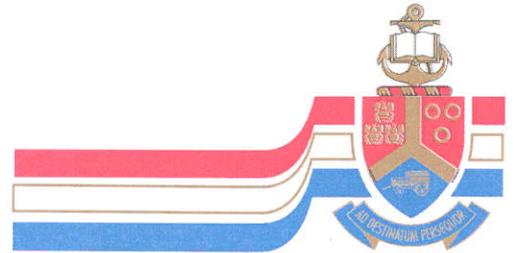


APPENDIX A
QUESTIONNAIRE TO
TECHNOLOGICAL
ENTREPRENEURS

Fax: (012) 362-5307
e-mail: tinus.pretorius@eng.up.ac.za



University of Pretoria

Faculty of Engineering,
The Built Environment and
Information Technology

Department of Engineering
and Technology Management

3 November 2004

3 November 2004

Dear Respondent

RESEARCH PROJECT ON TECHNOLOGICAL ENTREPRENEURSHIP

I am currently conducting research on the *development of technological entrepreneurship in emerging countries* such as South Africa. This research forms part of my PhD studies at the Department of Engineering and Technology Management, Faculty of Engineering, Built Environment and Information Technology, University of Pretoria.

A significant part of the research project focuses on the following issues:

- Personal profile of the practicing *technological entrepreneur* (person);
- The *new venture creation process* of the technological enterprise;
- The *further development* of the new venture into a *mature business*;
- The *environmental influences* on the entrepreneur, the venture creation and further growth processes.

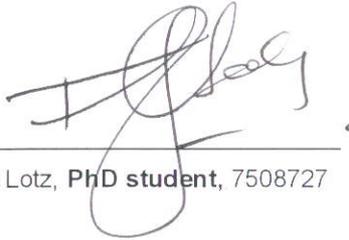
Despite the internationally acknowledged notion that new venture creation in the technological business domain is a cornerstone for growth and job creation in developing nations, the *present body of knowledge on technological entrepreneurship in emerging countries is fairly limited*.

You have been identified as a *practicing technological entrepreneur* and your participation in the research project will contribute significantly to enhance the existing knowledge base. It should take approximately **15 minutes to complete the questionnaire** and any queries should be directed to the research assistant administrating the questionnaire.

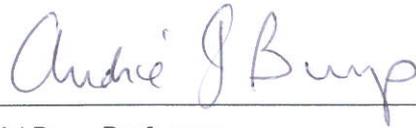
Your valued time and co-operation in completing the attached questionnaire is sincerely appreciated. The questionnaire is **completed anonymously** and the information will be treated **confidentially** in accordance with the ethical standards underwritten by the University of Pretoria.

A summary of the research findings could be e-mailed to you early in 2005. Kindly contact the student at his e-mail address plppret@mweb.co.za should you be interested.

Thank you,



Frans Lotz, **PhD student**, 7508727



AJ Buys, **Professor**,

Study Leader: Department of Engineering & Technology Management

**UNIVERSITY OF PRETORIA : DEPARTMENT OF
ENGINEERING AND TECHNOLOGY MANAGEMENT**

QUESTIONNAIRE A : ENTREPRENEURS

RESEARCH PROJECT ON TECHNOLOGICAL ENTREPRENEURS

INSTRUCTIONS TO COMPLETE THE QUESTIONNAIRE

1. Please mark with an X in the block(s) where the numbers 1,2,3 etc. appear opposite your selected answer, or write your answer in the space provided.
2. Use a pen of any colour to mark the X in the appropriate block, or type an X next to the appropriate number when using an electronic copy of the questionnaire.
3. Do not write or mark any blocks in the column designated "For official use only".
4. Where a number is required in your answer, write the number in the space provided, or type the number in when using an electronic copy of the questionnaire. An example of this is the following:

What is your present age?

31 years

5. There can only be one answer (marked with an X) in any question with one set of chronological numbering 1,2,3 etc. An example of this is the following:

What is your core business?

1	2	3 X	4
Manufacturing	Mining	Construction	Other

6. There can be more than one answer (marked with an X) in any question with more than one set of chronological numbering 1,2,3 etc. An example of this is the following:

Rate your entrepreneurial abilities?

	Poor	Average	Good
Independence	1 X	2	3
Dedication	1	2 X	3
Leadership	1 X	2	3
Perseverance	1	2	3 X
Adaptability	1	2	3 X

7. Where more than one answer could be possible in your particular case, select the most appropriate one only or highest ranked one only. A specific instruction to mark one block only is given as part of the question. An example is the following:

Is your intellectual property protected by (mark one block only):

1	2 X	3
SA patent	International patent	No patent at all

8. The following is an example of an incorrect answer:

What is your present religion?

1	2	3	4
Muslim X	Hindu	Christian	Other X

9. Where the question requires a rating to be allocated to several questions given, write the numbers 1 (highest ranking) to e.g. 10 (lowest ranking) in the blank space provided. An example of this is the following:

Rate the following measures to improve technological entrepreneurship by writing the numbers 1 (most important) to 5 (least important) into the blank spaces below:

Increase efforts to positively influence society's perception towards entrepreneurship in general	2
Improve the development of technological entrepreneurial skills during primary, secondary and tertiary education	1
Increase efforts by the private sector	4
Increase efforts by Central / Provincial / Local Governments	3
Other measures (list them in question 56)	5

DEFINITIONS

The following definitions should help to clarify terms used in the questionnaire:

- Innovation** - Systematic application of creative ideas to explore

market opportunities.

