

Person-work Environment Fit Perceptions on employee performance in Civil Service Sector employees in Addis Ababa and Dire Dawa

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Abstract

Scholars of organizational behaviour have long been interested in understanding the interactions between employees and their environments, and how these interactions can influence employee work engagement and performance. This study aims to explore factors affecting work engagement and job performance based on person-environment (PE) theory and to examine the extent how PE fit in civil service sectors. The study analysed the responses from 942 sample employees of the two city administrations (Addis Ababa and Dire Dawa) and the collected data was analysed using descriptive statistics, factor analysis, correlation and structural equation analysis. The finding of this study shows that mean perceived score of all the PE fit dimensions -person-job fit (PJ), person-organization (PO) fit, person-group (PG) fit and person-supervisor (PS) fit are above the average score for the seven-point Likert scale measurement. The spearman correlation result shows the all the PE fit dimensions have a significant (p -value <0.05) and positive relationship with employee work engagement and job performance. The Structural Equation Model analysis shows that employees with a higher person-job fit, Person-group fit and Person-supervisor fit have a higher work engagement and higher job performance and it is significant (p -value <0.05). The study suggests that leaders should retort when important issues arise, made decisions, prompt responding to urgent questions and they should avail when needed. Civil service sector managers should take actions to effectively promote employee's PJ fit, PG fit and PS fit to improve their work engagement and job performance.

Keywords: PJ fit, PO fit, PG fit, PS fit, PE fit, work engagement, job performance

1. Introduction

The Federal Government of Ethiopia has introduced a series improvement in the public sector over the past few decades. However, initial studies and observations show that such efforts are far from achieving the goals of the government sector. The studies call for further investigation into the problems of poor task performance in Ethiopia (Tadesse, 2019).

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Many organizations struggle to achieve high levels of performance. Many more struggles to sustain them. While managers set organisational targets or attempt to implement new strategies or actions that improve their performance, the common result is a slew of unfinished projects, disengaged employees, and disappointing results.

One of the most important questions for organizations is how to make employees perform high (Eggerth, 2008). With regard to the global economy of the 21st century, organizations have to cope with rapid changes and increasing challenges (Cesário & Chambel, 2017; Sonnentag, 2002). In order to maintain competitive advantage, the enhancement of employee performance is required more than ever. As such, researchers are, despite years of research, still concerned with the identification of the various attributing factors to work-related performance (Koopmans et al., 2011).

Many scholars on human resources ascertained that the fit between the individual value with organization (person-organization fit) and the fit of the individual value with the job (person-job fit) are the main conditions for organizational success and performance (Kristof-Brown, 2006). The match or congruence between a person and an environment is a commonly used context for understanding the attitudes and behaviour of organizational characteristics (Kristof-Brown et al., 2005). Scholars of management and psychology have been interested in the interaction of employees and the organisational environments for decades (Parsons, 1909; Schneider, 1987, as cited in Edwards & Billsberry, 2010).

Finding a suitable job is important. People spend a lot of time and effort looking for a suitable job, matching their skills and abilities, and meeting specific needs and goals and values. Similarly, organizations spend substantial effort to select persons who will best meet the demands of the job, adapt to training and changes in job demands, and remain loyal and committed to the organization.

According to Kristof-Brown et al. 2002 and Jansen and Kristof-Brown 2006, P-E fit can be defined as the match between the values, goals, and personality of an individual and those of that person's environment. The term "environment" in the definition of P-E fit above, is a very wide-ranging concept. Kristof-Brown et al. 2002, split up the term environment into four different domains or factors P-J fit, P-O fit, P-G fit, and P-S fit based on how it is evaluated. Person job fit (P-J fit) is evaluated to see how far the employees is fit with their job, person organization fit (P-O fit) is evaluated to see whether the employees are fit in the organization, person group fit (P-G fit) is evaluated to see how far the employee is fit within the group of other employees working in the organization, person supervisor fit (P-S fit) is evaluated to see the depth of relationship that exist between supervisor and employees in the organization.

Poor fit between the employee's needs (needs-supplies fit) as well as the job environment's demands (demands-abilities fit) was associated with low task performance. The term needs-supplies fit refers to the degree to which employee needs, such as the need to use skills and abilities are met by the work environment's supplies and opportunities to satisfy those needs. Demand-abilities fit refers to the degree to which the job's demands are met by the employee's skills and abilities. The two types of fit can overlap. For example, work overload may leave the

employer's demands unmet as well as threaten the employee's need to satisfy others (Caplan, 1998).

Studies of person-environment fit shows that people interact with multiple dimensions of the environment simultaneously. This multidimensional nature of the environment fit suggests that many of the consequences attributed to fit are not simply a matter of fit or misfit with a single aspect of the environment. Rather, it has significant consequences on the individual and organizational outcomes, with better fit associated with better outcomes (Cable and Edwards, 2004). P-E fit studies are based on the fact that individuals are becoming more involved with their environment and that employee behaviour is influenced by both environmental factors and individual traits.

According to Jansen and Kristof-Brown (2006), the PE fit studies is "elusive criterion of fit". The problem is both personal behaviours (individual factors - Personality, values, goals, etc) and environmental characteristics (environmental factors - jobs, supervisors, groups, organizations, vocations, etc.) are multidimensional. Researchers have been faced with the seemingly impossible problem of capturing all of the personal behaviours and environmental characteristics. As a result, researchers did not know the many different forms of fit and how it fits together (Jansen and Kristof-Brown, 2006). Most researchers usually select certain variables from individual factors and environmental factors to construct interaction terms, to which the approach can discover the relationship between specific variable combinations and outcome variables, but can hardly explain the relationship between outcome variables and the interaction between individuals and environment as a whole (Wang and Sun, 2010).

