

SURVIVAL IN TURBULENT TIMES: AN EXPLORATORY STUDY ON THE CONTRIBUTION OF MARKETING INNOVATION

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Abstract

As an outcome of the economic crisis, the global manufacturing sector is collapsing. Focusing on Chinese manufacturing small and medium enterprises (SMEs), this study investigates whether marketing innovation, defined as improvements in the marketing mix, can assist in withstanding the challenges of operating under the current economic conditions. A conceptual model linking market orientation, marketing innovation, competitive advantage and firm survival is tested using both structural equation modelling and logistic regression. Three key findings are derived. First, the examined Chinese manufacturing SMEs had a greater likelihood of survival had they developed and sustained a competitive advantage. Second, marketing innovation assisted in developing and sustaining competitive advantages based on differentiation and cost leadership strategies. Third, marketing innovation capabilities improved when the examined manufacturing SMEs were competitor oriented and had good inter-functional capabilities.

Keywords: Innovation, Marketing Orientation, China, SMEs

1. INTRODUCTION

Worldwide, the manufacturing sector is in crisis. In the fourth quarter of 2008, industrial production fell by 3.6% in the US, 4.4% in the UK, 4.7% in Australia, 6.8% in Germany, 12% in Japan and 21.7% in Taiwan (The Economist, 2009a; Saulwick, 2009). The lack of global demand – not just for manufacturing outputs, but for everything – is largely to be blamed for the current state of affairs (The Economist, 2009a).

Like business everywhere else, business in China is also being engulfed by the challenges of the current crisis. The popular business press abounds with anecdotes of the massive layoffs currently taking place in many of China's industrial cities, resulting in a reverse flow of migrants back to the rural provinces. Amidst this doom and gloom picture, the frailty of Chinese manufacturers is, however, not universal. There are some Chinese companies such as Lenovo Group and Haier which are faring much better than their manufacturing counterparts (The Economist, 2009b). There is no doubt that these companies are also suffering from the challenges of the current economic landscape, but their turmoil tend to be more transient, having a greater ability to withstand the global economic crisis. So the question arises as to what distinguishes these manufacturers from their less successful counterparts who are being subjected to a more severe battering.

It has been postulated that what distinguishes the former group of companies from the latter is their capacity to innovate; innovate not necessarily in the radical sense but most likely in the incremental way (The Boston Consulting Group, 2009). Radical innovation refers to major changes in technology/knowledge that stem from the

discovery of something new. Incremental innovations, on the other hand, are major advances to an established technology/knowledge. Incremental innovation can occur three ways: (1) process innovation resulting in an improved production and/or delivery method, (2) organisational innovation resulting in the implementation of a new organisational method improving business practices, work place organisation or external relations, (3) marketing innovation involving improvements in product design, placement, promotion or pricing (OECD, 2005).

Marketing innovation is often the less costly of these three broad categories of incremental innovation. It often provides quick fix innovative solutions emphasizing low-risk product modifications, extensions and design changes (Bennett and Cooper, 1979, 1981). For cash-strapped manufacturers operating in the grips of the current economic crisis (often, but not always, small and medium enterprises), marketing innovation is generally the only plausible strategy (given its relative affordability) available to attempt reversing the flow of declining sales. Intuitively, the theoretical logic of marketing innovation makes sense: endeavour to increase sales by shifting consumer demand from elastic to more inelastic market segments by delivering better value (actual or perceived) to the consumer. It is difficult to refute this position when global demand for manufactured goods is rapidly declining and manufacturers need to hastily reinvent the demand functions of their products if they are to ensure their short to medium-term survival in the current economic landscape.

However, one cannot stop to wonder whether in practice, demand functions can actually be shifted through marketing at a time when consumer demand is at an all time low. In other words, can marketing innovation really assist manufacturers to

manage and survive the current economic crisis? This is the question that the current study addresses by grounding itself in the Chinese manufacturing context.

This study, a work-in-progress, aims to make five important contributions. First, in examining the Chinese manufacturing sector, this paper is primarily interested in small and medium enterprises (SMEs). It, therefore, extends the China specific academic business literature that has largely focused on medium to large enterprises, often state-owned or administered as joint ventures with foreign partners. The importance of SMEs in the Chinese context has mostly been neglected (Siu and Liu, 2005) in spite of them playing an important role to China's economy (The Bureau of SMEs, 1999; Wang and Yao, 2002). The focus of this study is, therefore, a step to contribute to the literature on Chinese SMEs.

Second, while innovation as a driver of performance has been well established in the literature (e.g. Butler, 1988, Lengnick-Hall, 1992; Porter and Stern, 2001), marketing innovation as a determinant of performance has received less scrutiny (Han, Kim and Srivastava, 1998; Hurley and Hult, 1998; Lukas and Ferrell, 2000). This study adds to the marketing innovation literature. Grounded in the resource-based view of strategy and organisational capability theory, this study views marketing innovation as a key resource and capability that manufacturing SMEs can use to manage their environment, perform and even survive in tough economic times (Grewal and Tansuhaj, 2001).

Third, although marketing innovation has been the subject of sparse scrutiny in the academic business literature, it is closely aligned to the better researched construct of

marketing orientation (Grewal and Tansuhaj, 2001). Marketing orientation is about understanding and satisfying customers and other relevant stakeholders. With a primary objective of innovation being the development of new or modified products/processes aimed at improving organisational performance and with superior performance inherently dependent on understanding and satisfying customer needs better than one's competitors, marketing orientation and innovation are intrinsically linked constructs (Hauser, Tellis and Griffin, 2006). The basic hypothesis of the marketing orientation literature attributes a positive relationship between the marketing orientation construct and performance. However, a few scholars have inferred innovation as a moderating variable between marketing orientation and performance (e.g. Deshpandé, Farley and Wedster, 1993; Hurley and Hult, 1998; Jaworski and Kohli, 1996). These studies conceptualise innovation as the actual mechanism that transforms marketing orientation into superior performance. While both theoretically sound and empirically proven (e.g. Hurley and Hult, 1998), studies examining the "marketing orientation-innovation-performance" link are scarce in the extant academic business literature. The third contribution of this study is, therefore, to extend the extant literature by examining how marketing orientation allows firms to improve their marketing innovation capability and in turn, perform better.

