

Organizational culture and performance of Malaysian manufacturing firms



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ABSTRACT

The purpose of this paper is to examine the effects of organizational culture on firm performance. Data for the study was collected through a survey of 223 companies registered with the Federation of Malaysian manufacturers. Responses were analyzed using PLS-SEM to assess the relationships between organizational culture and firm performance. The findings that amongst Malaysian manufacturers, organizational culture has a medium effect on firm performance. Helpful insights may be gleaned for organizations, particularly in the Malaysian manufacturing sector, which seek to introduce organizational culture in order to successfully increase competitiveness and responsiveness to environmental changes. Organizational culture has been studied in great detail in recent literature. Many new researchers have explored various composition factors of transformational leadership and how this will have an effect on firm performance. However, there is few research in the area of transformational leadership amongst Malaysian manufacturing companies. This research contributes to existing literature through empirical examination of the relationship between organizational culture and firm performance, particularly in the Malaysian manufacturing sector. The conclusions of this research strongly suggest that implementing means to encourage and foster organizational culture are likely to result in the achievement of superior firm performance. Our study shows inter-functional cooperation, openness and flexibility and the basic values of success are supported.

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1. Introduction

All organizations strive to improve firm performance. Organizational culture itself is an important driver for better firm performance (Morone, 1989; Porter, 1985; Stacey and Ashton, 1990). Prior research has indicated organizational culture plays a significant role in various parameters related to firm performance, e.g. job satisfaction and productivity. Innovation of organizational culture has positively impacted firm performance, which in turn improves national economy, industrial competitiveness and standards of living (Gopalakrishnan and Damanpour, 1997).

An organization's culture drives the behaviour and actions of an organization. Hence, it is a critical factor in a firm's operations (Chang and Lin, 2007). Organizational culture itself has been defined differently by different sources. It is most commonly

stated that the culture of an organization represents the type of activities which occur naturally within it, as per Lundy and Cowling (1996). More in-depth studies involving sociological and anthropological perspectives have suggested that organization culture be described as shared norms in terms of values, beliefs and behaviors, which serve as an insight into how an organization functions (Deshpande and Webster, 1989). Yet a different description of organizational culture is where it is portrayed as a sum of assumptions; assumptions which have had positive effects for the organization and then spread and adopted amongst its employees (Martins and Terblanche, 2003).

The importance of organizational culture can be attributed to its influence in achieving an organization's desired outcomes. Objectives such as innovation, productivity and financial performance can all be shaped by organizational culture, as it provides a solution to integrating and adapting an organization's members under a common culture, and thus improves the smooth operations of the firm (Blackwell, 2006; Furnham and Gunter, 1993).

Organizational culture can be classified into several categories (Blackwell, 2006; Martins and

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Terblanche, 2003; Schein, 1992). Some of the more commonly proposed categories are clan, hierarchy, adhocracy and market, and these categories segregate organizational culture through leadership styles, bonding, and the dominant attributes present as well as how the organization is strategically emphasized (Deshpande et al., 1993). In a clan culture, for example, dominant attributes would be participation and teamwork, whereas competitiveness and goal achievement would be the primary traits in a market culture. Market culture was found to have the most effect on organizational performance, with hierarchy the least (Deshpande et al., 1993). Culture can also be categorized under four cultures: group culture, developmental culture, hierarchical culture and rational culture (Quinn and Spreitzer, 1991), or four constructs: cooperativeness, innovativeness, consistency and effectiveness (Chang and Lin, 2007) as well as a division into bureaucratic, innovative and supportive (Wallach, 1993). Culture in this perspective could have a restrictive and a directive impact on the strategies of organizations.

