

MARKET ORIENTATION IN THE SHANGHAI AUTOMOTIVE INDUSTRY: AN EXPLORATORY STUDY

Xiaoyuan PAN^a and Leonie HALLO^b

บทคัดย่อ

งานวิจัยนี้ศึกษาว่าบริษัทสามารถพัฒนาการเน้นตลาดผู้บริโภคเป็นสำคัญ (MO) เพื่อพัฒนาปรับปรุงการดำเนินงานธุรกิจ (BP) ในอุตสาหกรรมยานยนต์ที่นครเซี่ยงไฮ้ซึ่งดำเนินการในช่วงที่เศรษฐกิจกำลังเจริญเติบโตได้หรือไม่ และพบว่าบริษัทต่าง ๆ ในอุตสาหกรรมยานยนต์ในนครเซี่ยงไฮ้สามารถปรับใช้การเน้นตลาดผู้บริโภคเป็นสำคัญ ในระดับต่าง ๆ ได้ โดยส่วนใหญ่ใช้ในระดับกลางหรือต่ำกว่าระดับกลางเพื่อวัดผลการดำเนินงานธุรกิจ งานวิจัยนี้ใช้การวัดทั้งแบบอัตนัยและปรนัย และข้อค้นพบของงานวิจัยชี้ให้เห็นว่าการเน้นตลาดผู้บริโภคเป็นสำคัญเกี่ยวข้องกับการดำเนินงานธุรกิจในเชิงบวกโดยการวัดแบบอัตนัย และบริษัทที่มีระดับของการเน้นตลาดผู้บริโภคเป็นสำคัญสูงก็จะมีระดับการดำเนินงานธุรกิจสูงด้วยเช่นกัน อย่างไรก็ตามถ้ามีการใช้การวัดแบบปรนัยผลที่ออกมาจะผสมกันโดยมีนัยสำคัญในเชิงบวกเกี่ยวกับความเกี่ยวข้องระหว่างการเน้นตลาดผู้บริโภคเป็นสำคัญ และรายได้ต่อปีต่อพนักงานและผลตอบแทนสินทรัพย์รวม แต่มีความเกี่ยวข้องในเชิงบวกที่อ่อนกว่าระหว่างการเน้นตลาดผู้บริโภคเป็นสำคัญ และการขายประจำปีต่อพนักงานและไม่มีความสัมพันธ์ระหว่างการเน้นตลาดผู้บริโภคเป็นสำคัญ และผลตอบแทนตราสารทุน

Abstract

This paper focuses on whether companies can develop market orientation (MO) to improve business performance (BP) in the Shanghai automotive industry, operating in an emerging economy, and finds that companies within the Shanghai automotive industry do adopt a MO at different levels, with most companies at or below the middle level. In order to measure BP, this research employs both subjective and objective measures, and the research findings indicate that MO is positively correlated with BP by a subjective mea-

^aDr. Xiaoyuan PAN holds a DBA from the University of South Australia, Australia. Currently he is working as a Vice President of Donghua Automotive Industrial Company in Nanjing China. He is a senior engineer.

^bDr Leonie Hallo holds a PhD in Psychology (Gold Star Award) from the University of Adelaide. Currently, she is working as a Senior Adjunct Research Fellow in the International Graduate School of Business, University of South Australia.

sure, and that companies with a higher degree of MO are more likely to display higher levels of BP. However, if objective measures are used, the results are mixed. There is a significant positive association between MO and annual profit per employee and return on total assets, a weak positive association between MO and annual sales per employee, and no relationship between MO and return on equity.

INTRODUCTION

Market orientation (MO) is an organizational culture in which all employees are committed to the continuous creation of superior value for customers through three behavioral components; customer orientation, competitor orientation and inter - functional coordination (Narver & Slater 1990; Slater & Narver 1995). MO, which has been considered a fundamental concept in modern marketing, is a major research stream developed in strategic marketing since the mid-90s.

MO has been positively linked with firm BP in early works (Kohli & Jaworski 1990), and these findings have been confirmed as being robust in meta-analyses (Kirca, Jayachandran & Bearden 2005; Shoham, Rose & Kropp 2005). However the nature of the relationship is not always clear-cut (O'Sullivan & Butler 2009) and appears to relate to both cultural and sector factors. The relationship between MO and BP has been demonstrated to be stronger for manufacturing firms than for service firms and using subjective measures rather than objective measures of performance.

