

CULTURAL DIMENSIONS OF NEW ZEALAND ENTREPRENEURIAL BEHAVIOR

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Abstract

Research by Hofstede (1980) identified four dimensions of culture that can be expected to impact on entrepreneurial behaviors within a country. McGrath, MacMillan, and Scheinberg (1992) undertook a multi-country comparison which indicated significant differences between entrepreneurs and career professionals, but which did not assess each country independently. This research develops the McGrath et.al. (1992) instrument for use in New Zealand and presents results from a national (three center) survey. The paper analyses the results in the context of the Hofstede (1980) dimensions, and suggests further research directions.

Preliminary Draft. Please do not quote.

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Introduction

The purpose of this research is to identify differences between New Zealand entrepreneurs and non-entrepreneurs with respect to cultural dimensions as defined by Hofstede (1980) (hereafter Hofstede). The first section of the paper analyses the instrument used by McGrath, MacMillan and Scheinberg (1992) (hereafter MMS), which identifies survey items that discriminate between entrepreneurs and non-entrepreneurs from a sample of more than 3000 individuals in eight countries. The second section is a discussion of a revised instrument used in a New Zealand survey paralleling MMS. The final section reports the findings of the New Zealand study in the context of Hofstede's study.

The New Zealand survey (Appendix 1) was sent to 1000 firms in Christchurch, Dunedin and Wellington listed in the **New Zealand Business Who's Who** (1994) with starting dates of 1980 or later. The response rate was 61%. The results indicate that there are no significant differences between responses from the three centers, suggesting that the results can be generalized to the New Zealand population. It should be noted that Auckland was specifically excluded because of its multi-cultural nature contributed to specifically by a high level of recent immigrants from many different ethnic groups. The survey did not ask respondents to indicate any ethnic affiliation, and such questions would almost certainly be necessary to identify sub-group cultural influences in the Auckland region.

Surveys were personally addressed to the chief executive officer or managing director. Respondents were asked to identify their position as either owner/manager or professional manager. The majority (83%) of respondents identified themselves as owner/managers. This distribution was probably to be expected, as the covering letter clearly identified the research as being concerned with entrepreneurial attitudes. The distribution of respondents suggests that the conclusions from the survey are more indicative of business people with an ownership stake than of managers. Only one statement in the survey generated a significant difference between

responses of self-identified owners and of self-identified managers. This research does not attempt to differentiate further between entrepreneurs and managers at this stage.

MMS define entrepreneurs as individuals who had begun a business that was still operating after two years and which employed at least one other person. The sample of New Zealand businesses effectively used a two year survivorship filter based on the timing of the mailing compared to the compilation of the source publication. Discussions with the editors of the **New Zealand Business Who's Who** indicate that it is highly probable that all entries involve businesses that employ at least one person, but that information is not specifically available. The editors also indicate that the publication is intended to include all New Zealand businesses that do business with other businesses. The results will be biased to the extent that the sampling method excludes any segment of entrepreneurial activity.

MMS define non-entrepreneurs as career professionals, and use a sample of school teachers, bank managers, and government employees. The New Zealand instrument was sent to 55 primary and secondary schools in the same three centers as above. A total of 382 responses were received. The surveys had been sent in bulk to the schools, so no responses rate can be determined. The average score by item is presented graphically in Appendix 2 and numerically in Appendix 3. On the basis of simple comparisons of means, all but four statements generate significant differences between the two groups (0.01 level).

Hofstede's Cultural Dimensions

In their analysis, MMS claim to be extending the work of Hofstede, which was an attempt to define culture and its consequent influences on behavior. Hofstede suggested four defining dimensions of culture:

Dimension Definitions	
Power Distance	Relationship between individuals and collectives
Individualism	Management of inequality between people
Uncertainty Avoidance	Stance toward the future
Masculinity	Allocation of roles between the sexes

Hofstede gathered survey data between 1967 and 1973 from 116,000 people working in a single multinational corporation in 40 countries, and found evidence of stable characteristics within these four dimensions that were different among countries. Hofstede used his results to suggest general, persistent cultural differences. Subsequently, other researchers looked at how culture impacts on entrepreneurial behaviors as a subset of general population behaviors (El-Namaki, 1988; Peterson, 1988).

