

Environmental Coping Capacity, Environmental Uncertainty and Performance

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Abstract

To cope with environmental uncertainty, the key organizational factors within a company should include an environmental coping capacity configuration (ECC). We intend to explore and operate this construct. This study specifies that the ECC shall be at a certain degree of internal alignment with differentiation strategy, decentralization, and management accounting systems composed of broad scope and timelines. The study also proposes that the ECC will be positively affected by perceived environmental uncertainty and will positively affect organizational performance. Statistical analysis is based on a structural equation model, using responses from 226 sub-unit managers of publicly owned manufacturing companies in Taiwan. The results completely support the research hypotheses. They demonstrate a significant degree of positive alignment among the ECC's constituents, and show that a company can achieve great performance when its ECC fits its perceived environmental uncertainty.

Key words: Environmental Uncertainty, Environmental Coping Capacity, Organizational Performance

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I .Introduction

Intensive competition resulting from market globalization causes the external environment to become more complicated and uncertain for companies. As a company operates in uncertain environments, it will experience greater difficulty in planning and controlling its business. Therefore, how to cope with environmental uncertainty has long been a concern and is recognized as an important issue in academic research (Baines and Langfield-Smith, 2003; Duncan, 1972; Milliken, 1987; Thompson, 1967). In organizational studies, Meyer, Tsui and Hinings (1993) and Miller (1981) advised that for coping with uncertain environments organizations should have tightly interdependent and mutually supportive strategy, structure and information systems. In accounting, Bains and Langfield-Smith (2003) and Chenhall (2003) suggested that organizational strategy, structure and management accounting systems (MAS) should be complementary instruments requiring to be designed as a holistic organism for adapting to environmental changes. Although the relationships between environmental uncertainty and organizational strategy, structure and MAS have been extensively discussed (Alexander, 1991; Bains and Langfield-Smith, 2003; Chenhall, 2003; Chenhall and Morris, 1986; Chong and Chong, 1997; Cul and Chia, 1994; Govindarajan, 1986; Koberg, 1987; Miller, 1988; Porter, 1980), the relationship between environmental uncertainty and the gestalt of these organizational factors still lacks research exploration. By taking the view of organizational configuration as the theoretical foundation (Meyer, Tsui and Hinings, 1993), this study builds a construct called “environment coping capacity configuration” (ECC), which includes differentiation strategy, decentralization structure, and MAS composed of broad scope and timeliness. By operationalizing the concept of “fit as mediation” (Venkatraman, 1989), this study aims to examine the following questions:

- (1) Can the dimensions of ECC be aligned consistently so as to fit its perceived environmental uncertainty?
- (2) Can such a fit have a positive effect on organizational performance?

The remainder of this paper is organized as follows: Section 2 discusses the research model and derives the research hypotheses; Section 3 describes the research method, data, and measurement; Section 4 presents model estimation and results; and Section 5 concludes the paper.

II .Conceptual Development and Research Model

According to prior studies, as a company confronts an uncertain environment, its

strategic choice tends to be differentiation (Bains and Langfield-Smith, 2003; Miller, 1988); its organizational structure tends to adopt decentralization (Alexander, 1991; Govindarajan, 1986; Koberg, 1987); and its management accounting systems tend to become broad in scope and timeliness (Chenhall, 2003; Chenhall and Morris, 1986). Based on the view of organizational configuration, this study thus holds that as a company perceives environmental uncertainty, its differentiation strategy, decentralization, and MAS including broad scope and timeliness should exhibit a certain degree of internal alignment. Such alignment is constructed as a company's ECC, representing its environmental coping capacity. By the concept of fit as mediation (Venkatraman, 1989), this study maintains that the design of a company's ECC tends to fit its perceived environmental uncertainty (PEU) which is composed of three dimensions of dynamism, heterogeneity and hostility in this study, and such a fit will further improve the company's performance. Figure 1 depicts the research model, which is explained in the text that follows.

