

## **The Antecedents of Value Creation in Singapore Corporations**

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### **Abstract**

The impetus for value creation has led to greater interest in encouraging entrepreneurship within organizations (intrapreneurship). The intrapreneurship literature reveals general agreement that organizational entrepreneurship flourishes where the environmental conditions of an organization are most favorable. However, there is little empirical research examining the relationship of the organizational climate and the intentions of employees to be intrapreneurs, and their actual participation in such activities. This paper reports a study on the elements of organizational climate on intrapreneurship attitudes, intentions and actions on the part of middle managers in corporations in Singapore.

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### **Introduction**

Until recently most of the attention in the entrepreneurship research literature has focused on value creation through new ventures. Yet there have been companies raised as exemplars of entrepreneurship development within existing incumbents with initially little attention paid to by researchers even though the term “intrapreneurship” was coined in 1985 by Pinchot and “internal corporate entrepreneurship” by Schollhammer in 1982. The advocates of corporate entrepreneurship are finally getting attention from the corporations as there is greater realization that it is important as a growth strategy and competitive advantage (Pinchot, 1985; Zahra 1991; Kuratko, 1993; Merrifield, 1993). Corporate entrepreneurship contributes to organization renewal (Guth & Ginsberg, 1990), profitability (Zahra, 1991). It prevents the turnover of innovative-minded employees disenchanted with bureaucratic organizations from becoming entrepreneurs (Garvin, 1983; Kanter, 1985; Pinchot, 1985).

Through corporate entrepreneurship, value creation is possible by harnessing the creativity and efforts of the members of the corporations. Yet at the same time, there is a growing realization that corporate entrepreneurship is not something that is easily jumpstarted in any organization. A conducive environment allows the corporations to tap the innovative talents of their employees and managers (Hornsby, Kuratko & Zahra, 2002). Yet more important than the fact that the organization has elements of a climate is that the employees consider conducive, is the question whether the presence of the organization environment leads to differences in behavior: whether the employees would give their best ideas, innovations and entrepreneurial efforts to the firm.

This paper reports a study on organization environment on corporate entrepreneurship involving a sample of middle managers in Singapore, examining the influence of the organization environment on intrapreneurial attitudes, intentions and action.

## **Literature Review**

The role of the environment on individuals present have been examined in on entrepreneurial intentions and actions (e.g. Begley, Tan & Schoch, 2005; Naffzinger, Hornsby & Kuratko, 1994). Prior research found the influence of environmental factors on attitudes and intentions. The corporate entrepreneurship literature, too, has emphasized the need for favorable environmental conditions (Pinchot, 1985; Cornwall & Perlman, 1990; Kuratko et al, 1990). A conducive organization environment has been identified as being necessary for intrapreneurship to occur (Oden, 1997; Hullard, 1995; Schollhammer, 1982). Elements of the organizational environment include psychological security, appropriate use of rewards, diffusion of authority, and flexible time and resource framework of sponsorship and time, people and money (Burgelman, 1983; Pinchot, 1985; Kanter, 1985; Souder, 1981).

An intrapreneurial organization culture allows inventor/innovators and their teams to continue with the project (McCrimmon, 1995). Continuity harnesses commitment to the project and avoids information loss that occurs when large corporations stick to the usual practice of transferring projects to different teams (Pinchot, 1985). Organizations should have upward and horizontal open communication system which allows feedback on new ideas to occur quickly (Hisrich, 1986; Cornwall & Perlman, 1990; Lombriser, 1994). Quinn (1985) found that the most innovative companies keep the total organizations flat and project teams small, which allow learning and investigation of ideas cut across traditional functional lines in the organizations. Empowerment would be a feature resulting in an entrepreneurial organization capable of responding to new market demands and changing technologies (Pinchot, 1985; Conger, 1989; Cornwall & Perlman 1990; Peters, 1987), without being constrained in the options available for their needed resources, approvals or intended markets (called “multiple options”). The organization should foster a tolerance for mistakes, encourage “trying” or risk-taking, experimentation without fear of failure (Hisrich, 1986, Power et al, 1988; Lombriser, 1994). An intrapreneurial organization culture should not insist on conformity as any pressure to conform would inhibit the creative process (Albrecht *et al*, 1987).

