

## CHAPTER 4

### DATA ANALYSIS AND RESULTS

#### 4.1 Introduction.

This chapter explains the results and findings of data analysis in detail. The analyses of all variables are described using descriptive statistics such as data screening, outliers, normality, and multicollinearity. As mentioned earlier, validity and reliability have been tested through EFA and CFA. This chapter interprets the measurement and structural models and the crucial role of main variables in this study, which includes IWE as endogenous variable and employee performance as exogenous and employee commitment as mediating variables.

The hypotheses are tested and reported based on the direct relationship among variables of IWE within the scope of employee commitment which related to their performance. Finally, the efficacy of the model and the validity of the proposed hypotheses are tested.

## 4.2 Data Screening

After gathering all the data, the researcher began to examine the data accordingly, where statistical analysis tools were used in testing the hypothesis of the study in order to achieve its goals. According to Chmielewski, M., & Kucker, (2020) the main aim of conducting data screening in any research is to avoid problem during data analysis and to ensure a quality in the model results.

Indeed, a good research should establish a proper data presentation, which is clean, reliable, valid, normal distribution, with a complete data value and without the presence of an outlier. Fundamentally, data must be recorded carefully to prevent errors during data entering. For this reason, the researcher has used the Statistical Package for Social Sciences (SPSS) version 25.0 to reveal values or data out range .

### 4.2.1 Missing Data Analysis

Missing value can be defined as loss of data due to errors in data entry, data collection, or unanswered questions by respondents. It is also considered as one of the most serious issues in data analysis and it occurs in answered questions survey when respondents did not complete the answers or left some or all items blanks (Zhang, Y., Zhou, B., Cai, X., Guo, W., Ding, X., & Yuan, 2021). However, 15-20 missing data rates were fairly common according to psychological and educational researchers (Dong and Peng, 2013).

According to Hair et al. (2010), if there was more than 50% value went missing, the particular item should be removed from the data. In addition to that, the total deleted data from the whole survey should not exceed 20%. Moreover, the missing value should be replaced so it would not affect (chi-square) and to ensure the data validity while maintaining fairness in the answers during the analysis process.

Based on the frequency test that was done in each variable, it was found that some of the questionnaires were unusable because of missing responses. Other than that, some questions in the survey were incomplete so as their answers in the questionnaire. Due to the incomplete questions and answers in some questionnaires, these responses were excluded from the data analyses, which resulted in the total of 273 usable responses out of 285. Hence, the total number of outliers was 12 cases with the reason primarily because of the z-scores were more than  $\pm 3$ . For that matter, those outliers were removed (285-12) so the number of usable responses left was 273.

#### **4.2.2 Normality and Outliers**

For the purpose of verifying and distributing normally and also to ensure that the data conform to the conditions of the use of exploratory factor analysis (EFA) and to ensure that the extremes values of outliers do not affect the results of the study test, the normal distribution test was used for the items of the study measures through the central tendency measures (mean, median, standard deviation Skewness and Kurtosis). The researcher has conducted Skewness and Kurtosis test to measure items of the study scale through central tendency.

Hair, Black and Babin (2010) stated that the degree of data distribution is expected to be normal. The value of skewness, and kurtosis, must be equal to zero in order to get a normal distribution. In contrast, there is an inconsistency with this argument because Rana et al., (2021) asserted that values should not be more than  $\pm 2.58$ . Furthermore, that distribution tends to tail off the right hence indicated that there is positive skewness. In contrary to skewness distribution, it is entirely opposite. According to Westfall (2014), he suggested that a peaked distribution led to a positive kurtosis value distribution, whereas flatter distribution indicates a negative kurtosis value.

When looking at the reputation of a normal distribution, it is fair to say that it is widely used in statistics. One of the best tests to measure whether the data set is distributed fairly or not, researchers must use standard deviation. It tells you how all samples are gathered and how the mean is calculated in a data set. Ibrahim et al., (2021) highlighted that the number of  $\pm 3$  indicates a normal distribution in the skewness value and  $\pm 7$  for value kurtosis too while Hair Black and Babin (2010a) confirmed that the data which are distributed naturally will obtain between (-2) and (+2) in the values of Skewness and Kurtosis, with that achieved, the values of the mean and median are very close.

As mentioned earlier, the values of Skewness, and Kurtosis, should be less than 3 Skewness for the survey questionnaire. Tables in appendix E show the values with less than  $\pm 3$  for Skewness and less than  $\pm 7$  for Kurtosis which indicate that both Skewness and Kurtosis are within the normal range. Hence, based on the results in appendix E, it is clear that the assessment of normality are distributed normally in this study.

This study also highlights the important approaches in handling outliers where the researcher has conducted an outlier test to obtain an accurate data. Mahalanobis distance approach was used to detect outlier. This type of distance evaluation is a standardized form of Euclidean distance (D2). It scales in terms of standard deviations, whereby this Euclidean distance (D2) standardizes the data with adjustments made for correlations between the variables (Hair et al., 2006). Detection of outliers is based on the argument that outlier cases are often for those whose D2 values are higher than the chi-square values ( $\chi^2$ ), considering to the number of items used. Twelve of the outliers shown in the table (see in appendix C) have proved that these items are higher than the maximum scale. Thus, respondents (1, 23, 15, 85, 111, 154, 88, 182, 255, 261, 266, 271) were removed from the analysis to reduce the analysis errors and increasing the

quality outcome of results (Aguinis, H, Gottfredson, R.K and Joo, 2013). After checking all the necessary, the original items were reduced, from 285 to 273 remaining cases to be analysed.

#### 4.2.3 Linearity

The term of scatter plot refers to a relationship between two variables. Therefore, the primary function of a scatter plot is to show the dotted line that is leaner. The researcher used SPSS version 25 to test the scatter plot residuals and the result of the test revealed that a straight-line association with dependent variable scores-mean of employee performance (Hair et al, 2010). In the normal situation of probability plot, the points should lie in a reasonably straight diagonal line from bottom left to top right (Bishara et al., 2021; Pallant, 2010). According to Figure 19, the result does not show any major problem in terms of normality.

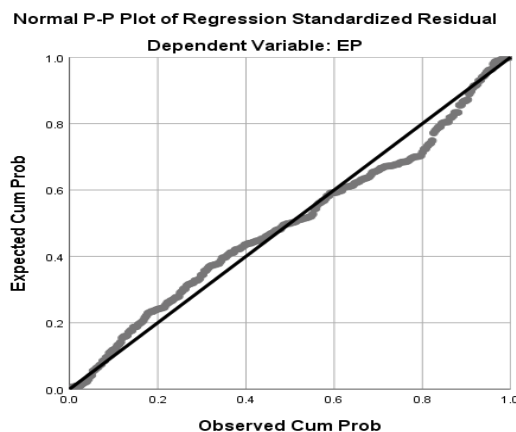


Figure 19: Scatter plot represents

Culpepper et al., (2021) and Hair et al (2010a) defined the assumption of normality as being related to “the supposition which dependent variable displays equal variance across several independent variables”. In this study, the result of the homoscedasticity test through scatter plot diagrams of the standardized residual shows that it exists in the set of the independent variable and the variance of the independent

variable response. Figure 20 below shows a visual inspection of the distribution of residual suggested the absence of homoscedasticity.

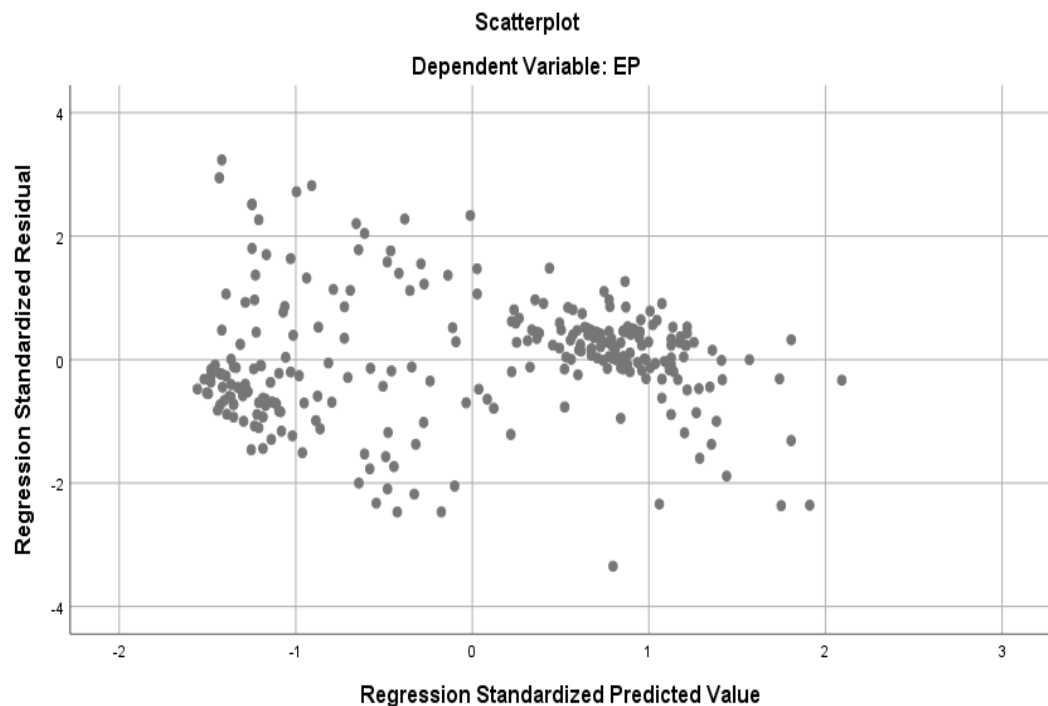


Figure 20: Residual

#### 4.2.4 Multicollinearity Test

The main objective for the multicollinearity test is to know to what extent the correlation among independent variables without explaining the independent variance variable. According to O'Brien (2007) who explained that the correlation among the independent variables should not be obvious. In contrast, the correlation between the independent variables on the dependent variable must be highly correlated.

If the correlation among the independent variable is above 80%, the probability of multicollinearity is high. Moreover, Hair et al. (2006) suggested that the value of variance inflation factor (VIF) must be less than 5, if more, it will lead to multicollinearity; thus will affect negatively on coefficients and p-values.

Table 13 shows the result of tolerance and VIF values without any significant multicollinearity among the independent variable. The result of tolerance values is above 0.2 and ranged between 0.636 to 0.395 and all VIF values are less than that, which is quite reasonable. Hence, the results are free from multicollinearity.

In summary, the researcher conducted a multicollinearity test on 273 questionnaires for the purpose of verifying the independence of the underlying factors of independent variables and the researcher found out from the results test that there was not any complete fusion among the independence of factors. This confirms that does not negatively affect the correlation coefficient (R), which is illustrated in the following Table 13 Multicollinearity test.

| <b>Variables</b>      | <b>Collinearity Statistics</b> |              |
|-----------------------|--------------------------------|--------------|
|                       | <b>Tolerance</b>               | <b>VIF</b>   |
| <b>HONESTY</b>        | .404                           | <b>2.478</b> |
| <b>ACCOUNTABILITY</b> | .450                           | <b>2.221</b> |
| <b>EFFORT</b>         | .395                           | <b>2.533</b> |
| <b>TEAM</b>           | <b>.636</b>                    | <b>1.572</b> |

#### **4.3 Demographic Profile and Response rate**

The respondents were medical professionals such as doctors, nurses, and pharmacists in the public health sectors from hospitals in the Kingdom of Bahrain and the study anticipated some of the problems and obstacles encountered during data collection. For instance, one main challenge was the respondents' lack of attention and awareness about the research issues.

Other than that, some of the respondents did not pay attention and did not give full cooperation when answering the questionnaire and some of them refused to complete and filling the questionnaire as prescribed. Moreover, some questionnaires

appeared to be incomplete as the respondents might not understand the subject. Therefore, they were considered under the category of unreturned and incomplete questionnaires. The survey was conducted from 5<sup>th</sup> of April 2019 to 13<sup>th</sup> of June 2019 (approximately nine weeks). The total number of distributed survey questionnaires was 370.

A total number of 370 questionnaires were distributed among the employees in public health sector in the Kingdom of Bahrain, which is larger than the recommended sample. Questionnaires were returned, which represented an approximately 73.7% of response rate. A total number of 26 incomplete questionnaires were considered as incomplete value thus excluded from the analysis.

The total number of unreturned questionnaires was 59, and 12 cases, were an outlier. Therefore, a total of 273 samples were usable. The total response rate was 73.7%. The sample size of n=273 was sufficient for this present study. Hair et al. (2010) mentioned that the missing data could be replaced by mean, provided that it is lower than 5% from the total data. Table 14 below illustrates the summary of data collection and response rate.

| <b>Responses</b>                           | <b>Total</b> | <b>Ratio</b> |
|--|--------------|--------------|
| <b>Distributed questionnaires</b>          | 370          |              |
| <b>Unreturned questionnaires</b>           | 59           |              |
| <b>Returned questionnaires</b>             | 311          | 84%          |
| <b>Uncompleted questionnaires</b>          | 26           |              |
| <b>Returned and entered questionnaires</b> | 285          | 77 %         |
| <b>Outlier</b>                             | 12           |              |
| <b>Usable questionnaires</b>               | 273          | 72.4%        |
| <b>Total Response rate</b>                 |              | <b>73.7%</b> |

Table 14: Summary of data collection and response rate



### 4.3.1 Respondent Profile

Table 16 shows that the participants were chosen from a total sample population of 9816 employees in public health sector in the Kingdom of Bahrain, the populations are from three professions, such as doctors, nurses and pharmacists. The survey was carried out from 5<sup>th</sup> of April 2019 to 13<sup>th</sup> of June 2019. A total of 370 questionnaires were distributed and only 273 questionnaires were returned. The final data used for analysis was 273 questionnaires. The response rate was 73%

Table 15: Respondent Profile

| Demographic Variables |                | N =(273)<br>Frequency | Percentage<br>% | Cumulative<br>Percent |
|-----------------------|----------------|-----------------------|-----------------|-----------------------|
| Gender                | Male           | 120                   | 44              | 100%                  |
|                       | Female         | 153                   | 56              |                       |
| Age                   | 20-25          | 52                    | 19.0            | 100%                  |
|                       | 25-30          | 152                   | 55.7            |                       |
|                       | 31-35          | 46                    | 16.8            |                       |
|                       | 35-40          | 4                     | 1.5             |                       |
|                       | 41-45          | 16                    | 5.9             |                       |
|                       | above 45       | 3                     | 1.1             |                       |
| Qualification         | Diploma        | 13                    | 4.8             | 100%                  |
|                       | B.s            | 209                   | 76.6            |                       |
|                       | Master         | 51                    | 18.7            |                       |
|                       | PhD            | 0                     | 0               |                       |
| Experience            | 1-5 Years      | 66                    | 24.2            | 100%                  |
|                       | 5-10 Years     | 126                   | 46.2            |                       |
|                       | 10-15 Years    | 49                    | 17.9            |                       |
|                       | 15-20 Years    | 28                    | 10.3            |                       |
|                       | above 20 Years | 4                     | 1.5             |                       |
| Professional          | Doctor         | 67                    | 24.5            | 100%                  |
|                       | Nurse          | 177                   | 64.8            |                       |
|                       | Pharmacist     | 29                    | 10.6            |                       |
| Total                 |                | 273                   |                 |                       |

### 4.3.2 Gender

Table 15 shows that the sample was mostly of female respondents (56%) in the participation of medical staff (doctors, nurses, and pharmacists) in public health sector

in Bahrain. It is also revealed that majority of the respondents were from female as well. Figure 21 illustrates the distribution of respondents by gender.

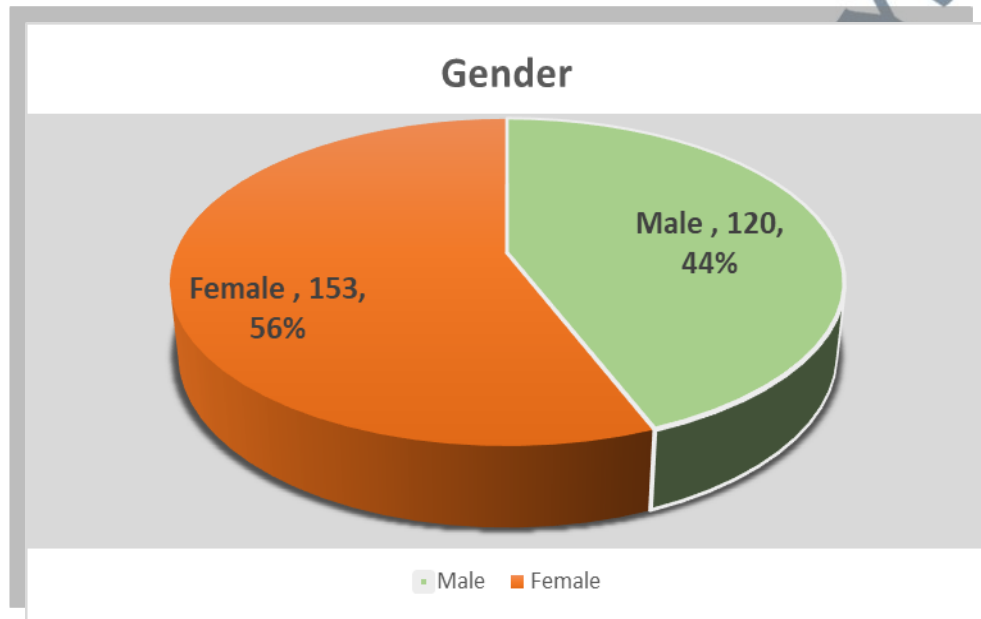


Figure 21: Distribution of respondents by gender

#### 4.3.3 Age

The findings further indicated that there were 52 (19%) respondents from the age range of 20 to 25 years, followed by 152 respondents from 25 to 30 years old (55.7.6%), which was the majority of respondents age, while 46% (16.8%) were from the age of 31 to 35 years, the next category, 35 to 40 years represented 1.5% only with four respondents, 41 to 45 years with 16 respondents (5.9%) and finally, above 45 years old category was the lowest with only 3 respondents, at 1.1%.

