

CHAPTER 7

7 FINDINGS

7.1 Chapter purpose

Jung *et al.* (2001:41) found that individuals' assessment of their entrepreneurial skills is associated with their entrepreneurial intentions and actions from a cross-cultural perspective. The results from two of their studies furthermore supported their hypothesis that self-assessed entrepreneurial self-efficacy would have a positive relationship with entrepreneurial intention and action.

Given the above findings, this study aimed to establish business owners' perceptions of their creativity, the innovativeness of their businesses and the corresponding implementation drive. This is done against the background of the current need for economic growth in South Africa, aiming to investigate how the creative and innovative processes can be enhanced in entrepreneurship training and development in order to improve the capacities of human capital in the entrepreneurship domain.

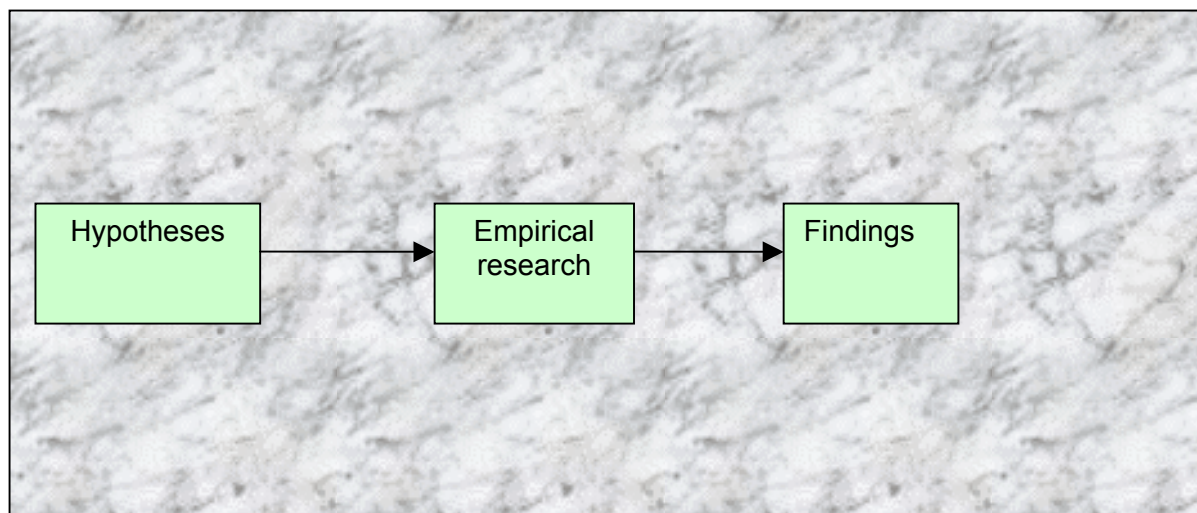


Figure 7.1: Chapter purpose/layout

7.2 Reporting the Empirical Results

7.2.1 Research methodology (Chapter 6)

The following hypotheses guided this study:

Hypothesis H ₁	South African small business persons do not perceive themselves to act creatively.
Hypothesis H _{1a}	South African small business persons perceive themselves to act creatively.
Hypothesis H ₂	South African small business persons do not perceive their businesses as innovative.
Hypothesis H _{2a}	South African small business persons perceive their businesses as innovative.
Hypothesis H ₃	South African small business persons do not report a high implementation orientation with regard to creativity and innovation.
Hypothesis H _{3a}	South African business persons report a high implementation orientation with regard to creativity and innovation.

Study objectives included furthermore the exploration of relationships between:

- South African small business persons' perception of their creative skills and their perception of their business' innovativeness (Innovative entrepreneurial orientation), and
- South African small business persons' perception of their creative skills and their perceived implementation-outcome orientation.

The questionnaire was designed to measure small business owners' perceptions of their own creativity, the innovativeness of their businesses and their orientation toward implementation. A survey was done and the instrument as well as the sample was tested with various statistical techniques, including factor analysis and the Kruskal-Wallis test for analysis of variance.

