



Technical Brief for the WORK ENGAGEMENT PROFILE

Content, Reliability, and Validity

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OVERVIEW

The *Work Engagement Profile* (WEP) is a 24-item questionnaire that measures four intrinsic rewards individuals can receive directly from their work: *meaningfulness*, *choice*, *competence*, and *progress*. Items are presented in a 7-point Likert format, with individuals being asked to circle a number from 1 (strongly disagree) to 7 (strongly agree) to indicate how much they agree or disagree with each statement. The questionnaire is self-scoring and takes about twelve minutes to complete. The WEP is printed in a twenty-page booklet with interpretive materials providing background information on the relationship of the intrinsic rewards to one's engagement with work and to various positive outcomes for both the individual and the organization. The materials also provide more in-depth information about each reward and the building blocks that help produce it.

THEORETICAL FOUNDATION

The WEP stems from a research program that has sought to explain how and why workers add value in today's work. It is built on an integrated conceptual model of work, self-management, engagement, and intrinsic rewards.

The Nature of Today's Work

Work in the United States has changed dramatically over the past 30 years to involve more choice and meaning-

fulness (Thomas, 2000, 2009; O'Toole & Lawler, 2006). This change in work was caused by a number of developments, including the shift from a manufacturing to a service economy, the automating or offshoring of more routine and programmable jobs, flatter and less bureaucratic organizational designs, IT systems that supply more information to workers, and knowledge workers' demands for more meaningful work.

Whereas many earlier jobs were defined primarily in terms of prescribed *activities* (behaviors) that workers were to perform, today's jobs are better understood as including both the activities workers perform and the *purposes* those activities are intended to accomplish (Thomas and Velthouse, 1990). Today organizations increasingly rely on workers to exercise self-direction, or *self-management*, in their work—adapting their activities as appropriate to better accomplish their goals and/or purposes. This self-management, then, is the primary way that workers add value in today's work.

Self-Management and Engagement

Figure 1 identifies key elements of self-management. The oval represents overt work behavior, while the four boxes show four self-management steps—the mental steps through which workers direct their behavior toward accomplishing their purpose. The solid arrows indicate the main sequence of the self-management steps, while the dotted arrows indicate feedback effects—adjustments that workers make when things are not working well.

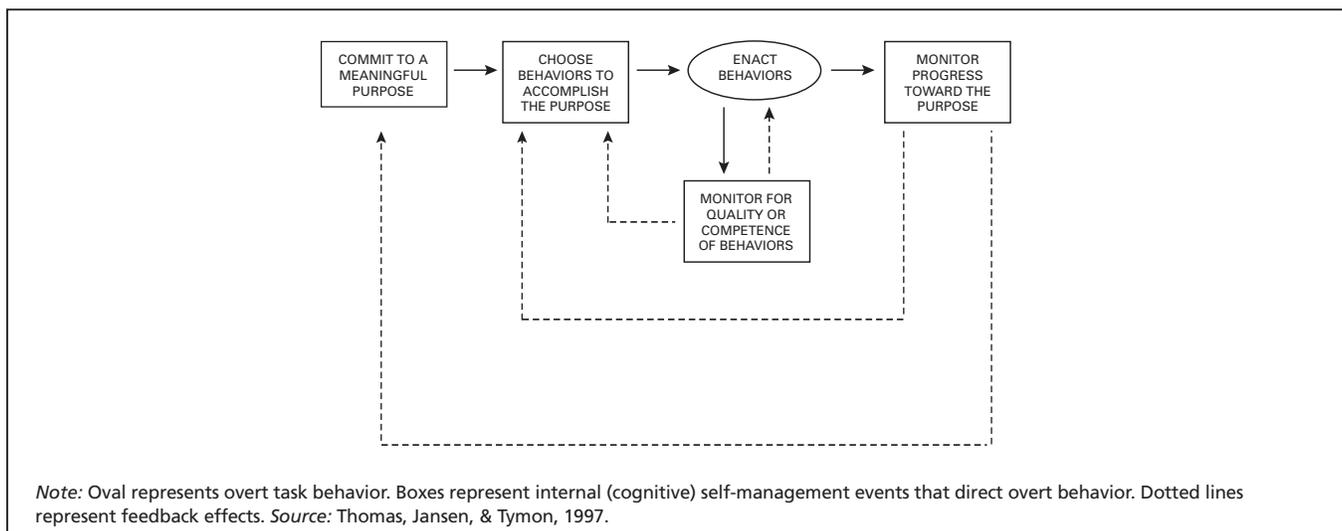


Figure 1. The self-management process

The four steps of self-management provide a way of specifying the core or defining aspects of work engagement. Workers who are highly engaged

- Actively commit to their work purpose
- Actively choose behaviors they believe will best accomplish the purpose
- Actively monitor their work behaviors to ensure that they are performed competently
- Actively monitor progress to make sure their purpose is being achieved

The Intrinsic Rewards That Power Engagement

Intrinsic rewards are psychological rewards that workers get directly from their work. These can be contrasted with *extrinsic* rewards, usually economic, provided by supervisors or managers.

