Analysis of the effects of role overload and role conflict on performance through job stress as a mediating variable in the cellular phone trading centers in Surabaya

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ABSTRACT
The purpose of this research is to identify the effects of the role overload and role conflict on job performance with job stress as mediating variable in the cellular phone trade-centers. The population consists of the employees working in cellular phone-shops in Trade Centers located in Surabaya, East Java. By using purposive sampling, the characteristics of 316 were selected based on their aged such as over 17 years old, residing in Surabaya, and working the cellular phone traded centers in Surabaya. The data were analyzed multiple regression. It was found that the role overload and role conflict have positive effects on job stress. However, the role overload, role conflict, and job stress have negative effects on job performance. Finally, the role overload and role conflict also have effect on job performance through job stress as a mediating variable.

1. INTRODUCTION
The employee performance shown by the productivity of labor is the measurement of all success in their job. This variable is so important that it is constantly scrutinized by many experts. Performance is affected by some factors (Jankingthong & Rurkkhum 2013; Toban et al. 2014), such as the role overload, role conflict, and job stress.

The phenomenon of job stress is also frequently seen on the fast motion of the employee behavior when serving customers, for example, buyers who are critical or overly bargain the prices. Buyers at the center of Surabaya city for trading the cellular phones at Plaza Marina, World Trade Center (WTC) and other trade areas, can easily compare the trading prices with other sellers of the same areas. There are many traders who allow it to be done. This condition leads to quick emotion for the employees toward the buyers. Another frequently encountered conflict when the employees are less polite in speaking to consumers who do not buy after enquiring the employee to demonstrate a variety of items they sell.

The phenomenon above is an illustration of the employees’ job stress. This job stress condition can be experienced by the employees and this can
affect the productivity. According to Karimi et al. (2014); Bashir and Ramay (2010), job stress can affect the performance of the employees and their productivity. Again, based on a study by Wang’eri and Okello (2014); Yongkang et al. (2014); Karimi et al. (2014); Kolagar et al. (2014) it was explained that the factors that affect job stress is the role overload. It can affect job productivity. A study by Malik et al. (2013) found that role overload has a significant effect on productivity. The effect of role overload on productivity is negative, thus, the higher the role overload the lower the productivity is or the other way around, the lower the role overload, the higher the productivity is.

In addition, another study by Vanishree (2014); Yongkang et al. (2014); Karimi et al. (2014) proved that job stress is affected by the role conflict. On the other hand, the role conflict has a negative effect on the employees’ performance. The negative effect of role conflict on performance indicates that the higher the role conflict the lower the performance is. Thus, the lower the role conflict the higher the performance is (Rum et al. 2013; Smith 2011).

The research findings above are the basis for the researchers for doing the research on the effect of role overload and role conflict and job stress towards the performance. It was done to test the hypotheses related to it, such as the effect of role overload, role conflict on job stress and the effect of job stress on the performance as well. This is expected to provide benefits for the employers, especially those in the counters in the center of cellular phones in Surabaya. Besides that, it can also provide information to the human resources departments to improve employee performance.

2. THEORETICAL FRAMEWORK AND HYPOTHESES
The role overload affects job stress as stated by Idris (2011). The role overload through the impact on employees during job stress that is in continuous condition will also cause employees’ performance. Tensions describe the job stress because there is psychological pressure in the job environment. Job load on the employees can make them feel tired both physically and psychologically and finally they are not comfortable with the job condition.

There are other studies that strengthen the effect of role overload on job stress. Studies by Wang’eri and Okello (2014), Yongkang et al. (2014); Karimi et al. (2014) found that the role overload can affect job stress. The higher the role overload, the lower the performance is. Therefore, the first hypothesis can be stated as the following.

H1 = The role overload has a significant effect on the employee’s job stress in the trade center of cellular phones in Surabaya.

Other studies strengthen the effect of role conflict on job stress. A study by Vanishree (2014); Yongkang et al. (2014); Karimi et al. (2014) also found a relatively similar finding. It was also found that role conflict affects job stress. Thus, the degree of role conflict is related to the level of job stress. Based on these two variables, the second hypothesis is stated as follows.