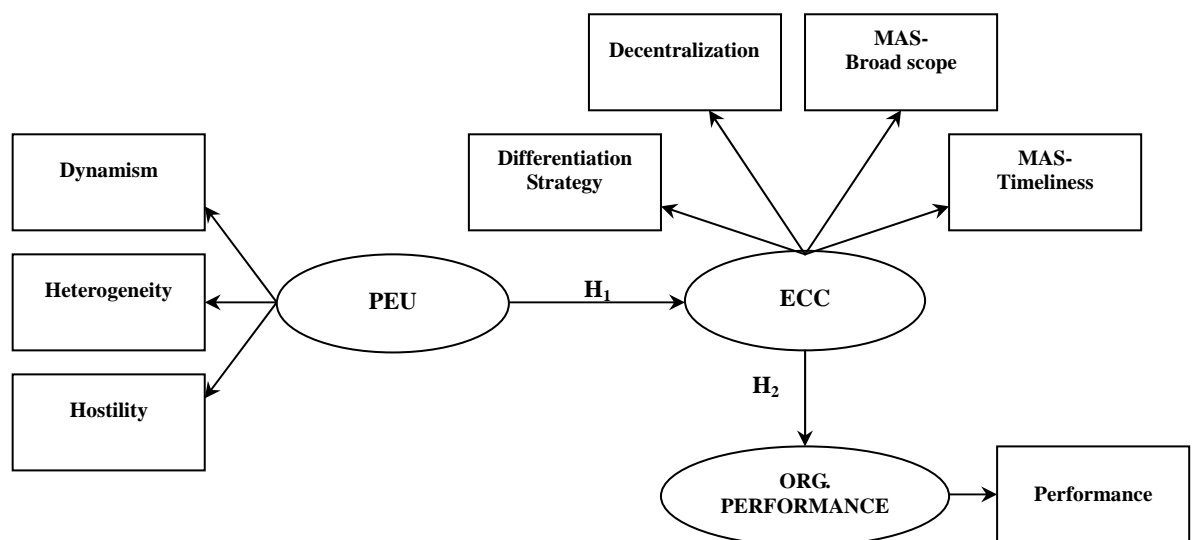


Figure 1. Research model

1. Research variables

PEU: Miller and Friesen (1983) referred to environmental uncertainty as an uncertain status of external environments in which a company's managers cannot easily predict customers' preferences and competitors' threats. From their study, Miller and Friesen (1983) deduce environmental uncertainty to comprise three characteristics of dynamism, heterogeneity and hostility. Dynamism reflects both change and innovation rates in the industry and unpredictable actions of competitors and customers. Heterogeneity refers to market variations requiring diversity in production and market

orientation. Hostility indicates the severity of the threat posed by multifaceted and intense competition in, for instance, product price, product quality, and resource scarcity. This study adopts these characteristics of environmental uncertainty and specifies the environmental uncertainty as managers' "perceived environmental uncertainty" (PEU), as in prior studies (Baines and Langfield-Smith, 2003; Fisher, 1996; Gul and Chia, 1994).

ECC: The construct of ECC reflects a degree of internal alignment among differentiation strategy, decentralization and MAS composed of broad scope and timeliness. Each dimension of the ECC is explained below.

The ECC's first dimension is differentiation strategy. According to studies by Miller (1988) and Porter (1980), a company's differentiation strategy entails pursuing product uniqueness based on important aspects of customer concern, such as product quality, brand image, and customer services. In addition, such strategy usually includes adopting an innovative product-design and customer-satisfaction mode.

The second dimension of ECC is decentralization. A company's organizational structure normally is decentralized when decision power is delegated to middle- and lower- level managers by their superiors (Govindarajan, 1986). Decentralization provides such managers with more authority to plan and control operational activities, and gives them more discretionary power of managerial decision. Also, greater decentralization leads to more chances for managers to access the relevant operational information (Waterhouse and Tiessen, 1978).

