



# INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v11-i2/8308>

DOI:10.6007/IJARBSS/v11-i2/8308

**Received:** 05 January 2021, **Revised:** 28 January 2021, **Accepted:** 15 February 2021

**Published Online:** 24 February 2021

**In-Text Citation:** (Sulaiman et al., 2021)

**To Cite this Article:** Sulaiman, W. S. W., Rahim, A. I. F. C. A., & Halim, F. wati. (2021). Psychometric Properties of the Public Service Motivation Scale among Malaysian Public Service Officials. *International Journal of Academic Research in Business and Social Sciences*, 11(2), 667–678.

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**Vol. 11, No. 2, 2021, Pg. 667 - 678**

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[www.hrmars.com](http://www.hrmars.com)

ISSN: 2222-6990

## Psychometric Properties of the Public Service Motivation Scale among Malaysian Public Service Officials

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### Abstract

Employees in the public sector should have a high motivation in delivering the best service that can influence the development of a country. However, studies on the measurement of public service motivation are still few in Malaysia. Therefore, the objective of this study was to test the psychometric qualities of the Public Service Motivation Scale through content validity, construct validity and internal consistency analyses. This study employed a survey design by administering a questionnaire consisting demographic information and the Public Service Motivation Scale to 200 respondents. Results showed that the scale has good content and construct validity with three factors extracted having good eigen values and percentage of variance explained (PVE) with PVE total of 72.49%. The factors were labelled as compassion, self-sacrifice and commitment to public interest. Research findings give implication on the suitability of the Public Service Motivation Scale to be used in measurement in the Malaysian context.

**Keywords:** Motivation, Public Service, Validity, Reliability, Factor Analysis

### Introduction

The development of a country depends on the efficient and quality delivery of its' public service. The existence of a competitive and excellent public service becomes an important agenda in ensuring that the nation achieves the status of a developed and high-income country. Taking into consideration the spirit of public officers who always strive to give the best service, each dimension in the public service is constantly improved and explored to determine the effectiveness of its' service in Malaysia. Thus, employees in the public sector need to have high motivation to ensure that key performance indicators can be attained. This is supported by Siddiquee (2006) who said that studies on attitudes at work among public officers are very important as they determine the effectiveness of the public sector.

Staats (1988) define public service as a concept, attitude and a sense of responsibility. This gives rise to the concept of public service motivation (PSM) which was introduced by a western scholar, Rainey (1982) and was then revised by Perry and Wise (1990). Public service motivation is defined as a tendency and motive of an individual to be involved in public service (Perry, 2000). The term motive which is used in this study means individual's purpose in this involvement is not forced by other people. Public service motivation can be considered as an individual's tendency to respond to the motives set by a public institution or organization (Perry & Wise, 1990). Rainey and Steinbauer (1999) on the other hand define it as a general altruistic motivation to fulfil the needs of the community, nation or country. According to Vandenabeele, Scheepers and Hondeghem (2006), public service motivation refers to the beliefs, values and attitudes which are beyond an individual's self-interests or organizational interests, involving consideration about the interest of a larger political entity and encourages the interaction and motivation to act accordingly. It can also be considered an intrinsic motivation. Individuals with high public service motivation have commitment towards public welfare and they are characterized by ethics which are developed based on the service to other people and the desire for public change (Houston, 2006).

Perry and Wise (1990) categorize this motive into three: (1) rational, (2) normative and (3) affective. Rational motive involves the behaviour based on individual's maximum ability. Motive based on norm on the other hand, refers to the behaviour produced by efforts to comply with the norms, while affective motive refers to those who trigger behaviour based on emotions in various social contexts. Rational motive is usually chosen by individuals who want to be involved in the making of public policy (Kelman, 1987). The motive of this involvement usually becomes interesting and dramatic and can retain an individual's image. Motive based on norms is often related with public interests, while motive based on affect involves commitment towards programme rather than its' social importance, patriotism and welfare (Perry & Wise, 1990).

### **Literature Review**

Perry (1996) started to explore the measurement of public service motivation through his studies in developing an instrument. He conducted his study by taking the aspiration of how important a good and competent public service is, particularly in developing and managing a nation's resources well and with integrity. The construct of public service motivation was then developed by considering that it is defined as an individual's tendency to take important responsibilities as a public officer. Based on this, public service motivation was categorized into four dimensions: (1) attraction to policy making, (2) commitment to public interests, (3) compassion and (4) self-sacrifice.

