



Measures for Employee Engagement: Public Service in Sri Lanka

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Abstract

Employee engagement is crucial in the delivery of public service efficiently and effectively. Employee engagement is essential as a foundation for service climate (Salanova et al., 2005). Measuring employee engagement is vital to identify the areas to be improved to increase the service quality. The most accepted Utrecht Work Engagement Scale (UWES) is heavily applied to measure the employee engagement of Business to Customer (B2C) profit oriented organizations. Therefore, a customized measure for employee engagement is essential for public service. This paper describes the development of a customized scale based on UWES scale for assessing employee engagement in public service with reference to Divisional Secretariats in Sri Lanka. In developing and validating measures, qualitative and quantitative methods were utilized as recommended by Hinkin's (1998). Finally, a customized scale with 16-items was developed under vigor, dedication and absorption dimensions to measure the employee engagement of public service in Sri Lanka.

Keyword: *Employee Engagement; Pubic Service; Divisional Secretariats; Sri Lanka; Scale Development; UWES scale*

Introduction

The main purpose of public service is to serve the community. When Sri Lanka is concerned, the necessity of service quality in public service has been discussed extensively by citizens, not just over the past few years, but over decades. In 2015 Ranaweera mentioned that the government administration in Sri Lanka is facing a critical situation in providing a quality government service. Service quality is a measure of how far the delivered service level, match with customer expectations (Lewis and Booms, 1983). Service climate is employees' shared sense of the service quality (Schneider *et al.*, 1998). Service climate theory and past research highlight that these employee experiences are reflected in customer reports of service quality (Bowen and Pugh 2009, cited Bowen and Schneider 2014). It is important to identify the service climate, to know how the public servants perceive their service quality. A positive service climate exists when the foundation for it first exists in the engagement employee's experience in their work and work world (Schneider *et al.*, 2009a). Engaged employees are more willing to do the kinds of things a

service climate asks of them (Schneider *et al.*, 2009a). Therefore, a service climate is more easily built on a foundation of engaged employees (Schneider *et al.*, 2009a). Salanova *et al.*, (2005) suggested that employee engagement is necessary as a foundation for a service climate and empirically tested and found that employee engagement affects customer experiences through service climate. However, there is a massive concern in employee engagement and at the same time there is doubt and no uniformity in definitions, since engagement having been operationalized and measured in many unequal ways (Kular *et al.*, 2008). Clear theoretical and practical understanding of public servant's engagement is needed in order to provide better quality public service. Generally, the primary aim of private organizations is to maximize profits. Whereas public organizations aim to carry out and enforce the democratic law and policy, working for the public interest and providing public services without expecting profit. (Dahl and Lindblom, 1953 cited Heres and Lasthuizen, 2012).

Objective

Sri Lankan public service has given least attention in developing customized employee engagement measures because public servant's engagement is different than other profit oriented organization's employee engagement. Therefore, there is a need of a research to develop customized employee engagement measures for public service in Sri Lanka. This paper relates the development of a 16- items instrument to measure the employee engagement in public service with special reference to Divisional Secretariats in Sri Lanka. Divisional Secretariats are the key public service organizations which provide more than 90% government related social services such as such Civil Registration, Issuing of Permits/Licenses, Payment of Pensions, Samurdhi Program, Social welfare, Social Benefits and Development Programs (Herath, 2008) to citizens. Divisional Secretariats are controlled by Ministry of Public Administration and Management.

Theory

One of the challenges mentioned regarding the employee engagement in literature is the lack of an acceptable definition (Marcey and Schneider, 2008; Markos and Sridevi, 2010; Cowardin-Lee and Soyalp, 2011). Iddagoda *et al.*, (2016) revealed that the uncertainty about the meaning of employee engagement is evident by the use of different labels such as personal engagement, job engagement, organizational engagement, work engagement, and employee engagement. Kahn (1990) defined the engagement as the "harnessing of organization members' selves to their work roles". The scholars put their significant efforts over the past two decades to study engagement and the practitioners put their efforts to improve organizational development related involvements to increase the level of engagement among their employees. Previous studies mentioned that engagement effects to number of important organizational consequences such as job satisfaction, organizational commitment (Saks, 2006), intention to turnover (Shuck *et al.*, 2011); organizational citizenship behavior (Rurkkhum and Bartlett, 2012; Saks, 2006); and performance (Kim *et al.*, 2012).

