The Effect of Overtime and Workload towards Employee Productivity
With Burnout as Mediating Variable
(A Research at PT. RAPP)

Iis Farida Okta 1*, M. Alkadri Perdana 2
1,2 Politeknik Negeri Bengkalis, Indonesia

Address: Jl. Bathin Alam, Sungai Alam Bengkalis Riau - 28711
Author's correspondence: faridaoktaitis@email.com

Abstract. This research aims to determine the influence and how much influence overtime and workload on employee productivity with burnout as mediating variable at PT. RAPP. Utilizing a quantitative method, non-probability sampling with purposive sampling, data collection technique using questionnaire with sample of 80 employees. Data analysis used was descriptive analysis, classical assumptions, Multiple Regression Analysis, R2 Test, F Test, T Test, and mediation test. The results of this research indicate that: (1) Overtime significantly and negatively influence employee productivity with tcount -2.830 < ttable 1.99167 and Sig. 0.006 < 0.05 (2) Workload significantly and positively influence employee productivity with tcount 11.906 > ttable 1.99167 and Sig 0.000 < 0.05 (3) Overtime significantly and negatively influence burnout with tcount -6.117 < ttable 1.99125 and Sig 0.001 < 0.05 (4) Workload significantly and positively influence burnout with tcount 3.821 < ttable 1.99125 and Sig 0.001 < 0.05 (5) Burnout significantly and negatively influence employee productivity with tcount -6.450 < ttable 1.99167 and Sig. 0.000 < 0.05 (6) There is mediating role burnout on the influence of overtime on employee productivity with Z-Score 4.43 > 1.96 (7) Burnout does not mediate the influence of workload on employee productivity with Z-Score -3.28 < 1.96.

Keywords: Overtime, workload, burnout, productivity

1. BACKGROUND

For the purpose of accomplishing long term success in nowadays competitive business environment, companies in various industries are under pressure to increase profitability. Increased profitability is a key objective for businesses because it contributes to business sustainability, satisfies stakeholder expectations, and provides a market advantage. In an endeavor to increase profits, businesses are evaluating the significance of productivity and efficiency enhancements. The objective of productivity enhancement is to generate more output or results by maximizing the utilization of available resources. Meanwhile, the objective of efficiency improvement is to produce the same or more output with fewer resources.

Implementing overtime work and high workload is one strategy for increasing productivity and efficiency. Overtime refers to the practice of employees working in excess of the normal working hours specified by regulations or company policy. Overtime work comprises additional work performed beyond normal working hours. Companies frequently utilize overtime to increase production output in a brief amount of time. At the same time, it is expected that assigning workloads to employees will improve the utilization of time and resources. High workloads reflect situations in
which employees are under pressure to complete complex tasks, meet stringent deadlines, or deal with large volumes of work in a short period of time.

According to information obtained from the International Labour Organization (ILO) on the Statistics of Overtime 2023, the rate of overtime work in the industrial sector has remained significant in recent years. According to the report, more than 20 percent of employees in ILO member countries regularly work overtime. The ILO establishes that the standard workweek for employees is 40 hours. In the meantime, the obtained data indicates that the proportion of employees working 49 or more hours per week varies from 2 percent to 91 percent of the total workforce in ILO member states. This demonstrates that the pressure to increase productivity frequently drives companies to implement overtime work as a temporary solution.

In addition, in accordance to the 2021 Mind the Workplace report published by Mental Health America (MHA), employees frequently express concern that they will not be able to take necessary time off when coping with an unmanageable workload. This is supported by a survey of over 5,000 employees from 17 industries in the United States, which revealed that nearly 83 percent of respondents felt emotionally exhausted from work due to an unmanageable workload. Moreover, employees claim that they work too many hours per week, indicating a high workload.

The industrial sector in Indonesia is not exempt from the phenomenon of overtime work and high workload. Manufacturing is one of the industrial sectors that continues to expand in Indonesia. According to data from Badan Pusat Statistik (BPS) Indonesia 2022, the number of medium and large manufacturing companies in Indonesia reached 29,000 of total manufacturing companies in 2022. Along with the high demands in work, the manufacturing industry is one of the sectors that often experiences overtime work and high workload, this is in line with research conducted by Nelson et al (2023) that shows the high production process has an impact on the high demand for labor and capabilities in the manufacturing industry.

