THE EFFECTS OF INCOME, GENDER, AGE, EDUCATION, WORKING PERIOD, INSURANCE, TRAINING, AND WORKER STATUS ON OUTSOURCED AND WORKERS PERFORMANCE IN SOUTH SUMATERA IN MANUFACTURING COMPANIES

Ratna Juwita
Corresponding Author: Sriwijaya University, Indonesia. E-mail: ratna@stie-mdp.ac.id

Nurlina Tarmizi
Sriwijaya University, Indonesia. E-mail: nurlinat@yahoo.com

Didik Susetyo
Sriwijaya University, Indonesia. E-mail: didiksusetyo@yahoo.com

Bambang Bemby Soebyakto
Sriwijaya University, Indonesia. E-mail: bembysoebyakto@gmail.com

Abstract
This research investigated the effects of income, gender, age, education, working period, insurance, training and workers’ status (outsourcing or permanent) on performance. The result showed that gender, education, insurance, training and status had positive and significant effect on performance. Income had significant and negative effect on performance, the increased income would decrease performance. Age had positive but not significant effect, the increased age would decrease performance. Working period had negative but not significant effect on performance, the short working period would decrease performance.

Keywords: Outsourcing, Workers’ Performance

1. Introduction
In 1776, in his book Wealth of Nations, Smith (1776) introduces specialization in which stresses on individual activities based on individual’s interest. Specialization induces work share to produce products from workers with specialized/specific skills and education. Mahapatro (2010) explains that human resource is important and valuable source that needs to be developed in order to create effectivity of workers in improving and maintaining organization performance. The worker is an asset of the organization to achieve competitive advantage.

Recently, companies tend to employ younger work force as contract workers who are independent. Contract workers are those workers that only have limited control on their job. These workers, from payment point of view, are the results of substantial work performance in which
they have higher responsibilities and risks compared to workers (Levy, 2014). Based on a survey in Canada, the level of growth input of workers who produce services has similarities with the statement made by Siegel and Griliches (1991) that there is an increase in Total Factor Production in the United States between 1979–1987 partially caused by outsourcing. According to Abraham and Taylor (1993), there are three theatrical consideration in outsourcing, namely, the saving in the payment of wages, the transfer from labor demand to labor supply and the creation of specialized skills access and also as an input for companies that do not have specialized skills.

State-owned companies (BUMN) that have outsourced workers are PT. Petrokimia Gresik, PT. Kertas Leces, PT. Telkom Indonesia, PT. PLN, PT. Jamsostek, PT. Pertamina, PT. Garuda Indonesia, PT. Bank Rakyat Indonesia, PT. Bank Negara Indonesia, PT. Askes, PT. ASDP Ferry Indonesia, PT. Krakatau Steel, dan PT. Dirgantara Indonesia. Outsourced workers in BUMN companies reached 280 thousands to 300 thousands with a distribution of 70 thousand in PT PLN (Persero), 30 thousand in PT Pertamina and 30 thousands in state-owned banking companies respectively (Susanto, 2013).

In South Sumatra, there are several major state-owned industries such as PT. Tambang Batu Bara Bukit Asam, PT Semen Baturaja, PT. Pupuk Sriwijaya, as well as the Processing & Marketing Unit of Pertamina (DepKeu, 2012). The existence of outsourced workers has become part of modern industry practices today. Definitely, there are strong reasons for these companies to use the services of outsourced workers. In fact, this also occurs in the state-owned enterprises (BUMN, 2013).


Income represents the amount of earnings obtained by an individual and family based on theoretical concept. Income received can be based on many categories such as the age in entering the workforce, working hours, age, education and skilled (trained) group (Mincer, 1958). Furthermore, similar research based on gender conducted by Tjandraningsih et al. (2010) find that women has high outsourcing status (71%) than men (53%). This might be due to gender equality in which woman has the same opportunities as man including their ability in participating in a company. As a result, policy and opportunities help to increase women participation in an organization (Reeves and Baden, 2000). Research conducted Cotter et al. (2004) also find that more women are working in a job that previously dominated by men. The change in recruitment system in which there is equality between male and female represents a revolutionary, where more women are starting to do activity that once was limited to men.

According to a study by Tjandraningsih et al. (2010), the age of respondent that was very dominant belongs to group < 35 years old. This is consistent with company's preference in which they are more likely to use young outsourced. Young labor force seeking for job based on their ability and education is hoping to receive payment as workers. Mahapatro (2010) explains workers as a successful asset of a company, where workers can volunteer to work enthusiastically, and become part of the company's competitive advantage. Based on the level of education, the highest percentage of temporary workers consist of those who did not graduate from elementary or high school. This is same like with the findings of Olsen et al. (2004) in which workers with higher education degree tend to have bigger job opportunities. This is due to the fact that outsourcing work is dominated by the unskilled job (Tjandraningsih et al. 2010).