Hofstede's study generally concludes that New Zealand forms part of the cluster that includes the United States, Great Britain, Canada, Ireland, South Africa, and Australia. His study, and conclusions are based on work done in the 1970s, at a time when New Zealand enjoyed a high standard of living, maintained relatively high levels of regulation and/or public ownership of assets in many sectors, and supported an extensive welfare state. Arguably, all of these conditions have changed, with the current climate marked by a perception of widening gaps in the standard of living between groups of New Zealanders, significant privatization or corporatization of state owned assets and deregulation of many sectors, and a more fragile welfare state. While many of the cultural factors identified by Hofstede would have been consistent with the general social conditions of the 1970s, it is likely that some of those factors would be different in the 1990s. It is, of course, also likely that other countries would have different outcomes if Hofstede's work were to be repeated today. Hofstede himself suggested that replication of his study was desirable, but this has not occurred.

The MMS Study

The constructs suggested by Hofstede and used by MMS could also apply in locating entrepreneurial behavior in an overall cultural context. Such constructs are difficult to create and quantify. MMS try to extend Hofstede's work in the area of entrepreneurial behavior by claiming that each of their discriminating survey items belongs to one of Hofstede's four dimensions. Hypotheses about how entrepreneurs are expected to behave in relation to the four dimensions are then posited. Responses are classified, and claims are made about support for the hypotheses. The authors do not describe their validation processes, and do not report reliability test results, making analysis of their findings difficult.

MMS report that their discriminant analysis correctly classifies entrepreneurs 73% of the time, and the qualitative analysis they present tends to focus on relative responses, rather than the specific values. The authors themselves suggest that the real strength of their research lies with the relativities (pg. 127), but they leave the problems with the instrument unaddressed in their exposition. The new instrument is designed to minimize some of the problems with the instrument without diminishing the underlying value of the MMS thesis.

Instrument Technical Issues

In the category of technical issues, the quantification of the Likert scale used in the survey is a concern. The numerical values are arbitrary, and are assumed to be equidistant on a continuous scale. Consequently, parametric tests are less than satisfactory, but numerical values are necessary if any comparisons are to be made. These problems apply to all Likert Scale quantifications, but should be acknowledged.

The reliability of survey instruments is generally measured by Cronbach's alpha, which is the average covariance of the items in the survey. It is a measure of internal consistency of the scale being used. It is interpreted to be the expected correlation between this twenty five item scale measuring differences between entrepreneurs and non-entrepreneurs in Hofstede's cultural

dimensions and any other twenty five item scale measuring the same thing. In the New Zealand study, the Cronbach alpha was 0.6872. No reliability tests were reported by MMS.

Instrument Statement Issues The difficulties with creating appropriate survey instruments are well documented (Fowler, 1988). In this particular case, the published MMS article does not include mention of any efforts made by the authors to test the reliability and validity of their instrument. A pilot study was conducted in 1994 as a first step in replicating the MMS study in New Zealand. Concerns were raised by participants about some of the statements, which led to extensive interviews with focus groups formed from the sample targets.

Open discussion debriefings were held on separate occasions with subsets of the entrepreneur, career professional, and student pilot samples. The purpose of the discussions was to gain insight into what the respondents thought the statements actually meant and what the respondents meant by their answers. Approximately half of each pilot group was present at each meeting. The problems identified in those discussions are indicated by the bold print in the individual statements in Appendix 4. Where the statement was considered completely ambiguous, the entire statement is highlighted, while compound sentences are indicated with italics.