7.2.1 Descriptive results

7.2.2.1 Response rate

Of the 222 returned questionnaires, 218 were complete. This resulted in a return rate of 29% that could be considered acceptable for a mailed questionnaire given the response rate for the South African Innovation Survey, which was in the region of

10% (Oerlemans *et al.* 2001:17). Sixty-two (62) of the hundred (100) (62%) questionnaires distributed to the Small Business Information Centres were returned and hundred and fifty-six (156) of the six hundred and fifty (650) (24%) distributed via mail. The response rate was sufficient to accept the sample as representative of the population.

7.2.2.2 Demographic information

The results of the study with regard to demographics are tabulated beneath:

Table 7.1: Gender

	Frequency (n)	Percent (%)
Male	165	75.7%
Female	53	24.3%
TOTAL	218	100%

Table 7.2: Social heritage/culture based on language

	Frequency (n)	Percent (%)
English	73	33.5%
Afrikaans	49	22.5%
Black South African	61	27.9%
Other (European, Latin American, Asian, Jewish, North American)	35	16.0%
TOTAL	218	100%

Table 7.3: Business role

	Number	Percent
Owner	68	31.2%
Manager	58	26.6%
Both	85	39.0%
Other (unspecified)	7	3.2%
TOTAL	218	100%

Table 7.4: Years business management experience

	Number	Percent
0-2 years	19	8.7%
3-5 years	44	20.2%
5-10 years	34	15.6%
10+ years	121	55.5%
TOTAL	218	100%

Table 7.5: *Business size*

	Number	Percent
Micro enterprise	70	32.11%
A Very small business	59	27.06%
A small enterprise	39	17.89%
A Medium enterprise	26	11.93%
A large enterprise	24	11.01%
TOTAL	218	100%

Table 7.6: *Business life cycle phase*

	Number	Percent
Start-up	19	8.72%
Growing	118	54.13%
Mature	68	31.19%
Declining	13	5.96%
TOTAL	218	100%

Reasonable distribution was obtained for all the independent variables except for gender. This conclusion is made in view of the estimate of the Statistics South Africa's (SSA) Survey of non-VAT registered businesses in South Africa (Statistics South Africa 2002:28) that in March 2001 approximately 1.4 million (60.6%) of the 2.3 million small and micro-business owners, were women.

7.2.2.3 Factor Analysis

The measuring instrument attempted to test perceptions of creativity, business innovativeness and the implementation orientation of small business owners in South Africa.

Confirmatory factor analysis allows one to test specific hypotheses about the factor structure for a set of variables, in one or several samples. Questions 13, 15, 18, 23, 27, and 30 had to be read in the opposite direction to get the correct picture.

Outliers are infrequent atypical observations that do not contribute positively on the value of the factor loadings. For purposes of this study, questions 11, 14 and 19 were removed from the dataset for this reason, resulting in twenty of the twenty-three items in the questionnaire loading successfully.

Cronbach's alpha is an instrument to test for the degree to which the instrument items are homogeneous and reflect the same underlying constructs. Cronbach's alpha measures how well a set of items (or variables) measures a single one-dimensional latent construct. The more items there are in a scale designed to measure a particular concept, the more reliable the measurement instrument will be. Cronbach's Alpha for all variables is 0.6525 in this dataset.

Assuming that the factor analysis model is correct, it should not be expected that the factors will extract all variance from the items, rather, only that proportion that is due to the common factors, and shared by several items. In the language of factor analysis, the proportion of variance of a particular item that is due to common factors (shared with other items) is called communality. The total variance is defined as the sum of the positive eigenvalues of the correlation matrix. Communalities as indicated by the squared multiple correlations (SMC) (co-variances), indicate the amount of variance in each variable that is being "explained" by the factors (Cooper & Schindler 2001:595).