P-E fit measurement can be viewed as subjective and objective (Caplan, 1987 and Kristof, 1996). Subjective includes self, co-worker, and superior report, which is perceived by the target person or employee. Subjective fit represents the perceived fit of the employee. Objective fit includes facts about the person and environment which are not perceived by the person. It is a 'real fit' and free of the bias of human perception.

Perceived fit is usually captured via subjective methods, that is, research instruments that allow respondents to report a direct assessment of their compatibility (Kristof et al., 2005). A research result shows that perceived fit is a much stronger correlate of behavioural and psychological outcomes than the objective forms of fit (Kristof-Brown et al., 2005). This study plans to apply the subjective fit to measure the perceived views of employees about their needs, demands, supplies, abilities, teams, supervisors and organizations (Janssen, 2000). Schneider states that people's preferences about organizations are based on their own judgments that agree with their own behaviours and the behaviours of organizations (Schneider et al., 1995). Similarly, Kristof-Brown et al., 2005 recommends perceived fit to study the fit as it assesses a person's overall sense of fit to their employing organization which also allows respondents to judge and report their direct compatibilities. Moreover, study results confirmed that perceived fit has a stronger relationship with behavioural and psychological outcomes than the objective forms of fit (Kristof-Brown et al., 2005).

According to Greguras and Diefendorff (2009), it is important to understand the appropriate

level of P-E fit as it affects the professional development of employees at different stages of the organization's life cycle. In the pre-hire stage, the knowledge of P-E fit is often used for career counselling and job searching (Jansen and Kristof-Brown, 2006). The study shows that much of the P-E fit research has been conducted in the post-employment period and long-term tenure of employees, and the results show a strong relationship between P-E fit and employee attitudes toward work. The target population for this study will be employees of civil service experts who are working at different levels.

The study provides further insight into how work engagement mediates the relationships between P-E fit and task performance. Therefore, the study also examines the indirect effects of P-E fit on task performance through work engagement. The study hypothesized that highly engaged employees tend to exhibit greater commitment, motivation, and efforts towards accomplishing tasks effectively.

Statement of the Problem

According to the former Ministry of Civil Service (2013), the awful attitude of public servants, skill and knowledge gaps of the public servants and resource constraints are key factors affecting the performance of the current public service sector in Ethiopia. The awful attitudes and skill and knowledge gaps of the employees are categorized as personal traits while the resource constraints are under organizational characteristics. However, there is no comprehensive study on the identified gaps of the individual and organizational factors as well as with the attitude of public servants in relation to the performance of the public sector in Ethiopia (Kassa Teshager and Zekarias Minota, 2020). Existing studies on individual and organizational factors determining the performance of public servants is not comprehensive and up to date (Kassa Teshager and Zekarias Minota, 2020).

Empirical literature findings revealed that P-E fit has significantly positive effects on various individual, e.g. engagement, job satisfaction, task performance, and organizational outcomes, e.g. team engagement, psychological ownership, fiscal performance (Han, Chiang, McConville, & Chiang, 2015; Hardin & Donaldson, 2014; Lauver & Kristof-Brown, 2001; Kristof-Brown, Zimmerman, & Johnson, 2005). Specifically, higher perceived fit results in a higher level of employees' performance (Kulik, Oldham, & Hackman, 1987; Milliman et al., 2017). However, although the P-E fit – outcome relationship has been studied to a great extent, little is known about the underlying mechanisms through which P-E fit leads to employee performance (Greguras & Diefendorff, 2009). Previous studies indicated the need to examine the role of personal factors in the relationship between P-E fit and performance (KristofBrown et al., 2005). However, more research is required to determine how the different domains of fit work together (Catano et al., 2005; Horn et al., 2008; Jansen & Kristof-Brown, 2006) to influence organizational commitment and withdrawal behaviours and also to determine the practicality and legal defensibility of using person-environment fit measures for selection (Arthur, Bell, Villado, & Doverspike, 2006; Werbel and Gilland, 1999). To my knowledge, no study has so far tested the entire different person- environment fit on task performance simultaneously. Although P-E fit dimensions are shown to be important factors relating to the outcomes like - job satisfaction,

tenure, staff turnover, work engagement, organizational commitment, absenteeism, organizational citizenship behaviour, and task performance in various contexts, little is known as to how these factors together account for the enhancement of these outcomes particularly on task performance.

Many scholars of P-E fit touted a high degree of fit of the employee with his environment, which has a positive effect on both his own performance and that of the organization (Kristof, 1996; Taris, 2003). But what aspects determine whether an employee has a good fit with an organization? And to what extent are these elements on their own important for sustainable performance? Studying and exploring the nature of Person-environment fit and its dimensional impacts on outcomes will help to understand and resolve work-related issues within the organization. The present study attempts to identify the various facets of the person-environment P-E fit (Person-job fit, person-organization fit, person-group fit and person supervisor fit) of public sector employees on task performance among the mediator effect of commitment and motivation.

Researchers have suggested that more exploratory research is needed to satisfactorily explore individuals' experiences of being a fit in the workplace (Follmer et al., 2018; Talbot & Billsberry, 2010). More replicate studies are needed in the future on P-E fit (Rein De Cooman, 2019).