Both intrinsic and extrinsic rewards are important to workers. However, intrinsic rewards are much more important in today's work than they were in earlier eras. Today's knowledge workers demand work that is more intrinsically rewarding; thus, these rewards play a larger role in job satisfaction and retention. The greater degree of self-management in today's work has also strongly increased the potential for intrinsic rewards. Worker engagement is also more directly linked to intrinsic rewards than to extrinsic rewards. With extrinsic rewards, workers tend to be more interested in the rewards than in the work and perform only well enough to earn the rewards. With intrinsic rewards, in contrast, workers are directly interested in doing their work well.

Each of the four self-management steps requires workers to make a judgment—about the *meaningfulness* of the work purpose, the amount of *choice* they have in selecting work activities, the *competence* with which they are performing work activities, and the *progress* they are making toward accomplishing the work purpose. Each of these judgments, when positive, is accompanied by a positive emotional charge. These emotional charges are the intrinsic rewards that energize or power continued engagement.

The WEP measures four intrinsic rewards that flow from the four steps of self-management (adapted from Thomas & Tymon, 2009):

- **Sense of meaningfulness.** Meaningfulness is workers' perception of their opportunity to pursue a worthy work purpose. Their sense of meaningfulness is the feeling that the path they are on is worth their time and energy—that they are on a valuable mission and that their purpose matters in the larger scheme of things.
- **Sense of choice.** Choice is workers' perception of their opportunity to select work activities that make sense to them and to perform them in ways that seem appropriate. Their sense of choice is the feeling that they are free to choose—to use their judgment and act out of their understanding of the work.
- **Sense of competence.** Competence is the accomplishment workers feel in skillfully performing the work activities they have chosen. Their sense of competence involves the feeling that they are doing good, high-quality work on those activities.
- **Sense of progress.** Progress is the accomplishment workers experience when they are advancing toward the work purpose. Their sense of progress involves the feeling that their work is moving forward and that their activities are really accomplishing something.

Consequences of the Intrinsic Rewards

The intrinsic rewards measured by the WEP are logically related to workers' *well-being*, *job performance*, and *commitment* to their organization. (Specific findings are reported later in this brief in the section on validity.)

- **Well-being.** Because the intrinsic rewards are positive experiences for workers, higher levels of the intrinsic rewards are related to greater satisfaction with their job and with their organization, as well as greater satisfaction with their professional development and reduced levels of stress.
- **Job performance.** Because intrinsic rewards are based on positive assessments of the steps of self-management and also energize continued self-management, higher levels of intrinsic rewards are related to higher performance—especially to aspects of performance related to attentiveness, creativity, and innovation.
- **Commitment.** Workers' commitment to the organization is manifested in their stronger intention to

remain with the organization, resulting in reduced turnover, as well as in other forms of organizational loyalty—for example, recommending the organization to others as a place to work and speaking highly of the organization's products and services.

DEVELOPMENT

Work on the model of intrinsic rewards began in the 1980s, at a time when workers were being “empowered” through the job changes mentioned earlier. In an influential article, Thomas and Velthouse (1990) proposed that the motivation underlying successful empowerment involved the four intrinsic rewards. This form of motivation came to be called “psychological empowerment” in the academic literature on organizational behavior (see, e.g., Spreitzer, 1995).

Thomas and Tymon (1994; Tymon, 1988) developed an initial measure of the four intrinsic rewards using a sample of individuals in three organizations. Factor analysis confirmed that the four intrinsic rewards were experienced as separate, meaningful constructs. Correlations with other variables were also supportive of the model. (Specific relationships to other variables are discussed later in the validity section of this brief.)

Thomas and Tymon continued to refine the measure, adding additional items and replacing items that did not load as highly as others. These intermediate versions were used by a number of other researchers who reported good reliabilities (e.g., Albert, 1993; Sparrowe, 1994, 1995; Sutz, 1991). Sparrowe (1995) also conducted a successful confirmatory factor analysis on one of these versions. In addition, the name of one of the scales was changed from “impact” to “progress” to better capture the nature of the construct.¹

The developmental process culminated in the final 24-item instrument, with 6 items per scale. This final measure was published by Xicom, Inc., as the *Empowerment Inventory* (Thomas & Tymon, 1993). Interpretive materials in the booklet focused on the four “feelings of empowerment” that energize work, together with the building blocks for each of the four factors.