Organizations that emphasize on intrapreneurship usually adopt certain practices to bring out the innovativeness of employees. They provide opportunities for training and development. These measures could help to enhance employees' innovativeness, facilitate creative decision-making, promote creativity and thus innovation (Sherman, 1984; Cornwall & Perlman, 1990). They encouraging smaller scale innovations and ensure that innovations are adopted wherever they could be employed. They also allow for organizational flexibility enabling employees to cross the boundaries of existing structure of organization, avoiding the jealous tendency to turfiness blocks innovation. (Kuratko & Hodgetts, 1992). Organizational factors that have been found to influence the degree to which intrapreneurial activity occurs include time, people and money (Sathe, 1985; Souder, 1981). Sponsorship in the form of information (data, technical knowledge, political intelligence, expertise); resources (funds, materials, space, time); and support (endorsement, backing, approval, legitimacy) is necessary (Cornwall & Perlman, 1990). Intrapreneurs are better off in companies that pump discretionary time, money, and heads

counts into the system and tell managers to tolerate some underground activity. Enough slack to permit the early informal stages of intrapreneuring is an important element in building an environment for innovation. Discretionary funds must be available to continue the increasingly promising exploration (Pinchot, 1985).

In addition to the practices that exist, Trice & Beyer, (1993) add that employees who perceive that their innovativeness contributes to the growth and profit of the corporation are more likely to act innovatively. Recognition of the contribution and publicity about innovation and intrapreneurship would thus be needed. While this recognition is intangible, there is also suggestion that the tangible rewards system have criteria articulated for risk-taking and innovation (Cornwall & Perlman, 1990) made known to their employees (Carrier, 1994). This will promote risk taking and employees will get the assurance that their companies take into consideration their innovative spirit when assessing them. The organizational factors referred to earlier fit in the five dimensions identified by Zahra *et al* (2002) in their study of middle managers' perceptions of the internal environment for corporate entrepreneurship.

The organizational factors have been found to influence middle management behavior and financial performance. However, it is not middle management behavior *per se* but intrapreneurship behavior that we are interested in. In this regard, middle managers or any individuals in the organization can be conceived of as potential entrepreneurs. Much like individuals in the socio-cultural environments of an economy faced with politico-economic conditions, these corporate employees are individuals in microcosms of society (their organizations). The selfsame question we ask of an economy and the needed conditions that give rise to entrepreneurship can be asked of organization conditions and the interest in entrepreneurship in middle managers or employees. Shapero and Sokol (1982) propose a model that posits the role of socio-cultural factors that affect perceived desirability and feasibility of entrepreneurship. In the model, a person first asks if it is desirable to start a business and then if it is feasible. One who answers both questions affirmatively is likely to take the steps necessary to start a business. Perceived desirability and feasibility will influence intentions and determine actions to be seriously considered and subsequently taken.

Krueger et al. (2000) found support for their model of entrepreneurial intentionality that built upon Shapero et al.'s work. Begley and Tan (2001) dealt with face and shame as socio-cultural influences on the entrepreneurial intentions of individuals in society. There is a need to examine the impact of the organizational factors on intrapreneurial intentions and actions also the relationship between perceived feasibility and desirability on intrapreneurship intentions.

This study examines the impact of the organizational climate on perceived feasibility, perceived desirability, intrapreneurial intentions and action.

## Methodology

The study employed a survey of middle managers in Singapore. The instrument comprised twenty-seven questions developed from the literature such as Pinchot (1985), and Cornwall and Perlman (1990) on the organizational climate (culture and practices), measures of the individual's attitudes and behaviors, and the characteristics of the organization. In addition to the statements on organizational climate, the respondents responded to a statement each on the extent to which innovativeness contributed to the growth and profit of their organizations, whether they had sufficient knowledge and skill, and whether they would like to be intrapreneurs. The questions were deliberately kept to the minimum to fit a two-page survey to encourage the return of completed questionnaires. A seven-point Likert-like scale measured both the items and the dependent variables. The initial questionnaire was pilot tested on a panel of three university professors and five middle managers and modified accordingly. The pilot test assisted with the face validity of the items and the time required to complete the questionnaire.

A sampling frame was developed to select the top 600 companies with the largest annual sales volume above S\$60million from the Singapore 1000 Directory representing the service, electronics, manufacturing and construction industries. The companies were classified into four broad categories. The service industry included the financial institutions and hotels. The oil and chemical sectors were included in the manufacturing industry. Six hundred companies were telephoned to identify middle managers who would agree to participate. Middle management in the areas of Engineering, Human Resource, Marketing, Production, Public Relation, and Research & Development (R&D), were chosen because of their involvement in both strategic and tactical decisions. Resulting from the phone calls we sent 434 questionnaires (about 72 percent of the prospects) by fax. A total of 106 completed questionnaires were received, which translated to a response rate of 24.4 percent. Four questionnaires were rejected because they had missing, incomplete or invalid responses. As Table 1 shows, the responses represented the targeted industries satisfactorily.

