On Factor Structure of the Work Involvement Construct in the Malaysian Context

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ABSTRACT

Studies have conceptualized work involvement as a multidimensional construct. However researchers have so far provided inconclusive agreement on the dimensionality of this latent factor. Therefore, a re-conceptualization of work involvement scale is crucial due to the inconsistencies in the measure of this construct. This study attempts to examine the construct validity of the work involvement measure by using a Malay-translated version of the instrument. A priori *proposition was made that work involvement is a single-dimensional construct. This means that work involvement measurement can be represented by a single factor consisting of five items. SPSS version 14 and AMOS 16 were used to analyze the data. The findings supported the single-dimensionality of work involvement factor based on the results from exploratory and confirmatory factor analyses. The research results also showed acceptable internal consistency reliability for the work involvement factor, which suggested the utility of the five-item work involvement measure in the Malaysian context.*

Keywords: *work involvement, construct validity, internal consistency reliability, Malay-translated version*

INTRODUCTION

Work involvement has been defined as the extent to which employees are normally interested in, identify with, and are preoccupied with their

work relative to other aspects of their lives (Kanungo, 1982a). In terms of motivational approach, the concepts of alienation and involvement are viewed as opposite ends of a continuum of the same phenomenon (Kanungo, 1982b). This state is considered as an attitudinal condition that reflects the one-dimensional cognitive response of an individual employee. Based on the literature, work involvement and job involvement are two distinct constructs. However, the terms have been used interchangeably resulting in confusion in the literature on their actual definition (Kanungo, 1982a). As such, it is crucial to clearly distinguish the two constructs. Basically, work involvement evaluates general aspects of work while job involvement assesses employee's involvement in his or her present job. According to Kanungo (1979), work involvement has been conceptualized as the perceived importance of work in one's life or the level of psychological identification with work. On the other hand, job involvement is a descriptive form of belief regarding the employees' present job (Kanungo, 1982a). This cognitive state determines the satisfaction level of employees' present needs provided by their present job (Kanungo, 1982a).

Work involvement is also a normative belief about the value of work in an incumbent's life and this attitudinal state is a result of his or her previous cultural and socialization activities (Kanungo, 1982a). Based on Rottenbery and Moberg (2007), the work involvement concept can be used in assessing employees' level of involvement across jobs while job involvement is limited to a specific job. In fact, the job involvement construct should be operationalized based on the type of occupation that respondents have in a particular study (Rottenbery & Moberg, 2007). Accordingly, an empirical work by Elloy and Terpening (1992) concur with Kanungo's (1982a) proposition on the orthogonality or distinctiveness of work involvement and job involvement. Specifically, a causal model tested by Elloy and Terpening (1992) demonstrates the theoretical distinction between the said constructs based on the data collected. Given the conceptual assertion and empirical evidence, it can be summed up that job involvement and work involvement are two distinct constructs.

Based on the conceptualizations, Kanungo (1979, 1982a) asserted that studies should place more emphasis on work involvement rather than job involvement because the former is an attitudinal state that employees consistently have from one job situation to another. Furthermore, according

to Campbell (1990), Fishbein and Ajzen (1975), Hackman and Oldham (1975), Kanungo (1979, 1982a), Motowidlo (2003), and Organ (1988a), attitudinal state is theorized as the main antecedent to various behavioral outcomes. This is based on the notion that employees who are highly involved in their work would put forth an extra amount of effort in order to achieve organizational objective (Rotenberry & Moberg, 2007). By doing so, highly involved employees would be more likely to engage in productive work activities, resulting in improvement of job performance level (Rotenberry & Moberg, 2007). This is reflected through desirable behaviors at work, such as efficient performance of task-related aspects as well as high level of engagement in organizational citizenship behavior (Kanungo, 1982a; Motowidlo, 2003; Organ, 1988a; Rotenberry & Moberg, 2007).

