

**CAN ENTREPRENEURIAL ORIENTATION IMPROVE FIRM
PERFORMANCE IN AN ENVIRONMENT WHERE PRICE
DOMINATES QUALITY?**

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Abstract

This paper looks at whether businesses in the developed world can utilise the Lumpkin and Dess (1996) entrepreneurial orientation (EO) construct to survive and succeed when faced with nimble, low cost producers from emerging economies such as China. The Australian Automotive Components industry (represented by members of the Federation of Automotive Product Manufacturing) was chosen for this study because it mainly consists of global company subsidiaries. Therefore the results may have global implications. It was found that proactiveness and competitive aggression were prominent strategies, particularly developing alliances in countries with low labour costs. However the entrepreneurial dimensions: innovation and autonomy, were not as prominent as in past studies, suggesting quality solutions to enhance performance outcomes were less important in the current paradigm.

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INTRODUCTION

In a dynamic and extremely competitive global economic system, entrepreneurial orientation (EO) can be the vehicle for a firm's ultimate survival and success (Covin, 1991). Statements by Government officials, business leaders, and University professors alike, support the contention that entrepreneurial activities in organisations of all sizes can assist nations re-energise their economic development and regain their competitive edge (Sexton, 1988). The principle that quality is the best and most profitable long term strategy may be under threat by an emerging trend among businesses to award contracts based on price alone. This practice appears associated with allowing contract winners to use basic, and often, inferior industry standards as the base quality requirement rather than worlds best practice. If the drive towards accepting the lowest price at the expense of quality continues, then researchers will need to scramble for new models to deal with this changing paradigm.

With the rapid growth of the Chinese manufacturing sector, a range of industries in developed economies find themselves dealing with nimble, low cost competitors. It is now not uncommon for domestic manufactures to find themselves being asked, when quoting for new work, "what is your China price". This question sends chills down the spine of domestic manufacturers faced with shrinking margins, cancelled orders, and some of the best product copiers in the world.

One of the industries that have found the China manufacturing sector a significant and growing competitor is the Australian automotive-parts industry (AACPI). This paper utilises Lumpkin and Dess's (1996) construct of EO to look at whether the AACPI has developed an entrepreneurial orientation to deal with this potential threat to their existence. According to Lumpkin and Dess, EO comprises five dimensions: *innovation*, *proactiveness*, *risk-taking*, *competitive aggressiveness*, and *autonomy*. The automotive components industry was chosen for this study because it is an integral part of the Australian economy. Furthermore, as the majority of companies involved are subsidiaries of global businesses the findings may have global implications. There are over 200 domestic component, tooling, design and engineering firms supplying four major automotive manufacturers. The AACPI generates over 700 million in annual exports (FAPM, 2005) and employs more than 40,000 Australians with annual sales of more than \$6.8 billion (IBISWorld, 2006).

LITERATURE REVIEW

A major development in the literature has been on the conceptual model of entrepreneurship as firm behaviour. Miller (1983) saw a firm's Entrepreneurial Orientation (EO) as a combination of the firm's *risk-taking*, *innovation* and *proactiveness*. Covin and Slevin (1991) clarified the role of these dimensions (postures), and linked them clearly to enhancing firm performance. Lumpkin and Dess (1996) expanded the EO framework by adding the dimensions: *autonomy* and *competitive aggressiveness*. Although there is general agreement that EO does impact on firm performance (Lyon, Lumpkin and Dess, 2000), the effect of each EO dimension on firm performance remains a matter of debate.

In the current study, the five dimensions postulated by Lumpkin and Dess (1996) are used to build a generic profile of an automotive component firm's level of EO. It was expected that if companies were entrepreneurial, then all five dimensions of EO would be perceived as important attributes to improving firm performance. Therefore *Hypothesis 1; All five dimensions of EO will be considered important attributes within the firms of the Australian Automotive Components industry in terms of improving a firm's performance.*

EO and Performance

The research to date indicates there is general agreement that EO does influence firm performance (Lyon, Lumpkin & Dess, 2000). Typically this research suggests that increasing entrepreneurship is associated positively with company financial performance (eg Miller, 1983; Zahra, 1993). However, there has been some contention as to what the appropriate intensity of entrepreneurial behaviour is and what the implications of entrepreneurial activities, such as risk taking, will have on firm performance (Zahra, 1993). Miller and Friesen (1982) have cautioned that increasing entrepreneurship beyond a particular threshold can harm a company's financial performance.