H2: The role conflict has a significant effect on employees’ job stress in the cellular phone trade center, in Surabaya.

The relationship between role overload and employees’ performance was also described by Malik et al. (2013). Role overload causes the employees’ low productivity. Employees with excessive tire job can not concentrate on their job so that they cannot accomplish the jobs, either. The redundant burden in the job immediately can also lead to encourage employees unable to do the job quickly so that they cannot get the target. The employees, then, cannot do job completely because of the higher demands to be done. In such a condition, the quality of the job will decrease.

The evidence above can be referred to some studies such as by Malik et al. (2013); Vanishree Rum et al. (2013). Their findings also showed a relatively similar evidence that role overload affects the employees’ performance. Thus, the higher the degree of role overload, the lower the employees’ performance is. The relationship between the role overload and the employees’ performance as described above leads to the following hypothesis:

H3 = Role overload has a significant effect on employees’ performance in the cellular phone trade centers in Surabaya.

The next is based on the study by Rum et al. (2013), finding that the role conflict has an effect on employees’ performance. Role conflict occurs during the job being done by the employees and when it is not in accordance with the appropriate competency and their characteristics. Thus, when they do their jobs, they feel not being supported by their own expertise. Therefore, when they cannot do the job optimally, because of the lack of expertise, they cannot finish their jobs well.

Research Rum et al. (2013); Belias et al. (2015); Razak, Jonah, and Nasrudin (2011) also had the relatively same finding, namely the role conflict
has an effect on the employees’ performance. Role conflict has a negative effect on the employees’ performance. Thus, the higher the role conflict, the lower the employees’ performance is and the lower the role conflict, the higher the employees’ performance is. Based on the relationship between the employees’ performance and role conflict, then the fourth hypothesis is stated as the following:

H4 = Role conflict has a significant effect on employees’ performance in cellular phone trade centers in Surabaya.

Ahmed and Ramzan (2013), states that job stress affects the employees’ performance. Employees under stressful conditions illustrate that they experience fatigue physically and psychologically. In turn, they cannot do job optimally. They cannot concentrate on their jobs fully and consequently they reduce the quantity of job that should be completed. Employees in stress condition do not have the ability to innovate and finish the job slowly, with respect to employment so that they will produce a lower quality in their jobs.

Research conducted by Bashir and Ramay (2010); Ratnawat and Jha (2014); Yahaya et al. (2011) also showed a similar finding, proving that job stress affects the employees’ performance. Job stress has a negative effect on the employees’ performance, in which the higher the job stress is, the lower performance is. The lower the job stress is the higher performance is. Job stress affects the level of concentration in the organizational culture negatively so as to reduce the performance. Based on the above evidence, the fifth hypothesis is formulated as follows.

H5 = Job stress have a significant effect on the employees’ performance in the cellular phone trade centers in Surabaya.

Research Bashir and Ramay (2010) conducted a research on job stress toward the employees’ performance. They also found that role overload and role conflict and job stress have an effect on the employees’ performance. Role overload, role conflict, and job stress have negative effects on the employees’ performance. When the role overload is in higher level, the role conflict level is also higher, and the higher the level of job stress can eventually leads to the employees’ poor performance.

The above finding is also supported by other studies that show the influence overrole load, role conflict and job stress on performance. For example, Yongkang et al. (2014); Karimi et al. (2014); Wang’eri and Okello (2014) have a relative finding that role overload, role conflict and job stress also affect the employees’ performance. Based on the relationship between overload role, role conflict, job stress and the employees’ performance, the following hypothesis is stated:

H6 = Role overload, role conflict and job stress have significant effects on the employees’ performance in the cellular phone trade centers in Surabaya.

Research by Trayambak, Kumar, and Jha (2012) described that job stress is affected by overload role and role conflict. For example, when employees experience job stress, they will also reduce their performance. For that reason, job stress can become a mediating variable towards the effect of role overload and role conflict the performance. It is because when role overload and role conflict affect job stress, and in turn, the stress of job will reduce the performance.