Table 7.7 indicate the procedure followed to test whether the measuring instrument indeed tested the concepts spelled out in the previous chapter, namely perception of owner's creativity, perception of innovativeness and a measure of implementation:

Table 7.7: Rotated Factor loadings, Cronbach Alpha and Eigenvalues

	Cronbach Alpha	Eigen-values	Factor 1	Factor 2	Factor 3
Q20 I usually consider more than one solution to address a problem in my business	0.62260	0.99229	0.445	0.056	0.129
Q21 I enjoy trying out new ideas in my business	0.6140	0.95290	0.665	0.015	0.043
Q22 I purposefully seek problems where nobody else sees any	0.6380	0.86952	0.378	0.097	-0.205
Q24 I am willing to try a truly original approach even if there is a chance it could fail	0.6288	0.81667	0.439	0.007	0.001
Q25 I have purposefully mastered some creativity techniques, e.g. "thinking hat"	0.6330	0.75469	0.526	-0.065	-0.124
Q26 I easily make connections between things happening in my environment and commercial opportunities for my business	0.6201	0.72998	0.531	0.103	0.031
Q28 I love to modify and adapt my business' products / services	0.6042	0.65252	0.733	0.128	-0.000
Q29 I am continually envisaging business ideas to make life easier	0.6246	0.63366	0.599	-0.014	-0.070
Q31 I continuously look at old problems with a new / fresh approach	0.6293	0.59692	0.548	-0.042	-0.090
Q9 New services/products were introduced	0.6235	4.05310	0.180	0.605	0.196
Q10 New marketing concepts/ideas were implemented for the enterprise	0.6235	2.05873	0.159	0.570	0.239
Q12 Some risks were taken to grow / expand the business	0.6423	1.95960	0.101	0.319	-0.064
Q16 The long term/strategic goals of the enterprise were changed in the last 3-5 years.	0.6566	1.23746	-0.089	0.452	-0.264
Q17 New product/service innovations caused the business to change its	0.6402	1.09222	-0.057	0.691	-0.160

	Cronbach Alpha	Eigen-values	Factor 1	Factor 2	Factor 3
operational processes in the last 3-5 years					
Q13 Too high costs was a barrier towards innovation	0.6692	0.57546	-0.068	-0.002	0.498
Q15 A lack of information/knowledge about appropriate technologies was a barrier towards innovation	0.6654	0.49695	0.035	-0.147	0.466
Q18 My competition implements new ideas before I do.	0.6595	0.44338	0.157	-0.171	0.434
Q23 I only implement a new process when I have proof that it worked somewhere else	0.6577	0.41140	-0.051	0.106	0.423
Q27 When brainstorming for business ideas I am quick to air my view that something will not be practicable	0.6697	0.357262	-0.099	0.012	0.385
Q30 Once a business plan has been developed one should stick to it	0.6706	0.31528	-0.229	0.106	0.385

The decision of when to stop extracting factors basically depends on when there is only very little "random" variability left. In deciding on the number of variables, the scree test, a graphical method first proposed by Cattell in 1966, to plot the eigen-values was used (Statsoft 2004).

Based on the scree-test three factors were identified with canonical correlations of 0.9220; 0.8345 and 0.8003. (See table 7.8) Canonical correlation is an additional procedure for assessing the relationship between variables. This analysis enables investigation into the relationship between two sets of variables. In general, the larger the weight (i.e., the absolute value of the weight), the greater is the respective variable's unique positive or negative contribution to the sum (Statsoft 2004).

The interpretation of factor loadings is largely subjective and Cooper and Schindler (2001:594) state that there is no way to calculate the meaning of factors – they are what one sees in them and therefore factor analysis is largely used for exploration. Investigation of the variables for each factor indicated that three concepts were tested with the questionnaire, namely:

- Factor 1: Perception of own creativity,
- Factor 2: Perception of business venture's innovativeness,
- Factor 3: Implementation – outcome orientation.