There is a constant debate and inconclusive results as to whether person or situational factors have a stronger link to work involvement. Although Carmeli (2005) and Carmeli and Freund (2004) reported on the equal importance of person and situational factors in explaining work involvement, Newton and Keenan's (1983) empirical study demonstrates that work involvement is not attributed to a person factor. In fact, work involvement is an attitudinal condition, that is highly dependent upon the work environment, not personality traits that exist naturally in one's life. On the same note, the empirical findings by Bozionelos (2004) reported that personality traits are weakly associated with work involvement. Based on the findings, Bozionelos (2004) concluded that environmental factors related to organization and job better predict employee's work involvement. This is consistent with the findings by Newton and Keenan (1983) that work environment makes a larger contribution to work involvement, as opposed to personality traits. Drawing on the empirical evidence, it can be summed up that optimizing work involvement among employees would seem to be mainly a function of job and organizational factors.

Work involvement has been theorized as a significant predictor of various workplace outcomes (Elloy & Terpening, 1992; Kanungo, 1982a; Kanungo, 1982b; Kanungo, 1990; Rotenberry & Moberg, 2007). Nevertheless, limited evidence and equivocal results on work involvement-behavioral outcomes association are due to several reasons. One of the reasons is that researchers are more interested in testing other attitudinal

conditions, such as motivation and commitment, as the antecedent to the behavioral outcomes (Bozionelos, 2004; Carmeli 2005; Carmeli & Freund, 2004; Newton & Keenan, 1983; Rotenberry & Moberg, 2007). This is because these attitudinal factors have been widely used and theorized as strong predictors of job performance (Langfred & Moye, 2004). On top of that, inconclusive findings on work involvement and various workplace outcomes, such as job performance, turnover intention, etc. are attributed to the inconsistency in the measure of both constructs (Rotenberry & Moberg, 2007).

Work involvement has been measured in a number of ways, including instruments developed by Kanungo (1982a), Lodahl and Kejner (1965), and Saleh and Hosek (1976). The first two measures have large number of items with very limited evidence of measurement validity. For instance, Lodahl and Kejner (1965) reported that work involvement is a multidimensional construct, neverthelss they have not clearly defined and labeled all the dimensions (Kanungo, 1982a; Kanungo, 1982b). According to Elloy and Terpening (1992), Kanungo (1982a), and Kanungo (1982b), there is still no agreement on what dimensions that really constitute work involvement as measured by Lodahl and Kejner (1965). In fact, Saleh and Hosek's (1967) measure of work involvement incorporates 30 items that were supposed to measure the cognitive response of work involvement exclusively. However, the instrument was found to be less robust because it had been contaminated with items on intrinsic motivation. Albeit its wide usage in the literature, both scales have not been specific on the latent construct that it is supposed to measure (Elloy & Terpening, 1992; Kanungo, 1982a; Kanungo, 1982b; Rotenberry & Moberg, 2007). This is due to the fact that both instruments have been used to measure ill-defined work involvement and job involvement (Elloy & Terpening, 1992; Kanungo, 1982a; Kanungo, 1982b; Rotenberry & Moberg, 2007). This will inevitably bring forth problems in interpreting the results in studies that used Lodahl and Kejner's (1965) and Saleh and Hosek's (1967) measurements of work involvement.

It also deserves noting that Kanungo's (1982a) evaluation of work involvement construct attends to the aforementioned drawbacks in the work involvement measure. In essence, the scale is consistent with the operationalization of work involvement that assessed the extent to which employees are generally interested in, identify with, and are preoccupied

with their work in relative to other aspects of their lives. Work, in this context, refers to work in general, not specifying any present or past job or position of a certain individual employee. With such a clear definition, the measure was then developed. However, Kanungo (1990) noted that there is lack of empirical investigations conducted to date on the work involvement measure. Most importantly, Kanungo (1990) strongly asserted that Western conceptualizations and measurements may be culture-specific, especially in terms of validity and applicability in the non-Western sample. With the exception of Kanungo (1982a), limited evidence on psychometric properties of the work involvement measure has been reported thus far. As such, this has prompted the need to shed some empirical light on the psychometric properties of the work involvement construct. This is done by assessing internal consistency reliability and construct validity of the work involvement measure developed by Kanungo (1982b, 1990).