Table 1: Targeted And Actual Percentage Of Responses From Different Industries

Industry	Targeted	Targeted%*	Actual	Actual
Service	36	35.3%	33	32.4%
Electronics	22	21.6%	29	28.4%
Manufacturing	36	35.3%	32	31.4%
Construction	8	7.8%	8	7.8%
<b>TOTAL</b>	102	100%	102	100%

\*The targeted percentage was derived after grouping the companies listed in the Singapore 1000 Directory into the four industries.

The exploratory factor analysis was conducted on the seventeen questions excluding those measuring desirability, feasibility, intention and action as these were single item scales and those asking on characteristics of the organization. The results, as

shown in Table 1, indicated a total of four factors with eigenvalues of more than 1.00. After examining the questions, the constructs were subsequently named as organizational culture, organization pro-innovation practices, organizational flexibility, perception of innovativeness, and organization support and sponsorship.

Table 2 Factor Analysis Of Intrapreneurial Climate

Variables and Factor Description	Factor 1	Factor 2	Factor 3	Factor 4
<b>Organizational Culture [Culture]</b>				
Communication	0.75982			
Continuity	0.72986			
Cross Functional Team	0.46844			
Lowest Level Decision Making	0.60920			
Multiple Options	0.72607			
Tolerance for failure	0.61976			
Conformity *	0.71017			0.45830
<b>Organization Pro-Innovation Practices [Practices]</b>				
Creative Decision Making		0.71674		
Small Beginnings		0.64720		
Spreading of Innovation		0.62623		
Training and Development		0.70878		
<b>Manager's Perception of Innovations as a Contributor to Firm Growth &amp; Sales [Innovativeness]</b>		0.70565		
<b>Organizational Flexibility [Flexibility]</b>				
Discretionary Latitude			0.75369	
Freedom From Turfiness			0.72548	
<b>Organization Support &amp; Sponsorship [Sponsorship]</b>				0.79423
Performance Evaluation Criteria *			0.50188	0.54244

\* Variable to be eliminated

Table includes all factor loadings over 0.45.

In Factor 1, the item *Conformity* was eliminated because it was loaded with values of more than 0.45 on two factors to ensure that the selected items accounted for a single factor. Upon observation, it was noted that Factor 2 consisted of two different dimensions. The item innovativeness was conceptually different from practices towards

innovation and was of special interest to the research. Hence it was separated and stood on its own. In Factor 4, the item performance evaluation criteria was eliminated because it was loaded with values of more than 0.45 on two factors too, leaving only sponsorship.

The Cronbach reliabilities for organizational culture, practices towards innovation and organizational flexibility were 0.856, 0.754 and 0.562 respectively. Nunnally [1974] stated that a scale with an alpha value of over 0.50 was acceptable for the purpose of the study. He also indicated that one could save time and energy in the early stages of research on hypothesised measures of a construct by insisting on an alpha of 0.70 or higher [Nunnally, 1978]. Consequently, that scales with an alpha of between 0.50 and 0.70 would be considered as marginal but still usable for this study.

To test the hypotheses, the four indicators of interest in intrapreneurship, namely desirability, feasibility, intention and action were regressed on the organizational factors. The analyses were conducted using SPSS.

## Findings

The regressions of these dependent variables were as shown in Table 3, which investigated the impact of organizational factors:

- on desirability R1, feasibility R2, intention R3 and action R4
- together with desirability and feasibility on intention R5
- together with desirability, feasibility and intention on action R6

No evidence of multi-collinearity was found.

Table 3: Regression Results

	R1 Desirability	R2 Feasibility	R3 Intention	R4 Action	R5 Intention	R6 Action
Culture	0.191	0.11	*0.3	**0.45	*.23	**0.36
Practices	0.018	-0.18	-0.16	-0.15	-0.12	-0.13
Flexibility	0.034	0.06	*0.23	0.18	*0.21	0.14
Innovativeness	0.125	**0.36	**0.35	0.20	*0.24	0.11
Sponsorship	-0.002	0.07	-0.03	0.03	-0.04	0.03
Desirability					**0.25	*0.24
Feasibility					**0.23	0.053
Intention						0.14
Adjusted R <sup>2</sup>	0.09	0.15	0.34	0.36	0.47	0.45
F	1.92	**3.32	**9.84	**10.85	**11.99	**9.36
N	102	102	102	102	102	102

\* indicates probability level of 0.05

\*\* indicates probability level of 0.01

The model *R1* indicates that the independent variables did not predict desirability; neither the variables nor the overall model were statistically significant ( $R^2 = 0.091$ ). The overall models in *R2* to *R6* were statistically significant. In model *R2* perception of innovativeness had a significant effect on feasibility ( $p < 0.01$ ) and the model was statistically significant. Middle managers who perceived that innovation increased the sales and profit of their organizations found it more feasible to innovate within the organizations.