1. Thomas and Tymon (1994; Tymon, 1988) had originally developed separate items for both progress and impact to see if they were separate constructs. Factor analysis revealed that they formed a single factor. Initially, the factor was called *impact*. However, as the nature of self-management became clearer, *progress* became a more appropriate term. For simplicity, we use the word *progress* throughout this technical brief, even though some earlier papers used the term *impact*.

Work continued on developing and refining other parts of the conceptual model (Newton, 1993; Thomas & Jansen, 1996; Thomas, Jansen, & Tymon, 1997; Thomas & Tymon, 1997a, 1997b). Concluding that the term *empowerment* had become dated, Thomas and Tymon began to focus their work more directly on the concepts of intrinsic motivation and self-management. In 2000, Thomas published a book for practitioners on the model and its applications titled *Intrinsic Motivation at Work*. Thomas and Tymon also entered into an informal partnership with New West Institute, a Denver-based consulting firm whose organizational development and training made extensive use of the *Empowerment Inventory* and *Intrinsic Motivation at Work*. Work done at New West provided field testing of the model and the *Empowerment Inventory*.

In 2005, the *Empowerment Inventory* was republished by Thomas and Tymon as the *Profile of Intrinsic Motivation* (PIM). The measure remained unchanged, but the interpretive materials were rewritten with input from New West to focus more directly on self-management and intrinsic rewards than on feelings of empowerment. An important addition was the inclusion of richer descriptions of the experience of scoring high or low on each of the four intrinsic rewards, which resonated well with clients. Feedback on the PIM from New West and its clients has been very positive.

By 2009, human resource professionals had adopted the term *employee engagement* to refer to the type of value-added behavior and motivation researched by Thomas and Tymon. Recognizing that their models of self-management and intrinsic motivation provided an integrative way of explaining and building employee engagement, Thomas and Tymon's instrument was republished by CPP, Inc., as the *Work Engagement Profile* (WEP). Interpretive materials now explain what engagement looks like (i.e., self-management), what makes work engaging (i.e., the four intrinsic rewards), and actions workers can take to raise the level of their intrinsic rewards. The rich descriptions of the experience of scoring high or low on each of the four intrinsic rewards have also been augmented to cover middle-range scores. Research findings on the intrinsic rewards are briefly discussed as well. Concurrently, Thomas published the second edition of *Intrinsic Motivation at Work* (2009), which focuses on how managers can recognize and build engagement via the four intrinsic rewards—both for themselves and for the

people who report to them. This edition is copublished by Berrett-Koehler and the American Society for Training and Development (ASTD).

For simplicity, we refer to the instrument as the *Work Engagement Profile* (WEP) throughout the remainder of this technical brief, even though earlier publications of the instrument had different titles.

FACTOR STRUCTURE

Factor analyses of the final version of the instrument show strong support for its structure across three di-

verse samples. Results show that individuals perceive the four intrinsic rewards as distinct concepts and that the 24 items in the WEP are associated with their intended factors.

The initial factor analysis, shown in Table 1, depicts a clean, four-factor structure. The sample comprised 384 employed individuals, in both managerial/supervisory and nonsupervisory positions, who were attending evening MBA classes on the East Coast of the United States. As shown in the table, each item loaded strongly on its intended factor, with scale loadings on the intended factor being much larger than loadings on other factors.

TABLE 1. FACTOR LOADINGS OF WEP ITEMS

	Factor 1	Factor 2	Factor 3	Factor 4
Competence 1	.88			
Competence 2	.87			.23
Competence 3	.85			
Competence 4	.84			
Competence 5	.84			.25
Competence 6	.84			
Choice 1		.91	.22	
Choice 2		.89		
Choice 3		.87	.25	
Choice 4		.84	.25	.28
Choice 5		.84		.27
Choice 6		.72	.23	.24
Meaningfulness 1			.85	.21
Meaningfulness 2			.84	
Meaningfulness 3		.24	.81	.25
Meaningfulness 4		.32	.77	
Meaningfulness 5	.21	.34	.67	.20
Meaningfulness 6	.29		.64	.26
Progress 1	.34	.24		.79
Progress 2	.33	.27	.24	.76
Progress 3	.35			.75
Progress 4	.22	.26	.29	.75
Progress 5	.25		.28	.72
Progress 6		.28	.33	.72

Note: Factor loadings less than .20 are not shown. Source: Tymon, 1994.