METHODOLOGY

Procedures and Measure

Self-administered questionnaires were distributed to the respondents in nine public service agencies and departments in the northern region of Peninsular Malaysia. The researchers went to each agency and department and personally gave the questionnaires to the chief clerk of each department, whom was contacted prior to the researchers' visit. The clerks were briefed on the research objectives and guidelines in answering the 5-item on work involvement in the questionnaire. A total of 500 questionnaires were distributed and 268 were returned. However, only 256 questionnaires were usable for data analysis. Work involvement is a one-dimensional construct measured by five items (refer to Table 2). These items were adopted from Kanungo (1982b, 1990). All items were rated on a seven-point Likert scale, namely 1= very disagree, 2 = disagree, 3 = slightly disagree, 4 = moderate, 5 = slightly agree, 6 = agree, 7 = very agree. To determine the score of this scale, ratings within each scale are summed and divided by the total number of items in that particular scale. Based on the literature, Sarros, Tanewski, Winter, Santora, and Densten (2002) and Elloy and Terpening (1992) reported a fairly high reliability coefficient of 0.86 and 0.75 respectively of the work involvement factor. A seminal work from Kanungo (1982a) reported high reliability value of 0.89.

Decentralization and Back-Translation of the Items

In the decentralizing process, the original measurement was changed before it was adapted and back-translated. The purpose is to improve the translatability of the measurement whereby items that are likely to be specific to the original culture or context were removed or altered (Brislin 1980; Geisinger 2003). Two bilingual experts and one public service officer helped to identify items in the measurement that need to be refined to suit the Malaysian culture and public sector context. Then, the measurement was assessed to ensure that there is no culture-specific language or content.

Work involvement measure was translated using back-translation procedure. Following Brislin (1970) and Geisinger (2003), two different bilingual language experts were used in the back-translation process. One of the experts translated the original items to the Malay language, and another expert re-translated the translated items into the English language without having seen the original test. After that, based on Geisinger (2003), the quality of the language translation was observed in terms of how accurately the back-translated measurement agrees with the original version. Then, the back translated items were discussed and verified with officers and clerical staff from the public service departments and agencies to ensure suitability of all items in the public sector context. Another discussion was made with two human resource officers in one of the public service departments to get feedbacks on the appropriateness of items adapted and translated in measuring work involvement of public servants. This stage is crucial to guarantee content and face validity of all items used in the study. Based on the feedbacks, several improvements were made to the items.

Analytical Procedures

The reliability and initial evidence of validity were reported based on results from Cronbach's alpha reliability and exploratory factor analysis (EFA). The EFA on the latent construct was carried out to determine if the responses gathered can be grouped according to the hypothesized factor. Following Byrne (2005), Hair *et al.* (2006), Kim and Mueller (1978), Tabachnick and Fidell (2007), and Worthington and Whittaker (2006), EFA using principal axis factoring with direct oblique rotation and *a priori* criteria of single-dimensional work involvement measure was conducted to analyze factor structure of the construct.

The cutoff point of 0.5 was used as the threshold to ensure practical significance for further analysis (Hair *et al.*, 2006; Worthington & Whittaker 2006). Then, measurement model or CFA for each latent factor was examined by observing the model fit level. Based on Hair *et al.* (2006) and Tabachnick and Fidell (2007), convergent validity in this study was assessed by calculating the average variance explained (AVE) and composite reliability (CR) of each latent construct.

RESULTS

The demographic profiles of the respondents were gathered in this study. Further, exploratory and confirmatory factor analyses and internal reliability consistencies and mean were employed to examine the factor structure of the work involvement scale using a single-dimensional measure developed by Kanungo (1982b, 1990).