One of the largest manufacturing companies in Indonesia is PT Riau Andalan Pulp and Paper (RAPP). It is managed by Asia Pacific Resources International Holdings Ltd (APRIL), a firm that likewise focuses on the pulp and paper industry. Asia Pacific Resources International Holdings Ltd (APRIL) is a member of the Royal Golden Eagle (RGE) group, which was founded by Sukanto Tanaoto (CEO) in 1973. This group today consists of over 80 subsidiaries and is the largest in Indonesia or among multinationals.
In conformity with Aprilasia.com (2023), PT.Riau Andalan Pulp and Paper (RAPP) is located in Pangkalan Kerinci, kecamatan Langgam, kabupaten Pelalawan, approximately 75 kilometers from the capital city of Riau, Pekanbaru, with its main office, administration, and collaboration located at Jalan M.H.Thamrin No. 31, Kebon Melati, Tanah Abang, Jakarta Pusat 10230, Indonesia. and Paper is situated in a favorable location since Pangkalan Kerinci is the closest resource with a suitable climate for tree growth, which is the primary raw material for Pulp and Paper. PT. RAPP is known as an integrated mill that produces 2,000,000 tons per year of pulp with a production capacity of 2,500,000 tons per year and 800,000 tons per year of paper with a production capacity of 800,000 tons per year.

APRIL Group is a world leading pulp supplier and uses advanced manufacturing processes to produce pulp of premium quality. The plantation pulp products of PT. RAPP are PEFC certified, as the fiber used in production is sourced from sustainably managed plantation and sources which uphold ecological, economic and social values. This pulp afterwards become one of material in the production of paper at PT. RAPP. The paper product is branded as PaperOneTM. Therefore, this product is marketed in more than 70 countries.

The organization structure of PT. RAPP is divided into several main offices including finance office, procurement office, personal and administration, research process and product development, operation and product, quality control, and production. The employees are working under each department with separates role and job responsibilities. Considering PT. RAPP’s large production and distribution of pulp and paper, this company could require high workloads and work hours for its employees in order to fulfill the market demand and completing the work tasks.

Moreover, burnout is a major concern in the context of overtime work and high workloads. Burnout is a condition of mental, physical, and emotional exhaustion caused by extended, chronic stress at work. Burnout can mediate the relationship between overtime work, workload, and employee productivity in the context of overtime work and a high workload. Research by Adil et al (2022) found that burnout occurs due to the high frequency of overtime work along with elevated workloads that affect the psychological well-being of employees and can influence work productivity in the industrial sector. Therefore, based on the described background and problem, the phenomenon of overtime work and high workload is evident and an appropriate topic
of research. The research related to this topic is expected to provide valuable input for the company in managing the employees’ management.

2. LITERATURE REVIEW

Nugraheni (2019) defined overtime as work performed by employees, on the basis of superior orders, that exceeds the usual working hours on working days, or work performed on employees' weekly rest days or official holidays. The principle of overtime work is basically voluntary, except in certain conditions where work must be completed immediately for the benefit of the company. Therefore, according to Nugraheni (2019) there are three indicators of overtime namely: overtime hours, overtime compensation, and workload assigned.

Workload can be defined as work assignment that is given to employee to be finished in a period of time. Furthermore, Hamdani (2021) explain workloads can further differentiated into excessive or too little workload quantitative, that which arises as a result of too many tasks or a little is given to the employee to complete within a certain time, and excessive workload or too little qualitative, if employee feel unable to perform a task, or not working on a task use the skills or potential of employees.

According to Primaturi (2021) workload that exceeded intensity of work assignment employee capabilities may result in threats and reactions to task acceptance, which can change physical condition of employees and emotional improvement in employees, changes in employee behavior and performance such as delaying work, being difficult to work with, and failing to comply with regulations, but workloads can improve employee performance to achieve greater efficiency.