The level of knowledge is based on education which is an important key to enter labor force market leading to the increase in economic growth. Apart from formal education, the focus is more on the learning and training activity associated to the job itself. This creates an association between formal education and skills improvement (Brunello and De Paola, 2004).

The tenure of workers in a company becomes short: 27.7% of the workers has employment period of 1-12 months, 23.2% and 38% have work tenure of 1-3 years and above 5 years respectively. The users of workers usually contracted for 2.5 times but the study found that quite a lot of workers who are contracted more than 3 times, 9 times, 11 times and 15 times. In addition to the contract repetition, a policy on outsourced workers led to a shorter employment
period in a company meanwhile, the length of employment period is closely related to the contract period (Tjandraningsih et al., 2010).

Tjandraningsih et al. (2010) investigate the difference between the use of insurance for contract and outsourced workers in metal industry and its effect on welfare. According to Martinez (2000), insurance implementation provides structured means for service users to evaluate the service quality that can be incorporated into performance management system. Training can be general or specific. General training includes the improvement of productivity in a work place where the workers receive benefit from it. If trainings increase productivity, training will be financed jointly by the employees and the company. Workers will be paid by not coming to work if it was replaced by training and the company pays the cost of training (Sorensen, 2000).

Based on the previous discussion and studies, this research is conducted to investigate the effect of income, gender, age, education, working period, insurance, training and worker status on the performance of outsourced and workers in South Sumatera in manufacturing companies. The purpose of this study is to analyze the effect of income, gender, age, education, working period, insurance, training, and worker status on the performance of outsourced and workers.

2. Literature Review

Income variations of the workers are different from the number of hours worked during the week which is calculated over one year in the company. Earnings and income variation on population can be classified based on education, skilled group and unskilled group (Mincer, 1958). Self-employed workers, wage and salary income can be attributed to the work performed. The economic value of the workers is in the form of human capital services that go into business development capabilities. Difficulties will arise when determining the value of customer satisfaction derived from its human capital labor (Schultz, 1972). According to Acemoglu and Autor (2013) there are three differences in giving compensation:

1. Compensation is paid lower or higher, due to the characteristics of the job, including job requirements.
2. Two workers with the same human capital can be paid at different pay for different jobs particularly in relation to productivity.
3. Companies may pay lower wages to workers because of their gender or race different workers.

According to Parcheta et al. (2013), 55 years before women have equal rights with men starting from the women's movement known as feminism began in 1848, when the first women's rights convention was held at the time. During this time in American history, women had very few rights to education, so education obtained is limited. This is caused because the colleges allowing women relatively very little. The sign of the 20th amendment in 1920 gave right to women to vote (Elmuti et al. 2003). For the last 93 years, there is an improvement in gender equality for women, however, there are still some inequality in income, executive position and high productive position.

Recently, women are more represented in the work force: starting from low position to middle management position. The change in gender system is accredited to revolutionary, in which the women able to have the position and do job activity that were limited to men. One of the incentives for women to work is the cost of children that sometimes cannot be fulfilled by the spouse's income (England, 2010).

Human investment if done correctly will give stronger foundation of ongoing development World Bank, (1991). According to Harbison (1973), human resource is the main component of country's wealth. Capital and natural resources are passive production factors; human are active agent that does capital accumulation, natural resources exploitation, social, economic and political organization development and national development continuation. Countries that are not able to develop skills and knowledge of its human capital and utilize them effectively in its economy will not be able to develop its country.

According to Schultz (1972), investment theory and rate of return on investment opportunities in human capital can be classified with the inclusion of schools and higher
education, training and learning, preschool learning activities, migration, health, information and investment on children. The supply and demand considerations are introduced, there is both a short and a long horizon in developing new information that is valuable by virtue of the fact that it contributes to the advance in knowledge and is useful in making private and public decisions pertaining to human capital.

Improvement in human capital, according to Schultz (1972), consists of two main parts. Firstly, a part of capital is based on the proposition of some types of expenditure form productive activities in work services providers. Secondly, resting on the allocation of time, which has led to the various economic activities in non-market. There is a close and strong linkage between the two parts. Human capital in the context of growth reveals the importance of income to be earned in the formation of human capital. The development of micro theories also expand the concept of income that would be obtained which led to the formulation of the theory of time allocation.

