (Dietz and Hartog, 2006), learning styles (Carragher, 1993), leadership or organizational power (Harmaakorpi and Niukkanen, 2007) might influence individuals' perceptions of pay fairness and satisfaction and therefore variations in these could be examined in future research. In the meantime, organizations might infer, with the exception of internal pay comparisons, that the majority of individuals may not distinguish between pay fairness and satisfaction in a meaningful manner. Individuals who may distinguish between the two concepts are likely to give higher ratings for pay fairness than for pay satisfaction. Consequently, the use of pay satisfaction as the criterion for assessing whether or not the pay system is providing the intended "fair pay" would likely underestimate the criterion of interest. Are pay satisfaction and pay fairness the same construct? No, they are not. They may not serve as true surrogates of one another however it would appear that a large portion of the population generally might not distinguish them from one another.

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