QUALITY MANAGEMENT

- Peter MADZÍK, Ludmila LYSÁ, Pavol BUDAJ, Determining the Importance of Customer Requirements in QFD – A New Approach based on Kano Model and its Comparison with other Methods
- Alexandr GUGELEV, Anastasia GRISHNEVA, Anzhelika SEMCHENKO, Margarita LUKYANENKO, Modern Methods of Quality Control in Educational Services based on TOM
- Tatjana ODINTSOVA, Nataliya KOCHERJAGINA, Olga GORDASHNIKOVA, Olga RYZHOVA, Formation of Logistics Services Quality Management Model
- Miriam ANDREJOVA, Anna GRINCOVA, Zuzana KIMAKOVA, Quality Assessment of the Rubber-Textile Conveyor Belts at the Dynamic Impact Loading
- Kirill Igorevich PORSEV, Marat Fatyhovich BULATOV, Method to Improve Information Assurance Quality for Research and Development at Knowledge-based Enterprises
- Gabriela PASCU (POPESCU), Lavinia CIUCAN (POPA), Preventive Financial Control in Public Entities
- Shrikant Krupasindhu PANIGRAHI, Hatem Mahmoud AL-NASHASH, Quality Work Ethics and Job Satisfaction: An Empirical Analysis
- Komal MALIK, Harsh VARDHAN, Vinithendra P. SINGH, Evaluating the Affect of Harmony between Consumer Psyche and Brand on Customer Loyalty in the Insurance Sector
- Nila TRISTIARINI, St. Dwiarsro UTOMO, Yulita SETIAWANTA, The Capability of Risk as a Corporate Reputation Driver to increase Market Value
- Egwu U. EGWU, Ama A. UDU, Livinus Okpara ONU, Effects of Entrepreneurial Innovativeness on Firm Performance
- Irina PCHELINTESEVA, Olga GORDASHNIKOVA, Anastasia VASINA, Methodologies and Tools of a Two-Phase Rating System for Innovation Project Value Assessment
- Jaahnavi KOLA, Praseeda CHALLAPALLI, A Study on Relationship between Emotional Intelligence, Ethical Ideology, Job Performance and Employee Engagement in Telangana Autonomous Engineering Colleges
- Isfenti SADALIA, Ira Erminda DAULAY, Lisa MARLINA, Iskandar MUDA, The Influence of Intellectual Capital towards Financial Performance with Brand Value as an Intervening Variable
- Ika Nurul QAMARI, Julitta DEWAYANI, Augusty FERDINAND, Strategic Human Resources Roles and Knowledge Sharing: How do Enhancing Organizational Innovation?
1. Introduction

In September 2015, the United Nations officially introduced the SDG (Sustainable Development Goals), after a grand meeting in the United Nations headquarters in New York, USA, attended by the representatives of 193 countries. Sustainable Development Goals (SDG) is a continuation of the Millennium Development Goals (MDG) project that has been conducted since 2005 until the end of 2015. SDG has 5 (five) main foundations: human, planet, welfare, peace and partnership, to achieve three main objectives including ending poverty, achieving equality, and addressing climate change, which is expected to be realized in 2030 (Demirel et al., 2018; Castika and Balzarova, 2018 and Wiengarten et al., 2018). Currently, the leaders of the nation are encouraging their society to care and contribute to the implementation of SDG, especially in developed countries. They continuously develop the latest innovations for a better world realization by 2030. In July 2016, the United Nations announced 3 (three) countries with the best index of SDG realization. They are Sweden, Denmark and Norway. Not only the governments and communities, but also the companies, especially the multinational companies, are required to participate in the realization of SDG. The World Bank states that at least nearly 50% of the world’s waste is produced by corporations, not including the amount of pollution, and other destructive factors. It is only natural for the corporation to participate in the handling. Environmental performance is the companies’ activity which is directly related to the natural environment (Albertini et al., 2001; Hui et al., 2001; Watson et al., 2004; Zutshi and Schal, 2004; Watson et al., 2004; Darnall and Edwards, 2006; Eng and Wahid, 2006; Lozano and Valles et al., 2007; Gonzales and Diaz, 2009; Iraldo et al., 2009; and San et al., 2016). One of the environmental performance measuring instruments in Indonesia is PROPER. The Pollution Control Evaluation and Rating or PROPER is one of the alternative means of compliance instruments employed by the government since 1995. In this case, the Ministry of Environment encourages the compliance and concern of the companies for environmental management through the performance level information of corporate compliance dissemination to the public and stakeholders. Thus, it is expected that the community and stakeholders can respond to the environmental management performance of the companies which are participants of PROPER in accordance with its capacity. The company performance assessment is derived from the serial monitoring data analysis that is required in the regulation of environmental pollution control. To facilitate the communication with the stakeholders in addressing the performance results of each company’s structuring, the company’s performance rating is grouped into five colors: gold, green, blue, red, and black.

