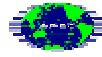


**A COMPARATIVE STUDY OF PRESIDENTS' VOCATIONAL INTERESTS
ON CORPORATE STRATEGY, ORGANIZATIONAL STRUCTURE AND
PERFORMANCE BETWEEN JAPANESE VENTURE COMPANIES AND
SMC IN CHINESE TAIPEI**

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ABSTRACT

A comparative study of the effects of SMC's presidents' Vocational Interests according to the Holland's (1985) R-I-A-S-E-C model to corporate behavior and performance between Japan and Chinese Taipei was proposed and tested in this paper. The proposed analytical framework incorporated with corporate HRM strategy, organizational structure, and corporate growth rate in sales. Samples of 335 Japanese and 172 people in Chinese Taipei data were used for confirmatory factor analysis to figure out each type scores, and for correlation analysis to identify the relationship between each type score and corporate behavior, as well as performance. The contribution and limitation will be discussed, in addition to the directions for future study.



RESEARCH BACKGROUND

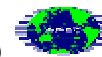
Japan has been facing a serious post-bubble economic crisis throughout the late 90's. Its effects especially in area of corporate structure, business core competencies, and Human Resources Management (HRM) strategies. For example, flattening and networking corporate structure, investing in a specialized business domain, and reduction of human resource costs by increasing internal competition and restructuring employees are introduced. In HRM area, Japanese companies have been introducing practices such as an early retirement, performance-based pay systems and downsizing thorough dismissal plan. Those HRM strategies are just the opposite of the traditional Japanese style that base on the long- term employment of employees.

To cope with such a severe downward economic situation, tripartite efforts among government, private sector and academic institutions have been working together to create new business innovations by starting new business in Japan to breakthrough the economic recession. The entrepreneurial business innovations have potential to grow business rapidly by creating new market, with relatively small investment and employees. This is so called the third "venture business" movement following those of 70's and 80's in Japan.

The first venture movement was during 1970 to 1973, and it brought number of new engineering & technology companies that contributed rapid economic development in Japan. During those periods, the current Japanese leading companies, such as SONY and HONDA were evolved in Japan. Likewise, the second venture movement during 1983 to 1986 sprouted many advanced technology related companies, such as Kyosera, Horiba were grown as the successful Japanese companies.

Throughout these venture movements, relationship between strong personality and performance of the company could be pointed out among the successful venture companies. Like Mr. Akio Morita of SONY and Mr. Soichiro Honda of HONDA, and, founders of venture business tend to have a strong entrepreneurial spirit to create new product. In addition, many of those presidents have career background as engineers themselves, and have strong commitments to their technology and quality of products. Finally, those venture companies are small in size at the beginning, and president's leadership is likely transmitted throughout the company. It is assumed that presidents' personality might have a strong influence on the corporate culture, strategy formation, and achievements, and it will explain the key factor for success to small venture business companies.

According to R-I-A-S-E-C model proposed by Holland(1985), a typology of six personality types is offered as a tool for understanding individual vocational interest, work behavior, and achievement. Based on this model, a relationship between a president's typology in venture company which will be reflected in management style and their relationship with corporate behavior as well as their performance will be analyzed.



Because small and medium sized enterprises (SME's) are regarded as a new driving force to create market and employment, they are becoming popular not only in Japan, but also in the other Asian countries, as well as in the U.S and Europe countries. Therefore, it will be interesting to conduct an international comparative survey to test the relationship between president's personality type and their corporate behavior and performance in SME. Because of steady economic growth during Asian economic recession through SME's, especially in area of high-technology, Chinese Taipei, Republic of China was chosen to compare with Japan.

Purpose of this study is, first to identify the personality type most frequently found in SME's presidents for Japan and Chinese Taipei. If there is similarity in types between two sample sets, it will suggest the universality in the type of personality for presidents for SMEs. Secondly, this survey tests the effects of presidents' personality to their companies' corporate behavior and performance. If a certain type of personality shows strong effects to corporate achievements, it will suggest the type of personality that have higher potentiality in SME management.

THEORETICAL BACKGROUND

The origin of categorizing personality in career was developed by vocational counselor in education, military and clinical settings. Holland (1958) started construction of Vocational Preference Inventory and gradually modified the model to categorize people in terms of interest or personality types.