Perry's (1997) consequent study then tried to explore the antecedents of public service motivation. The study involved 375 respondents who voluntarily answered the survey using the Public Service Motivation scale developed by Perry (1996). The study aimed to examine the relationship of antecedents of public service motivation which were parental socialization, religious socialization, professional identification, political ideology, and individual's demographic factors. Results of the study found that there were significant relationships between parental socialization with compassion and self-sacrifice. This factor was significant with parental relations since altruism is an attitude encouraged and modelled by parents. Furthermore, religious socialization was related with compassion and also

commitment to public interests. This is because religious factor in the United States of America emphasizes community and religious programmes particularly in church. For the antecedent of professional identification, there are certain professions which inculcate interest, involvement and passion in giving contribution to the community. However, political ideology was not related with any dimensions in public service motivation. This may be due to the various political beliefs and dynamics occurring in the United States of America. For individual's demographic factors, there were significant relationships between age, education level and income with public service motivation.

A study by Choi (2004) tested the relationship between public service motivation and ethical behaviour in the United States of America and tried to explore the issues whether those who have high public service motivation behave ethically. Findings showed that the dimension of self-sacrifice has significant correlation, however commitment to public interests was not significantly related with ethical behaviour. This suggests that self-sacrifice is a critical factor in influencing ethical behaviour.

This is consistent with Lee's (2011) study who found a relationship between public service motivation and prosocial behaviours such as volunteerism. The study compared voluntary behaviour of employees in profit-oriented organization versus non-profit organization. Results obtained showed that there were different patterns of voluntary behaviour between these two organizations. Employees in non-profit organization were more involved in religious, social and community activities whereas employees in profit-oriented organization were more involved in educational setting.

Apart from that, Kim (2008) has conducted a study to validate the Public Service Motivation scale in Korea which employed the 24-item scale. A total of 690 and 498 respondents were involved in study 1 and study 2. Factor analysis was used to analyse the data. Results showed that four factors were obtained with 12 items which showed that the scale has good validity and reliability. Findings showed that although four factors were replicated from the original scale, however, the dimension of attraction to policy making provided doubtful results.

Bozeman and Su (2015) in a meta-analysis study related to the theory and concept of public service motivation said that the concept of public service motivation basically is not only for public officers, but it can also be studied among employees in the private sector. This is because public service motivation is universal and can be seen as the internal factors when a task is performed.

Because the scale was developed in the western culture, it is important to examine whether the concept of public service motivation is suitable in other cultures. Several studies have shown different findings such as Vandenberg et al. (2004) who found that the Public Service Motivation scale is a universal concept and all four dimensions were obtained among respondents in France and Holland. Andersen and Pedersen's (2012) study among public officers in Denmark also obtained four dimensions of public service motivation. However, their findings showed significant relationships between attraction in policy making, compassion and self-sacrifice with professional behaviour but no significant relationship was found between commitment to public interest and professional behaviour. Kim (2008) also replicated four dimensions of public service motivation, but additional analysis found that

attraction to policy making showed a doubtful result. This is supported by findings in Lee's (2005) study who found that among public officers in Korea, the dimension of attraction to policy making did not influence performance, however there were significant relationships between the other three dimensions with performance. Therefore, it is important to examine the suitability of this scale in the context of public service in Malaysia.

### **Research Objectives**

The objectives of this research are to:

1. evaluate the content validity of the Public Service Motivation Scale
2. assess the construct validity of the Public Service Motivation Scale
3. assess the reliability of the Public Service Motivation Scale

### **Research Method**

#### **Research Design**

This study employed a survey design by distributing questionnaire in collecting data. The distribution of questionnaires was done manually and also distributing online using Google Form. The researchers were able to reach out many respondents by using online survey and the questionnaire was accessible to respondents using the Malaysian Public Service Department email. The period of data collection took two weeks to be completed.

#### **Respondents**

A total of 200 respondents from Malaysian Public Service Department participated in this study. Hair et al. (2010) suggested 5 to 10 subjects for each item for the purpose of doing factor analysis, therefore selection of samples for exploratory factor analysis was adequate as the scale has 16 items.

#### **Research Instruments**

The questionnaire consisted of two parts. Part A involves questions about demographic information of respondents comprising of questions on gender, age, ethnic group, marital status, grade of employment, and length of service. Part B comprises the Public Service Motivation scale.

