

Strategic Performance Measurement and Managerial Performance: The Mediating Role of Job Satisfaction and Psychological Empowerment

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Abstract

Traditional Performance Measurement System (PMS) has been under serious challenge since its emphasis is on financial measures and satisfying the regulatory and accounting reporting requirements. Many organizations have adopted strategic PMS to overcome these weaknesses. The overall aim of this study is to examine the relationship between PMS and managerial performance in the context of behavioral and motivation issues in an automobile industry. The mediating role of job satisfaction and psychological empowerment is taken into consideration. Data for this study was collected using self administered survey utilizing structured questionnaires. The sampling frame comprised of 88 sales branch managers and 427 dealer managers of automotive companies in the area under study. A total of 100 usable questionnaires were analyzed in this study. Path analysis is used to analyze the relationship between the variables. Findings show job satisfaction mediates the relationship between strategic Performance Measurement System (SPM) and managerial performance.

Keywords Strategic performance measurement, managerial performance, job satisfaction, psychological empowerment, automotive industry, Malaysia

1. Introduction

Performance Measurement System (PMS) plays an important role in developing corporate strategy and performance evaluation for organization to be more competitive in the global economy (Ukko et al., 2007). It identifies individual effectiveness at all hierarchical levels within an organization (Ubeda and Santor, 2007) and prepares information useful in decision making process (Ukko et al., 2007). Another objective of performance measurement is to assist managers in planning and controlling (Chenhall and Smith, 2007). Traditional PMS has been criticized for its weaknesses. Jusuh et al., (2008) found that besides being short term focus where measurements were done on past performance, traditional PMS tend to be easily manipulated by managers. It places less emphasis on intangible asset investment and is more focused on investment that can be easily evaluated (Jayayeri and Scapens, 2008).

Strategic PMS, on the other hand, takes into consideration financial and non-financial factors (Dossi and Patelli, 2010). Ittner et al., (2003) reported that strategic PMS focus on long-term value of shareholder through income measurement usage surplus (residual income) or cash flow. Organizations choose to adapt strategic PMS because the use of non-financial factors increases their

competitiveness in marketplace (Neely et al, 1996) and integrates information on business operations and organization strategy. One of the widely known innovations in this area is called Balanced Scorecard (BSC) which was originated by Kaplan and Norton in 1992. The basic principle in BSC is its emphasis on the relationship between performance measurement and business unit strategy (Wong et al., 2007). Other examples of strategic PMS include Tableau de bord, General Electric (Jayayeri and Scapens, 2008); as well as Business Modeling, and Economic Value Measurement (Ittner et al., 2003).

Organizations use PMS at various levels including departments, units, groups and individuals. Chenhall (2005) highlights the importance of Strategic Performance Measurement (SPM) role on individuals. Findings from studies on SPM and managerial performance show inconsistent results (Hall, 2008; Wong et al., 2007). According to Ukko et al. (2007) and Neely et al. (1996) performance measurement affects behavior of employees such as their job satisfaction (Lau and Solihin, 2005) and psychological empowerment (Hall, 2008).

Due to many criticisms of traditional PMS, there have been considerable innovations in this area including the development of strategic PMS. Research in SPM area is focused on the impact of SPM towards company's performance (Davis and Albright, 2004). There is limited study on SPM effect on managerial performance and limited emphasis on individual behavioral factor (Ittner and Larcker, 1998). This study will examine the relationship between SPM and managerial performance by taking into consideration behavioral factors namely job satisfaction and psychological empowerment as intervening variables. The objectives of the study are twofold as follows:

- 1) To determine the mediating effect of job satisfaction and psychological empowerment on relationship between SPM and managerial performance.
- 2) To determine the mediating effect of job satisfaction and psychological empowerment on relationship between SPM and managerial performance.

2. Literature Review

The literature review section of this study focuses on key variables of this study including SPM, managerial performance, job satisfaction, and psychological empowerment.

Literatures in the area of PMS indicates that there are several characteristics of SPM (1) provide broad set of measures related to important parts of the organization; (2) integrates measures with strategy and valued organizational outcomes; (3) integrates measures across functional boundaries and value chain (Hall, 2008). Malina and Selto (2001) argue that SPM consist of a set of critical performance measures. Their study show that BSC was considered comprehensive as it provides the overall measure of performance. BSC is also the most widely used SPM which highly emphasized on the relationship of performance measurement and business strategy (Otley, 1999). A survey by Davis and Albright (2004) found that the financial performance of a group of bank branches that implement BSC is higher compared to those that do not implement BSC. Consistently, a study by Hoque and James (2000) shows that there is a significant positive relationship between BSC usage and performance improvement.