The third and fourth ECC dimensions are related to management accounting systems. The function of MAS is to provide required management accounting information for managerial decision-making (Bouwens and Abernethy, 2000). According to Chenhall and Morris (1986), the four characteristics of MAS are broad scope, timeliness, aggregation, and integration. Because broad-scope MAS provide external (e.g., customer's preferences, competitor's actions, technological development), non-financial (e.g., market size, market share), and future-oriented (e.g., probability of future events) information, and timely MAS provide information speedily and frequently ensuring that the information is available to influence decisions. Decision makers particularly need such kinds of information to deal with uncertain situations (Chenhall and Morris, 1986). This study thus focuses on broad scope and timeliness as two components of MAS.

Organizational Performance: Organizational performance is the extent to which an organizational goal is achieved by employing organizational resources in the environments that a company confronts. Miller (1987) and Raymond, Pare and Bergeron (1995) cited multifaceted essence for organizational performance. As they mentioned, organizational performance comprises financial and non-financial aspects

of long-term profitability, sales growth, financial investment capacity and public image. This study adopts these financial and non-financial aspects as the content of organizational performance.

Given these research constructs, this study holds that ECC will have a strong mediation effect between PEU and organizational performance. The specific hypotheses tested are explained below.

2. Research hypotheses

A company's ECC is its configuration for coping with external environmental uncertainties. Under uncertain environments, a company needs a degree of internal alignment among differentiation strategy, decentralization, and broad scope and timeliness in MAS. Miller (1988) and Porter (1980) have pointed out that in highly uncertain environments, because customer's preference is changeable and competitor's threat is unclear, the environment confronted by managers constantly varies and cannot be fully controlled. In such situations, a company will actively innovate to manufacture unique products to satisfy customer-preference changes and remove competitor's threats. Hence, differentiation strategy is one way to deal with PEU.

Decentralization can also deal with uncertain environments by giving lower level managers with discretionary power to deal with changeable customer's preference and unclear competitor's threats, and with authority to develop their own control styles (Govindarajan, 1986). For instance, a subunit manager has the right to determine customer's opinions about product, and set tactics to treat competitor's threats.

Although Mintzberg (1979) suggested that differentiation strategy leads to decentralization, the theory and evidence fail to suggest a consistent pattern of their relationship under uncertain environments (Miller, 1988). This study thus only holds that a degree of differentiation strategy and decentralization should be internally aligned without postulating the direction of their association.

Because broad-scope MAS provide information related to the external environment, the planning and controlling difficulties caused by uncertain environments can be alleviated. In addition, because timely information can enhance the facility of MAS to report upon the most recent events and to provide rapid feedback on decisions, it is particularly useful to respond to unpredictable environments (Chenhall and Morris, 1986). As such, it is logical to expect that a company in an uncertain environment will rely on these kinds of MAS to cope with such situations. Since the MAS can help a company's managers acquire information relevant to decisions of organizational strategy and structure under uncertain environments (Chenhall and Morris, 1986; Chong and Chong, 1997), this study thus maintains that companies will use such MAS to reinforce the degree of organizational consistency, leading to a better

fit between environmental coping capacity and environmental uncertainty. Hence, it is hypothesized that when a company perceives a more uncertain environment, the degree of internal alignment among the dimensions of ECC will increase. The following hypothesis is thereby proposed:

H₁: The degree of internal alignment of ECC is positively related to PEU.

A company's environmental coping capacity involves a degree of internal alignment among its differentiation strategy, decentralization, broad scope and timeliness in MAS. Hence, a well-aligned ECC will help to improve organizational performance. Conversely, when these constituent organizational factors cannot combine to produce an effective ECC, they will be incompatible and will not adapt to environmental variations; thus, the resulting configuration will inhibit improvement of organizational performance. The following hypothesis is thereby proposed:

H₂: Organizational performance is positively related to the degree of internal alignment of ECC.