Lumpkin and Dess (1996) believe that it is essential to recognise the multi-dimensional nature of the performance construct. Contingency theory suggests that the fit among key variables, such as the environment, structure and strategy, is critical for obtaining optimal firm performance (Miller, 1983). Zahra and Covin (1995) and Wiklund (1999) add that many variables could influence performance or moderate the relationship between EO and performance. Wiklund and Shepherd (2005) highlight that EO can assist in achieving high firm performance when the internal and external environmental factors are aligned appropriately and the firm is part of a growth market. Therefore: *Hypothesis 2 is; Displaying an EO will significantly enhance a firm's performance.*

Innovation

Covin and Miles (1999) suggested that entrepreneurship would not exist without innovation. They defined innovation as the firm's tendency to support new ideas, experimentation and creative processes earlier than competitors. Peters (1990) said that innovation requires creativity, and an obsession to see it through. Neely and Hii (1998), considered research and development (R&D) an important source of innovation. These authors said R&D included the ability of the firm to improve existing products, develop new products, and develop new production methods or equipment and product quality.

A number of authors have linked innovation to business performance. Bradmore (1996) said that innovation enhances business performance through the successful implementation of new ideas. Neely and Hii (1998) suggested two views on how innovation affects business performance. The first view stated that the production of new products or processes strengthens a firm's competitive position in relation to its rivals. The second view argued that the process of innovation transforms a firm fundamentally by enhancing its internal capabilities, making it more flexible and adaptable to market pressures than non-innovating firms. *Therefore Hypothesis 3 is: Innovation will have the strongest relationship with firm's performance compared to the other EO dimensions.*

Proactiveness

Venkataraman (1989) claimed proactiveness was an important ingredient of entrepreneurship. This author defined proactiveness as seeking new opportunities, which may or may not be related to the present line of operations. Venkataraman also suggested firms can be proactive by: shaping the environment; introducing new products and brands ahead of competition; strategically eliminating operations which are in the mature or declining stages of product life cycle; participating in emerging markets; and by anticipating and pursuing new opportunities.

Competitive Aggressiveness

The intensity of a firm's efforts to outperform industry rivals and taking them head on at every opportunity is defined as competitive aggressiveness. It is characterised by a strong offensive posture, which is directed at overcoming competitors (Lumpkin & Dess, 1997: 2). Venkataraman (1989) suggested that competitive aggressiveness is accomplished by setting ambitious market share goals and taking bold steps to achieve them, such as cutting prices and sacrificing profitability.

The entrepreneurship literature regards the dimensions of proactiveness and competitive aggressiveness synonymously. However, Lumpkin and Dess (1997) argued that there is an important distinction between the two dimensions. They suggested proactiveness and competitive aggressiveness are distinct concepts that may not co-vary and are differentially related to firm performance. In their study, Lumpkin and Dess (1997: 2) said that proactiveness is “a response to opportunities whereas competitive aggressiveness is a response to threats”.

Another important difference was provided by Chen and Hambrick (1995: 457) who stated that “proactiveness involves taking the initiative in an effort to shape the environment to one’s own advantage; responsiveness involves being adaptive to competitors challenges”. In other words, although it is possible for a particular firm to exhibit both competitive aggressiveness and proactiveness, their presence may vary in strength. Thus *Hypothesis 4 is; Proactiveness and competitive aggressiveness will be differentially related to a firm’s performance within the industry.*