Another study by Yahaya et al. (2011) also revealed that job stress affects the employees’ performance, meaning that the higher job stress lead to decreased performance and lower job stress lead to increased performance. Job stress experienced by employees is affected by various factors including the role overload and role conflict. For that reason, job stress can be considered a mediating variable for the effect of role overload and role conflict on performance. As such, the seventh hypothesis is stated as the following:

H7 = Role overload and role conflict affect the employees’ performance through job stress as a mediating variable.

Research Framework
The research framework in this study can be drawn as in Figure 1.

3. RESEARCH METHOD
This study is a quantitative as referred to Bungin (2013), in which, the design of quantitative research should prove the hypothesis. The population consists of employees in cellular phone trading center in Surabaya. According Kuncoro (2008), the population is a group of elements for the research chosen using a purposive sampling. Thus, it is based on y the objective and the characteristics of the population in the sample. The characteristics of the target sample are such as aged over 17 years, located in Surabaya, working in cellular phone counters in Surabaya. The questionnaires were distributed to the respondents, collected back with the total number of 316 samples, as based on the criteria determined.

Role overload is measured based on the fol-
The figure shows a research framework with variables such as Role Overload, Role Conflict, Job Stress, and Employee's Performance. The framework includes hypotheses (H1 to H7) connecting these variables.

4. DATA ANALYSIS AND DISCUSSION

The test results show the level sig for the validity in Pearson correlation value role overload, role conflict, job stress, and performance is still below 0.05. This evidence indicates that the overall indicators (statements) on each of the study variable is considered valid. It also shows that the reliability for Cronbach alpha values, it ranged from 0.73 to 0.87. Under the provisions of Cronbach alpha values, it can be stated that every variable is declared reliable research.

The significance level of Kolmogorov Smirnov value is equal to 0.848 and it is higher than 0.05. Thus, the normality test based on the above data can be concluded that the assumption of normality can be met. Therefore, the views from the assumption of normality, it shows that the output can be used to make predictions.

Based on the VIF values, it is ranging from 1.203 to 1.305 means VIF below 10 so that between the independent variables, considered not inter-connected or there is no Multicolinearity. Based on the above evidence, the level of sig. is over 0.05 for the three independent variables. Thus, it can be explained that the role overload, role conflict and job stress did not affect the residual values. These findings suggest that the characteristics of the data from the study have qualified for the research because the unavoidable impacts of bias (unclear). Finally, all the statements in the questionnaire are said to be feasible for use in research.

The Effect of Role Overload and Role Conflict on Work Stress

The effect of role overload and role conflict on job stress conducted by using multiple linear regression as in Table 1. The coefficient of determination indicates that role overload and role conflict have an impact of 14% on job stress, so that a change in the assessment role overload and role conflict caused changes in job stress by 14%.

F test was done by comparing the F-computed and F-table. F-computed value totaled to 25.417 and it was higher than F-table (4.61). Under terms of testing, it could be explained that the role over-
load and role conflict simultaneously proved to have a significant effect on work stress.

The t-test is conducted by comparing t-computed and t-table. T-computed variable is equal to 4.882 role overload and role conflict t-computed variable is equal to 4.324. T-computed of the two variables is higher than t-table (1.960). Under terms of testing, it could be explained that role overload proved a significant effect on work stress so that the level of role overload affects the level of job stress. Role conflict proved to have a significant effect on job stress. Thus, the intensity of conflict in the workplace affects job stress.

The Effect of Role Overload, Role Conflict, and Job Stress on Performance
The effect of role overload, role conflict, and work stress on performance was done by using multiple linear regression as in Table 2. The coefficient of determination is the value of the effect of role overload, role conflict, and work stress on performance. The degree of the effect is identified from the R2 value that is equal to 0.151 (15.1%). The coefficient of determinant indicates that role overload, role conflict, and job stress have an effect on the performance of 15.1%, so that changes in the assessment role overload, role conflict, and job stress lead to changes in performance of 15.1%.