This factor structure has held up in the two subsequent factor analyses of which we are aware. Both used samples from other nations. The first was performed by Forest (2008) on a carefully translated French version of the WEP. His sample was 122 French-speaking government employees of the Province of Quebec. All items showed highest loadings on their intended factors. Together, the four factors explained 76% of the variance in the 24 items.

The other factor analysis is a preliminary analysis by Stumpf (2008) from an ongoing study involving 28 firms in India. The study is being conducted as a joint project of Right Management and a team of academic researchers that includes Tymon and Thomas.² The large sample of 4,811 is heterogeneous, including levels from individual contributor to vice president. Firms sampled are from five industries: information technology, engineering/manufacturing, business processing outsourcing, pharmaceuticals, and financial services. In this sample, factor analysis yielded the same four factors. With the exception of 1 item, all items showed highest loadings on their intended factors. Together, the four factors explained 61% of the variance in the 24 items.

NORMS

The WEP contains a graph on which people can compare their four scale scores against the percentile scores of a norm group.³ The percentile ranges are divided into three sections: high 25%, middle 50%, and low 25%. This partitioning allows individuals to identify whether their scores on each intrinsic reward are above average, close to average, or below average.

The norm group was the 384 part-time MBA students whose data were used by Tymon (1994) for the factor analysis reported earlier. Although somewhat young (the median age category was 26–30), this group of employed individuals was relatively heterogeneous in other respects. The gender split was 64% male and 36% female. The sample was evenly split between nonsupervisory positions (51%) and supervisory or managerial positions (49%). The breakdown for the latter was as follows: supervisor/foreman (14%); middle management (22%); department head or project manager (8%); general manager, division

2. The research team was assembled by Richard Smith. The study was a partnership between Right Management, Inc., its subsidiary India Grow Talent, and a team of academic researchers, including Steven Stumpf, Walter Tymon, and Jonathan Doh (Villanova University) and Kenneth Thomas (Naval Postgraduate School, emeritus). We are especially indebted to Holly Dolgaard at Right Management for data collection and to Steven Stumpf for the preliminary data analysis cited in this technical brief. Research results are cited as Stumpf, 2008.

manager, or chief administrator (2%); and corporate officer, vice president, president, or CEO (2%). The sample represented a wide range of industries, with the most frequently indicated being manufacturing (26%); finance, insurance, and real estate (23%); and nonfinancial services (17%).

Table 2 shows the mean item scores on the four WEP scales for studies of North American subjects as a rough way of judging the representativeness of the norm group scores.⁴ These results show that the norm group means are relatively close to the means from the other studies. In particular, the norm group means are quite close to Forest's means using a French translation of the WEP items. The norm group means also tend to fall within a band of plus or minus .25 of the results using earlier versions of the instrument. (The one exception involves an unusually high meaningfulness score for Tymon's 1988 study, due perhaps to its high proportion of hospital workers dealing with life-and-death issues.) Allowing for differences in some items and the differences in samples, the norm group means are relatively representative of the overall pattern of scores. The normative group for the WEP will be updated from time to time as more data are collected and analyzed.

RELIABILITY

Table 3 shows reliability figures (coefficient alpha) for the four scales at various stages of development. The number of items in each scale is shown in parentheses for the initial and developmental versions. Scales in the final version contained 6 items per scale. With the exception of the initial version (which contained only 3 meaningfulness items) and Sparrowe's (1994) analysis (which reduced each scale to 3 items), all reported coefficients have been good to excellent. Coefficients for the final version of the instrument have all been .83 or higher. In particular, U.S. applications of the final version (Tymon, 1994; Burke, 2004) have reported coefficients greater than .90.

VALIDITY

Statistical relationships between the WEP scores and other variables provide promising evidence that the

3. Percentile values for a given raw score were calculated as the median point (or middle) of the range of cumulative frequency covered by that score. For example, if a raw score of 35 on a given intrinsic reward had a cumulative frequency of 40% and a 36 had a cumulative frequency of 60%, then a 36 would be seen as covering the range from 40% to 60%, and the percentile assigned would be the median value of 50%.

4. The one North American study not included was by Burke (2004). Burke gave her subjects non-standard instructions, asking them to think of a specific time when they were especially highly motivated.

