Big Five Personality Traits and Reciprocal Relationship between Job Satisfaction and Job Performance

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This study aims to connecting the relationship between three variables related to human resource management in a company namely personality traits, job satisfaction and job performance. This model was developed to build a hypothesis on how personality can increase job satisfaction and job performance and influence between job satisfaction and job performance. The survey was conducted from October 2019 to January 2020 through a Google form survey. Here, the 485 data were collected from correspondents which were then validated. In this study, we are using LISREL 8.7 to develop the model values. In addition, this study is contributing to add the findings compilation of clarify inconsistencies in previous findings between relationship of personality characteristics that most influence with job satisfaction and performance.

Keywords: Big five personality traits, Job satisfaction, Job performance, Personality, Reciprocal relationship

1. INTRODUCTION

The research on job satisfaction and job performance has important benefits for companies. It knows that the relationship between job satisfaction and job performance can help management allocate its limited resources. If job satisfaction affects job performance, then management must pay attention to factors that can increase job satisfaction so that it can produce high job performance. If job performance can affect job satisfaction, then management must be able to create a conducive work environment so as to increase job performance and produce high job satisfaction as well [1]. The suggestion on reciprocal relationship between job satisfaction and job performance has been applied [1, 2]. The existence of these findings cannot be separated from proposed person due to the research is reciprocal relationship between job satisfaction and job performance, researchers add variables that can affect job satisfaction and one of the suggestions is personality [3]. In 2002, Judge decided to research the relationship between personality and job satisfaction by using the theory of big five personality traits. In that study, it was found that there was a significant relationship between the two, where neuroticism had the strongest relationship, followed by conscientiousness, extraversion, agreeableness and the extraversion, agreeableness and the weakest were –

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openness to experience [4]. Chinese employees are the most influential personality trait was extraversion. Another case with use a sample of internal auditors working at Jordanian public shareholding companies listing on the Amman Stock Exchange (ASE), found that personality the most influential trait on job satisfaction is conscientiousness and neuroticism [5]. Here, the banking and health care sectors, personality trait that most influences is conscientiousness that continues to consistently affect other variables and neuroticism [6]. The sample school teacher in Sri Lanka, shows personality trait that most influences on job satisfaction and job performance is agreeableness and the second is extraversion. The differences in the results of the above research, is tested again on the influence of big five personality traits with job satisfaction and the reciprocal relationship between job satisfaction and job performance. Because there is no research that takes in the manufacturing sector, the respondents taken in this study are manufacturing staff in Indonesia. It is hoped that later it can be seen the cause of the differences between personality traits that most influence job satisfaction. Thus, the difference occurred due to differences in the industrial sector or cultural differences over a country. Based on the background of the problem and previous studies, the problems that are going to be discussed in the current study are formulated in these questions does the big five personality trait also affect job

satisfaction among staff working in manufacturing companies. From the five personality traits, which personality influences the level of job satisfaction among staff in manufacturing companies. Also, job satisfaction affects job performance for staff working in manufacturing companies. Based on the background and the problems of the current studies, the purposes of the current study are formulated to determine the effect of big five personality trait on staff in manufacturing, Thus, to obtain the personality trait that has most influences to job satisfaction of staff who working in manufacturing companies also to determine the effect of job satisfaction on job performance over staff working at manufacturing companies.

2. METHODOLOGY

A. Big Five Personality Traits

Research on personality has been done since long ago. One well-known theory is the DISC personality type (Dominance, Influence, Steadiness and Compliance) put forward by an American psychologist named William Moulton Marston in 1920 [7]. In 1921, Carl Gustav Jung published a book entitled "Psychological Types" which suggested the theory that there are four main psychological functions that humans use to live their lives, namely sensing, intuition, feeling and thinking [8]. This theory was then continued to be developed by Isabel Briggs Myers until the first time in 1962 a test known as the MBTI (Myers-Briggs Type Indicator) was published. In MBTI, a person's personality is divided into four dimensions, the dimension of concentration (Introvert vs. Extrovert), the dimension of understanding information (Sensing vs. Intuition), the dimension of decision making and conclusions (Thinking vs. Feeling) and the dimension of lifestyle (Judging vs. Perceiving). From these four dimensions produces eight cognitive functions which then produce 16 personality types [9]. In the previous research found five personality determinants namely surgency, agreeableness, dependability, emotional stability and culture [10]. Although the number or distribution of personality characteristics varies and is debatable, the types of personality types that are often used in research are the "Big Five Norman" proposed by Norman in 1963. Where the five characteristics are extraversion, emotional stability, agreeableness, dependability and culture [11]. This fifth characteristic is the most difficult character to identify and be named; some call it culture [11], intelligence [12], openness to experience [13] and intellect [14]. However, the outlines of the four names actually have the same core, so that the personality types of the top five are defined as openness to experience, conscientiousness, extraversion, agreeableness and emotional stability or neuroticism [15]. Then the measuring instrument on the personality of the big five began to continue to be developed by Dr. Lewis R. Goldberg [16].