In spite of these discussions, an argument exists still among scholars about the measurement of this construct. Kahn (1990, 1992), work has been more accepted with placing a foundation that used much of the engagement research, did not suggest an operationalization of the construct. Then Maslach and Leiter (1997) developed Maslach-Burnout Inventory (MBI) to measure engagement with the same three dimensions of the burnout construct: exhaustion, cynicism, and efficacy have been heavily criticized (Schaufeli, Salanova, Gonzalez-Roma, and Bakker, 2002). They introduced the Intellectual, Social, Affective Engagement Scale (ISA Engagement Scale), which included of Intellectual, Social, and Affective engagement three components. The review of the literature yielded seven relevant instruments aimed at measuring the engagement construct which can be summarized as follows (Table 01).

Table 01: Measures for Engagement

Measures	Author	Used definition
The Gallup Workplace Audit	Hartet, Schmidt, and hayes (2002)	Individual's involvement and satisfaction with as well as enthusiasm for work.
The Utrecht Work Engagement Scale	Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002)	A positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption.
Psychological Engagement Measures	May, Gilson, and Harter (2004)	Harnessing of organization members' selves to their work roles.
Sak's Job Engagement and Organization Engagement Scale	Saks (2006)	The author built on the definitions provided by various other well-known scholars.
Rich et al's Job Engagement Measures	Rich, LePine, and Crawford (2010)	Harnessing of organization members' selves to their work roles.
James et al.,'s Employee Engagement Survey	James, McKechnie, and Swanberg (2011)	Harnessing of organization members' selves to their work roles.
The Intellectual, Social, Affective Engagement Scale (ISA Engagement scale)	Soane, Truss, Alfes, Shantz, Rees, and Gatenby (2012)	Proposed that engagement has three underlying facets: Intellectual engagement, Affective engagement and Social engagement

Source: Rana and Ardichvili (2015) Employee Engagement Instruments: A Review of the Literature, pg no.07-10

Methods

Both qualitative and quantitative methods were utilized in generating items. Firstly, published articles related to employee engagement were obtained and examined to find a definition and dimensions for this construct. According to the literature, the Utrecht Work Engagement Scale (UWES) which developed by Schaufeli *et al.*, (2002) is one of the most widely used engagement instruments around the world based on the definition: "as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption". *Vigor* is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. *Dedication* is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge" *Absorption* is characterized by being fully concentrated and happily engrossed in one's work, whereby when time passes one has difficulties with detaching from work. (Schaufeli *et al.*,2002). The 7-point Likert type scale was used. Therefore, the researchers used this definition to develop a customized instrument measure employee engagement of public service in Sri Lanka.

Secondly, a focus group discussion was conducted with senior officers in public sector to generate items based on the above three: Vigor, Dedication, and Absorption dimensions. Based on the literature and participants' descriptions of employee engagement the researcher identified 19-items. These 19- items were put in to a questionnaire and distributed among 20 public servants to get their feedback and comments about the consistency of the questionnaire. Then a quantitative study was undertaken with 100 employees of Divisional Secretariats within Gampatha District.

Results

This questionnaire was used to collect data from 100 employees in five Divisional Secretariats in Gampaha District for the first stage validation. This stage was mainly carried out for the confirmation purpose of the newly developed scales' psychometric properties (Chu and Murrmann, 2006). Also this questionnaire was translated to Sinhala. Both Sinhala and English questionnaires were distributed separately as required by the respondents. To qualify for the study, respondents had to work in the respective Divisional Secretariats during the past six months. Figure 01 show the respondent's service period of their Divisional Secretariat. 100 questionnaires were distributed using non-probability judgmental sampling technique to respondents and were asked to fill out the questionnaires by themselves. Out of the hundred, ninety six (96) questionnaires were answered and out of them only ninety four were found to be useful representing a 94% response rate. Among hundred employees 73% of the respondents have a degree. (Figure 02)