We do not hypothesize a direct effect of PEU on organizational performance. It means that the model is a complete mediation model in which the effect of PEU is completely mediated through ECC. Thus, the confirmation of the model will provide strong support to the effect of fit between PEU and ECC (Venkatraman, 1989).

III. Research Method

1. Sample and data collection

This study employed a questionnaire survey with sample companies drawn from publicly owned manufacturing industries in Taiwan. The broadly based sample assumed a wide range of environmental characteristics, levels of strategic priority and managerial autonomy, and MAS availability.

The unit of analysis was a subunit within a company. Because subunit managers (e.g., production, marketing, R&D, and accounting managers) were involved in daily decision-making activities and were charged with the responsibility for their units' performance, they constituted relevant subjects for this study. Each subunit manager (950 subunit managers in total) was sent a questionnaire with a cover letter and a self-addressed, postage-paid envelope. Recognizing the sensitive nature of some information requested, the respondent's anonymity was ensured, as stated in the cover letter.

Questionnaires were returned by 231 subunit managers. Five respondents'

questionnaires were removed from the study, including one which was incomplete and four which chose essentially the same answer for all items. Consequently, 226 questionnaires were available for data analysis, yielding an effective response rate of 23.79%. Respondents' companies represented a great many industries as presented in Table 1, including electronics information, chemicals, textiles and apparel, food products, steel, electrical engineering, plastics, and automobiles, etc. No industry, except the electronics information industry, was represented by more than 10% of the total respondents. The electronics information industry's respondent percentage was 39.8%, which was proportionate to its percentage (43%) of the total population of targeted industries. The respondents indicated that the number of employees in their companies ranged from 80 to 41,000, with a mean size of 1,600. The average age of the respondents was 41.42 years. The average time spent with their present company and in their current position was 11.72 years and 4.50 years, respectively. The main functional employment areas represented included accounting (37.6%), marketing (29.6%), production (23%), and other areas (9.8%).

Although nonresponse bias is always a concern in survey research, the response rate here is within the range of response rates typical for this type of study (Olson, Slater and Hult, 2005). In addition, we found no significant differences between early and late respondents on all measures.

Table 1. Characteristics of sample firms

Firm's principal industry	N	% of sample	Number of employees	
			Range	Mean
Electronics information	90	39.8	80-41,000	2,460
Chemicals	21	9.3	97-2,495	531
Textiles & apparel	20	8.8	150-5,000	1,043
Food products	19	8.4	100-5,500	1,102
Steel	16	7.1	168-8,800	1,695
Electric engineering	14	6.2	150-12,000	1,471
Plastic	8	3.5	200-900	483
Automobile	7	3.1	400-2,800	1,214
Electric appliance & cable	6	2.7	200-1,000	542
Paper	5	2.2	800-3,500	1,618
Other manufacturing industries	20	8.9	120-5,500	862
Total	226	100.0	80-41,000	1,600

2.Measures

The research instruments used in this study were taken primarily from previous studies as listed in Appendix. Cronbach's (1951) alpha coefficients were calculated to assess reliability of variable. The response format of research instruments was a 7-point Likert-type scale.

PEU: This study adopted Miller and Friesen's (1983) environmental characteristics of

dynamism, heterogeneity and hostility as the three dimensions of PEU. These PEU characteristics were measured by using Miller and Friesen's 13-item instrument, asking respondents to state the extent of their perception of uncertain environments. A high score indicated high environmental uncertainty as perceived by subunit managers. A factor analysis yielded three factors with eigenvalue greater than one, confirming three major dimensions of environmental uncertainty. The three factors thus constituted the indicators of PEU in this study.

ECC: This construct was operationalized as a degree of internal alignment among the four dimensions reflecting a company's environmental coping capacity: differentiation strategy, decentralization, and MAS composed of broad scope and timeliness.

The first dimension, differentiation strategy, was measured by Miller's (1988) nine-item instrument. A higher score on this scale indicated that a company was more likely to have adopted a differentiation strategy.