An item analysis was performed to investigate the means, standard deviations and other statistics of the identified factors:

Table 7.8: *Item analysis*

	Factor 1 (Perception of own creativity)	Factor 2 (Perception of venture's innovativeness)	Factor 3 (Implementation- outcome orientation)
Number of items	9	5	6
VP (i.e., the variance explained by the factor,)	2.903 16.99%	1.594 6.79%	1.414 6.52%
Mean	4.035	3.798	2.988
Variance	0.308	0.602	0.602
Std Deviation	0.555	0.776	0.776
Skewness	-0.448	-0.500	-0.285
Kurtosis	0.099	0.019	-0.486
Cronbach Alpha	0.7978	0.6485	0.6041
Eigenvalue	4.05310	2.05873	1.95960
Squared Multiple Correlation	0.830	0.736	0.659
Canonical correlation	0.9220	0.8345	0.8003

The variance and the standard deviation provide measures of how the data tend to vary around the mean. If the data is tightly clustered around the mean, both the variance and the standard deviation will be relatively small (Groebner & Shannon 1993:116).

For two of the three factors the skewness, which measures the deviation of the distribution from symmetry, is clearly different from 0, which indicates that distribution is asymmetrical, while normal distributions are perfectly symmetrical. If the kurtosis (which measures "peakedness" of the distribution) is clearly different from 0, then the distribution is either flatter or more peaked than normal, the kurtosis of the normal distribution is 0.

The scale mean for factor one (perception of own creativity) was 4.035, indicating that the majority of respondents perceived themselves to be creative. The scale mean for factor two (perception of business' innovativeness) was 3.798. This was an indication that the majority of small business owners perceived their businesses to be innovative. The reported implementation-outcome orientation however, hovered around the median on the scale, namely 2.988.

The statistical significance of the above was also tested with the Wilcoxon procedure, looking at the difference from the median on the Likert scale, i.e., 3. It was confirmed that factors one (perception of creativity) and two (perception of business' innovativeness) differ significantly from the median point (3): on the measuring scale.

Table 7.9: Statistical significant differences from median on scale.

FACTOR	Mean	Std Deviation	Wilcoxon P-value
Perception of own creativity	1.0346	0.5563	0.0000
Perception of business innovativeness	0.7982	0.7776	0.0000
Implementation-outcome orientation	-0.0122	0.7777	0.9181

The perception of innovativeness was lower than the perception of creativity which reflected what other researchers have been finding, namely that innovativeness in South Africa compared to other third world countries, is worse, and needs attention. Although creativity is not the only factor influencing innovativeness there is a gap between the perceptions of creativity and the expected resulting innovativeness.

The correlations between the "new" variables were investigated. The more correlation differs from 0, the stronger the linear relationship between the two variables (Groebner & Shannon 1993:658). Table 7.10 indicates the factor correlations for the rotated factors:

Table 7.10: Factor Correlations

	Factor 1 (Perception of own creativity)	Factor 2 (Perception of venture's innovativeness)	Factor 3 (Perception of implementation-outcome orientation)
Factor 1	1.000		
Factor 2	0.198	1.000	
Factor 3	-0.157	-0.105	1.000

The correlations indicated weak relationships between factor one and two and three, and factors two and three. It was indicated that a very high perception of creativity might even result in a negative implementation orientation.

Some covariance of the factors indicated overlapping dimensions that contribute to a single overall dimension. The statistics however confirmed three independent factors. This was not surprising given the theoretical confirmation that no one-way-definitiveness can take effect in the relationship between innovation and creativity (i.e., creativity cannot directly generate innovation, nor does innovation automatically establish creativity), although a certain unity and degree of mutuality existed (Ivanyi & Hofer 1999:1001). Against the background of Bandura's (1978:238) theory on self-efficacy however, higher correlations between creativity and innovation as well as creativity and implementation orientation was expected.

The Kolmogorov-Smirnov test for goodness of fit was done to confirm the distribution of the factors.