Studies cited in this research paper are mainly from Western perspectives. However, Ahmad and Khairuddin (2003) have already shown that P-E fit theory can be applicable to a developing country such as Malaysia. The study can provide more evidence of such a contention. Further the study fills the gaps using empirical evidences about the process through which organizations promote P-E fit in developing countries (Sekiguchi, T., 2006). Moreover, to the best of my knowledge, there has been no study in the public sector yet, as expected, on all P-E fits and its impact on performance. So, a better understanding is needed in the civil service sectors to know which dimensions of P-E fit is more related with task performance and work engagement. This study aimed to assess the prevalence of dimensions of P-E fit in civil service sectors and its effects on job performance using the mediating effect of work engagement. The general objective of the study is to assess and examine the person – work environment fit on task performance mediated by work engagement in Ethiopian Civil Service Sector employees. The study tries to address the following specific objectives: (1) to examine the person – work environment fit in public sectors of Ethiopia; (2) to assess the possible relationships person – work environment fit, task performance and work engagement in public sectors of Ethiopia; and (3) to examine the mediating effect of work engagement on the relationship between P-E Fit and task performance.

This study will create a better understanding of how people interrelate with their work environment in public sector organizations and assists in the creation of appropriate policy and practice interventions to support the success of an organization. Moreover, this research study will also help for the theoretical and empirical developments of the fields.

2. Literature Review

The P-E fit refers to the relationship of compatibility or incompatibility that may exist between a person and the environment. The P-E fit theory has a long history that goes back to 1909 when Pearson first introduced the concept of “congruence” in vocational counselling (Sekiguci, 2004). Since then, the model has been further developed, improved, and expanded by many other scholars in order to accurately capture and explain how the interaction between personal characteristics and work environment influences each other.

Several P-E fit formulations have been proposed, the most widely known ones those of Dawis and Lofquist (1984); French, Rodgers and Cobb (1974); Levi (1972); McGrath (1976); and Pervin (1967). Contemporary P-E fit research is often traced to Parsons (1909) who developed a matching model to describe the fit between attributes of the person and characteristics of different vocations. Afterward, Murray’s need-press model and Lewin’s field theory largely contribute for the development of theoretical P-E fit research (Edwards, 2008).

For a long time, P-E fit has been discussed from the two perspectives of supplementary fit and complementary fit (Muchinsky and Monahan, 1987). Supplementary fit usually means that individuals and organizations have similarities in terms of goals, attitudes and values; for example, individuals and organizations deem that autonomy is of greater significance (Kristof, 1996). Complementary fit denotes that the resources owned by the individual or the organization are able to meet each other’s needs; for example, the skills possessed by the individual meet the requirements of the organization, or the resources provided by the organization meet the needs of the individual (Cable and Edwards, 2004). In a complementary fit, an employee adjusts the deficiencies of the organization or adds what is missing in it (Muchinsky & Monahan, 1987). Complementary fit is attained when a person’s abilities and skills meet the environment’s demands (abilities–demands fit); or when the environment’s resources fulfil a person’s needs (needs–supplies fit) (Caplan, 1987; Kristof, 1996).

The basic principle of person-environment fit (P-E fit) is based on Lewin’s Field theory, which states that an individual’s behaviours are the outcome of the interaction between individual and environment (Oh et al., 2014; Milliman et al., 2017). Mathematically, $B=f(P, E)$, where B is behaviour, f is function, P is person and E is environment. Some of the credit for the popularity of fit research comes from its historic roots. Specifically, fit is the manifestation of interactional psychology (Kristof-Brown, Zimmerman, & Johnson, 2005) as well as Lewin’s formula for human behavior, $B = f(P,E)$, where B refers to behaviours, which is a result of both the person (P) and the environment (E) (Lewin, 1943). Perhaps due in part to these roots, fit research has become “one of, if not the, dominant conceptual forces in the field” (Schneider, 2001)

The theoretical concept of P-E fit was first proposed by Plato (Kaplan 1950) and further developed by vocational psychologists such as Dawis, Lofquist (Dawis et al. 1964), and Holland (Holland 1959). The concept has its roots in the interactive perspective in psychology (Kaplan 1950), which recognizes that individuals’ attitudes and behaviours are determined jointly by their personal characteristics and their environments. In studies of PE fit, persons are operationalized

in terms of individual traits such as abilities or preferences. Environments usually refer to some characteristics of a setting such as demands or norms (Yang et al. 2008). The core premise of the PE fit theory is that when individuals and their environments are compatible, their attitudes and behaviours are likely to be positive (Kristof Brown et al. 2005). In contrast, PE misfit can generate dysfunctional attitudes and behaviours.

Theoretically, work engagement is linked to all kinds of positive outcomes for organisations. Engaged workers are full of energy, committed to the organisation and work hard, without developing work-related stress complaints. In this sense, engaged employees are not only productive, but their positive work attitude creates a positive atmosphere at work as well. There is some evidence that this positive atmosphere also positively affects others at work. Engaged workers are satisfied with their work and are less likely to leave their jobs. In the past decade research has focused on these effects of work-engagement. Several studies have found evidence for the positive effects of work-engagement on organisational outcomes. Work engagement appears to be related to better performance, psychosocial risks and job performance.

Research has revealed that engaged employees are highly energetic, self-efficacious individuals who exercise influence over events that affect their lives (Bakker, 2009). Because of their positive attitude and activity level, engaged employees create their own positive feedback, in terms of appreciation, recognition, and success. Although engaged employees do feel tired after a long day of hard work, they describe their tiredness as a rather pleasant state because it is associated with positive accomplishments. Finally, engaged employees enjoy other things outside work. Unlike workaholics, engaged employees do not work hard because of a strong and irresistible inner drive, but because for them working is fun (Gorgievski, Bakker & Schaufeli, 2010).