TABLE 2. MEAN ITEM SCORES ON THE WEP SCALES

Studies	Mean Item Scores			
	Meaningfulness	Choice	Competence	Progress
Final WEP instrument				
Tymon (1994): norm group 384 evening MBA students	5.32	4.95	5.95	5.25
Forest (2008): 122 government workers	5.34	4.71	5.83	5.37
Earlier versions				
Sparrowe (1994): 182 hospitality workers	5.47	4.80	6.12	5.39
Sutz (1991): 372 project engineers	5.40	5.20	5.70	5.04
Tymon (1988): 158 professional/technical workers	6.26	5.19	6.06	5.34

TABLE 3. WEP INTERNAL CONSISTENCY RELIABILITIES AT THREE STAGES OF DEVELOPMENT

Version	Scales			
	Meaningfulness	Choice	Competence	Progress
Initial version				
Tymon (1988)	.72 (3) ^a	.86 (4)	.84 (6)	.87 (12)
Intermediate versions				
Sutz (1991)	.94 (6)	.92 (6)	.94 (5)	.88 (4)
Albert (1993)	.85 (6)	.93 (6)	.92 (8)	.93 (9)
Sparrowe (1994)	.79 (3)	.85 (3)	.78 (3)	.84 (3)
Sparrowe (1995)	.90 (6)	.85 (6)	.86 (5)	.86 (4)
Final version				
Tymon (1994)	.92	.95	.95	.93
Burke (2004)	.91	.95	.91	.91
Forest (2008)	.87	.90	.93	.83
Stumpf (2008)	.85	.85	.88	.88

^a Numbers in parentheses show number of items used per scale in initial and intermediate versions. The final version used 6 items per scale.

instrument is measuring what it was designed to measure. Since a number of core items for the scales have remained relatively constant throughout the developmental process, we cite studies using earlier versions of the instrument as well as those using the final version.

Relationships to Other Motivational Measures

Forest's (2008) data serve to identify which motivational phenomena are tapped or not tapped by the WEP by examining relationships between the final WEP scales and a number of other motivation-related measures.

Rewards from purposes and activities

Forest included a measure of four different types of motivation derived from the work of Deci (Gagne & Deci, 2005). The types of motivation are "intrinsic" (having fun doing one's job); "identified" (fitting one's personal values); "introjected" (because one's reputation depends on it); and "extrinsic" (doing one's job for a paycheck). We note that Deci's model of intrinsic motivation is based solely on enjoying task *activities*, in contrast with the WEP's model, which considers intrinsic rewards as coming from task *purposes* as well as task activities. Thus, the WEP should show relationships with both Deci's measure of intrinsic motivation (enjoying activities) and identified motivation (valuing purposes). It should not be correlated with the introjected scale (reputation) or the extrinsic scale (pay). This proved to be the case, as all four WEP scales correlated significantly with the intrinsic scale, and three scales correlated significantly with the identified scale. In contrast, none of the WEP scales correlated significantly with the introjected or extrinsic scales. Thus, the WEP appears to be tapping rewards from the two aspects of work in its model (purposes and activities) and does not appear to be picking up extraneous motivations related to reputation or extrinsic rewards.

"Harmonious" (nonobsessive) passion for work

A second measure in Forest's study distinguishes between harmonious and obsessive passion at work. The "passion at work" measure (Vallerand & Houliort, 2003) contains three scales: harmonious passion (e.g., appreciating work), obsessive passion (e.g., having trouble controlling one's need to work), and intensity of passion. The theory

underlying the WEP focuses on positive rewards from work that are satisfying and fulfilling and should thus correlate with harmonious passion, as well as measuring the intensity of that passion. It should not correlate with obsessive passion. Again, this proved to be the case. All four WEP scales correlated significantly with harmonious passion and with strength of passion, while none correlated significantly with obsessive passion. Thus, the WEP appears to be tapping the strength of intrinsic rewards that follow positively or harmoniously from work, rather than a more obsessive, or "driven," need to work.

Positive experience of work

Another indicator of the positive versus negative experience of work involved the PANAS measure (Watson, Clark, & Tellegen, 1988; Gaudreau, Sanchez, & Blondin, 2004). This measure's two scales assess the frequency of positive affect (e.g., excitement) and negative affect (e.g., nervousness) at work. As would be expected, the four WEP scales all correlated positively with positive affect and negatively with negative affect. Thus, the WEP appears to be picking up positive feelings from work—a central part of the model's definition of intrinsic rewards.