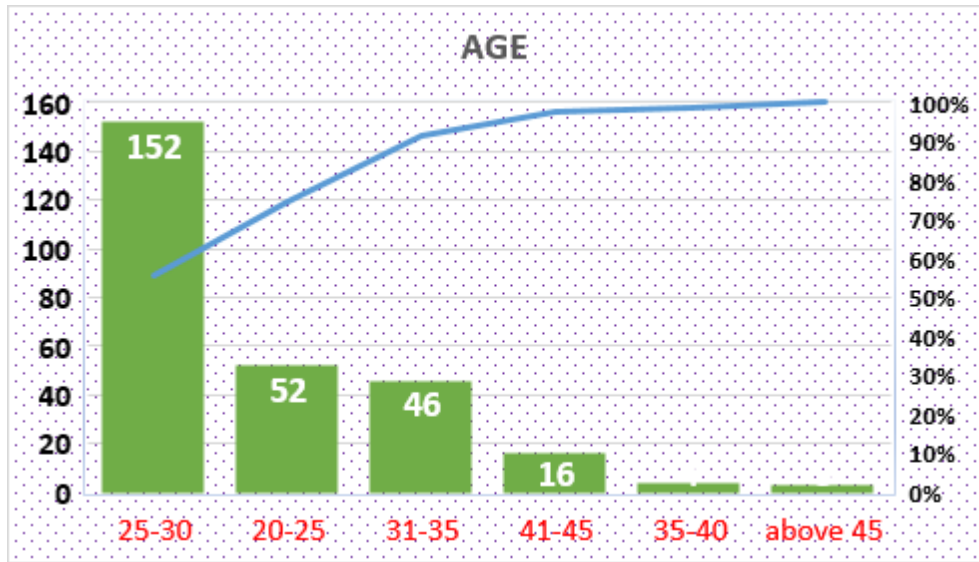


Figure 22: illustrates the distribution of respondents by age

#### 4.3.4 Qualification

Looking at the academic qualification background of the respondents, there are few categories i.e., diploma, bachelor's degree, master's degree and PhD. The total number of respondents with diploma is 11, all of them are the nurses where they represent the lowest proportion among the respondents by (4%) In contrast, those who hold bachelor's degree are 210 respondents, the majority at 76.9% followed by master's degree, 52 people (19%), while no one has a Ph.D. degree among the respondents. Figure 23 illustrates the distribution of respondents by academic qualification.

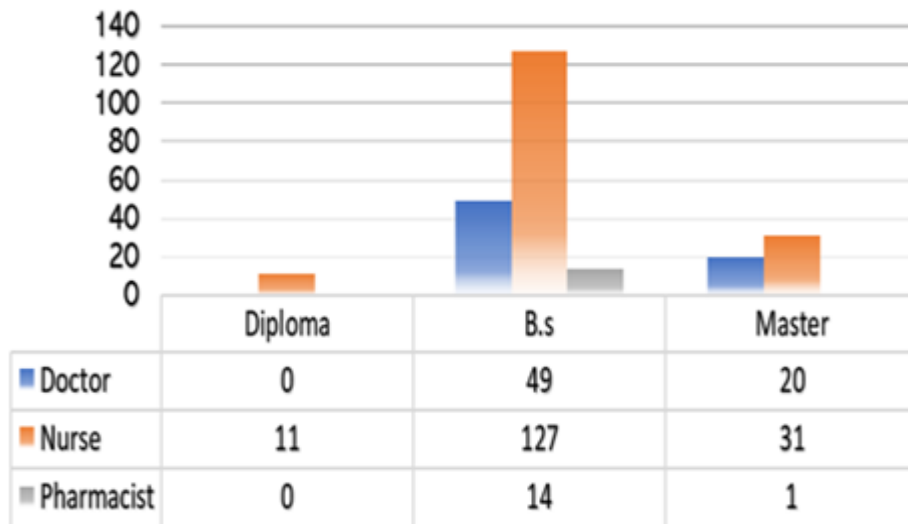


Figure 23: Distribution of respondents by academic qualification

#### 4.3.5 Experience

For working experience level among respondents, 66 respondents (24.2%) are in the category of 1 to 5 years, while 126 or majority of the respondents (46.2%) are in the category of 5 to 10 years experiences, 49 respondents have 10 to 15 years of experience (17.9.0%) and lastly, 28 respondents (10.3%) are with 15-20 years of experience.

In term of experience, the least number of respondents are the ones from the category above 20 years experiences, with only 4 respondents. Figure 25 illustrates distribution of respondents by experience.

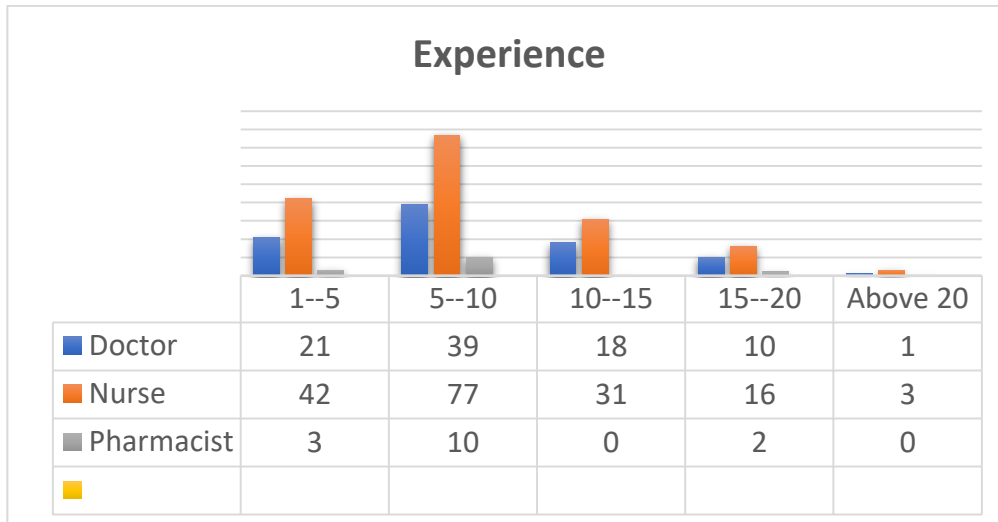


Figure 24: Distribution of respondents by experience

#### 4.3.6 Professional

The last variable in demographic profiles is the types of profession, such as doctors, nurses, and pharmacists. The range of professionals was divided into three groups. Firstly, doctors are represented by 89 respondents (32%). Secondly, nurses are represented by 169 respondents (61%), which are the majority of respondents. Finally, the lowest respondents are the pharmacists, with only 15 respondents (5.5%). Figure 25 shows distribution of respondents by professional.

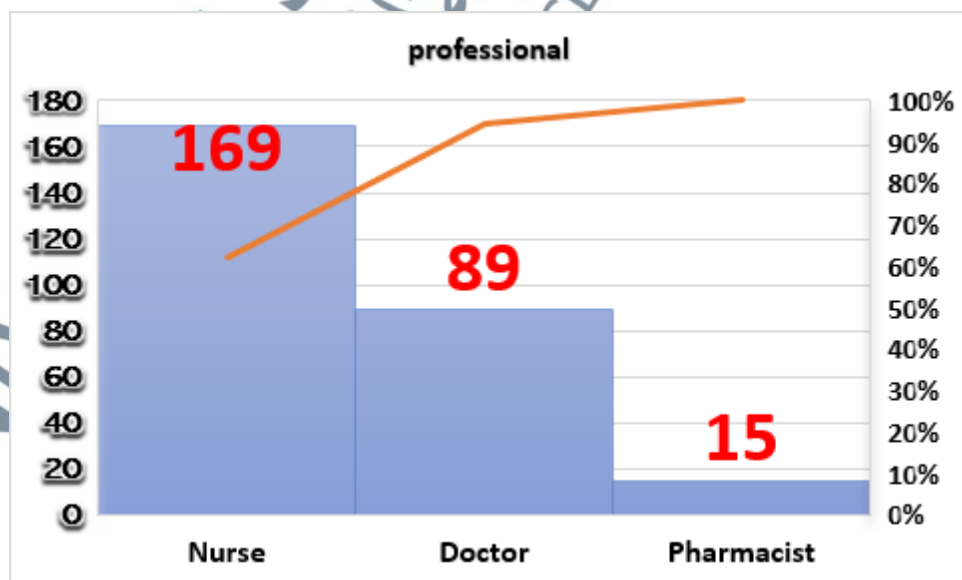


Figure 25: Distribution of respondents by professional.

#### **4.4 Descriptive statistics of Demographic Characteristics:**

##### **4.4.1 Background of the Respondents**

In this study, all the respondents are the employees of public health sector of the Kingdom of Bahrain. The table 15 shows the statistical, demographic characteristics of the medical staff in public health division in Bahrain, such as age, gender, professional among medical staff in Bahrain.

##### **4.4.2 Descriptive statistics of variables**

Krajcsi, (2017) argued that the main benefits from the descriptive statistic are through the useful summarise technique which can help the researcher to understand the research data better. These statistical methods are utilized to describe data numerically.

Evidently, in this study, all items have been analysed using descriptive analyses, including the three variables IWE, EC and EP. The descriptive statistic consists of mean and standard deviation of all attributes used in the questionnaire and descriptive statistic.

The measurement scales were calculated using mean and standard deviation (S.D). This current study has used a Five-point Likert scale ranging from “1” strongly disagree “2” disagree “3” neutral, “4” agree and “5” strongly agree. The study’s main objective is to explore the relationship of Islamic work ethics on employee performance among medical staff in the public health sector in Bahrain and describe the general situation of IWE, EC and EP from the respondents’ perspective, as shown in Table 17.

Table 16 indicates the average of the three variables' descriptive statistics, including IWE as an independent EC as mediating and dependent variable EP.

IWE consists of four dimensions: Honesty, Accountability, Effort and Team; with the mean are ranged from 3.03-3.272, while the average scale is 3.320. The highest mean in the dimensions of IWE is "effort" and the lowest is 3.272 for "teams". Based on the findings, the effort dimension appears as the strongest items. The values show that the capability to use the effort is the highest among the respondents in terms of IWE variable. Whereas the mediating variable has three dimensions: continuous commitment, normative commitment and effective commitment; the mean ranging from 3.035-3.020 with the average of scales 3.03, which reflected a moderate level among respondents from the table.

The final variable is EP consisting of two-dimension, which are contextual performance and task performance; the mean ranged from 3.614-3.475 and the average of scales is 3.544, the highest among variables. The employees' contextual performance (ECP) is the highest mean, with 3.614 out of a maximum of 5, making up at 72%. This is followed by access to employees' task performance (ETP) at 3.475, making up at 69% and accountability (Acc) is 3.38, with approximately 68%. The effort dimension of IWE is 3.309, with around 66%. A little different from the team items at 3.272 with 65%. Honesty (hon) is 3.181 among the other with 63%. The same situation could also be seen in both dimensions of mediation. Continues commitment (NCS) and normative commitment (NCS) both are around 3.309 with 61%. Finally, Affective commitment (ACS) mean is 3.02, with approximately 60% which is the lowest among other dimensions.

In summary, employee's contextual performance (ECP) has the highest mean of 3.614, with approximately 72% and the lowest affective commitment (ACS) mean is

(overall mean) 3.257 out of a maximum 5 or 65%. The result of the standard deviations (S.D) from the range 1.0345 to 1.044, the overall for all variables were 0.948. According to Hair et al. (2010), this situation is considered acceptable variability within the data set and it is seen as normally distributed. Moreover, the low standard deviation indicates that a large number of respondents have agreed with the statement.

Table 16: illustrates descriptive Statistics for all Variables.

| Variable                 | Demission      | Code | Mean  | S.D.   |
|--------------------------|----------------|------|-------|--------|
| Islamic work ethic(IWE)  | Honesty        | Hon  | 3.181 | 1.0345 |
|                          | Accountability | Acc  | 3.38  | 0.980  |
|                          | Effort         | Eff  | 3.309 | 1.004  |
|                          | Team           | Team | 3.272 | 0.592  |
| Employee commitment (EC) | Affective      | ACS  | 3.020 | 0.889  |
|                          | Normative      | NCS  | 3.035 | 0.875  |
|                          | Continues      | CCS  | 3.035 | 0.937  |
| Employee performance     | Task           | ETP  | 3.475 | 1.031  |
|                          | Contextual     | ECP  | 3.614 | 1.044  |

Key: HON: Honesty, ACC: Accountability, EFF: Effort, Team: Team, ACS: Affective commitment, NCS: Normative commitment, CCS: continuous commitment: ETP, employee task performance: ECP: Employee contextual performance.

#### 4.5 Exploratory Factor Analysis (EFA)

As mentioned earlier in Chapter Three, the questionnaire was adapted from previous studies and items were tested through factor analysis. The main objective of using Exploratory factor analysis (EFA) is to reduce the number of items and detect the relationship's structure among items Ledesma et al. (2021) mentioned that principal components extraction is used to conduct factor analysis based on varimax rotation.

EFA is defined as a statistical method which is aimed to confirm the construct validity of the scale by detecting a small number of latent variables that sufficiently represent the interplay between measured variables or observations so that each latent



variable represents the amount of variance shared between a number of measured variables (Kline, 2011b).

Moreover, Hair et al.,(2016) suggested that the purpose of using these factors is to studying the hypotheses proposed by the researcher, as EFA is also considered as a mathematical-statistical method that contributes to dividing the number of variables into groups, besides, it is an endeavour to reveal the relationship pattern between the apparent variables. In addition, the researcher relies on the results of numerous tests such as correlation matrix, Matrices Anti-image, Kaiser-Meyer-Olkin (KMO) and Bartlett's. These and other tests including their purposes will be explained in detail.

#### **4.5.1 Correlation Matrix between Variables**

The main purpose of conducting the Correlation matrix is to know whether the study variables have correlation coefficients between two items and to what extent. It is believed as the first step that the researcher must use in the factor analysis method (Flora and Flake,2017; Pallant, 2013). Moreover, the function of EFA is to explore the internal consistency of the items validated study measures. In fact, the correlation matrix indicates the extent of links or relationships among items that may be saturated in one common interest. Furthermore, in order to avoid any problem for example; a complete fusion among items of the scales, a strong correlation value between them must be 80% or more (Kline, 2011b).

Table 18 indicates that the highest correlation value is through the access to employee task performance and contextual performance with .778. This is followed by a response to Continuance Commitment and a team with 772 and the p-value is 0.000. In contrast, the lowest correlation among variables is honestly followed by normative commitment with 0.451. The results of the correlation matrix show that the values of correlation are

less than 0.80 and range between 0.778 and 0.451 where Kline (2011) stated that correlation coefficients between items must be between 30.and 90. Table 17 below presents the correlation matrix between the latent variables.

Table 17: Correlation Matrix among the Constructs

| Items | HON   | ACC   | EFF   | TEAM  | ACS   | NCS   | CCS   | ETP   | ECP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| HON   | 1.000 |       |       |       |       |       |       |       |       |
| ACC   | .695  | 1.000 |       |       |       |       |       |       |       |
| EFF   | .710  | .666  | 1.000 |       |       |       |       |       |       |
| TEAM  | .503  | .495  | .581  | 1.000 |       |       |       |       |       |
| ACS   | .503  | .495  | .581  | .643  | 1.000 |       |       |       |       |
| NCS   | .451  | .468  | .619  | .678  | .678  | 1.000 |       |       |       |
| CCS   | .570  | .455  | .555  | .772  | .772  | .650  | 1.000 |       |       |
| ETP   | .613  | .513  | .593  | .634  | .634  | .629  | .660  | 1.000 |       |
| ECP   | .548  | .481  | .531  | .584  | .584  | .596  | .609  | .778  | 1.000 |

Source: Computed Data Analysis

Key: HON: Honesty, ACC: Accountability, EFF: Effort, Team: Team, ACS: Affective commitment, NCS: Normative commitment, CCS: continuous commitment: ETP, employee task performance: ECP: Employee contextual performance.

#### 4.5.2 Anti-image correlation matrix

An anti-image matrix was conducted to ensure that each item in the questionnaire has an anti-image correlation, either in partial or total correlation. The main objective of the anti-image correlation matrix test is to assess the quality of each item separately and to ensure the correlation level with the score goal is 1 or close to 1. All in all, the correlation must be higher than 0.50. in contrast, any items lower than 0.50 must be deleted to increase the proportion of variance explained.

