



RESEARCH DESK



EMPLOYEE PASSION SURVEY

Psychometric Evaluation

Joseph Crawford PhD in Leadership Psychometrics

Keith E Ayers, CEO Intégro Leadership Institute

Trustinside
Assessments

INTRODUCTION

The Employee Passion Survey (EPS) incorporates three elements: two subscales, the Employee Passion Index (EPI) and the Values that Build Trust (VBT); and an item to identify individual employee passion (EP) towards their organization and their job.

With 5,826 respondents from Australia and the United States, this psychometric evaluation reports on the reliability and validity of the EPI and VBT, along with consideration to correlations between measures. Two groups of the EP were examined with more depth using discriminant function analysis to determine whether scale items of the EPI or VBT can independently predict differences among the two groups.

The analyses were conducted using IBM's SPSS Statistics 24 and the AMOS Graphics add-on.

BACKGROUND

The Employee Passion Survey (EPS) was developed by Keith Ayers, Founder of Intégro Leadership Institute, in 2010. The EPS was designed to measure employees' overall levels of passion and engagement with their jobs and their organization. The EPS is divided into three sections. Section 1, the Employee Passion Index (EPI), was designed to measure five employee needs; to be respected, to learn and grow, to be an insider, to do meaningful work and to be on a winning team. There are two items for each of the five needs. Respondents are asked first to rate the importance of the need to them personally and then to rate how well they felt their manager, team or organization satisfied this need. Each item was assessed on a 10-point scale where 1 = low and 10 = high.

Section 2, the Employee Passion (EP) report, is a forced choice item assessment designed to identify each respondent's level of passion with their job and their organization. Respondents are asked to choose one of the following options that best describes them: 1) passionate about both the job and the organization, 2) passionate only about the job, 3) passionate only about the organization, 4) not passionate but still conscientious and 5) disconnected from the job and the organization. Categories 1 and 2 represent groups of employees that are of particular interest since both groups are passionate about their job but only group 1 is also passionate about the organization.

Section 3, the Values that Build Trust (VBT) scale, was designed to measure employees' perceptions of their organization's trustworthiness. In this scale there are four behaviors that build trust, each of which are supported by two values. They are; Acceptance (Respect and Recognition), Openness (Receptivity and Disclosure), Congruence (Straightforwardness and Honesty), and Reliability (Keeps Commitments and Seeks Excellence). Respondents are asked to rate each of the eight values on a 10-point scale to describe how important the trust value is to them personally and then how well they feel their organization operates by this value.

SECTION 1 THE EMPLOYEE PASSION INDEX

Assumption testing – normality and suitability

Prior to any analyses being conducted, required assumptions were tested. Namely, the data was tested for its suitability for usage in factor analysis, and that the data was considered normally distributed. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.912, and the Bartlett's test was significant ($p < 0.001$). Thus, the data was considered suitable. However, Skewness (S) and Kurtosis (K) indicators highlighted that some of the items were not normally distributed. Many items passed the test, however, some did not, and this is factored into what methods of analysis are used.

The items that were not normally distributed were those asking respondents how important these needs are to them personally. Prior research has established that these needs are important to virtually everyone with an average score of 9 on a 10-point scale, for all ten items. A wider distribution of responses in this case would not be normal.

General Scoring and Interpretation

Using the summation of the EPI importance, satisfaction, and gap (importance minus satisfaction) scores, an overall picture of quartiles is presented between 0 and 100, as shown in Table 1. The gap score highlights overall performance of an organisation. A more detailed presentation of the mean and standard deviations (SD) of each item is presented in Table 2.

Table 1. Performance scores for the EPI.