Demographic Profiles of the Respondents

The sample consists of 61.70 per cent male and 38.30 per cent female. The majority of respondents, i.e. 55.08 per cent, were below 30 years old while 7.42 percent were above 50 years old. Given the fact that Malaysian public service departments and agencies were predominantly Malay-populated, 98.4 per cent of the respondents were Malays. Only 1.2 percent and 0.4 per cent were Chinese and Indians, respectively. The majority of respondents, 56.7 per cent were secondary-school certificate holders and 29.30 per cent were diploma holders. The rest of the respondents or 13.7 per cent were undergraduates and masters degree holders. A total of 72.2 per cent of the respondents have worked in the organization for less than 10 years while 27.80 per cent have worked for more than 10 years. A total of 210 respondents or 83 per cent have been in the current job position for less than 10 years while the rest have hold the current position for more than 10 years. Finally, a vast majority of the respondents or 94.90 per cent were support staffs and only 5.10 per cent were professional and management staff.

Reliability and Exploratory Factor Analysis (EFA)

Table 1 presents the results of the internal consistency reliability, mean, and standard deviation for measure. Cronbach's alpha value was 0.938 for the overall work involvement scale. EFA was conducted to examine the factorial validity of the work involvement construct. Using principal axis factoring with oblique rotation and *a priori* criteria of one-factor extracted, Table 2 depicts the EFA results, which indicated that work involvement is a single-dimensional factor. The total variance explained for this construct was 65.355 and KMO value was 0.867. The factor loadings for all items ranged from 0.714 to 0.963. To ensure good construct validity of the instrument, composite reliability (CR) and variance extracted (VE) values were examined and reported in the subsequent section.

Table 1: Summary Statistics Work Involvement and Cronbach's Alpha

Construct	Items	Mean	SD	Cronbach's alpha
Work involvement	5	5.717	0.006	0.938

Table 2: Exploratory Factor Analysis for Work Involvement Items

Items	Factor 1
1. In general, I like working here.	0.714
2. Doing my job well gives me the feeling that I have accomplished something worthwhile.	0.833
3. I feel a sense of pride working for this organization.	0.805
4. In my job, I am willing to put a great deal of effort beyond what is normally expected.	0.963
5. The things that I do on my job are important to me.	0.909
Total Eigenvalues	7.128
Variance Explained	32.558
KMO	0.867
Total Variance Explained	65.355

Construct Validity of the Work Involvement Scale

According to Hair et al. (2006) and Tabachnick and Fidell (2007), construct validity is crucial to ensure that a set of observed variables actually converge on the theoretical latent construct these variables were designed to measure. In addition to the standardized factor loadings in the confirmatory factor analysis, convergent validity in the present study was examined by

observing the value of composite or construct reliability (CR) and variance extracted (VE) for the work involvement factor. As noted by Hair *et al.* (2006), CR values should be greater than 0.6 while VE should be above 0.5. The CR value that is lower than 0.6 indicates that the items do not consistently measure the hypothesized latent construct. The rule of thumb for a good reliability estimate is 0.6 or higher, which means that all items consistently represent the theorized latent construct. The value of VE that is smaller than 0.5 infers that more error remains in the items than variance explained by the latent factor structure imposed on the measure (Hair *et al.*, 2006). CR, VE and standardized factor loadings are the indicators for convergent validity.

Table 3 shows the calculated composite reliability for each latent construct, which were above 0.70 and the standardized factor loadings of above 0.5 for all items. Table 4 depicts the result of the calculated variance extracted (VE) to further support the convergent validity of the work involvement factor. An average variance extracted (AVE) of 0.5 or higher suggests adequate convergence (Hair *et al.*, 2006). AVE for a single dimensionality of work involvement construct was above 0.5, lending empirical support for convergent validity of all items. In other words, all five items converged on the hypothesized factor that is work involvement as purported by Kanungo (1982b, 1990).