In this present study, the researcher has determined that the proportion of the test should be 0.50. Hence, there was no item that should have less than the percentage of

0.50. This confirms that the Anti-Image correlation matrix of this study has high quality and is suitable for CFA. The table 18 below illustrates anti-image figures.

Table 18: Anti-image

|             | HON               | ACC               | EFF               | TEA               | ACS               | NCS               | CCS               | ETP               | ECP               |
|-------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>HON</b>  | .579 <sup>a</sup> |                   |                   |                   |                   |                   |                   |                   |                   |
| <b>ACC</b>  | .542              | .508 <sup>a</sup> |                   |                   |                   |                   |                   |                   |                   |
| <b>EFF</b>  | .607              | .569              | .636 <sup>a</sup> |                   |                   |                   |                   |                   |                   |
| <b>TEAM</b> | .661              | .619              | .693              | .755 <sup>a</sup> |                   |                   |                   |                   |                   |
| <b>ACS</b>  | .661              | .619              | .693              | .755              | .755 <sup>a</sup> |                   |                   |                   |                   |
| <b>NCS</b>  | .606              | .567              | .635              | .692              | .692              | .634 <sup>a</sup> |                   |                   |                   |
| <b>CCS</b>  | .637              | .597              | .668              | .728              | .728              | .667              | .701 <sup>a</sup> |                   |                   |
| <b>ETP</b>  | .635              | .595              | .666              | .725              | .725              | .664              | .699              | .696 <sup>a</sup> |                   |
| <b>ECP</b>  | .598              | .560              | .626              | .682              | .682              | .625              | .657              | .655              | .616 <sup>a</sup> |

Key: HON: Honesty, ACC: Accountability, EFF: Effort, Team: Team, ACS: Affective commitment, NCS: Normative commitment, CCS: continuous commitment: ETP, employee task performance: ECP: Employee contextual performance.

#### 4.5.3 Communalities

Communality can be defined as the ratio of the participation or prevalence of each item in the composition of the latent factor, which will be determined by loading variables. Moreover, the communality level must be more than 0.50. and not to be a wide range (Osborne 2014; Pallant, 2013) Looking at the an appendix E, it clearly depicts that all the items are with the scale above 0.050. Consequently, all items are valid for CFA. See an appendix E

#### 4.5.4 KMO Results

During the analysis stage, the researcher had tested the Kaiser-Meyer-Olkin test (KMO) to ascertain whether the items were sufficiently predicted by each factor and to measure of sampling sufficiency, capability, suitability adequacy and Bartlett's test of

sphericity. Kaiser (1974) mentioned that KMO measures are based on their closeness to one as magnificent, which is deemed as perfect for an acceptable.

Kaiser-Meyer-Olkin test (KMO) recommends that the value above or around 0.90 is considered as adorable if it is between 0.80 and 0.70; consider an acceptable or middling value; if the value 0.60 it considers as mediocre; a value of 0.50. and below is not acceptable and deemed miserable.

Table 19 indicates that Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is (.954), the results indicate sufficiency if they achieve above than recommended 0.50 while Bartlett's test at the level of significance at (000) or (that is  $p < 0.01$ ). Moreover, the chi-square test is 13432.720, which portrays as significance, and other variables that have highly correlated. Based on these results, the model has demonstrated high capabilities of the overall quality. Therefore, the sample is valid and suitable for an EFA test.

Table 19: KMO and Bartlett's Test

| <b>KMO and Bartlett's Test</b>                          |                           |                  |
|---|---------------------------|------------------|
| <b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b> |                           | <b>.954</b>      |
| <b>Bartlett's Test of Sphericity</b>                    | <b>Approx. Chi-Square</b> | <b>13432.720</b> |
|   | <b>df</b>                 | <b>1485</b>      |
|   | <b>Sig.</b>               | <b>.000</b>      |

#### 4.5.5 The variance of Extracted Factors

The use of variance of extracted factors is to determine the number of items in the factor analysis. The contrast ratio is considered as a percentage of the variations extracted from the factors. Moreover, the maximum variance for each variable is 1.0.

An eigenvalue can be defined as the variance proportion that is explained through the extracted factor. The following table shows the total (Proportion of Variance Explained). It consists of two parts: the first represents the primary eigenvalue (the eigenvalue in each element and the other proportion shares each element to the interpretation of the total variation and a cumulative ratio.

It is clear that the factor analysis for all variables indicate nine aspects with an eigenvalue greater than one, and the proportion of the participation of the total variance has reached 72% and this indicates that the survey of the questionnaire has explained the proportion of 72%. Comrey and Lee (1992) stated that the formula in interpreting loadings as: .71 as excellent, .63 = very good, .55 = good, .45 = fair and the last one .32 = poor. Therefore, the result indicates a high proportion in the human sciences, the correctness of the measurement, validity and stability of selected items. The proportion of the participation of each variable is presented as follows. See appendix E.

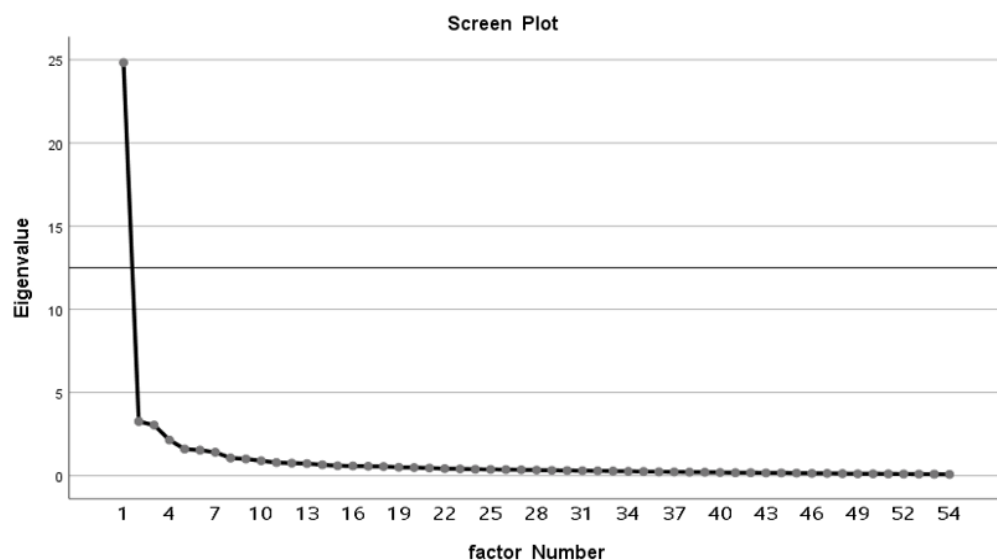


Figure 26:Screen Plot

A screen plot represents eigenvalues on the y-axis while the number of factors on the x-axis. Henderson, (2017) cited that the screen plots graph's main point is to know

how many components eigenvalues more than 1.0. And to know the number of factors related to this measure and quality.

The point of interest in the graph happens when it slopes downward. Once the curve slopes, it obviously means levelling off (the “elbow”), which reveals a number of factors should be generated by the analysis. In other words, it is halting the choice of component and starts extracting them from the point in which the line appears to fade until it becomes horizontal. The graphic shows the existence of nine dimensions of the scale of the study variables, as shown by figure 29 screen plot.

One may distinguish the items that correspond with certain factors by simplifying the interpretation process in terms of the emergent factor and minimize the number of variables with high loadings on each factor. The researcher had used the SPSS software by starting loading patterns before undertaking the CFA process. After the process, EFA had excluded 6 items and there were 54 items in the questionnaire that were used to determine the relationship of this study.

Table 20: Summary of Items Dropped in Exploratory Factor Analysis (EFA)

| Variable     | The original number of items | No. of items dropped | Final EFA number of items | Descriptions of items dropped               |
|--------------|------------------------------|----------------------|---------------------------|---|
| IWE          | 23                           | 6                    | 17                        | -<br>HON5,HON6<br>TEAM 5,TEAM6<br>ACC4,ACC5 |
| EC           |                              | 0                    | 18                        |   |
| EP           | 19                           |                      | 19                        |   |
| <b>Total</b> | <b>60</b>                    | <b>6</b>             | <b>54</b>                 |   |

Key:IWE : Islamic work ethics, EC: employee commitment ,EP: employee performance.

#### 4.5.6 Factor Loading Results

According to the table, the first construct is the first dimension of employee performance, i.e., employee task performance (ETP) and it has contained ten items including the factor loading for above than recommended cut-off value of 0.50 and these are the items: (ETP1, ETP2, ETP3, ETP3, ETP4, ETP5, ETP6, ETP7, ETP8, ETP9, ETP10), followed by one of Islamic work ethics dimensions i.e., effort including six items and the factor loading for them is fairly satisfied and over than 0.05 and these items are (EFF1, EFF3, EFF2, EFF4, EFF5, EFF6).

The next dimension of the dependent variable is called employee contextual performance (ECP); it consists of nine items (ECP1, ECP2, ECP3, ECP4, ECP5, ECP6, ECP7, ECP8, ECP9) all loading factor of the item is above 0.50, which is acceptable, Access in Affective commitment (ACS), which is the first construct of three components of mediating variable and involved six items (ACS1, ACS2, ACS3, ACS4, ACS5, ACS6) all factor loading is above than recommended 0.50.

The second component of mediation variable that followed is called normative commitment (NCS) which contains six items (NCS1, NCS2, NCS3, NCS4, NCS5, NCS6), factor loading of them are accepted as they meet the recommended last dimension of mediation variable called as continues commitment and it has six items (CCS1, CCS2, CCS3, CCS4, CCS5, CCS6), the factor loading of the six items is above the range over than the level of recommended 0.50., as followed by one of the dimensions of the independent variable (IWE), this factor is called teamwork (Team) with only four items (TEAM1, TEAM2, TEAM3, TEAM4) these items are fairly enough in term of factor loading, a similar situation which can be seen in the next factor or dimension of independent variable honesty (Hon); which also has the same items with the previous factor four items (HON1, HON2, HON3, HON4.). These items have similar factor

loading and the last and the lowest factor loading among these nine factors belong to the independent variable called Accountability (ACC) and it consists of only three items (ACC1, ACC2, ACC3), one of these items is lower than 0.50, but it can be acceptable as long as it does not affect the validity (Hair et al., 2016).

A table in appendix E illustrates the component with several strong loadings and all variables loading substantially on their component for constructs of independent and dependent variables. All loadings of the items are satisfactorily higher than the recommended cut-off value of 0.50, illustrating convergent validity and ranged between 0.762 and 0.478. An Appendix E indicates the factor loading for all items. See Appendix E.

#### **4.6 Confirmatory Factor Analysis (CFA)**

According to Hair et al. (2010) who cited that CFA is considered as the key component of SEM, for verifying and confirming the validity of the existence of factorial structures. CFA aims to examine the evidence of construct validity of the scale or questionnaire, based on the existence of a prior scientific theory, or based on the results of EFA and scientific literature. Therefore, CFA is an advanced statistical method to verify the accuracy of the questionnaire.

Construct validities consist of convergent validity and discriminant validity. Furthermore, CFA also aims to test a powerful theory that assumes the existence of concepts or underlying factors. The underlying factor indicates that it is a hypothetical, theoretical concept that is measured by items. This factor is studied well first according to previous studies or prior literature. For example, an Islamic work ethics is an underlying hypothetical, theoretical concept that is measured by four factors “honesty,



accountability, effort, team.” These four factors are underlying theoretical variables that are measured by means of the items that represent each factor.

For this matter, the researcher has applied EFA test and sorted the results to ensure that all components became compatible, and eligible to meet the requirements for constructs validity, in addition to it, the researcher has also conducted CFA to confirming the validity of measurements model.

CFA has multi-function tests such as removing any item or latent variables that are not meeting the requirement value standards and accepting only the items loading value factor exceeded 60% to examine items measurement relationship and the latent factors. Moreover, the loading factor with value more than 0.40 can be accepted when the number of the respondent is more the 300 (Hair, Black, Babin anderson, and Tatham, 2006).

#### **4.6.1 Goodness-of-Fit of the Model**

##### **4.6.1.1 The goodness of Fit Index (GOF)**

The goodness of Fit Index (GOF) is considered as one of the best indicators of the correlation, indicating the value of the variance that the supposed model interprets. In other words, the extent to which the model assumed by the researcher to provide information, correlation, the relationships, and the case model similar to the study population. According to Hair et al. (2006) (GOF) was defined as “the degree to which the actual or observed input matrix is predicted by the estimated model, there are three types of GOF indicators: absolute fit indices, incremental fit indices and parsimonious fit indices.

The stander value of (GOF) is between zero and one; in other words, once the value is closer to one that is indicated, that implies a good model fit, while if the value

is closer to zero, it is indicated as a bad model fit of the supposed model. Generally, the specific and clear criterion for the level of the GFI and the AGFI indicator should be equal to 0.90 and above.

#### 4.6.1.2 Chi-squared test $\chi^2$

Chi-squared test  $\chi^2$  indicates the difference between the assumed model and the actual model through the ratio of (p). if the value of p is less than 0.5, then it indicates that there are no differences between the assumed model of the study and the collected data. Chi-squared test  $\chi^2$  can significantly influence if the sample is exceeding 200 respondents. On the contrary, the small size of the sample does not affect and the easy to be accepted model; even in the case of incompatible and harmonious sample in the study data (Kline, 2011a) Chi-squared test  $\chi^2$  is very difficult to rely on because there are some negative points which are sensitive to the value of correlation coefficient. The higher correlation automatically leads to a higher value of the Chi-squared test  $\chi^2$ . Therefore, it is preferable to use other indicators with the Chi-squared test  $\chi^2$  to come up with better results.

#### 4.6.1.3 Relative or Normed Chi-Square

As a matter of fact, the Relative or normed Chi-Square test is used to indicate the quality of conformity for the large sample size especially when the researcher is not keen to compare different structural models of the same data. In fact, it is the result of relative or normed Chi-Square test after dividing the Chi-squared test  $\chi^2$  on the degrees of freedom (DF); if it is less than five, it indicates acceptance model. Furthermore, the best value and perfect indicator of the Relative or the normed Chi-Square test is less

than two and this result is considered as a model that fit the data. Other indicators advised being used since the normed Chi-Square test affected by size.

#### **4.6.1.4 Comparative Fit Index (CFI)**

Comparative Fit Index (CFI) is considered a good match indicator used in comparing between the theoretical and hypothetical model. On one hand, it emphasizes the existence of a relationship between variables and the null hypothesis model while on the other hand emphasizes the absence of a relationship or correlations. Comparative Fit Index (CFI) value is ranged between (1,0). This value is shown to be a good match between the assumed model and sample data. A value greater than .90 indicates a good fit of the model with the data.

#### **4.6.1.5 Tucker-Lewis Index (TLI) or Non-Normed Fit Index (NNFI)**

The Tucker-Lewis Index is also called the Non-Normed Fit Index. The main objective is to use this indicator when the model is complicated thus compensate for the complexity of the assumed model by adding estimated value through parameters. TLI value should be 0.90 or greater than that in order to match the assumed model.

#### **4.6.1.6 Incremental Fit Index (IFI)**

The researcher used the Incremental Fit Index (IFI) to elucidate how far the suggested model fits or matches zero models. Kline (2012) mentioned that the value of the Incremental Fit Index (IFI) must be 0.90 or greater to accept the model.

#### **4.6.1.7 Root Mean Square Error of Approximation (RMSEA)**

The researcher used Root Mean Square Error of Approximation (RMSEA) to show how the quality of the assumed model matches the study data because (RMSEA)

has enough capability to determine the amount of error in the model as the level of variation from the other criteria. Furthermore, it measures the difference between the data variance matrix and the variance matrix of the assumed model. The value 0.05 of RMSEA index is considered as a perfect model that matches the study model, whilst the range between 0.50 and 0.08 of RMSEA index indicates a limited match between the proposed model and the actual model of the study data. Nevertheless, RMSEA ranges between 0.08 to 0.10, indicates the presence of insufficiency of the model and, therefore, the match is insufficient. The worst value of RMSEA can lead to rejecting the model if it is higher than 0.10.

Kline, (2011a) cited that the zero value in RMSEA index optimal match and the greater the value of the index, the lower it is in the quality of the model. For more details regarding Goodness of Fit Statistics and Acceptable Cut-off Criteria, see appendix F.

Table 21: Recommendation Values of Measurement Variable

| Indictors                       | Acceptable value |
|---------------------------------|------------------|
| <u>Absolute Fit indices</u>     |                  |
| Chi-square                      | Less than 5      |
| Normed $\chi^2$                 | Less than 0.10   |
| CMINDF                          |                  |
| <u>Incremental Fit Indices</u>  | More than 0.90   |
| CFI                             | More than 0.90   |
| IFI                             | More than 0.90   |
| TLI                             | More than 0.90   |
| GFI                             | More than 0.90   |
| AGFI                            |                  |
| <u>Parsimonious Fit Indices</u> |                  |
| RMSEA                           | Less than 0.08   |
| P-value                         | More than 0.05   |

#### 4.6.2 Confirmatory Factor Analysis of the Independent Variable Islamic Work Ethics

According to EFA results, which have explained the validity of the structural equation of the latent factors of the independent variable IWE (IWE), the researcher realizes the quality of the correlation between these inherent dimensions through the CFA and ensures that the measure of Islamic work ethics is free of the Illogical Correlation, which equals one or more and this confirms that the measure of IWE is free from any defects or problems in the CFA.