Previous studies have shown that integration of measures with strategy and providing information about value chain is an important characteristic of SPM (Kaplan and Norton, 1996; Malina and Selto, 2001; Neely et al., 1996; Webb, 2004). SPM also provides understanding of linkages

between business operations and strategy (Chenhall, 2005; Gimbert et al., 2010). Similarly, Ukko et al. (2007) found that SPM is able to help company in conducting and achieving the strategic objectives. SPM will focus employee attention to important issue to the company, by linking company's objective with employment assessment. It also provides information on operation and organizational strategy which helps the manager to understand their role and responsibility in conducting task to achieve better performance (Hall, 2008).

Based on the review of the literature, in prior research, the terms BSC, SPMS and CPMS were used interchangeably (Abdul Rasit and Ismail, 2012). Burney and Swanson (2010) focus on the effect of BSC on the behaviour of managers. Results from their study indicate positive relationship between performance measures, and organisational strategy and job satisfaction. Based on data from over 700 respondents, Burney and Widener (2007) find that SPMS has a positive implication on managerial performance. The findings also indicate that the relationship between SPMS and managerial performance is mediated by job-relevant information and role stressors. Webb (2004) indicates that if individuals inclination and commitment to achieve difficult goal or multiple objectives set in the SPMS, lead to improvement in the overall performance. Past researchers examined the effect of CPMS on performance and found positive relationship (Hall, 2008; Scott & Tiessen, 1999).

Webster (2006) survey middle-level managers of large Australian manufacturing organisations to examine the influence of interactive the use of PMS in enhancing performance and innovation. The study found indirect significant relationship between interactive use of PMS and individual performance. Psychological empowerment also mediates the associations between the interactive use of PMS and the individual creativity. A study by Moulang (2015) involves survey of middle level managers on the relationship between interactive performance measurement system (IPMS) to creativity. The study incorporates psychological empowerment as an intervening variable and confirms the relationship between the three variables.

On the other hand several research provide negative implications of PMS use. Rinsum and Verbeeten (2010) in their survey among 94 public sector managers in the Netherlands indicates that subjectivity in PMS does not provide better informational feedback. Other evidence concerning the negative behavioural consequences of PMS include Cheng et al. (2007). They proposed that multiple measures may have undesirable effects due to the limited cognitive ability of managers to cope with incompatible demands from the inclusion of multiple goals.

The Harvard Professional Group (1998) sees job satisfaction as the keying radiant that leads to recognition, income, promotion, and the achievement of other goals that lead to a general feeling of fulfillment. Kendall and Hulin (1969) see job satisfaction as effective feeling or reaction towards a situation. A simple definition of job satisfaction is that of Kendall and Hulin (1969) who have defined it as the feelings a worker has about his job. As such job satisfaction is pleasant or positive emotion as a result of task evaluation or working experience (Locke, 1976).

Past research on job satisfaction, SPM, and managerial performance provide inconsistent findings. A study by Ittner et al. (2003) indicates that the increasing stress on diversity in performance measurement resulted in higher satisfaction and also stock market performance. Park and Deitz (2006) survey on 199 automobile salespeople from 35 sales offices in Seoul, South Korea found that quality has a significant positive relationship with performance and job satisfaction. Hochwater et al. (1999) study on 220 respondents from an administrative section of a hotel industry in the US found that the strongest positive relationship between job satisfaction and performance occurred when high

value attainment was coupled with either positively high or negatively low affective disposition. Mohr and Puck (2006) treats job satisfaction and job stress as mediating variables between conflict and performance. Findings from their study show that managers who have conflict will report low job satisfaction resulted in high job stress and low performance. A survey of 70 managers from manufacturing industry in Indonesia by Chong and Sholihin (2005), show disparity features between financial and non-financial measurement do not affect the employee's perception to justice and belief. They concluded that the importance of non-financial measures, compared to financial measures is insignificant on job satisfaction. Similarly, Bowling (2007) found the effort to improve performance by improving job satisfaction will find failure, however the employees who felt satisfaction in his job would be an advantage to the organization in other aspect.

Hall (2008) shows that comprehensive PMS is related indirectly with managerial performance through intermediary variables of role clarity and psychological empowerment. Moreover, there is significant relationship between basic cognitive belief towards immediate manager and psychological empowerment (Ergeneli et al., 2007). Individual power is a basic element in management and organizational effectiveness, and the effectiveness increase when power and control is shared (Keller and Dansereau, 1995). Power is an internal factor within a person that helps them to react to change in environment at the right time. Studies found that power within individuals can influence sales and profit, cost reduction, customer satisfaction, customer criticism, loyalty to organization, effectiveness, number of customer, problem solving efficiency (and also problem obstacle), and coordination between function (Spreitzer, 1995; Klagge, 1998; Niehoff et al, 2001). The perception of power is expected to influence the number and product quality generated by employee (Sigler and Pearson, 2000). Spreitzer (1995) reported that there was positive relationship between perception of power and performance. Kirkman and Rosen (1999) found team who reports having power is more productive as compared the team without power existence. The employees who have power will support Total Quality Management by paying attention to quality problem at workplaces, and always trying to improve the way they operate.