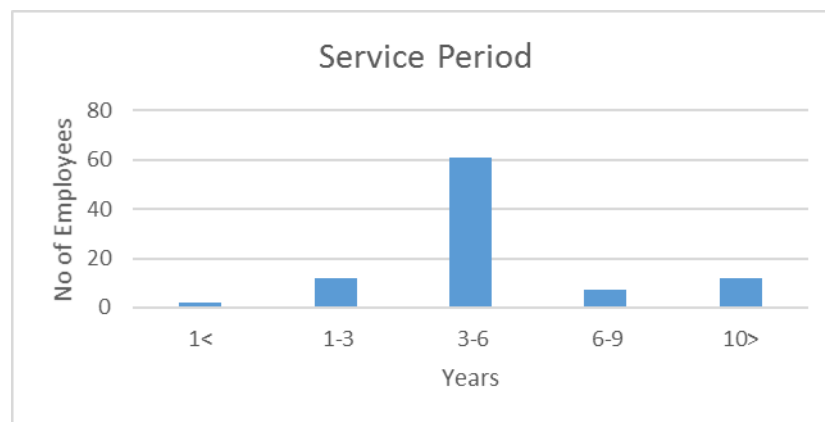


Figure 01- Respondents service period of current Divisional Secretariat

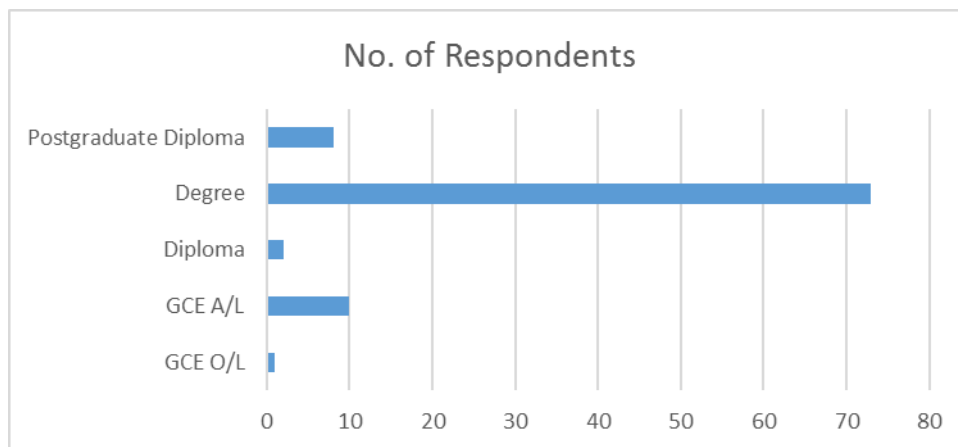


Figure 02- Respondents Level of Education

Both Churchill (1979) and Parasuraman *et al.* (1988 cited Wijesekera and Fernando, 2017) said the validation of an instrument begins with the computation of Cronbach's Alpha Coefficient, item-to-total correlation and Exploratory Factor Analysis (EFA). The Cronbach's Alpha value for these 19 items was .866 (Table 02). So, there was no item to be deleted from the scale. Corrected Item-Total Correlation is the correlations between each item and the total score from the questionnaire. In a reliable scale, all items should correlate with the total (Nunnally,1970). Hence, item should be analyzed that do not correlate with the overall score from the scale: if any of these values are less than about .3 then there is an issue, because it means that a particular item does not correlate very well with the overall scale.

Therefore, the items with low correlations may have to be removed from the scale. At the first stages of the development of this scale, according to Nunnally(1970) 02 items were deleted which had low item-to-total correlations (<.3) from the scale; (Table 03) and finally the items were reduced to 17-items.