2. **Entrepreneur**
innovates - Is a person who habitually creates and to build something of recognized value around perceived opportunities.
3. **Technology**
(produced - Is the utilization of technical knowledge through science to create wealth) through techniques to perform some useful function.
4. **Technological entrepreneur**
a - Is a person who practices entrepreneurship in a technology based industry or enterprise.
5. **Intellectual property** - Is the business idea, technology or knowledge which is unique to the enterprise, process, service or entrepreneur.
6. **Foreign capital**
any - Is capital or financial resources obtained from other source than the founders or owners.
7. **Venture capital** - Is capital or funds specifically ear marked for application in newly founded enterprises.
8. **Government**
bodies, as - Includes all central (national), provincial, local (municipalities and metros) government well as government agencies and semi-government institutions such as Telkom, Eskom etc.
9. **Emerging countries** - Is a term used to describe the so-called developing or third world countries

UNIVERSITY OF PRETORIA : DEPARTMENT OF ENGINEERING AND TECHNOLOGY MANAGEMENT

QUESTIONNAIRE A : ENTREPRENEURS

RESEARCH PROJECT ON TECHNOLOGICAL ENTREPRENEURS

Please mark with an X in the block(s) where the numbers 1, 2, 3 etc appear opposite your selected answer(s), or write your answer in the space provided.	For office use only													
1. Respondent number	V1 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="text-align: center;">1</td><td style="text-align: center;">2</td><td style="text-align: center;">3</td></tr></table>				1	2	3							
1	2	3												
<u>PART A: ENTREPRENEUR</u>														
2. What is your present age? _____ years	V2 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="text-align: center;">4</td><td style="text-align: center;">5</td></tr></table>			4	5									
4	5													
3. What age were you when you started your first business? _____ years	V3 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="text-align: center;">6</td><td style="text-align: center;">7</td></tr></table>			6	7									
6	7													
4. What sex are you? <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%;">Male</td><td style="width: 50%; text-align: center;">1</td></tr><tr><td>Female</td><td style="text-align: center;">2</td></tr></table>	Male	1	Female	2	V4 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 50px; height: 20px;"></td></tr></table> 8									
Male	1													
Female	2													
5. What is your home language? <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20%;">1</td><td style="width: 20%;">2</td><td style="width: 20%;">3</td><td style="width: 20%;">4</td><td style="width: 20%;">5</td></tr><tr><td>English</td><td>Afrikaans</td><td>Zulu</td><td>Xhosa</td><td>Other</td></tr></table>	1	2	3	4	5	English	Afrikaans	Zulu	Xhosa	Other	V5 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 50px; height: 20px;"></td></tr></table> 9			
1	2	3	4	5										
English	Afrikaans	Zulu	Xhosa	Other										
6. What is your present religion? (Mark one block) <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20%;">1</td><td style="width: 20%;">2</td><td style="width: 20%;">3</td><td style="width: 20%;">4</td><td style="width: 20%;">5</td></tr><tr><td>Christian</td><td>Muslim</td><td>Hindu</td><td>Jewish</td><td>Other</td></tr></table>	1	2	3	4	5	Christian	Muslim	Hindu	Jewish	Other	V6 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 50px; height: 20px;"></td></tr></table> 10			
1	2	3	4	5										
Christian	Muslim	Hindu	Jewish	Other										
7. To what race group do you belong? <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20%;">1</td><td style="width: 20%;">2</td><td style="width: 20%;">3</td><td style="width: 20%;">4</td><td style="width: 20%;">5</td></tr><tr><td>Black</td><td>Indian</td><td>White</td><td>Coloured</td><td>Other</td></tr></table>	1	2	3	4	5	Black	Indian	White	Coloured	Other	V7 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 50px; height: 20px;"></td></tr></table> 11			
1	2	3	4	5										
Black	Indian	White	Coloured	Other										
8. What is your position as a child in your family? <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 16.6%;">1</td><td style="width: 16.6%;">2</td><td style="width: 16.6%;">3</td><td style="width: 16.6%;">4</td><td style="width: 16.6%;">5</td><td style="width: 16.6%;">6</td></tr><tr><td>Eldest</td><td>2nd Eldest</td><td>3rd Eldest</td><td>4th Eldest</td><td>5th Eldest</td><td>Other</td></tr></table>	1	2	3	4	5	6	Eldest	2nd Eldest	3rd Eldest	4th Eldest	5th Eldest	Other	V8 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 50px; height: 20px;"></td></tr></table> 12	
1	2	3	4	5	6									
Eldest	2nd Eldest	3rd Eldest	4th Eldest	5th Eldest	Other									
9. What was the level of your family income per month when you were 18 years old? <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20%;">1</td><td style="width: 20%;">2</td><td style="width: 20%;">3</td><td style="width: 20%;">4</td><td style="width: 20%;">5</td></tr><tr><td>R0 - R 1,000</td><td>R1001- R 5,000</td><td>R5001- R 10,000</td><td>R10001- R 20,000</td><td>R20001- more</td></tr></table>	1	2	3	4	5	R0 - R 1,000	R1001- R 5,000	R5001- R 10,000	R10001- R 20,000	R20001- more	V9 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 50px; height: 20px;"></td></tr></table> 13			
1	2	3	4	5										
R0 - R 1,000	R1001- R 5,000	R5001- R 10,000	R10001- R 20,000	R20001- more										