Chow et al. (2006) found power was significant in improving the performance and organizational support to increase employees' sense of pride in designed task. Therefore, manager is encouraged to empowering employee in order to increase the commitment and harmonization at workplaces. Consequently, it will lead to increase of work performance, good organizational behavior as well as quality of work and react on demand to improve performance (Paul et al., 2000). According to Bennis (1984) psychological empowerment is a set of management practical empowerment activity, authority control to staff. Meanwhile Niehoff et al. (2001) reported psychological empowerment is transferring the power in the organization to individual who are entitled to it and those who control organizational resources. In short, psychological empowerment concept is to encourage the workers to contribute in decision-making process, where, it would encourage employee to be more active in the organization overall activities (Ergeneli et al., 2007).

3. Scope of Study

Automotive industry is chosen for this study because it contributes significantly to the economic development of Malaysia and also the Asian region. Malaysia produces her own national car through two local manufacturers. Several foreign manufacturers also assemble their automobiles in this

country. Automotive industry is considered as a highly competitive industry as it possess high and sensitive competition rate on economic environment factor (Dhafr et al., 2006). In addition, industry deregulation through World Trade Organization in 2008 and Asean Free Trade Area (AFTA) has resulted in sales of imported automobiles at relatively low prices. It is expected that automotive companies in Malaysia require supports including performance measurement tools that can help improve their performance and enable them to compete effectively in the industry (Md Deros et al., 2006). In addition, there was no study done on the relationship between SPM and managerial performance in automotive industry. Most of the research in the automobile industry was limited to the relationship between supplier and manufacturer (Schmitz and Platts, 2004) and manufacturing operation, to generate new model (Dhafr et al., 2006).

In Malaysia, sales of automobiles are done through sales branches and sales dealers. Each branch or dealer is led by a sales manager. The sales managers will be the unit of analysis for this study because they have good understanding of the sales operations and the PMS at their respective branches or dealers. In this study, Klang Valley area is chosen as the area under study because it is considered the most developed and highly populated area in Malaysia. Based on the findings from a pilot study, the managers at sales branches and sales dealers in automobile industry in the Klang Valley area are being evaluated using financial and non-financial measures, consistent with the scope of this study.

4. Theoretical Framework

Generally, this study use theory of motivation. Motivation is a concept that elaborates the internal strength within individuals to start and direct their behaviors (Gibson et al., 1976). In other words, people have the desire to achieve the objective and the inducement to achieve the objective is known as motivation. The research framework of this study is illustrated in Figure 1:

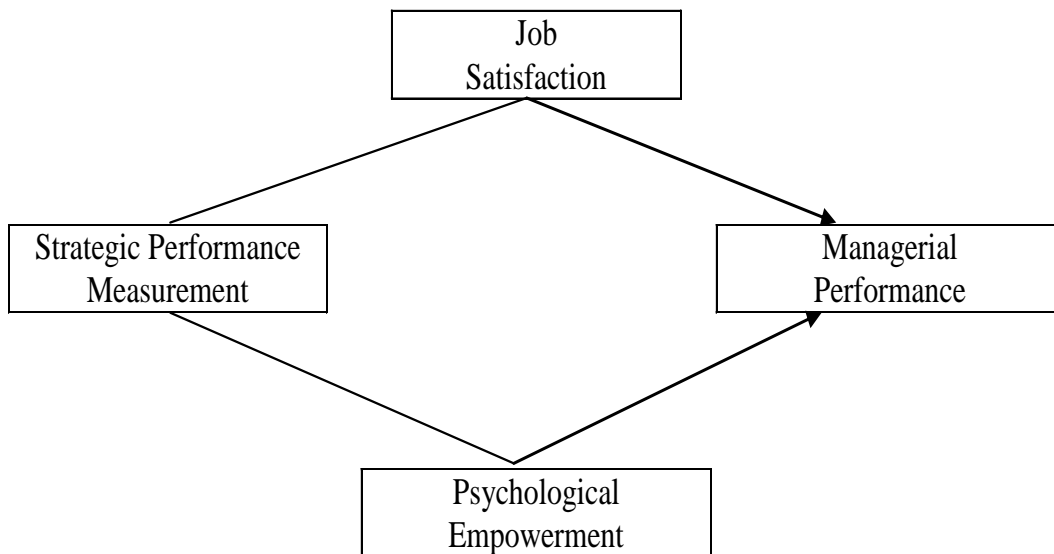


Figure 1 Research Framework

4.1 Development of Hypothesis

Past studies in law, organizational politics and management accounting suggest that fair procedures will affect behavior of individuals (Alexander and Ruderman, 1987; Lindquist, 1995). Tang and Sarfield-Baldwin (1996) states that if managers use fair and consistent rules to employees and provide compensation based on performance and merit, employees will have positive perception towards the procedures and encourage them towards having high job satisfaction, commitment and participation. Similarly, Kaplan and Atkinson (1998) highlight the importance to consider behavioral issues in PMS.