This study employed the Public Service Motivation (PSM) scale developed by Perry (1996) and revised by Kim et al. (2012). Public service motivation is a term that reflects a specific internal motivation related with individual's interest in providing service to the public (Rainey, 1982). The scale has 16 items that measures four dimensions: (1) commitment to public interest (item PSM1-PSM4), (2) attraction to policy making (item PSM5-PSM8), (3) compassion (item PSM9-PSM12), and (4) self-sacrifice (item PSM13-PSM16). Each dimension was measured by four items. The scale used a 5-point likert scale from Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. The original version of the scale was in English language and it was translated into the Malay language through a translation committee panel.

The study using the Public Service Motivation scale has been conducted in various countries such as Australia, Belgium, China, Denmark, France, Italy, Korea, Lithuania, Holland, Switzerland, United Kingdom dan United States of America. The scale has been tested to examine universality and cultural differences in public services in these countries (Kim et al. 2012).



## Results

### Demographic Profile

Analysis on respondents' demographic profile was aimed to understand the background of respondents involved in this study. Table 1 presents the demographic profile of the respondents. Majority of the respondents (49.5%) were between the age of 30 to 39 years old, 57% of them were females and 85% of the respondents were Malays. A total of 105 respondents (52.5%) worked in the management and professional positions with majority of them (33%) have worked for 10 to 19 years.

Table 1: Demographic profile

DEMOGRAPHY		N	%
Age	Below 29 years	34	17.0
	30 - 39 years	99	49.5
	40 - 49 years	47	23.5
	50 - 60 years	20	10.0
Gender	Male	86	43.0
	Female	114	57.0
Ethnicity	Malay	170	85.0
	Indian	5	2.5
	Chinese	4	2.0
	Others	21	10.5
Marital status	Married	143	71.5
	Single	50	25.0
	Single Father/Mother	7	3.5
Service group	Management & Professional	105	52.5
	Administrative	94	47.0
	Top management	1	0.5
	1-3 years	32	16.0
Length of service	4-9 years	65	32.5
	10-19 years	66	33.0
	20-29 years	26	13.0
	30-40 years	11	5.5

### Results of Content Validity

The researchers have translated the Public Service Motivation scale from its' original language into Malay language. The process of translation of the scale was done by appointing a translation committee. This translation committee comprised of six subject matter experts in psychology and industrial and organizational psychology. A series of committee meeting was conducted to ensure that the translation process obtained equivalence of meaning for the scale. This process involved two phases which were the translation phase and the verification of translation to compare the equivalence between the original scale and the translated scale. The verification of translation process was done four times to ensure that the scale really measured what it was supposed to measure.

For content validity assessment, two different subject matter experts were appointed to evaluate the content of the scale. This process of content validation was conducted to assess

that the content of the scale consisted of items that measured public service motivation. In this process, among the questions raised by the experts were: does the scale measure what it is supposed to measure and does the scale measure all the things about the construct.

Taking into consideration that the Public Service Motivation scale was developed in the west that may have sociocultural differences, it can therefore influence the validity of the scale when administered in a different culture. These cultural differences can contribute to the bias in items used in the scale and construct (Van De Vijver & Leung, 1997; Van de Vijver, 1998; Van De Vijver & Tanzer, 2004; He & Van de Vijver, 2012). Measures proven valid in a study may produce different validity results across different samples and situations (Burns & Grove, 2005). Thus, the study of psychometric properties of a scale determining its' validity and reliability becomes important to assess its' suitability and applicability.

Based on the technique of content validity ratio (CVR), the scale was evaluated by the two subject matter experts. According to Gregory (2011), the panel has to give evaluation based on the suitability of an item whether "Suitable" or "Not Suitable". Items evaluated as "Suitable" refer to the items measuring the aspect and construct while items evaluated "Not Suitable" indicated that the items were not suitable to measure the construct intended. Hence, to obtain the content validity ratio the calculation was done based on the evaluation of these two experts. Results of the evaluation of Panel 1 and Panel 2 showed the result of the content validity of the Public Service Motivation scale was 0.75. This shows that the scale has good content validity.

### **Results of Construct Validity**

The data were analysed using Exploratory Factor Analysis (EFA) to explore the factor structure of the scale. Exploratory factor analysis is suitable to be used when there are no previous studies showing construct validity of a scale in the local context which is different than the culture in which the scale was developed (Pallant & Bailey, 2005). Based on the review of literature in Malaysia there was no study yet validating the Public Service Motivation scale using factor analysis.

A total of 16 items in the scale were analysed using Principal Component Analysis (PCA) with Varimax rotation. When PCA was conducted, suitability of the data for analysis was first evaluated to determine it fulfils the requirements of factor analysis. Examination on the correlation matrix showed that all items have coefficient values of .30 and above (Pallant, 2007). So was the value of Kaiser-Meyer-Olkin (KMO) which was .907, exceeding the recommended value of .60 (Kaiser, 1974) and Bartlett Test of Sphericity (Bartlett, 1954) was also significant ( $p < .000$ ), which supported the presence of factors in the correlation matrices.

