Organizational Structure as a Predictor of Employee Involvement and Quality of Production: Evidence for Malaysia Manufacturing Firms

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Abstract
Organizational structure provides guidance to all employees by laying out the official reporting relationships that govern the work flow of the organization. This study tries to open up many windows, still locked in the area of organizational structure in regards to employee involvement and quality of production in manufacturing industry in Malaysia. Such information would enhance the school of thought among researchers.

Keywords Employee involvement, organizational structure, quality of production

INTRODUCTION
The design of organizational structure has been subject to recent journal review, e.g., Greson and Drazin (2007); Soda and Zaheer (2012); Islam et al. (2012); Gutterman (2012); Csaszar (2012), and has been the topic of recent books, e.g., Tolbert and Hall (2008); Griffin (2011); Bateman and Snell (2011); Kamaluddin et al. (2011); Robbins and Coulter (2014). However, the association between organizational structure and employee involvement and quality of production particularly in the manufacturing industry, rarely found a place for discussion or in other words have been largely ignored.

As we know it, every organization has an organizational structure which determines the responsibilities and engagements of each employee. By stating that, having an effective organizational structure in place can improve costs (Anand and Daft, 2007), increase productivity (Syverson, 2011) and increase employee satisfaction (Shafaee et al., 2012). Organizational structure is the set of means and processes devoted to the formal organization (Martin-de-
Castro et al., 2006). An organization can be structured in many ways and a sound organization structure is essential for the conduct of business activities in a proper and efficient manner. Perhaps the most common issues discussed by researchers and practitioners related to organizational structure are formalization, centralization and complexity. Dumais (2011) suggests that organizational structure is not simply about structure and the resulting organizational chart. It is about the relationships between people, work, formal structures and informal practices and behaviours. In addition, Kast and Rosenzweig in Martin-de-Castro et al. (2006) said that formal organization is a planned structure and represents a deliberate attempt to establish relations outlined between the components in charge to fulfil the objectives efficiently.

In this study, formalization defined as the extent to which rules and procedures were followed in an organization (Soda and Zaheer, 2012). Burns and Stalker in Greson and Drazin (2007) believe that the most effective structure is the one that conformed to settings requirements. Tolbert and Hall (2008) describe that formality can be measured by the written rules in an organization and involves organizational control over the individual.

Tolbert and Hall (2008) define centralization as the distribution of power within organizations. Csaszar (2012) defined centralization as a process where the focus of decision making and actions at the lower level were subject to the approval of top management, and decentralization as systematic delegation of authority at all levels of management. Csaszar (2012) also adds that the organizational structure can be a valuable capability for the organization, it can be adaptable, difficult to imitate and to transfer, and although its duration can be variable and is susceptible to substitution, it represents a source of competitive advantage whose support will depend on a suitable management that allows it to surpass the mentioned limitations.

 Complexity defined (Dooley 2002) as the amount of differentiation that exists within different elements constituting the organization. Csaszar (2012) defined centralization as a process where the focus of decision making and actions at the lower level are subject to the approval of top management, and decentralization as systematic delegation of authority at all levels of management. Complexity can be measured by the division of labour, job titles, multiple divisions, and hierarchical levels (Tolbert and Hall, 2008).

According to Cohen (2002), there is no one best way to design an organization. Cohen added that no one structure, set of systems or method is appropriate for every organization. Different organizations require different structures depending upon the environment in which they are operating. All environments cannot be treated equally so an appropriate structure must be selected in order to perform better and achieve desired organizational goals. Doz and Prahalad (1986) claim that the appropriate design of an organization depends upon many factors, but most salient among these are the strategic intent of the organization. Anand and Daft (2007) categorized organizational dimensions into two groups: structural and contextual. Structural dimensions according to them express endogenous traits of an organization, which provide
a basis on which one can measure and compare organizations, while contextual dimensions express organization overall such as the size of the organization, technology type, environment and its aims, which show the status of the organization and affect on structural dimensions. Structural dimensions include formalization, specification, standards, authority hierarchy, complexity, centralization, professionalism and personnel relations.