In general, employees who have job satisfaction perform better than employees without job satisfaction. Studies have shown that employees with high job satisfaction will produce good work performance (Hochwater et al., 1999; Mohr and Puck, 2006; Locke 1976; Lawler, 1974; Park and Deitz (2006); Nerkar, 1996; Valentine et al., 2009; Pitts, 2009). This is consistent with motivation theory that states when job satisfaction exists, motivation will increase, and subsequently employees will work towards achieving high performance. Hoque et al. (2001) states the adoption of PMSs are able to present the signal and motivation through improvement in critical activity. Chong and Solihin (2005) states this benefits will increase job satisfaction deemed by employee as a fair and able measurement system to increase employee motivation. Hochwater et al. (1999), Mohr and Puck (2006), Locke (1976), Park and Deitz (2006) and Nerkar (1996); found the increasing of job satisfaction will increase motivation and working performance. As such, the hypothesis is developed as follows:

H1: There is a positive relationship between SPM and managerial performance through job satisfaction

Empowerment improve the initiative of managers continuously resulting in high work performance (Haris et al., 2009; Hall, 2008; Sigler and Pearson 2000; Paul et al., 2000; Spreitzer 1995; Chow et al, 2006, Ergeneli et al., 2007). Empowerment is an effort to improve the participation level of employees in the decision making process. It encourages the individuals to be more active in the organization (Ergeneli et al., 2007). Findings from Hall (2008) show that comprehensive PMS influence the cognitive behavior and motivation that increases the psychological empowerment, and consequently influence managerial performance Performance will increase if the manager believes that he has the power to determine how the work should be done. This is consistent with the motivation theory (Mc Clelland's Learned Theory) that states that when psychological empowerment exists, work performance will increase. SPM system provides performance information needed by manager to form high psychological empowerment. This statement is suited with result of the study carried out by Hall, (2008); Ergeneli et al. (2007); and Sigler and Pearson (2000). In addition, the manager who has psychological empowerment will produce better performance as compared to manager who does not have psychological empowerment (Hall, 2008; Haris et al., 2009; Sigler and Pearson, 2000; Paul et al., 2000; Spreitzer, 1995; Chow, 2006; Ergeneli et al., 2007). Basically, high psychological empowerment would result to continuously increase of effort and flexible which would eventually improve the performance. As such, second hypothesis is formed as follows:

H2: There is a positive relationship between SPM and managerial performance through psychological empowerment.

5. Research Methodology

The data for this study was collected from respondents using self administered structured questionnaires. The population of survey comprised of branch managers and dealer managers from automotive companies located in Klang Valley. Based on data obtained from the web sites, twenty five automobile manufacturing companies in Malaysia have a total of 88 sales branches and 427 sales dealers. Purposive sampling approach was applied in selecting a sample of 130 sales branches and sales dealers from this list. A total of 100 usable questionnaires were analyzed in this study.

5.1 Survey Instrument

The questionnaires comprised of four sections; Part A - PMS, Part B - job satisfaction, Part C - managerial performance, Part D - demographic profile. Hoque et al. (2001) used twenty items consisting of three items to represent financial measures and seventeen items to represent non-financial measures to measure PMS. Their measurements were originally adopted from Kaplan and Norton (1992). Similar instrument had been used by Hoque and James (2000), Chong and Solihin (2005) and Jusoh et al. (2008). For the purpose of this study, this instrument was modified to exclude return on investment and replaced with operating cost, while sales revenue and cash flow were added (Bhagwat and Sharma, 2007; Jusoh et al., 2008). The non-financial perspective reflects the three perspectives of BSC which are Customers, Internal business processes and Learning and growth. The six items used in customer perspective are market share, on time delivery, number of customer complaints, survey of customer satisfaction, customer response time, and cycle time from order to delivery. Internal business process perspective adopted from Kaplan and Norton (1992) includes two items which are labor efficiency variance, and percentage of defective product shipped. Three additional items added are capacity utilization, accuracy of forecasting techniques (Bhagwat and Sharma, 2007) and productivity on one worker (Michalska, 2005). The learning and growth perspective consists of three items, time to market new product (Kaplan and Norton, 1992), employees skill training (Maltz et al., 2003; Michalska, 2005), and rotation of workers (Michalska, 2005). Hence, total of 19 items were applied to measure SPM.