Koesmowidjojo (2017) states that workload is one of the aspects that must be considered by every company. Workload is a set or number of activities that must be completed by an organization within a specified time. Workload is any form of work given to human resources to be completed within a certain period of time. As a result of workload that is too heavy or physical ability that is too weak can result in an employee to suffer from disorders or occupational disease. Furthermore, there are three indicators of workload according to Koesmowidjojo (2017) namely job condition, time utilization, and targets to be achieved.

Alam (2022) describes that according to Pines and Maslach, burnout is a syndrome of exhaustion, both physically and mentally which includes developing negative self-concept, lack of concentration and negative work behaviors. This situation makes the
atmosphere at work become depressing, unpleasant, dedication and commitment are reduced, performance and worker achievement are not maximized. This situation makes workers keep distance, not wanting to get involved with their environment. Besides that, burnout is influenced by a mismatch between effort and what is obtained from work. There are three indicators of burnout according to Maslach and Leiter et al (2017) in Alam (2022), namely emotional exhaustion, depersonalization, and reduced personal accomplishment.

Sutrisno (2016) explained that productivity is generally defined as the relationship between outputs (goods or services) and inputs (labor, materials, money). Productivity is a measure of productive efficiency in the form of comparison between outputs and inputs. Inputs are often limited to labor, while outputs are measured in physical units, form, and value. According to Sutrisno (2016) there are five indicators of productivity namely ability, improvement in work result achieved, spirit at work, self-development, and quality.

Furthermore, the basis of previous research is used as a comparison and reference to be carried out. The author’s desire to conduct study on the effect of overtime and workload towards employee productivity with burnout as mediating variable (a study at PT. RAPP) is driven by the existence of previous international and national research journals as following studies.

According to a study by Greena and Heywoodb (2023) entitled “Performance pay, work hours and employee health in the UK”, this study examine the effect of performance pay and work hours on employee health. One of the results of the study shows work hours have an effect on employee health, one candidate emphasized, claims that the hours of work increase under performance pay and that the increase is sufficient to harm health.

Overtime decreased the result employee productivity of employees. It was stated in a study from Yulianto and Mulyanti (2023) “The Influence of Working Time on Attendance Hour and Employee Productivity”. Taking a sample of employees from the report generating unit, the results show that the more working hours employees have, the less productive they are the next day. This is due to employee eye fatigue from working on reports in front of a computer screen. The more hours worked with additional overtime hours, the lower the production.

Meanwhile overtime influence fatigue on employee as well. The result of a study from Syaputra and Lestari (2019) about “The Influence of Working Time to Fatigue on
Construction Workers at Project X East Jakarta”. A study on Project X in East Jakarta investigated the link between work hours and worker performance. Interviews revealed widespread fatigue among construction workers, with 60% reporting body aches.

Workload has an influence on employee work productivity as well. This term is proven on a study conducted by Manoppo et al (2021) entitled “The Influence of Workload, Work Environment and Integrity on Employee Productivity at PT. Empat Saudara Manado”. Triyadin utilized associative study, with a sample of 40 respondents. Manoppo et al (2021) indicates that workload, work environment and integrity simultaneously or partially have a significant positive effect on employee productivity at PT. Empat Saudara Manado as the increase in workload will result on the increase on employees’ productivity as well.

In exploring more finding related to burnout and employee productivity, a study by Safitri and Frianto (2021) entitled “The Effect of Work Life Balance and Burnout on Employee Productivity of PT. Indomarco Adi Prima Surabaya”, recognized that burnout has a negative but insignificant effect on employee productivity.