<p>10. What was the employment status of your parents when you were 18 years old?</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 70%;"></th> <th style="width: 15%;">Yes</th> <th style="width: 15%;">No</th> </tr> </thead> <tbody> <tr> <td>Father worked</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Father self- employed</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Mother worked</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Mother self-employed</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </tbody> </table>		Yes	No	Father worked	1	2	Father self- employed	1	2	Mother worked	1	2	Mother self-employed	1	2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;">V10</td><td style="width: 60px; text-align: center;"><input style="width: 100%;" type="text"/></td><td style="width: 20px; text-align: right;">14</td></tr> <tr><td>V11</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">15</td></tr> <tr><td>V12</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">16</td></tr> <tr><td>V13</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">17</td></tr> </table>	V10	<input style="width: 100%;" type="text"/>	14	V11	<input style="width: 100%;" type="text"/>	15	V12	<input style="width: 100%;" type="text"/>	16	V13	<input style="width: 100%;" type="text"/>	17																																				
	Yes	No																																																														
Father worked	1	2																																																														
Father self- employed	1	2																																																														
Mother worked	1	2																																																														
Mother self-employed	1	2																																																														
V10	<input style="width: 100%;" type="text"/>	14																																																														
V11	<input style="width: 100%;" type="text"/>	15																																																														
V12	<input style="width: 100%;" type="text"/>	16																																																														
V13	<input style="width: 100%;" type="text"/>	17																																																														
<p>11. What is your present academic qualifications?</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 70%;"></th> <th style="width: 15%;">Yes</th> <th style="width: 15%;">No</th> </tr> </thead> <tbody> <tr><td>School grades 1-11</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>Matric grade 12</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>Artisanship (Trade test)</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>Technical College Certificate</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>Technicon Certificate and/or diploma</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>Technicon degree</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>University Bachelor degree</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>University Masters degree</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>University Doctoral degree</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> <tr><td>Other</td><td style="text-align: center;">1</td><td style="text-align: center;">2</td></tr> </tbody> </table>		Yes	No	School grades 1-11	1	2	Matric grade 12	1	2	Artisanship (Trade test)	1	2	Technical College Certificate	1	2	Technicon Certificate and/or diploma	1	2	Technicon degree	1	2	University Bachelor degree	1	2	University Masters degree	1	2	University Doctoral degree	1	2	Other	1	2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;">V14</td><td style="width: 60px; text-align: center;"><input style="width: 100%;" type="text"/></td><td style="width: 20px; text-align: right;">18</td></tr> <tr><td>V15</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">19</td></tr> <tr><td>V16</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">20</td></tr> <tr><td>V17</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">21</td></tr> <tr><td>V18</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">22</td></tr> <tr><td>V19</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">23</td></tr> <tr><td>V20</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">24</td></tr> <tr><td>V21</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">25</td></tr> <tr><td>V22</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">26</td></tr> <tr><td>V23</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">27</td></tr> </table>	V14	<input style="width: 100%;" type="text"/>	18	V15	<input style="width: 100%;" type="text"/>	19	V16	<input style="width: 100%;" type="text"/>	20	V17	<input style="width: 100%;" type="text"/>	21	V18	<input style="width: 100%;" type="text"/>	22	V19	<input style="width: 100%;" type="text"/>	23	V20	<input style="width: 100%;" type="text"/>	24	V21	<input style="width: 100%;" type="text"/>	25	V22	<input style="width: 100%;" type="text"/>	26	V23	<input style="width: 100%;" type="text"/>	27
	Yes	No																																																														
School grades 1-11	1	2																																																														
Matric grade 12	1	2																																																														
Artisanship (Trade test)	1	2																																																														
Technical College Certificate	1	2																																																														
Technicon Certificate and/or diploma	1	2																																																														
Technicon degree	1	2																																																														
University Bachelor degree	1	2																																																														
University Masters degree	1	2																																																														
University Doctoral degree	1	2																																																														
Other	1	2																																																														
V14	<input style="width: 100%;" type="text"/>	18																																																														
V15	<input style="width: 100%;" type="text"/>	19																																																														
V16	<input style="width: 100%;" type="text"/>	20																																																														
V17	<input style="width: 100%;" type="text"/>	21																																																														
V18	<input style="width: 100%;" type="text"/>	22																																																														
V19	<input style="width: 100%;" type="text"/>	23																																																														
V20	<input style="width: 100%;" type="text"/>	24																																																														
V21	<input style="width: 100%;" type="text"/>	25																																																														
V22	<input style="width: 100%;" type="text"/>	26																																																														
V23	<input style="width: 100%;" type="text"/>	27																																																														
<p>12. What is your present <u>primary</u> field of training? (Mark only <u>one</u> block)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 20%;">1</th> <th style="width: 20%;">2</th> <th style="width: 20%;">3</th> <th style="width: 20%;">4</th> <th style="width: 20%;">5</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Technical</td> <td style="text-align: center;">Commerce</td> <td style="text-align: center;">Human Sciences</td> <td style="text-align: center;">Agricultural</td> <td style="text-align: center;">Other</td> </tr> </tbody> </table>	1	2	3	4	5	Technical	Commerce	Human Sciences	Agricultural	Other	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;">V24</td><td style="width: 60px; text-align: center;"><input style="width: 100%;" type="text"/></td><td style="width: 20px; text-align: right;">28</td></tr> </table>	V24	<input style="width: 100%;" type="text"/>	28																																																		
1	2	3	4	5																																																												
Technical	Commerce	Human Sciences	Agricultural	Other																																																												
V24	<input style="width: 100%;" type="text"/>	28																																																														
<p>13. Have you ever attended any formal training program or course in entrepreneurship?</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 50%;">1</th> <th style="width: 50%;">2</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> </tbody> </table>	1	2	Yes	No	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;">V25</td><td style="width: 60px; text-align: center;"><input style="width: 100%;" type="text"/></td><td style="width: 20px; text-align: right;">29</td></tr> </table>	V25	<input style="width: 100%;" type="text"/>	29																																																								
1	2																																																															
Yes	No																																																															
V25	<input style="width: 100%;" type="text"/>	29																																																														
<p>14. How many years working experience did you have before you started your business?</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tbody> <tr> <td style="width: 25%; padding: 5px;">Research & development</td> <td style="width: 15%; text-align: center;">_____</td> <td style="width: 15%;">years</td> <td style="width: 45%;"></td> </tr> <tr> <td style="padding: 5px;">Technical</td> <td style="text-align: center;">_____</td> <td>years</td> <td></td> </tr> <tr> <td style="padding: 5px;">Supervisory/ Managerial</td> <td style="text-align: center;">_____</td> <td>years</td> <td></td> </tr> <tr> <td style="padding: 5px;">Sales</td> <td style="text-align: center;">_____</td> <td>years</td> <td></td> </tr> <tr> <td style="padding: 5px;">Other</td> <td style="text-align: center;">_____</td> <td>years</td> <td></td> </tr> </tbody> </table>	Research & development	_____	years		Technical	_____	years		Supervisory/ Managerial	_____	years		Sales	_____	years		Other	_____	years		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;">V26</td><td style="width: 60px; text-align: center;"><input style="width: 100%;" type="text"/></td><td style="width: 20px; text-align: right;">30</td></tr> <tr><td>V27</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">31</td></tr> <tr><td>V28</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">32</td></tr> <tr><td>V29</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">33</td></tr> <tr><td>V29</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">34</td></tr> <tr><td>V29</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">35</td></tr> <tr><td>V29</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">36</td></tr> <tr><td>V29</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">37</td></tr> <tr><td>V30</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">38</td></tr> <tr><td>V30</td><td style="text-align: center;"><input style="width: 100%;" type="text"/></td><td style="text-align: right;">39</td></tr> </table>	V26	<input style="width: 100%;" type="text"/>	30	V27	<input style="width: 100%;" type="text"/>	31	V28	<input style="width: 100%;" type="text"/>	32	V29	<input style="width: 100%;" type="text"/>	33	V29	<input style="width: 100%;" type="text"/>	34	V29	<input style="width: 100%;" type="text"/>	35	V29	<input style="width: 100%;" type="text"/>	36	V29	<input style="width: 100%;" type="text"/>	37	V30	<input style="width: 100%;" type="text"/>	38	V30	<input style="width: 100%;" type="text"/>	39													
Research & development	_____	years																																																														
Technical	_____	years																																																														
Supervisory/ Managerial	_____	years																																																														
Sales	_____	years																																																														
Other	_____	years																																																														
V26	<input style="width: 100%;" type="text"/>	30																																																														
V27	<input style="width: 100%;" type="text"/>	31																																																														
V28	<input style="width: 100%;" type="text"/>	32																																																														
V29	<input style="width: 100%;" type="text"/>	33																																																														
V29	<input style="width: 100%;" type="text"/>	34																																																														
V29	<input style="width: 100%;" type="text"/>	35																																																														
V29	<input style="width: 100%;" type="text"/>	36																																																														
V29	<input style="width: 100%;" type="text"/>	37																																																														
V30	<input style="width: 100%;" type="text"/>	38																																																														
V30	<input style="width: 100%;" type="text"/>	39																																																														
<p>15. What was the size of the last firm which you worked for before you started your own business? (Mark <u>one</u> block)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 25%;">1</th> <th style="width: 25%;">2</th> <th style="width: 25%;">3</th> <th style="width: 25%;">4</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1-5 employees</td> <td style="text-align: center;">6-50 employees</td> <td style="text-align: center;">51-200 employees</td> <td style="text-align: center;">201 & more employees</td> </tr> </tbody> </table>	1	2	3	4	1-5 employees	6-50 employees	51-200 employees	201 & more employees	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;">V31</td><td style="width: 60px; text-align: center;"><input style="width: 100%;" type="text"/></td><td style="width: 20px; text-align: right;">40</td></tr> </table>	V31	<input style="width: 100%;" type="text"/>	40																																																				
1	2	3	4																																																													
1-5 employees	6-50 employees	51-200 employees	201 & more employees																																																													
V31	<input style="width: 100%;" type="text"/>	40																																																														

