

# BIG FIVE PERSONALITY TRAITS AND RECIPROCAL RELATIONSHIP BETWEEN JOB SATISFACTION AND JOB PERFORMANCE

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**Abstract:** *This journal was created with the aim of 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. As many as 485 data were collected which were then validated. The model values using Lisrel 8.7. This study contributes to add to the compilation of findings, so as to clarify the causes of inconsistencies in previous findings between the relationship of personality characteristics that most influence with job satisfaction and performance.*

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

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## INTRODUCTION

Research on job satisfaction and job performance has important benefits for companies, knowing 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. Then 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 (Yang & Hwang, 2014). In research (Yang & Hwang, 2014) and (Chandrasekara, 2019) suggest a reciprocal relationship between job satisfaction and job performance.

The existence of these findings can not be separated from (Judge, Thoresen, Bono, & Patton, 2001) who proposed that in research into the reciprocal relationship between job satisfaction and job performance, researchers add variables that can affect job satisfaction and one of the suggestions is personality. 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 weakest was openness to experience (Judge, Heller, & Mount, 2002). Then in 2014, (Yang & Hwang, 2014) conducted a study on Chinese employees, where the results showed that the most influential personality trait was extraversion. Another case with research from Yang & Hwang, (Obeid, Salleh, & Mohd Nor, 2017) conducted a similar study but using a sample of internal auditors working at Jordanian public shareholding companies listing on the Amman Stock Exchange (ASE), found that personality the most

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influential trait on job satisfaction is conscientiousness and neuroticism. Supported by research (Harris & Fleming, 2017) that conducts research in the banking and health care sectors, personality trait that most influences on job satisfaction is conscientiousness that continues to consistently affect other variables and neuroticism. In the study (Chandrasekara, 2019) which sampelnya is a school teacher in Sri Lanka, the results show that personality trait that most influences on job satisfaction and job performance is agreeableness and the second is extraversion.

Because of the differences in the results of the above research, this journal will be 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. Does the difference occur because of differences in the industrial sector or because of cultural differences from a country.

Based on the background of the problem and previous studies, the problems that is going to be discussed in the current study are formulated in these questions:

1. Does the big five personality trait also affect job satisfaction among staff working in manufacturing companies?
2. From the five personality traits, which personality influences the level of job satisfaction among staff in manufacturing companies?
3. Does job satisfaction affect job performance for staff working in manufacturing companies?

Based on the background and the problems of the current study, then the purposes of the current study are formulated as follows:

1. To determine the effect of big five personality trait on staff in manufacturing
2. To find out the which personality trait that has most influences to job satisfaction of staff who working in manufacturing companies
3. To determine the effect of job satisfaction on job performance on staff working in manufacturing companies

## **LITERATURE REVIEW**

### **1. 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 (Wilson, 2014a). Then 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 (Jung, 1971). 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 4 dimensions, namely 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 4 dimensions produces 8 cognitive functions which then produce 16 personality types (Wilson, 2014b). Previously, the research (Tupes & Christal, 1961) found 5 personality determinants namely surgency, agreeableness, dependability, emotional stability and culture.

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 (Yang & Hwang, 2014). Where the five characteristics are extraversion, emotional stability, agreeableness, dependability and culture (Norman, 1963). This fifth characteristic is the most difficult character to identify and be named, some call it culture (Norman, 1963), intelligence (Borgatta, 1964), openness to experience (McCrae & Costa,

1985) and intellect (Goldberg, John, Kaiser, Lanning, & Peabody, 1990). However, according to (Digman, 1990) 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. Then the measuring instrument on the personality of the big five began to continue to be developed by (Dr. Lewis R. Goldberg, 1992).

## **2. Job Satisfaction**

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 (Hoppock, 1935). According to (Adams, 1963), job satisfaction can be achieved if the rewards for the work are received fairly in accordance with their abilities. Then (Porter

& Lawyer, 1968) states job satisfaction is achieved if the desire or need for something is fulfilled. 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. Research on job satisfaction continues to be carried out, until finally (Spector, 1985) 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.