Basic ideas of Holland's (1985) R-I-A-S-E-C model is consists of three basic aspects. First, the model characterize people by their similarity to each of six personality types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Second, the environments in which people live can be characterized by their six model environments. Third, matching of a person with respective environment leads to outcomes include vocational choice, vocational stability and achievement. Therefore, model suggest that people search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take their responsibility more confidentially.

Therefore, it will be hypothesized that presidents of SMEs show a particular personality type in common, and their personality will bring the success in their business under their type of environment.

Followings are descriptions of a. preferences, b. competencies, c. self-perceptions, and d.values for each type of personality, and figure 1 indicates the hexagonal formation of types depend on the similarity of characteristics among types.

1) Realistic Type

- a. Prefers realistic occupations or situations in which one can engage in preferred activities and avoid the activities demanded by social occupations or situation.
- b. Uses realistic competencies to solve problems at work and in other settings.
- c. Perceives self as having mechanical and athletic ability and lacking ability in human



relations.

- d. Values concrete things or tangible personal characteristics- money, power, and status.

2) Investigate Type

- a. Prefers investigative occupations or situations in which one can engage in preferred activities and competencies and avoid the activities demanded by enterprising occupations or situations.
- b. Use investigative competencies to solve problems at work and in other settings.
- c. Perceives self as scholarly, intellectual, having mathematical and scientific ability, and lacking in leadership ability.
- d. Values science.

3) The Artistic Type

- a. Prefers artistic occupations or situations in which one can engage in preferred activities and competencies and avoid the activities demanded by conventional occupations or situations.
- b. Uses artistic competencies to solve problems at work and in other settings.
- c. Perceives self as expressive, original, intuitive, introspective, independent, disorderly, and ability in acting, writing, and speaking.
- d. Values esthetic qualities.

4) The Social Type

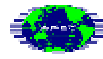
- a. Prefers social occupations and situations in which one can engage in preferred activities and competencies and avoid the activities demanded by realistic occupations and situations.
- b. Uses social competencies to solve problems at work and in other settings.
- c. Perceives self as liking to help others, understanding others, having teaching ability, and lacking mechanical and scientific ability.
- d. Values social and ethical activities and problems.

5) The Enterprising Type

- a. Prefers enterprising occupations or situations in which one can engage in preferred activities and avoid the activities demanded by investigative occupations and situations.
- b. Uses enterprising competencies to solve problems at work and in other situations.
- c. Perceives self as aggressive, popular, self-confident, sociable, possessing leadership and speaking abilities, and lacking scientific ability.
- d. Values political and economic achievement.

6) The Conventional Type

- a. Prefers conventional occupations or situations in which one can engage in preferred activities and avoid the activities demanded by artistic occupations or situations.
- b. Uses conventional competencies to solve problems at work and in order



situations. Perceives self as conforming, orderly, and as having clerical and numerical ability.

c. Values business and economic achievement.

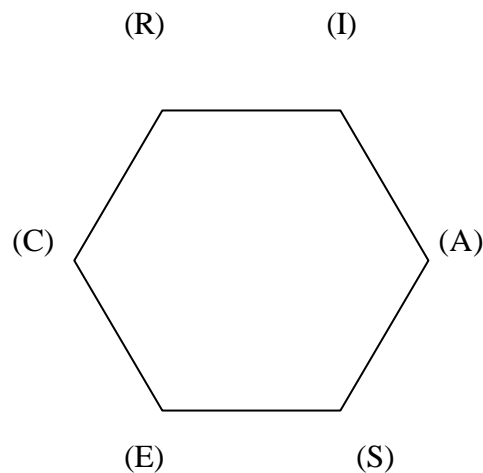


Figure 1 Hexagonal Formation of Personality Types

METHOD

Sample and Procedure

Questionnaire survey were conducted to presidents of Japanese venture business companies and SME companies in Chinese Taipei. For the Japanese survey, sample was selected from industrial sectors in “Almanac of Venture Companies 96” published by Nikkei News Paper Co.ltd(1996). Questionnaires were sent to 1,361 presidents by mail, and 335 replied by enclosed self-stamped envelop (Response rate: 24.6%). For the survey of Chinese Taipei, 1,428 companies in industrial sectors with employee size of between 100 to 300 were selected, based on the company list published by National SME agency. Questionnaire were sent directly to presidents with self-stamped envelope, and 172 replied (response rate: 12.04%).