Fourth, a key interest of this study is to examine the "marketing orientation-innovation-performance" relationship in the context of the current economic crisis. Crises that pose a threat to the vitality of a firm have been extensively researched from different perspectives in the extant academic literature: psychology (e.g. Halpern, 1989), social polity (Weick, 1988), technological structure (Pauchant and Douville, 1994) among others. Marketing orientation has also been previously

researched in the context of crises (e.g. Deshpandé and Farley, 2004; Grewal and Tansuhaj, 2001). This current study adds to the latter body of knowledge.

Last but not least, given the specific interest of this study in the Chinese organisational context, a fourth contribution of this paper is to extend the extant enquiry on marketing orientation which has primarily focused on the North American and Western Europe environment (Grewal and Tansuhaj, 2001).

2. LITERATURE REVIEW

As stipulated above, although marketing innovation has been the subject of sparse scrutiny in the academic business literature, it is closely aligned to the better researched construct of marketing orientation. Marketing orientation is a central focus of modern marketing concepts and has received wide attention from both academic scholars and practitioners. It is, however, still subject to varying definition and requires further investigation, especially in international contexts (Dalgic, 1994; Racela, Chaikittisilpa and Thoumrungroje, 2007). Market orientation is about understanding and satisfying customers and other relevant stakeholders (Day, 1994; Narver and Slater, 1990).

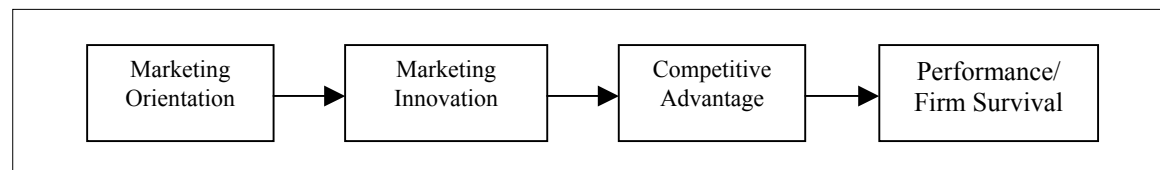
Kohli and Jaworski (1990) and Narver and Slater (1990) are two seminal studies on marketing orientation. The former was among the first studies to develop a conceptual framework, including antecedents and consequences of the market orientation construct. The latter, was empirically based and developed a measure of marketing orientation. In 1993, two further significant studies reinforced this literature. The first, by Jaworski and Kohli (1993), expanded on their 1990 study to develop a more

comprehensive framework of market orientation. The second, by Kohli, Jaworski and Kumar (1993) extended the empirical literature on marketing orientation through the publication of the MARKOR scale. These four articles are the research foundations of a large body of literature that can be grouped in two major strands; a behavioural and a cultural perspective. The former perspective, builds on the work of Kohli and Jaworski (1990:6) and views marketing orientation as a behavioural response to the competitive operational dynamics that an organisation faces. The cultural perspective of marketing orientation builds on the work of Narver and Slater (1990:21), which defines marketing orientation as “the organization culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and thus superior performance for the business”. In this paper, the cultural conceptualisation of marketing orientation is adopted on the basis that culture has the potential to influence behaviours (Raap, Schillewaert and Hao, 2008). Similar to previous studies, marketing orientation is, therefore, defined in terms of an organisation’s customer orientation, competitor orientation and its inter-functional coordination.

As highlighted above, the basic hypothesis of the marketing orientation literature attributes a positive relationship between the marketing orientation construct and performance. Recently, previous research has suggested that this relationship is, however, moderated by innovation in that marketing orientation drives innovation which in turn influences performance. This paper extends this debate by suggesting that the link between innovation and performance is mediated by the ability of the firm to develop and sustain a competitive advantage. This theoretical position constitutes the point of departure of this paper. Figure 1 highlights the theoretical

framework adopted in this study. The framework posits three main links: (i) in order to exhibit marketing innovation capabilities, a firm needs to adapt a marketing orientation approach (ii) marketing innovation capabilities help to develop and sustain a competitive advantage and (iii) a competitive advantage allows a firm to better perform and survive in an economic crisis. Each construct in the model is elaborated in the next section. In the interest of space, the antecedents of marketing orientation are not addressed in this study. Several factors influencing marketing orientation have been examined in the current academic business literature. These include top management teams, risk aversion, internal operational dynamics among others (Jaworski and Kohli, 1993). Readers interested in this literature should refer to Kirca, Jayachandran and Bearden (2005) for a recent review.