The ISO 14001 Environmental Management System (ISO 14001 EMS) was published by the International Organization for Standardization (ISO) in 1996 in Geneva, Switzerland. This system is believed to help create an integrated mechanism for continuous improvement of environmental performance that is applied to everyday production activities (Kumar et al., 2017 and Thayer et al., 2017). The problem is that not all companies are willing and able to implement the ISO 14001 EMS. In addition to being voluntary, some studies reveal that the certification of ISO 14001 EMS requires a large cost depending on the characteristics and facilities of each company that includes investment costs and routine audit fees (Ionascu et al., 2017; Testa and D’Amato, 2017; Qian et al., 2018 and Wiengarten, et al., 2018). In 2015, more than 300,000 companies worldwide were certified ISO 14001 EMS. The high participation in the implementation of ISO 14001 EMS is because the ISO 14001
EMS provides benefits such as: providing cost and resource efficiency, expanding market opportunities, increasing reputation and profitability, reducing the government’s coercive, avoiding conflict and increasing stakeholder satisfaction. Company performance is often associated with the financial condition of the company. Financial performance is a general measure of a company’s overall financial health at a given time or subjective measurement of how well a company can use or manage its assets from the main operational activities of its business in accordance with the policies made by the management to be the income of the company itself at a certain time. The company financial performance can be measured by evaluating and analyzing the financial statements. Company financial performance can be measured by analyzing and evaluating the financial statements. There are several categories of company financial performance measurement according to Lu, et al., (2018); Finger et al., (2018); Wong et al., (2018) and Blasi et al., (2018) they are:

1. Earnings Measures: earning per share (EPS), return on assets (ROA), return on net assets, return on capital employment and return on equity,
2. Cash flow Measures: free cash flow, cash flow return on gross investment, cash flow return on investment, total shareholder return and business return,
3. Value Measures (economic value added (EVA), market value added (MVA), cash value added (CVA) and shareholder value (SHV).

In this study, financial performance is measured using Earning Per Share (EPS), in which EPS shows the amount of money to be earned on every common share outstanding in the period. EPS or earnings per share is calculated by dividing the net income available to ordinary shareholders (residual net income) by the weighted average number of ordinary shares outstanding during the period (Muda, 2017 & Leyva et al., 2018). EPS is only shown for the calculation of common stock. The greater the net income of a company, the greater the EPS will be. As the EPS of a company increases, the greater the net income will be distributed in the form of cash dividend to the common shareholders.

2. Research Methods

This study was conducted in 2012-2016. The samples were obtained from the PROPER database from Indonesian Ministry of Environment and Forestry and Indonesia Stock Exchange. There were as many as 20 companies with a total of 100 observations with criteria that the company experienced fluctuations in PROPER ratings and did not get black rating on PROPER during the study period. The method employed was Regression Generalized Least Square using E-Views Software.

3. Results and Discussion

3.1. Result

3.1.1. Goodness of Fit (Hausmann Test)

Hausmann test was performed to decide the best regression model used in this study. The model is selected based on:

1. If the p-value of Hausmann Test is less than 0.05, thus the approach model to be used is the Fixed Effect Model.
2. If the p-value of Hausmann Test is more than 0.05, thus the approach model to be used is the Random Effect Model.