There are seven hypotheses that are included in this study as following:

H1  =  Overtime has significant influence on Employee Productivity  
H2  =  Workload has significant influence on Employee Productivity  
H3  =  Overtime has significant influence on Burnout  
H4  =  Workload has significant influence on Burnout  
H5  =  Burnout has significant influence on Employee Productivity  
H6  =  Burnout mediates the influence of overtime on Employee Productivity  
H7  =  Burnout mediates the influence of Workload on Employee Productivity

3. RESEARCH METHOD

This research was conducted at PT. Riau Andalan Pulp and Paper (RAPP) that is located at Pangkalan Kerinci, kecamatan Langgam, kabupaten Pelalawan. the research object was all employees of PT. Riau Andalan Pulp and Paper (RAPP). The sampling technique that applied in this research was technique in the form non-probability sampling with the total of respondent was 80 respondents. Measuring perceptions and testing the effect and relationship between the variables studied uses linear and multiple regression analysis, utilizing SPPS 27 as an analytical tool as well as sobel test to discover the mediating effect. The type of research is quantitative descriptive.
4. RESULT AND DISCUSSION

Overtime refers to the practice of employees working in excess of the normal working hours specified by regulations or company policy. Overtime work comprises additional work performed beyond normal working hours. Companies frequently utilize overtime to increase production output in a brief amount of time. At the same time, it is expected that assigning workloads to employees will improve the utilization of time and resources. High workloads reflect situations in which employees are under pressure to complete complex tasks, meet stringent deadlines, or deal with large volumes of work in a short period of time. Yulianto and Mulyanti (2023) in a research “The Influence of Working Time on Attendance Hour and Employee Productivity” found that the more working hours employees have, the less productive they are the next day. The more hours worked with additional overtime hours, the lower the productivity. Workload has an influence on employee work productivity as well. This term is proven on a research conducted by Triyadin and Yusuf (2021) entitled “The effect of workload on employee productivity at ULP Rayon Woha” that stated the effect of workload 53.6 % increase the employee productivity.

Moreover, burnout is a major concern in the context of overtime work and high workloads. Burnout is a condition of mental, physical, and emotional exhaustion caused by extended, chronic stress at work. Burnout can mediate the relationship between overtime work, workload, and employee productivity in the context of overtime work and a high workload. Research by Adil et al (2022) found that burnout occurs due to the high frequency of overtime work along with elevated workloads that affect the psychological well-being of employees and can influence work productivity in the industrial sector.

Based on the results of the tests that have been carried out, the research used two equations model to determine the relationship between variables. the results of testing the regression equation model from this research can be described in the following tables.
Table 1 Result of Partial Regression Coefficient Test (T-Test) Regression Model II

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>8.715</td>
<td>2.939</td>
<td>2.965</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>Overtime</td>
<td>-0.599</td>
<td>0.098</td>
<td>-0.609</td>
<td>-6.117</td>
<td>0.001</td>
</tr>
<tr>
<td>Workload</td>
<td>0.507</td>
<td>0.133</td>
<td>0.380</td>
<td>3.821</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Source: Processed Data 2023

From the table above, the result of table 4.27 describe that Sig. value of overtime 0.001 < 0.05 and negative tcount -6.117 < negative ttable -1.991. This result indicates overtime has significance influence burnout. As a research from Wahyuni and Dirdjo (2020) related to the relationship of overtime at work fatigue and performance of nurses in intensive care Hospitals Abdul Wahab Sjahranie Samarinda show that Although employee work overtime, they do not experience significant job fatigue because positive coping and the excess work time is still within the tolerance limit. This can be concluded that the overtime that occurred at PT. RAPP is still under control and within the tolerance limit of employee. When employees of PT. RAPP experience overtime in moderate overtime, thus employee will feel less stressed as employee can finish the target of work and reduce emotional exhaustion caused by stress.

Furthermore, the result of the table describe that Sig. value of workload 0.001 < 0.05 and tcount 3.821 < ttable 1.991. The result of the analysis above shown that overtime has a significant and positive influence on burnout. This mean workload influence and workload impacted on the increase of burnout among employee at PT. RAPP. The result above is in accordance with a research by Adil et al (2022) entitled “The Effect of Workload on Burnout of Welding Production Division Operator PT Futaba Industrial Indonesia”. Workload has a positive and significant effect on burnout. High workload led to exhaustion between employee and causing burnout. In addition to, the table below shown the effect between overtime, workload and employee productivity at PT. RAPP.
Table 2. Result of Partial Regression Coefficient Test (T-Test) Regression Model II