However, the results of the first factor analysis did not extract a good factor structure because only two factors were extracted. Therefore, the researchers conducted the second PCA with varimax rotation by fixing the extraction method to fixed number of factors, that is fixing the factors into four factors as suggested by the original model by Perry (1996) and Kim (2012). Next, communalities were examined to determine that items showed clarity to samples by ensuring that all values were above 0.30 (Pallant, 2007). After examining the communalities values, all items showed satisfactory values which were above 0.50. The results of communalities are shown in Table 2.

Table 2: Results of Communalities of the 16-item Public Service Motivation scale

Item	Communalities
PSM1	.670
PSM2	.721
PSM3	.661
PSM4	.717
PSM5	.557
PSM6	.685
PSM7	.674
PSM8	.694
PSM9	.815
PSM10	.754
PSM11	.842
PSM 12	.749
PSM13	.733
PSM14	.723
PSM15	.843
PSM16	.706

PCA has extracted four factors with good eigen values which were 3.65 for Factor 1, 3.28 for Factor 2, 3.04 for Factor 3, and 1.57 for Factor 4. Percentage of variance explained (PVE) for the four factors also showed good results with PVE 22.84% for Factor 1, 20.50% for Factor 2, 19.00% for Factor 3 and 9.81% for Factor 4 with total percentage of variance of 72.15%. The values of factor loading for each item were checked to ensure that they fulfil the minimum requirement of .40 as suggested by Hair et al. (2010). All items were found to have good loadings. Factor loading for each item was then analysed to determine which factor it belongs to. The analysis showed that Factor 1 consisted of 5 items, Factor 2 has 5 items, Factor 3 has 4 items and Factor 4 only has 2 items which were PSM5 and PSM6. According to the requirement of factor analysis, a factor can only be accepted if it consists of at least 3 items (Hair et al., 2010). Hence, Factor 4 in this analysis could not be accepted and items PSM5 and PSM6 were eliminated and the third PCA was conducted.

Based on the analysis of the third PCA, results showed that three factors were obtained and the factor structure was clearer, more systematic, and consistent with the original conceptualization of the Public Service Motivation scale developed by Perry (1996) and Kim et al. (2012). The results were examined again for the suitability of data to ensure it fulfilled all the requirements. Examination on the correlation matrices showed coefficient values of .30 and above. In fact, in this analysis the value of Kaiser-Meyer-Olkin (KMO) increased to .909, and the value of Bartlett Test of Sphericity was significant ( $p < .000$ ), which supported the presence of factors in the correlation matrices.

Findings from this analysis is shown in Table 3. The results extracted three factors with good eigen values which were 4.12 for Factor 1, 3.09 for Factor 2 and 2.94 for Factor 3. Percentage of variance explained (PVE) for the three factors were good with PVE 29.40% for Factor 1, 22.10% for Factor 2 and 21.00% for Factor 3 with total percentage variance of 72.49%. The three factors were more structured and more suitable with the original factor structure as



suggested by Perry (1996) and Kim et al. (2012). All items also have satisfactory factory loadings and the results are shown in Table 3.

Table 3: Results of factor analysis

Item	Factor			Communalities
	1	2	3	
Eigen value=2.94; PVE=21%				
PSM1			.800	.688
PSM2			.820	.729
PSM3			.650	.659
PSM4			.631	.686
Eigen value=4.12; PVE=29.4%				
PSM7	.682			.668
PSM8	.648			.679
PSM9	.853			.791
PSM10	.746			.698
PSM11	.843			.832
PSM12	.747			.748
Eigen value=3.09; PVE=22.1%				
PSM13		.735		.730
PSM14		.806		.713
PSM15		.907		.835
PSM6		.756		.694

Upon examining the items listed under each factor, these factors were similar with the three factors in the original Public Service Motivation scale. Thus, Factor 1 represents the dimension of commitment to compassion, Factor 2 represents the dimension of self-sacrifice and Factor 3 represents the dimension of commitment to public interest. Factor 1 consisted of 6 items which were PSM7, PSM8, PSM9, PSM10, PSM11 and PSM12. Factor 2 has four items namely PSM13, PSM14, PSM15 and PSM16. The last factor was Factor 3 also has 4 items comprising of PSM1, PSM2, PSM3 and PSM4.