Studies on MO have addressed both the degree and the forms of MO and their impact on performance. Most have been based on empirical evidence obtained in developed economies, including USA, UK, Germany, Australia, New Zealand, Hong

Kong, and Japan. However, the association of market orientation with business performances and company competitiveness in the rapidly changing environment of an emerging economy is starting to receive attention in the marketing literature. The impact of cultural values on the MO - BP relationship has also been investigated and in particular, several studies have focused on transitional economies or developing countries, including China.

Since 1978, there has been a transition from a centrally planned economy to a free market economy in China. This process of transition has required fundamental changes in the behaviour of companies. The managers of state owned enterprises have been required to change their traditional priorities from fulfilling centrally planned tasks to identifying the appropriate target markets and developing products that meet consumers' needs. Since China entered the WTO in 2001, the Chinese economy has played a rapidly increasing part in the global economy, and Chinese companies are increasing their MO.

Sin, Tse, Chow & Lee (2005) examined levels of MO and the link with BP in firms in Hong Kong and China. Their study showed that the US approach based on the model of Narver & Slater (1990) did generalise to both Hong Kong and China and they established a link with BP. The levels of MO in China were not notably differ-

ent from those in Hong Kong. They cited as an explanation the Chinese government's encouragement of mergers in large state owned enterprises (SOEs), resulting in larger corporations which tend to be more market oriented. Alternatively the lack of difference between China and Hong Kong on MO may be due to increasingly competitive pressures and increased managerial autonomy during the time of reform. MO was found to have a stronger relationship with performance in Hong Kong than in China in this study □

Liu, Luo & Shi (2003) investigated the link between level of MO and BP in Chinese SOEs in both manufacturing and services and also found a significant link. They reported that SOEs had adopted market oriented and learning oriented strategies, using subjective measures. They also found a positive correlation between MO, entrepreneurship and learning orientation. The authors suggest the need to use other market performance measures such as sales turnover, market share, and return on investment.

Tang & Tang (2003) explored the applicability of MO in its various forms to China. Their research indicated that MO is practised at different levels in China, including comprehensive, competitive-focused and underdeveloped types. Using subjective measures of business performance, the three types of MO practised were differentially associated with performance indicators and, in particular, the competitor-focused grouping achieved the highest performance scores in three of four subjective business performance areas. Further, market environment factors were different across the various forms of MO. However, as the authors

noted, the reliance upon self-reported subjective measures of market orientation presents only a partial view. Objective performance measures, however, can be difficult to obtain. Tang and Tang's research was conducted largely within SOEs.

Qu & Ennew (2005) looked at the antecedents of MO in two service sectors using an interview approach and identified several barriers to the development of MO including government regulation, ownership structure and resource availability.

Bathgate, Omar, Nwanko & Zhang (2006) investigated MO in the Chinese manufacturing sector and found that 40% of the organisations surveyed were low scoring in MO, 53% were medium scoring and just under 7% scored in the high range on MO using the MARKOR scale. They comment that at that time China was still undergoing a transition from a rigid planned economy to a consumer driven economy and that the marketing concept was still in the process of development. They comment that ... there are still some uncertainties about the value of market orientation in organisations even at senior management levels despite the wide-ranging economic liberalisation process currently underway in China. (p 4).

Li, Sun & Liu (2006) also examined MO & BP in Chinese SOEs and again demonstrated the link. Their study builds on institutional theory in the context of the transitions occurring in the Chinese economy as autonomy is transferred from the government to SOEs. They investigated competitive pressures, government interference, and formalised corporate governance as well as the relationship with performance using subjective measures. They comment ... the most

effective improvement in cost and quality may lie in developing a strong market orientation in order to build a sustainable competitive advantage, which will lead in turn to superior performance. (p108) They cite their focus on SOEs as a limitation.

The current research focuses upon the automotive industry in Shanghai. Automotive production in China has increased dramatically over the last few years. Domestic sales rose to 13.6 million vehicles in 2009 and auto sales are expected to exceed 20 million units in 2011 (China Automotive Review, 2010) and China has recently broken the dominance of the US market: in 2009 China surpassed the US in the car and van market. Car ownership is soaring in the major cities including Shanghai. Marcus Chao, the President of Lean Enterprise China, (cited in Snyder, 2009) commented: "Rising personal income is making cars affordable for more Chinese, who crave the prestige of a car but seek value for their money". Automotive export continues to grow and grew 75% in the first seven months of 2010 to nearly 290,000 units. Much of China's recent economic stimulus package was spent on infrastructure to cope with this growing automotive capacity: "As incomes rise, new car prices plummet, and the government adds new roadways... to prevent gridlock, the Shanghai city government auctions a limited number of new car licence plates each month. Even with these restrictions, the number of gas guzzling vehicles on Chinese roads is multiplying so fast it poses a grave threat to the environment ..." ('Dream Machines' 2005) but traffic congestion is still in the news. The press has recently reported a 10 day traffic jam outside of Beijing which stretched for 100 km