The estimation result shows that p-value is 0.4222 or more than 0.05 which means the approach to be used is Random Effect Model (REM).

<table>
<thead>
<tr>
<th>Correlated Random Effects – Hausman Test</th>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test cross-section random</td>
<td></td>
<td>0.644138</td>
<td>1</td>
<td>0.4222</td>
</tr>
</tbody>
</table>

Table 1. Hausmann Test
Source : Eviews Result Test (2017)

3.1.2. Hypothesis testing

3.1.2.1. Coefficient of Determination Test ($R^2$)

Coefficient of determination test was done to see the proportion of Y dependent variable total variances which are explained by X independent variable.

<table>
<thead>
<tr>
<th>R-squared</th>
<th>Adjusted R-squared</th>
<th>Mean dependent var</th>
<th>Durbin-Watson stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.053418</td>
<td>0.033901</td>
<td>64.13814</td>
<td>219.1842</td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>215.4370</td>
<td>Sum squared resid</td>
<td>4502069.</td>
</tr>
<tr>
<td>F-statistic</td>
<td>2.736970</td>
<td>Durbin-Watson stat</td>
<td>0.959285</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.069771</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Coefficient of Determination Test
Source : Eviews Result Test (2017)

The regression result using Random Effect Model (REM) shows that the coefficient of determination ($R^2$) is equal to 0.053418, or in other words, 5.34%. Variations or changes in Earning Per Share (EPS) can be explained by both variables namely environmental performance and ISO 14001 Environmental Management Implementation. Meanwhile, the rest of 94.6% is explained by other variables and factors not included in this study model.

3.1.3. Simultaneous Significance Test (F-Test)

F-test is performed to evaluate the effect of independent variable to the dependent variable individually. Based on F-test results it can be seen that p-value is 0.069771. The hypothesis for the F-test is as follows:

$H_0$: There is no influence of environmental performance and environmental disclosures variables simultaneously on the financial performance

$H_1$: There is an influence of environmental performance and environmental disclosure variables simultaneously on the financial performance

Based on the F-test criteria, it is concluded that:

- If Prob (F-Statistics) < 0.05 thus $H_0$ is rejected (Muda et al., 2018), and
- If Prob (F-Statistics) > 0.05 thus $H_1$ is accepted.

The result of Prob (F-Statistics) is 0.069771 > 0.05. Therefore, it can be concluded that $H_2$ is accepted. It shows that simultaneously both independent variables, namely environmental performance and ISO 14001 Environmental Management System Implementation, have no influence on the dependent variable, namely financial performance (EPS).

3.1.4. Partial Significance Test (T-Test)

The t-test was performed to evaluate the effect of the two independent variables on the dependent variable separately.

The t-test result shows that the environmental performance variable has a t-statistic value of 2.162842 and p-value of 0.0330. This probability result is smaller than the level of $\alpha = 5\%$ or in other words partially independent variable of environmental performance has a significant impact on the financial per-
performance and has a positive relationship. The t-test result also shows that the t-statistic value of Environmental Management System Implementation variable is -1.059012 and the p-value is 0.2922. The result of this probability is greater than the level of α = 5% or in other words partially ISO 14001 Environmental Management Implementation independent variable does not significantly affect the financial performance.