Organizational culture involves the interaction of people in the workplace and how the basic assumptions, values, beliefs, and various philosophies as well as ideologies shape the workplace environment (Lund, 2003; Schein, 2009). It is pared down to the fundamentals by Deal and Kennedy (1982), who refer to organizational culture as the way things are done in the organization. Although the culture's core set of assumptions is created within the organization, it is further developed by influences from social and historical forces. Organizational culture begins from the top, with the leadership, before being strengthened and affirmed by the accumulated experiences from the members (Rashid et al., 2003), and in the process it influences how the members of an organization behave (O'Reilly, 1989). In an academic setting, a supportive institution can improve staff innovation and student academic achievement (Hofman et al., 2002). It is important to consider the various characteristics of organizational culture so that its members may participate in a common vision to build a greater sense of purpose (Zhu et al., 2009). This is supported by Denison and Mishra (1995), who identified a sense of mission as one of four cultural traits prominent in organizational culture.

While studying culture, we have encountered issues in dividing the ethnically diverse sample set in Malaysia, a country populated by Malays, Chinese, Indians as well as other races. Instead, we focused solely on organizational culture. This is in line with the Theory of Planned Behaviour where the area of planned behaviour is represented in our model by organizational culture that supports innovation.

The Malaysian Manufacturing sector has been a pillar of growth for Malaysia. From an agrarian community, during the 1970s, Malaysia has propelled its economic growth by focusing on building a manufacturing base. The Malaysian Government invited multi-national companies and

entrepreneurs by providing various incentives to manufacture products in Malaysia. The aim was to create employment and spur exports.

The Malaysian manufacturing sector has performed well between January and November 2014, demonstrating an increase in sales value by 6.1% to reach RM600.1 billion, while also showing an increase in employee number by 1.5% to 1,030,383 persons. In that same time, productivity increased by 4.6% to RM582,421, with the overall manufacturing index expanding at 5.9% over the previous year and growing by 3.7% in November 2014 in particular. Thus our aim in this study is to measure the effect of organizational culture on firm performance of Malaysian manufacturing firms.

2. Literature review and model development

2.1. Firm performance

Subjective measures adapted from Kellermanns and Eddleston (2006), were chosen to measure firm performance, as objective data of private firms are not easily obtainable. Kellermanns and Eddleston (2006) have demonstrated a high correlation of subjective measures of firm performance with objective performance data, indicating the reliability of their method. Four performance related questions referred to growth in sales, market share, number of employees, and profitability; and two performance related questions referred to profit margin on sales and ability to fund growth from profits. We can see that Kellermanns and Eddleston (2006) model on FP to be suitable because the measurements encompasses to top line performance, margins, profitability, market share, size of firm and ability to grow market share. Our model where we identify EO (Hughes and Morgan, 2007) on FP will find that the Kellermanns and Eddleston (2006) as a suitable performance measurement given the metrics measured by this performance measurement.

2.2. Organizational culture

It has been found that organizational culture has a significant relationship with FP. It has also been observed that the organization's innovation has acted positively as a moderator between organizational culture and FP. This has resulted in our choice on Hogan and Coote (2014) concept of an organizational culture that supports innovation. Hogan and Coote (2014) have proposed a set of organizational culture that supports innovation, where the qualities in organizational culture and organizational innovation were combined.

An organizational culture which successfully influences employee behaviour can be constructed by placing an emphasis on particular values, while reinforcing the corresponding norms for the desired behaviour (Tellis et al., 2009).

2.3. Research model

A recent study that is well cited in Google Scholar on organizational culture is [Hogan and Coote \(2014\)](#). They focused on organizational culture values that support innovation. The eight dimensions that were highlighted by [Hogan and Coote \(2014\)](#) are: basic values of success, openness and flexibility, internal communication, competence and professionalism, inter-functional co-operation, responsibility of employees, appreciation of employees and risk-taking. Our study has removed the dimension of risk-taking and responsibility of employees. The rationale for this is because this journal is part of a larger study which excludes the effects of risk-taking and responsibility of employees.

The first dimension is success. This value emphasizes the importance of achieving success in the firm, how important it is to ensure the firm has good governance, high level of encouragement to motivate employees to succeed, the importance of achieving high standards of performance and also, to ensure that employees know the importance of achieving the firm's goals for the survival of the firm.