B. Job Satisfaction

Gaps in job satisfaction between employees can be affected by the similar salary and benefits, incentives, rewards, attention and good relations, good work facilities and conducive working conditions [17]. Initially the measurement of job satisfaction is done by asking employees directly about job satisfaction that is self-assessed without using dimensions, because it considers job satisfaction as an overall psychological condition [18]. According to Adams, job satisfaction can be achieved if the rewards for the work are received fairly in accordance with their abilities [19]. Job satisfaction is achieved if the desire or need for something is fulfilled [20]. Job satisfaction is divided into two types, namely intrinsic satisfaction and extrinsic satisfaction. Intrinsic satisfaction occurs when receiving rewards created from the work itself, for example challenges, achievements and opportunities to apply their expertise. Whereas extrinsic satisfaction occurs when receiving rewards created by others, such as promotions, benefits and a good work environment [20]. Research on job satisfaction continues to be carried out, until finally built a survey of job satisfaction based on extrinsic satisfaction divided into nine dimensions, namely benefits, communication, contingent rewards, co-workers, nature of work, operating procedures, pay, promotion and supervision [21].

C. Job Performance

Job performance is measuring a person against his goals, whether the results achieved are in accordance with the expected goals [22]. Job performance is a measure of how a person performs his duties using time, techniques and interactions with others [23]. Individual work performance (IWP) as behavior that is relevant to company goals [24]. With the main focus of task performance which is defined as a person's ability to perform core tasks in their work. Although IWP has long been recognized as a multidimensional construct, it was only three years later that it received full attention [25]. Job performance categorizes into two dimensions, namely task performance and contextual performance [26]. Task performance is the most basic component in assessing job performance, namely by assessing the results of the task and has a direct relationship with work effectiveness. While contextual performance includes voluntary feelings in carrying out tasks or jobs that are not officially part of their work and the ability to help and work with colleagues in completing their work [27]. It is now generally agreed that IWP not only consists of task performance, but also consists of contextual performance and counterproductive work behavior (CWB) [28, 29]. CWB is a behavior that can endanger the welfare of a company. Such as theft behavior, absence, theft of substances and behavior outside the task [30]. The IWP will be added one more dimension, namely adaptive performance [31, 32, 33].

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Adaptive performance measures the extent to which a person can adapt to changes that occur over the role in the work or work environment. So, the IWP questionnaire (IWPQ) by dividing it into four dimensions, namely task performance, contextual performance, adaptive performance and CWB.

D. The Effect of Openness to Experience on Job Satisfaction

Someone who has a high level of openness to experience tends to have broad or varied interests, is adventurous, creative, has a high curiosity, always wants to learn new things and enjoy new experiences [34]. They prefer change and are creative in finding solutions to problems and prefer to help others. In relation to job satisfaction, the nature of likes to try new things, independent, imaginative and has a high curiosity, people with a high level of openness to experience tend to have higher job satisfaction [35]. So, the hypothesis can be concluded is:

(H₁): Openness to Experience has a positive relationship with job satisfaction

E. The Effect of Conscientiousness on Job Satisfaction

High conscientiousness shows one's tendency to be more organized, task oriented and efficient. Here, a high level of attention, goal-directed behavior, attention to details, planning ahead, thinking about how their actions affect others and paying close attention to deadlines. The reliable, honest, consistent, obeying the rules and values of the company [36]. Because they are very concerned about deadlines, they prefer to complete the task as soon as possible or not delay so that they will get more awards. Thus, a significant positive relationship between conscientiousness towards job satisfaction. So, it can be concluded that the hypothesis is:

(H₂): Conscientiousness has a positive relationship with job satisfaction

F. The Effect of Extraversion on Job Satisfaction

A high level of extraversion makes a person to be sociable, talkative, active, energetic, assertive and outgoing. They also have many emotional expressions and feel excited and excited when they are among many people. The optimistic thoughts and have a lot of energy, so they will not feel too depressed and tense. Because working in a company must be surrounded by many people, people with high levels of extraversion tend to have more friends because of their social nature, which will create a conducive work environment. Its shows that an extraversion has the most significant level of influence on job satisfaction, then the following hypotheses can be drawn:

(H₃): Extraversion has a positive relationship with job satisfaction

G. The Effect of Agreeableness on Job Satisfaction

Agreeableness is a dimension that shows how much a person's tendency to be kind, sympathize and understand others. Someone with a high level of agreeableness has a tendency to work more easily, have empathy and care for others, likes to help people in need and contribute to the happiness of others. They can build interactions within a group quickly and easily. The more people who have high levels of agreeableness, it can reduce conflict and stress levels in a company. They tend to be successful at work and get more emotional support from their colleagues [37]. Here, a significant positive relationship between agreeableness and job satisfaction. Then the hypothesis that can be taken is:

(H₄): Agreeableness has a positive relationship with job satisfaction

H. The Effect of Neuroticism on Job Satisfaction

Neuroticism is a trait characterized by emotional instability, moodiness and sadness. The higher the level of neuroticism, the person will more easily feel anxious about many things, easily angry, easily feel sad, often feel stressed, quickly experience mood swings and difficult to get up after experiencing things that are very depressing. They will feel pressured to complete the work if under time pressure. They spend a lot of time worrying, so they cannot use time effectively and efficiently. As a result, people with high levels of neuroticism will be more dissatisfied with their work. This is supported by previous research which states that high instability or neuroticism has a strong negative relationship to job satisfaction. Thus, the hypothesis that can be taken is:

(H₅): Neuroticism has a negative relationship with job satisfaction

I. The Effect of Job Satisfaction on Job Performance

In the research who conducted on employees in the Tangerang area states that there are a positive relationship between job satisfaction and job performance. Workers who have high job satisfaction will make extra efforts to do work more effectively and efficiently, which in turn increases overall productivity [38]. In other research also state that there was a positive reciprocal relationship between job satisfaction and job performance. When teachers have better job performance, the teacher will get good appreciation from students, parents, principals and higher authorities so that the job satisfaction of these teachers will increase. Conversely, teachers with high job satisfaction will teach more enthusiastically and cause their job performance to increase. The same results are also shown in research on employees where employees who have better work performance will be more accepted by the company so that employees will feel that they have achieved self-actualization through their work. From the three studies above, hypotheses can be drawn as follows:

(H₆): Job satisfaction has a reciprocal relationship with job performance

Based on six hypotheses, we design a conceptual study model framework (see Figure 1).

Figure 1. Conceptual Study Model Framework

3. RESULT AND DISCUSSION

Measurements in this study were carried out through a questionnaire divided into three parts, personality traits, job satisfaction and job performance. Measurement of personality traits is taken from previous research, which is then processed into a statement form by each dimension using 10 indicators, so that there is a total of 50 indicators. The greater the value, the tendency towards the trait is also higher. Then in measuring job satisfaction based on Spector, with 9 dimensions measured using each of the 4 indicators, so that there is a total of 36 indicators. To measure job performance in this study using a reference, this consists of 4 dimensions with a total of 47 indicators. Measurement of these variables using six Likert scale. All questionnaire guidelines in English will be translated into Indonesian with the aim of minimizing the occurrence of differences in understanding due to the language used not their mother tongue. For the first pre-test, the questionnaire was distributed randomly to 33 staff at manufacturing companies. This is done to ensure the truth and clarity of the words used in the questionnaire. Then, ask for input from several staff to further revise the questionnaire. After the revision, the questionnaire was distributed randomly to 31 staff at manufacturing companies to conduct the second pre-test and fill out the questionnaire. The subjects of this study were staff in various departments of 23 companies engaged in manufacturing in Indonesia. The survey was conducted from October 2019 to January 2020. The total questionnaire that was filled in was 487 reduced by 45 invalid questionnaires, so that as many as 442 questionnaires were used in the subsequent analysis. By following the testing through two approaches, namely by separating the measurement model first from the whole model, then analyzing it using Confirmatory Factor Analysis (CFA) and estimating and re-specifying before the whole model is confirmed and estimated, then this study will also be tested through the two approaches. This is done to anticipate the occurrence of wrong rejection of the null hypothesis as a result of most of the testing

parameters that require estimation, causing the model to have inadequate identification and the chi-square goodness-of-fit index which tends to be large. Then to analyze each hypothesis used Structural Equation Modeling (SEM). Where the Standardized Root Mean Square Residual (SRMR) and Comparative Fit Index (CFI) are used to determine how well the hypothetical model matches the observational data [34]. With the standard value accepted if $SRMR \leq 0.09$ and $CFI \geq 0.95$. The software that will be used in this research is LISREL 8.7 with a validity test with a factor loading (λ) and KMO of more than ($>$) 0.5 and declared reliable if the Cronbach's Alpha value is more than ($>$) 0.5. The reliability test results can be showed in Table I.