Table 02: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.844	.866	19

After that, factor loadings obtained from Exploratory Factor Analysis with Varimax Rotation to test the factors and remove the poor performing items and Table 04 indicates the summary of the 17 items which loaded to three factors. These three factors are same as the dimensions (vigor, dedication and absorption) of UWES scale.

In the third stage of this scale development process, reliability and validity were tested for the three factors separately. The reliability statistics of the data set was ensured with a Cronbach's Alpha value (Flynn *et al.*, 1994). It must be more than .7 and the reliability of the instrument was ensured in terms of consistency. Next step of the instrument development process was to examine whether the deletion of any items could improve the Cronbach's Alpha value. To ensure construct validity, Exploratory Factor Analysis with Principal Component Analysis was to be-carried-out. Also to examine whether items in the scale measures the employee engagement construct convergent and discriminant, validity had to be ensured. If an item loads significantly <.5 (Field, 2009, p. 648) on the factor, it is measuring the convergent validity which is prevalent and if it ensures that no other items are measured by the concept, the discriminant validity could be established.

Each factor explains a percentage of the total variance. Kim and Mueller (1978) mention that factors that do not explain much variance might not be worth including in the final model. It takes some iteration to come up with the optimal number of factors. Therefore, the reliability and validity analysis of each factor were obtained.

Factor 1 –Dedication

Table 03 : Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.808	.814	7

Table 04: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
DED1	32.9149	30.702	.403	.334	.805
DED2	33.5426	27.520	.526	.377	.786
DED3	33.4787	27.263	.534	.328	.785
DED4	33.1915	26.630	.664	.470	.763
DED6	32.9574	28.063	.606	.426	.776
DED7	33.6915	24.323	.605	.460	.773
DED8	33.5851	25.364	.523	.396	.791

The Cronbach's Alpha value for the seven items in factor 1 (Dedication) was .814. Therefore, there was no item to be deleted and the values in the column labeled Corrected Item-Total Correlation which was above .4

Table 05: Summary -Factor 1

No of Items		Absolute loading
	I committed to my job because,	
1	DED1 - This job is very important to me	.751
2	DED2 - My job is meaningful	.670
3	DED3 - At work I am very happy	.515
4	DED4 - I feel my job is valuable to the organization	.617
5	DED6 - I have the ability to do my job	.630
6	DED7 -I am proud on the work that I do	.661
7	DED8 -I find the job is challenging	.659

Total Variance Explained 64.33%

According to Table No.07, all items had strong loadings on the construct, they were supposed to measure indicating uni-dimensionality and construct validity. Total Variance Explained was 64.33%.

Factor 2- Vigor

Table 06: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.876	.887	7

Table 07: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
VIG1	36.1170	23.954	.476	.254	.890
VIG2	35.7553	22.810	.740	.634	.848
VIG3	35.8404	23.684	.629	.521	.863
VIG4	35.4787	23.994	.662	.530	.858
VIG5	35.3085	24.753	.749	.633	.851
VIG6	35.5638	22.915	.764	.624	.845
ABS5	35.2553	24.902	.702	.617	.856

The Cronbach's Alpha value for the seven items included in factor 2 (Vigor) was .887. There was an item to be deleted (Table 09). It was VIG1. To increase the Alpha value VIG1 was deleted from the scale. The new reliability statistics of factor 2 (Vigor) was as follows.

Table 08: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.890	.895	6

Table 09: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
VIG2	30.3191	16.263	.728	.620	.868
VIG3	30.4043	16.824	.637	.521	.884
VIG4	30.0426	17.095	.672	.527	.877
VIG5	29.8723	17.725	.768	.633	.865
VIG6	30.1277	16.306	.760	.613	.863
ABS5	29.8191	17.784	.729	.616	.870

The new Cronbach's Alpha value for the six items included in factor 2 was .895. The values in the column labeled Corrected Item-Total Correlation were above .6.