Figure 1: Conceptual Model



3. HYPOTHESES DEVELOPMENT

3.1 Marketing Orientation- Marketing Innovation link

Organisational capability theory, views the firm as a set of input-output combinations, whereby co-ordinated resources are central to organisational performance (Nelson and Winter, 1982). The focus of the organisational capability perspective is, in essence, based on co-ordinating the intangible resources of the organisation, rather than on the traditional factors of capital and labour as determinants of output. This notion of organisational capability theory has gained in prominence under the resource-based view of strategy (Wernerfelt, 1984; Barney, 1991), in which resources, if valuable,

rare, inimitable and non-transferable, are viewed as sources of competitive advantage. Organisational capability theory views the firm's capability in managing these valuable, rare, inimitable and non-transferable resources as an organisation's value creator. Organisational capability theory, therefore, takes a dynamic focus, by analysing the firm-specific interactive processes that convert resources into value-creating assets (Amit and Shoemaker, 1993). With this more dynamic focus, organisational capability theory goes beyond the resource-based view, and analyses the means by which firms amass and dissipate new capabilities and the forces that limit the rate and direction of this process. One of these capabilities that has been linked to organisational performance in the scholarly literature is marketing orientation. Day (1994) for example, outlines how marketing orientation enhances performance by providing organisations a superior ability to understand, attract and retain customers. In fact, most of the literature on marketing orientation demonstrates a positive and direct relationship with performance (e.g. Narver and Slater, 1990; Ruekert, 1992; Slater and Narver, 1994). However, despite the conceptual soundness of the role of marketing orientation on performance, it is important to note that other studies have also found no significant relationship (e.g. Diamantopoulos and Hart, 1993) or mixed results (e.g. Jaworski and Kohli, 1993) between the two constructs. Han et al (1998) suggest that innovation as a missing link between marketing orientation and organisational performance might help to address these irregularities in the empirical literature. Similarly, Slater and Narver (1994) highlight that marketing orientation leads organisations to adopt an external focus and commitment to innovation, which in turn allows them to achieve and sustain superior performance. Deshpandé et al (1993) further suggest that marketing orientation might facilitate innovation en route to organisational performance. Zaltman, Duncan and Helbek,

(1973) suggest that there are two stages of innovation: initiation and implementation. A critical element of the initiation stage is the openness and willingness to innovate (Hurley and Hult, 1998). With marketing orientation representing organisation-wide responsiveness to market information (Kohli and Jaworski, 1990), Jaworski and Kohli (1996) suggest that marketing orientation is an antecedent to innovation. Marketing orientation can thus be advanced as a critical part of the initiation stage of innovation (Hurley and Hult, 1998). Therefore, building on extant literature, it is hypothesized that:

H1: The marketing orientation of a small-to-medium manufacturer is positively related to its marketing innovation capability.

3.2 Marketing Innovation-Competitive Advantage link

Innovation can be an important source of competitive advantage en route to superior performance. Schumpeter (1950) was among the first to have suggested that innovation helps firms to sustain the value of their asset endowment which otherwise would be eroded under economic dynamics that tend to relentlessly converge towards perfect competition. More recently, this thinking has been picked up by strategy theorists who argue under the resource-based view and organisational capability perspective, that asset endowments are valuable in providing a source of competitive advantage only if they are idiosyncratic to the firm and non-transferable outside the firm (Amit and Schoemaker, 1993). It is the firm's ability to develop and sustain these strategic asset endowments which provide them with a source of competitive advantage. Strategic assets, however, remain sources of competitive advantage as long as they cannot be replicated (Dierickx and Cool, 1989). Innovation is one such mechanism for firms to ensure that strategic assets are hard to imitate. Innovation brings an element of change to extant asset endowments and if successful, results in valuable new resource combinations that competitors will find difficult to imitate

quickly. This difficulty is enhanced not only by the idiosyncratic nature of the created new resource but also through the path-dependent nature of resource accumulation (Nelson and Winter, 1982). This means that an element of time is introduced before competitors can match the new resource combination. Consequently, as long as innovation is ongoing, leading to the “flows” of resources adding to the “stock” of strategic assets (Dierickx and Cool, 1989), a firm should be able to retain a source of sustainable competitive advantage subject to the desired outcome of the innovation being achieved (Chakravarthy, 1997). Thus, building on extant literature, it is hypothesised that:

H2: The marketing innovation capability of a small-to-medium manufacturer is positively related to its competitive advantage.

3.3 Competitive Advantage-Performance (Firm Survival) link

The link between developing/sustaining a competitive advantage and superior performance has well been established in the literature (e.g. Porter, 1980; Barney, 1997; Grant 1998). From a focus on superior performance in the form of monopoly rents (Caves and Porter 1977; Porter 1980) to Ricardian rents resulting from idiosyncratic firm-specific resources (Wernerfelt, 1984) to Schumpeterian rents attributed to the dynamic capability of firms in renewing advantages over time (Winter, 1987; Teece, Pisano and Shuen, 1997), the hypothesis of competitive advantage as a determinant of superior performance dominates strategic management research (Powell, 2001). Building on the strength of this research stream, a positive relationship between competitive advantage and performance is also hypothesized in this study. Performance as highlighted above is defined in the context of this study as survival from the current economic crisis.

H3: The competitive advantage of a small-to-medium manufacturer is positively related to its survival.

4. METHODOLOGY

In this study, a survey methodology was used to collect data. A series of measures were developed from the current extant academic business literature and adapted to fit the current study (see Appendix A). These constructs were pretested through both exploratory qualitative interviews (N=5) and survey pretests (N=15). With this study also taking place within the Chinese context, the questionnaire was translated from the original English version to Mandarin Chinese and back-translated to ensure that the original meaning was maintained. The finalised survey was then distributed to a randomly developed sampling frame of export-oriented manufacturing SMEs generated from a database provided by a professional market research agency. Following Zheng, Morrison and O'Neil (2006), SMEs in the Chinese context, were defined as firms with less than 500 employees and with a turnover of less than or equal to RMB Yuan 5 million (US\$500,000). A total of 1000 questionnaires were distributed to small-to-medium manufacturers in Beijing (245), Shanghai (215), Xian (102), Tianjin (92), Suzhou (84), Wuhan (82), Wenzhou (76), Chongqing (68), and Dalian (36). 184 completed usable questionnaires were obtained representing an 18.4% response rate. The surveys, conducted on the basis of confidentiality were distributed between November 2008 and February 2009, a period that saw a sudden collapse of the Chinese manufacturing sector as a result of the current economic crisis. Table 1 below provides an overview of the SMEs that participated in this study.