Individuals engaged in their work have a high level of energy, are passionate for their work, and are fully absorbed in their activities. Although the concepts of work engagement and P-E fit are somewhat interrelated, they are not synonymous. P-E fit is generally the compatibility between the individual and their environment but work engagement is whether the employee is actively involved in advancing organizational goals.

Work engagement has received considerable attention in recent times as a mediating construct linking P-E fit and positive workplace outcomes. Work engagement is “a positive fulfilling work-related state of mind characterized by vigour, dedication and absorption” (Schaufeli et al., 2006, p. 702). Highly engaged employees exhibit high-quality behaviours and performance (Muduli et al., 2016). Evidently, high work engagement results in greater profitability, shareholder returns, productivity, and customer satisfaction (Harter et al., 2002; Saks and Gruman, 2014). A growing body of research recognises work engagement as a key mediator of P-E fit- task performance models (Juhdi et al., 2013; Saks, 2006; Schaufeli and Bakker, 2004). Despite its importance, the mediating role of work engagement between P-E fit and task performance is scarcely explored.

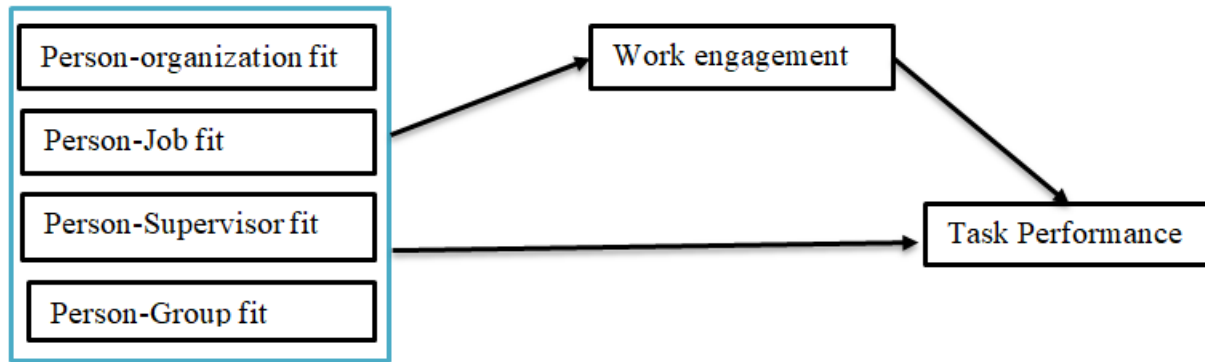


Figure 2.1: Conceptual framework of P-E fit, work engagement and task performance (Adopted from Xiong, B., 2015).

3. Methods

This research used a quantitative approach, as a process of data collection, interpretation, analysis, and report writing. The sample for this study was taken from the two administrative cities of Ethiopia. The sample is designed to provide estimates of task performance and person – environment fit indicators for the two administrative cities as a whole and for each of the two administrative cities separately. The target populations for this study was employed of civil servants (experts at different levels) of two administrative cities - Addis Ababa and Dire Dawa. The target organizations are government civil service offices – land administration, finance, trade, agriculture, investment offices/Bureaus. First, the sample was stratified into Addis Ababa and Dire Dawa cities and secondly, the offices categorized in to four offices (public relation and good governance; economic sectors; municipal services and social sectors). Based on the number of customers the offices serve and the availability of the offices from both administrative cities the following offices were selected at office level. From public relation and good governance - Public Service and Human Resource Management Bureau selected; from economic sectors - Finance and Economy bureau; Trade, industry and investment Bureau; Agriculture, Water, Mines and Energy Bureau; Land Development and Management Bureau and Road and Transport Bureau selected; from municipal services - Communication Affairs Bureau and city administrative office and from social sectors -Women’s and children’s Affairs Bureau; Health Bureau; Education bureau will be selected. Finally, a sample of employees (experts) was randomly selected to fill the survey questionnaire from the selected civil service sectorial offices/Bureaus.

To generate quantitative data the study will use survey design where samples of respondents will be drawn using appropriate scientific methods. A simple random sampling technique will be used in drawing the representative samples of the research. The nature of the data is cross - sectional whereby data and information will be collected from the field once and from the target civil service public service sectors. To achieve this, standard model questionnaires will be developed from different literature reviews and contextual to our study, along with a written description of why certain questions or sections have been included.

For this survey, a representative sample size has to be determined using variables for each objective and then the maximum sample size will be considered. The standard sample size formula is used to estimate the sample size using Cochran (1963) formula: the sample size is determined using population proportion formula with 95% confidence interval, using the following assumptions and parameters: Proportion of task performance on the person-environment fit study considered as 50%, 4.5% margin of error (since there is no study in Ethiopia in this area and so a representative sample has to be selected with minimum margin of error). Using the Cochran sample size formula with Deff of 2, a sample of 949 employees (experts at different levels) were selected and asked to fill the standardized self-report questionnaires related to P-E fit and its outcomes.

After the data collection process, the data were analysed using STATA and R software. First, in order to confirm the dimensionality of the questionnaire and to guarantee that each variable constituted an independent construct, an exploratory factor analysis was conducted. The Cronbach alpha was used to test the reliability of the factors. The spearman correlation was used to see whether any relation exists between the identified factors and the dependent variables. Finally, a structural equation model was used to examine the relationship among person-job (PJ), fit person-organization (PO) fit, person-group (PG) fit and person-supervisor (PS) fit, work engagement and task performance.

Data quality were measured both at the process and outcome levels of the study. At the process level, a number of actions were taken to ensure the quality of data to be generated. Well experienced and committed data collectors is recruited and given tailored training to make them become familiar with the study. The supervisors were committed themselves to directly involved in the field data collection process as well as monitoring enumerators. The collected data were further checked its reliability and validity using statistical techniques and through cross checking the responses from diverse respondents.