16. Which one of the following factors motivated you most to start your own business?
(Mark one block)

1	2	3	4	5
Money	Challenge	Independence	Non-employment	Other

V32 41

17. Did you have a role model who inspired you to start your own business?

1	2
Yes	No

V33 42

18. Which one category describes your own risk profile best? (Mark only one block)

1	2	3
Risk taker	Risk manager	Risk averter

V34 43

19. Rate your own abilities against the following entrepreneurial characteristics:

	Poor	Average	Good
Independence	1	2	3
Dedication	1	2	3
Perseverance	1	2	3
Motivation to excel	1	2	3
Leadership	1	2	3
Opportunity orientation	1	2	3
Tolerance of risk and uncertainty	1	2	3
Adaptability	1	2	3
Logical (analytical) thinking	1	2	3
Creative (holistic) thinking	1	2	3

V35 44
V36 45
V37 46
V38 47
V39 48
V40 49
V41 50
V42 51
V43 52
V44 53

20. What age were you when you were first introduced to the concept of entrepreneurship?

_____ years

V45 54 55

21. Rate the general attitude of the culture in which you grew up, towards entrepreneurship.
(Mark only one block)

1	2	3
Conducive to entrepreneurship	Neutral or apathetic toward entrepreneurship	Negative toward entrepreneurship

V46 56

PART B : ENTERPRISE DETAILS

22. In which one of the following geographical areas is the core (head office, main factory, workshops etc.) of your business located?

1	2	3
Metropolitan	Towns	Rural area

V47 57

23. What is your core business? (Mark only one block)

1	2	3	4	5	6
Manufacturing	Technical services	Mining	Construction	Research and Development	Other

V48 58

24. What is the present annual turnover of your business?

1	2	3	4
R1-R240 000	R240 001-R1m	R1,1m - R5m	R5,1m and more

V49 59

25. What is the average annual turnover growth in your business over the past 3 years? (Mark only one block)

1	2	3	4
Negative growth	0-10% per year	11-50% per year	51% and more per year

V50 60

26. What is the total number of people employed in your business at present (permanent & temporary)?

1	2	3	4
1-5	6-50	51-200	200 and more

V51 61

27. How many business units or branches does your business have?

1	2	3
1	2-5	6 or more

V52 62

28. What is the total value of all your business assets (excluding land and buildings)?

1	2	3	4
0-R100 000	R100 001-R1m	R1,1m-R5m	R5,1m and more

V53 63

29. What is the percentage of Government (central, provincial and local) contracts of the total turnover of your business?

	0-20%	21-80%	81-100%
At starting date	1	2	3
At present	1	2	3

V54 64

V55 65

30. To what extent does your business apply technological innovation (i.e. systematic application of creative ideas to explore market opportunities) in your product / process / service? (Mark only one block)

1	2	3	4	5
Non-existent	Poor	Average	Good	Excellent

V56 66

<p>31. How long has your present business been in operation?</p> <p>_____ years</p>	<p>V57 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 20px; height: 15px;"></td><td style="width: 20px; height: 15px;"></td></tr></table> 67 68</p>							
<p>32. What is the technological component of your product/process/service: In other words, to what extent do you use technology in your core business of production/processing or servicing? (Mark <u>only</u> one block)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 33%; text-align: center;">1</td> <td style="width: 33%; text-align: center;">2</td> <td style="width: 33%; text-align: center;">3</td> </tr> <tr> <td style="text-align: center;">Non-existent</td> <td style="text-align: center;">Average</td> <td style="text-align: center;">High</td> </tr> </table>	1	2	3	Non-existent	Average	High	<p>V58 <table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td style="width: 80px; height: 15px;"></td></tr></table> 69</p>	
1	2	3						
Non-existent	Average	High						

PART C : FORMATION OF NEW ENTERPRISE

33. What period has passed between the date when you first felt the need to start your own business (thought of the idea) and the actual start date of your new business?