Several general concerns were raised by the participants. Essentially all expressed difficulties in knowing the appropriate or desired perspective to take. Were they to express their personal views or the views they believe society holds, were they to answer as employers, employees, self-employed people, or from some ideal position they had never actually held? Several felt that the wording of some statements led to a particular perspective being taken, but this perspective was not necessarily consistent throughout the survey. Some found some questions too ambiguous to warrant a response. Specific wording changes were discussed with the groups, and generally the views of the groups were incorporated in the new instrument. The revised instrument begins with

the instruction: *For each statement, please indicate your personal level of agreement/disagreement.*

Statement Construction and Evaluation

Comparisons with prior work, especially studies which incorporate several countries, are valuable in general. Actual or close approximations to MMS statements were used whenever possible. Fifteen MMS statements were used as in the original or modified as a result of the focus group discussions. New statements were designed to fall into one of the four Hofstede dimensions, using Hofstede's discussion of the characterizations of the dimensions as a guide.

Classification of the statements by dimension is not straightforward, and was done in three ways as reported in Appendix 1. In the first column, the characteristics described by Hofstede were used to classify all 25 statements (column labeled **Current**). In the second, the MMS classification was used for the 15 statements common with that research (column labeled **MMS**). In a final classification, factor analysis was used to divide the statements into four factors¹ (column labeled **Factors**).

Individualism

Hofstede describes individualism as “the relationship between the individual and the collectivity which prevails in a given society (pg. 148)”. Hofstede created an individualism index for each of the 40 countries in his study, and placed valuation of personal time at one end of the index spectrum and position within a company structure at the other. He contrasts “inner-directed”

¹ The factor analysis generated seven factors with eigenvalues greater than one, with a cumulative percentage of variance of 48.1. This result, compared with the four factor model, suggests that the instrument was not an efficient measure of Hofstede's four dimensions.

with “other-directed” influences. He also suggests that in individualistic societies the concept of losing face would play a relatively minor role.

Hofstede created an Individualism Index which he used to predict country scores and compare actual scores. He reported an actual score for New Zealand of 79 compared to a predicted score of 58 (on a scale up to 100). In specific work related areas, respondents in more individualistic countries tended to believe that staying with one company and working for big companies were not desirable behaviours. Further, companies were not seen to be responsible for their employees.

Entrepreneurs are traditionally portrayed as being even more individualistic than the norm. In terms of the discussion above, entrepreneurs would be expected to value both personal time and achievement outside of organizations. Entrepreneurs would be expected to value competition over cooperation, and to believe in non-interventionist governments. They would also be expected to believe that planning is more important than luck in success, and to have less concern about failure than non-entrepreneurs. These characteristics were used to generate statements 1,3,7,14,16,18,19,22, and 25, although MMS had classified statements 16 and 25 as uncertainty avoidance and masculinity respectively. Under this classification, the survey results indicated support for the hypothesis that entrepreneurs are more individualistic than non-entrepreneurs with seven statements, no significant difference with one, and lack of support with one (Appendix 3).

Power Distance

Hofstede discusses the power distance dimension in the context of inequality between people within a society. Inequality can be manifest in wealth, power, education, and basic physical and mental individual characteristics. The power distance dimension is a characteristic of social systems and organizational styles, however, not of individuals. Hofstede also found clear

differences in responses by occupation. Education and hierarchical position accounted for 88% of the variance in the occupational power distance index scores. In terms of Hofstede's Power Distance Index, New Zealand had an actual score of 22 with a predicted score of 35, and had the fourth lowest actual score of 39 countries.

Entrepreneurs might be expected to prefer larger power distance situations than non-entrepreneurs. They are more likely than others to value money and see it as a reward for achievement. They are expected to value education as a means to achievement. They are also more likely to want to control employees and to be able to discriminate in their treatment of clients if they think it profitable to do so.

The wealth aspect generated statements 4 and 8, education statement 20, and power in the work place statements 13 and 17. MMS had classified statements 8 and 13 as masculinity statements, and 17 as an individualism statement. Based on the current classification, the entrepreneurial hypotheses are supported by four statement responses (4,8,13, and 20), but not by statement 17 (Appendix 3).