Table 1: Characteristics of Respondents

Characteristic	Category	%
Industry categories	Consumer manufacturing firms	63
	Industrial manufacturing firms	37
Employment size	1 - 9	12
	10 - 49	34
	50 - 99	28
	100 - 199	22
	200 - 499	4

Turnover	Under RMB100,000	9
	RMB100,001 – 500,000	21
	RMB500,001 – 1,000,000	33
	RMB1,000,001 – 3,000,000	32
	RMB3,000,001 – 5,000,000	5
Age	Under 5 years	3
	Between 6 – 10 years	22
	Between 11 – 20 years	32
	Between 21 – 50 years	22
	Between 51 – 100 years	19
	Greater than 101 years	2

4.1 Measurements

The survey items used in this study, were based on a nine-point Likert scale format.

Wherever possible, multi-item measures were developed to help reduce measurement errors associated with single-item measures. Both exploratory factor and reliability analyses were conducted to identify and refine the constructs used for data analysis.

Marketing orientation was measured from the scale developed by Narver and Slater (1990) and adopted the following components as the basis of measurement: customer orientation (eight items), competitor orientation (eight items) and inter-functional coordination (eight items). Following Han et al (1998), a component-wise approach individually investigating each of the three components of marketing orientation was used for analysis purposes. Similar to Han et al (1998), confirmatory factor analysis indicated that while a combined marketing orientation construct provided reasonable fit indices, a three-factor measure provided a better fit to the data¹.

¹ Confirmatory factor analysis revealed the following fit indices for the one factor structure of market orientation: goodness-of-fit (GFI) = 0.86, adjusted goodness-of-fit (AGFI) = 0.82, $\chi^2 = 127.23$ ($p < 0.05$) and the root mean square residual (RMSR) = 0.073. For the three-factor structure of market orientation, the following fit indices were obtained: GFI = 0.92, AGFI = 0.86, $\chi^2 = 92.09$ ($p > 0.05$) and RMSR = 0.067.

The *marketing innovation* (7 items) scale was adapted from Hurley and Hult (1998). The *competitive advantage* scale used in this study is based on Porter's (1980) three generic strategies: differentiation, cost leadership and focus. A differentiation strategy involves developing and sustaining a market position that is perceived as being unique. With a cost leadership strategy, firms aim to minimise relative costs (and therefore maximise profitability) through benchmarking against competing firms. A focus strategy involves serving a narrowly defined market segment and outperforming competing firms that are operating more broadly. The measures of differentiation (4 items), cost leadership (5 items) and focus (4 items) competitive advantages were developed based on Frambach, Prabhu and Verhallen (2003). Since firms can either adopt one competitive strategy over another or simultaneously pursue a combination of competitive strategies (e.g. Campbell-Hunt, 2000; Frambach et al, 2003), conceptually I treat the three generic strategies of differentiation, cost leadership and focus as complementary rather than mutually exclusive. Thus, a respondent firm may score equally high (or low) on all the three generic strategies. Similarly, the respondents firms might also choose one generic strategy over another. Last but not least, *survival* (4 items) was measured using a perceptual construct. This measure was not based from previous studies. It was rather informed from the interviews conducted during the pre-testing of this study.

In total, 48 indicators are presented in the proposed research model (see Appendix A). Exploratory factor analysis with varimax rotation was performed to establish validity in the constructs used. Standardized factor loadings of greater than 0.5 were used for creating factors and the recommended cut-off of .70 (Nunally, 1978) was employed for Cronbach alphas (see table 2 and 3).

Table 2: Means, Standard Deviations and Standardized Loadings

Construct	Indicators	Mean^a	Standard Deviation	Standardized Factor Loading
Customer Orientation (n = 184)	CUSOR1	4.23	0.93	0.73
	CUSOR2	4.79	1.46	0.52
	CUSOR3	5.17	2.47	0.67
	CUSOR4	6.72	1.54	0.53
	CUSOR5	3.71	2.61	0.43
	CUSOR6	6.79	3.42	0.69
	CUSOR7	6.13	1.46	0.76
	CUSOR8	2.72	2.01	0.39
Competitor Orientation (n = 184)	COMOR1	5.89	1.24	0.74
	COMOR2	6.81	2.43	0.82
	COMOR3	3.74	2.46	0.41
	COMOR4	6.49	1.52	0.76
	COMOR5	3.99	1.99	0.28
	COMOR6	4.68	1.64	0.86
	COMOR7	2.98	2.61	0.33
	COMOR8	5.96	2.67	0.79
Inter-functional coordination (n = 184)	INTFUNC1	6.76	1.46	0.62
	INTFUNC2	7.21	3.42	0.73
	INTFUNC3	6.43	2.46	0.59
	INTFUNC4	6.22	2.81	0.55
	INTFUNC5	5.97	2.49	0.72
	INTFUNC6	4.67	1.56	0.77
	INTFUNC7	5.61	1.47	0.68
	INTFUNC8	3.89	2.94	0.45
Marketing Innovation (n = 184)	MKTGINNV1	6.46	2.41	0.71
	MKTGINNV2	6.97	1.63	0.69
	MKTGINNV3	7.38	1.74	0.58
	MKTGINNV4	6.92	1.33	0.63
	MKTGINNV5	5.76	2.49	0.62
	MKTGINNV6	5.94	1.46	0.59
	MKTGINNV7	6.83	2.74	0.67
Competitive Advantage (Differentiation) (n = 143)	DIFF1	5.94	2.35	0.72
	DIFF2	7.62	2.13	0.81
	DIFF3	6.19	1.49	0.69
	DIFF4	6.49	2.13	0.63
Competitive Advantage (Cost leadership) (n = 172)	COST1	5.49	2.14	0.63
	COST2	6.72	2.36	0.76
	COST3	6.94	2.65	0.85
	COST4	8.21	1.49	0.71
	COST5	7.48	1.46	0.62
Competitive Advantage (Focus) (n = 61)	FOCUS1	6.46	1.43	0.82
	FOCUS2	8.04	2.49	0.76
	FOCUS3	6.09	2.43	0.71
	FOCUS4	5.97	2.22	0.69
Firm Survival (n = 184)	SURVIVE1	5.03	1.46	0.66
	SURVIVE2	4.95	1.47	0.63
	SURVIVE3	4.86	1.41	0.76
	SURVIVE4	4.76	0.56	0.56