Working period can affect job performance both positively and negatively. It gives positive effect on performance, if the longer employment period the more experienced the worker in doing their jobs. On the other hand, it affects negatively when negative habit rises as the employment period increases.

Based on Article No. 65 paragraph (7) and Article No. 59 paragraph (1) of the Constitution No. 13/2003, the working relationship between the worker (labor) and another company (in this case the recipient companies), can be based on PKWTT (work agreement for an unspecified time), or it can also be based on PKWT (specific time employment agreement) if it meets the requirements referred to the Article No 59 of the constitution No. 13/2003. This indicates that the relationship between a worker and outsourcing company is based on an agreement of workers and temporary workers. However, if the requirements are fulfilled for a particular job based on the type and activities of the job in a given time, it can be done through PKWT (job contract).

On the contrary, under Article No. 66 paragraph (2) letter b in conjunction with Article No. 59 paragraph (1) and (2) of the constitution No. 13/2003, in the context of workers provision agreement, the employment relationship between a worker and the outsourcing company may be contracted through PKWT (as a contract worker) if all the requirements are met according to the type and nature of work that will be completed within a specified time. According to Tulus (1992), the period of employment of workers are categorized into 3 (three): short working period (employment period): < 6 years, moderate working period: 6-10 years, and a long working period: > 10 years.

The definition of insurance, in Article 246 of the Code of Commercial Law (Commercial code) of the Republic of Indonesia, is an agreement, by which a guarantor is binding on the insured to receive a premium, to provide reimbursement for a loss, damage or loss of expected profit, which may be experienced as an uncertain event. Insurance, based on the law of insurance, refers to an agreement between two (2) or more parties in which the insured person binds himself to the insurer, receive premiums of insurance to reimburse the insured for loss, damage or expected profit loss or legal liability to third parties which may be suffered by the insured due to an uncertain events, or to make payments on death or insured life (Adisu, 2008).

The concept of training theory, according to Mincer (1958), is formal and becomes basis in carrying out the work while informal training can be seen from the experience during the work, as well as workers age. Identification of informal training in terms of experience and age is not too difficult to measure, as can be seen with the existence of training and the labor force.

Difficulties arise when measuring the formal training that is measured from the beginning of the school year, which is used to calculate the costs incurred in making education investment. When the workers are compared based on their education, which is also used as a principle of classification, the working group will be grouped also in accordance with the amount of training followed. Differences in training and experience would lead to differences in compensation.

Training can reduce the current acceptance and increase current spending, but the company could have beneficial training, if the future acceptance increases or the expenditure declines. The income effect is also influenced by the General Training, a common training which is different to the job training, but could also increase the marginal productivity of future workers at companies that provide these activities.
General training or as a whole can improve the marginal product in the company, because in a competitive labor market, wage rates paid by each company is determined by the productivity and future wage rate. Furthermore, the marginal product will also rise in companies that provide general training.

Outsourcing is the act of transferring the work to external parties. Whether to do or not to outsource is a part of the decision to produce or buy. Organizations continue faced with the decision whether to expend resources to create assets, resources, products or services internally or buy it from the other parties. If an organization chooses to buy, then the companies are involved in outsourcing.

The definition of performance in an organization is the answer of the success or failure of organizational goals that have been set, the supervisors or managers often do not notice, unless the state of the company has been very bad or any activity cannot be the maximum. Performance is the result of the quality and quantity of work achieved by employees in carrying out their duties with responsibility given to him (Mangkunegara, 2009)

2.1. Research Framework

Company can decide the labor force worker or outsource workers based on their demand in the labor market. This is done in accordance with the implementation provisions that are run by the company. This is an overview that can be set in conceptual framework in the research.

Figure 4 illustrates that there are several variables that can be used to analyze the performance of the two types of workers: outsourced and workers. The variables are income, gender, age, education, working period, insurance, training and status. These variables are analyzed to see their effect in influencing the performance in both outsourced and workers.

2.2. Hypothesis

Based on the formulation of the problem and literature review, the hypothesis in this study is that there is an association between income, gender, age, working period, employment, insurance, training and worker status to the performance of both outsourced and workers.
3. Research Methodology

The objects in this study are sectoral workers in the industrial sector in South Sumatra. The independent variables are income, gender, age, education, working period, insurance, training, and worker status. These become factors that raise the difference in the performance of outsourced and workers. The type of data collected is of primary data in 2015 which are gathered from workers employed in the manufacturing sector. Primary data refers to data that are obtained directly from related respondents, in the form of questionnaire data. This research was conducted by taking a sample of workers employed in the manufacturing sector in South Sumatra. In determining the sample size, with Slovin formula (Juanda, 2012) and also stratified sampling techniques are used.