## **3. Job Performance**

According to (Thorndike, 1913) job performance measures a person against his goals, whether the results achieved are in accordance with the expected goals. In his book (Hall & Goodale, 1986) says that job performance is a measure of how a person performs his duties using time, techniques and interactions with others. (Chambell, 1990) defines individual work performance (IWP) as behavior that is relevant to company goals. 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 by Borman and Motowidlo (Koopmans et al., 2013). (Borman & Motowidlo, 1993) categorizes job performance into two dimensions, namely task performance and contextual performance. 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 (Borman & Motowidlo, 1997). It is now generally agreed that IWP not only consists of task performance, but also consists of contextual performance and counterproductive work behavior (CWB) (Rotundo

& Sackett, 2002; Viswesvaran & Ones, 2000). CWB is a behavior that can endanger the welfare of a company (Rotundo & Sackett, 2002). Such as theft behavior, absence, theft of substances and behavior outside the task (Koopmans et al., 2011). In his review (Koopmans et al., 2011) identified in the IWP will be added one more dimension, namely adaptive performance (Griffin & Parker, 2007; Pulakos, Arad, Donovan, & Plamondon, 2000; Sinclair & Tucker, 2006). Adaptive performance measures the extent to which a person can adapt to changes that occur over the role in the work or work environment (Griffin & Parker, 2007). So (Koopmans et al., 2013) built the IWP questionnaire (IWPQ) by dividing it into four dimensions, namely task performance, contextual performance, adaptive performance and CWB.

## **HYPOTHESES**

Based on the detailed description of the literature review above, the current study proposes several hypotheses as follows:

### **1. Openness to experience and its positive relationship with 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 (Gans & Cherry, 2019). They prefer change and are creative in finding solutions to problems and prefer to help others (Chandrasekara, 2019). In relation to job satisfaction, according to (Topolinski & Hertel, 2007) because of its nature that 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. So the hypothesis can be concluded is:

(H<sub>1</sub>) : Openness has a positive relationship with job satisfaction

## **2. Conscientiousness and its positive relationship with job satisfaction**

High conscientiousness shows one's

tendency to be more organized, task oriented and efficient (Harris & Fleming, 2017). They have 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 (Gans & Cherry, 2019). They are reliable, honest, consistent, obeying the rules and values of the company (Lounsbury et al., 2012). 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. (Harris & Fleming, 2017; Obeid et al., 2017; Saudi, 2018) states that there is a significant positive relationship between conscientiousness towards job satisfaction. So it can be concluded that the hypothesis is:

(H<sub>2</sub>): Conscientiousness has a positive relationship with job satisfaction

## **3. Extraversion and its positive relationship with job satisfaction**

A high level of extraversion makes a person

to be sociable, talkative, active, energetic, assertive and outgoing (Lounsbury et al., 2012). They also have many emotional expressions and feel excited and excited when they are among many people (Gans

& Cherry, 2019). They tend to have optimistic thoughts and have a lot of energy, so they will not feel too depressed and tense (Chandrasekara, 2019). 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 (Judge et al., 2002). As in research (Yang & Hwang, 2014) which shows the results that extraversion has the most significant level of influence on job satisfaction, then the following hypotheses can be drawn:

(H<sub>3</sub>): Extraversion has a positive relationship with job satisfaction

## **4. Agreeableness and its positive relationship with job satisfaction**

Agreeableness is a dimension that shows how much a person's tendency to be kind, sympathize and understand others (Harris & Fleming, 2017). 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 (Gans & Cherry, 2019). They can build interactions within a group quickly and easily (Yang

& Hwang, 2014). 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 (Zellars & Perrewé, 2001). Research

results in journals (Chandrasekara, 2019) show that there is a significant positive relationship between agreeableness and job satisfaction. Then the hypothesis that can be taken is:

(H<sub>4</sub>) : Agreeableness has a positive relationship with job satisfaction