The second dimension is openness and flexibility. This dimension highlights how open, flexible and responsive is the organization to change in the business dynamics, new ideas and how it is going to take advantage to come out ahead in the marketplace. Openness and flexibility aims to provide a safe workplace for employees to be creative, innovative and take responsibility on their work. The top management needs to be receptive to new ideas and to build processes where employees can try different things in a logical and safe manner while implementing these new ideas.

The third dimension is internal communication. Internal communication looks at how a firm communicates within itself internally. This organization culture upholds respect and trust within colleagues and management. The firm aims to create an environment where employees can communicate effectively and share ideas, which are important to be competitive in the workplace. Firms need to be able to have access to information and knowledge from the different levels of employees. This gathering of knowledge will help the firm to analyze and come up with better business ideas, strategies and processes that will allow the firm to leap ahead in the marketplace.

The fourth dimension is competence and professionalism. Competence and professionalism shows the prominence of having competent skills, knowledge and experience of the employees in performing the task-at-hand. Having and appropriate skills, knowledge and experience would allow the task-at-hand to be carried out properly. The employee will be able to provide feedback on the task and how to improve our approach, to either improve the efficiency on the product or come up with a new idea or strategy.

The fifth dimension is inter-functional cooperation. This organizational culture aims at

ensuring the coordination between different departments in a firm is successful although at times, this can be a complex challenge. The different departments need to ensure they are well coordinated in terms of timeline, communication between the relevant members are effective and miscommunication does not arise and conflict situations are properly resolved through a transparent process. Achieving inter-functional cooperation will allow a firm to be more likely successful in developing a new business process or a new product or service in the marketplace.

The sixth dimension is appreciation. Appreciation places values on how a firm outlines the key performance indicators of a firm, set market driven and appropriate reward mechanisms and then, when the employees achieve these goals, the firm will then reward them. It is important for this organization culture to be effective, the firm needs to quantitatively place the tangible results of the firm into the key performance indicator of the employees. Appreciation is an important component of organizational culture because it will ensure the employee is motivated in carrying out the other dimensions defined in this study. A motivated employee is likely to ensure that he achieves success in the firm, being open and flexible, communicate internally effectively, study and learn new skills to ensure he is competent and professional, coordinate properly with different departments, being responsible for their work and also, risk-taking with the aim of adding value to the firm.

The research model is shown in [Fig. 1](#) and the following hypotheses are developed for this study:

H1: Appreciation has a positive effect on Firm Performance

H2: Cooperation has a positive effect on Firm Performance

H3: Openness has a positive effect on Firm Performance

H4: Professionalism has a positive effect on Firm Performance

H5: Quality has a positive effect on Firm Performance

H6: Success has a positive effect on Firm Performance

3. Results and discussion

This study analyses its subjects at the organizational level. The respondents of the study hold managerial positions in companies under the umbrella of the Federation of Malaysian Manufacturers (FMM). The FMM is the largest private sector economic organization in Malaysia and represents over 3000 manufacturing and industrial service companies.

3.1. Data collection

All respondents are from the Malaysian manufacturing industry involved in a variety of

products from textile, electronics, wood products, spare parts, gloves and many other manufacturing industries. The feedback process where questionnaires were distributed and collected was three months long. Using google forms, 223 data points were collected from the respondents.