Uncertainty Avoidance

Hofstede characterizes uncertainty avoidance with three indicators: rule orientation, employment stability and stress, leading to the need for security and a dependence on experts. He finds that uncertainty avoidance is negatively correlated to the need for achievement, which would suggest that entrepreneurs will exhibit low levels of uncertainty avoidance. He also finds that rituals and rules are used by people to avoid uncertainty, which would also suggest that entrepreneurs would exhibit low levels of uncertainty avoidance.

Hofstede found that age had a strong relationship with the country's uncertainty avoidance index. He reported actual figures, and age adjusted figures. For New Zealand, the actual score was 49, while the age adjusted score was 60, with a 39 country average of 64 for both. He concludes, however, that the clusters of countries do not vary significantly with either score, and New Zealand does not move as a result of the adjustment.

Entrepreneurs are expected to be less concerned than others with promotion in organisations, and with frequent changes of job or location. They are more likely to see good time management as necessary for success, and to see both the excitement and dangers of starting a business as adding acceptable levels of stress. They are also more likely to see themselves as being more in charge of their lives than non-entrepreneurs. These characteristics led to the development of statements 2,5,6,9,11,12 and 21. MMS had classified statement 2 as an individualism statement, statement 5 as power distance and statement 9 as masculinity. They did not have equivalents of statement 6 or 21. Four of the statements in this classification (5,6,9,12) resulted in insignificant differences between the two surveyed groups, and of the remaining two, statement two did not support the entrepreneurial hypothesis while statement 21 did provide support (Appendix 3).

Masculinity

Hofstede describes masculinity in very traditional terms of roles for the two sexes. At the same time, he contrasts the "masculine" concepts of aggression, autonomy, and dominance with the "feminine" concepts of nurturance, affiliation and helpfulness. The New Zealand score in his study was 58, and 55 when controlled for the number of women in the actual sample. The 39 country average was 51 for each.

The traditional image of entrepreneurs would appear to be more correlated to the "masculine" set of characteristics, and the hypotheses for this dimension would suggest that entrepreneurs are

more aggressive and more concerned with profit than employee welfare. Statements generated with these concepts in mind were 10,15, 23, and 24. MMS had classified statement 10 as an individualism measure, and had no equivalents for the other three statements. The survey results provided support for the hypotheses with statements 10, 15 and 23, but not with statement 24 (Appendix 3).

Statement Classification

The difficulties classifying the statement are clearly demonstrated in this analysis. For both statements 16 and 25, the different classifications led to different interpretations of results between this study and MMS. In other cases, the statements may not have been sufficiently well formulated to actually measure the construct intended. The individual Cronbach alpha scores based on the current classification are: Individualism, 0.33; Power Distance, 0.21; Uncertainty Avoidance, 0.25; and Masculinity, 0.26. These low scores indicate low levels of reliability that the statements identified actually measure the four Hofstede dimensions. Factor analysis is a statistical data reduction technique designed to determine groupings on the basis of covariances between variables, and is frequently used, as in this case, to find patterns within data sets that might not otherwise be intended or obvious.

The classifications generated by the factor analysis are indicated in the third column of Appendix 1. The algorithm was forced to create four factors, although the program actually found seven factors with eigenvalues above 1. The prior classifications suggest that factor one is individualism, factor two power distance, factor three masculinity, and factor four uncertainty avoidance. Response analysis indicates that eight statements in factor one (Cronbach alpha 0.74) support the entrepreneurial hypotheses, with two not supporting and one not significant. Factor two (Cronbach alpha 0.56) has five statements supporting the hypotheses, with one not significant. Factor three (Cronbach alpha 0.30) has three supporting statements, one non-

supporting, and two not significant. Factor four (Cronbach alpha 0.18) has one supporting and one not significant statement result.