Table 7.11: Test for goodness of fit

Factor	Kolmogorov-Smirnov Statistic	P-value
Perception of own creativity	D 0.0618	Pr>D 0.0414
Perception of venture's innovativeness	D 0.0723	Pr>D<0.0100
Implementation-outcome orientation	D 0.0515	Pr>D>0.1500

The significance level calculated for each correlation is a primary source of information about the reliability of the correlation. Reliability is a contributor to validity but not a sufficient condition for validity (Cooper & Schindler 2001:215). Reliability is concerned with the estimated degree to which a measurement is free of random or unstable error. It is common to use a probability of 0.05 as the cut-off between a chance occurrence and a cause occurrence. If the probability is greater than 0.05 i.e., $Pr > 0.05$, the conclusion is that no difference exists. If $Pr < 0.05$, then it is concluded that a statistically significant difference has been observed, in short, that means there is a real difference due to some cause.

It was found that two factors identified by the factor analysis did not comply with the assumptions necessary to proceed with the variance analysis (i.e., the statistical method for testing the null hypothesis that the means of several populations are equal), namely a normal population. This on the one hand cautioned the making of generalisations, but simultaneously keeping in mind that:

- It might be possible that small business owners would not be a normal population pertaining to factors such as creativity and innovation, and
- Monte Carlo studies (Statsoft 2004) suggest that meeting those assumptions closely is not absolutely crucial if your sample size is not very small (i.e., smaller than 50) and when the departure from normality is not very large.

Since it would be useful to explore relationships between some of the independent and dependent variables, a non-parametric test, namely the Kruskal-Wallis was utilised for further analysis. The Kruskal-Wallis test is appropriate for data that are collected on an ordinal scale or for interval data that do not meet F-test assumptions. Kruskal-Wallis is a one-way analysis of variance by ranks. It assumes random selection and independence of samples and an underlying continuous distribution.

7.2.3 Kruskal-Wallis

The Kruskal-Wallis test is a generalisation of the Mann-Whitney U test. The generalisation is to k populations where k may be larger than two (2). Otherwise the null hypothesis being tested is the same that is: all groups come from identical distributions (McBean & Rovers 1998:1).

The Kruskal-Wallis test for differences in c medians (where $c > 2$) may be considered an extension of the Wilcoxon rank-sum test for two independent samples (Berenson & Levine 1996:546). The test is used to test whether c -independent sample groups have been drawn from populations possessing equal means. As the sample sizes in each group get large, the test statistic H may be approximated by the chi-square distribution with $c-1$ degrees of freedom. Thus for any selected level of significance α , the decision rule would be to reject the null hypothesis if the computed value of H

exceeds the upper tail critical of χ^2 value and not to reject the null hypothesis if H is less than or equal to the critical χ^2 value.

The following is assumed for the Kruskal-Wallis test:

- Independent observations and independent random samples.
- Variable of interest is continuous but does not have to be normally distributed.
- Ordinal measurement scale.

7.2.3.1 Pairs-wise comparisons of factors with independent variables

The analysis of variance was applied to identify pairs wise differences in the dependent variables for the factors identified by the factor analysis, namely perception of own creativity, perception of venture's innovativeness and implementation-outcome orientation.

The higher the p-value, the less it can be believed that the observed relation between variables in the sample is a reliable indicator of the relation between the respective variables in the population. The results indicate acceptable P-values for all the independent variables except for gender where, as already been indicated, the study was not representative. This means that there is reason to believe that the differences found in the sample also occurs in the population.

Z statistics provides hypothesis tests and confidence intervals for a population mean based on a single sample when the population variance is known. The Z test was used to establish whether the sample is random and whether it represents the population. Z-scores are calculated from the true population parameters μ (mu) and Σ (sigma). The procedure used is a Z test using the normal approximation to the binominal. The null hypothesis (i.e., there is no difference) is rejected if the Z-stat is larger than the indicated critical value for an overall alpha of 0.05.