Variables

Personality Type. Personality type was measured by thirty keywords reflecting respondents’ personality, consisting six dimensions (6 personality types x 5 words)? Sample are requested to circle all words fit to the traits of him/her. Followings are the category of types for each keyword. Realistic: adaptable, specific/concrete, straightforward, introverted, sincere; Investigative: inquisitive, independent, quiet/plain, intelligent, exacting; Artistic: theoretical, creative, imaginative, intuitive, emotional; Social: generous, cooperative, social, positive, kind; Enterprising: adventurous, impulsive, talkative, ambitious, optimistic; Conventional: conservative, prudent, practical, efficient.

Corporate Strategy. A 23 item scale developed by Kato(1996) was used to



measure corporate strategies. They are classified into five categories: financial(6), marketing(5), organizational(5), technological(3), and human resources(3) . Samples are required to choose the five most frequently used items out of 23 items at the company in last five years.

Organizational Structure. A three-item scale was used to measure the organizational structure as a corporate norm on 7-point scale. These questions focus on 1)matching of organization's management goals with the individual goals, 2)levels of corporate structure that make decisions, and 3)sharing of top management's direction and decisions with staff .

Performance. Corporate performance was measured by both quality and quantity scales. For quality scale, five stages of corporate growth level, namely 1)Start-up, 2)Risky growth, 3)Controlled Growth, 4)Maturity, 5)Seeking future diversification were questioned. On the other hand, rate of sales level for 1990 and the most recent accounting year were measured to compare the sales growth rate.

Background data. Additional background data were collected concerning president and company. For president's question, it contains age, length of service as a president, career path to be a president(company founder, succeeded a relative, succeeded a non-relative, hired from outside), generation of presidency (first, second, third, other) field of experience(technology, management, administration). On the other hand, company's question, duration of operating business, number of employees, number of internal and external board of directors were questioned.

RESULTS

Categorizing Personality Types

To categorize personality type of each sample, first of all, confirmatory factor analysis was performed to measure the effecting power to each keyword from the respective personality types. Then, each type score was calculated by adding effecting power of the words showed significant t-value? Thirdly, a z-score was calculated among six type scores to standardize the score. Finally, a personality type for each respondent was determined by the highest z-score among six types.

Table 1 shows the frequencies of each type for Japanese sample and sample of people in Chinese Taipei. For both nationalities, enterprising type was predominant (JPN: 23.3%; TWN:24.4%) and realistic type (JPN: 17.3%; TWN: 16.9%) , conventional type (JPN: 16.1%; TWN: 16.9%) are following respectively.

This result shows that entrepreneurial personality is prevailing among presidents of SME companies both in Japan and Chinese Taipei.

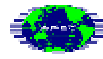


Table 1 Frequencies of R-I-A-S-E-C Personalities

	JPN		TWN	
	N	%	N	%
Realistic	58	17.3	29	16.9
Investigative	42	12.5	20	11.6
Artistic	54	16.1	26	15.1
Social	49	14.6	26	15.1
Enterprising	78	23.3	42	24.4
Conventional	54	16.1	29	16.9
Total	335	100.0	172	100.0

Chi-square Results

Table 2 indicates the result of Chi-square analysis tests the relationship between personality score and president's career path. Because career personality is supposed to be closely related to one's career experience that formed the individual profession, it was hypothesized that there is a relationship between each career personality and several indicators of career background. Out of three indicators used in this analysis, career route, generation of presidency, and field of experience, similar results was found between Japanese sample and sample of people in Chinese Taipei.

For Japanese sample, significant relationship between personality score and career route was found. Within career route, sample was asked to choose one from 1)company founder, 2)succeeded a relative, 3)succeeded a non-relative, 4)hired from outside, and higher frequencies were found as 1) company founder for Enterprising type and 2)succeeded a relative for Conventional type, whereas 3)succeeded a non-relative and 4)hired from outside for Realistic type. Therefore, founder of the company tend to have Entrepreneurial type rather than other types, however, those presidents who succeeded a relative have Conventional type, and those came from non-relative successors show Realistic type.

On the other hand, for the sample of people in Chinese Taipei, it shows a similar result with Japanese sample, but in the generation of presidency. The first president (s/he could be the same as the founder, however, the first president refer to as an official title) shows Enterprising type most frequently among personality types and the second president shows Conventional type most, whereas, fourth and other generation of presidents show Realistic types.