_____ years

V59

70	71

34. To what degree was existing technology (i.e. manufacturing processes, construction or mining methods, service methodology etc.) transferred from your previous employer to your new enterprise?

1	2	3	4
Direct	Partial	Vague	No transfer

V60 72

35. How many initial founders (who were owners) were there in the business?

1	2	3
1 (myself)	2 (myself + 1)	3 or more

V61 73

36. How many of the original founder members are still owners today?

1	2	3	4
Only me	All of them	Some of them	None of them

V62 74

37. If there were more than one founder member, did their skills and capabilities during the first year : (Mark only one block)

1	2	3	4
Compliment each other	Did nothing for each other	Were destructive to each other	Not applicable

V63 75

38. In what ratio did you (the founder(s)) finance your business initially? (Mark only one block)

Own capital	20% or less	1
Foreign capital	80% or more	
Own capital	between 21% and 79%	2
Foreign capital	between 79% and 19%	
Own capital	80% or more	3
Foreign capital	20% or less	

V64 76

39. Of the foreign capital, which of the following other institutions contributed to your financing during the first year of your business operation?

	Yes	No
Family	1	2
Friends	1	2
Other private individuals ("angels")	1	2
Venture capital fund organisations	1	2
Commercial banks	1	2
Public stock issues	1	2
Non-financial institutions	1	2
Other	1	2

V65 77
 V66 78
 V67 79
 V68 80
 V69 81
 V70 82
 V71 83
 V72 84

40. Which of the following institutions assisted you directly during the business start-up period?

	Yes	No
Previous employer	1	2
Government	1	2
Private sector	1	2
Non-governmental organisations	1	2
Business incubator	1	2
Other	1	2
None at all	1	2

V73	<input type="text"/>	85
V74	<input type="text"/>	86
V75	<input type="text"/>	87
V76	<input type="text"/>	88
V77	<input type="text"/>	89
V78	<input type="text"/>	90
V79	<input type="text"/>	91

41. Have you protected your business idea(s) (i.e. intellectual property) by registering:
(Mark one block only)

1	2	3
A South African patent	An International patent	No patent at all

V80	<input type="text"/>	92
-----	----------------------	----

PART D : NEW ENTERPRISE SUCCESS

42. How did your business perform against your projections on average over the past 3 years?

	Below expected	As expected	Above expected
Annual turnover	1	2	3
Growth	1	2	3
Profitability	1	2	3

V81 93
 V82 94
 V83 95

43. Has any one or more of your previous business ventures failed before due to :

	Yes	No
Insolvency	1	2
Voluntary closure	1	2
None	1	2

V84 96
 V85 97
 V86 98

44. Do you employ additional managerial skill (in addition to the founders) in the management team of your business at present?

1	2
Yes	No

V87 99

45. How do you rate your own personnel (people) management skills?

1	2	3	4	5
Non-existent	Poor	Average	Good	Excellent

V88 100

46. Who is primarily responsible for the marketing function in your business?
 (Mark only one block)

1	2	3	4
In-house specialists	External firms	Owner(s)	Nobody in particular

V89 101

47. Does your firm use formal written procedures on issues such as personnel, quality control, purchasing etc.?

1	2
Yes	No

V90 102

48. How many new permanent jobs were created by your business during the past 5 years?

_____ Jobs

V91
 103 104 105 106

49. Does your company have a Research and Development department?

1	2
Yes	No

V92 107

50. In what way did the following external factors influence your business' success during the first 3 years?

	Negatively	Not at all	Positively
Central Government policies & programs	1	2	3
Central Government initiatives	1	2	3
Provincial Government initiatives	1	2	3
Local Government initiatives	1	2	3
Private sector initiatives	1	2	3
Non-governmental organisations initiatives	1	2	3
Tax incentives	1	2	3
Healthy climate for business opportunities	1	2	3
Development initiatives of Small, Medium & Micro Enterprises (SMEE)	1	2	3
Black empowerment policies	1	2	3

V93		108
V94		109
V95		110
V96		111
V97		112
V98		113
V99		114
V100		115
V101		116
V102		117

51. Rate the following factors as causes for a lack of technological innovation in your firm, or alternatively in South African firms in general, by writing the numbers 1 (biggest cause) to 5 (smallest cause) in the blank spaces below:

Insufficient assistance and initiatives from Government	
Poor or no return on efforts to improve own technological innovation abilities	
Lack of resources (time, money, staff)	
Lack of skills and knowledge to innovate	
Easy and cheap access to existing technologies	

V103		118
V104		119
V105		120
V106		121
V107		122

52. Does your firm qualify at present as a:
(Mark one block only)

1	2	3
Black owned business where blacks own 100% of business	Black empowered business where blacks own 1%-99% of business	White owned business where blacks own 0% of business

V108		123
------	--	-----

Note: Black in this question includes Coloured, Indian and other than white race groups.

53. Rate the following factors as causes for new technological business failures by writing the numbers 1 (biggest cause) to 10 (smallest cause) in the blank spaces below :

Insufficient assistance and initiatives from Government	
Insufficient assistance and initiatives from the private sector	
Insufficient training in entrepreneurial skills	
Non-sympathetic culture and upbringing towards entrepreneurship	
Insufficient training in business management skills	
Racial and sexual discrimination	
Availability of and access to venture capital	
Availability of and access to mentorship programs	
Insufficient tax incentives	
Other causes (list them in 54)	

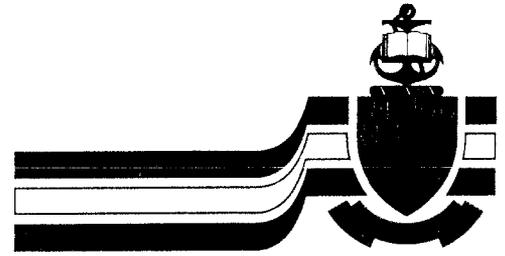
V109		124
V110		125
V111		126
V112		127
V113		128
V114		129
V115		130
V116		131
V117		132
V118		133