^a Negatively worded items were reverse-coded for the calculation of means

Table 3: Correlation Matrix, Means and Standard Deviations

Measure	Alpha	Mean	Std. Dev	1	2	3	4	5	6	7	8
1. Customer Orientation	0.76	5.23	1.24	-							
2. Competitor Orientation	0.79	6.72	2.31	0.43***	-						
3. Inter-functional Coordination	0.83	7.21	2.06	0.21*	0.25**	-					
4. Marketing Innovation	0.83	5.24	1.96	0.24**	0.27**	0.31**	-				
5. Differentiation Comp. Advantage	0.76	6.89	2.47	0.38**	0.24**	-0.12	0.19*	-			
6. Cost Leadership Comp. Advantage	0.84	6.76	1.95	-0.42**	0.18*	0.32**	0.24**	0.43**	-		
7. Focus Comp. Advantage	0.75	8.16	2.68	0.23**	0.32**	-0.10	0.10	0.16*	0.24**	-	
8. Survival	0.68	5.73	1.49	0.42**	0.43***	0.46**	0.37**	0.39**	0.43**	0.31**	-

Notes: Negatively worded items were reverse-coded for the calculation of means; * $p < .05$, ** $p < .01$, *** $p < .001$

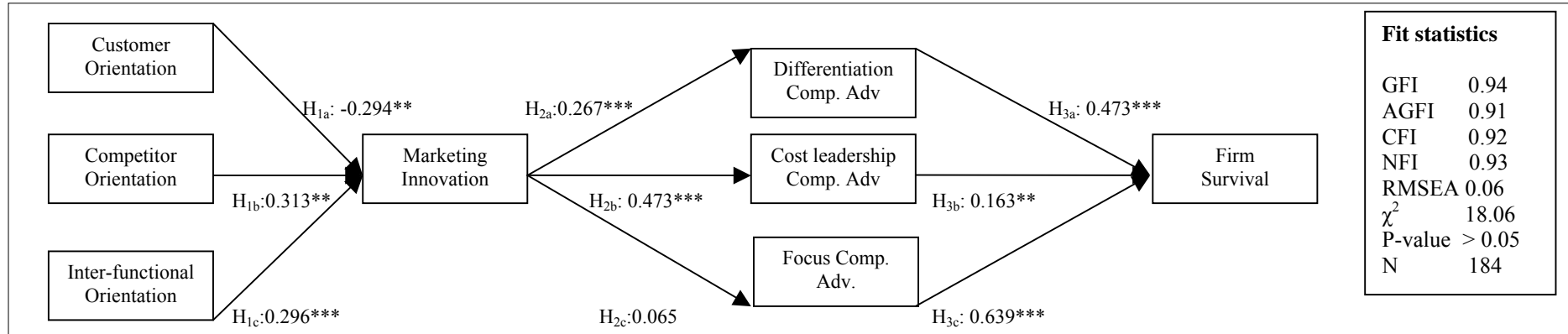
4.2 Model Specification and Estimation

Using the SAS system's CALIS procedure, structural equation modelling performed with maximum likelihood estimation was applied to assess the hypothesized model. Figure 2 as an extension of the conceptual model advanced in figure 1 above, shows the path diagram that was empirically tested. Overall, the tested model outlined in figure 2 provided a good fit to the data. Residual terms and modification indices were also reviewed and revealed no problematic issues.

Consistent with the literature, the tested hypotheses received strong empirical support to the exception of H_{1a} and H_{2c} . To investigate whether the obtained results hold true regardless of age, size of the firm and industrial category (i.e. whether industrial or consumer manufacturing), the data was dissected across these descriptor variables and the path model re-run. The obtained results were similar to the overall aggregate path model and are, therefore, not reported further.

In addition, with the measure of the survival dependent construct being a perceptual one in the path model, a post hoc analysis using logistic regression was used to test

the sensitivity of the results outlined in figure 2. With the surveys conducted on the basis of confidentiality, it was possible to track down which SMEs had actually survived the sudden collapse of the Chinese manufacturing sector rather than relying on a perceptual measure of survival. Therefore, a dummy variable was also employed to measure the dependent variable coding 1 for survival ($n = 98$) and 0 for non survival ($n = 86$). Table 4 shows the results from the logistic regression. To account for the different components of marketing orientation and the three generic competitive advantages, table 4 shows the findings for both reduced and full models. It is worth noting that in using logistic regression as a post-hoc analysis, the aim is not to examine the sequencing of the constructs examined in the path model outlined in figure 2, but rather to get a general idea of the extent to which the hypothesized individual constructs contribute to the probability of firm survival. A significant finding for the individual hypothesized constructs in the logistic regression reinforces confidence in using these respective hypothesized constructs in a path model that is largely theoretically driven and based on a subjective measure of survival. Overall, the explanatory powers of the logistic regressions indicated good fit as evidenced by the model chi-square statistics. The findings were complimentary to those obtained from structural equation modelling, with all hypothesized constructs significant (at least $p < 0.05$). Age, size of the SME and industrial categories as control variables were not found to be significant indicating that the proposed relationship between marketing orientation, marketing innovation, competitive advantage and firm survival holds true regardless of these three demographic descriptors. From the complimentary findings obtained from the logistic regression, it can thus be inferred that the findings of the path analysis outlined in figure 2 are fairly robust. In the next section, the implications of these findings are discussed.