Risk-Taking

Lumpkin and Dess (1996) defined risk taking as venturing into the unknown. This is because, in addition to monetary risk, it typically entails psychological and social risk (Gasse, 1982; Lumpkin & Dess, 1996). Recent research indicates that entrepreneurs score higher on risk-taking than do non-entrepreneurs (Falbe & Larwood, 1995). Entrepreneurs are generally believed to take more risks than non-entrepreneurs do because the entrepreneur faces a less structured and a more uncertain set of possibilities (Bearse, 1982). This view is supported in a study by Saravathy, Simon and Lave (1996) who suggest that entrepreneurs are more prone to accept risk as a part of everyday business. Moreover, Morris (1998) found that entrepreneurs tended to be moderate or calculated risk-takers. Calculated risk-taking is explained by Morris (1998) as an attempt on the part of the entrepreneur to find ways to mitigate, shift or share risk. The research overall suggests entrepreneurs are calculated risk takers leading to *Hypothesis 5; Entrepreneurial firms will be identified as calculated risk- takers and this dimension will have a positive effect on a firm’s performance.*

Autonomy

Put simply, autonomy is having the authority to follow through on your convictions. A more complex definition regards autonomy as the freedom granted to teams and individuals encouraging them to exercise their creativity in bringing forth an idea and being able to follow it through to completion (Lumpkin & Dess, 1996). Thus entrepreneurs have the autonomy to make strong and decisive decisions and guide the direction of the business (Mintzberg & Waters, 1985).

Some authors report that top management in high performing firms encourage employee interaction and suggest that ideas of employees at all levels are valued (Kanter, 1983; Nadler & Tushman, 1990). According to these authors, employees are energised by the orientation of the firm and new ideas are routinely generated and embraced by employees who feel they belong and their contributions are valued. Hart (1992) supported these views and suggested that decision-making occurs from the entrepreneurial activities of many organisational members. According to Schrivastava and Grant (1985), an alternative view is to regard autonomy as using an autocratic leadership style. These types of managers depend on their position: their power comes from being an owner of the business or occupying a high position. Overall it appears entrepreneurial firms require a high level of autonomy leading to *Hypothesis 6; Companies within the Automotive Components industry will practice a high level of autonomy and this has a positive impact on a firm’s performance.*

METHODOLOGY

The study employed a two stage multi-method approach: Stage one consisted of an explanatory study through a self-administered mail questionnaire. The variables used were the five dimensions

of EO, firm performance and firm size. Questions allowed respondents to rate their firm on a five-point Likert scale. The scores from these scales were then used to develop an overall performance index for the firm. Stage two consisted of a descriptive qualitative approach through telephone interviews.

The target population consisted of Australian Automotive Component companies across Australia. Most of these companies were found to be members of the Federation of Automotive Products Manufacturers, (FAPM), the largest association within this industry. A total of 200 organisations were identified using the FAPM directory. Of the 52 respondents to the mail questionnaire, 44% were CEOs and General Managers and 56% were Functional Managers. It was found that 71% of respondents had worked for their company for less than 15 years and 52% of respondents had been in the Automotive Components industry for less than 15 years. The actual interview sample consisted of senior managers from five firms who expressed their willingness to cooperate in the mail survey.

RESULTS

Hypothesis One: The results show that respondents considered all EO dimensions important in improving firm performance. From table 1, it can be seen that proactiveness was rated the highest with an average score of 4.3. Innovation with an average of 4.2 was the second most important dimension. Risk taking was the lowest ranked dimension with an average score of 3.3.

Table 1: Importance of each EO construct in terms of improving performance

| | |
|----------------------------|------|
| Innovation | 4.2 |
| Proactiveness | 4.36 |
| Competitive Aggressiveness | 3.8 |
| Risk Taking | 3.3 |
| Autonomy | 3.5 |

The results support hypothesis one as all five dimensions of EO were considered important attributes by AACI firms in terms of improving a firm's performance.

Hypothesis Two: A standard multiple regression analysis was performed between firm performance as the dependent variable and the EO dimensions as independent variables.

