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The Relationships among Controllability of Objective Performance Measures, Distributive and Procedural Justice: A Conceptual Framework

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ABSTRACT : *As an integral part of management control system (MCS), performance measurement systems (PMS) influence manager's behavior towards enhancing his/her performance through the assessment of the performance in performance evaluation process. To be an effective control mechanism, PMS must have the capabilities to influence managers' behaviors towards desired organizational goals which in line with the central tenet of MCS. However, the performance measures used in the process of performance evaluation must be perceived as fair by managers to achieve the intended managers' behavior. The aim of this study is to examine the effect of controllability of objective performance measures on distributive and procedural justice. The framework proposed suggests that controllability of objective performance measures is positively associated with managers' perceptions of distributive justice and procedural justice. Data will be obtained through a mailed structured questionnaire survey distributed to departmental managers in large size companies listed in the directory of Federation of Malaysian Manufacturers (FMM). The findings are expected add to the empirical evidence on PMS and organizational justice. They will further provide explanations on what causes performance measures to be perceived as fair by managers.*

Keywords: *Controllability, Performance Measures, Distributive Justice, Procedural Justice*

I. INTRODUCTION

Performance measurement systems (PMS) are main management control tools in performance evaluation which include the process of measuring and evaluating performance, and rewarding. Traditionally financial oriented, PMS has shifted focus to holistic view incorporating multiple performance measures, both financial and nonfinancial, that linked to business strategy (Chenhall, 2005; Franco-Santos, Lucianetti, & Bourne, 2012; Hall, 2008). These multiple performance measures are used in the diagnostic control system, evaluating the standards

with actual perfoemance, and taking corrections on the feedback generated i.e. variances. This diagnostic control system is likely to provide motivation and direction to achieve goals by focusing on the corrections of irregularities or errors from the standards. The motivational effect is further enhanced for the manager to behave aligned with organization goal by attaching rewards with achieved performance measures. Therefore, PMS is a management control tool that guides organizational efforts towards specific objectives and determines the success of the effort through performance measures/indicators of work performed and the result of the activities.

As an integral part of management control systems (MCS), the behavioral effect of PMS on employee performance is important. The aim of MCS is to align the behavior of the individual with organization goals (Merchant, Van der Stede, Lin, & Yu, 2011). Indeed, an organization's success depends basically on individual employee actions (Burney, Henle, & Widener, 2009). Motivating employees has been a central issue in MCS, particularly when using PMS in its main functions of performance evaluation. Franco-Santos et al. (2012)concluded that performance measurement system (PMS) could be used to affect people's behavior in several ways. These effects are classified in the effects on people's strategic focus; cooperation, coordination, and participation; motivation; citizenship behaviors; role understanding and job satisfaction; decision making, learning, and self-monitoring; leadership and culture; perceptions of subjectivity, justice, and trust; judgment biases; and conflicts and tensions.

In performance evaluation, superiors use objective performance measures alone or make subjective adjustments to objective performance measures. Although superiors' subjective adjustments may have positive impacts on managers' behavior, subjectivity can cause other problems, such as claims of favoritism and bias (Burney et al., 2009). The findings of a study conducted by Voußem, Kramer, and Schäffer (2016) have revealed a nonlinear, inverted U-shaped relationship between subjectivity emphasis and perceptions of distributive and procedural fairness. That means; subjectivity enhances managers' justice perceptions when the emphasis on subjectivity is low, but subjectivity decreases managers' justice perceptions when the emphasis on subjectivity is high. Therefore, the use of subjective performance measures would have negative impacts on managers' perceptions of distributive and procedural justice.

To ensure objective performance measures are capable of influencing employee behavior, they must incorporate certain properties that reflect the quality of these measures. In this regard, Vancil (1973) argued that evaluation which is based on controllable factors is likely to be fair; in other words, performance measurement system must contain all controllable factors and exclude uncontrollable factors to more likely be perceived as fair (cited in Cugueró-Escofet & Rosanas, 2013). The application of controllability principle means that managers should be evaluted based only on the elements that are under their control (Burkert, Fischer, & Schäffer, 2011). According to Bisbe, Batista-Foguet, and Chenhall (2007) controllability principle can be defined and measured based on two separate dimensions; the sensitivity and precision of the measure. Accordingly, this study looks at the effect of controllability of objective performance measure on managers' perceptions of distributive and procedural justice.