(Oster, 2010). While massive growth in the Chinese auto industry is clear, how to extract maximum profit from this opportunity is a relevant question for individual automotive manufacturers. Shanghai is the largest industry city in China, and its automotive industry is the largest in China. The automotive industry is a premier industry in Shanghai. Adopting a MO is very important to the automotive industry. No published study to date has examined MO systematically in the Chinese automotive industry.

The purpose of this research was to determine the levels and forms of MO in the Shanghai auto industry and the relationship of MO and BP in an emerging economy.

RESEARCH HYPOTHESES AND METHODOLOGY

This paper tests the hypothesis that MO is positively associated with business performance within the selected setting.

Measures of Market Orientation

Tang and Tang (2003) employed the MKTOR measure in the context of Chinese industry and established its suitability for use in China. Thus Narver and Slater's conceptualization was adopted for this study. The MO measures they used contain 14 items relating to the three behavioral components, namely: customer orientation (6 items), competitor orientation (4 items), and inter-functional coordination (4 items) (see Appendix 1). These MKTOR components have been exactly replicated in this study. Responses to each of these 14 items were

recorded by using a 7-point scale, with 1 indicating a respondent's company does not carry out this practice at all, and 7 indicating a respondent's company carries out this practice to a very great extent.

Measures of Business Performance

In this study, BP measures include both subjective and objective measures in order to estimate business performance in different ways. Subjective measures are based on managers' self-assessment of their company's BP, including the manager's response indicating how they compare their company's average new product success (BP1), average annual sales growth (BP2), average return on investment (BP3) and market share (BP4) to that of their largest competitor in their key market over the previous three years. The objective measures used are financial measures including sales revenue per employee (BP5), profit per employee (BP6), return on total assets (BP7), and return on equity (BP8), based on the firms' Annual Reports. These measures can remove the effects of the size of company, number of employees, and company assets. Thus there are two hypotheses:

H1: Market orientation is positively associated with business performance assessed by subjective measures.

H2: Market orientation is positively associated with business performance assessed by objective measures.

DATA COLLECTION AND METHOD OF ANALYSIS

The questionnaire contains three parts. The first part deals with the general infor-

mation of the company; ownership, number of employees, products and so on. The second part concerns MO. The third part contains questions about BP.

A survey of 250 firms from Shanghai was conducted using a mail survey to general managers. Of the total 250 surveys distributed, 95 useable ones were collected, achieving an effective response rate of 38 per cent. Such response rates are considered comparable with both previous studies on MO (Slater & Narver 1995) and management research in China (Luo & Tan, 1998).

Data were analyzed using SPSS (Statistics Package for Social Science) for Windows. Cluster analysis was adopted to test whether MO has different forms in the Shanghai auto industry. In order to confirm the relationship among MO and BP, correlation analysis was undertaken.

RESULTS

Forms of MO

Cluster analysis was performed on the basis of the set of MO variables. A hierarchical cluster analysis was performed, due to limited sample size (Hair et al, 1995) using the factor scores as inputs (Greenley, 1995). This resulted in a five-cluster solution, based on the largest increases in both number and percentage of the clustering (agglomeration) coefficients. Its robustness was confirmed by a subsequent discriminant analysis. The five clusters are presented below and Table 1 presents the frequencies.

Cluster 1 *Underdeveloped Market*

Table 1: Numbers and Percentages of Each Cluster

		Number	Percent
Total		95	100%
Cluster 1	Underdeveloped market orientation	11	11.58%
Cluster 2	Fragmented orientation	12	12.63%
Cluster 3	Focus on interfunctional coordination	57	60.00%
Cluster 4	Competitor and customer focused orientation	6	6.32%
Cluster 5	Comprehensive market orientation	9	9.47%

Orientation (C1) There are 11 companies in this cluster, all having underdeveloped MO, as companies in this cluster scored poorly across all MO items, with the mean scores of all 14 MO items being the lowest among all the clusters. The mean scores of the items ranged from 1.55 to 2.91, while one item, “Customer satisfaction is frequently and systematically measured” achieved a mean score of only 1.55.