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>16.720</td>
<td>2.854</td>
<td>5.859</td>
<td>0.000</td>
</tr>
<tr>
<td>Overtime</td>
<td>-0.311</td>
<td>0.110</td>
<td>-0.236</td>
<td>-2.830</td>
</tr>
<tr>
<td>Workload</td>
<td>1.584</td>
<td>0.133</td>
<td>0.888</td>
<td>11.906</td>
</tr>
<tr>
<td>Burnout</td>
<td>-0.676</td>
<td>0.105</td>
<td>-0.505</td>
<td>-6.450</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Productivity

Overtime has a significant effect on employee productivity based on the criteria sig. value 0.006 < 0.05 and the result of tcount -2.830 < negative ttable -1.99167. The result of the analysis above shown that overtime has a significant and negative influence on employee productivity. This mean overtime influence and overtime impacted on the decrease of employee productivity at PT. RAPP. This is in accordance with research from Yulianto and Mulyanti (2023) regarding The Influence of Working Time on Attendance Hour and Employee Productivity that found the more working hours the employees will affect productivity in the next day, due the fatigue caused by overtime.

Moreover, workload significantly influence productivity of PT. RAPP employees as the Sig. value 0.000 < 0.05 and tcount 11.906 > 1.991 ttable. It means Workload (X2) has significant and positive influence on employee productivity (Y). This result is in line with a research Manoppo et al (2021) indicates that workload partially have a significant positive effect on employee productivity at PT. Empat Saudara Manado as the increase in workload will result on the increase on employees’ productivity as well.

According the result of table 4.27 in the previous discussion, the Sig. value of Burnout is 0.000 < 0.005 and negative tcount -6.450 < negative ttable -1.99. This result shows that burnout influence employee productivity significantly. The conclusion
above is in accordance with a research about “The Effect of Work Life Balance and Burnout on Employee Productivity of PT. Indomarco Adi Prima Surabaya” by Safitri and Priyanto (2021). The result of this research found that the increase in burnout will decrease employee productivity.

Meanwhile to determine whether there is mediation effect of burnout, using unstandardized coefficients value from the table 1 and table 2, the result of path analysis is shown below.

![Figure 1. Result of Path Analysis](Source: Processed Data, 2023)

The result of path analysis in the previous section shows that indirect influence between overtime on employee productivity through burnout is greater than direct influence overtime on employee productivity as $0.307 > -0.236$. This result shows that burnout has mediating influence on the effect of overtime and employee productivity.

Meanwhile the result of path analysis shows that indirect influence between workload on employee productivity through burnout is less than direct influence workload on employee productivity as $0.191 < 0.888$. This result shows that there is no influence of burnout as mediating variable on the effect of overtime and employee productivity.

5. CONCLUSION AND SUGGESTION

According to the result of analysis and hypothesis test in previous section in this research, it can be concluded that overtime, workload, and burnout partially influence employee productivity at PT. RAPP. Overtime that occurred among PT. RAPP Employee is moderate overtime. Overtime negatively influences employee productivity
in which overtime decrease the employee productivity. Furthermore, workload has significant and positive influence on employee productivity. It means if workload among employees increase, employee productivity will increase as well. Meanwhile burnout has significant and negative influence on employee productivity at PT. RAPP. When employees experiencing burnout in their job, this affects on the decrease of employee productivity.

The result of path analysis between overtime, burnout, and employee productivity indicates that the coefficient value of indirect influence between overtime and employee productivity through burnout is greater than coefficient value of direct influence between overtime and employee productivity. Thus, it can be concluded that burnout mediates the relationship between overtime and employee productivity.

The result of path analysis between workload, burnout, and employee productivity indicates that coefficient value of indirect influence between workload and employee productivity through burnout is less than coefficient value of direct influence between workload and employee productivity. it can be concluded that burnout does not mediates the relationship between workload and employee productivity.

REFERENCES


Raih Asa Sukses, Jakarta.


Scepanovic, S., Costantinides, M., Quercia, D., Seunghyun, K. (2023). Quantifying the impact of positive stress on companies from online employee reviews.