Table 2: Multiple Regression analysis

| Independent Variables | Beta | Significance |
|--|-------|--------------|
| <i>Innovation</i> | 0.31 | 0.05 |
| <i>Proactiveness</i> | .47* | 0 |
| <i>Competitive Aggressiveness</i> | 0.04 | 0.73 |
| <i>Risk Taking</i> | -0.04 | 0.78 |
| <i>Autonomy</i> | 0.03 | 0.81 |

Model Summary:

| R | R Square | Adjusted R Square | F-ratio | Significance |
|------|----------|-------------------|---------|--------------|
| .68* | 0.46 | 0.4 | 7.05 | 0 |

* Correlation is significant at the 0.01 level (2 tailed)

As all correlations between the five EO dimensions and performance were under 0.7 and no extreme outliers were detected, it was concluded that neither multicollinerarity nor outliers affected the results. Altogether, 46% (40% adjusted) of the variability in firm performance was predicted by the five EO constructs. According to Cohen (1969), any r^2 value greater than 25% is strong. Among the independent variables, proactiveness was the predominant influence, with a standardised coefficient of .47 and a significance value of .00 ($p < .05$).

It was found that Hypothesis two *Displaying an Entrepreneurial Orientation will significantly enhance a firm's performance* is supported when taking together the net effect of EO. However, proactiveness uniquely contributed to the model and is the only measure which is statistically significant.

In order to test hypotheses three, four and five, correlation analysis was used to identify significant relationships between dependent and independent variables.

Hypothesis Three: As shown in table 3 there was a positive relationship between innovation and firm performance however, the relationship can only be described as mild-moderate ($r=.44$, $p < .01$), therefore: *Hypothesis three: "Innovation will be more positively related to firm performance compared to other EO constructs within the industry"* was not proven.

Table 3: Correlation Matrix for Key Variables

| | Firm Performance | Firm size | Innovation | Proactiveness | Comp. Aggressiveness | Risk Taking |
|-----------------------------|------------------|-----------|------------|---------------|----------------------|-------------|
| Firm size | 0.14 | | | | | |
| Innovation | .44** | 0.14 | | | | |
| Proactiveness | .54** | 0.15 | .50** | | | |
| Comp. Aggressiveness | .28* | 0.18 | .35** | .30* | | |
| Risk Taking | .37* | 0.11 | .50** | .52** | .29* | |
| Autonomy | 0.22 | 0.1 | .41** | .35* | -0.05 | 0.1 |

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Hypothesis Four: Correlation scores for the proactiveness and competitive aggressiveness variables were firstly compared to the dependent variable - firm performance. Table 3 indicates that proactiveness has a moderate-strong positive relationship to performance and is statistically significant. ($r=.54$, $p < .01$). Competitive aggressiveness has a weak relationship with firm performance ($r=.28$, $p < .05$). Additionally, proactiveness and competitive aggressiveness were significantly correlated against each other at the .303 level ($p < .05$). However, this also indicates that these two constructs of EO exhibit quite a large degree of independent variance. Table 4

below compares proactiveness and competitive aggressiveness to two key measures of firm performance.

Table 4: Correlation Matrix – Proactiveness and Competitive Aggressiveness

| | Proactive ness | Comp. Agg. | Sales Trend |
|--------------------|-------------------|---------------|----------------|
| Comp. Agg. | .303* | | |
| Sales Trend | .329* | 0.208 | |
| ProfitabilityTrend | .319* | -0.009 | 0.303* |

* Correlation is significant at the 0.05 level

Table 4 suggests that proactiveness is positively associated with sales and profitability with both correlations being significant at the 5% level. However, competitive aggressiveness is negatively related to profitability and is only very weakly associated with sales trend.

These results may be due to proactiveness being a response to opportunities whereas competitive aggressiveness is a response to threats as found by Lumpkin and Dess, (1997). In other words, a firm may exhibit both competitive aggressiveness and proactiveness, but their presence may vary in strength or change over time. Therefore, Hypothesis 4: *Proactiveness and competitive aggressiveness are differentially related to performance within the industry*, is proven to be correct.

Hypothesis Five: posited that entrepreneurial firms will be identified as calculated risk takers and the construct will have a positive effect on firm performance. The correlation matrix (Table 3) identifies that a mild-moderate relationship exists between risk taking and firm performance ($r=.367$, $p < .01$). Over 50% of the respondents agree that the company is willing to take calculated risks. Therefore Hypothesis Five: *Entrepreneurial firms will be identified as calculated risk takers and this construct will have a positive effect on firm performance* is supported.