Table 10: Summary -Factor 2

No of Items		Absolute loading
1	VIG2 - I can continue my work something in spite of difficulties	.652
2	VIG3 - I can continue my work very long period at a time	.541
3	VIG4 - I put my full effort to my work	.614
4	VIG5 - I would like to put all my efforts to my job	.731
5	VIG6 - I am not afraid to go my work	.720
6	ABS5 -I deeply involve my work	.685

Total Variance Explained 65.72 %

All items had strong loadings on the construct, (Table 12), they measured indicating uni-dimensionality and construct validity. Total Variance Explained was 65.72 %.

Factor 3- Absorption

Table 11: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.751	.761	3

Table 12: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ABS2	10.1277	6.908	.531	.296	.730
ABS3	9.1596	7.705	.652	.429	.608
ABS4	9.7979	6.722	.577	.368	.672

As indicated in Table 13, the Cronbach's Alpha value for the three items included in factor 3 (Absorption) was .761. There was no item to be deleted and the values in the column labeled Corrected Item-Total Correlation were above .5.

Table No. 13 Summary -Factor 3

No of Items		Absolute loading
1	ABS2 - I never think about other things when performing the job	.612
2	ABS3 - Time pass quickly when I do my job	.743
3	ABS4 - It is difficult to detach myself from the job	.676

Total Variance Explained 67.69 %

Also, all items had strong loadings on the construct, (Table 15), they were supposed to measure indicating uni-dimensionality and construct validity. Total Variance Explained for this construct was 67.69 %. Finally, there were only 16 items under three dimensions for the new scale to measure the employee engagement of Divisional Secretariats. To ensure more reliability of these measures, Split –half reliability was considered. This following SPSS out- put indicates the all these data were supportive of the reliability of the measurement.

Table 14 Reliability Statistics

Cronbach's Alpha	Part 1	Value	.805
		N of Items	8 ^a
	Part 2	Value	.835
		N of Items	8 ^b
	Total N of Items		16
Correlation Between Forms			.444
Spearman-Brown Coefficient	Equal Length		.615
	Unequal Length		.615
Guttman Split-Half Coefficient			.614

a. The items are: DED1, DED2, DED3, DED4, DED6, DED7, DED8, VIG2.

b. The items are: VIG3, VIG4, VIG5, VIG6, ABS2, ABS3, ABS4, ABS5.

In order to confirm the reliability of this measure, Composite Reliability (CR) and Average Variance Extracted (AVE) were calculated using the following equations. The Composite Reliability indicates the reliability and internal consistency of a latent construct. According to Fornell and Larcker (1981) the value of $CR \geq 0.6$ is required in order to reach composite reliability for a construct. The Average Variance Extracted shows the average percentage of variation explained by the measuring items for a latent construct. $AVE \geq 0.5$ (Fornell and Larcker, 1981) is required for every construct.

$$AVE = \frac{\sum K^2}{n}$$

$$CR = \frac{(\sum K)^2}{[(\sum K)^2 + (\sum 1 - K^2)]}$$

K = factor loading of every item

n = number of items in a model

Table 15. AVE and CR values

	F1	F2	F3
Average Variance Extracted (AVE)	0.486	0.657	0.676
Composite Reliability (CR)	0.837	0.919	0.862

All AVE and CR values were included in Table 17 and it indicates that there is a good reliability of these measures (F1- AVE value was 0.486 and it was closer to 0.5). In order to provide support for discriminant validity, Pearson Correlations among the study factors were computed. For this purpose,

composite scores for each factor were calculated by averaging scores representing that dimension. Table 18 shows the significant correlations among the factors. The highest correlation occurred between F2 and F3 (0.447) and reversely, the lowest correlation was found between F1 and F3 (0.280) Bauer et.al (2006) assessed their newly developed scales' discriminant validity by utilizing conservative Fornell/Larcker test. It means Fornell and Larcker (1981) recommended that shared variance (i.e., square of the correlation) among any two constructs should be less than the average variance extracted (AVE) of each factor.