<p>54. Write down any other causes than the above, in order from biggest (first) and smallest (last) causes for new technological business failures:</p>																										
54a <input style="width: 95%; height: 40px;" type="text"/>	V119 <input style="width: 50px;" type="text"/> 134																									
54b <input style="width: 95%; height: 40px;" type="text"/>	V120 <input style="width: 50px;" type="text"/> 135																									
54c <input style="width: 95%; height: 40px;" type="text"/>	V121 <input style="width: 50px;" type="text"/> 136																									
54d <input style="width: 95%; height: 40px;" type="text"/>	V122 <input style="width: 50px;" type="text"/> 137																									
54e <input style="width: 95%; height: 40px;" type="text"/>	V123 <input style="width: 50px;" type="text"/> 138																									
<p>55. Rate the following measures to improve the development of technological entrepreneurship in emerging countries by writing the numbers 1 (most important) to 5 (least important) into the blank spaces below :</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="padding: 2px;">Increase efforts to positively influence society's perception towards entrepreneurship in general</td> <td style="width: 50px;"></td> </tr> <tr> <td style="padding: 2px;">Improve the development of technological entrepreneurial skills during primary, secondary and tertiary education</td> <td></td> </tr> <tr> <td style="padding: 2px;">Increase efforts by the private sector</td> <td></td> </tr> <tr> <td style="padding: 2px;">Increase efforts by the Central / Provincial / Local Governments</td> <td></td> </tr> <tr> <td style="padding: 2px;">Other measures (list them in 56)</td> <td></td> </tr> </table>	Increase efforts to positively influence society's perception towards entrepreneurship in general		Improve the development of technological entrepreneurial skills during primary, secondary and tertiary education		Increase efforts by the private sector		Increase efforts by the Central / Provincial / Local Governments		Other measures (list them in 56)		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50px;">V124</td> <td style="width: 50px;"><input style="width: 50px;" type="text"/></td> <td style="width: 50px;">139</td> </tr> <tr> <td>V125</td> <td><input style="width: 50px;" type="text"/></td> <td>140</td> </tr> <tr> <td>V126</td> <td><input style="width: 50px;" type="text"/></td> <td>141</td> </tr> <tr> <td>V127</td> <td><input style="width: 50px;" type="text"/></td> <td>142</td> </tr> <tr> <td>V128</td> <td><input style="width: 50px;" type="text"/></td> <td>143</td> </tr> </table>	V124	<input style="width: 50px;" type="text"/>	139	V125	<input style="width: 50px;" type="text"/>	140	V126	<input style="width: 50px;" type="text"/>	141	V127	<input style="width: 50px;" type="text"/>	142	V128	<input style="width: 50px;" type="text"/>	143
Increase efforts to positively influence society's perception towards entrepreneurship in general																										
Improve the development of technological entrepreneurial skills during primary, secondary and tertiary education																										
Increase efforts by the private sector																										
Increase efforts by the Central / Provincial / Local Governments																										
Other measures (list them in 56)																										
V124	<input style="width: 50px;" type="text"/>	139																								
V125	<input style="width: 50px;" type="text"/>	140																								
V126	<input style="width: 50px;" type="text"/>	141																								
V127	<input style="width: 50px;" type="text"/>	142																								
V128	<input style="width: 50px;" type="text"/>	143																								
<p>56. Write down any other measures than the above, in order from most important (first) and least important (last) which are necessary to develop technological entrepreneurship in emerging countries:</p>																										
56a <input style="width: 95%; height: 40px;" type="text"/>	V129 <input style="width: 50px;" type="text"/> 144																									
56b <input style="width: 95%; height: 40px;" type="text"/>	V130 <input style="width: 50px;" type="text"/> 145																									
56c <input style="width: 95%; height: 40px;" type="text"/>	V131 <input style="width: 50px;" type="text"/> 146																									
56d <input style="width: 95%; height: 40px;" type="text"/>	V132 <input style="width: 50px;" type="text"/> 147																									
56e <input style="width: 95%; height: 40px;" type="text"/>	V133 <input style="width: 50px;" type="text"/> 148																									

WE THANK YOU FOR YOUR EFFORT AND VALUABLE TIME SPENT WHILE COMPLETING THE QUESTIONNAIRE.

APPENDIX B
QUESTIONNAIRE TO
MOT / MPM / MEM
STUDENTS

Fax: (012) 362-5307
e-mail: mmulder@postino.up.ac.za



University of Pretoria

Faculty of Engineering,
The Built Environment and
Information Technology

Department of Engineering
and Technology Management

17 September 2002

Dear Student

RESEARCH PROJECT ON TECHNOLOGICAL ENTREPRENEURS

I am currently conducting research on the development of technological entrepreneurship in emerging countries such as South Africa. This research forms part of my PhD studies at the Department of Engineering and Technology Management, University of Pretoria.

A significant part of the research project focuses on the entrepreneurship content of formal technical training programmes at educational institutions. To assess the extent of entrepreneurial training of a sample group of MOT, MPM and MEM students such as yourselves, will contribute significantly to the knowledge base of the research topic.

Your valued time and co-operation in completing the attached questionnaire is sincerely appreciated. The questionnaire is completed anonymously and the information will be treated confidentially in accordance with the ethical standards underwritten by the University of Pretoria.

Thank you

A handwritten signature in black ink, appearing to read 'Frans Lotz'.

.....
Frans Lotz, PhD student, 7508727

A handwritten signature in black ink, appearing to read 'JK Visser'.

.....
JK Visser, **Professor**
Acting Head of Department:
Engineering & Technology Management