Hypothesis Six: The correlation statistics in Table 3 identifies that autonomy has a positive impact on firm performance ($r=.22$), however, is statistically insignificant at both the 5% level and 1% level. A high level of autonomy was found present within the industry. Approximately 75% of respondents suggested that a democratic leadership style is practised within the firm. A further 90% suggested that decisions are made through a consensus opinion of the firm. This type of autonomy is in line with the explanation given by Lumpkin and Dess (1996). According to these authors, within organisations, autonomy refers to the independent action of an individual or a team in bringing forth an idea or a vision. Therefore: Hypothesis six: *Companies within the Automotive Components industry will practice a high level of autonomy and this will have a positive impact on firm performance* is proven correct, however, the positive impact autonomy has on firm performance is statistically insignificant.

DISCUSSION

The statistical findings in this report indicate that EO has a major impact on business performance in the AACI. Respondent companies considered all EO constructs important attributes to improving firm performance (Hypothesis One) and that entrepreneurship was an important element contributing towards their business success. The multiple regression analysis supported the strong relationship between EO and firm performance. 46% of the variability in firm performance was predicted by all EO dimensions, a level that Cohen (1969) considers strong.

Innovation: The literature reviewed suggested that innovation should be strongly linked to business performance (Neely and Hii, 1998). The results of this survey proved only a mild-moderate relationship with firm performance. Only a small majority of respondents suggested that their organisation puts new ideas into practice on a daily or weekly basis and all interviewees said this was unrealistic and unnecessary. Interviewees generally identified innovations as being major new ideas, not modifications as part of a continuous improvement program. 83% of respondents agreed that research and development occurred in their organisation. The main reasons given for in-house R&D departments were to develop new products and revamp and modify existing products to extend their lifecycle. The comments made in telephone interviews indicated that the high power level of customers (i.e. large Automotive firms such as Ford General Motors, Toyota) was also a driving force in encouraging innovation within respondent firms.

Proactiveness: Results of this study suggested that proactiveness was the most important construct in terms of improving firm performance in the AACI. When asked about the importance of being the first to launch new products ahead of competitors, nearly 50% of respondents were neutral. This is inconsistent with previous studies, which found it vital for proactive firms to introduce new products and brands ahead of competitors (Venkatraman, 1989). The responses from this survey suggest that first mover advantage is not a driving force within the industry.

Three managers interviewed identified proactive behaviour as strong in their companies. They associated proactive strategies with what is defined in the literature as a “reactive” approach. According to Chen & Miller (1994), reactive strategies are often characterised by reactions to events in the environment as opposed to initiative taking. All interviewees pursued cost reduction strategies in order to meet customer requirements. A number of respondents suggested that undertaking strategies defined as reactive in the literature could actually have a proactive element. Overall it was identified that firms in the AACI who proactively seek to lower their cost structure and successfully match their competitive strategy to their external environment to gain a competitive price advantage, are proactively positioning themselves to be dominant players in the industry.

Competitive Aggressiveness: 91% of respondents suggested that price competitiveness was important or very important. According to all five companies interviewed, their customers all required them to undertake competitive tendering creating an on-going focus on price. Interviews highlighted how strategic alliances were aggressively pursued to maintain competitive positions in the market. According to one company, globalisation has reshaped the AACI and continuing over-capacity in the domestic market was driving consolidation and strategic alliances in the industry particularly partnering low cost overseas manufacturers in developing countries like China.

According to the literature, the constructs of proactiveness and competitive aggressiveness are differentially related to firm performance (Lumpkin & Dess, 1997). The statistical findings in this research supported this. Although these two constructs may have been both important factors in regards to firm success, the correlation analysis suggested that these two dimensions make distinct contributions to firm performance, in particular sales and profitability.

During interviews, one company explained how their performance had improved by aggressively striving to dominate the market via international strategic alliances with companies in China and Japan. The firm was attempting to reduce its cost base yet build relationships with firms renowned for their quality achieved via technological advancement. This example identifies how the dimensions of proactiveness and competitive aggressiveness are not always independent and consistently have differential effects on firm performance. This interdependence was reinforced from comments made by other companies interviewed.