Job satisfaction and psychological empowerment are the intermediary variables in this study. Job satisfaction was measured using instrument adapted by Park and Deitz (2005) from Churchill et al. (1976). Seven out of twenty six items had been chosen to assess job satisfaction, which specifically refers to working aspects. Psychological empowerment was measured by using twelve items of psychological empowerment adapted from Spreitzer (1995). This scale contains three items for every four components in psychological empowerment: meaning, competence, self-determination and impact. Similar instrument was used by past researchers such as Ergeneli et al. (2007) and Hall (2008) to measure psychological empowerment.

Managerial performance is the dependent variable, measured using nine items introduced by Mahoney et al. (1965). It is a self-rated performance evaluation on eight dimensions of performance; planning, investigating, coordinating, evaluating, supervising, staffing, negotiating, representing and the ninth item is an overall performance rating. Similar measurement was used by Hall (2008); Chalos and Poon (2000), and Chong and Chong (2002) to measure managerial performance.

6. Findings and Discussion

Questionnaires were distributed to 130 managers at sales branches and sales dealers of automobile industry in Klang Valley area. A total 112 (86.15%) questionnaires were returned. Twelve questionnaires cannot be processed due to incomplete information. Hence, a total of 100 (76.92%) questionnaires were analyzed using descriptive, regression and path analysis. Table 1 shows the response rate towards the survey.

Table 1 Response Rate

Details	Total	Percentage (%)
Questionnaires distributed	130	100.00
Questionnaires returned	112	86.15
Questionnaire returned, yet incomplete	12	9.23
Questionnaires analyzed	100	76.92

Profile of Respondents

Descriptive statistics is used to explore and summarize the observations regarding the respondents and organizations participating in this study, as shown in Table 2.

Table 2 Profile of Respondents

Respondent Characteristic		Total	Percentage (%)
Sex	Male	76	76
	Female	24	24
Education	SPM/STPM*	15	15
	Diploma	40	40
	Degree	38	38
	Master	4	4
	Professional	3	3
Work Experience	≤ 5 years	4	4
	6 – 10 years	19	19
	11 – 15 years	54	54
	≥ 16 years	23	23
Duration of current post	≤ 5 years	52	52
	6 – 10 years	26	26
	11 – 15 years	16	16
	≥ 16 years	6	6
Organization Characteristic			
Ownership	Local	60	60
	Foreign	10	10
	Joint (local and foreign)	30	30
No. of workers	≤ 10 person	13	13
	11 – 20 person	44	44
	21 – 30 person	24	24
	31 – 40 person	17	17
	≥ 41 person	2	2
Annual Sale (RM)	≤ 10 million	3	3
	11 – 20 million	29	29
	21 – 30 million	44	44
	31 – 40 million	16	16
	≥ 41 million	8	8

SPM/STPM* - National level examination conducted by Ministry of Education

Based on Table 2, total of 76 respondents (79%) are male, while the remaining of 24 (24%) are female. Respondent's education background varies from SPM/STPM to the professional level. Most respondents (85 percent) have at least diploma education while only 15 percent have secondary level education as their highest education. Majority of the respondents (96 percent) have more than five years of work experience with 54 percent has between 11-15 years of experience. Almost half of the respondents have been holding their position for more than five years.

Most of the organizations (60 percent) participated in this study are locally owned. Another thirty percent is joint ownership organization, while only 10 percent is foreign owned. In terms of size, 44 percent of the organizations have between 11-20 employees and another 24 percent have between 21-30 employees. Only two percent have more than forty employees. Annual sales concentrates within the range of 11-40 million, with five percent records less than ten million of annual sales while another eight percent records more than forty million of annual sales.

6.1 Factor Analysis

Factor analysis test is done to ensure the authentication of the data. Ideally, factor analysis should be performed on all variables. Due to a limited sample size of 100 respondents, this study applied within-scale factor analysis (Flynn, Schroeder, & Sakakibara, 1995). This approach has been applied to examine predetermined factors from other studies (Kuei, Madu, Lin and Lu, 1997; Kuei and Madu, 2001). Five separate analysis was performed on SPM- financial and non-financial, job satisfaction, psychological empowerment, and managerial performance. The results show that Bartlett's test of sphericity is large and significant, and KMO measure is greater than 0.6. Therefore factorability is assumed. As the sample size is 100, this study is uses 0.55 factor loadings (Hair et al., 2006).