Realizing the importance of organizational structure, the objective of this study was to investigate the impact of organizational structure on employee involvement and quality of production in Malaysia’s manufacturing firms. Beginning with a description of the core construct of organizational structure, this study explores its theoretical foundation and critically review about the aforesaid relationships.

ORGANIZATIONAL STRUCTURE AND EMPLOYEE INVOLVEMENT

Employee involvement, otherwise known as employee engagement or participative at all levels of an organization can be critically important to competitiveness in the contemporary business environment (Rashid et al., 2011). Numerous researchers have developed a long list of management practices and concepts for generating high involvement and high performance among employees. As a result of the enhancement of employee involvement, this believed to improve teamwork (Markos and Sridevi, 2010), attitude regarding work (Leana et al., 2000), decision making capabilities, empowerment, job satisfaction, creativity and motivation (Apostolou, 2000), employees well being (Freeman and Kleiner, 2005), and increase productivity (Jones et al., 2010). To make clear and easier to understand, in this study, employee involvement includes employee participation in problem solving (Modlin, 2010; Green, 2012), strategy development (Chavez, 2011; Greiner and Cummings, 2011), and implementation of solutions (Green, 2012). Other forms of employee involvement include increasing the responsibility of employees or known as job enrichment (Ariani, 2012), forming self-managed teams (Masternak, 2012), and quality circle (Zoghi and Mohr, 2011). With proper organizational systems and resources, employees will have the ability to engage higher level of contributions (Judeh, 2011). This include clear direction regarding organizational priorities (Word, 2012), workloads are fairly and equitably distributed (Green, 2012), skills enhancement (Nisbet, 2009), and lastly adequate resources to execute work tasks (Litwin, 2011). By structure, this means the framework around which the group is organized, the underpinnings which keep the coalition functioning. Wang et al. (2011) suggest that an effective structure shall facilitate working relationship within various entities in the organization and may improve the working efficiency within the organizational units.

A number of studies have been found a significant correlation between structure of organization and employee involvement (e.g. Bellou, 2010; Tolbert and Hall, 2008; Soda and Zaheer, 2012; Shafaei et al., 2012). Employees in all organizations want to work in an environment of trust and respect where
they feel they are making a real contribution to the goals and objectives of the organization. Cohen (2002) believes that trust is an essential fluid for all social activities, allowing people to work together. They want to be able to have the opportunity to show management that they can accomplish the task with creativity gained from working in teams.

Organizational structure plays an important role in determining organizational performance. Different organizations require different structures depending upon the environment in which they are operating. All environments cannot be treated equally so an appropriate structure must be selected in order to perform better and achieve desired organizational goals. Literature suggests that organizational structure plays an important role in achieving performance goals. Sablynski (2003) states, that organizational structure decreases ambiguity among employees and make their behaviour more predictable thus enhancing organizational performance. When organizational tasks are easy, spans of control, or other structural factors for that matter, are unlikely to be influential determinants of organizational performance (Kast and Rosenzweig, 1981).

ORGANIZATIONAL STRUCTURE AND QUALITY OF PRODUCTION

Quality on the other hand is universal value. Quality is all about customer and the satisfaction level of a customer is measured on how products and services meet or exceed customer expectation. However, from the perspective of manufacturing, quality means conformance to specifications. Specifications are targets and tolerances by designers of products. Targets are the ideal values for which production is expected to strive, while tolerances are the acceptable deviations from these ideal values. There will always be variations in the production process. While variations cannot totally be eliminated in the production of products, organizations can strive to minimize around target values. This minimizes the economic loss and benefits both the producer and the consumer. Quality in production include product design, purchasing, production planning and scheduling, engineering and maintenance of tools and equipments, packaging, shipping, warehousing, and ancillary functions to support the quality efforts, such as human resources, finance, and legal services (Alwan, 2012).