Table 16: Pearson correlation

** . Correlation is significant at the 0.01 level (2-tailed).

	F1	F2	F3
F1	<i>1</i>		
F2	0.311	<i>1</i>	
F3	0.280	0.447	<i>1</i>

Table 17: Squired multiple correlation (SMC)

	F1	F2	F3
F1	<i>0.486</i>		
F2	0.096	<i>0.657</i>	
F3	0.078	0.199	<i>0.676</i>

AVE shown as italic on diagonal

	F1	F2	F3
Mean	5.55	4.84	5.86
SD	0.85	1.23	0.90

AVE vs. SMC significantly indicates the discriminant validity of this measurement
Finally, the developed new scale with three dimensions was mentioned in Table 34.

Discussion and Conclusion

To increase service quality of public service employee engagement is essential. This paper developed a customized measurement scale for measuring the employee engagement of Divisional Secretariats as a case. Both qualitative and quantitative methods were utilized according to Hinkin's (1998) recommendations in generating items. In this regard, scale development steps recommended by Hinkin's (1998) were followed. Based on qualitative research methods the study developed 19- items. Thereafter, when quantitative analysis was employed to purify the scale items, dimensionality, reliability, factor structure and validity analysis techniques were employed. Finally, 16- items were loaded to three dimensions same as UWES scale. Among these, vigor dimension could be the least important and the absorption dimension was the most vital component for employees. This study contributed to the conceptual and methodological advancement of employee engagement and public sector literature by developing customized scale to measure employee engagement of Divisional Secretariats.

Analysis of findings revealed that absorption, with the mean score of 5.86 is the most important factor in public services. Respondents stated that they never do other things when performing the job and the time pass quickly when they do the job. Also it is difficult to detach them from the job. Second most important factor identified was dedication, mean score is 5.55. It means employees are committed to their job because the job is very important and meaningful to them. Also, they feel the job is valuable and challenging. They have the ability to do the job. So they are happy and proud on the work that they do. The new UWES scale consisted with 17-items under three dimensions: vigor 6-items, absorption 6-items

and dedication 5-items. Moreover, a 9- items short version of this scale has been developed. In this stage for practical purposes the above three dimensions be collapsed into one dimension.

A comparison between new scale and 17-item UWES scale is given in Table No.21. The contents of both scales are same and the items of new scale are simple, short and easily understand than UWES.

Table 21. Comparison with New Scale and UWES scale

ITEMS OF NEW SCALE	ITEMS OF UWES SCALE
F1- Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge”	
I committed to my job because, This job is very important to me My job is meaningful. At work I am very happy. I feel my job is valuable to the organization. I have the ability to do my job. I am proud on the work that I do. I find the job is challenging.	I find the that I do full of meaning and purpose. I am enthusiastic about my job. My job inspires me. I am proud of the work I do. I find the job is challenging.
F2-Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties.	
I can continue my work something in spite of difficulties. I can continue my work very long period at a time. I put my full effort to my work. I would like to put all my efforts to my job. I am not afraid to go my work. I deeply involve my work.	At work, I feel full of energy. In my job, I feel strong and vigorous. When I get up in the morning, I feel like going to work. I can continue working for very long periods at a time In my job, I am mentally very resilient At work, I always persevere, even things do not go well
F3 - Absorption characterized by being fully concentrated and happily engrossed in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work.	
I never think about other things when performing the job. Time pass quickly when I do my job. It is difficult to detach myself from the job	I feel happy when I am working. Time flies when I am working. It is difficult to detach myself from the job. When I am working, I forget everything else around me. I am immersed in my work. I get carried away when I am working.

Limitations and Future Studies

The findings of this research explained with the following limitations. Employee engagement has several definitions and measures. In this study the researcher selected the definition used to develop UWES. That is “Employee Engagement mean a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli, *et al.*, 2002). The second limitation is the

use of judgmental sampling technique as one of the non- probabilistic sampling techniques. This technique would provide more confidently the chance of generalizing the results. The sample size was 100 and it was selected only from Gampaha District. Also, the original questionnaire was translated in to Sinhala and it was sometimes felt that the real meanings expected from the items were subjected to change. As a closing note, further studies can be recommended with large sample size covering all island using this newly developed scale to measure the employee engagement of Divisional Secretariats and replication studies with other public organizations would be fruitful for further generalizations of the newly developed scale.

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