Table 3 Factor Analysis on Strategic Performance Measurement

N o	SPM	Factor Loading		
		1	2	3
5	Sales revenue	0.75		
2	Sales Growth	0.69		
1	Operating income	0.60		
3	Cash Flow	0.58		
4	Operating cost	0.57		
	KMO Measure of Sampling Adequacy			0.71
	Bartlett's Test of Sphericity		53.44	
	Significant			0.000
	Eigenvalues			2.04
	Total Variance Explained		40.76	
6	On time delivery	0.82		
7	Number of customer complaints	0.79		
5	Market share	0.75		
1	Customer response time	0.67		
14	Survey of customer satisfactory	0.65		
11	Accuracy of forecasting techniques		0.74	
9	Cycle time from order to delivery		0.73	

4	Percentage of defective products shipped	0.63
2	Capacity utilization	0.58
12	Productivity of one worker (in term of sales)	0.55
13	Time to market new product	0.87
10	Employee skills training	0.85
8	Rotation of workers	0.66
	KMO Measure of Sampling Adequacy	0.75
	Bartlett's Test of Sphericity	337.82
	Significant	0.000
	Eigenvalues	2.02
	Total Variance Explained	54.50

Table 3 shows the results of factor analysis on SPM which generates one factor for financial perspective with total variance of 40.76 and eigenvalues of 2.04. KMO Measure of Sampling Adequacy is 0.71 indicates that further analysis can be done as the KMO rate is greater than 0.5. Factor loadings for all financial items is greater than 0.55, hence all items under SPM- financial perspective are considered acceptable. The final result of factor analysis on items representing non-financial perspectives of SPM is shown in Table 4. Initially there are fourteen items, but the third item, labor efficiency variance was dropped as the factor loading is less than 0.55. Three factors emerged with the total variance of 54.50% and eigenvalues of 2.02. Most of the factors fall under similar dimensions as previous studies (Hoque et al., 2001; Chong and Solihin, 2005), which matches the three perspectives of BSC; (1) Customer satisfaction (2) Internal business processes, and (3) Learning and growth. Based on the factor loadings, thirteen items are applicable as their value is greater than 0.55.

Table 4 Factor Analysis on Job Satisfaction

Number	Job satisfaction	Factor Loadings
1.	Overall job satisfaction	0.70
7.	My colleague workers, overall	0.66
2.	My compensation (Salary)	0.60
6.	My supervisor, overall	0.60
5.	Company Policies	0.60
3.	Opportunities for advancement	0.59
4.	Job security	0.59
	KMO Measure of Sampling Adequacy	0.80
	Bartlett's Test of Sphericity	106.13
	Significant	0.000
	Eigenvalues	2.67
	Total Variance Explained	38.13

Based on the factor analysis on seven items representing job satisfaction, one factor emerged. Hence, all seven items are applicable in this study as it has factor loading value which is greater than 0.55.

Table 5 Factor Analysis Test on Psychological Empowerment

No	Psychological Empowerment	Factor Loadings	
		1	2
9.	I have considerable opportunities for independence and freedom in how I do my job		0.88
7.	I have significant autonomy in determining how I do my job		0.85
8.	I can decide on my own how to go about doing my work		0.82
6.	I have mastered the skills necessary for my job		0.57
1.	The work I do is very important to me		0.85
2.	My job activities are personally meaningful to me		0.82
3.	The work I do is meaningful to me		0.80
10.	The impact of my work on what happens in my work area is large		0.60
KMO Measure of Sampling Adequacy			0.82
Bartlett's Test of Sphericity			360.33
Significant			0.000
Eigenvalues			2.56
Total Variance Explained			66.70

Table 5 shows the final result of factor analysis test for twelve items related to psychological empowerment. Four items which have factor loadings less than 0.55 were removed. Two factors emerged with the total variance of 66.70% and eigenvalues is 2.56. As the result, the first dimension is called Meaning, while the second dimension is named Self-determination. All eight items are acceptable for further analysis as the factor loadings is greater than 0.55.

Table 6 Factor Analysis on Managerial Performance

No	Managerial performance	Factor loadings	
3.	Coordinating		0.73
2.	Investigating		0.71
4.	Evaluating		0.69
8.	Negotiating		0.68
5.	Supervising		0.66
1.	Planning		0.65
9.	Overall, how do you rate your performance		0.65
7.	Representing		0.61
6.	Staffing		0.55
KMO Measure of Sampling Adequacy			0.86
Bartlett's Test of Sphericity			251.83
Significant			0.000
Eigenvalues			3.95
Total Variance Explained			43.87

Factor analysis on nine items of managerial performance produced one factor as shown in Table 6. All items has factor loadings greater than 0.55, thus acceptable for further analysis.

6.2 Reliability Analysis

Following factor analysis, reliability test was performed on the data to determine the value of cronbach alpha. The instrument in this study is considered reliable if the value of cronbach alpha is greater than 0.6 (Nunnally, 1978). Table 7 shows the result of reliability test for each variable of this study. It shows that all variables are reliable as the value of cronbach alpha is greater than 0.60, ranging from 0.63 to 0.84.