Table 3: Composite Reliability (CR) of Work Involvement Construct

Items	Standardized loadings	(Sum of standardized loadings)^2	Error	Number of items	Composite reliability
Work involvement 1	0.730		0.328		
Work involvement 2	0.860		0.247		
Work involvement 3	0.820		0.286		
Work involvement 4	0.940		0.113		
Work involvement 5	0.940		0.117		
Total	4.290	18.404	1.091	5	0.944

Table 4: Variance Extracted (VE) for Work Involvement Construct

Items	SMC	Error	Number of items	Average Variance Extracted
Work involvement 1	0.529	0.328		
Work involvement 2	0.745	0.247		
Work involvement 3	0.670	0.286		
Work involvement 4	0.890	0.113		
Work involvement 5	0.881	0.117		
Total	3.715	1.091	5	0.773

Work involvement measurement model

A confirmatory factor analysis was conducted to identify the validity of the work involvement construct. The standardized estimates were reported to interpret parameters in the measurement model. Both absolute and incremental fit statistics were used to establish the model fit. Traditional chi-square test and the root mean square error of approximation (RMSEA) were chosen to indicate the absolute fit statistics.

Two incremental statistics used were Tucker Lewis Index and the Comparative Fit Index. The values of Normed Fit Index (NFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI) can be between 0 to 1 and values greater than 0.90 and 0.95 reflected an acceptable and excellent fits to the data and the RMSEA values at or less than 0.05 and 0.08 indicated a close and reasonable fit (Byrne 2001; Kline 2004; Schumacker & Lomax 2005).

Work involvement was measured by five items. As illustrated in Table 5, the fit indices showed good fit, TLI= 0.991, CFI=0.997, RMR= 0.012, normed chi-square= 2.129 (chi-square=6.387, df= 3, p=0.094). Further, all of the standardized factor loadings were above 0.7 and significant with $p<0.05$. The measurement model also indicated that the standardized factor loadings of all indicators for work involvement latent factor were 0.73, 0.86, 0.82, 0.94, and 0.94 (refer to Table 3). This shows adequate support for convergent validity of all the items on the hypothesized latent construct of work involvement. Importantly, the good fit indices reported signify that the measurement model was fit to the data collected in this particular study.

Table 5: Model Fit Statistics for the Work Involvement Measurement Model

Measurement Model	df	χ^2	p	NC	RMSEA	RMR	TLI	CFI
Work involvement	3	6.387	0.094	2.129	0.067	0.012	0.991	0.997

DISCUSSIONS, IMPLICATIONS, AND CONCLUSION

In this study, work involvement was evaluated using Kanungo's (1982b, 1990) five-item instrument. The construct was defined as the extent to which employees are generally interested in, identifies with, and is preoccupied with his or her work in relative to other aspects of one's life. The term work refers to work in general, not specifying any present or past job or position of a certain individual employee. Based on this operational definition by Kanungo (1982a), the measure of a single dimensionality of work involvement was then developed. Despite the comprehensive conceptualization of work involvement by Kanungo (1982a), it was noted that there is lack of empirical investigations conducted to date on the work involvement measure (Kanungo, 1982b, 1990). There is a need to assess the work involvement measure in terms of its construct validity and utility in other settings, particularly in the Asian context because the original version of the work involvement measure developed by Kanungo (1982b, 1990) may be too culture specific that perhaps have impacted the validity and applicability of the instrument in the non-Western sample (Kanungo, 1982b, 1990). This has called for the need to evaluate the psychometric properties of the work involvement latent construct by assessing internal consistency reliability and construct validity. The latter was assessed by analyzing the convergent validity. Again, convergent validity was analyzed in terms of standardized factor loadings of all items, variance extracted (VE), and composite reliability (CR) of the construct.