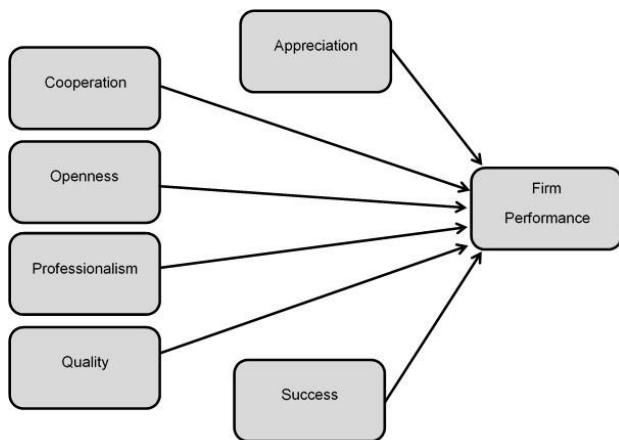


Fig. 1: Research model

3.2. Data analysis

Smart PLS version 3.0 was used to test the hypothesis generated. Smart PLS 3.0 is a variance-based structural equation modeling (SEM) software which handles both reflective and formative measures, and requires only a minimal sample size restriction (Chin, 1998; Ramayah et al., 2018) while generating estimations of sufficient statistical power (Reinartz et al., 2009). The two-step analytical procedure suggested by Anderson and Gerbing (1988) was used for the analysis. In the first step, the measurement model was evaluated in order to confirm its convergent and discriminant validity. After confirmation, the testing of the structural model follows. Bootstrapping procedure adopted Chin (1998) procedure involving 5000 resamples to determine the significant level of loadings, weight and path coefficients.

3.3. Measures and assessment of goodness of measure

The five-point Likert scale was used to gather independent variable data and dependent variable items. However, we have included other dependent variables in our survey which uses seven-point Likert scale. Common method variance can be avoided prior to data analysis using the five-point and seven-point Likert scale, as suggested by Podsakoff et al. (2003). The organizational culture that supports innovation is adopted and adapted from Hogan and Coote (2014). The independent variables from Hogan and Coote (2014) are basic values – success, openness and flexibility, quality of internal communication, competence and professionalism, inter-functional cooperation and appreciation of employees. The dependent variable

is firm performance which is measured using Kellermanns and Eddleston (2006). The dependent variables on firm performance are growth in sales, growth in market share, growth in number of employees, growth in profitability, return on equity, return on assets, profit margin on sales and ability to fund growth from profits.

3.4. Construct validity

Construct validity is performed by evaluating respective loading and cross-loading. According to Hair et al. (2010), the cut-off value for loading should be at minimum 0.5 for significance. Table 1 shows that construct validity is confirmed as all items measuring any particular construct loads highly on that construct compared to the other constructs.

3.5. Convergent validity

Convergent validity is assessed to determine the extent to which multiple items measuring the same concept are in agreement. Here, our assessment of convergent validity uses factor loadings, composite reliability (CR) and average variance extracted (AVE) as suggested by Hair et al. (2013) and the cut-off value for loading and AVE exceeded 0.5, while the CR should exceed 0.7.

Table 2 shows that the loading for all items are between 0.644 and 0.846, above the recommended value of 0.4 for exploratory and 0.7 by Hair et al. (2013). CR values in Table 2 range from 0.76 to 0.834, whereas AVE exceeds 0.5. All of the values recorded are above the cut-off values and indicate that the measurement model used has convergent validity.

The results in Table 2 indicate the measurement model was good and the six parameters of firm performance, appreciation, internal cooperation, openness, professionalism, quality and success serve as valid measures for the model. In order to avoid common method bias, a Harman single factor test was used, indicating that the first factor accounted for 31.9% of total variance of 54% and that there was no significant common method bias in the study.

3.6. Discriminant validity

Discriminant validity differentiates a construct from another construct. It can be measured by examining the cross-loadings of indicators or examining the correlations between potentially overlapping constructs. Table 1 affirms cross-loading validity by demonstrating all items have high loading on their respective constructs measured with lower loading on other constructs. Table 3 shows lower square correlations for each construct compared to the AVE when accounting for the indicators measuring constructs. This demonstrates that discriminant validity is sufficient for the measurement model.

3.7. Hypothesis testing

Six hypotheses were tested using path analysis. The results are depicted in Table 4. An R2 value of 0.462 was obtained, indicating that 46.2% of the variance observed can be explained by the

parameters laid forth. The results in Table 4 indicate three (H2, H3 and H6) out of six hypotheses were significant with a p-value of < 0.05. Beta-values for the significant hypotheses are 0.20 (H2), 0.17 (H3) and 0.16 (H6) while H1, H4 and H5 were not supported.