When the independent variables were considered against intention to be an intrapreneur as a dependent variable in model *R3*, a number of organizational variables were supported: innovativeness ( $p < 0.001$ ), organizational culture ( $p < 0.05$ ) and organizational flexibility ( $p < 0.05$ ) being the significant factors. When the organizational climate factors were regressed against action (*R4*), only organizational culture was a significant factor ( $p < 0.001$ ).

What is interesting is that desirability and feasibility when added to the regression as independent variables were significant in relation to intention in model *R5* ( $p < 0.01$ ;  $p < 0.01$  respectively) in addition to culture, flexibility and intention. In *R6* where all the organizational climate variables with feasibility, desirability and intention are regressed against action, only desirability proved to be a significant factor ( $p < 0.05$ ) in addition to organizational culture ( $p < 0.01$ ).

In summary, there was no significant predictor for the dependent variable desirability (*R1*). Perception of innovativeness showed significant effects on feasibility (*R2*). Organizational culture (consisting of communication, continuity, cross-functional team, decision at lowest level, multiple options and risk-aversion), Organizational flexibility (which included discretionary latitude and freedom from turfiness) and perception of innovativeness indicated significant effects on intention (*R3*) to innovate within the organizations. Similarly, desirability and feasibility were statistically significant in predicting intention (*R5*). In two regressions (*R4* & *R6*), the factors organizational culture, desirability and intention had significant effects on action of the respondents.

## **Discussion**

Contrary to expectations, the organizational climate variables did not appear to have effect on the perceived desirability and perceived feasibility of being intrapreneurs on the part of the middle managers except the perception of innovativeness as a factor influencing perceived feasibility. The organizational climate factors appear to have a direct effect on intention of being intrapreneurs (*R3*). Organizational culture, organizational flexibility and innovativeness appear to influence intention. Organizational practices, which includes aspects such as training and education, did not appear in any of the regressions as significant. These aspects require some discussion.

It would thus appear that organizational climate factors do not play a significant role on perceived feasibility and perceived desirability apart the perception of innovativeness as a contributor of firm growth. While at first, it may appear strange that

favourable conditions do not lead to intrapreneurship being desirable, it may be that the organizational climate variables examined do not directly relate to motivation or the direct rewards to the person for engaging in intrapreneurship. As for feasibility, the context in Singapore firms may explain the results. Training and retraining are encouraged by national economic agencies emphasizing manpower development in companies as manpower is Singapore's key, if not singular, resource. As such, training and education under practices would be familiar to the respondents. Further as feasibility points to the individual's self-efficacy, the relationship between environmental factors and perceived feasibility appear to be more tenuous, since the organizational environments except training and education do not have a direct impact on the individual's assessment of his/her ability to be an intrapreneur.

The perception of innovativeness as a contributor to corporate growth is a significant variable in models 2 (feasibility), 3 and 5(intention). Where feasibility is concerned, it would appear innovativeness is a significant factor because the Singapore middle managers may be accustomed to being innovative as the Singapore companies have since 1991 been encouraged to equip their employees to be innovative. In regard to intention, middle managers are usually motivated by the performance targets assigned to them. The potential contribution of innovativeness to this may have influence intention to become intrapreneurs.

Where intention to become intrapreneurs is concerned, this study provided empirical evidence that conducive organizational culture and flexible organizational structure had significant impact on intention. These factors appear to have a direct influence on intention and not indirectly through desirability or feasibility. Corporations should thus be encouraged to continue work developing such environments to encourage greater intrapreneurial efforts. The model *R5* appears to indicate that intention only predicts action in a limited degree. This is consistent with attitude theory as there is a gap between intention and action. Desirability in model *R5* is a significant factor. While the organizational climate factors do not predict desirability, other measures introduced by the firm might in turn influence action.

## **Conclusion**

This study is an exploratory study. The organizational climate does not appear to have an influence on perceived desirability and perceived feasibility with the exception of innovativeness in respect of feasibility. As model *R5* indicates, the organizational climate has explanatory power for intrapreneurial intentions. The efforts placed by firms on the environment thus has an impact on intentions. Further research is needed to explore the other factors that would influence action. Desirability appears to be an area that companies should look at since it is found to be a significant influence on action.

The paper has limitations as the sample was based on willing respondents in middle management. The Singapore context may have led to findings are peculiar to the local context



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