The first two factors have relatively high Cronbach alpha scores indicating reasonable internal consistency. They also provide reasonably consistent support for the entrepreneurial hypotheses relating to Hofstede's cultural dimensions of individualism and power distance. The other two factors have very low Cronbach scores, and very few attributable statements. Consequently, results relating to the Hofstede dimensions of masculinity and uncertainty avoidance, while apparently supportive of the entrepreneurial hypotheses, cannot be given much weight.

Summary and Conclusions

This research has attempted to develop an instrument to measure any differences between entrepreneurs and non-entrepreneurs with respect to Hofstede's cultural dimensions of individualism, power distance, masculinity, and uncertainty avoidance. The results suggest that entrepreneurs can be distinguished from non-entrepreneurs on the basis of attitudes reflecting individualism and power distance. The results also suggest that further work would be required to provide constructs capable of quantifying the dimensions of masculinity and uncertainty avoidance, and that no conclusions can be drawn about entrepreneurs with respect to these dimensions from this research.

The general finding that there are differences between entrepreneurs and others which can be classified as cultural is particularly relevant for policy makers. Governments, including the New Zealand government, regularly intervene in economic activities with the expressed aim of stimulating business growth. An understanding of the attitudes and beliefs that differentiate entrepreneurs from others is important to the extent that growth is influenced by entrepreneurial

activity. Interventions which do not take account of these differentiating attitudes, including the differences between countries, are likely to be less successful than those which do. Further, interventions that are targeted specifically to entrepreneurial outcomes may run contrary to the attitudes and beliefs of non-entrepreneurs. Policy makers might improve the efficacy of their intervention programs by balancing these differences in the design of economic development initiatives.

It must be remembered, of course, that cultural influences are one part of the total picture of entrepreneurial behavior. Further research is required to develop a full understanding of what constitutes and drives entrepreneurial activity. This research, in line with Hofstede and MMS, does suggest that cultural influences are real and pervasive. Further research might identify the impact of culture more definitively, or discover the degree to which cultural influences can be modified by policies designed for particular economic outcomes.