Aspects of the "flow" experience

Forest also included scales measuring the motivational state of *flow*—the state of being deeply engaged or immersed in a task (Csikszentmihalyi, 1990). The measure Forest borrowed from applies flow constructs to the work setting (Forest, LeBrock, Madore, & Boudrias, 2005). The three scales he used were "concentration" on the task at hand, "sense of control" over what one is doing, and "autotelic experience" (enjoying the experience). All three scales should correlate with the WEP scales, and that proved to be the case. All four WEP scales correlated significantly with each of the flow scales. Thus, the WEP appears to be tapping important aspects of the experience of successful engagement or immersion in work. The notion of enjoyable concentration and control over a work task is central to the WEP's underlying model of receiving intrinsic rewards through active self-management.

In sum, then, Forest's study provides consistent evidence that the WEP scales, as a group, are tapping into their intended phenomena. His results indicate that the WEP picks up positive feelings (intrinsic rewards) from work, addresses motivation associated with both work activities

and valued purposes, captures harmonious rather than obsessive motivational dynamics, and is associated with characteristics of active self-management or engagement in work tasks.

Relationships to Outcome Variables

Studies show significant relationships between the WEP and important outcome variables that the WEP's model would predict to be shaped by the four intrinsic rewards.

Job satisfaction

Studies consistently show strong correlations between the four WEP scales and measures of job satisfaction. Using regression, Thomas and Tymon (1994) found that the four WEP scales explained most of the variance in job satisfaction ($R^2 = .55$) in a sample of 148 managerial, professional, and technical workers. In his study of 372 project engineers, Sutz (1991) reported that all four WEP scales correlated significantly with job satisfaction and that an aggregated WEP score correlated .76 with job satisfaction. In an ongoing study of 4,811 Indian workers, Stumpf (2008) reported that all four WEP scales correlated significantly with a single-item measure of job satisfaction, with an aggregated WEP score correlating .52 with that item.

Professional development

Sutz's (1991) study of project engineers included a 3-item measure of professional development. This measure correlated strongly with WEP scales, showing a correlation of .75 with the aggregate WEP score. Thus, engineers experiencing greater meaningfulness, choice, competence, and progress also reported that they were growing professionally.

Career success

Tymon, Stumpf, and Doh's (2008) study using the Indian data found that individuals' ratings of their career success were influenced by their aggregate scores on the WEP. Interestingly, the relationship between WEP scores and career success depended heavily on individuals' satisfaction with their hygiene factors (including pay and working conditions). When satisfaction with these extrinsic factors was low, intrinsic rewards were not sufficient to raise individuals' feelings of career success. But when satisfac-

tion with these extrinsic factors was high, intrinsic rewards correlated relatively strongly with individuals' ratings of their career success. Thus, the researchers concluded that individuals' feelings of career success required both decent hygiene factors (external indicators of success) and intrinsic rewards (internal indicators of success).

Commitment to the organization

Results indicate that the satisfaction with work tapped by the WEP also generalizes to satisfaction/commitment with respect to the organization. The two WEP studies measuring organizational commitment both found significant correlations. In his study of 122 Quebec government workers, Forest (2008) used a measure of three types of organizational commitment (Meyer, Allen, & Smith, 1993; Vandenberghe, 2003). The three types were "affective" (e.g., are proud to be part of the organization), "normative" (e.g., feel it wouldn't be morally correct to leave), and "continuance" (e.g., feel they would have too much to lose if they left). As would be expected, the WEP scales correlated significantly with affective commitment, which is based on positive or rewarding feelings. They did not correlate positively with normative commitment or continuance commitment. Thus, the WEP appears to tap into the positive feelings that cause workers to want to stay (in contrast to feeling that they "should" stay or can't afford not to stay). Interestingly, the strongest correlations were with meaningfulness and progress (with correlation coefficients of .56 and .30, respectively). Both rewards involve the purpose aspect of work—its meaningfulness and progress toward accomplishing it.

In the data from the Indian study, Stumpf (2008) found that all four WEP scales correlated significantly with an organizational satisfaction/commitment factor, with correlations ranging from .30 to .53. Two items in this factor deserve special mention: "I would recommend this organization to friends as a place to work" and "I speak highly of my organization's products and services." Both suggest important behavioral benefits of the type of organizational commitment tapped by the WEP.

Reduced stress

Consistent with the finding that intrinsic motivation is related to positive rather than negative emotions regarding work, studies show that WEP scores are related to lower

levels of reported stress symptoms. In their study of professional workers, Thomas and Tymon (1994) found that stress symptoms were correlated negatively with all four scales, with regression showing that the four scales explained 21% of the variance in stress symptoms. Sutz (1991) found comparable results in his study of project engineers.