Risk Taking: From the telephone interviews and statistical analysis of this study, it was found that most respondents were fully aware of the risks they were taking, and took on the responsibility to manage and capitalise on these effectively. Apart from one company interviewed, respondents identified that in order for a risk to have a positive outcome, they should be calculated types. This is consistent with the research undertaken by Nelson (2001), Morris (1997) and Brockhaus (1980),

who all suggested that an entrepreneurial firm was one which centred on the willingness to engage in calculated risk taking.

Autonomy: Both autocratic and democratic elements of autonomy were displayed in the AACI. All interviewees said they were in charge and had a clear focus on the type of decisions they were able to make. However they also advised that their Head Offices had the power and authoritarian control to decide on important investment decisions

The challenges of definitions and attitude towards autonomy make it difficult to assess the value of this construct in any meaningful way other than to acknowledge that where people feel part of the decision-making process, they are likely to feel and act in a positive manner that could lead to higher firm performance.

CONCLUSION

The study found that all EO dimensions affected business performance within the AACI, although the amount of influence of each dimension varied. Proactiveness was identified as the dominant dimension in terms of improving performance. Reacting quickly to customer demands was found to be more important than being the first mover. This finding was partly explained by the need to meet guidelines for new and updated vehicle models, set by a small number of powerful manufacturers.

Competitive aggressiveness was important and required tight control over prices through effective management of the supply chain and development of strategic alliances. This led to seeking lowest cost suppliers in countries like China. Many of these alliances were structured on the necessity to maximise price competitiveness rather than the long term alignment of partner's quality goals. The effectiveness of these alliances is unclear and is worthy of further study.

Product based innovation was not identified as the important requirement in improving performance, rather quick customer response times and having in-house research and development units focused on enhancing firm's efficiency and effectiveness were important. One of the issues this raises is whether the definition of innovation used within this study was inclusive enough to encompass creative changes within sales and marketing and other service areas such as customer service. Such an expanded definition to include innovation within service areas may have led to an increased importance given to this dimension, therefore a greater focus on the definition of this dimension appears warranted.

Risk taking was rated the lowest of all the dimensions for improving performance. Most firms met the definition of being calculated and moderated risk types. This study confirmed past Global Entrepreneurship Monitor (GEM) studies that Australians do not see themselves as risk takers and hold the term "risk taker" in a negative light. This negative bias appears culturally based and therefore makes it somewhat difficult to ascertain the value of the ranking achieved by this dimension in this study. Greater access to financial data would be necessary to clarify the importance of this dimension and overcome any potential cultural factors.

There was difficulty in assessing the value of autonomy within the industry as analysis revealed both autocratic and democratic elements operating. This may partly be due to the fact that most of the organisations surveyed were part of foreign owned operations therefore constrained by overseas boards. It was also found that autonomy is a challenging concept for many people being interviewed. This may be culturally driven. The findings of this study found that some people see autonomy as a democratic concept whilst others see it as being in a position to enforce their power. Therefore the value of autonomy as an EO dimension may have more to do with personal motivation than entrepreneurship. This study found that although practicing managers may want personal autonomy, EO performance improvements may be best achieved through developing autonomous work teams.

The findings of this study demonstrate that a strong entrepreneurial orientation of a firm within the AACI leads to improved performance. Though these findings are limited to this industry, the EO dimensions approach appears to be a useful tool in entrepreneurship research. However these findings also raise a number of questions. What are the cultural influences on each EO dimension, and how might they be better defined to incorporate cultural influences? What competitive advantage can building up these dimensions have on business performance, particularly when quality becomes much less a concern than price? Does the current EO construct provide a potential solution to industries in the developed world facing emerging giants like China?

This study provides some suggestions to solving the above questions, particularly regarding the importance in developing proactiveness and competitive aggression. For example, such strategies as seeking alliances with low cost suppliers in emerging countries like China may be essential for the long term survival of organisations similar to those in the AACI study. However, once competitive price differentials are minimised, other EO dimensions such as innovation and autonomy may lead to higher performance as the point of difference between organisations swings back to quality. When or will this happen? The signs are that this is already happening in the AACI. But new or improved EO models to deal with these changing paradigms may be required. For now the jury is still out!

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