	EPI Importance	EPI Satisfaction	EPI Gap
Mean (SD)	90.03 (9.33)	76.47 (16.13)	13.56 (15.36)
Top 25%	97	88	2
Middle 50%	92	79	10
Bottom 25%	85	67	21

Table 2. Means and standard distributions for EPI

Employee Passion Index N=5.826	Importance Mean	SD	Satisfaction Mean	SD	Gap Mean	SD
1. My immediate manager or supervisor trusts me and treats me with respect	9.43	1.03	8.16	2.05	1.27	2.01
2. My organization’s policies and practices regarding compensation, work/life balance, and valuing diversity demonstrate respect for all employees	9.08	1.25	7.50	2.11	1.58	2.19
3. I have the opportunity to increase my knowledge and develop new skills in my job	9.01	1.27	7.43	2.18	1.58	2.26
4. My organization invests in developing the potential of all employees	8.81	1.34	6.96	2.23	1.85	2.35
5. When working with my immediate manager or supervisor I feel like an insider	8.65	1.52	7.60	2.23	1.05	2.27
6. My organization is open with employees about information and organizational performance to help us understand the decisions that are being made	8.72	1.38	6.96	2.33	1.76	2.50
7. The mission or purpose of my organization makes me feel proud to work here	8.83	1.41	7.70	2.12	1.13	2.01
8. The work I do is meaningful because it helps my organization fulfil its mission	9.13	1.18	7.85	2.00	1.28	1.92
9. My team is making a significant contribution to our organization	9.25	1.09	8.34	1.73	0.92	1.67
10. My team is focused on continually improving our performance	9.12	1.14	7.98	1.86	1.14	1.78

Reliability

Composite reliability (CR) of the recommended model is 0.92 (satisfaction) and 0.90 (importance). The recommended cut-off for CR is 0.7. Thus, the model demonstrates excellent internal reliability.

SECTION 2 THE EMPLOYEE PASSION REPORT

Section Two reports statistics for an individual item that asks participants to consider how passionate they are about their job and/or their organization. Table 3 provides a summary of the data by category. While less than half were passionate about their organization and the job (44.34%), a vast majority of the sample were passionate about at least their job (78.34%), and more than half were passionate about at least their organization (51.31%). 85.31 percent were passionate about at least their organization or job.

Table 3. Frequency and percentages of employee passion

Category	Frequency	Percentage
Passionate about the job and the organization	2,583	44.34
Passionate only about the job	1,981	34.00
Passionate only about the organization	406	6.97
Not passionate but still conscientious	487	8.34
Disconnected from the job and the organization	369	6.33
Total	5,826	99.98*

*Rounding of % means the total will not necessarily be exactly 100%, but will be close.

SECTION 3 THE VALUES THAT BUILD TRUST

Assumption testing – normality and suitability

Prior to any analyses being conducted, required assumptions were tested. Namely, the data was tested for its suitability for usage in factor analysis, and that the data was considered normally distributed. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.933, and the Bartlett's test was significant ($p < 0.001$). Thus, the data was considered suitable. However, Skewness (S) and Kurtosis (K) indicators highlighted that some of the items were not normally distributed, mainly in the importance indicator. Many items passed the test (particularly satisfaction items), however, some did not, and this is factored into what methods of analysis are used.

The items that were not normally distributed were those asking respondents how important these values are to them personally. Prior research has established that these values are important to virtually everyone with an average score of over 9 on a 10-point scale, for all eight values. A wider distribution of responses in this case would not be normal.

General scoring

Using the summation of the VBT importance, satisfaction, and gap (importance minus satisfaction) scores, an overall picture of quartiles is presented between 0 and 100, as shown in Table 5. The gap score highlights overall performance of an organization. A more detailed presentation of the mean and standard deviations (SD) of each item is presented in Table 6.

Table 4. Performance scores for the VBT.