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Table 7:12: Pairs-wise comparison of “perception of own creativity” with independent variables

		Factor 1: Perception of own Creativity						
<i>Independent variable</i>		Mean	Std Deviation	DF	Kruskal-Wallis test	Z-stat (Compared with independent variable)	Critical value ZC for alpha of 0.05	P-value & (Significance Level)
Number of years business management experience	(a)0-2	4.0994	0.5223	3	11.10	(a) 1.19 (b) 0.99 (c) 0.99 (d) 0.89	z>2.64	0.0112 (p<0,05)
	(b)3-5	4.2904	0.4981			(c) 2.68 (d) 3.11		
	(c)5-10	3.9084	0.7013			(d) 0.33		
	(d)10+	3.9669	0.5107					
Business life cycle phase	(a)Start-up	4.1286	0.4243	2	6.89	(b)0.10 (c)1.52	z>2.39	0.0320 (p<0,05)
	(b)Growing	4.1073	0.5609			(c)2.52		
	(c)Mature/declining	3.9067	0.5590					
Business Size	(a)Micro	4.0428	0.6139	4	3.77	(b)0.64 (c)0.32 (d)1.44 (e)0.41	z>2.81	0.4376 (NS)

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		Factor 1: Perception of own Creativity						
<i>Independent variable</i>		Mean	Std Deviation	DF	Kruskal-Wallis test	Z-stat (Compared with independent variable)	Critical value ZC for alpha of 0.05	P-value & (Significance Level)
	(b)Very Small	4.1130	0.5553			(b)0.85 (d)1.88 (e)0.87		
	(c)Small	4.0341	0.4416			(d)1.06 (e)0.13		
	(d)Medium	3.8803	0.5153			(e)0.82		
	(e)Large	3.9861	0.5964					
Social heritage	(a)Afrikaans	3.9138	0.5329	3	36.11	(b)1.06 (c)4.15 (d)1.72	z>2.64	<0.0001 (p<0,01)
	(b)English	3.8203	0.5073			(c)5.72 (d)2.80		
	(c)Black	4.3533	0.5206			(d)1.96		
	(d)Other	4.0952	0.4955					
Gender	(a)Male	4.0276	0.5404	1	0.11	Only two groups – no comparison	Only two groups – no comparison	0.7349 (NS)
	(b)Female	4.0566	0.6084					

The number of years' business management experience, the business' life cycle phase and social heritage had statistically significant influences on respondents' perceptions of their own creativity:

- Business persons with 3-5 years experience perceived themselves to be the most creative. The comparison analysis indicated the largest significant differences between 3-5 years and 10+ years and 3-5 years and 5-10 years experience.
- Start-up business owners' perceptions of their creativity were the highest. Statistical significant differences ($p < 0.05$) were found between the growing businesses versus the respondents in mature/declining businesses. The growing businesses' owners differed significantly from mature/declining businesses' owners perceptions of their own creativity. This difference was to be expected and came as no surprise. The fact that start-up's did not differ significantly from mature/declining businesses was however surprising and more research would be necessary to establish possible reasons for this. It could perhaps be speculated that since research results (Foxcroft *et al.* 2002) indicate that necessity entrepreneurs constitute 31% of entrepreneurs in South Africa as compared to 24% globally (a necessity entrepreneur is involved in a new business because he/she has no other choice of work), the exploration of creative avenues comes second to survival.
- Very small businesses had the highest perception of their creativity, but business size (i.e., micro, small, medium) did not make a significant difference with regard to the owners' perception of their own creativity.
- The South African black cultures were grouped together and all other groups were pooled together for analyses. The English language group's perceptions of their own creativity were the lowest of all the groups. Black South African's perceptions of their creativeness were the highest.