#### **5. Neuroticism and its negative relationship with 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 (Gans & Cherry, 2019) . 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 (Chandrasekara, 2019). As a result, people with high levels of neuroticism will be more dissatisfied with their work. This is supported by research (Harris & Fleming, 2017; Judge et al., 2002; Obeid et al., 2017) which states that high instability or neuroticism has a strong negative relationship to job satisfaction. Thus, the hypothesis that can be taken is:

(H<sub>5</sub>) : Neuroticism has a negative relationship with job satisfaction

#### **6. Job satisfaction and its relationship with job performance**

In the study (Chandrasekara, 2019) conducted on teachers in Sri Lanka found 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 (Yang & Hwang, 2014) that there is a significant reciprocal relationship between job satisfaction and job performance. With the existence of high job satisfaction will result in better job performance and good job performance will provide higher job satisfaction. This is due to staff who have better job performance will be more accepted by the company so that staff will feel they have achieved self-actualization through their work. From the two studies above, hypotheses can be drawn as

follows:

(H<sub>6</sub>) : Job satisfaction has a reciprocal relationship with job performance

#### **PREVIOUS STUDIES**

The list of previous studies is mentioned in the literature review presented in table 1 below.

Table 1. Previous Studies

No	Variable	Title of the Article	Year of Publication	Conclusion of the Study
1	Big Five Personality Trait on Job Satisfaction	The productive service employee: personality, stress, satisfaction and performance	Eric G. Harris and David E. Fleming (2017). Journal of Services Marketing Vol. 31, No. 6, pp.499-511	Instability influenced job satisfaction
2		The mediating effect of job satisfaction on the relationship between personality traits and premature sign-off	Mohannad Obeid, Zalailah Salleh and Mohd Nazli Mohd Nor (2017) Academy of Accounting and Financial Studies Journal, Vol. 21, No. 2	Neuroticism yielded a strong negative relationship with job satisfaction and conscientiousness had a positive relationship with job satisfaction
3		Personality traits and simultaneous reciprocal influences between job performance and job satisfaction	Cheng-Liang Yang and Mark Hwang (2014) Chinese Management Studies, Vol. 8, No. 1, pp 6-26	All Big Five personality traits significantly influence job performance, with agreeableness showing the greatest effect, followed by extraversion. Extraversion is the only personality trait that shows a significant influence over job satisfaction.
4	Job satisfaction and job performance	The effect of work environment, leadership style and organizational culture towards job satisfaction and its implication towards employee performance in Parador Hotels and Resorts, Indonesia	Suharno Pawirosumarto, Purwanto Katijan Sarjana and Rachmad Gunawan (2017) International Journal of Law and Management, Vol. 59, No. 6, pp 1337-1358	Job satisfaction does not give a significant and positive effect on employee performance
5	Job satisfaction and job performance in the media industry	Job satisfaction and job performance in the media industry	Naser Valaei and Shokouh Jiroudi (2016) Asia Pacific Journal of Marketing and Logistics, Vol.28, No. 5, pp 984-1014	Payment, promotion, supervision, operating conditions, co-workers, and nature of the work were found to be conducive to employees' job performance, among which co-workers

				generated the highest path coefficient followed by operating conditions, payment, and promotion.
6		Drivers of job satisfaction as related to work performance in Macao casino hotels	Zheng Gu and Ricardo Chi Sen Siu (2008) International Journal of Contemporary Hospitality Management, Vol.	Mediocre interpersonal skills are the major weakness of the labor force and job satisfaction is significantly correlated with job performance. Training opportunities, salaries

No	Variable	Title of the Article	Year of Publication	Conclusion of the Study
			21, No. 5, pp 561-578	and benefits, and support from colleagues and superiors are significant drivers of job satisfaction.