<table>
<thead>
<tr>
<th>Table 1. Number of Sample in Manufacturing Companies in South Sumatera</th>
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<tbody>
<tr>
<td>Description</td>
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<tr>
<td>Manufacturing Company</td>
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</table>

Table 1 shows the number of samples used in this study, based on the number of questionnaires filled by the respondents. 334 samples are gathered, in which, 155 are outsourced and 179 are workers, from two manufacturing companies. The source of the data is primary data, in which it was obtained directly from the object of research without passing through another person or other institutions. The technique of collecting data is through observation, interviews, questionnaires and documentation of the company.

4. Analysis Techniques

The analysis technique used in this research is multiple regression with descriptive analysis using questionnaire data. This approach is used to address the issues regarding the performance of outsourced and workers which are viewed from income, gender, age, education, working period, insurance, training, and status of the workers. The data is processed by using regression to see the influence of the independent variables to the dependent variable. Mathematically, the research model is as follows:

\[ Y = \alpha_0 + B_1\text{INCOME} + B_2\text{GENDER} + B_3\text{AGE} + B_4\text{EDUCATION} + B_5\text{WORKINGPERIOD} + B_6\text{INSURANCE} + B_7\text{TRAINING} + B_7\text{WORKERSTATUS} + \varepsilon \]  

(1)

Operating Variable Definition is as follows:

1. Income is the salary or wages earned by the workers in Rupiah per month.
2. Gender refers to the sex of the workers: 1 if the gender is male, 0 if the gender is women.
3. Age is the worker’s age in years.
4. Education is formal education pursued by the workers, in this study it is measured by the length of formal education attained.
5. Working period is the length of employment at the company.
6. Insurance is insurance facilities given by the company to the workers, 1 if the insurance provided in the form of health insurance and accident insurance, 0 if not both.
7. Training is activities obtained by the worker to improve and develop their knowledge and ability.
8. Worker status, outsourced or workers
9. Performance is the work activities by both outsourced and workers to increase the productivity of the company (Robbins, 2012).
Performance is measured by:

1. Work load (quantity) is the number of jobs that can be completed by outsourced and workers.
2. The quality of work is the result of work being completed outsourced and workers are in accordance with the company standards.
3. Depth of knowledge is the ability of outsourced and workers in completing the job.
4. Cooperation is the relationship between outsourced and workers in completing one's job.
5. Attendance is the existence of outsourced and workers within the company in accordance with the working hours.
6. Initiative is the desire of outsourced and workers to provide input to the completion of the work.
7. Personal ability is the ability possessed by outsourced and workers.

5. Research Results

The data used in the study is valid with the significance level below 0.01 (two-tailed). Thus, the data can be used in this research. The reliability test is conducted to see whether independent and dependent variables have the p value above 0.700, which indicates reliability. Table 2 presents the regression estimates.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>259.574</td>
<td>13.594</td>
<td>0.000</td>
</tr>
<tr>
<td>INCOME</td>
<td>-1.811***</td>
<td>0.489</td>
<td>0.000</td>
</tr>
<tr>
<td>GENDER</td>
<td>15.767***</td>
<td>4.904</td>
<td>0.001</td>
</tr>
<tr>
<td>AGE</td>
<td>0.603</td>
<td>0.373</td>
<td>0.107</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>1.896***</td>
<td>0.474</td>
<td>0.000</td>
</tr>
<tr>
<td>WORKING PERIOD</td>
<td>-0.603</td>
<td>0.392</td>
<td>0.125</td>
</tr>
<tr>
<td>INSURANCE</td>
<td>8.496**</td>
<td>4.113</td>
<td>0.040</td>
</tr>
<tr>
<td>TRAINING</td>
<td>0.259***</td>
<td>0.066</td>
<td>0.000</td>
</tr>
<tr>
<td>WORKING STATUS</td>
<td>19.293***</td>
<td>5.418</td>
<td>0.000</td>
</tr>
</tbody>
</table>

N 334
R² 0.205
F-statistic 10.497
Prob(F-statistic) 0.000

Note: ***, ** and * represent significance level at 1%, 5% and 10% respectively.

Income had negatively significant effect on performance indicating that the increased income would decrease the performance. The decrease in income primarily happened to outsourcing because companies that employ outsourcing would pay salaries by the outsourcing provider. Outsourcing earned salary from the provider after deducting service fee distribution. This situation would not have effect on the performance, if the company accepted the outsourcing and already made agreement with provider so that the outsourcing workers were required to work in accordance with the treaties and professionalism. Provider had to explain the amount they accepted and the amount accepted by outsourcing.