	VBT Importance	VBT Performance	VBT Gap
Mean (SD)	74.11 (6.55)	58.94 (14.71)	15.17 (15.36)
Top 25%	80	70	2
Middle 50%	76	62	10
Bottom 25%	71	51	21

Table 5. Means and standard deviations for VBT

Values that Build Trust N= 5.826	Importance Mean	SD	Satisfaction Mean	SD	Gap Mean	SD
1. People are valued for who they are	9.19	1.17	7.32	2.28	1.88	2.37
2. People get the recognition they deserve	9.14	1.22	6.81	2.41	2.32	2.62
3. Giving new ideas and methods a fair hearing	9.09	1.12	7.35	2.16	1.74	2.21
4. Communicating openly one's own ideas and opinions	9.12	1.09	7.39	2.17	1.72	2.21
5. People are clear about what is expected of them	9.21	1.07	7.32	1.99	1.89	2.02
6. Having high standards of honesty in everything we do	9.54	0.87	7.87	2.09	1.67	2.07
7. People follow through on their responsibilities	9.41	0.92	7.19	2.11	2.22	2.16
8. Striving to do our best in everything we do	9.41	0.9	7.69	2.01	1.71	1.98

Reliability

Composite reliability (CR) of the recommended model is 0.94 (performance) and 0.91 (importance). The recommended cut-off for CR is 0.7. Thus, the model demonstrates excellent internal reliability.

THE RELATIONSHIP BETWEEN VARIABLES

In order to explore the relationships between subscales presented in the EPS, correlation statistics were calculated, and are presented in Table 6. To identify the best method for analysis, a Kolmogorov-Smirnov test was used to test for normality. This test is best for larger samples, and it was significant, indicating the data was not considered normally distributed. The Spearman's Rho was used to calculate correlations, considering the data was not normally distributed. As the subscales are assumed to be unidimensional, Composite reliability (CR) was used for internal consistency, and is presented on the vertical. The removal of any one item from these models did not increase internal consistency.

Table 6. Composite reliability and inter-scale correlations

	1	2	3	4	5	6
1. EPI Importance	.90					
2. EPI Satisfaction	.40*	.92				
3. VBT Importance	.80*	.31*	.91			
4. VBT Satisfaction	.33*	.86*	.29*	.94		
5. EPI Gap	.18*	-.77*	.17*	-.68*	.90	
6. VBT Gap	.02*	-.71*	.15*	-.86*	.81*	.93

* $p < 0.001$

As seen in Table 6, there were strong relationships between EPI importance and VBT importance, and EPI satisfaction and VBT satisfaction. This would indicate there is a strong underlying relationship between what employees believe is important, and what they are satisfied with. Not surprisingly, a negative relationship is evident between the EPI gap and EPI satisfaction, and the VBT gap and VBT satisfaction, indicating that as satisfaction increases the gap reduces.

Interestingly, satisfaction increases in either the VBT or EPI had a strong relationship with both gap scores. The data show that there is a strong correlation between satisfaction of the needs that ignite passion (EPI), and the trust employees have for their organization (VBT).

An increase in satisfaction on the EPI will reduce the gap score on both EPI and VBT, meaning that need satisfaction increases the trust employees have for the organization and their managers. Likewise, an increase in satisfaction on the VBT scale would result in increased trust and increased need satisfaction.

EPI AND VBT GAP SCORES BY EMPLOYEE PASSION LEVELS

One-way Analysis of Variance (ANOVA) was used to compare gap scores with five levels of Employee Passion (EP). Between group analysis identified significant differences for both EPI and VBT gap scores: $F(4, 5821) = 410.33, p < 0.001, \eta^2 = 0.22$; $F(4, 5821) = 451.91, p < 0.001, \eta^2 = 0.24$. Table 13 and Figure 1 further highlight the mean scores across the five levels of employee passion.