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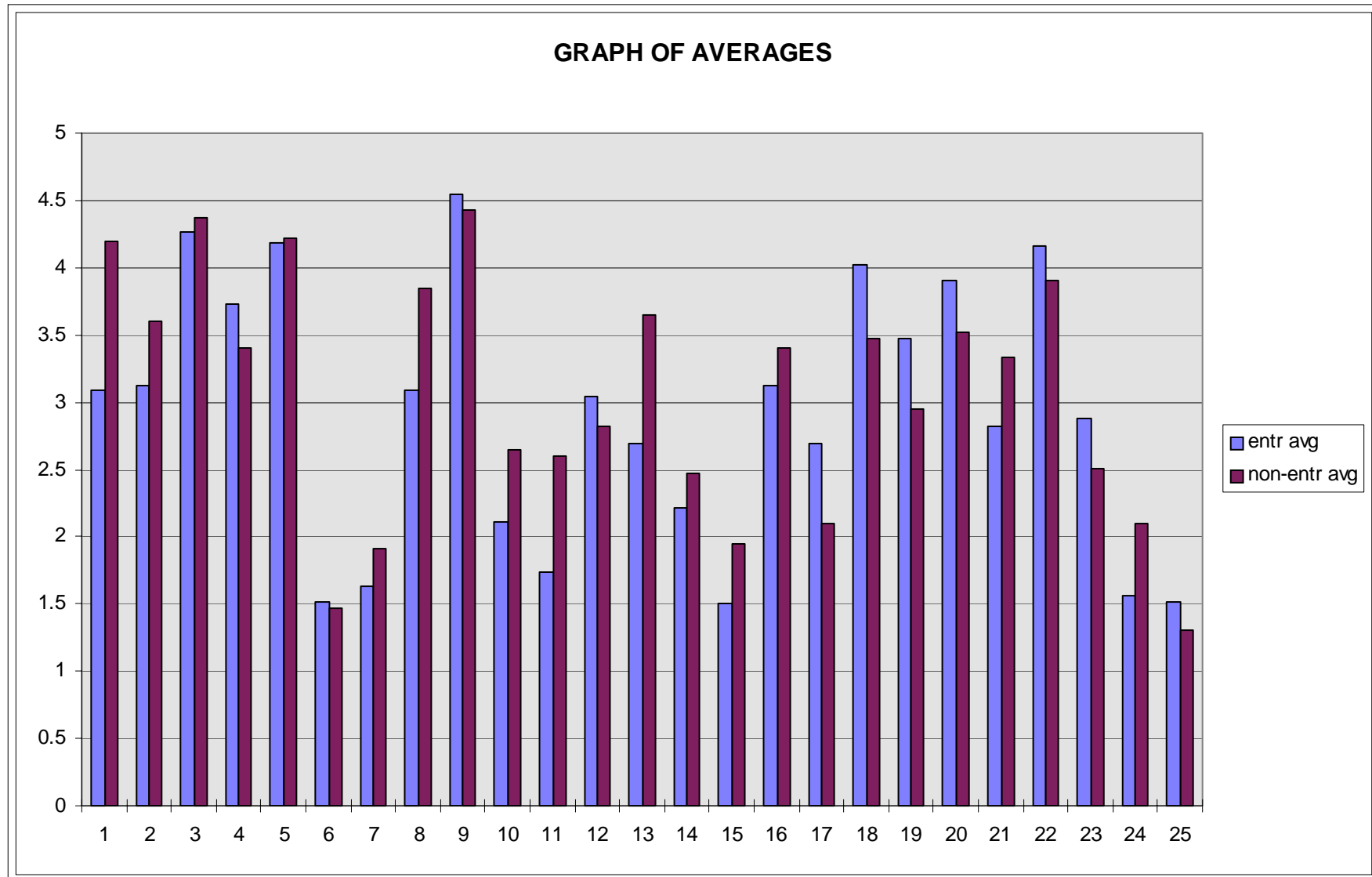
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Appendix 1		Revised Instrument for New Zealand National Survey	
Statement Classifications			
			For each statement, please indicate your personal level of agreement/disagreement
Current	MMS	Factors	(1= strongly agree, 2 = moderately agree, 3= neutral, 4= moderately disagree, 5= strongly disagree)
I	I	F1 = I	1. Being successful means owning your own company.
U	I	F1 = I	2. Being successful means being promoted up through the ranks in a corporation.
I	I	F1 = I	3. Work is more desirable if it's in a large organization.
P	P	F2 = P	4. People with lots of money come from influential families.
U	P	F2 = P	5. Change of jobs or residence should be avoided for successful careers.
U		F3 = M	6. Time management is necessary for success.
I	I	F1 = I	7. Work provides identity and self respect.
P	M	F1 = I	8. Being successful means making lots of money.
U	M	F3 = M	9. Being an entrepreneur means not being able to find a job.
M	I	F1 = I	10. People have a duty to uphold the values and reputation of their family.
U	U	F1 = I	11. Starting a company adds to the excitement of life.
U	U	F4 = U	12. Starting a company means taking a risk of not getting paid employment in the future.
I	M	F1 = I	13. The activities of employees outside working hours should be of concern to their employers.
I		F1 = I	14. People who start new businesses should be respected for contributing to community growth.
M		F1 = I	15. Decisiveness is a necessary characteristic for success.
I	U	F4 = U	16. Failure means losing face/respect.
P	I	F3 = M	17. Companies have a duty to give all clients and customers equal treatment.
I		F2 = P	18. The primary purpose of governments is to redistribute wealth.
I		F2 = P	19. Cooperation between business entities is better for society than competition.
P	P	F2 = P	20. Being successful means having high levels of formal education.
U		F1 = I	21. Entrepreneurs are more in control of their lives than people working for other people.
I		F2 = P	22. Being successful has more to do with luck than planning.
M		F3 = M	23. Working environment is more important than financial rewards.
M		F3 = M	24. Successful businesspeople care about their employees.
I	M	F3 = M	25. Personal time is just as important as work time.