Figure 2: Path Model Results (Standardized coefficients shown)

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4: Results of Logistic Regression (Dependent Variable: *Survival*; N=184)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Intercept	1.246 (3.28)***	1.463 (4.21)***	1.933 (3.45)***	2.453 (4.56)***	1.317 (3.92)***	1.539 (4.63)***	1.398 (3.79)***	1.953 (2.97)**	1.859 (3.51)**	2.453 (2.96)**
Customer Orientation	-1.034 (1.46)*	-0.958 (0.05)	-2.456 (1.69)*	-	-	-	-	-	-	-1.933 (1.15)*
Competitor Orientation	-	-	-	1.945 (3.26)***	1.357 (2.97)***	1.739 (2.14)**	-	-	-	1.639 (2.99)***
Inter-functional Orientation	-	-	-	-	-	-	1.698 (2.09)**	1.337 (2.53)***	1.440 (2.28)**	1.236 (2.49)**
Marketing Innovation	1.346 (3.47)***	1.476 (3.61)***	1.329 (2.35)**	1.045 (3.96)***	1.375 (2.46)**	1.212 (2.963)**	1.738 (2.79)***	1.822 (2.39)***	1.753 (2.11)***	1.823 (3.21)***

Differential Comp. Adv	1.026 (2.31)**	-	-	1.396 (2.95)**	-	-	1.987 (2.59)**	-	-	2.158 (2.37)***
Cost leadership Comp. Adv	-	1.832 (4.36)***	-	-	1.239 (3.43)***	-	-	1.926 (2.33)**	-	1.921 (2.33)***
Focus Comp. Adv	-	-	1.936 (2.53)**	-	-	1.397 (3.32)***	-	-	1.224 (3.27)***	1.337 (3.31)***
Control variables:										
Age	- 0.158 (0.84)	0.132 (1.23)	1.302 (0.13)	0.953 (0.05)	0.296 (0.93)	0.139 (1.13)	0.235 (1.11)	- 0.139 (0.09)	0.310 (0.05)	0.217 (0.19)
Size (Employment)	0.243 (1.45)	- 0.149 (0.62)	1.210 (0.53)	0.321 (1.39)	0.131 (0.53)	0.539 (0.27)	0.136 (0.09)	0.153 (1.09)	0.394 (1.44)	0.314 (1.53)
Industrial category dummy (consumer manufacturing =1; consumer manufacturing = 0)	0.131 (0.93)	0.214 (1.42)	0.419 (0.13)	0.731 (0.49)	- 0.931 (0.32)	0.132 (0.27)	0.453 (0.33)	0.297 (0.44)	0.312 (0.28)	- 0.835 (0.56)
Model Statistics:										
χ^2 (df)	21.96*** (7)	22.56*** (7)	22.13*** (7)	21.83*** (7)	20.45*** (7)	23.79*** (7)	22.63*** (7)	20.31*** (7)	22.17*** (7)	28.43*** (11)
-2 Log Likelihood	182.63	181.29	182.17	181.77	183.15	180.86	181.09	183.24	182.04	177.32

Notes: (1) Other than for df under "Model Statistics", the numbers in parentheses are t-ratios,

(2) Two-tail probabilities are reported for t-tests

(3) * p< .05, ** p< .01, *** p< .001

5. PRELIMINARY FINDINGS AND DISCUSSIONS

H_{1a}, which hypothesizes a positive relationship between customer orientation as a component of marketing orientation and marketing innovation is not supported. Customer orientation relates to a proactive disposition to providing superior customer value by meeting customers' needs and wants. As these needs and wants evolve over time, a focus on customer satisfaction, therefore, advocates continuous innovation (Peters, 1984). Although significant, the negative sign associated with the findings for H_{1a}, however, contradict this position. The findings suggest, opposite to the market orientation literature, that customer orientation deters marketing innovation. While this finding is counter-intuitive, previous studies such as Christensen and Bower (1996) lend support to the argument that customer orientation may deter innovation. The latter suggest that customers are likely to be content with the status quo rather than seek new innovative products. They argue that customers often have a self-guided interest in ensuring that companies do not disrupt incumbent products through innovation. By nature of the phenomena, disruptive products lead to customers having to discard old products as well as retrain in the adoption of the new disruptive products. Furthermore, innovative products run the risk of being abandoned by vendors if they do not attract a critical mass of the incumbent market. This leads to increased uncertainty from the customers' perspective, as vendors might discard the product lines of innovative, non-established products, resulting in the unavailability of crucial upgrades, maintenance and spare parts (Bhidé, 2006). New innovative products can also result in "backward compatibility" problems with the incumbent technology, such that customers might "be left stranded" (Bhidé, 2006: 12). This liability of newness leads customers to often be conservative in their adoption of new innovative products (Christensen and Bower, 1996). Thus, it can be advanced that the

more customer oriented firms are, the more customers will be communicating the “status quo” message to them. Thus customer oriented firms are less likely to develop innovative ideas and activities given their perceived lack of a market for new innovative products. From this logic, Christensen and Bower (1996) advance a negative relationship between customer orientation and innovation. This argument is also shared by others such as Bennett and Cooper (1979, 1981), Chandy and Tellis (1998) and Tauber (1974). It is to be noted, however, that these previous studies all focus on the negative relationship between customer orientation and radical innovation rather than incremental innovation. In fact, most of these studies seem to postulate that customer orientation seem to lead to incremental marketing innovation as opposed to radical innovation. This study’s findings add to the literature by suggesting that customer orientation might not even lead to incremental marketing innovation. It is conjectured that the same argument of liability of newness that has been postulated with respect to radical innovation might also hold true for incremental marketing innovation. Customers might not want a product with minor (and possibly cosmetic) improvements driven through changes in the marketing mix, if the costs of adoption would outweigh the benefits of these improvements. This results in a lack of a market even for incremental innovation which are less disruptive than radical innovation. Furthermore, it is also conjectured that given the specific Chinese context of this study and the fact that a large number of manufacturers in China are often contracted ones (i.e. part of a manufacturing value chain), they might have less of an ability to innovate by being customer oriented. Given their roles as suppliers within the value chain, Chinese manufacturers are more likely to take and fulfil orders rather than adopt a customer oriented approach in identifying, qualifying and quantifying

customers' needs and wants as part of the product conception and development process.