Reliability is defined as the quality of consistency or reliability of a study or measurement. Measuring instrument is reliable if it provides consistent results (Kothari, 2004). That means if the same or different researcher repeats the study it should produce more or less the same results at different times. An alpha Coefficient of reliability tests for the questionnaire will be made under each sub – scale and rearranged until it yields an acceptable result. A reliability coefficient (Cronbach's alpha) of 0.7 or higher is considered "acceptable" in most social science research (Cortina, 1993). In order to achieve validity, the researchers ensured the measuring instrument provides adequate coverage of the topic by containing an adequate representative sample of the all employees.

Inclusion criteria

The study sampled from all existing employees to participate in the survey while data collection. Employees were eligible to complete the survey if they had at least one year of experience and are currently employed and working in civil service offices during the data collection period. These pre-set criteria for participant eligibility were necessary to obtain rich and high-quality data from participants who had actually familiarized with his/her job, supervisors, groups and the

organization behaviours. Setting a baseline of a minimum of 1 year's work experience was an essential requirement as it was considered unlikely that employees with less than a year's experience would be in a position to speak confidently about his/her job and the organization he/she belongs to.

Operational definitions

- Fit - “similarity, congruence, alignment, agreement, composition, compilation, configuration, matching, and interactionist” between person and environment (Harrison, 2007).
- P-E fit – “the degree of compatibility or match between individuals and some aspect of their work environment” (Kristof-Brown et al., 2005; Milliman et al., 2017).
- P-J fit – Kristof (1996) identifies a job as “the tasks a person is expected to accomplish in exchange for employment, as well as characteristics of those tasks”
- P-O fit - the compatibility between people and organizations that occurs when: at least one entity provides what the other needs, or they share similar fundamental characteristics or both (Kristof, 1996).
- P-S fit – denotes the match between an individual and his or her supervisor in a work environment. But scant attention has been given for a person supervisor fit in research (Kristof-Brown et al., 2005).
- P-G fit - the match between individuals and their workgroups, usually on the basis of a shared psychological compatibility. P-G fit exists when one shares similar or complementary values as those of team members or a person has a work-related KSA (Seong, 2012).

4. Results and Discussion

4.1 Profiles of the respondents

The table 4.1 presents the detailed profile of the survey respondents. The participants were asked about their demographic information contains gender, marital status, position and highest education level.

The sample consists of 55.6% male and 44.4% female. Regarding the marital status of the respondents, 64.7% are married and 31.8 % are single. In terms of the employee position, 46.8% responded as they are senior expert, 34.1% middle level expert, 17.9% junior expert and only 1.2% is manager. Table 4.1 also shows that the majority of the respondents have BA/BSc Degree, which is 65.8%. About 23.6% of the respondents are MA/MSc and above MA/MSc degree holders and the rest 10.6% are diploma and below diploma holders.

Table 4.1: Profiles of the respondents

Profiles of the respondents		Count	Column N %
1. Name of Your City	Addis Ababa	595	63.2
	Dire Dawa	347	36.8
	Total	942	100.0
2. Sex	Male	519	55.6
	Female	415	44.4
	Total	934	100.0
4. Marital Status	Single	299	31.8
	Married	608	64.7
	Widowed	8	.9
	Divorced	24	2.6
	Total	939	100.0
6. Your Position in the organization	Manager	11	1.2
	Senior	441	46.8
	Middle level expert	321	34.1
	Junior	169	17.9
	Total	942	100.0
7. What is the highest level of education you have completed?	12th completed	4	.4
	Diploma	95	10.2
	BA/BSc Degree	611	65.8
	MSc/MA Degree and above	219	23.6
	Total	929	100.0

Source: Own Survey (2023)

4.2 Explanatory Factor Analysis

In order to confirm the dimensionality of the questionnaire and to guarantee that each variable constituted an independent construct, an exploratory factor analysis was conducted. To apply explanatory factor analysis, the adequacy of the sample size has to be checked and method of factor extraction and rotation procedures has to be explained. Exploratory factor analysis is a statistical method employed to increase the reliability of the scale by identifying inappropriate items that can be removed and the dimensionality of constructs by examining the existence of relationships between items and factors when the information of the dimensionality is limited. In this study, an exploratory factor analysis was conducted on the 24 items each with seven points Likert scale data from person-job fit, person-organization fit, person-group fit and person-supervisor fit question items with a non-orthogonal direct oblimin delta zero rotation method using SPSS and R software.

Research suggests that there is a tendency of people to over claim their knowledge to maintain a positive self-image and to show their competency to others (Atir et al., 2015). In many behavioural and organization research, it has been noticed that there is a discrepancy between the self-report measure (mostly exaggerated) and the actual measures. Due to these many respondents give a bias response to a self-assessed measure question item. Prior to the

analysis, the presence of method variance bias has to be tested using Harman's single-factor test. In Harman's single-factor test all variables in the study were entered into an exploratory factor analysis to examine the unrotated factor solution forced the algorithm to extract one factor. If the total variance extracted by one factor exceeds 50%, then there is a common method bias in the study. Table shows below that the total variance extracted by one factor is 33.5 % and this indicates that there is no substantial amount of common method variance present in the data.

Table 4.2: Total Variance Explained

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.711	36.296	36.296	8.040	33.501	33.501
2	2.581	10.756	47.052			

Extraction Method: Maximum Likelihood.

Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

It is mandatory assumption to test and examine the adequacy of the sample and the suitability of data to run factor analysis. Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy test and Bartlett's Test of Sphericity were executed to determine construct validity and to confirm that the data collected for an exploratory factor analysis were appropriate. The KMO test was used to verify the sampling adequacy for the analysis, and Bartlett's Test of Sphericity was used to determine if correlations between items were sufficiently large for explanatory factor analysis.

Table 4.3 presents KMO statistic and Bartlett's Test of Sphericity. The Kaiser (1974) recommends a bare minimum of 0.5 and that values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb (Hutcheson & Sofroniou, 1999). For these data the KMO value is 0.882, which falls into the range of being great, so the considered sample size is adequate for factor analysis. Bartlett's test of Sphericity (Bartlett 1950) provides a chi-square output value. The test of sphericity indicates a Bartlett's Test of Sphericity chi-square of 4300.225 and P-value =0.000 which is less than a significant value of 0.05. This indicates that the item correlation matrix is not an identity matrix. Both the assumption of sample size and correlation matrix are satisfied, now we can run a factor analysis for the collected data.

Table 0.3: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.889
Bartlett's Test of Sphericity	Approx. Chi-Square	7056.464
	df	276
	Sig.	.000

4.3 Factor Extraction and Retention

To determine the number of principal components and factors to retain three methods of factor retention method was used. The Kaiser criterion, acceleration method and Monte Carlo parallel analysis were applied. Studies show that the Parallel analysis is the most accurate and Kaiser Criterion is the old and poorest performance measure to determine the desired number of retention factors. Kaiser criterion tends to overestimate and acceleration factor – to underestimate the number of factors/ components. The parallel analysis shows fewer fluctuations in its accuracy and is more robust. To determine the number of factors to retain a screen plot graph was used. The scree plot is a graph of the eigenvalues against all the factors. From screen plot graph it is difficult to determine the exact number of retained factors even if the curve starts flatten on factor between 4 and 5 (Figure 4.1). Note also that there are 5 factors that have eigenvalue of greater than 1. To determine the retained number of factors further investigation is important.

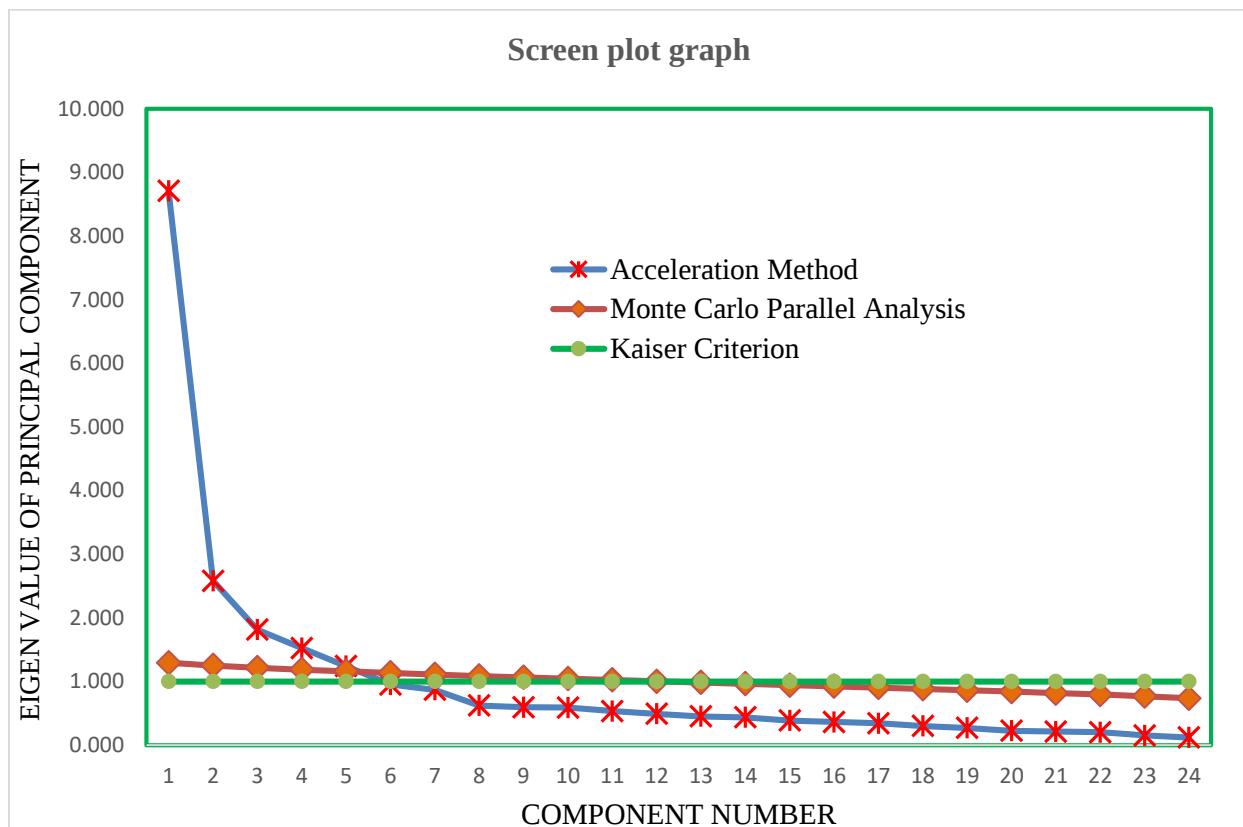


Figure 4.1: Screen plot graph

The scree plot depicts that there are five factors that has to be retained based on the eigen values greater than one. However, factor 5 contributes only small proportion on the total percentage of the eigen values. As mentioned above, the use of parallel analysis provides further evidence or a basis to decide the number of factors more easily. A parallel analysis is a more rigorous method, in which each eigenvalue (which represents the size of the factor) was compared against an

eigenvalue for the corresponding factor in many randomly generated data sets that have the same characteristics as the data being analyzed.