Therefore, both founder and the first presidents show Enterprising type of career personality most frequently, and the succeeding presidents are shifting to more conventional or administrative tendency of personality in Japan and Chinese Taipei.

Table 2 Cross-tabulation (Chi-square)
Japanese

Career Path I: Career route of the president

		R	I	A	S	E	C
1	Company founder	20	23	33	20	36	14
2	Succeeded a relative	20	12	16	19	24	30
3	Succeeded a non-relative	11	6	4	5	8	4
4	Hired from outside	5	1	1	4	2	4

Pearson's Chi-square:.024

Career Path II: Generation of presidency

		R	I	A	S	E	C
1	This company's First	19	19	28	19	34	15
2	Second	20	16	17	17	20	23
3	Third	9	3	6	8	10	7
4	Fourth	5	1	1	2	2	6
5	Other	4	2	1	2	4	1

Pearson's Chi-square:.425

Career Path III President's field of experience

		R	I	A	S	E	C
1	Technology	32	29	32	30	38	29
2	Management	20	7	15	12	19	13
3	Administration	5	6	2	3	9	8
4	Other	-	-	4	2	6	2

Pearson's Chi-square:.243

People of Chinese Taipei

Career Path I: Career route of the president

		R	I	A	S	E	C
1	Company founder	6	9	10	8	15	14
2	Succeeded a relative	5	5	8	4	9	7
3	Succeeded a non-relative	12	2	2	8	8	6
4	Hired from outside	2	3	4	4	7	1

Pearson's Chi-square:.20

Career Path II: Generation of presidency

		R	I	A	S	E	C
1	This company's First	4	8	15	6	18	10
2	Second	5	3	3	10	9	11
3	Third	5	5	2	3	6	3
4	Fourth	5	2	-	2	4	-
5	Other	7	1	2	4	1	3

Pearson's Chi-square:.01

Career Path III President's field of experience

		R	I	A	S	E	C
1	Technology	11	9	10	9	21	13
2	Management	7	3	11	9	13	8
3	Administration	5	2	2	2	4	5
4	Other	5	6	3	6	3	2

Pearson's Chi-square:.48



T-test Results

To compare the average score of continuous variables between Japan and Chinese Taipei, a t-test analysis was performed (Table 3). For background information, Japanese presidents' age and length of service show significantly higher score than that of the presidents in Chinese Taipei. Duration of operation for Japanese company was longer than companies of Chinese Taipei, however, number of employee in Chinese Taipei was surpassing that of Japanese company. There was no significant difference in number of internal board of directors between two samples, however, number of external director in the companies of Chinese Taipei was larger than Japanese companies.

Regards to the internal corporate structure, matching of organizational goals and individual goal was more compatible in the companies of Chinese Taipei. Likewise, decisions were made more participatively in the companies of Chinese Taipei. However, Japanese president think top management's direction and decisions were understood by staff better than the presidents in Chinese Taipei.

Finally, growth rate in sales was higher for Japanese SME than SME in Chinese Taipei, however, development stage was higher for SME in Chinese Taipei.

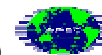
As a overall results of t-test, Japanese SME indicate more entrepreneurial characteristics for size of employees and rapid growth rate. On the other hand, although SMEs in Chinese Taipei are younger in duration of establishment than Japanese venture companies, SMEs in Chinese Taipei show more matured, well internally structured characteristics.

Table 3 Results of t-test analysis

	JPN	TWN	t-value
	Ave.(s.d)	Ave.(s.d)	*<.05, **<.01
President's age	57.79(9.01)	48.03(8.60)	14.22**
Length of service(yr)	15.09(11.12)	9.62(8.18)	6.46**
Dur of operation(yr)	34.42(16.78)	23.25(11.71)	10.03**
No of employees	128.64(171.75)	201.02(150.96)	-5.81**
Internal Board	4.80(2.75)	7.79(36.41)	-1.49
External Board	1.05(1.29)	4.42(11.01)	-5.04**
Goal matching	4.33(1.17)	4.58(1.34)	-2.50*
Decision style	2.38(1.38)	3.00(1.44)	-5.46**
Direction sharing	4.43(1.13)	4.23(1.30)	2.11*
Growth rate(%)	12.36(22.18)	2.58(9.63)	6.35**
Development stage	3.54(1.16)	3.77(0.87)	-2.81**

ANOVA Results

In order to examine the relationship between personality type and corporate behavior and performance, Analysis of variance (ANOVA) with sheffe examination was performed. As indicated in Table 4, although there were no variable indicate statistically significant level of difference in average score among personality types, all



variables contain at least one personality type has positive discrepancies to the rest of all types.