Retention

Studies also show that WEP scores are significantly related to workers' intention to remain with their organization. Using a 3-item measure of intent to leave, Sutz (1991) found that project engineers' intent to leave correlated negatively with all four WEP scales and correlated $-.49$ with an aggregated WEP score. Sparrowe (1994) applied path analysis to data from 182 employees on the determinants of turnover in the U.S. hospitality industry. An aggregate WEP score showed the strongest path coefficient ($-.61$) with intent to leave. This statistic was much stronger than the path coefficients for pay satisfaction ($-.17$) and promotion satisfaction ($-.18$). In the diverse Indian sample, Stumpf (2008) found that intent to leave correlated negatively with each of the four WEP scales and correlated $-.21$ with an aggregated WEP score.

Work effectiveness

Thomas and Tymon (1994; Tymon, 1988) had supervisors rate 81 of their direct reports on 6 items, including initiative, ability to handle uncertainty or ambiguity, resiliency to setbacks, flexibility, effort, and overall performance. These items were combined into an overall measure of work effectiveness. Together, the four intrinsic rewards explained 14% of the variance in work effectiveness. Most of this relationship was due to a significant correlation between work effectiveness and workers' sense of choice ($r = .31$).

In summary, the WEP scales explain significant amounts of the variance in job satisfaction, professional development, career success, organizational commitment, stress, retention, and performance. These results provide evidence not only of the validity of the WEP but also of the far-reaching impact of the intrinsic motivation measured by the WEP.

Relationships to Antecedent Variables

Research findings show that WEP scores respond to independent variables in ways that are consistent with the constructs underlying the four WEP scales.

Shared sense of meaningfulness on common projects

Sutz (1991) reported an analysis of the degree of agreement on intrinsic motivation scores for engineers within project teams—using reliability analysis to measure the internal consistency of scores within teams.⁵ Split-half reliabilities were used to calculate overall reliability coefficients across project teams for each intrinsic reward and for aggregate scores. Coefficient alpha for the aggregate measure was $.37$. The largest scale coefficient, by far, was for sense of meaningfulness ($.51$). In the underlying model, meaningfulness is seen as relating to the work purpose. In project teams, engineers share an overall project purpose, which would be expected to color the meaningfulness of their individual contributions. The lowest coefficient alpha ($.11$) was on sense of choice, reflecting differences in the autonomy given individual engineers by their team leaders (see below).

Autonomy afforded by supervisors

Of the four intrinsic rewards measured by the WEP, supervisors have the most direct control over the amount of autonomy (choice) allowed workers. Leadership, in fact, is often classified in terms of the degree of delegated decision making. While degree of delegation is often assumed to be a supervisory trait or style, Sparrowe (1994) noted that Leader-Member Exchange (LMX) Theory focuses on differences in the way leaders treat different workers. According to this theory (see, e.g., Dienesch & Liden, 1986), leaders form in-groups and out-groups among the people they supervise. In-group members have more access to the supervisor as well as more information, influence, latitude in decision making, and supervisory support. Sparrowe (1994) examined the relationship between hospitality workers' perceptions of favorable LMX treatment by their supervisor and WEP scores. As hypothesized, LMX treatment had a significant path coef-

5. This was essentially an analysis of the internal consistency of scores within branches. A computer program randomly assigned engineers in each branch into two groups—an X group and a Y group. Average scores for the X and Y groups on WEP scores were then correlated across engineering teams, producing a split-half reliability coefficient. An overall reliability coefficient for each variable was then derived from the split-half reliabilities using the Spearman-Brown Formula.

ficient with aggregate WEP score (.38). While LMX scores correlated significantly with all four WEP scales, the strongest correlation by far was with choice ($r = .47$). Similarly, Sutz (1991) reported correlations between engineers' intrinsic rewards and an item measuring frequency of interaction with their manager. Frequency of interaction correlated significantly with all four scales but, again, correlated most strongly with sense of choice ($r = .26$).

Team conflict versus cooperation

Of the four intrinsic rewards, progress is the most dependent on the cooperation of coworkers. Sutz's (1991) data included a multi-item measure of engineers' perceptions of conflict within their group. Of the four intrinsic reward scales, only progress correlated significantly ($-.21$) with intrateam conflict. His data also included a multi-item measure of "positive" team climate, which included items on cooperation/support within the team and confidence in its ability to accomplish work. That measure was correlated positively with all four intrinsic reward scales but most strongly with progress (.27).