Appendix 2

Revised Instrument National Survey Response Results Averages by question: entrepreneurs versus non-entrepreneurs



Appendix 3

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Revised Instrument National Response Results

Reports the average responses for both entrepreneurs and non-entrepreneurs by statement, along with the t-test probability that the means are equal. The final columns report the two different classifications of statements: Current referring to the expectations at the time the statement was created and Factor referring to the result of the factor analysis. Along side each of the statements is an indication of whether the results provided support for the hypotheses that the entrepreneurial responses would be different from the non-entrepreneurial responses in particular directions. Y indicates support; N indicates no support, NS indicates no significant differences in the mean scores between the two groups of respondents.

Statement	entr avg	non-entr avg	t-test probability	Support: Current Classification		Support: Factor Analysis	
1	3.09	4.20	0.00	I	Y	I	Y
2	3.12	3.61	0.00	U	N	I	N
3	4.26	4.37	0.07	I	NS	I	NS
4	3.72	3.41	0.00	P	Y	P	Y
5	4.19	4.22	0.54	U	NS	P	NS
6	1.51	1.47	0.43	U	NS	M	NS
7	1.64	1.91	0.00	I	Y	I	Y
8	3.09	3.85	0.00	P	Y	I	Y
9	4.55	4.42	0.02	U	NS	M	NS
10	2.11	2.65	0.00	M	Y	I	Y
11	1.74	2.60	0.00	U	Y	I	Y
12	3.04	2.83	0.01	U	NS	U	NS
13	2.70	3.65	0.00	P	Y	I	N
14	2.21	2.47	0.00	I	Y	I	Y
15	1.51	1.94	0.00	M	Y	I	Y
16	3.13	3.40	0.00	I	N	U	Y
17	2.70	2.10	0.00	P	N	M	Y
18	4.02	3.48	0.00	I	Y	P	Y
19	3.48	2.94	0.00	I	Y	P	Y
20	3.90	3.52	0.00	P	Y	P	Y
21	2.82	3.34	0.00	U	Y	I	Y
22	4.16	3.90	0.00	I	Y	P	Y
23	2.88	2.50	0.00	M	Y	M	Y
24	1.57	2.10	0.00	M	N	M	N
25	1.52	1.31	0.00	I	N	M	Y

Appendix 4

MMS Survey Instrument (identified ambiguities highlighted, and compound statements in italics.)

1. **Success is** owning your own company.
2. **Success is** being promoted up through the ranks in a corporation.
3. Work is **more desirable** if it's in a large organization
4. **Having a lot of money means you** come from an influential family
5. Change of jobs or residence is **highly discouraged and very difficult**.
6. **Time is a limited resource**.
7. Work **means to develop your** identity and self respect.
8. Being successful **is associated with** making a lot of money.
9. Being an entrepreneur means not being able to find a job.
10. **There is a duty** to uphold the values and reputation of your family.
11. Starting a company means **a risk of not getting past employment back**.
12. *Starting a company means a risk of uncertainty, but adds to the excitement of your life.*
13. **Private life** of employee is **properly of direct** concern to his company.
14. **Power is giving complete and detailed instructions to others who should do their jobs**.
15. **Having a lot of money means you have been an expert in your field**.
16. Failure is **associated** with losing face/respect.
17. **There is a duty** to give all clients and customers the same treatment.
18. **Equality is characterized by a stress on rewards based on merit**.
19. **Equality is everyone's right**.
20. Being successful **is associated with being well educated**.
21. **Entrepreneurs produce existing products in a more efficient way**.
22. **Change of social status is open to everyone**.
23. **Having rights means that every citizen is able to influence political decisions**.