Interestingly, those highest scored types between Japanese presidents and the presidents in Chinese Taipei were different. For Japanese presidents, Entrepreneurial type shows the highest score for the growth rate, and other highest score were categorized either Social type (Stages of corporate growth, Decision style) or Investigative type (Goal matching, Direction sharing).

On the other hands, for the presidents in Chinese Taipei, Social type shows the highest score for the growth rate, and the rest of types were either Realistic type (Stages of corporate growth, Goal matching), Conventional type (Decision style) and Social type (Direction sharing).

Table 4 Results of ANOVA

	JPN		TWN	
	highest type(top)	Differences	highest type(top)	Differences
Growth rate	<u>Entrepreneurial</u>	<u>16.26</u>	<u>Social</u>	<u>8.52</u>
	Realistic	4.23	Realistic	7.27
	Investigative	5.95	Investigative	7.03
	Artistic	3.41	Artistic	7.18
	Social	5.52	Entrepreneurial	7.17
	Conventional	6.17	Conventional	6.64
Stages of corporate growth	<u>Social</u>	<u>3.77</u>	<u>Realistic</u>	<u>4.03</u>
	Realistic	.45	Investigative	.51
	Investigative	.11	Artistic	.58
	Artistic	.58	Social	.32
	Entrepreneurial	.16	Entrepreneurial	.29
	Conventional	.05	Conventional	.03
Goal matching	<u>Investigative</u>	<u>4.56</u>	<u>Realistic</u>	<u>4.75</u>
	Realistic	.26	Investigative	.13
	Artistic	.20	Artistic	.37
	Social	.21	Social	.19
	Entrepreneurial	.26	Entrepreneurial	.18
	Conventional	.43	Conventional	.14
Decision style	<u>Social</u>	<u>2.71</u>	<u>Conventional</u>	<u>3.42</u>
	Realistic	.25	Realistic	.61
	Investigative	.57	Investigative	.62
	Artistic	.50	Artistic	.24
	Entrepreneurial	.36	Social	.39
	Conventional	.28	Entrepreneurial	.69
Direction sharing	<u>Investigative</u>	<u>4.55</u>	<u>Social</u>	<u>4.96</u>
	Realistic	.08	Realistic	.89
	Artistic	.05	Investigative	1.07
	Social	.24	Artistic	.73
	Entrepreneurial	.01	Entrepreneurial	.89
	Conventional	.37	Conventional	.82

p**<.05

As a conclusion of ANOVA analysis, although there were no significant differences in average score among personality types for any variables, a highest score of specific organizational outcome was brought under a particular type of president's personality



type. It might be suspected that significance value was lowered due to the smaller number of observations in each type.

Moreover, an interesting finding is that there were difference in relationship between a type that shows the highest score and organizational outcome between Japanese sample and sample of people in Chinese Taipei. Therefore, personality type contingent in specific corporate activity may be various depend on the circumstances of each country.

Cross-tabulation for Corporate Strategy

Table 5 shows cross-tabulation between personality types and corporate strategy. Corporate strategy was ordered by frequencies of total types and top five items were listed.

According to this analysis, Japanese sample and sample of people in Chinese Taipei showed similar results. First, both samples show higher ranked strategies were concentrated in either new product development (ex. Strengthen new product development system. JPN:13.6%, TWN:9.4%) or market development (ex. Increased share in current market. JPN: 10.8%, TWN:11.9%).

Secondly, for both samples, Enterprising type shows more strategies than other types. It also means that enterprising type of president use higher ranked strategies more than other type of presidents.

These results might suggest that Enterprising type of president uses an effective style of strategies more than other type of presidents both in Japan and Chinese Taipei.