II. LITERATURE REVIEW

The application of controllability principle means that managers should be evaluted based only on the elements that are under their control (Burkert et al., 2011). According to Bisbe et al. (2007) controllability principle can be defined and measured based on two separate dimensions; the sensitivity and precision of the measure. Sensitivity of a performance measure refers to the extent to which a measure reflects an agent's (a manager's) actions, while precision of performance measures refers to the lack of the noise in the measures (Banker & Datar, 1989).

Introduced firstly by Greenberg (1987), organizational justice refers to people's perception of fairness in the organization. Cugueró-Escofet and Rosanas (2013) defined justice as employees' perceptions of the treatment they receive from their organizations. Although there are four types of justices (Colquitt (2001), only distributive justice and procedural justice will be examined in this study. Distributive justice and procedural justice relate to the outcomes received by employees and the procedures used to determine these outcomes, whereas, the other two types, interpersonal and informational justice; focus on the way employees are treated by their supervisors (e.g., respect, dignity, communication, and explanations). Distributive and procedural justices relate to the distribution mechanism and procedures of outcomes, which are associated with the formal control system such as PMS. Distributive justice perceptions refer to the perceived fairness of distribution of outcomes employees receive, such as pay, promotions, and recognition (Burney et al., 2009). Procedural justice

perceptions reflect the perceived fairness of the procedures usedto determine these outcomes(Voußem et al., 2016).

PMS has been found to be associated with employees' perceptions of justice in the prior studies, yet this relationship needs much research to be clearer. The empirical evidenceshows organizational justice as an important factor explained individual's behavioral effect outcomes such as commitment, trust, job satisfaction and managerial performance when using PMS in performance evaluation. Wentzel (2002) investigated the effect of perceived fairness in budgeting process on performance by increasing managers' commitment to budgetary goals. The results have shown that managers' participation during the budgeting process enhances their justice perceptions, which in turn increases managers' commitment to budgetary goals and subsequently enhances performance. Lau and Sholihin (2005) investigated the behavioral consequences of the use of financial measures and nonfinancial measures for performance evaluation. This study examined the mediating effect of procedural justice and trust in supervisor on the relation between performance measures and job satisfaction. To the knowledge of the researcher, it was the first study that examined the relationship between the use of multiple performance measures and employees' perceptions of justice, specifically, procedural justice. The results have revealed that the use of performance measures for performance evaluation significantly affects job satisfaction indirectly through managers' perception of procedural justice and their trust in supervisors. However, the results have shown that the above findings are the same for both types of measures, financial and nonfinancial. The effects of nonfinancial performance measures on job satisfaction have not been different from the effects of financial measures.

Lau and Moser (2008), instead, used only non-financial measures and examining their effect on managers' perceptions of procedural justice and how these perceptions affect organizational commitment and managerial performance. The results have indicated that the use of nonfinancial measures has a direct positive effect on organizational commitment and managerial performance, and also has an indirect positive effect mediated by the managers' perceptions of procedural justice.

Burney et al. (2009) and Hartmann and Slapničar (2012), on the other hand, conceptualized PMS based on their characteristic. Burney et al. (2009) examined the effect of two characteristics of SPMS, namely technical validity and the extent to which SPMS reflects a strategic causal model, on managers' perceptions of distributive and procedural justice as well as the subsequent effect of procedural justice on organizational citizenship behavior which leads to managerial performance. The findings have revealed that the two characteristics are positively and equally associated with employees' perceptions of both distributive justice and procedural justice. Moreover, the results have revealed that perceived procedural justice is associated with employee performance through organizational citizenship behavior. Hartmann and Slapničar (2012) examined the relationship between four characteristics of PMS (two metrics and two process characteristics) and perceived procedural justice as well as the moderating effect of task uncertainty and tolerance for ambiguity on this relationship. The two metric characteristics that have been investigated are the diversity of metrics and their reliance on outcome vs. effort metrics (metric characteristics), while the two process characteristics are the amount of subordinate's voice in the performance evaluation process and the extent offormalization of the process. The results have revealed that the effect of the four characteristics of PMS on procedural justice depends on the level of task uncertainty and tolerance for ambiguity.