F-test was done by comparing the F-computed and F-table. F-computed value is 18.489 and it is higher than F-table (3.78). Under terms of testing, it could be explained that the role overload, role conflict and job stress together proved to have a significant effect on performance.

The t-test is conducted by comparing t-computed and t-table. T-count role overload variable of -2.979 t-count variable role conflict of -3.582. T-computed two variables are higher than t-table (1.960). Under the provisions of the test, then it could be explained that role overload have a significant effect on performance because the value t-computed lower than -1.960 -2.979. Role conflict and significant have a negative effect on performance because the value t-computed is lower than -1.960 -3.582. Job stress and has significant negative effect on performance because the value of t-computed is lower than -1.960 -3.409.

The Effect of Role Overload and Role Conflict on Performance through Job Stress as a Mediating Variable
The effect of role overload and role conflict on performance through job stress as a mediating variable was done with hierarchical regression. In this process, firstly it described the effect of role overload and role conflict on performance and the next process by adding a variable of job stress.

In the process of unity for the independent variables, it involves only role overload and role conflict determination values was obtained (the effect) 0.119 (11.9%) on performance. In the second process, it was added with job stress variable as independent variable. The coefficient of determination was to 0.151 (15.1%). Based on a comparison of the two coefficients of determination, it can be described that the by adding with job stress, it could increase the effect form 11.9% to 15.1%. Job stress is expressed as a variable that is capable of mediating the effect of 3.2%.

Discussion
Role Overload and Job Stress
The test result shows that the research hypothesis t-value of the effect of role overload on job stress is equal to 4.882 while the value of t-table is 1.960. T-value of role overload is higher than the value of the t-table, so it can be stated that the role overload proved to have a positive and significant ef-
fect on job stress. Increasingly, the higher the role overload, the higher the job stress is.

The above finding supports the research by Idris (2011) with respondents academics of five universities in Malaysia. It also showed that role overload proven to have an effect job stress. Other study was also conducted by the Yongkang et al. (2014) in China with study respondents of the mid-level government officials. The finding in this study indicates that the excessive workload affects the job stress level, the higher the workload leading to higher job stress. Another study supports the results of this study demonstrated from research by Karimi et al. (2014) at the nurses who work in hospitals in Iran. It showed also that the workload affects job stress because higher workload causes nurses to force his ability to work thus causing stress.

The comparison among the studies above could be explained that the role overload can lead to employees not to be optimistic with their capabilities while working. Excessive workload causes employees to feel pressured by time constraints and limited capabilities in the completion of the work. This causes the employees to feel stressed. Excessive workload causes employees to feel a real responsibility is difficult to be met (Pradana & Salehudin 2014).

**Role conflict and Job Stress**

The result of hypothesis testing showed that the value $t$-value of the role conflict effect on job stress is equal to 4.324 while the value of $t$-table is 1.960. The Value of $t$-value for role conflict is higher than that of the $t$-table. Thus, it can be stated that role conflict has a positive and significant effect on job stress. The higher of role conflict the higher the job stress is.

The finding above supports the research by Karimi et al. (2014) done on the nurses who worked in hospitals in Iran. This study also tested the effect of role conflict on job stress. It also provides evidence showing that role conflict significantly affects job stress of nurses. Yongkang et al. (2014) in China also conducted a study involving the effect of role conflict in job stress. It provides evidence that role conflict affected the employees to get stressed. They felt uncertain what to do with their job in the workplace. Vanishree (2014) on the small and medium enterprises (SMEs) also showed similar results regarding the effect of role conflict on job stress. Employees of SMEs tend to experience work stress when there is a conflict in the workplace.

Based on the previous studies, and the current study on the effect of role conflict on work stress, it could be explained that the conflict in the workplace causes employees to feel under pressure at work. The conflict in the workplace causes employees to work unwillingly and it is a burden for the employees to encourage them to feel stressed at work.