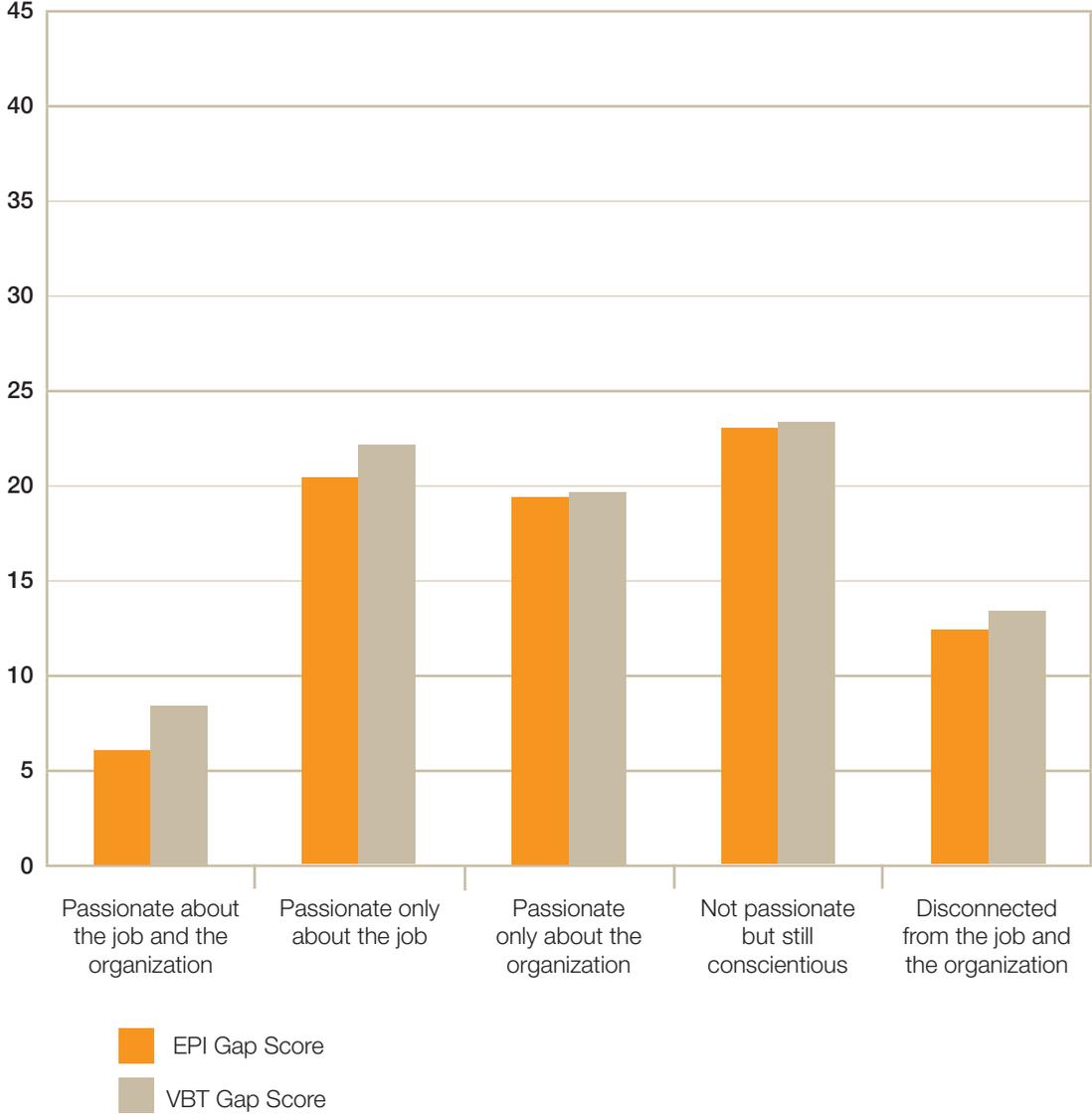
Eta-squared (²) is considered an overall indicator for the proportion of variability in the data that can be attributed to the independent variable. When $\eta^2 \geq 0.138$, effect size is considered to be large.

Scheffé's post-hoc analysis was used to identify those groups which differed from each other on EPI and VBT total gap scores. Those who were passionate about the job and the organization and those who were disconnected from the job and the organization differed significantly from all other groups on both EPI and VBT gap scores. However there was no significant difference between those who were passionate only about the job and those who were passionate only about the organization on both EPI and VBT gap scores. No difference was observed between those who were passionate only about the job and those who were not passionate but still conscientious on the EPI mean gap scores. Figure 1 shows the relationship between EPI and VBT total gap scores and each of the 5 EP levels.