Table I. The Result of Reliability Test

No	Variable	Cronbach's Alpha	Result
1	Openness to Experience	0.833	Reliable
2	Conscientiousness	0.888	Reliable
3	Extraversion	0.877	Reliable
4	Agreeableness	0.739	Reliable
5	Neuroticism	0.901	Reliable
6	Job Satisfaction	0.788	Reliable
7	Job Performance	0.827	Reliable

After validity and reliability tested, next is goodness of fit which the results showed that the value of Chi Square (X_2) with a significance level of 12559.98 and p value <0.05. Ho highlights that there are differences between the estimated covariance matrix sample and the population of the covariance matrix that is not acceptable. In other words, the estimated covariance matrix sample and the estimated covariance matrix population are different, therefore the model is considered bad. RMSEA is an index that is applied to compensate Chi Square Statistics for large samples. The RMSEA value indicates the expected good-of-fit when the model is estimated in the population. The recommended acceptance value is less than ($<$) 0.08. The test results show that the value is 0.170, which indicates a model that is not suitable. NFI is an index to measure incremental compatibility. The NFI value shows the expected good-of-fit when the value $\geq$ 0.9, while $0.08 \leq NFI < 0.9$ including marginal fit. Test results show that the value is 0.11, which shows the model is not suitable. NNFI is an index to measure incremental compatibility. The NNFI value shows the expected good-of-fit when the value $\geq$ 0.9, while $0.08 \leq NNFI < 0.9$ including marginal fit. The test results show that the value is 0.05, which shows the model does not match. IFI is an index to measure incremental compatibility. The IFI value shows the expected good-of-fit when the value $\geq$ 0.9, while $0.08 \leq IFI < 0.9$ including marginal fit. Test results show that the value is 0.12, which indicates the model is not suitable. RFI is an index to measure incremental compatibility. RFI values indicate the expected good-of-fit when the value $\geq$ 0.9, while $0.08 \leq RFI < 0.9$ including marginal fit. The test results show that the value is 0.05, which shows the model does not match. CFI is a adjusted incremental index. This

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compares the model tested with the zero model. The recommended CFI value ≥ 0.9, while 0.08 ≤ CFI <0.9 including marginal fit. Test results show that the value is 0.12, which indicates the model is not suitable. The results shown by LISREL software illustrate the correlation between variables, big five personality traits on job satisfaction, job satisfaction on job performance and job performance on job satisfaction. The relationship is illustrated in the Figure 2.
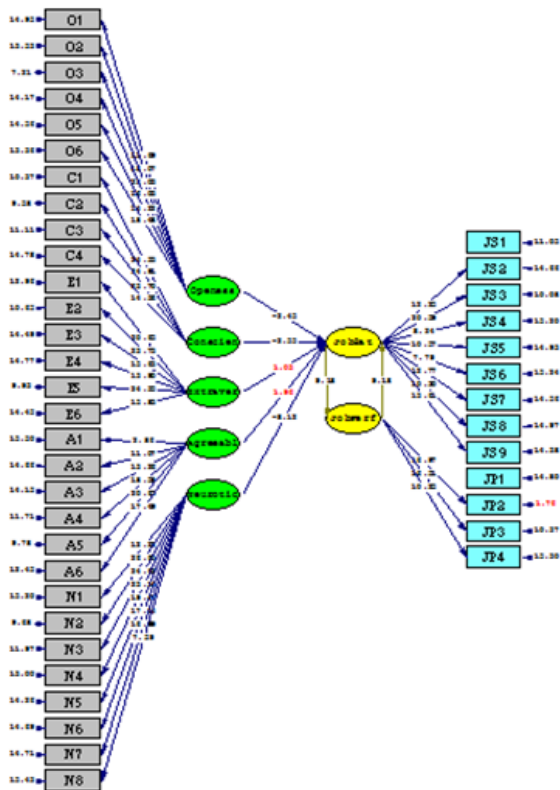

Figure 2. The result of SEM model analysis

Based on the Goodness-of-Fit Index calculation above, most parameters do not meet the requirements. However, several previous studies have conducted a similar model, therefore, the current research can be continued. The result of hypothesis test can be showed in Table II.