The second dimension, decentralization, was measured with a five-item instrument developed by Gordon and Narayanan (1984). Budgeting, investment, new products, pricing, and personnel policy are five areas in which authority has been delegated. A higher score indicated more authority had been delegated by an organization.

MAS dimensions were measured by using Chenhall and Morris's (1986) instrument asking subunit managers to indicate the extent to which they used broad-scope and timely information provided by their organization's management accounting systems. The instrument includes six items assessing scope and four assessing timeliness. The higher the score, the more the subunit managers used broad-scope and timely MAS. A factor analysis yielded two components with eigenvalue greater than one, confirming these two characteristics of MAS.

Organizational Performance: Venkatraman and Ramanujam (1987) pointed out that, for questionnaires assessing organizational performance, there is no clear evidence that a manager's objective assessments are either more reliable or more valid than the same manager's subjective assessments. Moreover, data from an objective assessment may not be available in the form desired for specific research questions such as comparing competitors' performance. Because this study's measurement of organizational performance involved comparing competitors, we used managers' subjective assessments to measure organizational performance.

Organizational performance was indicated by one observed variable-performance which was measured using a six-item instrument adopted from the measurement put forth by Raymond et al. (1995). This measurement requested respondents to rate their organizations' performance regarding long-term profitability, sales growth, financial liquidity, financial investment capacity, public image and client loyalty compared to

their industry's average or to competitors.

IV. Statistical Analysis and Results

Structural equation modeling (SEM) was used to analyze the data using a two-step approach recommended by Anderson and Gerbing (1988). In the first step, each latent variable was modeled as a separate measurement model. A measurement model relates observed variables to their associated latent variables. In this study, the observed variables were dynamism, heterogeneity, hostility, differentiation strategy, decentralization, broad scope and timeliness in MAS, and performance, while the latent variables were PEU, ECC and ORG. PERFORMANCE. In this model, ECC represented a pattern of covariation or internal consistency among the dimensions of ECC: differentiation strategy, decentralization, and MAS including broad scope and timeliness. Because this approach is similar to the concept of fit as covariation suggested by Venkatraman (1989), it is also a test of whether these dimensions are internally aligned.

Formulating measurement models for each latent variable involved using LISREL 8.52 to conduct confirmatory factor analysis for each set of items. SEM model fit is defined by Hair, Anderson, Tatham and Black (1998, p. 580) as the "degree to which the actual or observed input matrix is predicted by the estimated model." Range-of-fit indices used in this study include Chi-square (χ^2), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), and Root Mean Square Error Approximation (RMSEA). Both χ^2 and GFI measure overall model fit. An insignificant χ^2 indicates that the data fit the model. GFI ranges from 0 (poor fit) to 1 (perfect fit) with an acceptable minimum of 0.9 (Hu and Bentler, 1999). Model comparison is evaluated using CFI, which reflects a good model fit at a minimum value of 0.95 (Bentler, 1990). AGFI is used to measure incremental fit and ranges from 0 (poor fit) to 1 (perfect fit) with a cutoff of 0.9 indicating a good fit (Gerbing and Anderson, 1993). Finally, RMSEA should be less than 1 for a good model fit (Browne and Cudeck, 1993). Because the low factor loading, a number of items were deleted as part of the development of the measurement models. The items removed are reported in the Appendix. In all cases, the fit indices for each measurement model were better than the recommended criteria as showed in Table 2.

Table 3 lists the descriptive statistics for each final variable including theoretical and actual ranges, mean, standard deviation, and Cronbach's alpha, and Table 4 lists Pearson correlation coefficients between variables.