As a dimension of controllability of performance measures, sensitivity of a performance measure refers to the extent to which a measure reflects an agent's (a manager's) actions (Banker & Datar, 1989).Measures that are high in sensitivity reflect almost the exact effort put forth by agents, whereas measures that are low in sensitivity do not reflect the changes in agent effort. In a study of the relationship between performance measures properties and delegation, Moers (2006) found that if financial performance measures have high sensitivity, then they can be used for incentive purposes to complement delegation choice, which increases delegation. Woods (2012) argued that the level of sensitivity of objective performance measures determine the need for subjective adjustments. If supervisors perceive performance measures as less sensitive, they are more likely to adjust these performance measures to improve the capability of performance measures. However, his findings revealed that supervisors' subjective adjustments are not affected by their perceptions of the level of sensitivity of objective performance measures.

Precision of objective performance measures is also an important property. Woods (2012, p. 406) stated that *"measures that are low in precision (i.e., high in noise) are less informative about, and are more likely to inaccurately represent, managerial performance".* Although the prior literature has provided mixed evidence on the effect of performance measures precision on desired outcomes such as performance (Bouwens

& Lent, 2006), the precision property is a sufficient condition for achieving the best performance in most of the studies in principal/agent models(Feltham & Xie, 1994).

Prior literature has emphasized the importance of precision as an essential property for performance measures to grab the quality and quantity of managerial performance and to motivate managers at the same time. According to Bouwens and Lent (2006), noisy performance measures are more likely to make the incentive plans ineffective and to negatively affect agents behavior. In their study of the relationship between performance measures properties and the effect of incentive contracts, Bouwens and Lent (2006) found a positive association between performance measures precision and employee selection and effort. In another study that has examined the relationship between performance measures properties and delegation, Moers (2006) found that if financial performance measures have high precision, then they can be used for incentive purposes to complement delegation choice, which increases delegation. Woods (2012), on the other hand, studied the relationship between performance measures properties and subjective adjustments. The result shows that supervisors increase subjective adjustments as they perceive the objective measures less precise and vice versa. However, the use of subjective adjustments may cause other problems such as claims of favoritism and bias (Burney et al., 2009), which may lead to unfair performance evaluation. Furthermore, in an experimental setting, Bol and Smith (2011) results indicate that when performance measures are noisy (less precise), fairness and motivational concerns are raised and that urges subjective adjustments by supervisors.

Prior studies do provide empirical evidence on the application of controllability principle in the performance evaluation. For example, the findings by (Burkert et al., 2011) indicate that the relationship between the application of controllability principle and managerial performance is not direct but indirect, fully mediated by role perceptions. When managers perceive the controllability principle is not being applied or barely applied, they find less clarity in the role expectations imposed on them, in turn, this ambiguity lowers their job performance. Giraud, Langevin, and Mendoza (2008) found that the desire to apply controllability principle in performance evaluation is due to the reasons of fairness (justice), but they differentiate between internal and external uncontrollable factors. The study further shows that managers want the controllability principle to be applied for internal factors (i.e., decisions made by other managers in the company), but not for external factors (i.e., changes in the political and economic environment).

III. THEORY AND HYPOTHESES DEVELOPMENT

This study adopts organizational justice theory. Organizational justice theory focuses on the fairness perceptions on the workplace (Greenberg, 1990). This study focuses on two types of justice perceptions; distributive justice and procedural justice. Perceptions of individuals about distributive justice relate to the fairness of the distribution of outcomes while individuals' perceptions of procedural justice refer to the fairness of the process by which outcomes are determined (Birnberg, Luft, & Shields, 2006).

Distributive justice, basically, was rooted in equity theory which was introduced by Adams in 1965. Adams (1965) articulated that individuals balance their contribution to the outcomes received; to determine the fairness of the outcome, individuals then compare this ratio to a ratio of some referent other (Greenberg, Ashton-James, & Ashkanasy, 2007).In addition to the comparison to referent others to judge the distributive justice, the comparison also includes a comparison of the outcomes received to the effort put forth(Greenberg, 1986). People will perceive fairness when the ratios are equal. If people believe that the ratio is inequitable, they will try to minimize these negative emotions by increasing or decreasing their inputs and/or outcomes (Birnberg et al., 2006).

Procedural justice refer to the fairness of the process by which outcomes are determined (Birnberg et al., 2006).Leventhal (1980) argues that people assess the fairness of procedures by comparing the process of decision making to some procedural rules. The six rules were suggested by Leventhal (1980) are: (1) consistency (the decision process is applied consistently across persons and time), (2) bias suppression (free of bias from the decision maker), (3) representativeness (reflection of concerns and perspectives of all affected parties),(4) accuracy (based on accurate information), (5) correctability (bad decisions are correctable), and (6) ethicality (based on prevailing personal standards of morality and ethics).