QUESTIONNAIRE B

RESEARCH PROJECT ON TECHNOLOGICAL ENTREPRENEURS

Please mark with an X in the block(s) where the numbers 1, 2, 3 etc appear opposite your selected answer(s)	For office use only														
1. Respondent number	V1 <input style="width: 30px;" type="text"/> <input style="width: 30px;" type="text"/> <input style="width: 30px;" type="text"/> 1 - 3														
2. What is your present age?	V2 <input style="width: 40px;" type="text"/> 4														
<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 14%;">1</td> <td style="width: 14%;">2</td> <td style="width: 14%;">3</td> <td style="width: 14%;">4</td> <td style="width: 14%;">5</td> <td style="width: 14%;">6</td> <td style="width: 14%;">7</td> </tr> <tr> <td>20-25yrs</td> <td>26-30yrs</td> <td>31-35yrs</td> <td>36-40yrs</td> <td>41-50yrs</td> <td>51-60yrs</td> <td>61yrs & older</td> </tr> </table>	1	2	3	4	5	6	7	20-25yrs	26-30yrs	31-35yrs	36-40yrs	41-50yrs	51-60yrs	61yrs & older	
1	2	3	4	5	6	7									
20-25yrs	26-30yrs	31-35yrs	36-40yrs	41-50yrs	51-60yrs	61yrs & older									
3. Have you ever founded alone, or co-founded with someone else, a new business venture where none existed before?	V3 <input style="width: 40px;" type="text"/> 5														
<table border="1" style="margin-left: auto; margin-right: auto; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 50%;">Yes</td> <td style="width: 50%;">No</td> </tr> <tr> <td>1</td> <td>2</td> </tr> </table>	Yes	No	1	2											
Yes	No														
1	2														
4. If the answer is yes on question 3, was the venture a technology based business?	V4 <input style="width: 40px;" type="text"/> 6														
<table border="1" style="margin-left: auto; margin-right: auto; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 33%;">1</td> <td style="width: 33%;">2</td> <td style="width: 33%;">3</td> </tr> <tr> <td>Yes</td> <td>No</td> <td>Not Applicable</td> </tr> </table>	1	2	3	Yes	No	Not Applicable									
1	2	3													
Yes	No	Not Applicable													
5. To what race group do you belong?	V5 <input style="width: 40px;" type="text"/> 7														
<table border="1" style="margin-left: auto; margin-right: auto; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 20%;">1</td> <td style="width: 20%;">2</td> <td style="width: 20%;">3</td> <td style="width: 20%;">4</td> <td style="width: 20%;">5</td> </tr> <tr> <td>Black</td> <td>Indian</td> <td>White</td> <td>Coloured</td> <td>Other</td> </tr> </table>	1	2	3	4	5	Black	Indian	White	Coloured	Other					
1	2	3	4	5											
Black	Indian	White	Coloured	Other											
6. Where did you complete the largest portion of your primary and secondary education?	V6 <input style="width: 40px;" type="text"/> 8														
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="width: 80%;">In South African government schools</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>In South African private schools</td> <td style="text-align: center;">2</td> </tr> <tr> <td>In schools of any other African country</td> <td style="text-align: center;">3</td> </tr> <tr> <td>In schools on any other continent</td> <td style="text-align: center;">4</td> </tr> </table>	In South African government schools	1	In South African private schools	2	In schools of any other African country	3	In schools on any other continent	4							
In South African government schools	1														
In South African private schools	2														
In schools of any other African country	3														
In schools on any other continent	4														
7. What is your present highest qualification?	V7 <input style="width: 40px;" type="text"/> 9														
<table border="1" style="margin-left: auto; margin-right: auto; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> <tr> <td>B-degree</td> <td>Hons-degree</td> <td>M-degree</td> <td>PhD-degree</td> </tr> </table>	1	2	3	4	B-degree	Hons-degree	M-degree	PhD-degree							
1	2	3	4												
B-degree	Hons-degree	M-degree	PhD-degree												
8. To which group does your tertiary qualification (B-degree) belong?	V8 <input style="width: 40px;" type="text"/> 10														
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="width: 80%;">Natural science (eg BSc Physics)</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>Applied science (eg BSc QS)</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Engineering (eg BEng)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Other</td> <td style="text-align: center;">4</td> </tr> </table>	Natural science (eg BSc Physics)	1	Applied science (eg BSc QS)	2	Engineering (eg BEng)	3	Other	4							
Natural science (eg BSc Physics)	1														
Applied science (eg BSc QS)	2														
Engineering (eg BEng)	3														
Other	4														
9. At which institution group did you obtain your tertiary qualification (B-degree)?	V9 <input style="width: 40px;" type="text"/> 11														
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="width: 80%;">South African university</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>South African technicon</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Universities / Technicons in other African countries</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Universities / Technicons on other continents</td> <td style="text-align: center;">4</td> </tr> </table>	South African university	1	South African technicon	2	Universities / Technicons in other African countries	3	Universities / Technicons on other continents	4							
South African university	1														
South African technicon	2														
Universities / Technicons in other African countries	3														
Universities / Technicons on other continents	4														