The second step of the analysis involved constructing the structural model. Certainly, ECC served as a mediating variable between PEU and organizational

performance in the model. Using averaging scales as the indicators of the research constructs and with proper setup for model identification, the results of model estimation are shown in Figure 2. As the figure shows, all the fit indices display a good model fit: χ^2 (14.48) is insignificant ($df = 12, p = 0.27$); GFI (0.98), AGFI (0.95) and CFI (0.99) all have a value close to 1; and RMSEA (0.03) is lower than 1. Therefore, the model is unlikely to be severely misspecified, and the estimates of the structural parameters can be used for testing the hypotheses.

Other than the parameters constrained to unity for model identification, the paths from PEU to heterogeneity (1.03) and hostility (0.34), and from ECC to decentralization (0.51), and MAS including broad scope (0.57) and timeliness (0.60) are all significant based on two-tailed test. For the part of ECC, this finding indicates that the four dimensions of ECC converge on ECC, thereby demonstrating a significant degree of internal alignment among differentiation strategy, decentralization, broad scope and timeliness in MAS. For the structural part of the model, the path coefficients indicate that PEU positively and significantly affects ECC (0.48, $p < 0.05$), and the internally aligned ECC in turn positively and significantly affects organizational performance (0.49, $p < 0.001$). The results therefore support our hypotheses, and mean that ECC plays a significant mediating role between PEU and organizational performance.

The Maximum Likelihood test shows that none of the constrained paths can be relaxed to improve the model fit significantly, indicating that the effect of PEU on organizational performance is completely mediated by ECC. This result demonstrates the model to be a complete mediational model, strongly supporting the mediating effects of ECC. Following the reasoning of fit as mediation (Venkatraman, 1989), it can be concluded that a better fit between a company's perceived environmental uncertainty and its environmental coping capacity will yield greater organizational performance.

Table 2. Model fit for measurement models

Variable	χ^2	df	p	GFI	AGFI	CFI	RMSEA
Dynamism	2.38	1	0.123	0.99	0.95	0.99	0.078
Heterogeneity	0.34	2	0.843	1.00	1.00	1.00	0.000
Hostility	3.66	3	0.301	0.99	0.97	1.00	0.031
Differentiation strategy	10.05	5	0.074	0.98	0.95	0.99	0.067
Decentralization	5.53	2	0.063	0.99	0.94	0.99	0.089
MAS-Broad scope	1.84	2	0.399	1.00	0.98	1.00	0.000
MAS-Timeliness	1.47	1	0.225	1.00	0.97	1.00	0.046
Performance	4.16	2	0.125	0.99	0.95	0.99	0.069

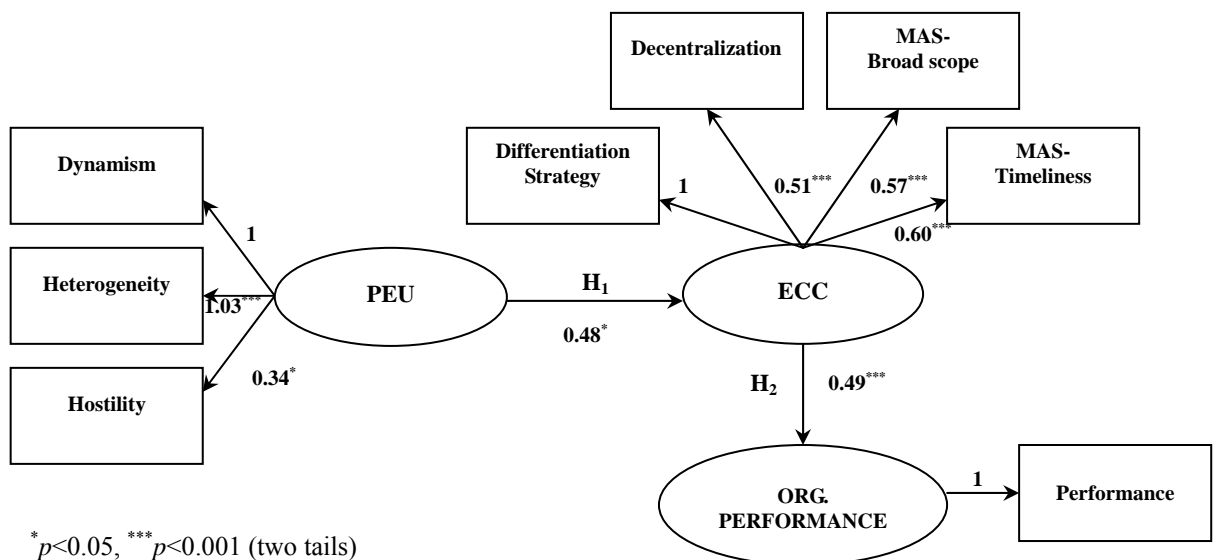
Table3. Descriptive statistics for final variables