Table 1: Construct validity

	Performance	Appreciation	Cooperation	Openness	Professionalism	Quality	Success
FP1	0.702	0.363	0.404	0.374	0.382	0.347	0.391
FP4	0.721	0.393	0.422	0.45	0.482	0.423	0.406
FP6	0.776	0.373	0.429	0.447	0.374	0.393	0.46
FP8	0.682	0.356	0.413	0.431	0.376	0.404	0.429
OA1	0.276	0.644	0.335	0.478	0.456	0.451	0.424
OA2	0.443	0.757	0.406	0.418	0.376	0.312	0.411
OA3	0.361	0.746	0.473	0.456	0.486	0.440	0.444
OT1	0.422	0.378	0.721	0.432	0.427	0.448	0.414
OT2	0.424	0.526	0.731	0.551	0.561	0.531	0.576
OT3	0.440	0.357	0.769	0.433	0.388	0.462	0.424
OO1	0.517	0.527	0.520	0.843	0.531	0.567	0.569
OO2	0.45	0.503	0.539	0.758	0.550	0.541	0.563
OO3	0.434	0.431	0.454	0.771	0.478	0.516	0.514
OP1	0.484	0.428	0.485	0.457	0.805	0.513	0.539
OP2	0.400	0.473	0.429	0.516	0.72	0.444	0.556
OP3	0.38	0.468	0.49	0.532	0.741	0.548	0.481
OQ1	0.511	0.405	0.598	0.585	0.548	0.846	0.497
OQ2	0.384	0.442	0.428	0.471	0.496	0.721	0.461
OQ3	0.280	0.375	0.392	0.471	0.43	0.661	0.515
OS1	0.499	0.384	0.465	0.487	0.565	0.538	0.812
OS2	0.397	0.439	0.438	0.497	0.42	0.449	0.706
OS3	0.404	0.511	0.528	0.581	0.562	0.443	0.714

Table 2: Convergent validity

Construct	Item	Loading	CR	AVE
Firm Performance	FP1	0.702	0.812	0.52
	FP4	0.721		
	FP6	0.776		
	FP8	0.682		
Appreciation of Employees	OA1	0.644	0.760	0.514
	OA2	0.757		
	OA3	0.746		
Openness and Flexibility	OO1	0.843	0.834	0.627
	OO2	0.758		
	OO3	0.771		
Competence and Professionalism	OP1	0.805	0.800	0.572
	OP2	0.720		
	OP3	0.741		
Quality of Internal Communication	OQ1	0.846	0.789	0.557
	OQ2	0.721		
	OQ3	0.661		
Basic Values - Success	OS1	0.812	0.789	0.555
	OS2	0.706		
	OS3	0.714		
Inter-functional Cooperation	OT1	0.721	0.785	0.549
	OT2	0.731		
	OT3	0.769		

Table 3: Discriminant validity

	1	2	3	4	5	6	7
1. Performance	0.721						
2. Appreciation	0.515	0.717					
3. Internal Cooperation	0.579	0.566	0.741				
4. Openness	0.592	0.616	0.637	0.792			
5. Professionalism	0.561	0.598	0.618	0.656	0.756		
6. Quality	0.545	0.539	0.648	0.684	0.661	0.747	
7. Success	0.585	0.587	0.636	0.693	0.694	0.643	0.745

A blindfolding procedure was used to test predictive relevance (Q2) at an omission distance of 7 (Chin, 1998). Q2 was found to be 0.215, which indicates that the model has predictive relevance (Fornell, 1994; Hair et al. 2013). Cross-validated redundancy measures as displayed in Table 4 support the predictive relevance of the structural

model for this study. Furthermore, Table 4 indicates that the f2 for Organisational culture on openness, organisational culture on basic values of success and organisational culture on inter-functional cooperation have a small impact on firm performance.

The purpose of this study is to identify the determinant factors in organizational culture that affects firm performance. Our study shows inter-functional cooperation, openness and flexibility and the basic values of success are supported.

The significance of inter-functional cooperation in our study shows that involving staffs from different departments with different knowledge and skill sets facilitated through complex coordination, communication, information-sharing, cooperation and conflict resolution processes, influences the success of the company.