Table 7 Reliability Test

Variable	No. of Item	Cronbach Alpha
V1) Strategic Performance Measurement (SPM)		
V1a) Financial	5	0.63
V1b) Customer Satisfaction	5	0.80
V1c) Internal Process	5	0.69
V1d) Learning and Growth	3	0.75
V2) Job Satisfaction	7	0.76
V3) Psychological Empowerment		
V3a) Meaning	4	0.82
V3b) Self-determination	4	0.83
V4) Performance	9	0.84

6.3 Path Analysis

Path analysis is used in studies to determine the indirect relationship between variables (Lau and Solihin, 2005). The first path analysis was performed to determine the relationship between SPM and managerial performance through job satisfaction. Figure 2 shows the path diagram for the relationship. As mentioned in the factor analysis earlier, SPM consists of financial, Customer satisfaction, Internal business processes, and Learning and growth. Beta coefficient values from the regression analysis are recorded in Figure 2.

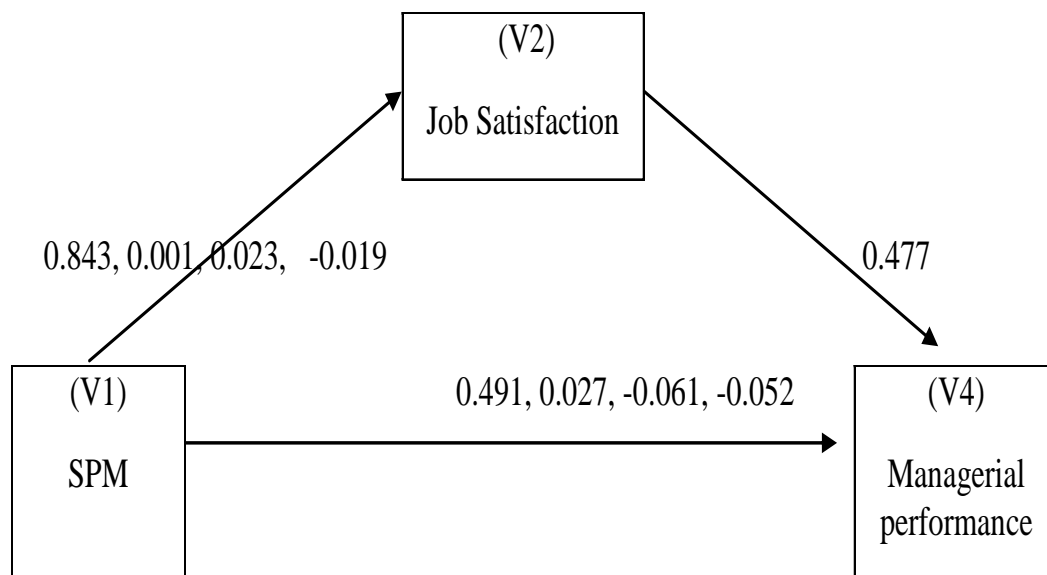


Figure 2 SPM and Managerial Performance through Job Satisfaction

The relationship has been tested using beta coefficient calculation as shown in Table 8, based on the beta coefficient value from Figure 2.

Table 8 Calculation of Analysis Path (Job Satisfaction)

Path (1)	V1a – V2 – V4	0.843 X 0.477	0.402
Path (2)	V1b – V2 – V4	0.001 X 0.477	0.001
Path (3)	V1c – V2 – V4	0.023 X 0.477	0.011
Path (4)	V1d – V2 – V4	-0.019 X 0.477	-0.009
Indirect impact			0.405

Table 8 shows the indirect effect value is 0.405, and considered significant, as it is greater than 0.05 (Bartol’s, 1983, p. 809). Therefore H1 is supported. The finding is consistent with the findings from the study done by Ittner et al. (2003), which stated that the higher the managerial performance emphasis on variety, the higher of job satisfaction and the performance. Studies by Hochwater et al. (1999); Mohr and Puck (2007) and Neely et al. (1996) also found that there is a positive relationship between SPM and managerial performance through job satisfaction.

The second path analysis was performed to determine the relationship between SPM and managerial performance through psychological empowerment. Figure 3 shows the path diagram for the relationship. As mentioned in the factor analysis earlier, SPM consists of financial, Customer satisfaction, Internal business processes, and Learning and growth while psychological empowerment consists of meaning and self determination. Beta coefficient values from the regression analysis are recorded in Figure 3.