Variable	Theoretical range	Actual range	Mean	Standard deviation	Cronbach's alpha
Dynamism	1-7	1.5-6.5	3.86	0.87	0.70
Heterogeneity	1-7	1-6.3	4.04	0.85	0.77
Hostility	1-7	1-6.4	4.10	0.75	0.64
Differentiation strategy	1-7	2-7	4.97	0.93	0.81
Decentralization	1-7	1-7	4.64	1.22	0.81
MAS-Broad scope	1-7	1.5-7	5.23	0.83	0.83
MAS-Timeliness	1-7	1.5-7	5.47	0.91	0.89
Performance	1-7	2.75-7	5.05	0.78	0.80

Table4. Correlation coefficients

Variable	1	2	3	4	5	6	7	8
1.Dynamism	1.000							
2.Heterogeneity	0.427**	1.000						
3.Hostility	0.192**	0.328**	1.000					
4.Differentiation strategy	0.387**	0.362**	0.144*	1.000				
5.Decentralization	0.009	0.083	-0.018	0.387**	1.000			
6.MAS-Broad scope	0.109	0.249**	0.040	0.404**	0.416**	1.000		
7.MAS-Timeliness	0.145*	0.244**	0.105	0.400**	0.203**	0.497**	1.000	
8.Performance	0.221**	0.242**	-0.070	0.554**	0.269**	0.403**	0.374**	1.000

N = 226, ** $p < 0.01$, * $p < 0.05$ (two tails)



* $p < 0.05$, *** $p < 0.001$ (two tails)

Model fit indices:

χ^2 (df: 12) = 14.48, $p = 0.27$, GFI = 0.98,

AGFI = 0.95, CFI = 0.99, RMSEA = 0.03

Figure 2. Model estimation

V. Conclusion

In this study, internal alignment among differentiation strategy, decentralization, and MAS composed of broad scope and timeliness is conceptualized and operationalized as a company's environmental coping capacity. The result demonstrates a significant degree of positive alignment among the constituent of environmental coping capacity, which supports the view of organizational configuration (Meyer, Tsui and Hinings, 1993), and shows that the fit between the environmental coping capacity and perceived environmental uncertainty will improve organizational performance. That is, the performance will be enhanced when a company employs a high degree of differentiation strategy along with high decentralization and MAS composed of broad scope and timeliness, as it perceives a high uncertain environment.

It is suggested to consider overall effective organizational factors to cope with uncertain environments, not just part of the overall factors as in this study. However, this study demonstrates that these picked factors in fact can be an uncertainty buster and performance promoter while they are consistently aligned. The outcome of this study implies that organizational designers will benefit from awareness of the need to adopt a configurational approach towards designing an overall control system for their organization. Such awareness is achievable by considering the integrating effect of strategy, structure and management accounting systems.

This study has some governing limitations. Because only manufacturing companies were examined, one should be cautious in generalizing the study findings to other industries. The survey approach lacked control over identity of questionnaire respondents and over social- desirability bias. However, because measures were taken to ensure anonymity and responses were mailed directly to researchers in this study, the likelihood of such biases occurring can be minimized.