H_{1b} with respect to the relationship between competitor orientation and marketing innovation is supported. Competitor orientation relates to a firm's ability to identify, sustain and improve its strengths (and minimise weaknesses) relative to other competitors. As hypothesized, this finding would suggest that in adopting a competitor oriented culture, Chinese manufacturing SMEs are more likely to undertake marketing innovation. In other words, a competitor-oriented culture facilitates marketing innovation.

H_{1c} with respect to inter-functional coordination is also supported. Inter-functional coordination relates to the firm's ability to implement a coordinated effort among various functions in being responsive to customer needs and wants. As hypothesized, this finding would suggest that Chinese manufacturing SMEs who have a greater likelihood of coordinating their activities across various functions are more likely to be able to respond to markets' exigencies through marketing innovation activities. This ability to respond is likely to come from the openness in communication that inter-functional coordination facilitates within an organization (Ruekert and Walker, 1987; Zaltman et al , 1973).

H_{2a} with respect to the relationship between marketing innovation and differentiation competitive advantage is supported. As hypothesized, this finding would suggest that marketing innovation can help Chinese manufacturing SMEs develop a competitive advantage on the basis of differentiation. Similarly, H_{2b} was supported suggesting that

marketing innovation capabilities can also help Chinese manufacturing SMEs develop a cost leadership based competitive advantage. H_{2c}, on the other hand, was not supported indicating that marketing innovation capabilities might not assist Chinese manufacturing SMEs develop a focus based competitive advantage. It is conjectured that by nature of its strategy, a focus based competitive advantage which only services a narrowly defined market segment, might put less emphasis on marketing innovation which emphasises improvement in product design, placement, promotion or pricing. A niche market segment might not require such improvements by nature of its nicheness. Hamermesh, Anderson and Harris (1978) and Workman (1993) in their study of niche marketers found that marketing may play a limited role for focused firms. They suggest that focused firms often develop focus competitive advantages because of their specific strengths. Coupled with an increased likelihood of suffering from a scarcity of resources (Frambach et al, 2003), focused firms are likely to leverage their existing strengths rather than to engage in constant innovative activities, including (but not exclusive to) marketing innovation. Frambach et al (2003) highlight how a manager of a focused firm they interviewed said: “we first look at our own possibilities and only then listen to the customer” (pg. 391). The finding of this study with respect to H_{2c} reinforces this position.

Last but not least, H_{3a}, _{3b} and _{3c} are all supported as hypothesized. These findings suggest that regardless of the type of competitive advantage adopted, a Chinese manufacturing SME is likely to survive the current economic crisis if it developed and sustained a competitive advantage. These findings align themselves with previous studies that have examined the relationship between competitive advantage and performance.

6. IMPLICATIONS FOR RESEARCH AND PRACTICE

The above findings suggest three simple messages. First, regardless of the type of competitive advantage analysed, Chinese manufacturing SMEs that had developed and sustained a competitive advantage, had both a perception of greater survival likelihood as well as an actual greater chance of survival from the current economic crisis as of the first quarter of 2009 when the data collection process of this study was completed. Second, Chinese manufacturing SMEs that had implemented a marketing innovation capability were able to develop, reinforce and sustain their competitive advantages founded on either differential or cost-leadership strategies. Marketing innovation did not, however, assist those Chinese manufacturing SMEs that were operating on the basis of focused strategies. Third, competitor orientation and inter-functional coordination assisted the studied Chinese small to medium manufacturers to develop their marketing innovation capabilities. Surprisingly, the examined Chinese manufacturing SMEs did not seem to have developed their marketing innovation capabilities on the basis of being customer oriented. Taken together, these three messages have several important implications for both research and practice. First, this study points to the critical role of innovation, particularly marketing innovation, as a moderating variable between marketing orientation and performance. As indicated further above, research on the marketing orientation-innovation-performance link is scant in the extant academic business literature. Further, by using a component-wise approach to measuring marketing orientation, this study advances the current academic business literature by analysing how the three different components of marketing orientation relate to the marketing orientation-innovation-performance link. Third, by incorporating a competitive advantage construct as a mediating variable between innovation and performance, this study extends the

literature on the marketing orientation-innovation-performance relationship. Last but not least, the implication for practice is that contrary to what has been postulated by the popular business press, marketing innovation does not appear to be the all encompassing panacea that will assist manufacturers from surviving the current economic crisis. Rather the link between marketing innovation and firm survival during an economic crisis seems to be mediated by the ability to develop and sustain a competitive advantage. Only those manufacturers that have developed and sustained a competitive advantage had a greater likelihood of surviving the current economic crisis. Marketing innovation capabilities do, however, assist in developing and sustaining this competitive advantage. In the context of the examined Chinese manufacturing SMEs, this argument holds true though only for differentiation and cost-leadership based competitive advantages. Those Chinese manufacturing SMEs that adopted a focused strategic approach did not seem to rely on marketing innovation to develop and sustain their competitive advantage.