Wolf (1993) stresses that organizational structure directly impacts organizational performance as it helps in following the operational strategy. This is supported by Hao et al. (2012), where they claim that organizational structure has a very important effect on performance. Clemmer (2003) also supports Wolf’s (1993) view that organizational structure indeed shapes the performance of an organizational structure. According to him even good performers cannot perform bestowed to their calibre in weak systems. The study conducted by Goerdel in Clemmer (2003) demonstrates how administrative decentralization, as a type of structure, induces positive organizational outcomes. In fact, it specifically demonstrates in Goerdel study of how administrative decentralization can benefit clientele, in general, and
diverse clientele, in particular. A simplification of the organizational structure enhances new product development (Langerak and Hulthink, 2005). Baum and Wally (2003) suggest that it is advantageous for the organization to practice decentralization for new product development and introduction of new technology and method. Likewise, decentralization structure also supports flexibility and adaptive production, in which decision will be able to be made rapidly for maximum efficiency.

Given the importance of organizational structure that has been discussed, this study suggested the following hypotheses.

H1: Organizational structure has significant impact on employee involvement in Malaysia’s manufacturing firms.

H2: Organizational structure has significant impact on quality of production in Malaysia’s manufacturing firms.

RESEARCH BACKGROUND

The population of this study comprised of all the manufacturing firms in Malaysia that were registered under the Federation of Malaysian Manufacturers. This study is a non-experimental quantitative study in which a sample survey was used as method of collecting data, or in other words, a seven-point Likert scale questionnaire was used as the research instrument. Six hundred questionnaires were mailed at the surrounding areas of the territory of Selangor, Penang, Kedah, Johor, Sabah, Sarawak, and the Federal Territory of Kuala Lumpur and Labuan using disproportionate stratified random sampling, due to the nature of the unit of analysis which was heterogeneous. Out of the 600 mailed questionnaires, only 233 completed questionnaires were returned and 201 were usable for further analysis.

Organization’s management representatives were chosen as the target group. These composed of the presidents, executive directors, general managers, accountants or financial controllers, and managers in multi-disciplined (such as, human resource, factory, marketing, sales, administration and etc.). The companies participated in this research have started their operations in between the year of 1950 and 2000.

Of the 201 firms in the 16 different industries surveyed, 33 firms were in the electrical and electronics industry, 28 in the chemical and petroleum industry, 27 in the food, beverage and tobacco products, 22 in the fabricated metal, 11 each in the basic metal industry, and paper, printing and publishing, 9 each in transport and plastic products, 17 in the wood products (including furniture), 14 in the non-metallic mineral products, 7 each in the rubber industry, and textile, wearing apparel and leather products, 3 in the medical, precision and optical instruments, 2 in machinery and 1 in other industry.
RESULTS

This study begins by examining the organizational characteristics of the participated firms which can be summarized in Table 1 to Table 4. In many organizations, employees working condition is a matter of great concern as working conditions of an organization affects the sense of well-being, health and motivation of employees (Jones, 2001). In this study, the working conditions proved to be very good for the 201 firms surveyed with 169 firms were in the range of slightly excellent to very excellent working conditions. Meanwhile, only 14 firms were in the range of slightly poor to poor working conditions.

<table>
<thead>
<tr>
<th>Table 1 Working Conditions</th>
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<tbody>
<tr>
<td>Respondent Companies Characteristics (n=201)</td>
</tr>
<tr>
<td>Working Conditions</td>
</tr>
<tr>
<td>Very poor</td>
</tr>
<tr>
<td>Poor</td>
</tr>
<tr>
<td>Slightly poor</td>
</tr>
<tr>
<td>Uncertain</td>
</tr>
<tr>
<td>Slightly excellent</td>
</tr>
<tr>
<td>Excellent</td>
</tr>
<tr>
<td>Very excellent</td>
</tr>
</tbody>
</table>

It is important that employees share a healthy relationship with each other at their workplace. A good communications between management and employees concerning decisions, workplace, grievances, and conflicts build support for and strengthen the work activities in the organization. In this study, employee relations for the 201 firms surveyed looked very promising with 169 firms reported to be in the range of slightly excellent to very excellent employee relations and only 12 firms in the range of slightly poor to very poor employee relations.