Table 7. Total gap scores for EPI and VBT by EP groups

	Means Scores	Passionate about the job and the organization	Passionate only about the job	Passionate only about the organization	Not passionate but still conscientious	Disconnected from the job and the organization
EPI	Importance	91.51	89.08	86.67	87.70	91.64
	Satisfaction	85.70	68.79	67.46	64.58	78.75
	Gap	5.81	20.29	19.21	23.11	12.90
VBT	Importance	74.69	73.75	72.87	70.07	74.63
	Satisfaction	67.09	51.50	53.31	49.31	60.74
	Gap	7.60	22.24	19.59	23.76	13.89

Figure 1. Total gap scores for EPI and VBT by EP groups



DISCRIMINANT FUNCTION ANALYSIS OF EMPLOYEE PASSION LEVELS

An examination of the five levels of employee passion indicated that 44.34 percent of employees in the data set ($n = 5,826$) identified they were passionate about their job and their organization. Only 34 percent indicated they were passionate only their job. For individuals who were Level 4, this section asks whether particular scale items are able to predict group membership. In simpler terms, whether particular activities conducted by the organization have the propensity to create passion for the organization, for those who are already passionate about their job.

In order to test equal variance among the groups, the Box's M was used. Box's M (6,166.80, $p < 0.001$) assumption was met, and equal variance is assumed. As such, the data was suitable for a discriminant function analysis. The Wilks' Lambda test (0.642, $p < 0.001$) was significant and as such, the predictor values will make predictions that are statistically significant in their accuracy. The cross-validated classification results demonstrate that the model accurately predicts those participants who sit within Level 5 and Level 4, 88.90 and 63.50 percent of the time, respectively.

A loading criterion of .20 was used to assess the loading matrix of correlations between all predictor variables and the discriminant function. An examination of the loadings suggested that the primary predictors for Function 1, differentiating between those who were passionate about both the organization and the job versus those who were passionate only about the job were 'My immediate manager or supervisor trusts me and treats me with respect', 'The work I do is meaningful because it helps my organization fulfil our mission', and 'Having high standards of honesty in everything we do'. Overall these findings suggest that in order for employees in this sample who are passionate only about the job to become more passionate about the organization they require greater satisfaction levels in the three areas identified by these predictors.

Table 8. Results of hierarchal function analysis predicting employee passion groups

Predictor Variable	Correlations of Predictors with Discriminant Function	Passionate about the job and the organization N = 2,583 Mean (SD)	Passionate only about the job N = 1,981 Mean (SD)
My immediate manager or supervisor trusts me and treats me with respect	.20**	8.99 (1.32)	7.37 (2.25)
My organization's policies and practices regarding compensation, work/life balance, and valuing diversity demonstrate respect for all employees	.03	8.45 (1.47)	6.67 (2.10)
I have the opportunity to increase my knowledge and develop new skills in my job	.13*	8.45 (1.53)	6.60 (2.20)
My organization invests in developing the potential of all employees	.02	8.07 (1.63)	6.07 (2.14)
When working with my immediate manager or supervisor I feel like an insider	.05	8.55 (1.54)	6.75 (2.32)
My organization is open with employees about information and organizational performance to help us understand the decisions that are being made	.10*	8.08 (1.68)	5.97 (2.30)
The mission or purpose of my organization make me feel proud to work here	.05	8.70 (1.41)	6.91 (2.10)
The work I do is meaningful because it helps my organization fulfil our mission	.24**	8.84 (1.25)	7.06 (1.97)
My team is making a significant contribution to our organization	-.03	8.93 (1.22)	7.90 (1.80)
My team is focused on continually improving our performance	-.05	8.65 (1.38)	7.49 (1.91)
People are valued for who they are	.13*	8.49 (1.487)	6.24 (2.24)
People get the recognition they deserve	.40**	8.10 (1.64)	5.58 (2.30)
Giving new ideas and methods a fair hearing	-.03	8.34 (1.523)	6.47 (2.14)
Communicating openly one's ideas and opinions	.07	8.44 (1.47)	6.44 (2.15)
People are clear about what is expected of them	.03	8.20 (1.49)	6.56 (1.97)
Having high standards of honesty in everything we do	.001	8.80 (1.42)	7.01 (2.15)
People follow through on their responsibilities	.03	8.14 (1.56)	6.32 (2.08)
Striving to do the best in everything we do	-0.06	8.60 (1.40)	6.88 (2.03)