**THEORETICAL FRAMEWORK**

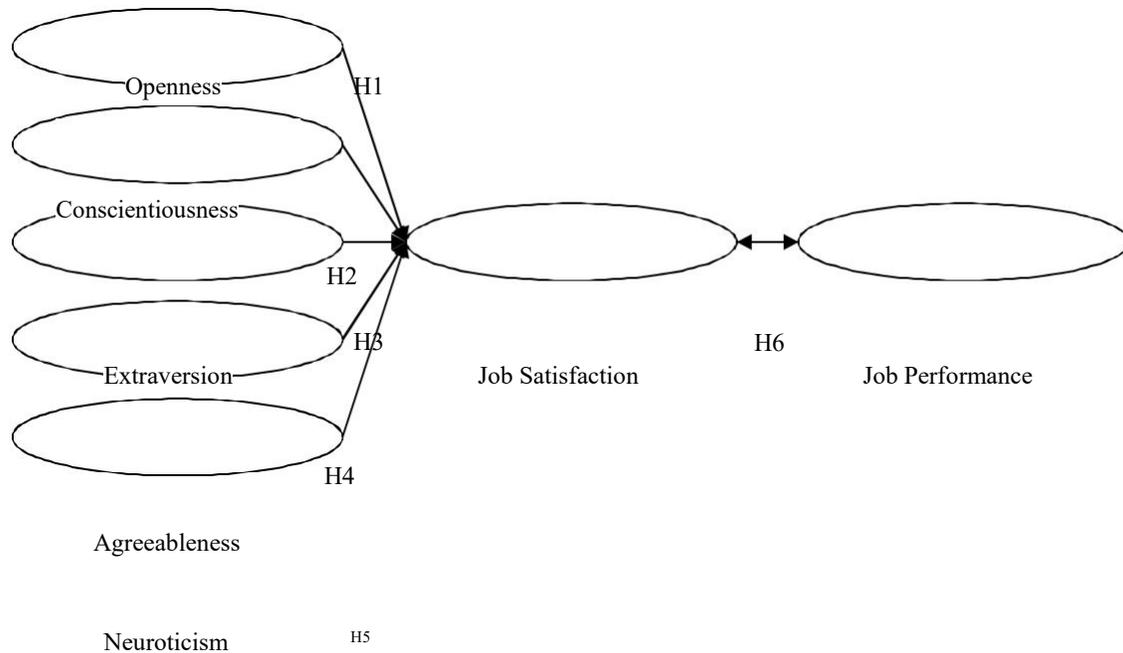


Figure 1. Framework

Conceptual Study Model

Source: (2014)

**METHODOLOGY**

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 (Dr. Lewis R. Goldberg, 1992), which is then processed into a statement form by each dimension using 10 indicators, so that there are a total of 50 indicators. The greater the value, the tendency towards the trait is also higher. The scale used is the International Personality Item Pool scale with six points, where 1 represents very inaccurate with values 1 to 6 that represent very accurate with a value of 6. While for indicators that contain negative words the value will be reversed, where 1 represents very not accurate with values 6 and 6 very accurate with values 1. One example of the indicator is "I don't talk much".

Then in measuring job satisfaction based on (Spector, 1985), with 9 dimensions measured using each of the 4 indicators, so that there are a total of 36 indicators. By using a Likert scale containing 6 points, where 1 represents strongly disagree with values 1 to 6 represent strongly agree with value 6. Then for indicators that have an indication of reducing job satisfaction has an inverse value, where

1 represents strongly disagree with value 6 while 6 represents very much agree with the value 1. One example of the indicator is "My job is fun".

Then to measure job performance in this study using a reference (Koopmans et al., 2013), which consists of 4 dimensions with a total of 47 indicators. Using a scale consisting of 4 points, where point 1 represents strongly disagree / never with value 1 and point 4 represents very agree / often with value 4. One example of the indicator is "I have difficulty determining priorities in my work".

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 PT Lion Wings, PT Sinar Mas Agro Resources & Technology Tbk, PT Mahakam Beta Farma, PT Kalbe Farma Tbk and PT Interbat. 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 PT Lion Wings, PT Sinar Mas Agro Resources & Technology Tbk, PT Dua Berlian, PT Mahakam Beta Farma, PT

Kalbe Farma Tbk, PT Interbat, PT Sewu Sentral Primatama, PT Trigoldenstar Wisesa and PT Mandom Indonesia 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.