Based on the results from the exploratory and confirmatory factor analyses, one-dimensionality of work involvement was supported. All factor loadings in the exploratory factor analysis were above 0.50 and measurement model for this construct showed good fit, indicating that the model fits to the data collected. The values of standardized factor loadings in the measurement model, composite reliability and variance extracted were all

above the cutoff points. The internal consistency value for this measure also reported alpha value of above 0.60 (refer to Table 1). The good psychometric properties produced via the validation analyses lend support for construct validity of Kanungo's (1982a) instrument in measuring work involvement. The finding is consistent with Kanungo's (1982a) proposition and empirical evidence in his seminal work that work involvement is a single dimensional construct. Although other researchers (e.g. Lodahl & Kejner 1965; Saleh & Hosek 1976) argued that work involvement is a multidimensional construct, this study found support for the unidimensionality of work involvement, which is consistent with Kanungo's (1982b, 1990) proposition in her seminal work on the conceptualization and measurement of the said latent variable.

The evidence of good construct validity was attributable to the rigor assessment of content validity of the Malay-translated version of Kanungo's (1982) work involvement measure. Prior to using the instrument for data collection purpose, the researcher scrutinized all of the items so that content validity was established, meaning that each question really measures the underlying latent factor it was purported to measure. Then, the decentralization process took place whereby items that were too specific to a certain culture or sector were changed to suit the Malaysian public service setting. This process was done based on Geisinger, (2003) and Brislin (1980). Following this, back translation process was conducted and finally all items were further verified with public service officers and support staffs on its suitability in the Malaysian public sector context. Given detailed process taken to ensure content validity of the instrument, the findings in this study provided evidence of construct validity of Kanungo's (1982) measure of work involvement.

Another plausible reason for the results was due to demographic aspects of the respondents, in terms of organizational tenure and job tenure. All of the public servants participated in the study have served for at least a year in their current position and respective departments and agencies. With such length of service, they would have developed a certain type of attitude towards work based on their perceptions on numerous aspects at work. The different attitudinal conditions experienced by the public servants would have included their level of involvement with work. Therefore, public servants in this study were able to respond to all of the items in the work involvement measure because they knew very well how they feel about

their work and what kind of attitude they have toward their work. As a result, a single-dimensional factor structure of work involvement obtained for public servants was congruent to the *a priori* model as articulated by Kanungo (1982a, 1990).

One important theoretical implication of this study would be in terms of construct validation of the instrument. Based on the suggestions in the literatures (e.g. House & Rizzo 1972; Deewar et al., 1980; Griffin et al., 1980; Kanungo 1982a; Fried & Ferris 1987; Scandura & William, 2000), construct validation is deemed crucial to ensure more meaningful results could be elicited from a research. Further, construct validation could be of substantial value to the theoretical domain in the respective field. Given the limited empirical scrutiny on the measurement validation in the Malaysian context, this study moved one step ahead by providing the evidence of construct validity of the Malay-translated version of the work involvement scale. Prior to assessing the psychometric properties of the constructs, each instrument has gone through decentralization and back translation process to enhance its utility in the Malaysian context. The rigor process and procedures of back-translation and decentering were conducted based on Brislin (1970), Werner and Campbell (1970), and Geisinger (2003). This stage is crucial to ascertain the suitability of all items in the Malaysian public service context, and more importantly, the process is useful to ensure content validity of the instrument scrutinized in this study. Following content validity, the construct validation procedures started with exploratory factor analyses (EFA) via SPSS version 14 and confirmatory factor analyses (CFA) via AMOS version 16. In addition to factor loadings in EFA and standardized factor loadings in CFA, this study assessed convergent validity of the measures in terms of variance extracted (VE) and composite or construct reliability (CR).

As a conclusion, Kanungo's (1982a, 1990) measure of work involvement has a good construct validity given the results and discussions of this study. This has proven the usability of the measurement tool in other cultural contexts. In other words, the Malay-translated version assessing the single-dimensionality of work involvement based on operationalization and seminal work of Kanungo (1982) can be a useful instrument in measuring work involvement construct in the Malaysia context, particularly in the public sector setting.

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