****Function 1 Strong Predictor | * Function 1 Moderate Predictor**

SUMMARY

The results of this study indicate that the Employee Passion Survey (EPS) is a valid and reliable measurement tool for organizations to assess the attitudes of their employees. This research document was developed to report on the psychometric properties of the Employee Passion Survey (EPS) along with its two scales: the Employee Passion Index (EPI) and Values that Build Trust (VBT). These two superordinate constructs had two subscales: importance and satisfaction.

Confirmatory Factor Analysis (CFA), model fit indicators, and Composite Reliability were used to test the underlying structure and internal consistency of the models. Each demonstrated a strong underlying structure, and subscales demonstrated strong internal reliability.

Further, analyses were conducted to examine the inter-scale correlation. There were strong correlations between many of the subscales demonstrating that as employees' need satisfaction increases, so too does their trust for the organization. Importance for employees was also significantly related, suggesting that what employees deem to be important is similar across what they find are important values that build trust, and important needs that ignite their personal passion.

The gap scores between the two subscales are also strongly correlated. This highlights that as the gap between importance and satisfaction decreases on the needs that ignite passion, so too does the gap for the values that build trust. Thus, the more an employee's needs are being satisfied, the higher their trust for the organization. Trust is a strong emotion. The more an employee trusts their organization, the more they feel emotionally connected to the organization.

Employees who are passionate about their organization and their job indicated the lowest gap between their satisfaction levels and what they expect. The most significant tension between expectation/importance and individual satisfaction were in those participants who were conscientious about their work but disconnected from the organization.

One of the lowest groups for their gap score (after Level Five) was Level One employees (Figure 1, page 11). This indicator could be seen as problematic without effective consideration being made to the characteristics of a Level One employee. Firstly, those in this group are disconnected from the organization, and as such are unlikely to have high expectations for the organization. Therefore, their natural gap is likely to be lower than that of those who are engaged and as a result expect more. Secondly, those disengaged employees are unlikely to carefully consider their answers before responding and are typically more likely to respond how they feel they are expected to respond, inflating their answers considerably.

Those employees who were passionate about their organization and their job were most likely to experience the highest levels of satisfaction, and as such, demonstrates the importance an organization should place on building a passionate workforce. Our research highlights that there are strategies an organization can employ to grow and develop their employees into being passionate about both their organization and their job.

To illustrate, we evaluated the two largest categories (Level Five and Level Four employees) representing 78.34 percent of the sample (44.34% and 34.00%, respectively). We found that the most effective way for an organization to improve their employees' passion for their organization, when they are already passionate about their job is, in order of effectiveness, by:

- Giving employees the recognition they deserve,
- Ensuring employees understand how meaningful their work is, and how it helps the organization fulfil its mission, and
- Ensuring managers and supervisors demonstrate trust and respect for all employees.

Whilst the three aforementioned strategies are most effective, the following three have also demonstrated the ability to predict membership between Level Four and Five employees:

- Providing opportunities for employees to increase their knowledge and develop new skills,
- Valuing employees for who they are, not just for what they do, and
- Being transparent with information and organizational performance with employees to enable them to understand the decisions being made by the organization.

Underpinning these strategies is interpersonal communication between management and employees. When managers provide recognition, transparently share, trust and respect their employees, and provide opportunities for employees to grow, the employees are more likely to be passionate organizational citizens.

Where managers do not do this, the organization risks losing employees who have a passion for their job, but not a passion for their current workplace.

©Intégro Holdings Pty Ltd