Cluster 2 Fragmented orientation (C2) The 12 companies in this cluster had the second lowest mean scores of MO among all the clusters. The mean scores of the items ranged from 2.33 to 3.83. While the item “Business objectives are driven by customer satisfaction” scored the highest in this cluster’s profile, most items scored second lowest among the five clusters.

Cluster 3 Focus on inter-functional coordination (C3) More than half of the companies fall into a cluster with a focus on inter-functional coordination. Cluster 3 contained 57 companies. The mean scores of the items ranged from 2.45 to 5.26. The mean scores of inter-functional coordination items are higher than those of other items, and even higher than one item of Cluster 4.

Cluster 4 Competitor and customer focused orientation (C4) Although there are only 6 companies in this cluster, it is retained as its profile of scores represents a

different type of market orientation. The mean scores of the items ranged from 3.24 to 6.48. The mean scores of competitor and customer orientation items are higher than those of inter-functional coordination.

Cluster 5 Comprehensive market orientation (C5) The 9 companies in this cluster have a well-developed and balanced market orientation, as the means in all three sub-orientations are high. All of the individual 14 MO items achieved the highest scores among all of the clusters.

The mean scores of the MO items within each cluster clearly indicate that the companies in different clusters focus on different MO items. Thus, the five-cluster solution also makes practical sense. The mean item scores rise increasingly from C1 to C5 except for some exceptions between C3 and C4 and the inter-functional coordination sub scale. Thus the findings demonstrate that the overall importance of MO increases from C1 to C5. In terms of the total market orientation scale, the scores are 2.38, 3.20, 4.25, 4.95, and 5.87 from clusters 1 to 5, showing that the companies of the Shanghai automotive industry surveyed in this research do adopt a market orientation to some degree. However a minority of companies (just under 16%) score at the top two levels, while 60% of companies score at the middle level.

Table 2: The Business Performances of Different Clusters

		C1	C2	C3	C4	C5
BP By Subjective measures	BP1	1.36	1.75	2.18	2.67	2.22
	BP2	1.09	1.42	2.12	2.50	2.22
	BP3	1.09	1.33	2.21	2.67	2.44
	BP4	1.09	1.67	2.25	3.00	2.56
BP By Objective measures	BP5	12	48	256	147	738
	BP6	-10	1	19	28	37
	BP7	-31	10	12	22	19
	BP8	-81	17	154	32	37

Business Performances in Different Clusters

Table 2 presents the mean scores of business performances in the different clusters. Cluster 1 (Underdeveloped market orientation) has the lowest scores of Business Performances on both subjective and objective measures. Cluster 2 (Fragmented orientation) has the second lowest scores of business performances on both subjective and objective measures. Cluster 4 (Competitor and customer focused orientation) has the highest scoring business performances in terms of subjective measures and Cluster 5 (Comprehensive market orientation) has high scores of business performances on both subjective and objective measures. However the highest scores on Annual profit per employee (BP6) and Return on total equity (BP8) are achieved by Cluster 3 (Focus on inter-functional coordination).

The Relationship Between Market Orientation and Business Performances

Pearson Correlation was used in order to analyze the relationship. There is a positive association between MO and market

performance using all four subjective measures and H1, that market orientation is positively associated with business performance assessed by subjective measures, is therefore supported. In terms of objective measures, there is a strong significant positive association between MO and annual profit per employee and return on total assets, a weaker positive association between MO and annual sales per employee, and no relationship between MO and return on equity. These results partly support H2, that market orientation is positively associated with business performance using objective measures.

The Relationships Between Subjective and Objective Measures of Business Performance

There are some different findings when using subjective and objective measures relating to hypotheses 1 and 2, and it is therefore necessary to examine the relationship between the two types of measure of business performance.

The four subjective measures are strongly correlated with each other. However, the findings are mixed in terms of objective measures. While annual profit per

employee is correlated with all of the subjective measures, the correlations of the other three objective measures with the subjective performance measures are not significant. The correlations between the other three objective measures are small and not significant.

CONCLUSIONS

Findings from this sample clearly show that companies operating in the Shanghai automotive industry of China do practise market orientation. In addition, by having different levels of emphasis on different MO dimensions, these companies practise different forms of MO, including underdeveloped, fragmented, focus on inter functional coordination, competitor and customer focused, and comprehensive market orientation.

According to the subjective and objective measures, different forms of MO do have different business performances and there are indications here for improving the level of MO.