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Appendix: Measure Used

Perceived Environmental Uncertainty

1. The rate at which products/services become obsolete.
2. The predictability of the actions of the competitors.
3. The predictability of demands and customer tastes.
4. The rate at which product/process technology change in this industry.
5. The frequency with which marketing practices need to be changed to keep pace with the market and competitors.
6. The differences among the company's products/services with regard to customers' buying habits.
7. The differences among the company's products/services with regard to the nature of the competition.
8. The differences among the company's products/services with regard to required methods of production or service.
9. The severity of threat posed by tough price competition.
10. The severity of threat posed by competition in product quality or novelty.
11. The severity of threat posed by dwindling markets for products.
12. The severity of threat posed by scarce supply of labor/materials.
13. The severity of threat posed by government interference.

Differentiation Strategy^a

To what extent do you agree the following descriptions?

1. Your organization uses strategy of major and frequent product or services innovations.
2. Annual R & D costs as a percentage of sales are more than those of your competitors.
3. The percentage of sales spent on costs of initiating and implementing product-market innovations is more than that of your competitors.
4. Your organization always tries to be ahead of competitors in product novelty or speed of innovation and usually succeed.
5. Your organization is growth-, innovation-, and development-oriented.
6. Your organization aggressively competes with rivals and actively enters new markets.
7. Your organization uses extensive advertisement to create a unique product image.
8. Your organization uses market segmentation to design products and satisfy

^a Items 2,6,7,8 were deleted from the measurement model.

customer needs.

9. The pricing of product is higher than that of your competitors.

Decentralization^b

To what extent has authority been delegated to you for each of the following classes of decisions?

1. Budget allocations.
2. Selection of large investments.
3. Development of new products or services.
4. Pricing decisions.
5. The hiring and firing of managerial personnel.

Management Accounting Systems-broad scope and timeliness^c

To what extent do you use the following information from your organization's management accounting systems?

1. Information that relates to possible future events (e.g. new legislation).
2. Information on the likelihood (quantified) of future events occurring (e.g., probability estimates).
3. Information of a non-economic nature such as customer preferences, employee attitudes, labor relations, attitudes of government and consumer bodies, competitive threats, etc.
4. Information on broad factors external to your organization such as economic conditions, population growth, technological developments, labor market, etc.
5. Information of a non-financial nature related to the following areas:
 - (a) Internally oriented information such as machine efficiency, output rates, employee absenteeism, etc.
 - (b) Market information such as market size, growth in market share.
6. Information that arrives immediately upon request.
7. Information supplied to you automatically upon its receipt into information systems or as soon as processing is completed.
8. Reports that provide frequently on a systematic, regular basis (e.g., daily/weekly reports).
9. Relevant information reports to you without delay after an event occurring.

Organizational Performance^d

Relative to your industry's average or to comparable organizations, what is, in your

^b The item 1 was deleted from the measurement model.

^c The items 1 and 5(a) were deleted from the measurement model.

^d The items 1 and 5 were deleted from the measurement model.

opinion, the performance of your organization in regard to the following criteria?

1. Long-term profitability.
2. Sales growth.
3. Financial liquidity.
4. Financial investment capacity.
5. Public image.
6. Client loyalty.

環境因應能力、環境不確定與績效關係之研究

鍾紹熙*

摘要

爲了因應環境不確定性，企業內部的重要組織因素應該建構一個“環境因應能力模組”，本文試圖探索並操作此構念。本研究認爲環境因應能力模組是差異化策略、分權以及廣範圍與及時性管理會計系統的組合，並且假設環境因應能力模組會受到認知環境不確定性的正向影響，而且也會正向地影響組織績效。本研究抽樣自台灣製造業上市公司的單位經理人，有效樣本爲 226 份，分析方法係採用結構方程模式，實證結果支持研究的假設。研究結果證實，構成環境因應能力模組的組織要素會有顯著程度的正向組合；並且顯示，當環境因應能力模組配適環境不確定性時，組織績效將會提升。

關鍵字：環境不確定性、環境因應能力、組織績效

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