Table 4.4 presents the actual data and a simulated Monte Carlo parallel analysis result of the eigen values along with factors. The eigenvalues of the first five factors in the actual data is greater than the corresponding eigen values of the simulative data set. According to parallel analysis method a factor is considered valid if the actual eigenvalue exceeds the eigenvalue generated from the random dataset. The last factor consists of item 8 (My abilities fit the demands of this job), item 9 (I really fit this organisation) and item 10 (I feel that my personal values are a good fit with the value of this organization). These items have no meaningful interpretation related to the study. Therefore, in this research we discard the last factor even if it has an eigen value of greater than 1. At last, the research retained four factors that are important and relevant to the research question under investigation.

Table 0.2: Eigen Values of the Actual Data and the Monte Carlo Simulative Data

Factors	Actual Data	Monte Carlo parallel analysis Simulative Data
1	8.711	1.294670
2	2.581	1.250406
3	1.814	1.216713
4	1.526	1.186915
5	1.241	1.160252
6	0.952	1.134948

The percentages explained by each factor were 36.3% (factor 1), 10.8% (factor 2), 7.6% (factor 3), and 6.6% (factor 4). These four factors explained about 60.97% of the variance.

Total Variance Explained

Comp onent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.711	36.296	36.296	8.711	36.296	36.296	5.223
2	2.581	10.756	47.052	2.581	10.756	47.052	5.304
3	1.814	7.558	54.610	1.814	7.558	54.610	4.808
4	1.526	6.360	60.971	1.526	6.360	60.971	5.624

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

4.4 Factor analysis result

Finally, the exploratory factor analysis identifies four factors using a principal factor analysis and oblimin rotation matrices identified four factor structure. Based on the literature, the person-environment fit dimension is proxied by four major dimensions, namely, person-job fit, person-organization fit, person-group fit and person-supervisor fit. Accordingly factor 1 is named as person-organization fit, factor 2(person-group fit), factor 3 (person-group fit) and factor 4 (person-supervisor fit). Table 4.5 presents the factor analysis result with the list of the items.

Table 4.3: Factor Analysis Results

	Component			
	PO fit (4 item)	PJ fit (7 item)	PG fit (6 item)	PS fit (4 item)
My values match those of current employees in this organization.	.796			
My organization meets my major needs well.	.794			
I have affections and affinity for this organization.	.748			
This organization has the same values as I do with regard to concern for others	.610			
I am the right type of person for this type of work.		.815		
My job helps me to become the person I want to be.		.793		
My motivation for work stems from loving this job.		.757		
My job inspired me.		.719		
I am passionate about this job.		.665		
I want to go to work when I wake up from bed in the morning.		.517		
My personality is a good match for this job.		.477		
My skills and abilities match the skills and abilities this team			.866	
My ability level is comparable to those of my team members			.804	
My personality is well suited for the personality or image of this team			.767	
My personality is similar to the team members I work with			.680	
Employees of this organization can work in unity.			.559	
When making key decisions, my team members will consult me.			.478	
My Boss gives me authority to do my job.				.922
I can trust my boss to back me up on decisions I make in the field.				.907
My Boss is flexible about how I accomplish my job.				.897
My manager is supportive of my ideas and ways of getting things done.				.722

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 13 iterations.

The reliability test was conducted to check whether or not the respondents' scores on any item statement tend to be related to their scores on the others. According to George and Mallery (2003), Cronbach's (α) value the rules of thumb classification states that if $\alpha > 0.9$ – 'Excellent', if α is between 0.8 and 0.9 – 'Good', α between 0.7 and 0.8 – 'Acceptable', α ranging from 0.6 to 0.7 is 'Questionable', α ranging from 0.5 to 0.6 is 'Poor', and $\alpha < 0.5$ – 'Unacceptable'. Based on this, the Cronbach's alpha for the four indicators of person – environment fit was computed and the result is indicated in the table below (Table 4.6). As indicated in the Table 4.6, Cronbach's alpha for the four person – environment fit dimensions within the range of good (ranging from 0.8 to 0.9). This is the evidence to conclude the data is reliable.

Table 4.6: Reliability Statistics for person – environment fit

Fit Dimensions/Indicators	N of Items	Cronbach's Alpha
Person-job fit	7	0.847
Person-organization fit	4	0.854
Person-group fit	6	0.856
Person-group fit	4	0.898
Overall	21	0.914

4.5 Descriptive Statistics and Spearman Rank Correlation Coefficient

The study focuses on the effect of person- environment fit on work engagement and job performance. In this subsection, we analysed the basic job – environment factors that affect the job performance of the employees by using summary statistics and correlation of variables. As described above, the seven-point Likert type data is systematically estimated to obtain the mean and correlation for each factor in order to analyse the Likert scale data quantitatively. The correlation analysis by means of Spearman rank correlation coefficient r was conducted to test for the relationship between the dependent variable - job performance, the mediating variable - work engagement and the independent variables - Person-job fit, Person-organization fit, Person-group fit and Person-group fit. As indicated on the conceptual framework, public servants' performance is broadly determined by organizational and individual factors through attitudinal factors. The person-environment fit dimension is proxied by four major dimensions, namely, person-job fit, person-organization fit, person-group fit and person-supervisor fit. The seven-point Likert scale captures were used to measure the respondent's self-rated perceptions on their job performance and person environment fit. The seven-point Likert scale categorized as - strongly disagree (1), disagree (2), Somewhat Disagree (3), Neither Agree nor Disagree (4), Somewhat Agree (5), Agree (6) and Strongly Agree (7) with corresponding codes. Table 4.7 depicts that job performance has a significant and positive relationship with Work engagement, person-job fit, person-organization fit, person-group fit and person-Supervisor fit (with p -value <0.05). Pair-wise all the fit dimensions are significantly related with other (p -value <0.05). The mean score of the job performance and the person – environment fit for all dimensions are above the average score (average score =3.5).