3.2. Discussion

Increased competition increasingly awaken the company for quality. The more critical the customer in responding to the quality of the product increasing the company need to improve the quality. ISO 14001 has become one of the requirements in world trade as one form of guarantee on the quality of products that consider the environmental aspects (McMillan et al., 2017; Tuczek et al., 2018; Albertini, 2018 and Salim et al., 2018). This requirement becomes an absolute requirement from customers of developed countries especially America, Europe and Japan. This is a challenge for companies in increasing customer satisfaction. The market demand for the application of international standards is intended to provide good and safe goods or services to the wearer and to meet the requirements of security, safety and environmental sustainability as well as competitive prices to consumers of the goods or services purchased. Thus, the development and application of environmental management, occupational safety and health systems need to be given attention. The development of companies and industries today has caused an environmental and energy crisis. Impact of industrial development, organizations and industries are required to increase accountability to the environment. Under these conditions, the demands of the world’s rules on the accountability of organizations and industries in environmental management are increasing. Environmental conservation has become the demand of developed country customers who consciously see the importance of protecting the environment early on to minimize future environmental damage, according to international agreements in 1996 The International Organization for Standardization launched a standard for managing the environment professionally within the organization and industry, the standard is called the ISO 14001 Environmental Management System (Graafland, 2018; Albertini, 2018; Wiengarten et al., 2018; Muramura et al., 2018; Heras et al., 2018; Castka and Balzarova, 2016 and Salim et al., 2018). The business transformation process undertaken by the company has the potential to have an impact on the environment, both positive and negative impacts. Environmental management system standards are not actually an international standard for environmental management systems as termed. This ISO in no way regulates the absolute requirements of environmental performance that an Organization must satisfy. This ISO Standard is more appropriate if it is considered as a framework to assist the Organization in developing its own environmental management system, managing environmental aspects and improving its environmental performance. Organizations can integrate ISO 14001 standards with other management functions to achieve environmental goals or economic goals. The impacts that arise can be grouped into two parts, namely physical impact and social impact (Fura and Wang., 2017; Peršič et al., 2018; Weidema et al., 2018; Greenland et al., 2018 and Gauthier and Wooldridge, 2018). When the company implements ISO 14001, the company has committed to continually improve its environmental performance. ISO 14001 is a standard that combines and balances business interests with the environment. Efforts to improve performance are tailored to the resources in the form of human, technical, or financial resources. Financial factors in the form of return on Earning Per Share is a reflection of management's success in managing the value of the company as reflected in the share price of the company concerned and after being divided from the company's net profit in Capital Market and Financial Market. Improvement of environmental performance takes a short time due to limited capital and financial. Liquid waste that pollutes the environment around the company can be reduced if it already implements ISO 14001. Financial Internal factor is the determining factor in managing its waste so as to reach the specified threshold. Sufficient sewage treatment facilities can be built within certain periods of time. If before the period is achieved then the company will never meet the environmental quality standards. However, if the company develops an environmental management system that meets the requirements of ISO, the company may obtain the ISO 14001 certificate. Another company, whose environmental performance meets the quality of raw materials but does not meet the requirements will not obtain ISO 14001 certificate. ISO 14001 is developed from the concept of Total Quality Management (TQM) based on Plan-Do-Check and Action activities (Maceno et al., 2018; Muñoz et al., 2018; Ayuso et al., 2018 and Zhou et al., 2018). The environmental policy should be documented and communicated to all employees and made available to the community, and includes a commitment to continuous improvement, pollution prevention, and compliance with regulations and a framework for goal setting and objectives (Demirel et al., 2018; Tuczek et al., 2018; Yuriev et al., 2018 & Latan et al., 2018), environmental aspects of the organization's activities, identification and access to regulatory requirements, the existence of objectives and targets that are documented and consistent with the policy, and the existence of programs to achieve the planned goals and objectives. In the documentation and communication phases of roles and responsibilities, adequate training, the assurance of internal and external communications, written documentation of the environmental management system and good document control procedures, documented operational control procedures and documented procedures of emergency action are essential to the achievement of the Environmental policy in the form of development of environmental commitment of an organization. This policy will be used as a framework for the preparation of environmental plans.

4. Conclusions and Suggestions

4.1. Conclusions

1. Environmental Performance and Environmental Management System Implementation (ISO 14001) do not simultaneously affect the Earning Per Share.
2. Company Environmental Performance measured from PROPER of Indonesian Ministry of Environment and Forestry rating partially has significant effect on the Earning Per Share.
3. Environmental Management System Implementation as measured by ISO 14001 certification ownership partially has no significant effect on the Earning Per Share.
4.2. Suggestions

1. Companies are suggested to increase the environment awareness inside and outside the company so that it will give a positive impact for the surrounding that will affect the investor in investing.

2. It is suggested for further researches to add other variables especially related to the environment that has influence on financial performance, either EPS or other variables such as ROA and ROI.

3. This research only employed manufacturing sector companies as the samples, it is suggested for the future researchers to expand the scope of study.

References