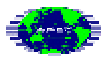
Table 5 Cross-tabulation for Corporate Strategy

Japan

#	Item	Total	R	I	A	S	E	C
1	Strengthen new product development system	13.6	11.0	9.2	12.0	8.3	15.6	9.8
2	Increased share in current markets	10.8	8.6	7.4	9.8	6.7	11.7	8.3
3	Expansion into new product	8.9	8.9	5.2	7.4	6.4	8.6	6.7
4	Strengthen facilities to allow for expanded production capacity	6.6	5.5	5.5	5.2	3.1	7.4	5.5
5	Improved productivity of Company assets through streamlining	6.4	4.9	2.8	3.7	5.5	8.6	5.5

Chinese Taipei

#	Item	Total	R	I	A	S	E	C
1	Increased share in current markets	11.9	12.2	6.1	8.5	9.1	12.2	9.8
2	Increased share in current markets	9.4	8.1	8.5	6.7	4.3	12.2	7.9
3	Strengthen facilities to Allow for expanded production capacity	9.2	9.1	6.1	4.9	8.5	8.5	7.3
4	Increased facilities investment to enable streamlining, energy conservation, and labor saving	7.8	9.1	3.0	4.3	8.5	9.8	6.7
5	Expansion into new product	7.8	6.1	4.3	2.4	6.1	13.4	5.5



Correlation Results

Table 6 indicates the correlation coefficient between score for each type and dependent variables. For Japanese sample, no significant relationship was found between growth rate and personality types. However, positive (Conventional) and negative (Enterprising, Artistic) relationship was found for development stage. However, a growth speed, a new variable calculated from developing stage divided by establishing years show positive relationship with artistic score and enterprising score. From this result, it will be assumed that company develops faster under Artistic and Enterprising types of presidents in Japan.

On the other hand, only significant coefficient was found between social score and growth rate in sample of people in Chinese Taipei.

Therefore, different types of performance were expected in relationship with president's career personality scores. For Japanese sample, enterprising and artistic score might accelerate growth speed, however, not likely for the growth rate in sales. On the other hand, higher social score might improve the growth rate in sales in Chinese Taipei.

Table 6-1 Correlation Analysis (Japan)

	R	I	A	S	E	C
Growth Percentage	-.064	-.054	-.047	-.068	-.068	-.054
Developing Stage	-.010	.015	-.094*	.045	-.094*	.112*
Developing Speed	-.015	.065	.116*	.080	.121*	.058

*<.05 **<.01

Table 6-2 Correlation Analysis (Chinese Taipei)

	R	I	A	S	E	C
Growth Percentage	.143	.146	-.112	.184*	-.049	.117
Developing Stage	.007	-.064	-.085	-.076	-.112	.035
Developing Speed	-.063	-.011	.082	-.016	.080	-.080

*<.05 **<.01

CONCLUSIONS

This study aimed to identify the validity of Holland's R-I-A-S-E-C typology in relationship with corporate structure, use of corporate strategy and corporate performance. As a result of a comparative survey, similarities and differences between presidents of Japanese venture companies and SMEs of Chinese Taipei were identified.



Similarities were, the exceeding percentage of Enterprising type of career personality, relationship between Enterprising type and president's career path as founder or the first, and frequently use of corporate strategy by Enterprising type of presidents. Therefore, Enterprising type show features in common for those presidents.

On the other hand, differences were open and participated style of organizational structure in SME of Chinese Taipei, and contingencies in career personality and organizational outcomes between two samples. Although Japanese sample and sample of people in Chinese Taipei tend to use the same kinds of corporate strategies, outcomes are varied with managerial conditions that companies are facing.

Implication of this study could be two folds. For academic implication, this study will indicate a new approach to analyze the relationship between top leader's management style based on Holland's R-I-A-S-E-C model and corporate behavior as well as performance. Because this model showed Enterprising type as a majority of career personality between two samples, it will support the validity of the model across the cultural difference. Therefore, it will be interesting to apply this model to other samples in different industries, corporate size, and rank in organization.

For practical implication, since there were contingencies between type of career personality and style of strategy to improve the company performance, president's R-I-A-S-E-C type will be used as a marker to find out the appropriate corporate strategy for each company lead by president have different type of career personality. Also, the result of this survey will provide an information for developing and selecting successor who have an appropriate career personality to carry over the business from the previous generation.

For future of study, increasing number of samples composed of different nationalities will be demanded to verify the generality of the R-I-A-S-E-C type indicator to measure the relationship between president's career personality and corporate behavior.



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