Gender affected positively and significantly the performance. The manufacturing company was identical with production process and of course it required male labor, not female one. Because the processing industry had high risk especially during the implementation of the production process. This situation occurred to all workers, permanent or outsourcing ones. Age has no statistically significant effect on performance. Education has positive and significant effect on performance. It will improve workers’ performance. Investment on workers’ education would be valuable in the future. Outsourcing or permanent workers human resource greatly understood that investment on education fulfill desire in the future.
Working period had negative and not significant effect on performance. Working period means the length of employment of workers in the company. A long working period also requires daily work process. The longer the work, the better the performance of the workers will be, because it already has experience in the work. Outsourcing workers had shorter working period compared to permanent workers because it depended on the agreement between the company and the provider. This kind of working period would effect the performance of outsourcing since they had to always adjust with the newcomers (new outsourcing workers).

Insurance had positive and significant effect on the performance. If they got the maximum insurance coverage (not just one type of insurance), then the performance of workers would increase. Processing industry provided insurance in the production process because the implementation of the production process had high degree of accident risk. Workers still desperately needed insurance because insurance was the protector during the working process. The performance of workers who had already obtained the maximum insurance during the production process was improved. Insurance was given to outsourcing and permanent workers.

Training had positive and significant effect on performance. This showed the importance of training for companies. Training aimed to increase the ability of workers because during the training, the workers were given knowledge tailored to the development of company. Outsourcing and permanent workers obtained training from the company so that the production process run at the maximum performance. The status workers in manufacturing, outsourcing or permanent workers (based on the table) had positive and significant effect on performance. This illustrated that outsourcing and permanent workers had the same desire, making maximum performance, in the production process.

6. Discussion

This research investigated the effects of income, gender, age, education, employment, insurance, training, and worker’s status (outourcing or permanent) on performance. Gender, education, training, insurance and worker’s status showed positive and significant effects on performance. These factors indicated that outsourcing and permanent workers in the production process have the same desire to improve performance.

Income had significant but negative effect on performance. This indicated that the increase in income would decrease performance. Outsourcing is not the whole of the income they earn because there is some part of the income belonging to the provider. Age had positive but not significant effect on the performance. The increase in age decreased performance. The working period had negative but not significant effect on performance. There were differences between the working period of outsourcing and permanent. This affected performance. Outsourcing had shorter working period compared to permanent workers since their working period was based on the agreement with the provider.

7. Conclusion and Suggestion

7.1 Conclusion

Income had significant but negative effect on performance. This indicated that the increase in income would decrease performance. According to Acemoglu and Autor (2013), there are differences of giving compensation: First, a worker can be paid lower due to compensation received in accordance with the characteristics of the job, including lower labor requirement. Compensation will be paid higher for more pleasant working conditions and better facility. Second, the imperfections of the market workers: two workers with the same human capital can be paid different wages because of different work especially related to productivity. Some show high working productivity while others show low productivity. Third, the employer can be paid lower because of gender and race. A low class worker industry employs and pays equal wage to other industries which use the human capital in the form of sense. For, if the workers are not employed, they will work on other industries that pay the same wages or they will not work at all or they will be unemployed.
Age had positive but not significant effect on performance. The increase in age could decrease performance. Previous researches (Olsen et al. 2004; Dube and Kaplan, 2008; Tjandraningsih et al. 2010) depicted that productive workers in the companies were associated with their ability to work. Productive age also strongly supported some work process implementation to improve performance.

Working period had negative but not significant effect on performance. This factor showed difference between outsourcing and permanent workers on the production and this would affect performance. Working period of outsourcing was not long in any company, because it depended on the agreement. Tjandraningsih et al. (2010) supports this research result. The calculation of working period in which working relationship occurs between workers and company or since they signed contract to work for certain company showed that workers had longer working period compared to outsourcing workers.

7.2. Suggestions

The difference in income between outsourcing and workers can be used as input for the company and provider of outsourcing workers in order to be able to do maximum work. Provider can give incentive to the outsourcing worker that is able to work at the time of placement in the company. The increasing number of workers approaching retirement age can be anticipated by periodical recruitment of good and productive age of outsourcing and permanent worker. The short working period of outsourcing should become consideration of companies. The company can make agreement with the providers to provide outsourcing that already have appropriate working experience.

References


Available at: <http://www.wiwiss.fu-berlin.de/forschung/veranstaltungen/rse/Papers_Summer_08/Outsource3v7Dec07.pdf> [Accessed on 25 May 2012].


The Regulation of the Republic of Indonesia Number 76 Year 2007 about The Fifth Amendment of Government Regulation Number 14 Year 1993 about The Management of Labour Social Security Program.