<table>
<thead>
<tr>
<th>Table 2 Employee Relations</th>
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<tbody>
<tr>
<td>Respondent Companies Characteristics (n=201)</td>
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<tr>
<td>Very poor</td>
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<tr>
<td>Uncertain</td>
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<td>Excellent</td>
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<tr>
<td>Very excellent</td>
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</tbody>
</table>
Leadership is an important function of management which helps to maximize efficiency and to achieve goals. Based on Table 3 in this study, leadership style that was participative seems to be the trend with 174 firms reported to have a leader that is in the range of slightly participative to very participative in their respective firms. However, there were about 15 firms were saying that their leaders were authoritarian.

Table 3 Leadership Style

<table>
<thead>
<tr>
<th>Respondent Companies Characteristics (n=201)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Mean</th>
<th>Mode</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leadership Style</strong></td>
<td>5.46</td>
<td>6</td>
<td>1.039</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very authoritative</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authoritative</td>
<td>1</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly authoritative</td>
<td>14</td>
<td>7.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertain</td>
<td>12</td>
<td>6.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly participative</td>
<td>62</td>
<td>30.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participative</td>
<td>89</td>
<td>44.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very participative</td>
<td>23</td>
<td>11.4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The integration between different departments in an organization becomes more evident when communication breaks down exist, which negatively impacts the work process. The fourth characteristic studied is about the interactions between different departments in Malaysia’s manufacturing firms. In this study, 155 firms fell in the range of slightly excellent to excellent category in overcoming barriers while 25 firms recorded minimal barriers as shown in Table 4.

Table 4 Departmental Interactions (Barriers)

<table>
<thead>
<tr>
<th>Respondent Companies Characteristics (n=201)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Mean</th>
<th>Mode</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Departmental Interactions (Barriers)</strong></td>
<td>5.54</td>
<td>6</td>
<td>0.964</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very poor</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly poor</td>
<td>11</td>
<td>5.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertain</td>
<td>10</td>
<td>5.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly excellent</td>
<td>65</td>
<td>32.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>90</td>
<td>44.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Excellent</td>
<td>25</td>
<td>12.4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In order to identify the underlying relationships between measured variables, an exploratory factor analysis was performed. After the last run of the exploratory factor analysis, with the eigenvalue of 1.16 and the total
variance of 12.69%, the factor loadings for the remaining items of organizational structure were in the range of 0.87 to 0.91, which indicates above recommended cut-off point value of 0.40 for statistical significance. The variable provides stable and reliable responses over a repeated administration of the test with the Cronbach’s alpha of 0.84. On the other hand, employee involvement and quality of production have the eigenvalue of 6.36 and 1.41 respectively and the total variance of 28.95 and 21.15 respectively after the last run of the exploratory factor analysis. The factor loadings for the remaining items of each of these aforementioned variables were in the range of 0.80 to 0.85 (for employee involvement) and 0.84 to 0.87 (for quality of production). The test for reliability had shown a Cronbach’s alpha value of 0.93 and 0.91 respectively.

Table 5 presented the scores of all the variables applied in this study, along with all means and standard deviations. Results showed that the mean scores for each of the three variables varied from 5.23 to 5.64, indicating that respondents had a high opinion of all the dimensions, while the standard deviation for these variables ranged between 0.70 and 0.91. As shown in Table 5, results of correlation coefficient analysis indicate that organizational structure had positively correlated with employee involvement and quality of production. However, these correlations were either moderate or weak. Organizational structure had a weak correlation between employee involvement (r = 0.26, p < 0.01) and a slightly moderated correlation with quality of production (r = 0.32, p < 0.01).

### Table 5 Means, Standard Deviations, and Correlations (N= 201)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organizational Structure</td>
<td>5.23</td>
<td>0.90</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Employee Involvement</td>
<td>5.32</td>
<td>0.70</td>
<td>0.26**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Quality of Production</td>
<td>5.64</td>
<td>0.91</td>
<td>0.32**</td>
<td>0.57**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Significant levels: **p < 0.01, *p < 0.05