Another interesting conclusion from this study is that MO is strongly and positively correlated with BP assessed by subjective measures, and companies with higher levels of development of MO are more likely to display higher levels of business performance than companies with less developed MO. However, using objective measures, the result is mixed. There is a significant positive association between MO and annual profit per employee and return on total assets, a weak positive association between MO and annual sales per employee, and no relation-

ship between MO and return on equity. This is a new discovery emerging from this work. In summary, even in an emerging economy with a turbulent environment, companies need to develop market orientation in order to improve their business performances.

REFERENCES

- China Automotive Review*, (2010), viewed 13 November 2010. < <http://www.chinaautoreview.com> >
- "Dream machines" (2005), *Economist*, vol. 375, no. 8429, pp. 24-26.
- Kirca, AH, Jayachandran, S & Bearden, WO (2005), "Market Orientation: A Meta-Analytic Review and Assessment of Its Antecedents and Impact on Performance", *Journal of Marketing*, vol. 69, no. 2, pp. 24-41.
- Kohli, AK & Jaworski, BJ (1990), "Market Orientation: The Construct, Research Propositions, and Managerial Implications", *The Journal of Marketing*, vol. 54, no. 2, pp. 1-18.
- Li, Y, Sun, Y & Liu, Y (2006), "An empirical study of SOEs' market orientation in transitional China", *Asia Pacific Journal of Management*, vol. 23, no. 1, pp. 93-113.
- Liu, SS, Luo, X & Shi, Y-Z (2003), "Market-oriented organizations in an emerging economy: A study of missing links", *Journal of Business Research*, vol. 56, no. 6, p. 481.
- Narver, JC & Slater, SF (1990), "The effect of a market orientation on business profitability", *Journal of Marketing*, vol. 54, no. 4, pp. 20-35.
- O'Sullivan, D & Butler, P (2009), "Mar-

- ket orientation and enterprise policy”, *European Journal of Marketing*, vol. 43, no. 11/12, pp. 1349-1364.
- Qu, R & Ennew, CT (2005), “Developing a Market Orientation in a Transitional Economy: The Role of Government Regulation and Ownership Structure”, *Journal of Public Policy & Marketing*, vol. 24, no. 1, Spring 2005, pp. 82-89.
- Shoham, A, Rose, G & Kropp, F (2005), “Market orientation and performance: a meta-analysis”, *Marketing Intelligence & Planning*, vol. 23, no. 5, pp. 435-454.
- Slater, SF & Narver, JC (1995), “Market orientation and the learning organization”, *Journal of Marketing*, vol. 59, no. 3, p. 63.

Appendix 1: Mean Scores of MO for Each Cluster

Cluster	1	2	3	4	5
Items of MO					
1. Business objectives are driven by customer satisfaction (MO1)	2.45	3.83	5.26	6.48	6.78
2. The commitment to serving customers' needs is monitored (MO2)	2.64	3.08	4.39	5.84	6.11
3. Competitive advantage strategy is based on customers needs (MO3)	2.27	3.17	4.37	4.96	5.56
4. Strategies are driven by beliefs about creating customer value (MO4)	2.45	2.92	3.39	4.88	5.67
5. Customer satisfaction is frequently and systematically measured (MO5)	1.55	2.33	2.45	3.24	5.89
6. Close attention is given to after-sales services (MO6)	2.91	3.75	4.61	4.48	5.89
Customer orientation sub scale	2.38	3.18	4.08	4.98	5.98
7. Salespeople in the company share information on competitors' strategies (MO7)	2.27	3.25	3.39	5.20	5.33
8. Company takes rapid response to competitors' actions (MO8)	2.09	3.00	3.61	4.64	5.78
9. Top managers regularly discuss competitors' strengths and weaknesses (MO9)	2.36	3.50	4.03	4.96	6.11
10. Company targets its customers with its competitive advantages (MO10)	2.73	3.33	3.95	5.24	6.22
Competitors' orientation sub scale	2.36	3.27	3.75	5.01	5.86
11. Top functional managers regularly visit their customers (MO11)	2.91	3.25	5.16	4.96	5.78
12. Inter-departmental communication of information about customer experience (MO12)	2.45	3.42	5.05	4.72	5.56
13. Business functions are integrated to serve our target market needs (MO13)	2.36	2.92	4.82	5.12	6.00
14. Managers understand how everyone can contribute to creating customer value (MO14)	1.91	3.08	5.00	4.56	5.44
Inter-functional coordination sub scale	2.41	3.17	5.01	4.84	5.70
Total market orientation scale	2.38	3.20	4.25	4.95	5.87