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Table 7.13: Pairs-wise comparison of: "Perception of business' innovativeness" with independent variables

		Factor 2: Perception of business' innovativeness						
<i>Independent variable</i>		Mean	Std Deviation	DF	Kruskal-Wallis test	Z-stat (Compared with independent variable)	Critical value ZC for alpha of 0.05	P-value & (Significance level)
Number of years business management experience	(a)0-2	3.4316	0.5783	3	6.65	(b) 2.46 (c)1.76 (d)2.37	z.>2.64	0.0840 (NS)
	(b)3-5	3.9318	0.6540			(c)0.76 (d)0.52		
	(c)5-10	3.7941	0.7075			(d)0.42		
	(d)10+	3.8082	0.8510					
Business life cycle phase	(a)Start-up	3.5894	0.8013	2	10.33	(b)1.95 (c)0.22 (c)2.95	z>2.39	0.0057 (p<0,01)
	(b)Growing	3.9678	0.6957					
	(c)Mature/ declining	3.6000	0.8336					
Business Size	(a)Micro	3.6314	0.7732	4	6.56	(b)2.22 (c)1.96 (d)1.28 (e)0.61	z>2.81	0.1613 (NS)
	(b)Very Small	3.0984	0.7837			(c)0.01 (d)0.42 (e)1.03		

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		Factor 2: Perception of business' innovativeness						
<i>Independent variable</i>		Mean	Std Deviation	DF	Kruskal-Wallis test	Z-stat (Compared with independent variable)	Critical value ZC for alpha of 0.05	P-value & (Significance level)
	(c)Small	3.9333	0.7641			(d)0.38 (e)0.95		
	(d)Medium	3.8615	0.7348			(e)0.53		
	(e)Large	3.7250	0.8082					
Social heritage	(a)Afrikaans	3.8040	0.7410	3	0.93	(b)0.50 (c)0.37 (d)0.17	z>2.64	0.8189 (NS)
	(b)English	3.7479	0.7378			(c)0.95 (d)0.27		
	(c)Black	3.8524	0.8389			(d)0.51		
	(d)Other	3.8000	0.8231					
Gender	(a)Male	3.7539	0.8150	1	1.45	Only two groups – no comparison	Only two groups – no comparison	0.2280 (NS)
	(b)Female	3.9358	0.6466					

- Business life cycle phase made a significant difference on how innovative businesses were perceived. In this regard the growing businesses had the highest perceptions of their businesses' innovativeness and the start-ups the lowest, a finding which was to be expected. Significant differences were found between the "growth" phase and the "mature/declining" phase with regard to perceived business' innovativeness. This difference was to be expected and posed no surprise.
- Respondents from small businesses had the highest perception of their creativity with a decrease toward medium and large businesses. Significant differences were found between the business' size and perceptions of innovativeness. Micro businesses' perceptions of innovativeness were lower than those of the small, medium and large businesses and very small businesses had the lowest perception of their innovativeness all over.
- For perception on business' innovativeness, no statistical significant differences were found amongst respondents with different years' management experience. However, the group with 3-5 years' experience had the highest esteem of their innovativeness and the group with 0-2 years' experience the lowest.
- The English language group's esteem of their innovativeness was the lowest of all the groups. No statistical significant differences were found between the various cultural groups for the perception of innovativeness of businesses.

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Table 7.14: Pairs wise analysis of Implementation-outcome orientation with independent variables

		Factor 3: Implementation – outcome orientation						
<i>Independent variable</i>		Mean	Std Deviation	DF	Kruskal-Wallis test	Z-stat (Compared with independent variable)	Critical value ZC for alpha of 0.05	P-value & (Significance level)
Number of years business management experience	(a)0-2	2.5877	0.6675	3	17.43	(b)0.75 (c)1.42 (d)3.12	z>2.64	0.0006 (p<0,01)
	(b)3-5	2.6969	0.8127			(c)0.89 (d)3.21		
	(c)5-10	2.9313	0.7978			(d)1.86		
	(d)10+	3.1721	0.7235					
Business life cycle phase	(a)Start-up	2.4736	0.7033	2	9.37	(b)2.75 (c)3.04	z>2.39	0.0092 (p<0,01)
	(b)Growing	3.0099	0.7766			(c)0.64		
	(c)Mature/declining	3.0761	0.7587					
Business Size	(a)Micro	2.7500	0.8286	4	20.11	(b)0.88 (c)1.75 (d)2.93 (e)3.85	z>2.81	0.0005 (p<0,01)
	(b)Very Small	2.8983	0.7792			(c)0.94 (d)2.20 (e)3.11		
	(c)Small	3.0683	0.6030			(d)1.28 (e)2.16		