Managerial effectiveness

While managers have the most direct control over the amount of choice allowed workers, they are also responsible for enabling or facilitating task accomplishment. Thus, a number of findings suggest that workers' evaluations of managerial effectiveness are most strongly related to sense of choice and sense of progress. Sutz (1991) reported that project engineers' ratings of their managers' effectiveness correlated significantly with choice (.24) and progress (.20). In the ongoing Indian study, Stumpf (2008) reports a related pattern in individuals' ratings of various aspects of leadership and management programs. For managerial support, performance management programs, and professional development programs, the strongest correlations are with sense of choice and sense of progress.

Constructive, task-related organization culture

Sparrowe (1995) hypothesized that constructive organization cultures would support intrinsic motivation/empowerment. Cooke (1989) had developed measures of twelve cultural styles, which he grouped into three categories: constructive, passive-defensive, and aggressive-defensive. Sparrowe used measures of the four aspects of constructive culture: "affiliative" (e.g., friendliness and

warmth), "humanistic-encouraging" (e.g., participative decision making), "achievement" (e.g., self-set goals and pursuit of excellence), and "self-actualizing" (e.g., personal development, independent thinking, and unique contributions). Using path analysis, he found that an aggregate measure of positive culture showed a significant path coefficient (.19) with intrinsic motivation/empowerment. Individual correlations show that the correlations for the non-task-related style—affiliative—failed to achieve significance. Thus, as the model would suggest, intrinsic rewards were related to cultural styles that supported workers in their task-related pursuits. In general, these cultural styles had the highest correlations with meaningfulness and choice, somewhat lower correlations with progress, and nonsignificant correlations with competence.

Interpretive styles

Thomas and Velthouse (1990) pointed out that the intrinsic rewards in the model are based on assessments or judgments made by workers. Thus, those judgments are based partly on "objective" conditions related to the work and partly on the more "subjective" interpretive processes through which workers reach their judgments. Thomas and Tymon (1994; Tymon, 1988) developed measures of styles of evaluation, attribution, and envisioning that would influence individuals' judgments regarding the four intrinsic rewards. Factor analysis identified three major interpretive styles: "deficiency focusing" (tendency to focus on the negatives in terms of what is happening and may happen), "skill recognition" (tendency to attribute one's successes to one's abilities rather than to luck or other factors), and "envisioning success" (tendency to think about the future in terms of positive rather than negative outcomes). As hypothesized, these interpretive styles were significantly related to workers' scores on the four WEP scales. Regressions showed that the three interpretive styles explained 28% of the variance in competence, 18% in progress, 5% in meaningfulness, and 4% in choice.

In conclusion, research indicates that WEP scores respond to a variety of antecedent variables in ways that are consistent with the WEP's underlying constructs, thus providing additional evidence of validity.

SUMMARY

This brief describes the development and characteristics of the *Work Engagement Profile* (WEP). The WEP is a

research, training, and change instrument that measures four intrinsic rewards individuals can get directly from their work: a sense of meaningfulness, a sense of choice, a sense of competence, and a sense of progress.

These four intrinsic rewards are asserted to play a key role in engaging workers in today's work. Briefly, today's jobs require more employee self-management than did those in previous decades. At the same time, the self-management required in today's work has the capacity to provide the intrinsic rewards needed to keep today's workers engaged in their work, adding value, and committed to their organization. The WEP is designed to measure the strength of those rewards.

The WEP was developed as part of a twenty-year program of research. It was developed through several iterations, with interpretive materials refined with inputs from training and change professionals. Research cited in this brief shows that the WEP has very good psychometrics. The four scales are distinct and meaningful for individuals and yield highly reliable scores, with reliabilities above .90 for U.S. samples.

An independent validation study cited in this brief provides relatively strong evidence that the WEP measures the motivational phenomena it targets. WEP scores are

shown to tap into intrinsic rewards related to both task activities and task purposes, to pick up relatively "harmonious" (nonobsessive) motivational dynamics, to correlate with positive as opposed to negative emotions in the workplace, and to pick up key elements of a "flow" state (being actively engaged in work tasks).

Other cited studies show that WEP scores have significant relationships to outcome variables of strong interest to organizations. WEP scores explain a significant amount of variance in job satisfaction, professional development, career success, organizational commitment, lowered stress, intent to remain with an organization, and work effectiveness.

Finally, studies also show that WEP scores respond to a variety of independent variables that would be expected to influence intrinsic motivation and engagement. These variables include the autonomy afforded by supervisors, cooperation versus conflict within work teams, managerial effectiveness, constructive organizational cultures, and individuals' interpretive styles (characteristic patterns of thinking about work events). Together, these studies of motivational phenomena, outcome variables, and responsiveness to independent variables serve to provide relatively strong evidence for the WEP's validity.

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