Furthermore, this analysis confirms that the measure of Islamic work ethics is free of the irrational correlation. This proves that the measure of IWE does not have problems in the CFA, which is a four-dimensional scale (teamwork, honesty, effort and accountability). In respect of the measurement model for use in IWE, most of the indices showed achievement of a good fit as per recommended values (Hair et al., 2010b). Figure 27 and Table 23 illustrate indicators of Islamic work ethics which are among the criteria identified by the researchers, whereby indicate that the model is consistent with the study data. The result values of chi-square ( $\chi^2$ ) is = 221.678, degrees of freedom= 84, ratio-  $\chi^2/df$ = 2.678 less than 5; this indicates that there are no differences between the model of Islamic work ethics as an independent variable and study data.

The level of significance is clearly affected by the sample size. Therefore, the researcher ought to rely on other indicators. In general, this result is a signal that the model is fit to the study data (Hire et al., 2012), while the value of GFI= .905 and AGFI=.865, which is considered as a good fit for the study. CFI = .954, which indicates the perfect match where the statisticians have mentioned that the exact match happens when the CFI range is between (0.90 – 1), while the result of TLI test get = .957, which is higher than recommended (90) and RMSEA = .078 less than .080 is considered a

good fit since the statisticians point out that RMESA value must be less than .08 in order to match condition between the assumed model and the study data (Hair et al., 2006). Moreover, all correlations among four values (teamwork, honesty, effort and accountability) dimensions are statistically significant since the P-value (0.000), which is less than 0.05.

Furthermore, as shown in Table 24, the factor loadings between Islamic work ethics and its four items i.e., effort, honesty, team and accountability) are statistically significant and factor loading. It is acceptable since the range is from 0.58 to 0.91. These show a good efficacy to measure the constructs with the value of average variance extracted (AVE) exceeding 0.50 and the composite reliability (CR) achieving acceptable values; above 0.70 (Hair et al., 2010). Based on these results, the researcher concludes that the model of IWE with their four items is totally identical with the study data.

Table 22: Results of fit indices for CFA-IWE

| Mode fit index | Hypothesized Model | Recommended Values | Comments |
|----------------|--------------------|--------------------|----------|
| CMINDF         | 2.639              | Less than 5.0      | Achieved |
| IFI            | .954               | More than 0.90     | Achieved |
| CFI            | .954               | More than 0.90     | Achieved |
| TLI            | .942               | More than 0.90     | Achieved |
| P-value        | 0.000              | More than 0.05     | Achieved |
| RMSEA          | .078               | Less than 0.08     | Achieved |

**Chi- square = 221.678**  
**DF= 84**  
**CMINDDF= 2.639**  
**GFI= .905**  
**AGFI= .865**  
**P= .000**  
**CFI= .954**  
**TLI= .942**  
**IFI= .954**  
**RMSEA= .078**

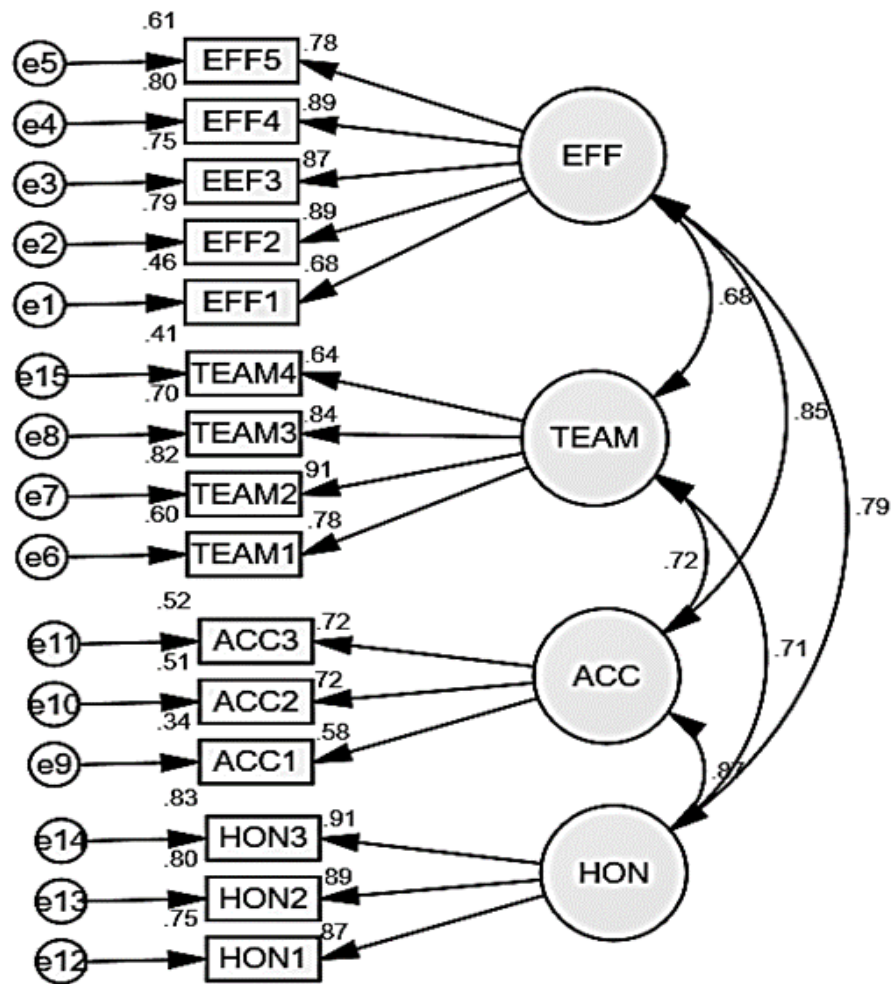


Figure 27: CFA for IWE

Key: HON: Honesty, ACC: Accountability, EFF: Effort, Team: Team work

Table 23: Standardized Measurement Coefficients IWE

|                                  | Effort               | Honesty | Team  | Accountability |
|----------------------------------|----------------------|---------|-------|----------------|
| Average Variance Extracted (AVE) | 0.784                | 0.793   | 0.732 | 0.755          |
| Composite reliability (CR)       | 0.914                | 0.920   | 0.872 | 0.714          |
| Item Abbreviation                | Standardized Loading |         |       |                |
| EFF1                             | 0.68                 |         |       |                |
| EFF2                             | 0.89                 |         |       |                |
| EFF3                             | 0.87                 |         |       |                |
| EFF4                             | 0.89                 |         |       |                |
| EFF5                             | 0.78                 |         |       |                |
| HON1                             |                      | 0.87    |       |                |
| HON2                             |                      | 0.89    |       |                |
| HON3                             |                      | 0.91    |       |                |
| TEAM1                            |                      |         | 0.78  |                |
| TEAM2                            |                      |         | 0.91  |                |
| TEAM3                            |                      |         | 0.84  |                |
| TEAM4                            |                      |         | 0.64  |                |
| ACC1                             |                      |         |       | 0.58           |
| ACC2                             |                      |         |       | 0.72           |
| ACC3                             |                      |         |       | 0.72           |

Note:: HON: Honesty, ACC: Accountability, EFF: Effort, Team: Team,

In this study, a researcher has conducted a Discriminant validity test and this test was done by comparing the square root of the AVEs with the correlation amongst those constructs. Since the value of AVE is higher than (0.50), which is ranged between (0.732) and (0.793), it is supposed to be greater than MSV, which ranged from (0.749 to 0.512). From the table results, it is clear that the AVEs square root is the highest inter-correlation between each construct with itself and the other constructs, with the support of a discriminant validity (Hu and Bentler, 1999). Hair et al. (2010) have mentioned that as the composite reliability (CR) value is greater than 0.70, that confirms the discriminant validity. Table 25 below illustrates the values.



Table 24: Correlations and Discriminant Validity Assessment for IWE

|             | <b>CR</b>    | <b>AVE</b>   | <b>MSV</b>   | <b>EFF</b>   | <b>TEAM</b>  | <b>ACC</b>   | <b>HON</b>   |
|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>EFF</b>  | 0.914        | 0.784        | 0.718        | <b>0.886</b> |              |              |              |
| <b>TEAM</b> | 0.872        | 0.732        | 0.512        | 0.847        | <b>0.856</b> |              |              |
| <b>ACC</b>  | 0.714        | 0.755        | 0.749        | 0.866        | 0.681        | <b>0.869</b> |              |
| <b>HON</b>  | <b>0.920</b> | <b>0.793</b> | <b>0.749</b> | <b>0.792</b> | <b>0.708</b> | <b>0.715</b> | <b>0.890</b> |

*Note.* Diagonal represents the square root of the average variance extracted, while the other entries represent the correlations estimate as Amos output.

#### 4.6.3 Confirmatory Factor Analysis of Employee Commitment

The EFA results show that there are three underlying (latent) factors in the employee commitment, affective commitment, continuance commitment and normative commitment. The underlying (latent) factor affective commitment is represented in five items, while the continuance commitment is represented in five items and normative in five items alike. The researcher used the CFA via the AMOS 21 program. Figure 29 shows the results of CFA for the mediator variable (employee commitment). The model is free from defect or irrational correlation, as shown in the figure

This confirms that there are no obstacles or irregularities in the CFA of the employee commitment model of three factors. Furthermore, all fit indices met the required criteria. This implies that there is a correlation between the employee commitment model and the study data. The measurement model of employee commitment (EC) shows values of chi-square ( $\chi^2$ ) =230.164 the ratio of the chi-square to the degree of freedom (normed  $\chi^2$ ) is 2.708, less than 5 and P = .000, which denotes that there is no difference between the employee commitment model and the study data thus indicates a good fit for study data (Hair et al., 2006). While the percentage of CFI = 0.960, whereas GFI=.907.and AGFA=.869, which meant a perfect match. The estimating values of both GFI, and AGFA, should be between 0-1. According to some

statisticians, a perfect match of CFI is ranged between (0.90 – 1), while the result of TLI = 0.950, which is higher than recommended and the value of RMSEA is 0.079, less than 0.08, these provide a good matching between the proposed model and the study data. All the ratios of (CFI = 0.960, TLI= 0.950, RMSEA =0.079 ) signify as good fit for data study (Schumacker and Lomax, 2004). However, in order to improve the fit indices, some items that do not meet the requirements of loading must be deleted, these items i.e., ACS6, NCS6, and CCS5. As shown in Table 27, the factor loadings between employee commitment and their three items (affective commitment, continuance commitment and normative commitment) are statistically significant and the factor loading. It was good and acceptable and ranged from 0.69 to 0.90. These imply a good efficacy to measure the constructs with the value of Average Variance Extracted-(AVE) exceeding 0.50 and the composite reliability (CR) achieving acceptable values, above 0.70 (Hair et al. 2010). Based on the results, three factors are well supported and they deem statistically significant. As shown in table 27

Table 25: Results of fit indices for CFA-EC

| <b>Mode fit index</b> | <b>Hypothesized Model</b> | <b>Recommended Values</b> | <b>Comments</b> |
|-----------------------|---------------------------|---------------------------|-----------------|
| <b>CMINDF</b>         | <b>2.708</b>              | <b>Less than 5.0</b>      | <b>Achieved</b> |
| <b>IFI</b>            | <b>.960</b>               | <b>More than 0.90</b>     | <b>Achieved</b> |
| <b>CFI</b>            | <b>.960</b>               | <b>More than 0.90</b>     | <b>Achieved</b> |
| <b>TLI</b>            | <b>.950</b>               | <b>More than 0.90</b>     | <b>Achieved</b> |
| <b>P-value</b>        | <b>0.000</b>              | <b>More than 0.05</b>     | <b>Achieved</b> |
| <b>RMSEA</b>          | <b>.079</b>               | <b>Less than 0.08</b>     | <b>Achieved</b> |

Table 26: Standardized measurement coefficients for employee commitment

|                                  | Affective commitment (ACS) | Continuance Commitment (CCS) | Normative commitment (NCS) |
|----------------------------------|----------------------------|------------------------------|----------------------------|
| Average Variance Extracted (AVE) | 0.746                      | 0.641                        | 0.779                      |
| Composite reliability (CR)       | 0.936                      | 0.898                        | 0.900                      |
| Item Abbreviation                | Standardized Loading       |                              |                            |
| ACS1                             | 0.81                       |                              |                            |
| ACS2                             | 0.87                       |                              |                            |
| ACS3                             | 0.89                       |                              |                            |
| ACS4                             | 0.90                       |                              |                            |
| ACS5                             | 0.85                       |                              |                            |
| CCS1                             |                            | 0.70                         |                            |
| CCS2                             |                            | 0.90                         |                            |
| CCS3                             |                            | 0.88                         |                            |
| CCS4                             |                            | 0.82                         |                            |
| CCS6                             |                            | 0.69                         |                            |
| NCS1                             |                            |                              | 0.78                       |
| NCS2                             |                            |                              | 0.91                       |
| NCS3                             |                            |                              | 0.88                       |
| NCS4                             |                            |                              | 0.71                       |
| NCS5                             |                            |                              | 0.70                       |

Key: ACS: Affective commitment, NCS: Normative commitment, CCS: continuous commitment

**Chi-squared = 230.164**  
**DF= 85**  
**CMINDF= 2.708**  
**GFI= .907**  
**AGFI= .869**  
**P= .000**  
**CFI= .960**  
**TLI= .950**  
**IFI= .960**  
**RMSEA= .079**

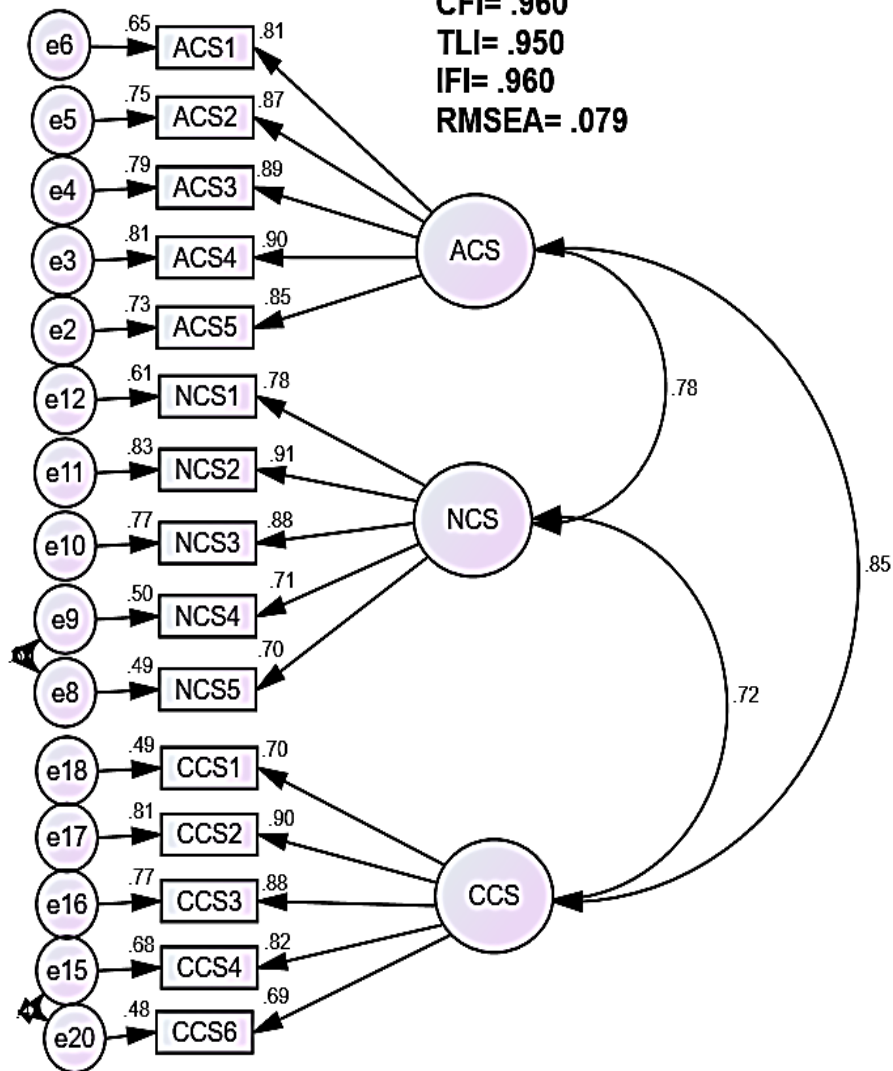


Figure 28 : CFA for employee commitment

Key: ACS: Affective commitment, NCS: Normative commitment, CCS: continuous commitment

Table 27: Correlations and discriminant validity assessment for employee

|     | CR    | AVE   | MSV   | ACS          | NCS          | CCS          |
|-----|-------|-------|-------|--------------|--------------|--------------|
| ACS | 0.936 | 0.746 | 0.718 | <b>0.864</b> |              |              |
| NCS | 0.898 | 0.641 | 0.605 | 0.724        | <b>0.801</b> |              |
| CCS | 0.900 | 0.779 | 0.718 | 0.847        | 0.778        | <b>0.883</b> |

*Note.* Diagonal represents the square root of the average variance extracted, while the other entries represent the correlations estimate as Amos output.