**Role overload and Employees’ Performance**

The hypothesis test result on the effect of role overload on performance with $t$-value of -2.979 while the value of the $t$-table is equal to -1.960. The $t$-value of role overload is lower than the $t$-table value. Thus, it can be stated that role overload has a significant and negative effect on performance. The higher the role overload, the lower performance is or the other way around.

The above finding supports the result of the study by Malik et al. (2013) on the employees of two large companies in Pakistan. They found that role overload has a significant effect on the productivity of employees, which means that when the role overload has a negative effect on productivity. The higher the role overload, the lower the employees’ performance. Research conducted by Vanishree (2014) on the employees who work in small and medium enterprises (SMEs) also examine the effect of role overload on employee performance. The findings of this study indicate that when the workload is causing excessive employee working less than optimal results, meaning that the higher the workload causing a decrease in employee performance.

Based on the comparison of the current study and the previous ones, it can be described that role overload can lead to increasingly lower employees’ productivity. Employees with excessive workloads cause employees unable to concentrate fully in the work and the work will be less accomplished. In fact, role overload also often causes employees to rush the work because of the demands much work to be completed. In such a condition, the quality of the work could be decreased (Pradana & Salehudin 2014).

**Role Conflict and Employees’ Performance**

The hypothesis testing result on the effect of role conflict on performance with the $t$-value of -3.582 and -1.960 for the $t$-table value. The $t$-value of role overload is lower than the value of the $t$-table, therefore, it can be stated that the role conflict has a significant and negative effect on performance. The higher the role conflict, the lower the em-
ployees’ performance. The lower the role conflict, the higher the employees’ performance is.

The above finding is consistent with the research by Rum et al. (2013) on local government employees in Kendari Indonesia. They also found that conflict in the work environment has a negative effect on the employees’ performance. It means that the higher the conflict in the workplace, the lower the employees’ performance. Another study showed the effect of role conflict on the performance conducted by Belias et al. (2015) on employees in Turkey. This research showed that role conflict has an effect on employee behavior, meaning that the conflict in the workplace affects the ability of the formal completion of every task done by the employees in the workplace.

Based on both the current study and previous ones, it can be explained that the role conflict affects the employees’ performance. Role conflict has a negative effect on the employees’ performance. When it is higher, the employee performance is lower (Tang & Chang 2010).

Job Stress and Employees’ Performance
The effect of job stress on the employees’ performance can be explained from the results of research hypothesis testing, which is based on t-value of -3.409 and -1.960 for t-table value. The t-value of job stress is lower than the t-table value. For that reason, it can be argued that job stress has a significant and negative effect on performance. The higher the job stress the lower the employees’ performance.

The above finding supports the study by Ahmed and Ramzan (2013) in Pakistan with the sample of bank employees. The level of work stress experienced by employees affects the employees’ result of work. When work stress increases, it tends to degrade the quality of the employee’s job. Another study conducted at the bank’s employees in Pakistan also conducted by Bashir and Ramay (2010) with relatively similar findings that employees work stress affects employee performance. Work stress also expresses the work of employees.

Based on the present research findings and the previous ones, it could be explained that job stress has an effect on performance. Work stress has a negative effect on the performance. The higher the job stress lead to employees’ low performance, and the lower the stress of work leads to the higher performance (Belias et al. 2014), and it can cause the employees’ health drop (Ismail et al. 2012). Work stress affects the level of concentration at work and thus it can leads to a negative organizational culture for the employees’ performance.

Role Overload, Role Conflict, Job Stress and Performance
The effect of role overload, role conflict, and job stress simultaneously on a performance based on the F-value that is equal to 18.489 and found to be higher than the F-table value that is 3.78. Based on the testing provision, when the F-value is higher than F-table, then all variables tested (role overload, role conflict and job stress) significantly affect the employees’ performance.

The finding above supports the study by Yongkang et al. (2014) on government employees in China. They also found that role overload, role conflicts and job stress simultaneously affect the employees’ performance. These three variables negatively affect the employees’ performance. The effect of role overload, role conflict, and job stress on employee performance is also shown in the study by Karimi et al. (2014) at the nurses who work in hospitals in Iran. They found that role overload, role conflicts and job stress have negative effects on the employees’ performance.