7. CONCLUSION

This study has been motivated by a need to improve our understanding of the current crisis being experienced in the global manufacturing sector. Using Chinese small to medium manufacturers as case studies, this study has sought to investigate whether incremental innovation activities could increase the likelihood of surviving the current industrial crisis. Particularly, focusing exclusively on marketing innovation as a form of incremental innovation, this study has examined the link between marketing innovation, defined as improvements in product design, placement, promotion or pricing, and the likelihood of survival. A conceptual model linking market orientation, marketing innovation, competitive advantage and firm survival was theoretically

derived and empirically tested using structural equation modelling. Sensitivity analysis of the findings was conducted through a post-hoc logistic regression. Three key findings emerged: (i) the examined Chinese manufacturing SMEs had a greater likelihood of survival had they developed and sustained a competitive advantage, (ii) that marketing innovation assisted in developing and sustaining competitive advantages based on differentiation and cost leadership and (iii) that marketing innovation capabilities improved when the Chinese manufacturing SMEs were competitor oriented and had good inter-functional coordination capabilities.

However, as with any research, these findings need to be interpreted with caution because of methodological limitations. First, the caveats concerning self-reported questionnaires apply to this study. For example, the dependent measure of survival used in this study is a perceptual one. This paper attempted to minimise this weakness through a post-hoc logistic regression using objective dummy measures of survival. However, the collected data is accurate as of the first quarter of 2009. With the industrial and economic crises still ongoing at the time of writing, firms that were noted as survivors might succumb to the ramifications of the economic crisis in the time that this article goes to press. Consequently, the second limitation of this study is that the findings ought to be only exploratory in nature. A follow up study at the end of the current crises would assist in validating the current exploratory findings. Last but not least, this research did not focus on medium to large manufacturers. Additional research is, therefore, required to provide further insights on the role of marketing innovation in assisting medium to large manufacturing firms manage the current industrial and economic crises.

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APPENDIX A: SCALE DEVELOPMENT

Construct	Indicators	Item
Customer Orientation	CUSOR1	My firm's strategies are driven primarily by customer satisfaction
	CUSOR2	My firm's strategies are based on understanding customer needs
	CUSOR3	My firm's strategies are driven by its beliefs about how it can create greater value for its customers
	CUSOR4	The customers' interests are one of the key priorities of my firm
	CUSOR5	My firm conducts market research with customers at least once a year to assess the quality of its products
	CUSOR6	My firm incorporates the extent to which its customers are satisfied with its products as part of its quality assessment
	CUSOR7	If my firm finds that its customers are dissatisfied with the quality of its products, it immediately takes corrective actions
	CUSOR8	My firm has a strong commitment to its customers
Competitor Orientation	COMOR1	My firm rapidly responds to competitive actions that threaten it in its industry
	COMOR2	My firm is very well aware of its competitors
	COMOR3	My firm is more customer focused than its competitors
	COMOR4	My firm competes primarily based on product differentiation
	COMOR5	My firm's product(s) are the best in the business
	COMOR6	My firm is quick to respond to significant changes in its competitors' pricing
	COMOR7	My firm regularly monitors its competitors' marketing efforts
	COMOR8	If a major competitor were to launch an intensive campaign targeted at export markets, my firm would implement a response immediately
Inter-functional coordination	INTFUNC1	Different functional areas across my firm work together as a team in servicing customers
	INTFUNC2	The activities of my firm's export team and the firm's other business functions (e.g. finance) are integrated in pursuing a common goal
	INTFUNC3	There is interdepartmental conflict in my firm (R)
	INTFUNC4	Key players from other functional areas (e.g. finance) within my firm hinder export activities (R)
	INTFUNC5	Key players from other functional areas (e.g. finance) within my firm are supportive of export activities
	INTFUNC6	Certain key players within the firm's senior management team attach little importance to our export activities (R)
	INTFUNC7	In my firm, employees in charge of exporting and those in other functional areas (e.g. finance) help each other out
	INTFUNC8	In my firm, departments/individuals compete

		with each other to achieve their own goals rather than working together to achieve common objectives (R)
Marketing Innovation	MKTGINNV1	Management actively seeks innovative marketing ideas
	MKTGINNV2	Improvements in product design are readily accepted
	MKTGINNV3	Improvements in product placement are readily accepted
	MKTGINNV4	Improvements in product promotional activities are readily accepted
	MKTGINNV5	Improvements in product pricing are readily accepted
	MKTGINNV6	Staff are penalized for new marketing ideas that do not work (R)
	MKTGINNV7	New marketing ideas are perceived as too risky and are resisted (R)
Competitive Advantage (Differentiation)	DIFF1	In my industry, my firm is always the first to market a new product
	DIFF2	Relative to competition, my firm is always ahead in the use of innovative promotional strategies
	DIFF3	Relative to competition, my firm is always ahead in the use of innovative pricing strategies
	DIFF4	My firm distinguishes itself from competition by the quality of its products
Competitive Advantage (Cost leadership)	COST1	My firm emphasises cost reduction in all its business activities
	COST2	In my firm, the production process changes all the time with the goal of constantly reducing production costs
	COST3	My firm invests mainly in large projects to realise economies of scale
	COST4	In my firm, costs is the most important consideration in the choice of a distribution system
	COST5	My firm tries to force competitors out of the market by good cost control
Competitive Advantage (Focus)	FOCUS1	My firm produces one single unique product
	FOCUS2	My firm attempts to specialize by concentrating on producing a limited number of products
	FOCUS3	My firm is active in a broad domain of products (R)
	FOCUS4	My firm targets a specific, limited part of the market with its products
Survival	SURVIVE1	My firm will survive the current economic crisis
	SURVIVE2	My firm possesses the ability to withstand the challenges of the current economic crisis
	SURVIVE3	My firm is in a good position to address the slow down in business activity currently being experienced as a result of the economic crisis
	SURVIVE4	Sales volume have decreased in the last three months as a result of the economic crisis but sales will rebound back to pre-crisis level

(R) = Reverse scaled items