As previous research has been done by (Yang & Hwang, 2014), (Spagnoli & Caetano, 2012) and (Aquino, Griffith, Allen, & Hom, 1997) by following the advice of (Anderson & Gerbing, 1988) to conduct 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 (Thompson, 2005). With the standard value accepted if SRMR 0.09 and CFI

0.95. The software that will be used in this research is LISREL 8.7.

Table 2. Operational Definition of the Variables

No	Variable	Dimension	The result of the operation of the variable
1	Big Five Personality Traits (Lewis R. Golberg, iPIP.ori.org, 1992)	Openness	I have excellent ideas
2			I am full of ideas
3			I have a rich vocabulary
4			I use difficult words
5			I have a vivid imagination
6			I am quick to understand things
7		Conscientiousness	I often forget to put things back in their proper place
8			I leave my belongings around
9			I make a mess of things
10			I shirk my duties
11			I don't talk a lot
12			I keep in the background

13		Extraversion	I talk to a lot of different people at parties
14			I don't like to draw attention to myself
15			I am quiet around strangers

No	Variable	Dimension	The result of the operation of the variable	
16	Job	Agreeableness	I have little to say	
17			I feel little concern for others	
18			I sympathize with others' feelings	
19			I am interested in people	
20			I take time out for others	
21			I feel others' emotions	
22			I make people feel at ease	
23			Neuroticism	I get irritated easily
24		I worry about things		
25		I often feel blue		
26		I get stressed out easily		
27		I get upset easily		
28		I am easily disturbed		
29		I change my mood a lot		
30		I have frequent mood swings		
31		Benefits	Benefits	I am not satisfied with the benefits I receive
32				The benefit package we have is equitable
33				There are benefits we do not have which we should have
34				The goals of this organization are not clear to me

35	Satisfaction (Paul E. Spector, 1985)	Communication	I often feel that I do not know what is going on with the organization
36			Work assignments are often not fully explained
37		Contingent Rewards	When I do a good job, I receive the recognition for it that I should receive
38			I do not feel the work I do is appreciated
39			I don't feel my efforts are rewarded the way they should be

No	Variable	Dimension	The result of the operation of the variable
40		Co-workers	I like the people I work with
41			I enjoy my co-workers
42			There is too much bickering and fighting at work
43		Nature of Work	I like doing the things I do at work
44			I feel a sense of pride in doing my job
45			My job is enjoyable
46		Operating Procedures	I have too much paperwork
47			Many of our rules and procedures make doing a good job difficult
48			I have too much to do at work
49		Pay	Raises are too few and far between
50			I feel unappreciated by the organization when I think about what they pay me
51			I feel satisfied with my chances for salary increases
52		Promotion	There is really too little chance for promotion on my job
53			Those who do well on the job stand a fair chance of being promoted
54			People get ahead as fast here as they do in other places
55	I am satisfied with my chance for promotion		
56	Supervision	I like my supervisor	
57		My supervisor is quite competent in doing his/ her job	

58			My supervisor shows too little interest in the feelings of subordinates
59	Job Performance (Linda Koopmans, et al, 2012)	Task Performance	How do you rate the quality of your own work in the past three months?
60			Compared to last year, I judge the quality of my work in the past three months to be ...
61			How do you rate the quantity of your own work in the past three months?
62			Compared to last year, I judge the quantity of my work in the last three months to be ...
63			I worked towards the end result of my work

No	Variable	Dimension	The result of the operation of the variable
64			I was able to perform my work well with minimal time and effort
65		Contextual Performance	Collaboration with others went well
66			Others understood me well, when I told them something
67			I understood others well, when they told me something
68			I came up with creative ideas at work
69			I took the initiative when there was a problem to be solved
70			I took the initiative when something had to be organized
71			I started new tasks myself, when my old ones were finished
72			I asked for help when needed
73			I think customers/clients/patients were satisfied with my work
74			Adaptive Performance
75		I worked at keeping my job skills up-to-date	
76		I have demonstrated flexibility	
77		I recovered fast, after difficult situations or setbacks at work	
78		I came up with creative solutions to new problems	
79		I was able to cope well with uncertain and unpredictable situations at work	
80		I easily adjusted to changes in my work	
81			I focused on the negative aspects of a work situation, instead of on

			the positive aspects
82			I spoke with people from outside the organization about the negative aspects of my work
83			I purposely worked slowly
84		Counterproductive Work Behavior	I purposely left my work so that someone else had to finish it
85			I behaved rudely towards someone at work
86			I quarrelled with my colleagues, manager, or customers
87			I purposely made mistakes