Based on both the present study and the previous ones, it could be explained that the role overload and role conflict affects the stress of work and the three variables affect the employees’ performance. Role overload, role conflict, and job stress simultaneously have an effect on the employees’ performance (Perera 2014).

Role Overload, Role Conflict on Performance through Job Stress
In capability of mediating, job stress can be described on the comparative value of determination (R Square) in the equation and the equation of the two. In the equation of the test, the effect of role overload and role conflict towards performance is 11.9%. In the second equation to test the effect of role overload, role conflict, and job stress on performance is 15.1%. As such, job work stress could provide mediation by 3.2%.

This study provides some findings that support the research Trayambak, Kumar, and Jha (2012), in relation to role overload and role conflict that can affect job stress as well in turn, they also affect the employees’ performance. It suggest that the degree of job stress that is caused by role overload and role conflict then also affect the employees’ performance. In this case, job stress is
considered a variable mediating the effect of role overload and role conflict on the employees’ performance. In addition, this is similar to the previous one by Research Yahaya et al. (2011) finding that job stress is a variable that mediates the effect of role overload and role conflict on the employees’ performance.

Based on both the previous studies and this present study, it could be explained that decreasing job stress is a vital for any company so that they can increase the employees’ performance, besides decreasing the two variables such as role overload and role conflict. By doing so, the employees can have experience less job stress to increase their performance.

As it is proved that job stress job stress can become a mediating variable on the effect of role overload and role conflict towards the employees’ performance. Role overload and role conflict affect job work stress, and then job stress, in turn, decreases the employees’ performance (Karve & Nair 2010; Usman, Ahmed & Ahmed 2011). Therefore, when employees feel a positive quality of their job, they will feel positive and eventually they can increase their performance (Rubel & Kee 2014).

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS
There are some conclusions in this study as the following:
1. Role overload and role conflict have been proved to have positive and significant effects on job stress by the employees in the cellular phone trading centers in Surabaya. The higher of role overload and role conflict can affect job stress.
2. Role overload and role conflict have also been proved to have negative and significant effects on the employees’ performance who work in the cellular phone trading centers in Surabaya. The higher the role overload and role conflict can decrease the employees’ performance.
3. Job stress has a negative and significant effect on the employees’ performance who work in the cellular phone trading centers in Surabaya. When job stress increases, it will decrease the employees’ performance.
4. Role overload, role conflict, and job stress have significant effects on the employees’ performance in the cellular phone centers in Surabaya.
5. Role overload and role conflict have effects on the employees’ performance in the cellular phone trading centers in Surabaya.

The practical implication in this study is that it is a good input for the companies especially the cellular phone trading centers in Surabaya that they have to pay more attention to role overload, role conflict, and job stress in order to improve their employees’ performance.

Some suggestion can be asserted as the following:
1. Role overload has a negative effect on job stress and performance, but based on the average value, it turned out to be the highest average value by role overload that is for the statement that: "The work that I do exceed my physical ability, so I often feel dropped after working." Therefore, the researchers suggest that the management should consider the degree of their employees being fatigue at work when they are given new tasks.
2. Role conflict has negative effect on job stress and performance, but based on the average value, it turned out to be the highest average value by role conflict is for the statement: "I often get two different orders at the same time." Thus, it is advisable that the management should draw up the work schedule for their employees so that there won’t be ordered in two commands (two jobs) at the same time. This needs to be done to improve the quality of completing the employees’ tasks.
3. In connection with a balance in the workload and work conflicts, the companies should also provide compensation to the progressive system, which means that employees are entitled to get a bonus when the sales target could be achieved. It could encourage them to work. By doing so, they will not consider their jobs as a burden but as a challenge to work hard through getting a bonus.

It can be seen from the perspective of the measurement for the employees’ performance that is based appraisal, so that it might be still subjective in their performance assessment.

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