Table 28 above shows the result of AVE of each factor higher than (0.50), which represents its correlation square with the other factor, ranged between (0.779) and (0.641), which is greater than MSV, ranged from (0.718 to 0.605), Hair et al. (2010) have argued that as the composite reliability (CR) value is greater than 0.70, that confirms the discriminant validity.

#### 4.6.4 Confirmatory Factor Analysis of Employee performance

The researcher carried out the CFA using AMOS 21 based on the earlier results of EFA, which showed that the model of the dependent variable of employee performance consist of nineteen items in this study. The CFA results of EP scale depict achievement of a good fit as per recommended values (Hair et al., 2010). Figure 29 and Table 29, show the results of the CFA of the dependent variable employee performance. Based on the results in both Figure 29 and Table 29, it is obvious that the model is free of the irrational correlation, which reaches more than one.

This proves that there is no problem in the CFA of the nineteen -items model of employee performance with their dimension task and contextual performance. Furthermore, the results of CFA are in accordance with the required standards, which indicates that there is a correlation between the employee performance model and the study data where chi-square is ( $\chi^2$ ) = 351.183, degrees of freedom= 134, ratio-  $\chi^2/df$ =

2.621,  $P = .000$ , which is less than 5, meaning that there are no differences between the employee performance model and in the study data.

Since the level of significance is not constant or affected by the size of the sample, the researcher relies on more suitable indices, such as  $GFI=863$  and  $AGFI=826$ , which have achieved good results while the CFI has obtained a .949, which implies an excellent match, where some statisticians mentioned that the perfect match of CFI ranged between (0.90 – 1).while  $TLI = .942$  and  $RMSEA = .077$  less than .080 which is considered a good fit (Hair et al., 2006).

Figure 30 and Table 30 show the measurement model results in response to employee performance (EP), in two dimensions i.e., task performance with ten items and contextual performance, consists of eight items. As shown in Table 30, the factor loadings between employee performance and its two items (Task performances and Contextual performance) are statistically significant. In addition, the standardized factor loading values obtained are ranged from 0.71 to 0.89, which are considered higher than recommended. Hair et al. (2010) have cited that the factor loading should not lower than 40, the AVE more than 0.50, and the composite reliability (CR) value should be above 0.70. Based on the results in Table 30, the dependent variable with its two dimensions is established due to the high value of the result.

Additionally, one item of contextual performance has been removed due to low factor loading. Based on these results of fit indices ratios, the model employed in response to EP is a good fit to the data due to a significant correlation between the proposed model and the assumed model of the study data because all the ratios of these fit indices have met the requirement which is higher than (90).

Table 28: Results of fit indices for CFA response to employee performance (EP)

| Mode fit index | Hypothesized Model | Recommended Values | Comments |
|----------------|--------------------|--------------------|----------|
| CMINDF         | 2.621              | Less than 5.0      | Achieved |
| IFI            | .949               | More than 0.90     | Achieved |
| CFI            | .949               | More than 0.90     | Achieved |
| TLI            | .942               | More than 0.90     | Achieved |
| P-value        | 0.000              | More than 0.05     | Achieved |
| RMSEA          | .077               | Less than 0.08     | Achieved |

Table 29: Standardized measurement coefficients for employee performance

|                                  | Task performance (ETP) | Contextual performance (ECP) |
|----------------------------------|------------------------|------------------------------|
| Average Variance Extracted (AVE) | <b>0.793</b>           | <b>0.695</b>                 |
| Composite reliability (CR)       | <b>0.945</b>           | <b>0.948</b>                 |
| Item Abbreviation                | Standardized Loading   |                              |
| ETP1                             | <b>0.71</b>            |                              |
| ETP2                             | <b>0.84</b>            |                              |
| ETP3                             | <b>0.83</b>            |                              |
| ETP4                             | <b>0.86</b>            |                              |
| ETP5                             | <b>0.79</b>            |                              |
| ETP6                             | <b>0.84</b>            |                              |
| ETP7                             | <b>0.83</b>            |                              |
| ETP8                             | <b>0.77</b>            |                              |
| ETP9                             | <b>0.75</b>            |                              |
| ETP10                            | <b>0.73</b>            |                              |
| ECP2                             |                        | <b>0.80</b>                  |
| ECP3                             |                        | <b>0.79</b>                  |
| ECP4                             |                        | <b>0.87</b>                  |
| ECP5                             |                        | <b>0.82</b>                  |
| ECP5                             |                        | <b>0.80</b>                  |
| ECP6                             |                        | <b>0.84</b>                  |
| ECP7                             |                        | <b>0.89</b>                  |
| ECP8                             |                        | <b>0.86</b>                  |

Key: ETP, employee task performance; ECP: Employee contextual performance.

Table 30: Correlations and discriminant validity assessment for employee performance

|     | CR    | AVE   | MSV   | ETP          | ECP          |
|-----|-------|-------|-------|--------------|--------------|
| ETP | 0.945 | 0.793 | 0.682 | <b>0.891</b> |              |
| ECP | 0.948 | 0.695 | 0.682 | 0.826        | <b>0.834</b> |

*Note: Diagonal represents the square root of the average variance extracted, while the other entries represent the correlation estimate as Amos output.*

As shown in Table 31, the result of the AVE value of each factor overtakes the coefficient representing its correlation square with the other factor, indicating discriminant validity (Straub, D., Boudreau, M-C and Gefen, 2004). In this condition, the AVE of the employee's task performance factor (0.793) is greater than the inter-correlation square between employees' task performance and contextual performance. Therefore, it clearly indicates that each factor does not measure the other factor and each of them matches the study data (Parasuraman, Berry and Zeithaml, 1993).



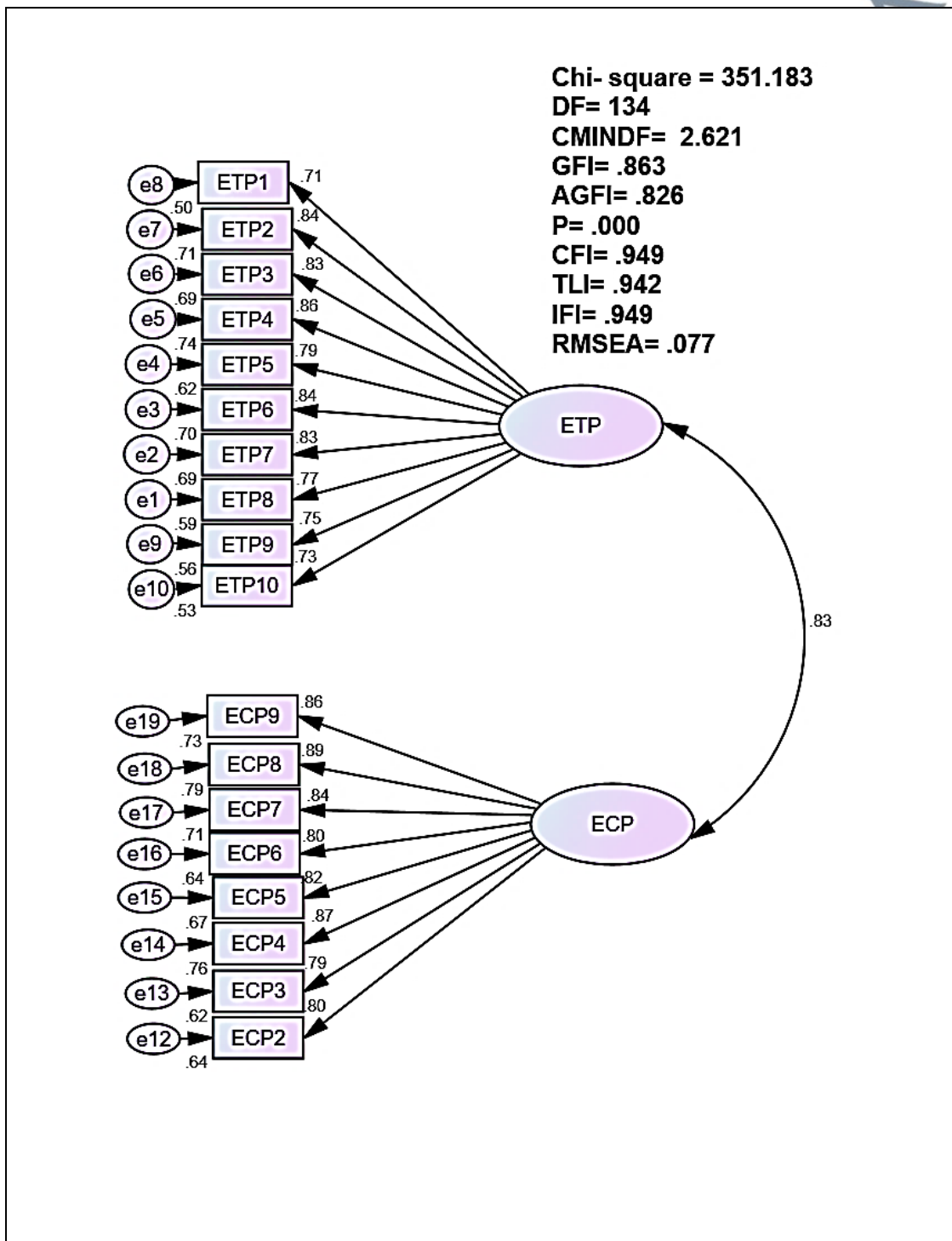


Figure 29: CFA for response to employee performance

Key: ETP, employee task performance; ECP: Employee contextual performance.

#### 4.6.5 Confirmatory Factor Analysis Results – Full Measurement Model

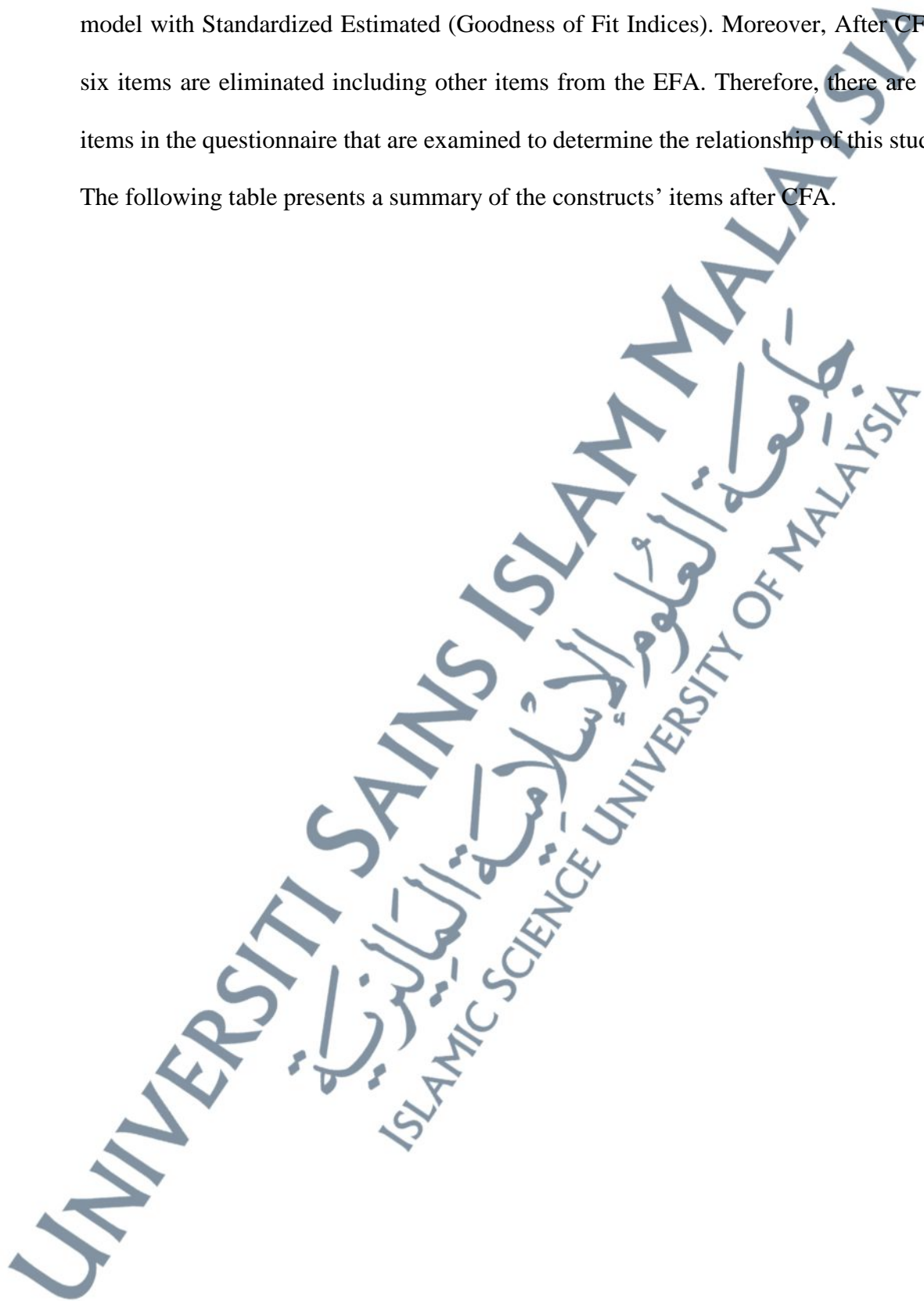
As indicated earlier, SEM analysis was analysed using a crucial test called as convergent validity for each variable individually, as shown in the above sections. Therefore, the following sections explain CFA for exogenous and endogenous constructs as highlighted earlier, which involve nine variables i.e., effort, honesty, teamwork, accountability, affective commitment, continuance commitment, normative commitment, task performance and contextual performance.

The researcher ensured that each exogenous and endogenous construct has the correct observed variable. Besides, the items of constructs should theoretically be close to each other with regard to the factor loading and GOF (Hair et al., 2010). To improve the measurement model and its suitability, some items that have low factor loading and high error in modification indices (MI) are eliminated. Inspection of (MI) indicated that there are errors in the items (NCS6, NCS5) (CCS4, CCS6) In addition, some items have to be excluded due to their low factor loading, these items are identified as Hon4, Eff6, Ccs5, Acs6 and Ncs6.

As the results of the measurement model show, the model fit indices such as the values of chi-square ( $\chi^2$ ) is at 1874.777 and degrees of freedom = 1044 and the normed  $\chi^2$  value (ratio value) is 1.796 less than 5, indicating sufficient fit. In addition, CFI= 0.928, TLI = 0.922 and IFI = 0.923, which explain that the model employed in this research is a good fit for data (Hair, et al. 2010).

Moreover, the parsimonious index (RMSEA) becomes a better measurement. The results also indicate that RMSEA = 0.054, which was recommended less than 0.08 (Hair

et al. 1998; 2006). Table 32 and Figure 31 below show the results of the structural model with Standardized Estimated (Goodness of Fit Indices). Moreover, After CFA, six items are eliminated including other items from the EFA. Therefore, there are 48 items in the questionnaire that are examined to determine the relationship of this study. The following table presents a summary of the constructs' items after CFA.