Niehoff and Moorman (1993) use three of the six rules in predicting the relationship between monitoring and procedural justice. Monitoring affects the perceptions of procedural justice for three reasons: (1) gathering information about performance can positively influence subordinates' perceptions about the information used by the decision maker (the accuracy rule), (2) performance monitoring can provide the leader with broader information that allows the leader to make unbiased decision (the bias suppression rule), and (3)

broad information available to the leader allows the leader to make decision in a consistent way (the consistency rule).

The application of controllability principle means that managers should be evaluted based only on the elements that are under their control (Burkert et al., 2011). Giraud et al. (2008) found that the application of controllability principle positively affects managers' perceptions of distributive justice. However, in the former study, managers' desirability of the application of controllability principle for external factors was deferent from internal factors. The findings show that managers desire internal uncontrollable factors (i.e., decisions made by other managers in the company) to be neutralized, but they do not desire external uncontrollable factors (i.e., changes in the political and economic environment) to be neutralized. The finding related to external factors has been interpretedthatmanagers believe that the neutralization of external factors may require the use of subjectivity in their evaluation and that may be a kind of unfairness. In this regard, Vancil (1973) argued that evaluation which is based on controllable factors is likely to be fair; in other words, performance measurement system must contain all controllable factors and exclude uncontrollable factors to more likely be perceived as fair (cited in Cugueró-Escofet & Rosanas, 2013). If uncontrollable factors are not excluded and affect managers' evaluation, there is a risk that the outcomes they receive do not compensate their effort. In contrast, implementing the controllability principle will increase managers' perceptions of distributive justice by strengthening the relationship between their effort and their outcomes (Adams, 1965; Langevin & Mendoza, 2013). Moreover, Cugueró-Escofet and Rosanas (2013) proposed that for a management control system to be considered as just, managers must be evaluated on factors over which they have some influence.

The above discussions lead to the following hypothesis:

H1: *The extent to which objective performance measures are controllable is positively associated with managers' perceptions of distributive justice.*

Refering to Leventhal (1980) six rules for procedural justice, basing performance evaluation on controllable performance measures is expected to correspond to some of the six rules suggested by Leventhal. If performance evaluation is based on controllable perfromance measures, the effect of uncontrollable factors will be removed. The impact of uncontrollable factors is different, some of the evluated mangaers will have slight negative effect, others will have strong negative effect and others may benefit from the uncontrollable factors (Langevin & Mendoza, 2013). Therefore, removing the effect of uncontrollable factors will lead to cosistent performance evluation (consistency rule). The use of controllable performance measures is also expected to enhance the accuracy in performance evaluation (accuracy rule) (Langevin & Mendoza, 2013). Since uncontrollable factors increase subjectivity in performance evluation, that increase the possibility of bias subsistence. Removing uncontrollable foactors is expected to mitigate the bias the decision making process (bias suppression rule) and to reflect managers' concerns (representativeness rule).

Based on the above discussion, the following hypothesis can be developed:

H2: The extent to which objective performance measures are controllable is positively associated with managers' perceptions of procedural justice.

IV. METHODOLOGY

This study uses a cross-sectional design.Data will be obtained through a mailed structured questionnaire survey. The respondents are departmental/functional heads from large manufacturing companies. Federation of Malaysian Manufacturers (FMM) (2016) will be used as the sampling frame. Only large manufacturing companies with more than 200 employees are included in the study sample. Established measurements are used for all variables of this study.

V. CONCLUSION

The purpose of this study is to investigate the extent to which controllability of objective performance measure properties affect managers' perceptions of distributive and procedural justice. As an integral part of MCS, PMS used in performance evaluation to achieve efficiency and effectiveness by tracking work progress against

predetermined performance measures periodically using diagnostic control system and provide rewards to promote further achievement. It has been arguedthat as long as objective performance measures are in good quality; subjectivity in performance evaluation would not be needed. As subjectivity in performance evaluation may have negative impacts on evaluated managers such as feelings of favoritism and bias (Burney et al., 2009). The framework proposed in this paper suggests that controllability of objective performance measures is positively associated with managers' perceptions of distributive justice and procedural justice.

The findings are expected add to the empirical evidence on PMS and organizational justice. Investigating the relationship between controllability of performance measures and organizational justice will further provide explanations on what causes performance measures to be perceived as fair by managers. It is hoped that the findings of this study will benefit the practitioners in designing objective performance measures that are capable of being used in performance evaluation to achieve the intended impact on managers' behavior.

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