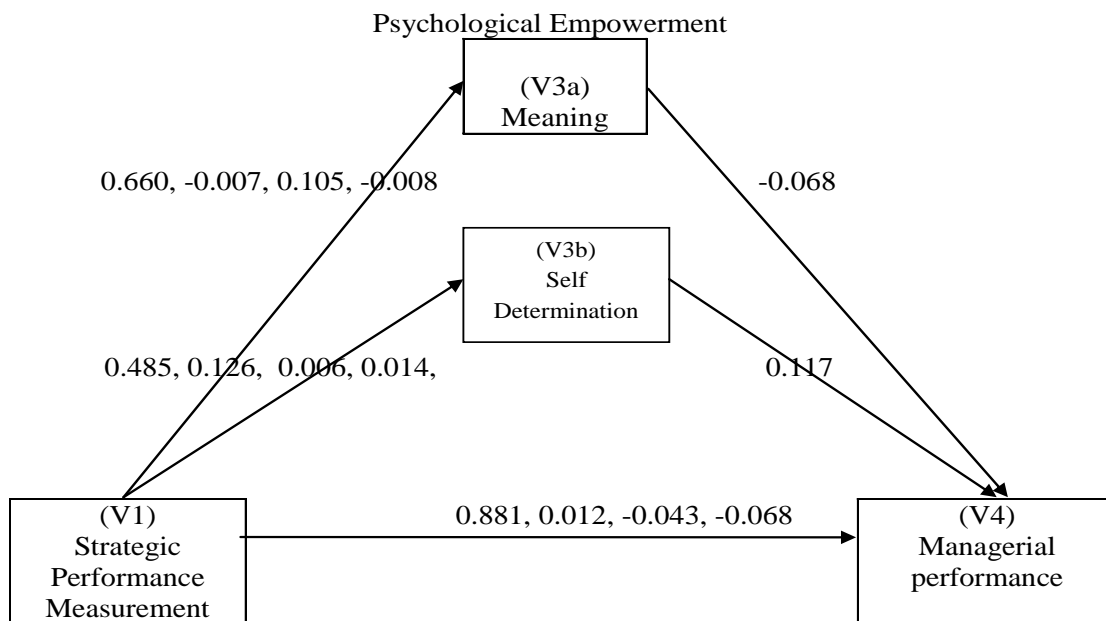


Figure 3 SPM and Managerial Performance through Psychological Empowerment

As discussed previously, psychological empowerment consists of two dimensions which are meaning and self-determination. The correlation has been tested using beta coefficient calculation as per table 9, based on beta coefficient values from Figure 3. Table 9 shows the indirect impact value -

0.050 for Psychological Empowerment (Meaning) and 0.075 for Psychological Empowerment (Self-Determination). Therefore H2a is not supported while H2b is supported. The findings support Hall (2008) which show that comprehensive PMS is related indirectly with managerial performance through psychological empowerment.

Table 9 Calculation of Path Analysis
Through Psychological Empowerment (Meaning)

Through Psychological Empowerment (Meaning)			
Path (1)	V1a – V3a – V4	0.660 X - 0.068	- 0.045
Path (2)	V1b – V3a – V4	-0.007 X - 0.068	0.001
Path (3)	V1c – V3a – V4	0.105 X - 0.068	- 0.007
Path (4)	V1d – V3a – V4	-0.008 X - 0.068	0.001
Indirect impact			- 0.050
Through Psychological Empowerment (Self-Determination)			
Path (1)	V1a – V3b – V4	0.485 X 0.117	0.057
Path (2)	V1a – V3b – V4	0.126 X 0.117	0.015
Path (3)	V1a – V3b – V4	0.006 X 0.117	0.001
Path (4)	V1a – V3b – V4	0.014 X 0.117	0.002
Indirect impact			0.075

7. Conclusion

The findings of this study show that in automotive industry, SPM has positive relationship with managerial performance through job satisfaction and psychological empowerment (self-determination). The study also shows that job satisfaction and psychological empowerment is the individual's internal factor that influences his motivation towards improving performance. Therefore it is recommended that all three factors (strategic performance measurement, psychological empowerment and job satisfaction) be given emphasis and be taken into consideration in designing and implementing PMS for automotive industry. This is to ensure the managers at sales branches and sales dealers of automotive industry show their best performance.

Several implications can be implied from the findings of this study. Firstly, the finding of this study is in conformity of the motivational theory that forms the framework of this study. Management of automotive company is suggested to ensure the SPM is applied in their organizations in order to increase managers' motivation. Consequently the highly motivated managers will be able to improve their job satisfaction and psychological empowerment. Secondly, the findings also provide additional empirical evidence on the influence of mediating variables on the relationship between SPM and managerial performance. Hence, the findings indicate that job satisfaction and in psychological empowerment (self-determination) are the mediating variables that influence the relationship between strategic performance measurement and managerial performance. Therefore, management level of automotive company need to emphasis on the job satisfaction and psychological empowerment to increase the managerial performance.

Limitations of the study include its limited sampling frame of managers of sales branches and sales dealers in automotive industry in Klang Valley area. Therefore, the findings from this study should not be generalized for other areas or different industries. Secondly, managerial performance is measured using questionnaires based on the perception of respondents towards own performance.

Although widely used and accepted in this area of study, the approach (self rating scale) is subject to a certain level of biasness. Future studies should explore other motivational factors, include various industries, and cover different areas. Usage of independent evaluation to measure managerial performance should also be considered.

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