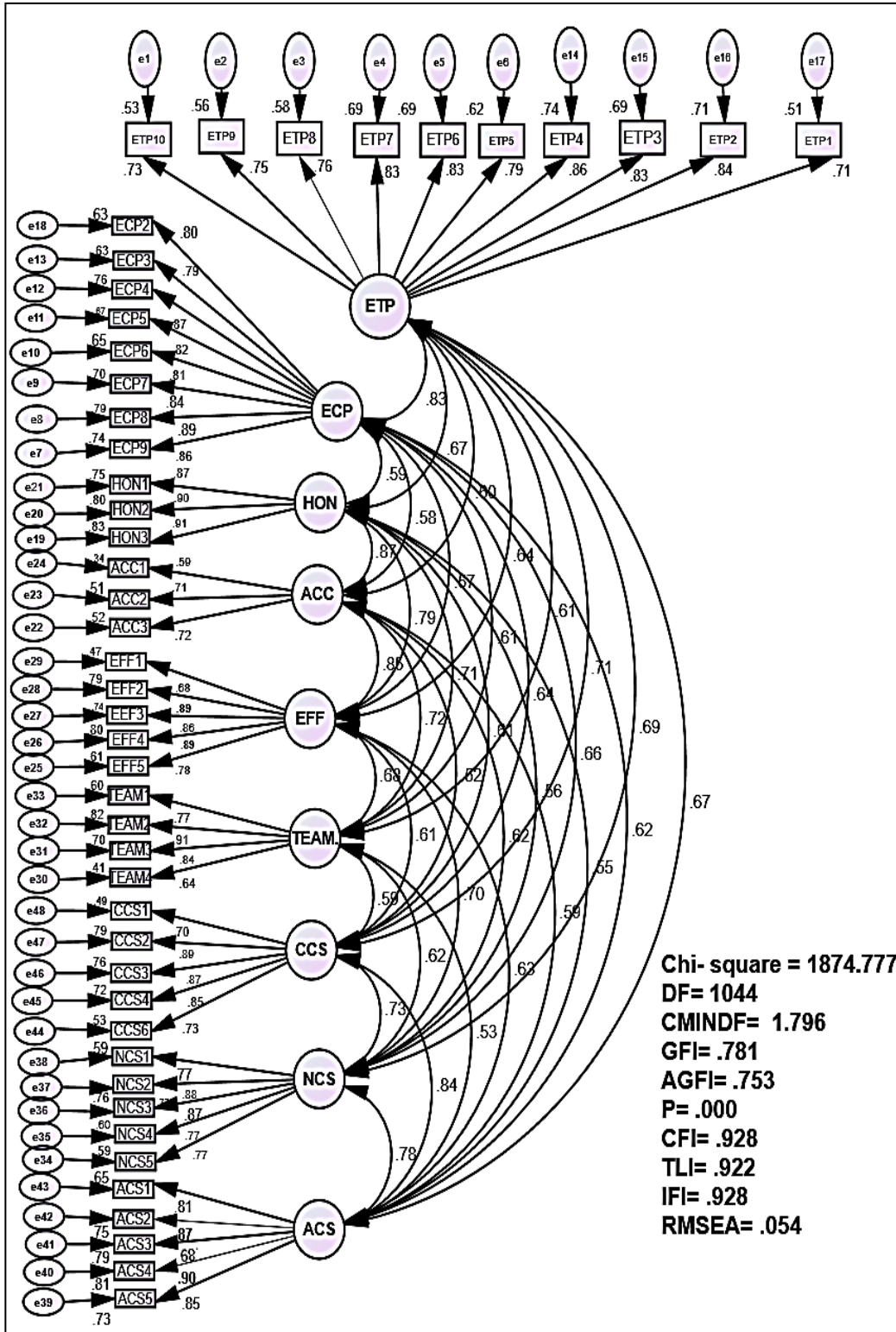


Figure 30 CFA for full measurement model

Table 31 Results of fit indices for CFA for full measurement model

|         | Hypothesized Model | Recommended Values | Comments |
|---------|--------------------|--------------------|----------|
| CMINDF  | 1.796              | Less than 5.0      | Achieved |
| IFI     | .928               | More than 0.90     | Achieved |
| CFI     | .928               | More than 0.90     | Achieved |
| TLI     | .922               | More than 0.90     | Achieved |
| P-value | 0.000              | More than 0.05     | Achieved |
| RMSEA   | .054               | Less than 0.08     | Achieved |

#### 4.6.6 Assessment of Reliability of the Instruments

After deleting some items with lower loading factor than the recommended 0.05, there is an urgent need to test the reliability of the instruments hence, Cronbach alpha is chosen to test the internal consistency reliability of all constructs.

Table 33 illustrates the result of Cronbach's alphas of 9 constructs with (48) items, more than the level of recommended 0.70 (Hair et al., 2011). This indicates that the internal consistency of a construct is satisfied, and confirmed.

Table 32 Cronbach's Alpha for the Constructs CFA)

| Variable                  | Item-Total Statistics |      |                 |                  |                          |
|---------------------------|-----------------------|------|-----------------|------------------|--------------------------|
|                           | Factors               | Code | Number of items | Cronbach's Alpha | Cronbach's Alpha Overall |
| Islamic work ethics (IWE) | HONESTY               | HON  | 3               | .900             | .907                     |
|                           | ACCOUNTABILITY        | ACC  | 3               | .897             |                          |
|                           | EFFORT                | EFF  | 5               | .890             |                          |
|                           | TEAM                  | TEAM | 4               | .902             |                          |
| Employee commitment (EC)  | AFFECTIVE             | ACS  | 5               | .894             |                          |
|                           | Normative             | NCS  | 5               | .892             |                          |
|                           | Continuance           | CCS  | 5               | .896             |                          |
| Employee performance (EP) | Task                  | ETP  | 10              | .897             |                          |
|                           | Contextual            | ECP  | 8               | .898             |                          |
| Overall                   | 9                     |      | 48              |                  |                          |

Key: HON: Honesty, ACC: Accountability, EFF: Effort, Team: Team, ACS: Affective commitment, NCS: Normative commitment, CCS: continuous commitment: ETP, employee task performance: ECP: Employee contextual performance.

#### **4.6.7 Validity Testing**

The primary purpose of conducted validity is to measure to the extent to which an instrument measures what it claims to measure (SÜRÜCÜ & MASLAKÇI, 2020).

This present study used two types of statistical validity tests. The first is called convergent validity, which is used to measure the model to determine if the indicators in a scale load together on a single construct. Whereas the second type of validity test is called discriminate validity and the main aim of this test is to verify if the items developed to measure different constructs are certainly evaluating different constructs.

##### **4.6.7.1 Convergent Validity**

Convergent validity can be characterised as a type of validity that tests constructs, which presumably measure the same construct (Feest, 2020). Convergent validity can be analysed through (CFA). Table 34 shows that all items have loadings of more than 0.50 in their underlying construct. In this case, the factor loading for the items is more than 0.50 and is acceptable if the study sample is more than 300 respondents. This, in turn, is a sufficient evidence of convergent validity. Therefore, all indicators in the present study are related to their constructs and thus there is a satisfactory proof in the use of the convergent validity of the model.

Table 33: Factor Loadings of all Constructs Construct.

| Construct              | Code | Number of items | Items | Factor loading |
|------------------------|------|-----------------|-------|----------------|
| Effort                 | EFF  | 5               | EFF1  | 0.68           |
|                        |      |                 | EFF2  | 0.89           |
|                        |      |                 | EFF3  | 0.87           |
|                        |      |                 | EFF4  | 0.89           |
|                        |      |                 | EFF5  | 0.78           |
| Honesty                | HON  | 3               | HON1  | 0.87           |
|                        |      |                 | HON2  | 0.89           |
|                        |      |                 | HON3  | 0.91           |
| Teamwork               | TEAM | 4               | TEAM1 | 0.78           |
|                        |      |                 | TEAM2 | 0.91           |
|                        |      |                 | TEAM3 | 0.84           |
|                        |      |                 | TEAM4 | 0.64           |
| Accountability         | ACC  | 3               | ACC1  | 0.58           |
|                        |      |                 | ACC2  | 0.72           |
|                        |      |                 | ACC3  | 0.72           |
| Affective commitment   | ACS  | 5               | ACS1  | 0.81           |
|                        |      |                 | ACS2  | 0.87           |
|                        |      |                 | ACS3  | 0.89           |
|                        |      |                 | ACS4  | 0.90           |
|                        |      |                 | ACS5  | 0.85           |
| Continuance Commitment | CCS  | 5               | CCS1  | 0.70           |
|                        |      |                 | CCS2  | 0.90           |
|                        |      |                 | CCS3  | 0.88           |
|                        |      |                 | CCS4  | 0.82           |
|                        |      |                 | CCS5  | 0.82           |
|                        |      |                 | CCS6  | 0.69           |
| Normative commitment   | NCS  | 5               | NCS1  | 0.78           |
|                        |      |                 | NCS2  | 0.91           |
|                        |      |                 | NCS3  | 0.88           |
|                        |      |                 | NCS4  | 0.71           |
|                        |      |                 | NCS5  | 0.70           |
| Task performance       | ETP  | 10              | ETP1  | 0.71           |
|                        |      |                 | ETP2  | 0.84           |
|                        |      |                 | ETP3  | 0.83           |
|                        |      |                 | ETP4  | 0.86           |
|                        |      |                 | ETP5  | 0.79           |
|                        |      |                 | ETP6  | 0.84           |
|                        |      |                 | ETP7  | 0.83           |
|                        |      |                 | ETP8  | 0.77           |
|                        |      |                 | ETP9  | 0.75           |
|                        |      |                 | ETP10 | 0.73           |
| Contextual performance | ECP  | 8               | ECP2  | 0.80           |
|                        |      |                 | ECP3  | 0.79           |
|                        |      |                 | ECP4  | 0.87           |
|                        |      |                 | ECP5  | 0.82           |
|                        |      |                 | ECP5  | 0.80           |
|                        |      |                 | ECP6  | 0.84           |
|                        |      |                 | ECP7  | 0.89           |
|                        |      |                 | ECP8  | 0.86           |

Key: HON: Honesty, ACC: Accountability, EFF: Effort, Team: Team, ACS: Affective commitment, NCS: Normative commitment, CCS: continuous commitment: ETP, employee task performance: ECP: Employee contextual performance.

Table 34: Correlations and Discriminant Validity Assessment of All Constructs CR

|             | CR    | AVE   | ECP          | ETP          | EFF          | TEAM.        | NCS          | ACS          | CCS          | ACC          | HON          |
|-------------|-------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>ECP</b>  | 0.948 | 0.696 | <b>0.834</b> |              |              |              |              |              |              |              |              |
| <b>ETP</b>  | 0.945 | 0.793 | 0.826        | <b>0.891</b> |              |              |              |              |              |              |              |
| <b>EFF</b>  | 0.914 | 0.784 | 0.571        | 0.640        | <b>0.886</b> |              |              |              |              |              |              |
| <b>TEAM</b> | 0.872 | 0.732 | 0.610        | 0.609        | 0.682        | <b>0.856</b> |              |              |              |              |              |
| <b>NCS</b>  | 0.907 | 0.643 | 0.662        | 0.691        | 0.699        | 0.617        | <b>0.802</b> |              |              |              |              |
| <b>ACS</b>  | 0.936 | 0.747 | 0.624        | 0.670        | 0.629        | 0.528        | 0.777        | <b>0.864</b> |              |              |              |
| <b>CCS</b>  | 0.906 | 0.779 | 0.644        | 0.710        | 0.609        | 0.594        | 0.730        | 0.841        | <b>0.883</b> |              |              |
| <b>ACC</b>  | 0.714 | 0.778 | 0.584        | 0.598        | 0.848        | 0.716        | 0.616        | 0.594        | 0.516        | <b>0.869</b> |              |
| <b>HON</b>  | 0.920 | 0.793 | 0.594        | 0.668        | 0.792        | 0.708        | 0.557        | 0.549        | 0.610        | 0.670        | <b>0.891</b> |

Key: HON: Honesty, ACC: Accountability, EFF: Effort, Team: Team, ACS: Affective commitment, NCS: Normative commitment, CCS: continuous commitment: ETP, employee task performance: ECP: Employee contextual performance. CR: Composite reliability, AVE: Average Variance Extracted

#### 4.6.7.2 Discriminant Validity

The main objective for a discriminant validity is to know whether the constructs in the model are highly correlated among them or not. Besides that, it compares the Square Root of AVE of a particular construct with the correlation between that construct with other constructs. The value of the Square Root of AVE should be higher than the relationship (Henseler, Ringle and Sarstedt, 2015)

Discriminant validity is indicated, as the AVE values are more than the squared correlations for each set of constructs. the square root of the AVE for a given construct must be higher than the absolute value of the correlation square of the given construct with any other factor ( $AVE > \text{correlation square}$ ).

Table 35 indicates the square root of the AVE for all constructs as higher than the correlations amongst those constructs plus some other constructs in the model. Furthermore, the table shows that the results of the Average Variance Extracted (AVE) test for one of the constructs among all variable is more considerable compared to the recommended value for each item. The value should be more than 0.5 or at least 0.5 but



some items can be accepted due to composite reliability (CR) which is higher than 0.6 (Afthanorhan, 2013).

According to (Barclay, D., Higgins, C. and Thompson, 1995; Fornell and Larcker, 1981) AVE should be higher than 0.5, but 0.4 is acceptable because Fornell and Larcker (1981) said that if AVE is less than 0.5, but composite reliability (CR) is higher than 0.6. then, the convergent validity of the construct is still adequate.

#### **4.7 Confirmation of Second-order Latent Variables:**

##### **4.7.1 Second-order for an independent variable**

This study requires second-order latent variables testing since IWE was examined as the latent variable for the four dimensions EEF, TEAM, ACC and HON. For the CFA second order, the factor loading for IWE → HON is .88, which is greater than .70 and has been well accepted as it meets the required value of greater than .50, followed by IWE → ACC is .66, which is less than .70 and is considered as the lowest factor loading among the others. However, the value is deemed acceptable as it meets the required value of greater than .50. In contrast, the factor loading for IWE → Team is .78 and finally, the factor loading for IWE → EEF is .90, which is considered the highest among the other four dimensions. Other than that, other requirements of the model fitness index such as the CFI, TLI, IFI and RMSEA (Uyanga Bazaa, 2021).

Meanwhile, the measurement model fitness is also achieved;  $\chi^2/df = 2.153 (\leq 5.0)$ , CFI = .969 ( $\leq .90$ ), TLI = .962 ( $\leq .90$ ), IFI = .969 ( $\leq .90$ ) and RMSEA = .077 ( $\leq .080$ ). The correlations among those latent variables are greater than .85 but the C.R., AVE, MSV, ASV and Cronbach Alpha have shown a high validity and reliability through the Discriminant and Convergent Validity among the four variables.

The four constructs are represented by the 15 indicators in the study. There is no multicollinearity and validity issue found. The CFA finding also implies no issue on the validity and reliability of each data.

Table 36 shows the validity and reliability findings for the four constructs (latent variables). C.R value is  $\geq .70$  and AVE value is  $\geq .50$ , while the reliability value is at  $\alpha$

$\geq .70$  for each variable. The *Discriminant Validity* and *Convergent Validity* do not find any serious issues as well.

The *Discriminant Validity* is  $AVE \geq MSV$  and the *Convergent Validity* is  $AVE \geq .50$ .

Overall, no validity or reliability issues were found. Figure 33 portrays the diagram of??

while Table 37 presents the output of CFA for the second-order model for IWE.

Table 35: CFA Output for Second-Order Model for IWE

|         | FIT INDEX | RECOMMENDED VALUES | COMMENTS |
|---------|-----------|--------------------|----------|
| CMINDF  | 2.153     | $\leq 3.0$         | ACHIEVED |
| IFI     | .928      | $\geq 0.9$         | ACHIEVED |
| CFI     | .969      | $\geq 0.9$         | ACHIEVED |
| TLI     | .962      | $\geq 0.9$         | ACHIEVED |
| P-VALUE | 0.000     | P-value $> .05$    | ACHIEVED |
| RMSEA   | .065      | $\leq 0.08$        | ACHIEVED |

Table 36: Correlations and Discriminant Validity Assessment for IWE

|      | CR    | AVE   | MSV   | EFF          | TEAM         | ACC          | HON          |
|------|-------|-------|-------|--------------|--------------|--------------|--------------|
| EFF  | 0.914 | 0.784 | 0.718 | <b>0.886</b> |              |              |              |
| TEAM | 0.872 | 0.732 | 0.512 | 0.847        | <b>0.856</b> |              |              |
| ACC  | 0.714 | 0.755 | 0.749 | 0.866        | 0.681        | <b>0.869</b> |              |
| HON  | 0.920 | 0.793 | 0.749 | 0.792        | 0.708        | 0.715        | <b>0.890</b> |

Note. Diagonal represents the square root of the average variance extracted, while the other entries represent the estimate of the correlation as in Amos output.

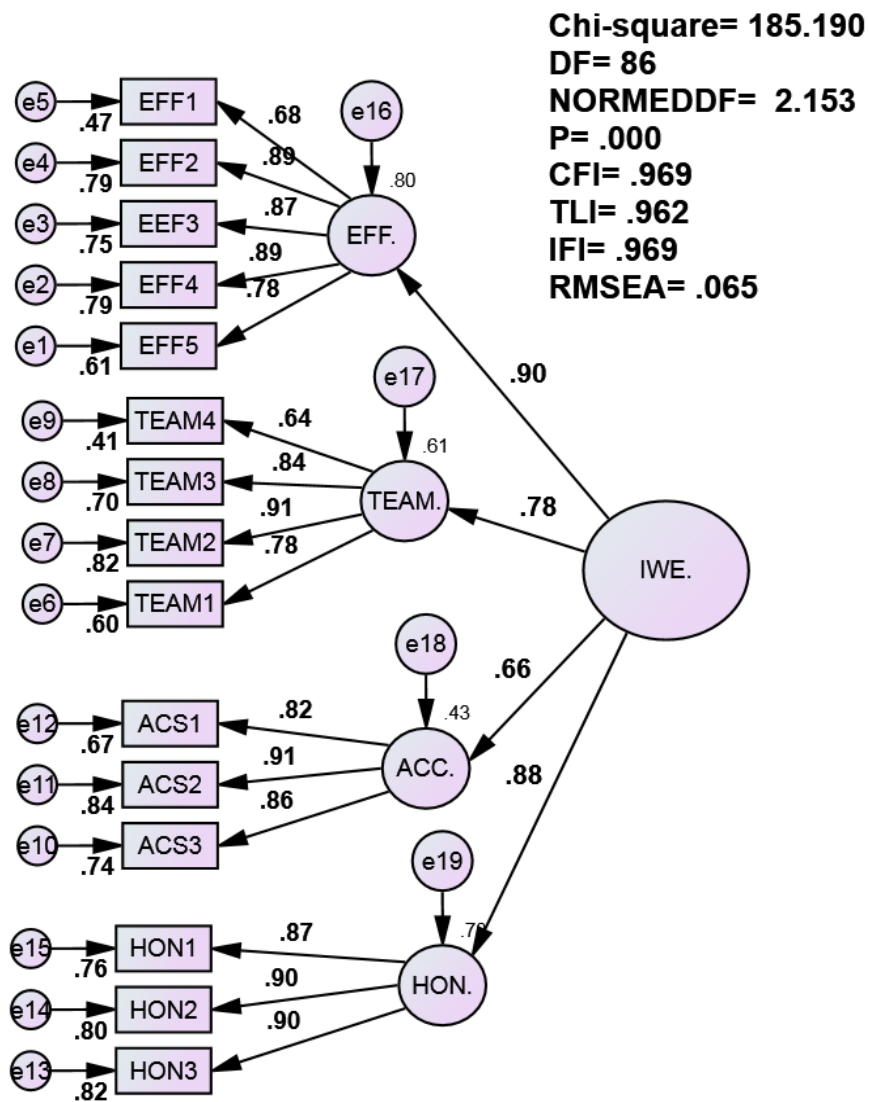


Figure 31: CFA Diagram for Second-Order Model for IWE

#### 4.7.2 Second-order for EC variable

EC was examined as a latent variable for the three dimensions ACS, NCS and CCS.