## **RESULTS**

The results of this study show the effect of big five personality traits on job satisfaction, job satisfaction on job performance and job performance on job satisfaction among staff working in manufacturing companies.

### **1. Normality and Outlier Tests**

To test the normal distribution of data for analysis, researchers applied a statistical test of the skewness value provided in the LISREL 8.7 software program. Assumptions for data normality are met when the critical value (c.r.) is less than  $\pm 2.58$  (Arbuckle, 1997). The normality test is managed by applying a normality assessment. Based on univariate tests, the values in c.r. column (skewness)

less than  $\pm 2.58$ . Therefore, it is evident that the data is normally distributed.

Outlier tests are tests to confirm that the analyzed data have the same range. What is said is that there is no outlier data if the z-score is in the range of -2.5 to 2.5. There are some data whose z-score values are in this range, so these data need to be deleted. After the data is deleted, the data has shown that there are no outliers.

## 2. Validity and Reliability Tests

LISREL software program version 8.7 also provides users with a validity test with a factor loading ( $\lambda$ ) and KMO of more than ( $>$ ) 0.5 and declared reliable if the Cronbach's Alphabet value is more than ( $>$ ) 0.5.

Table 3. The Result of Validity Test of the Study Variable Items

No.	Va ri a bl e	Fa ctors	Factor Loading	KMO MSA	Description
1	Openness	O1	0.610	0.755	Valid
		O2	0.800		Valid
		O3	0.891		Valid
		O4	0.787		Valid
		O5	0.645		Valid
		O6	0.786		Valid
2	Conscientiousness	C1	0.903	0.806	Valid
		C2	0.904		Valid
		C3	0.915		Valid
		C4	0.734		Valid
3	Extraversion	E1	0.805	0.808	Valid
		E2	0.894		Valid
		E3	0.728		Valid
		E4	0.675		Valid
		E5	0.897		Valid
		E6	0.742		Valid
4	Agreeableness	A1	0.196	0.813	Invalid
		A2	0.649		Valid
		A3	0.683		Valid
		A4	0.787		Valid
		A5	0.863		Valid
		A6	0.784		Valid
5	Neuroticism	N1	0.645	0.784	Valid
		N2	0.884		Valid
		N3	0.867		Valid
		N4	0.845		Valid
		N5	0.802		Valid

		N6	0.782		Valid
		N7	0.797		Valid
		N8	0.473		Invalid
6	Job Satisfaction	Benefits	0.818	0.646	Valid
		Communication	0.615		Valid
		Contingent Rewards	0.857		Valid
		Co-Workers	0.426		Invalid
		Nature of Work	0.521		Valid
		Operating Procedures	0.664		Valid
		Pay	0.608		Valid
		Promotion	0.573		Valid
		Supervision	0.643		Valid
7	Job Performance	Task Performance	0.777	0.734	Valid
		Contextual Performance	0.926		Valid
		Adaptive Performance	0.889		Valid
		Counterproductive Work Behavi	0.633		Valid

No	Variable/ Construct	Cronbach's Alpha	Critical Point	Result
1	Openness	0.833	0.500	Reliable
2	Conscientiousness	0.888	0.500	Reliable
3	Extraversion	0.877	0.500	Reliable
4	Agreeableness	0.739	0.500	Reliable
5	Neuroticism	0.901	0.500	Reliable
6	Job Satisfaction	0.788	0.500	Reliable
7	Job Performance	0.827	0.500	Reliable

Source: processed primary data, 2019

### 3. Goodness-of-Fit Test

In this study, the goodness-of-fit test was processed using LISREL 8.7 software. Table 4

below shows the results of the goodness-of-fit index after the test:

Table 4. *Goodness-of-Fit Index*

<b>Goodness of Fit Index</b>	<b>Result</b>	<b>Cut Off Value</b>	<b>Criteria</b>
Chi Square	12,559.98	Diharapkan kecil	
Probability		$\geq 0.05$	
RMSEA	0.170	$\leq 0.08$	Bad Fit
NFI	0.11	$\geq 0.9$	Marginal Fit
NNFI	0.05	$\geq 0.9$	Bad Fit
IFI	0.12	$\geq 0.9$	Marginal Fit
RFI	0.05	$\geq 0.9$	Bad Fit
CFI	0.12	$\geq 0.9$	Marginal Fit

Source: processed primary data, 2019

The results showed that the value of Chi Square ( $X^2$ ) with a significance level of 12559.98 and p value  $< 0.05$ .  $H_0$  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.

Root Mean Square Error of Approximation (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.

Normed Fit Index (NFI) is an index to measure incremental compatibility. The NFI value shows the expected good-of-fit when the value  $\geq 0.9$ , while  $0.08 \leq \text{NFI} < 0.9$  including marginal fit. Test results show that the value is 0.11, which shows the model is not suitable.

Non-Normed Fit Index (NNFI) is an index to measure incremental compatibility. The NNFI value shows the expected good-of-fit when the value

$\geq 0.9$ , while  $0.08 \leq \text{NNFI} < 0.9$  including marginal fit. The test results show that the value is 0.05, which shows the model does not match.

Incremental Fit Index (IFI) is an index to measure incremental compatibility. The IFI value shows the expected good-of-fit when the value  $\geq 0.9$ , while  $0.08 \leq \text{IFI} < 0.9$  including marginal fit. Test results show that the value is 0.12, which indicates the model is not suitable.

Relative Fit Index (RFI) is an index to measure incremental compatibility. RFI values indicate the expected good-of-fit when the value  $\geq 0.9$ , while  $0.08 \leq \text{RFI} < 0.9$  including marginal fit. The test results show that the value is 0.05, which shows the model does not match.

Comparative Fit Index (CFI) is an adjusted incremental index. This compares the model tested with the zero model. The recommended CFI value  $\geq 0.9$ , while  $0.08 \leq \text{CFI} < 0.9$  including marginal fit. Test results show that the value is 0.12, which indicates the model is not suitable.

According to 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.

#### **4. Hypothesis Test**

The results shown by LISREL software illustrate the correlation between variables, big five personality traits (openness, conscientiousness,

extraversion agreeableness and neuroticism) on job satisfaction, job satisfaction on job performance and job performance on job satisfaction. The relationship is illustrated in the picture below:

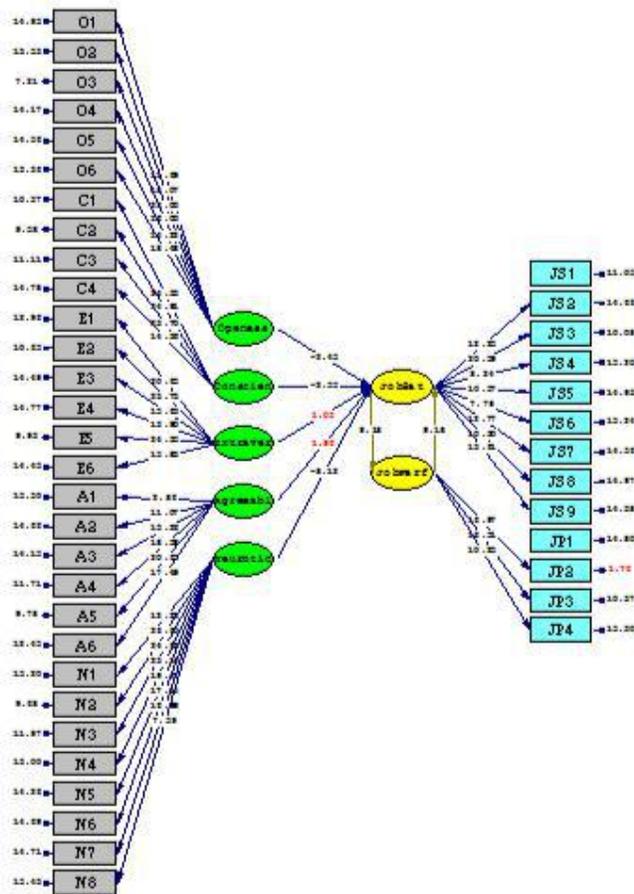


Figure 2. The result of SEM model analysis

Tabel 5. The Result of Hypothesis Test

Correlation between Variables	T value	Additional information
Openness → Job Satisfaction	-2.45	Significant
Conscientiousness → Job Satisfaction	2.55	Significant
Extraversion → Job Satisfaction	1.03	Insignificant

Agreeableness → Job Satisfaction	1.96	Insignificant
Neuroticism → Job Satisfaction	-8.12	Significant
Job Satisfaction ↔ Job Performance	9.18	Significant

Source: Data processed by LISREL software, 2019

#### **a. Pengujian Hipotesis Pertama**

The first hypothesis testing states (**H<sub>1</sub>**): **Openness to experience and its positive relationship with job satisfaction.** Table 5 above shows that the openness 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.

#### **b. Pengujian Hipotesis Kedua**

The second hypothesis states (**H<sub>2</sub>**): **Conscientiousness and its positive relationship with job**

**satisfaction.** Table 5 above 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.

#### **c. Pengujian Hipotesis Ketiga**

The third hypothesis states (**H<sub>3</sub>**): **Extraversion and its positive relationship with job satisfaction.** Table 5 above 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.

#### **d. Pengujian Hipotesis Keempat**

The fourth hypothesis states (**H<sub>4</sub>**): **Agreeableness and its positive relationship with job satisfaction.** Table 5 above shows 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.

#### **e. Pengujian Hipotesis Kelima**

The fifth hypothesis states (**H<sub>5</sub>**): **Neuroticism and its negative relationship with job satisfaction.** Table 5 above 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.

#### **f. Pengujian Hipotesis Keenam**

The sixth hypothesis states (**H<sub>6</sub>**): **Job satisfaction and its relationship with job performance.** Table 5 above shows that the variable job satisfaction and job performance proved to be significantly influential, as indicated by the t-value of 9.18.

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.

## **2. Conscientiousness and its Positive Relationship with Job Satisfaction**

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.

## **3. Extraversion and its Positive Relationship with Job Satisfaction**

The results of the analysis by LISREL software tells 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.

## **4. Agreeableness and its Positive Relationship with Job Satisfaction**

The results of the analysis by LISREL software tells

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.

## **5. Neuroticism and its Negative Relationship with Job Satisfaction**

The results of the analysis by LISREL software tells us that there is a significant and negative influence between neuroticism on job satisfaction. That is, manufacturing staff who 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.

## **6. Job Satisfaction and its Relationship with Job Performance**

The results of the analysis by LISREL software tells 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.

## **DISCUSSIONS**

### **1. Openness to Experience and its Positive Relationship with Job Satisfaction**

Different from previous studies, the results of the analysis by LISREL software tells us that there is a significant but negative influence between openness on job satisfaction. That is, the higher the level of desire to learn new things from manufacturing staff, the lower the job

## **CONCLUSIONS**

The conclusions of the current study based on the result analysis are described as follows:

1. 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.

2. 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.
3. 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.
4. 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.
5. 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.

## RECOMMENDATIONS

Based on the conclusions elicited in the current study, some suggestions are offered for future research:

1. In collecting the questionnaire, in this study using the Google form as a means of distribution, therefore the collection of respondent data sufficiency is slow. To overcome this, if the researcher knows the respondent, the researcher should meet the respondent directly to fill it. Meanwhile, if you are not familiar with the respondent, it should be shared with the lure of prizes, for example for the first 100 respondents will be given an OVO points.
2. 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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