The dimension of openness and flexibility facilitated through creativity, empowerment and

change that are essential for the exploration that drives innovation. This subsequently encourages more open-mindedness, creativity and innovation in the brainstorming and implementation of solutions. Traditionally, such openness to experience has been conceptualized to include culture and intellect (McCrae and Costa Jr, 1997), and may also be defined as an individual's tendency to exhibit creativity and insight (John and Srivastava, 1999). Such staff would display flexible attitudes and are able to open themselves to new experiences to undergo change. They would also be able to exert autonomy and independent thought in their work.

Table 4: Hypothesis testing

Hypothesis	Relationship	Std Beta	Std Error	t-value	Decision	VIF	f ²	R ²	Q ²
H1	Appreciation→Performance	0.108	0.086	1.150	Not supported	1.907	0.010	0.462	0.215
H2	Cooperation→Performance	0.202	0.087	2.272	Supported	2.209	0.033		
H3	Openness→Performance	0.170	0.091	1.944	Supported	2.681	0.022		
H4	Professionalism→Performance	0.113	0.097	1.114	Not supported	2.517	0.009		
H5	Quality→Performance	0.068	0.103	0.654	Not supported	2.439	0.003		
H6	Success→Performance	0.159	0.089	1.812	Supported	2.604	0.020		

High openness in CEOs indicate greater appreciation for a cooperative team where its members work together to explore multiple options from different perspectives and viewpoints, allowing for a more thorough evaluation of the options available while challenging incumbent assumptions (Neuman et al., 1999; Schilpzand et al., 2011).

Staff with flexibility can undertake many diverse strategies to tackle correspondingly diverse obstacles beyond the firm's immediate needs (Wright and Snell, 1998). Such employees will also display better performance during high turbulence, which is characterized by high dynamism, complexity and uncertainty (Ansoff, 1965; Chakravarthy, 1997). Hence, staff behaviour which imply an individual drive for change, learning and risk-taking are good indicators of better individual performance under turbulence.

The significance on the basic values of success means raising the performance expectations of employees, creating psychological ownership of organizational goals, enhances intrinsic motivation and feelings of self-efficacy, increases employees' motivations to find novel solutions to organizational problems.

4. Conclusion

Our findings reveal that involving staffs from different departments may require additional efforts from the company but it actually resulted in better firm performance. Supportive management helps create a collaborative work environment, which is another critical success factor. A collaborative work environment promotes the active flow of information and empowers the employees. In addition, a collaborative work environment facilitates the employees' adjustments to the new

system. Change is vital especially in the volatile business environment of the day, in particular organizational change, which should be undertaken continuously (Osterwalder and Pigneur, 2010; Shin et al., 2012).

Cross-functional coordination may be beneficial by enhancing the organization's ability to handle complexity and enhanced responsiveness (Holland et al., 2000), but it can also be disrupted by obstacles such as conflicting organizational goals and lack of cooperation (Wall and Lepsinger, 1994), rendering it both difficult and inefficient (Galbraith, 1994; Kahn and Mentzer, 1998). Subsequently, this difficulty may lead to inefficient decision-making and increased failure in the development of new products as well as resource conflicts (Cuijpers et al., 2011; Troy et al., 2008). Firms may find it more difficult to make and execute decisions based on information processing and prioritization of tasks due to rapid flow of information from various parts of the organization (Eppler and Mengis, 2004). In order to enhance cross-functional coordination, various integrating mechanisms have been devised, ranging from redesigning compensation systems to changing workplace architecture.

Our study is limited by the behaviour of employees. Understandably, with the advent of new technology and artificial intelligence, there is a trend towards automation in the Malaysian manufacturing sector. Systems and machines are replacing the work done in the manufacturing facilities across Malaysia. The automation of the manufacturing sector can have far-reaching effects in the manufacturing sector. The Malaysian manufacturing sector covers a wide range of industries. The automation trend will affect the different sectors differently. The automation of this sector can affect the significance of the impact of our study on firm performance.

Information technology strengthens the effectiveness of critical success factors (Carr, 2003; Abdolvand et al., 2008). Successful BPR results in efficient business processes and can be ensured by reducing the time and cost of the processes (Hammer and Champy, 1993).

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