Table 4.7: Descriptive statistics and spearman rank correlation

	Mean	SD	1	2	3	4	5	6
Job Performance	5.71	1.29	1					
Work engagement	4.44	1.31	.204**	1				
Person-job fit	5.23	1.25	.296**	.267**	1			
Person-organization fit	5.09	1.39	.198**	.270**	.460**	1		
Person-group fit	5.32	1.16	.333**	.284**	.347**	.448**	1	
Person-Supervisor fit	5.20	1.46	.300**	.288**	.378**	.433**	.473**	1

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

4.6 Structural Equation Modeling

Structural equation model analysis is conducted to test the hypotheses and to define the direction and magnitude of the effects. The results of the direct effect depict that Person-job fit, Person-group fit and Person-supervisor fit is significant factor of work engagement (p-value<0.05) whereas Person-organization fit is not a factor of work engagement of the employees. This means that work engagement of the employee is not affected due to the employee – organization fit. The direct effect of work engagement, Person-job fit, Person-group fit and Person-supervisor fit is a significant factor for job performance (p-value<0.05). Similarly, person-organization fit is not a significant factor for job performance of the employee.

Table 4.8: Structural Equation Modeling

Direct effects						
OIM						
	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
Structural						
Work Engagement						
PJF	.1479635	.0402447	3.68	0.000	.0690854	.2268416
POF	.0620504	.0406269	1.53	0.127	-.0175769	.1416777
PGF	.1620906	.0408243	3.97	0.000	.0820765	.2421048
PSF	.1261783	.0328037	3.85	0.000	.0618842	.1904724
Job performance						
Work Engagement	.0631634	.0329021	1.92	0.055	-.0013234	.1276503
PJF	.199756	.0399554	5.00	0.000	.1214449	.2780672
POF	.0184277	.0400864	0.46	0.646	-.0601403	.0969956
PGF	.1992911	.0405809	4.91	0.000	.1197541	.2788281
PSF	.1025592	.0325908	3.15	0.002	.0386825	.166436

Indirect effects							
OIM							
	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]		
Job performance							
Work Engagement	0	(no path)					
PJF	.0093459	.005492	1	.70	0.089	-.0014182	.02011
POF	.0039193	.0032792	1.20	0.232	-.0025078	.0103464	
PGF	.0102382	.0059238	1.73	0.084	-.0013722	.0218486	
PSF	.0079699	.0046399	1.72	0.086	-.0011241	.0170638	
Total effects							
OIM							
	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]		
Structural							
Work Engagement							
PJF	.1479635	.0402447	3.68	0.000	.0690854	.2268416	
POF	.0620504	.0406269	1.53	0.127	-.0175769	.1416777	
PGF	.1620906	.0408243	3.97	0.000	.0820765	.2421048	
PSF	.1261783	.0328037	3.85	0.000	.0618842	.1904724	
Job performance							
Work Engagement		.0631634		.0329021	1.92	0.055	-.0013234 .1276503
PJF		.2091019		.0397391	5.26	0.000	.1312147 .2869891
POF		.022347		.0401166	0.56	0.577	-.05628 .100974
PGF		.2095293		.0403114	5.20	0.000	.1305203 .2885383
PSF		.1105291		.0323916	3.41	0.001	.0470427 .1740155

5. Conclusion and Recommendations

5.1 Conclusion

This study investigated the relationship between P-E fit, work engagement and task performance in civil service employees. The study applied correlation and structural equation model. The spearman correlation result shows the Person-job fit, Person-organization fit, Person-group fit and Person-supervisor fit dimensions have a significant and positive relationship with employee work engagement and job performance. The structural equation depicts that civil service employees with higher person-job fit, Person-organization fit, Person-group fit and Person-supervisor fit dimensions are more likely to have higher work engagement and job performance. In contradict to the theory, in this study, the Person – organization fit does not affect the work

engagement of the employees and job performance. This might be the individual differences and unique organizational contexts which influences the relationship between P-O fit and the outcome. Future research in these areas should consider the specific individual differences and the organizational context to explore more about these intricate effects of person-organization fit on work engagement and job performance in the study.

5.2 Recommendations

This study employed a cross-sectional study design. To see the causal effect of person-environment fit on work engagement and job performance, a longitudinal study could have provided superior results. Future studies are recommended to employee longitudinal investigation to achieve superior results on the causality among constructs. The other limitations are the survey is based on self-reported data. There may be an exaggeration of knowledge on the given survey questions of perceptions. This chapter presents recommendation based on the research findings.

- A match of an individual's knowledge, skills, abilities, and other characteristics with the requirements of a particular job, then the employee will be more engaged in his/her work and this increase the job performance of the employee. Therefore, civil service office should focus on the person – job fit while recruiting the employee or assign a person that fits his/her jobs.
- Civil services office or employee of civil service has to give values for team work for a greater job performance and work engagement.
- Civil service managers should assign or revisit whether the employees fit with their supervisor because the good fit of these leads employee to engage in their work and for a better job performance.

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