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		Factor 3: Implementation – outcome orientation						
<i>Independent variable</i>		Mean	Std Deviation	DF	Kruskal-Wallis test	Z-stat (Compared with independent variable)	Critical value ZC for alpha of 0.05	P-value & (Significance level)
	(d)Medium	3.2756	0.7362			(e)0.84		
	(e)Large	3.4583	0.6298					
Social heritage	(a)Afrikaans	3.1360	0.6784	3	35.43	(b)0.26 (c)4.14 (d)0.54	z>2.64	<0.0001 (p<0,01)
	(b)English	3.7894	0.6194			(c)5.15 (d)0.34		
	(c)Black	2.4617	0.7456			(d)4.55		
	(d)Other	3.2761	0.8459					
Gender	(a)Male	3.0475	0.7637	1	1.45	Only two groups – no comparison	Only two groups – no comparison	0.2280 (NS)
	(b)Female	2.8019	0.7986					

- Significant p-values were indicated for all independent variables except for gender. This could however be due to the fact that females were underrepresented in the sample. Although females perceived themselves to be slightly more creative than males and their businesses more innovative than those of males, their implementation-outcome orientation was lower.
- Businesses with more than 10 years experience had the highest implementation-outcome orientation. Businesses with 0-2 years experience had the lowest perception of their innovativeness as well as implementation-outcome orientation. Statistical significant differences were found between the groups of 0-2 years' experience versus those with more than 10 years experience and 3-5 years experience versus those with more than 10 years experience with regard to their implementation-outcome orientation. The implementation-outcome orientation increased with years' business management experience with the highest among owners with 10 years+ business management experience.
- The results of the experience analysis corresponded with that of the life cycle phase of the business. Significant differences were found between the start-up businesses versus the growing and mature/declining businesses with regard to their implementation-outcome orientation. Interestingly, the mature/declining businesses were found to have the highest implementation-outcome orientation, the growing businesses came in second and the start-ups lowest. It was surprising that mature/declining businesses' implementation-outcome orientation was higher than that of growing businesses. This is a worrying trend that needs urgent attention via entrepreneurial development since it could link to the number of start-ups that fail within the first two to five years.
- Social heritage made a significant difference in implementation-outcome orientation. The "other" group's implementation-outcome orientation was the highest. "Other" included respondents of European, American and Asian descent. Significant differences were found on the implementation-outcome perceptions of the various cultural groups when compared, particularly English vs. Black, Afrikaner vs. Black and Black vs. Other. The English language group's implementation-outcome orientation was higher than that of Afrikaans speaking respondents as well as Black South African respondents. Black

South Africans' perceptions of their creativeness and their businesses' innovativeness were the highest but their implementation-outcome orientation the lowest. From a social psychological perspective, social environment has a significant effect on an individual's motivation, perception and attitudes (Jung *et al.* 2001:43). The theory that individualistic cultures bring a greater sense of personal responsibility to establish innovative change and performance outcomes (Jung *et al.* 2001:43), was confirmed by the finding that Black South Africans had the lowest implementation-outcome orientation.

- Business size made a significant difference on implementation-outcome orientation where the implementation-outcome orientation correspondingly increased with business size. Large businesses had the highest implementation-outcome orientation. In this regard it can be concluded that business size could to an extent be an indication that growth has taken place and therefore that the support mechanisms towards a more positive implementation-outcome orientation was already in place.