### Reliability

The scale was analysed for its' reliability in terms of its' internal consistency using alpha Cronbach reliability analysis. Results for the 14-item scale in Table 4 showed good reliabilities which were between .837 to .914 with alpha Cronbach for overall scale of .922.

Table 4: Results of reliability

Dimension	Cronbach Alpha
Factor 1 (6 item) - Compassion	.914
Factor 2 (4 item) – Self sacrifice	.872
Factor 3 (4 item) – Commitment to public interest	.837
Overall (14 item)	.922

## Discussion

Findings have shown that the Public Service Motivation scale has good psychometric properties. Based on the results of exploratory factor analysis, three factors were extracted which were compassion, self-sacrifice and commitment to public interest. This factor structure confirmed the presence of a three-dimensional public service motivation as proposed by Perry (1996); Kim et al. (2012). The findings of the current study are consistent with previous studies such as Kim (2008) who replicated a four-dimension public service motivation scale, but found that the dimension of attraction to policy making showed doubtful results. The three-factor structure was also supported by findings from Lee (2005) who found that among public officers in Korea, the dimension of attraction to policy making was not related to performance.

The dimension of compassion is the factor with the most items ie. six items and with the highest eigen value and percentage of variance explained. This shows that in the Malaysian public service, affective element is the most important factor in delivering service to the public. Public officers are motivated by sympathy to the less fortunate community and this encourages them to work harder in performing their responsibilities. Two additional items were included in this factor which were consideration towards the future generation and ethical behaviour were also elements of affective motivation. This is in line with Perry and Wise's (1990) statement which stated that affective motive is a trigger to behaviour based on emotions in various social contexts, confidence about social interests, patriotism and welfare.

The second dimension obtained in the current study was self-sacrifice. Similar findings were found in psychometric studies of the Public Service Motivation scale conducted the United States of America (Choi, 2004), France and Holland (Vandenabeele et al., 2004), Denmark (Andersen & Pedersen, 2012) and Korea (Kim, 2008; Lee, 2005). The important attitude in public service is willingness to sacrifice for public welfare, giving priority to public interest compared to self-interest, and willing to face difficulties to help the public. These are positive values inculcated among public officers and these factors are what motivate them in the delivery of public service.

The last dimension obtained in this study was commitment to public interests and this was also consistent with previous studies (Choi, 2004; Vandenabeele et al., 2004; Kim, 2008; Lee, 2005). Public officers are grounded on their commitment to help the public in dealing with social problems and contribute towards the interests of the public.

However, the dimension of attraction to policy making was not a factor in the Malaysian public service motivation. Similar results were found by studies by Kim (2008); Lee (2005) among public officers in Korea. One of the reasons that can explain this is that in Malaysia, involvement in policy making and policy changing is usually the responsibility of public officers who hold top management positions such as Directors, Chief Secretaries and Ministers in each ministry while majority of the other public officers implement the policies that have been developed.

## Conclusion

This study aimed to assess the psychometric properties of the Public Service Motivation scale. The scale that was originally developed in the west was translated into Malay language and

results of the assessment of subject matter experts showed that this scale has good content validity. In addition, construct validity was evaluated using exploratory factor analysis and a three-factor structure similar with the original dimensions were obtained. Apart from that, the scale has shown high reliability coefficients for all three dimensions and the total scale. The findings of this study give implications on the suitability of the Public Service Motivation scale to be used as a measurement instrument in the Malaysian context. Future studies can apply the Public Service Motivation scale by testing its' relationship with other variables such as job performance, job satisfaction, organizational commitment, and organizational citizenship behaviour. These studies can provide an in-depth understanding in the improvement of Malaysian public service.

The findings of this research contribute to the understanding of public service motivation construct. Theoretically, it confirms the moral theory of public service motivation and the cognitive developmental process underlying public service motivation which states four component process namely awareness, judgment, motivation and behaviour. The dimensions of compassion, self-sacrifice and commitment to public interest can be seen as intrinsic motivation and considered moral behaviour. Contextually, this research also supports the universality of the dimensions in public service motivation as the results also found similar dimensions with studies conducted in other countries such as Australia, Belgium, China, Denmark, France, Italy, Korea, Lithuania, Holland, Switzerland, United Kingdom and United States of America. This finding is also significant as it provides a reliable and valid instrument to measure how public officers should behave in delivering efficient and quality service to the public.

### Acknowledgements

The researchers would like to express gratitude to the Malaysian Public Service Department Malaysia for approving this research and allowing the use of their official email to distribute the questionnaire.

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