Figure 33 shows the Measurement Model as a finding of CFA Second-Order analysis.

There is one latent variable of EC as the Second Order in this study; EC consists of

three First Order Variables: the ACS, NCS and CCS. The First Order and the Second Order Variables have been analysed as a Pooled in this process. For the CFA Second Order, the factor loading for all variables is  $\alpha \geq .70$  for each variable.

The second-order model for EC has achieved a satisfactory goodness-of-fit with relative chi-square value  $\chi^2_{df} = 2.708 (\leq 5.0)$ , CFI = .960 ( $\leq .90$ ), TLI = .950 ( $\leq .90$ ), IFI = .960 ( $\leq .90$ ) and RMSEA = .079 ( $\leq .080$ ).

The three constructs are represented by the 15 indicators in the study. There is no multicollinearity and validity issue found. Evidently, the CFA finding also shows no issue on the validity and reliability of each data.

Table 38 shows the validity and reliability findings for the four constructs (latent variables). C.R value is  $\geq .70$  and AVE value is  $\geq .50$ , while the reliability value is at  $\alpha \geq .70$  for each variable. The *Discriminant Validity* and *Convergent Validity* do not detect any serious issues as well.

Figure 33 contains the diagram and Table 38 presents the output of CFA for the second-order model for EC and Table 39 shows the Correlations and Discriminant Validity Assessment for EC

Table 37: CFA Output for Second-Order Model for EC

|                | Fit Index | Recommended Values | Comments |
|----------------|-----------|--------------------|----------|
| <b>CMINDF</b>  | 2.708     | $\leq 3.0$         | Achieved |
| <b>IFI</b>     | .960      | $\geq 0.9$         | Achieved |
| <b>CFI</b>     | .960      | $\geq 0.9$         | Achieved |
| <b>TLI</b>     | 950       | $\geq 0.9$         | Achieved |
| <b>P-value</b> | 0.000     | P-value > .05      | Achieved |
| <b>RMSEA</b>   | .065      | $\leq 0.08$        | Achieved |

Table 38: Correlations and discriminant validity assessment for employee commitment (EC)

|     | CR    | AVE   | MSV   | ACS          | NCS          | CCS          |
|-----|-------|-------|-------|--------------|--------------|--------------|
| ACS | 0.936 | 0.746 | 0.718 | <b>0.864</b> |              |              |
| NCS | 0.898 | 0.641 | 0.605 | 0.724        | <b>0.801</b> |              |
| CCS | 0.900 | 0.779 | 0.718 | 0.847        | 0.778        | <b>0.883</b> |

Note. Diagonal represents the square root of the average variance extracted, while the other entries represent the correlation estimate as Amos output

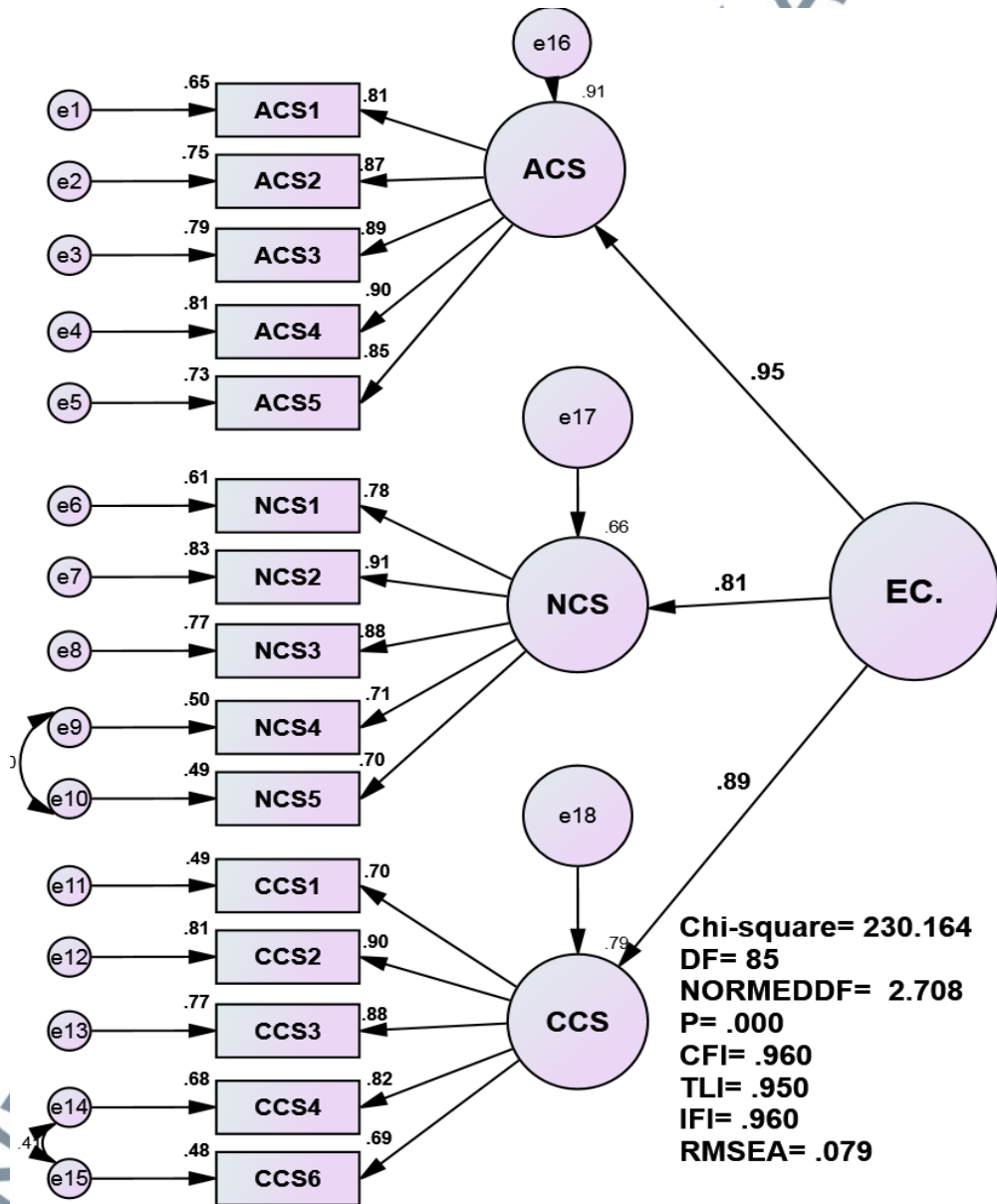


Figure 32: CFA Diagram for Second-Order Model for EC

#### 4.7.3 Second-order for EP variable

EP was examined as a latent variable for the two-dimensions: ETP and ECP. The second-order model for EP has satisfactory goodness-of-fit with a relative chi-square value CMIN/df of 2.621, RMSEA of 0.077, CFI of 0.949, TLI 0.942 and IFI of 0.949. The two constructs are represented by the 18 indicators in the study. There is no multicollinearity and validity issue found. The CFA finding shows there is no issue on the validity and reliability of each data.

Table 40 shows the validity and reliability findings for the four constructs (latent variables). C.R value is  $\geq .70$  and AVE value is  $\geq .50$ , while the reliability value is at  $\alpha \geq .70$  for each variable. The *Discriminant Validity* and *Convergent Validity* do not find any serious issues. Figure 34 contains the diagram, while Table 39 presents the output of CFA for the second-order model for EP and Table 41 presents the Correlations and Discriminant Validity Assessment for EP.

Table 39 : CFA Output for Second-Order Model for EP

|         | Fit Index | Recommended Values | Comments |
|---------|-----------|--------------------|----------|
| CMINDF  | 2.621     | $\leq 3.0$         | Achieved |
| IFI     | .949      | $\geq 0.9$         | Achieved |
| CFI     | .949      | $\geq 0.9$         | Achieved |
| TLI     | .942      | $\geq 0.9$         | Achieved |
| P-value | 0.0       | P-value > .05      | Achieved |
| RMSEA   | .065      | $\leq 0.08$        | Achieved |

Table 40 Correlations and Discriminant Validity Assessment for EP

|     | CR    | AVE   | MSV   | ETP          | ECP          |
|-----|-------|-------|-------|--------------|--------------|
| ETP | 0.945 | 0.793 | 0.682 | <b>0.891</b> |              |
| ECP | 0.948 | 0.695 | 0.682 | 0.826        | <b>0.834</b> |

Note. Diagonal represents the square root of the average variance extracted, while the other entries represent the correlation estimate as Amos output.

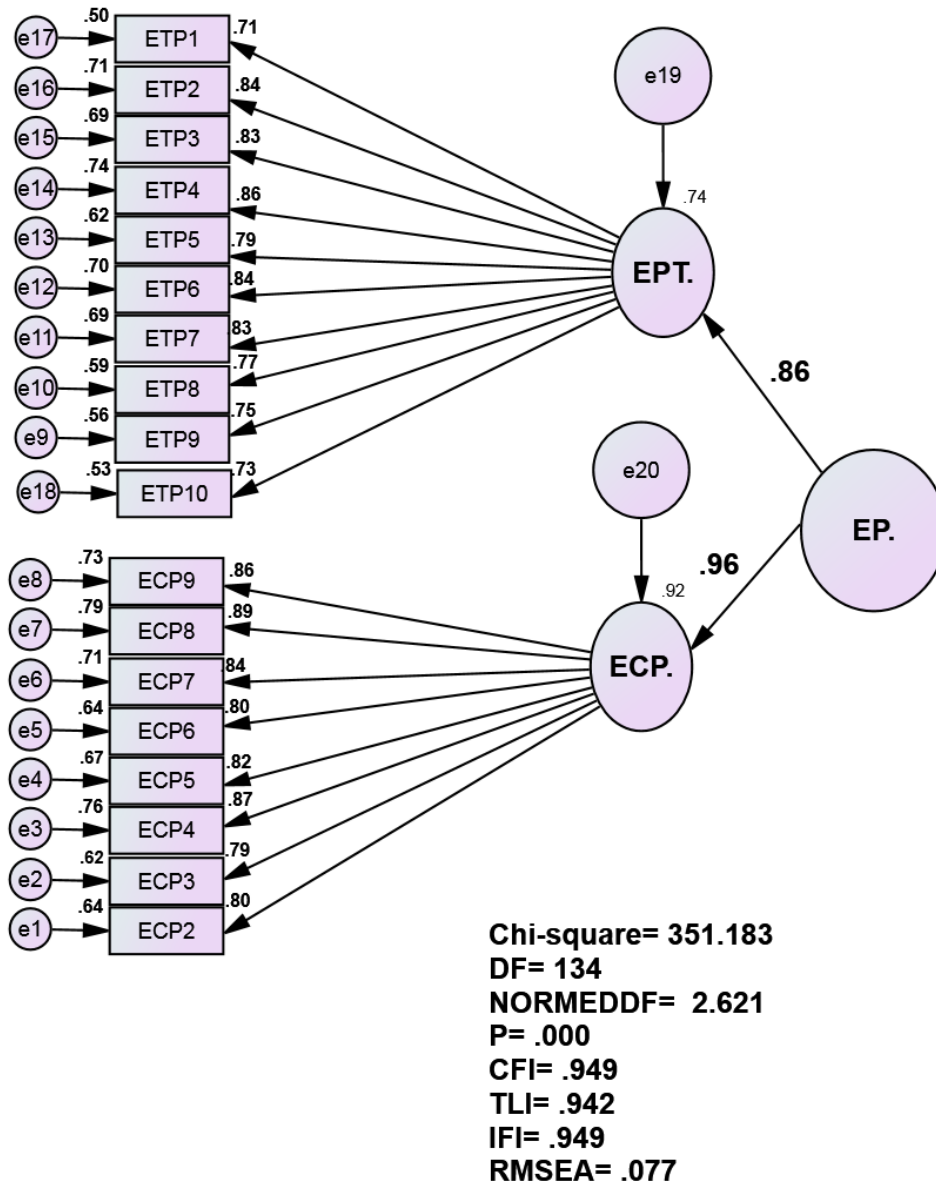


Figure 33 : CFA Diagram for Dependent Variable (Employee Performance)

#### 4.8 Structural Model for Variables

After finishing the measurement model, the next step was to run a structural model to prove the main hypothesis. The measure of goodness-of-fit of the data was achieved.

In this study, the direct hypothesis was tested, as discussed earlier in the Chapter Three. As mentioned earlier, the CFA method was employed to test convergent validity for each variable. The following sections explain the structural model for the main hypotheses. This study examined two exogenous variables in which Islamic work ethics and employee commitment plus one endogenous variable as the response to the employee performance.

The structural model results denote the model fit indices such as the values of chi-square ( $\chi^2$ ) is 1956.838 and degrees of freedom is 1.068. Furthermore, the findings show that normed  $\chi^2$  value (**cmindf**) (ratio value) is 1.832 less than 5, indicating sufficient fit. In addition, GFI= 0.775, AGFI = 0.752, P. value is less than (0.005) CFI = 0.923 and IFI= 0.05 is less than 0.10 these values explain that the model employed in this research is a good fit to data. Moreover, the results also indicate that RMSEA = 0.055, which is recommended less than 0.08 (Hair et al. 1998; 2006). Since all fit indices are larger than .90, this confirms that the model used by the researcher fit the study data. Figure 35 represents the result of the structural model and (Goodness of Fit Indices).



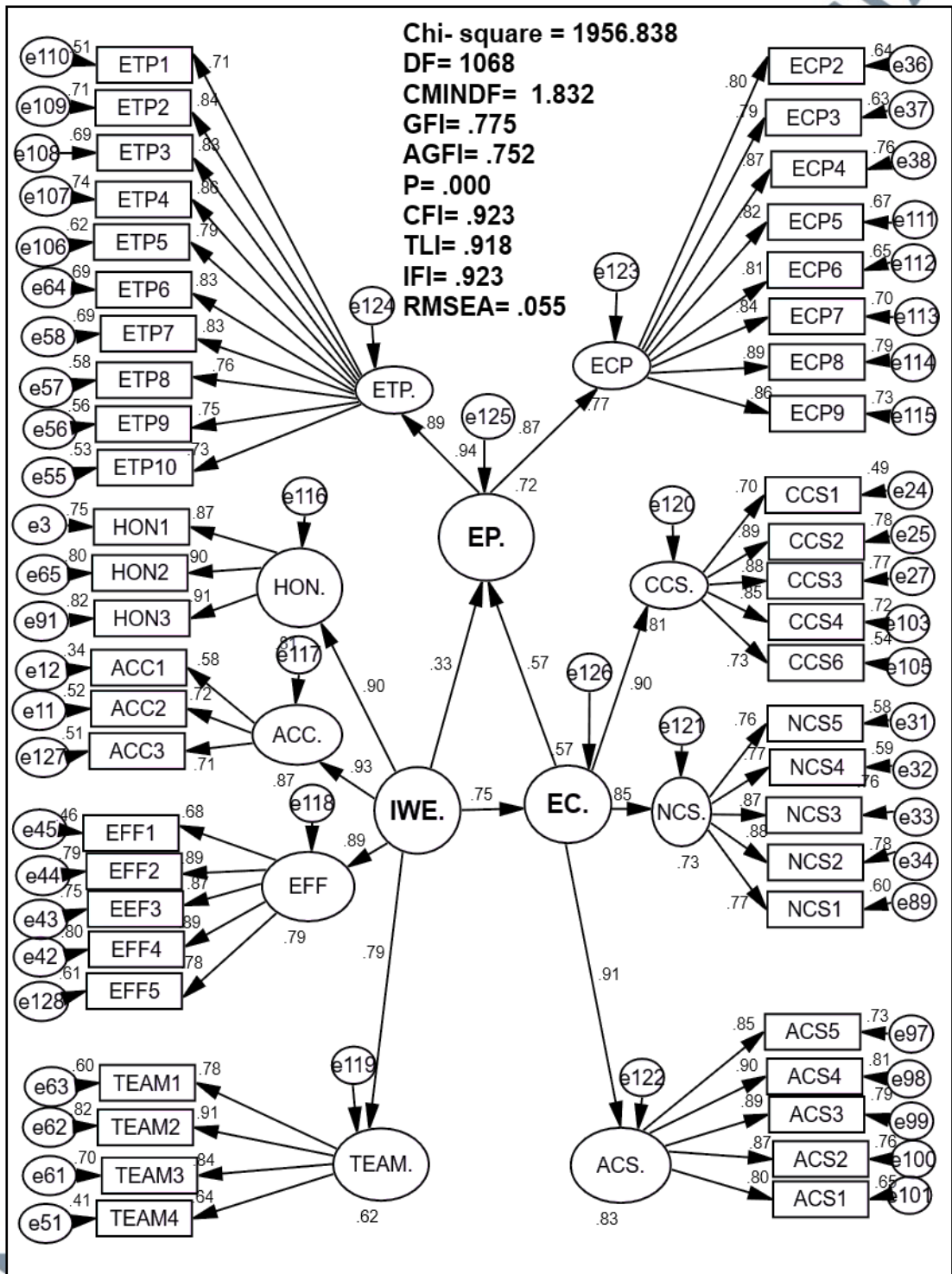


Figure 34: Structural Model with Standardized Estimated

Table 41: Results of fit indices for Structural Model

| Mode fit index | Hypothesised Model | Recommended Values | Comments |
|----------------|--------------------|--------------------|----------|
| CMINDF         | 1.832              | Less than 5.0      | Achieved |
| IFI            | .923               | More than 0.90     | Achieved |
| CFI            | .923               | More than 0.90     | Achieved |
| TLI            | .918               | More than 0.90     | Achieved |
| P-value        | 0.00               | More than 0.05     | Achieved |
| RMSEA          | .055               | Less than 0.08     | Achieved |

#### 4.8.1 Coefficient of determination result $R^2$

The  $R^2$  value indicates the amount of variance of dependent variables, which is explained by the independent variables. Hence, a more considerable  $R^2$  value increases the predictive ability of the structural model. It is crucial to ensure that the  $R^2$  values to be high enough for the model to achieve a minimum level of explanatory power (Urbach and Ahlemann, 2010). Falk and Miller (1992) recommended that the  $R^2$  values should be equal to or greater than 0.10 for the explained variance of a particular endogenous construct to be deemed adequate. Cohen (1988b) suggested that  $R^2$  is substantial when it is higher than 0.26. With sufficient power of above 0.02 and according to Chin (1998),  $R^2$  is significant when it is greater than 0.65 with acceptable power above 0.19.