Regression analysis results in Table 6 shows the strength of relationship between organizational structure and employee involvement and quality of production. Apparently, organizational structure had no relationship with employee involvement with β = 0.01, p < 0.93. Therefore, this indicates that hypothesis 1 is not supported. On the contrary, as exhibited in Table 6, the result indicates that organizational structure was found to have significant influences on quality of production with β = 0.14, p < 0.05. Thus, hypothesis 2 is strongly supported.
### Table 6 Regression Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Std. Coefficient Beta (β)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Involvement</td>
<td>0.01</td>
<td>0.93</td>
</tr>
<tr>
<td>Quality of Production</td>
<td>0.14*</td>
<td>0.05</td>
</tr>
</tbody>
</table>

*Significant levels: **p < 0.01, *p < 0.05*

### DISCUSSION, IMPLICATIONS AND CONCLUSION

As shown in the result of the descriptive analysis of variable, organizational structure had a mean score of 5.23 which is quite high. This indicated that the respondents of this study admitted the importance of organizational structure and believed that they have an effective design of organizational structure in their respective companies. The finding might also be related to Clemmer (2003), which according to him; organization cannot perform according to their calibre in weak systems. This was consistent with that argued by Gerson and Drazin (2007), Tolbert and Hall (2008), and Czsaszar (2012), that organizational structure played significant role in effective and efficient functioning of organization.

Surprisingly, the result of the regression analysis interprets that organizational structure had no positive relationship on employee involvement in Malaysia’s manufacturing firms, which also means hypothesis 1 was rejected. There was doubt that some of the manufacturing firms in Malaysia were practising authoritarian leadership style as claimed by 7.5 percent of the respondents (see Table 3) implying that decisions were made independently by managers with little or no input from the rest of the group. This could also might be contributed by how good the employees relation with their managers. The same reference in Table 3, six percent of the respondents were saying that the relationships between managers and employees in their respective organizations were poor.

Nonetheless, in this study, the relationships between organization structure and quality of production were found to be positively significant (i.e. $\beta = 0.14$, $p < 0.05$). Hence, the results had proven that an adaptive and effective organizational structure may improve the working efficiency within the organization. On the other hand, an organizational structure should allow the application of employees’ skills and knowledge to enable flexibility and creativity in the organization. Although the relationship between organization structure and employee involvement was unsupported, the most important implication is that it provides a different theory implication.

Organizational structure had positive relationship with quality of production. The company’s representatives believed that decentralization helped to improve the quality of decision and beneficial when new product lines or new activities were introduced in an organization. According to Langerak and Hultink (2005), a simplification of the organizational structure enhanced new product development. Baum and Wally (2003) on the other
hand suggested that it is an advantage for the organization to practice
decentralization for new product development and introduction of new
technology and method. Likewise, decentralization structure also supported
flexibility and adaptive production, which decision would be able to be
made rapidly for maximum efficiency. However, a working paper jointly
prepared by UNDP-Government of Germany evaluation of the UNDP role in
decentralization and local government (1999) mentioned that, decentralization
is not an alternative to centralization as both are needed. In this study, 86.5
percent of the respondents acknowledged that their managers were practising
participative leadership style and 89.5 percents of the respondents were
saying that the departmental interactions in their organizations were excellent,
implying that most manufacturing companies in Malaysia were practising a
more open climate.

According to Islam *et al.*, (2012), an organization will gain competitive
advantage if the structure of the organization is designed to support the new
product development process. In their study, they found that organizational
structure of decentralization and task specialization successfully predicted
the positive effect on the new product development. The result of this study
shows that organizational structure has a significant relationship with quality
of production, which is consistent to the previous studies. With a better
understanding of management support might improve the performance of
new product introduction (Schimmoeller, 2010) and the quality of production
Alwan (2012). The result of this study also supports the need to improve the
understanding of how the influence of managers affects quality production.
According to Gutterman (2012), an organizational structure is not static. It
should be more flexible to adapt environmental changes.

As the traditional organizational structure is unable to support the
introduction of new product and improve production capabilities, companies
should consider designing a structure that allows higher flexibility to support
all phases of new product introduction and improve the flexibility and
adaptive production for better communication and decision making. Therefore,
managers should consider refining their organizational structure in order to
attain the capabilities.

**REFERENCES**