Table II. The Result of Hypothesis Test

Hypothesis	Hypothesis Description	T-Value	Result
H_1	Openness to Experience has a positive relationship with job satisfaction	-2.45	Significant
H_2	Conscientiousness has a positive relationship with job satisfaction	2.55	Significant
H_3	Extraversion has a positive relationship with job satisfaction	1.03	Insignificant
H_4	Agreeableness has a positive relationship with job satisfaction	1.06	Insignificant
H_5	Neuroticism has a negative relationship with job satisfaction	-8.12	Significant
H_6	Job satisfaction has a reciprocal relationship with job performance	9.18	Significant

The first hypothesis testing states (H_1), shows that the openness to experience variable is proven to have a significant effect but a negative relationship to job satisfaction, which is indicated by the t-value of -2.45. Different from previous studies, the results of the analysis by LISREL software tells us that there is a significant but negative influence between openness to experience on job satisfaction. That is, the higher the level of desire to learn new things from manufacturing staff, the lower the job satisfaction. This is due to the monotonous manufacturing process flow. Conversely, if staff with a low level of openness to experience, job satisfaction will be high. The second hypothesis states (H_2), shows that the conscientiousness variable is proven to have a significant effect and has a positive relationship on job satisfaction, which is indicated by the t-value of 2.55. The results of the analysis by LISREL software tells us that there is a significant and positive influence between conscientiousness on job satisfaction. That is, the higher the level of accuracy in manufacturing staff, the higher the job satisfaction. The third hypothesis states (H_3), shows that the extraversion variable is proven to be influential but not significant and has a positive relationship to job satisfaction, which is indicated by the t-value of 1.03. The results of the analysis by LISREL software tell us that there is no significant and positive effect between extraversion on job satisfaction. That is, the higher the level of excellence, such as the sociable nature of manufacturing staff, will not greatly affect the level of job satisfaction. The fourth hypothesis states (H_4) show that the agreeableness variable is proven to be influential but not significant and has a positive relationship to job satisfaction, which is indicated by the t-value of 1.96. The results of the analysis by LISREL software tell us that there is no significant and positive influence between agreeableness on job satisfaction. That is, the higher the level of tendency for people to work in a team of manufacturing staff, it will not affect the level of job satisfaction. The fifth hypothesis states (H_5), shows that the neuroticism variable is proven to have a significant effect and has a negative relationship with job satisfaction, which is indicated by the t-value of -8.12. The results of the analysis by LISREL software tell us that there is a significant and negative influence between neuroticism on job satisfaction. That is, manufacturing staff whose have traits that are contained in neuroticism, such as being sad, and easily stressed, the lower the job satisfaction. Conversely, if the manufacturing staff has a low level of neurotics, then the level of job satisfaction will be higher. The sixth hypothesis states (H_6), shows that the variable job satisfaction and job performance proved to be significantly influential, as indicated by the t-value of 9.18. The results of the analysis by LISREL software tell us that there is a significant reciprocal relationship between job satisfaction on job performance and job performance on job satisfaction. That is, the higher the level of one's job satisfaction, the performance on the job will also be high, so also with people who have

a good level of performance, then that person will feel satisfied with their work, so that the job satisfaction is also high.

4. CONCLUSIONS

The conclusions of the current study based on the result analysis are described as there is a significant and negative effect between openness and job satisfaction on staff working in manufacturing companies in Indonesia. This shows that the higher the level of openness, the lower the level of job satisfaction. There is a significant and positive influence between conscientiousness and job satisfaction on staff working in manufacturing companies in Indonesia. This shows the higher level of conscientiousness, the higher the level of job satisfaction. There is no significant and positive influence between extraversion and job satisfaction on staff working in manufacturing companies in Indonesia. This shows the high or low level of extraversion, so it will not affect the high or low level of staff job satisfaction. There is a significant and negative effect between neuroticism and job satisfaction on staff working in manufacturing companies in Indonesia. This shows the higher the level of neuroticism, the lower the level of job satisfaction. There is a significant reciprocal influence between job satisfaction and job performance on staff working in manufacturing companies in Indonesia. This shows that the higher the level of job satisfaction, the higher the level of job performance. Vice versa, the higher the level of job performance, the higher the level of job satisfaction. Based on the conclusions elicited in the current study, suggestion is offered for future research such as adding a moderating variable between big five personality traits and job satisfaction. Because from previous studies up to now the most significant influence of the five personality traits is different. Thus, the presence of moderating variables will strengthen or weaken the relationship between big personality traits and job satisfaction and it can be concluded that personality traits have the least effect on job satisfaction. Finally, personality trait that has no effect does not need to be tested anymore, so it can save research time. One of the moderation variables is job fit person.

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