Conversely, Hair et al. (2017) recommended that  $R^2$  to be larger than 0.75, to be deemed substantial, with adequate power above 0.25. Table 43 shows the result of  $R^2$  from the structural model and indicates that all the  $R^2$  values are high enough for the model to achieve an acceptable level of explanatory power.

In this study, the model shows an excellent fit to the data as proven by the squared multiple correlations ( $R^2$ ) values for the dependent variables employee performance, EP ( $R^2=0.72$ ) and employee commitment, EC ( $R^2=0.57$ ) as shown in Table 38. Thus,

the one latent variable IWE and EC explained a substantial 72% of the variance for the employee performance. Meanwhile, Islamic work ethics has revealed 57% of the variation for employee commitment among medical staff in public health sector in the Kingdom of Bahrain.

Table 42: Coefficient of determination result R<sup>2</sup>

| exogenous construct | endogenous construct | R <sup>2</sup> | Hair et al. (2017) | Cohen, (1988b) | Chin (1998) |
|---------------------|----------------------|----------------|--------------------|----------------|-------------|
| IWE , EC            | EP                   | 0.72           | Moderate           | Substantial    | Substantial |
| IWE                 | EC                   | 0.57           | Moderate           | Substantial    | Moderate    |

*Note: IWE; Islamic work ethics, EC; employee commitment, EP; employee performance*

#### 4.8.2 Effect Size F<sup>2</sup>

Effect size F<sup>2</sup> measures if an independent latent variable substantially impacts a latent dependent variable (Gefen and Rigdon, 2011). According to Hair et al. (2017), to assess the R<sup>2</sup> values of all endogenous constructs, the change in R<sup>2</sup> value when a particular exogenous construct is omitted from the model can be used to assess whether the omitted construct has a substantial effect on the endogenous constructs. This measure is referred to as the f<sup>2</sup> effect size when a selected exogenous construct is included or excluded from the model. The change in R<sup>2</sup> values is calculated by estimating the path model twice, first with the exogenous construct included (yielding R<sup>2</sup> included) and second with the exogenous construct excluded (yielding R<sup>2</sup> excluded), whereby f<sup>2</sup> is calculated using the given formula:  $f^2 = (R^2 \text{ included} - R^2 \text{ excluded}) / (1 - R^2 \text{ included})$ . According to Cohen (1988b), f<sup>2</sup> of the exogenous latent variable is measured as 0.02 small, 0.15 medium and 0.35 large. Table 44 shows the results of the effect size f<sup>2</sup> for the exogenous latent variables IWE ranged between 0.02 and 0.15 and less than 0.35, which is considered as medium effect size on endogenous employee performance, EP

where employee commitment, EC is more than 0.35. This is considered as the large effect size.

Table 43: Effect size  $f^2$

| Exogenous constructs | R <sup>2</sup> - squared Included | R <sup>2</sup> - squared Excluded | f-squared | Effect size |
|----------------------|-----------------------------------|-----------------------------------|-----------|-------------|
| IWE                  | 0.72                              | 0.67                              | 0.1786    | Medium      |
| EC                   | 0.72                              | 0.58                              | 0.5000    | Large       |

| 0    | 0.02  | 0.15   | 0.35  |
|------|-------|--------|-------|
| None | Small | Medium | Large |

Note:  $f^2$  = above 0.35 considered large effect size.

$f^2$  = ranging from 0.15 to 0.35 considered medium effect size.

$f^2$  = between 0.02 to 0.15 considered small effect size

$f^2$  = values less than 0.02 are considering with NO effect size

$f^2 = (R^2 \text{ included} - R^2 \text{ excluded}) / (1 - R^2 \text{ included})$

#### 4.8.3 Squared Multiple Correlation ( $R^2$ ) of the Structural Model

In this study, the structural model's squared multiple correlation or  $R^2$  on employee commitment and response to employee performance is 0.57. The findings from the result show that the path became significant, indicating that the employee's commitment is partial mediating effect on employee's performance. respectively. Therefore, the result indicates that exogenous variables have explained for that 72% of the variance in response to employee performance.

#### 4.9 Hypotheses Results

Three major direct hypotheses and one indirect hypothesis related to the research's aim were investigated in this present study. This study's hypotheses were

tested using SEM and AMOS. Table 40 shows the structural model assessment, which indicates the hypothesis testing.

#### **4.9.1 Main Hypotheses Testing**

**H1): There is a statistical significance on the direct relationship between Islamic work ethics and employee performance**

As shown in Table 44, the t-value (C.R) and p-value of IWE in predicting EP are (4.175) and (<0.001), respectively. It means that the probability of getting t -value as large as 5.173 in absolute value is (<0.001). In other words, the regression weight for IWE in the prediction of EP durable is significantly different from zero at the 0.001 level. Thus, H1 is supported. Moreover, the path coefficient is 0.335, indicating a significant positive relationship. It means when IWE goes up by 1 standard deviation, EP also goes up by 0.335 standard deviations.

**H2): There is a direct positive significant relationship between Islamic work ethics on employee commitment**

As shown in Table 44, the t-value (C.R) and a p-value of IWE in predicting the response to EC were (9.297) and (<0.001), respectively. It means that the probability of getting a t-value as large as 9.297 in absolute value is (<0.001). In other words, the regression weight for IWE in the prediction of response to EC is significantly different from zero at the 0.001 level. Therefore, H2 is supported. In addition, the path coefficient is 0.753, indicating a positive relationship. It means when IWE goes up by 1 standard deviation, the response to EC also goes up by 0.753 standard deviations.

**H3): There is a statistical significance of a direct relationship between employee commitment and employee performance**

Table 44 presents that the t-value (C.R) and a p-value when using EC in predicting the response to EP are (6.743) and (<0.001), respectively. It means that the probability of getting a t-value as large as 6.743 in absolute value is (<0.001). In other words, the regression weight for EC in the prediction of response to EP is significantly different from zero at the 0.001 level. Thus, H3 is supported. Furthermore, the path coefficient is 0.567, indicating a positive relationship. It means when EC goes up by 1 standard deviation, response to EP goes up by 0.567 standard deviations. Finally, the last hypothesis of H4 IWE- EC and EC – EP shows the partial mediation significance with an indirect effect 0.42.

Table 44: Structural Model

| Hypothesis | Exog. | → | Endo.        | Estimated<br>beta       | C.R   | P-<br>Value | Status | Result    |
|------------|-------|---|--------------|-------------------------|-------|-------------|--------|-----------|
| H1         | IWE   | → | EP           | 0.335                   | 4.175 | 0.000       | Sig.   | Supported |
| H2         | IWE   | → | EC           | 0.753                   | 9.297 | 0.001       | Sig    | Supported |
| H3         | EC    | → | EP           | 0.567                   | 6.743 | 0.000       | Sig.   | Supported |
| H4         | IWE   | → | EP VIA<br>EC | Indirect effect<br>0.42 |       | 0.005       | Sig.   | Supported |

Note: IWE; Islamic work ethics, EC; employee commitment, EP; employee performance

**H4): There is a positive significant direct relationship between Islamic work ethics and employee performance through employee commitment**

The last hypothesis H4 predicted IWE as an independent variable partially mediating EC and significantly influences the EP among medical staff at the workplace. The finding shows that there is a significant relationship between EC and IWE and a further significant relationship between EC and EP. The significant relationship in this finding shows that H4 is supported.

For the mediation role of EC for the relationship between IWE and EP, the results mentioned in the Table 45 suggest that IWE impacts on EP and the standardized

coefficient is 0.335. This also shows the direct impact of Islamic work ethics on employee commitment, the standardized coefficient is 0.753 and finally, the direct influence that EC has on EP in which the standardized coefficient is 0.567,

Based on the positive direct relationship of IWE has on EP (0.335), a researcher examines the mediation effect of EC on the relationship between IWE and EP too, where the finding of this study is showed in Table 46. Basically, it reveals a significant relationship of IWE which indirectly impacts on EP through their impact on EC with coefficient .570. Therefore, the results of the study indicate that employee commitment is a partial meditation between IWE and employee performance and the path coefficient is larger than 20% and less than 0.08, hence this can be characterized as a partial mediation (Hair et al., 2006). as shown in Table 45.

Table 45: Structural parameters of the mediation role of employee commitment for the relationship between Islamic work ethics and employee performance

|    | Model  | Direct effect | Indirect effect | Significant of the indirect effect | Mediation type    |
|----|--|---------------|-----------------|------------------------------------|-------------------|
| H1 | Islamic work ethic --> employee performance                          | 0.335         |                 | P=0.001 Significant                | Partial Mediation |
| H2 | Islamic work ethic ----> employee commitment                         | 0.753         |                 | P=0.001 Significant                |                   |
| H3 | Employee commitment --> employee performance                         | 0.567         |                 | P=0.005 Significant                |                   |
| H4 | Islamic work ethics --> employee performance via employee commitment |               | 0.42            | P=0.001 Significant                |                   |

Source: the mediator effect exceeds the value 0.08 is significant (Hair et al., 2006)

#### 4.10 Testing the level of significance of the indirect effect

The indirect effect relationship between IWE as an intended variable and EP as a dependent variable through the EC as a mediator can be measured by the value of P-

value and T-value of the direct effect between the study variables, which confirmed a direct effect between the IWE and EP by the value of p 0.000 and T-value 4.175. Under other conditions, P-value (0.000) and T-value (9.297) is the direct effect between IWE and EC of the medical staff, while P-value (0.000) and T-value (6.743) are the direct effects between the EC of the medical staff performance.

Sobel Test has also confirmed the indirect effect of EC on the relationship between IWE and EC in medical staff in the public health sector in Bahrain, where P-value is 0.000, a value less than 0.05 and T-value is 5.70, which is greater than 1.964, as shown in Figure 36, which confirms the statistical significance of the indirect relationship between IWE and EP through the EC. Therefore, IWE affects the EC of the medical staff, which leads to the impact on the EP of the medical staff in public health sector in the Kingdom of Bahrain.

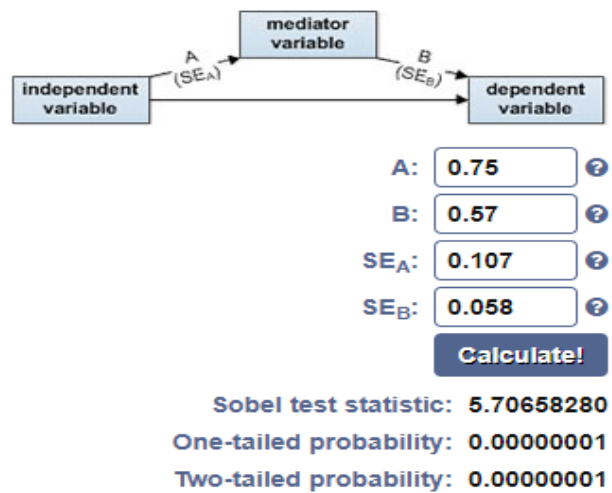
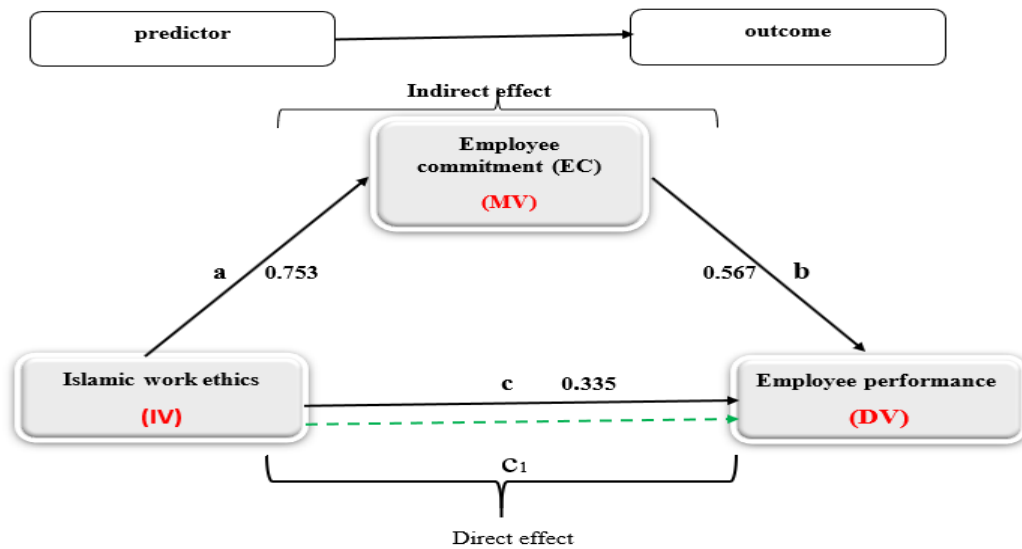


Figure 35: Sobel test to measure the indirect effect of IWE on the employee performance amongst medical staff through the mediator variable employee commitment



Table 46 Mediation Analysis

| Path               | Direct Effect | Indirect Effect | Total Effect   | Significant p-Value |
|--------------------|---------------|-----------------|----------------|---------------------|
| IWE → EP           | 0.335         |                 |                | 0.001               |
| IWE → EC           |               | 0.753           |                | 0.001               |
| IWE → EP<br>VIA EC |               |                 | 0.753<br>0.567 | 0.005               |



\*Note: C1 --> indicates an indirect effect

Figure 36: Single Mediator Model

Figure 37 shows that the indirect effect is 0.42 ( $0.753 * 0.567$ ), while the direct effect is an effect of 0.335. Then, we can conclude that the EC construct in medical staff is a mediator in the relationship between IWE and EP amongst medical staff. The type of mediation considers as partial mediation since the path coefficient is larger than 20% and less than 80%.

#### 4.11 Summary

In summary, this chapter has discussed the data analysis procedures, which are assessed in the initial and second phases of data testing. To refine the items before conducting SEM analysis, data screening such as outlier and missing data were examined. In addition, several necessary tests were utilised, such as linearity, normality, and multicollinearity. Furthermore, this chapter presents a profile of the respondents, such as professional background, age, level of education and experience.

Cronbach's alpha was employed to assess each scale for reliability. Both convergent and discriminant validity tests were conducted and EFA was applied to examine the underlying structure among the items. In this chapter, CFA was used to eliminate any scale item or latent factor that was incompatible or did not meet the conditions thus, created a unique measurement model. The results of both of measurement models and the structural model were then presented. The main objective of using the structural model in this study is to ascertain the consistency of the hypothesised construct with its proposed mediating effects.

The findings were attained via a questionnaire survey among medical staff (doctors, nurses and pharmacists) working in the public health sector in the Kingdom of Bahrain. The analysis answers four research questions and four hypotheses were also assessed.

EFA and CFA were used for all study variables and structural equation model SEM was conducted to assess all study hypotheses. The four hypotheses were tested through model fit indices. The model fit indices indicate that IWE has a statistically significant effect on EP. Moreover, the mediating variable (EC) influenced EP and has been examined and confirmed.