<p>10. Have you received any formal training in entrepreneurship (as a subject in the course curriculum) in any of the following educational stages :</p> <p>10.1 Primary school</p> <table border="1" style="margin-left: 100px; border-collapse: collapse;"> <tr><td style="width: 50px; text-align: center;">1</td><td style="width: 50px; text-align: center;">2</td></tr> <tr><td style="text-align: center;">Yes</td><td style="text-align: center;">No</td></tr> </table> <p>10.2 Secondary school</p> <table border="1" style="margin-left: 100px; border-collapse: collapse;"> <tr><td style="width: 50px; text-align: center;">1</td><td style="width: 50px; text-align: center;">2</td></tr> <tr><td style="text-align: center;">Yes</td><td style="text-align: center;">No</td></tr> </table> <p>10.3 University or technicon (B-degree)</p> <table border="1" style="margin-left: 100px; border-collapse: collapse;"> <tr><td style="width: 50px; text-align: center;">1</td><td style="width: 50px; text-align: center;">2</td></tr> <tr><td style="text-align: center;">Yes</td><td style="text-align: center;">No</td></tr> </table>	1	2	Yes	No	1	2	Yes	No	1	2	Yes	No	<p>V10 <input style="width: 40px;" type="text"/> 12</p> <p>V11 <input style="width: 40px;" type="text"/> 13</p> <p>V12 <input style="width: 40px;" type="text"/> 14</p>
1	2												
Yes	No												
1	2												
Yes	No												
1	2												
Yes	No												
<p>11. In your opinion, classify the extent of formal training in the subject entrepreneurship which you received <u>prior</u> to your present studies, into <u>one</u> of the following categories :</p> <table border="1" style="margin-left: 100px; border-collapse: collapse; width: 60%;"> <tr><td style="padding: 2px;">Totally adequate ie no further improvements required</td><td style="text-align: center; padding: 2px;">1</td></tr> <tr><td style="padding: 2px;">Good with only minor improvements necessary</td><td style="text-align: center; padding: 2px;">2</td></tr> <tr><td style="padding: 2px;">Poor with major improvements necessary</td><td style="text-align: center; padding: 2px;">3</td></tr> <tr><td style="padding: 2px;">Totally inadequate ie drastic improvements required</td><td style="text-align: center; padding: 2px;">4</td></tr> </table>	Totally adequate ie no further improvements required	1	Good with only minor improvements necessary	2	Poor with major improvements necessary	3	Totally inadequate ie drastic improvements required	4	<p>V13 <input style="width: 40px;" type="text"/> 15</p>				
Totally adequate ie no further improvements required	1												
Good with only minor improvements necessary	2												
Poor with major improvements necessary	3												
Totally inadequate ie drastic improvements required	4												
<p>12. If you have not done so already, do you have strong aspirations to start a new venture in future?</p> <table border="1" style="margin-left: 100px; border-collapse: collapse; width: 60%;"> <tr><td style="width: 30%; text-align: center;">1</td><td style="width: 30%; text-align: center;">2</td><td style="width: 30%; text-align: center;">3</td></tr> <tr><td style="text-align: center;">Yes</td><td style="text-align: center;">No</td><td style="text-align: center;">Not applicable</td></tr> </table>	1	2	3	Yes	No	Not applicable	<p>V14 <input style="width: 40px;" type="text"/> 16</p>						
1	2	3											
Yes	No	Not applicable											
<p>13. In your opinion, to what extent did the subject "New Ventures and Entrepreneurship" in your Hons/Masters degree programme contribute to the development of your own entrepreneurial abilities?</p> <table border="1" style="margin-left: 100px; border-collapse: collapse; width: 60%;"> <tr><td style="width: 30%; text-align: center;">1</td><td style="width: 30%; text-align: center;">2</td><td style="width: 30%; text-align: center;">3</td></tr> <tr><td style="text-align: center;">Significantly</td><td style="text-align: center;">Minor</td><td style="text-align: center;">Not at all</td></tr> </table>	1	2	3	Significantly	Minor	Not at all	<p>V15 <input style="width: 40px;" type="text"/> 17</p>						
1	2	3											
Significantly	Minor	Not at all											
<p>14. What sex are you?</p> <table border="1" style="margin-left: 100px; border-collapse: collapse; width: 60%;"> <tr><td style="width: 50%; text-align: center;">1</td><td style="width: 50%; text-align: center;">2</td></tr> <tr><td style="text-align: center;">Male</td><td style="text-align: center;">Female</td></tr> </table>	1	2	Male	Female	<p>V16 <input style="width: 40px;" type="text"/> 18</p>								
1	2												
Male	Female												

We thank you for your effort and valuable time spent while completing the questionnaire.

APPENDIX C
STUDENT
QUESTIONNAIRE
RESULTS

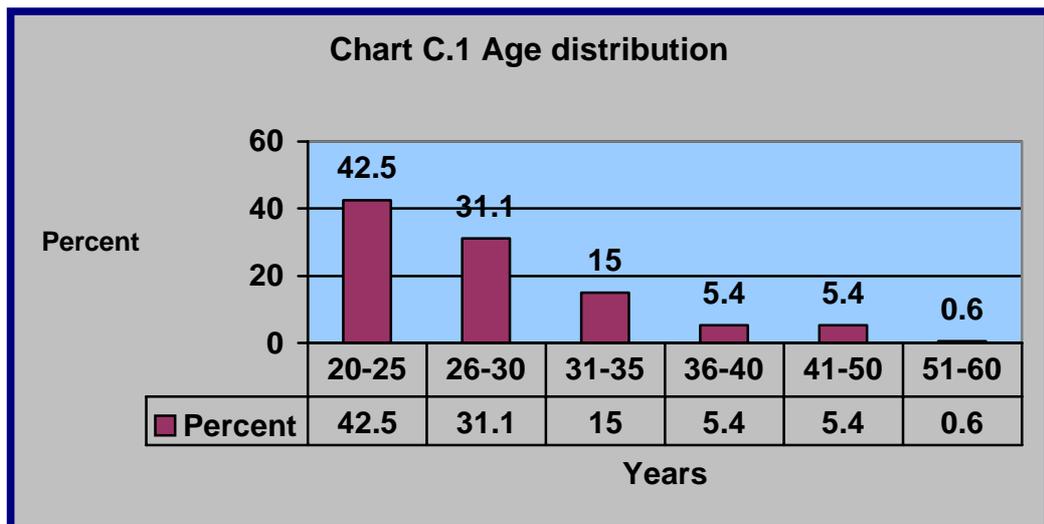
APPENDIX C

STUDENT QUESTIONNAIRE RESULTS

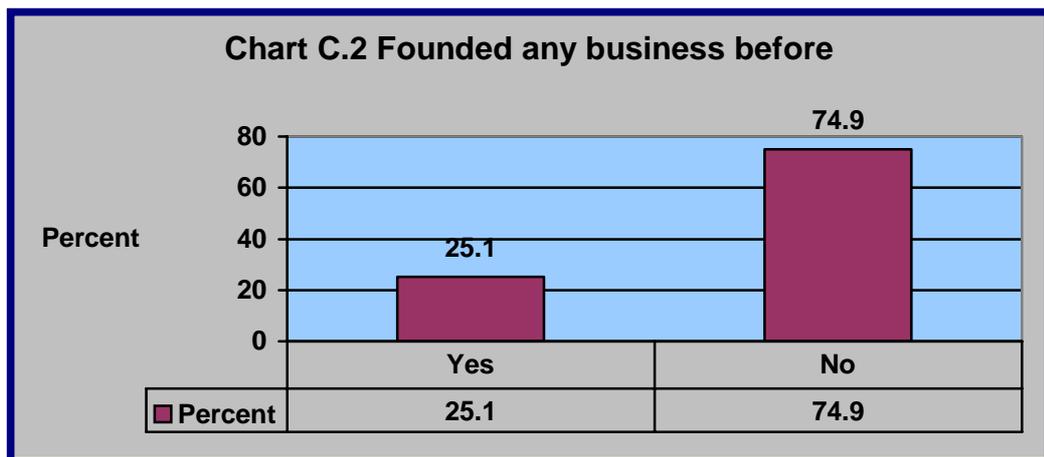
1. FREQUENCY ANALYSIS

1.1. Limited personal information

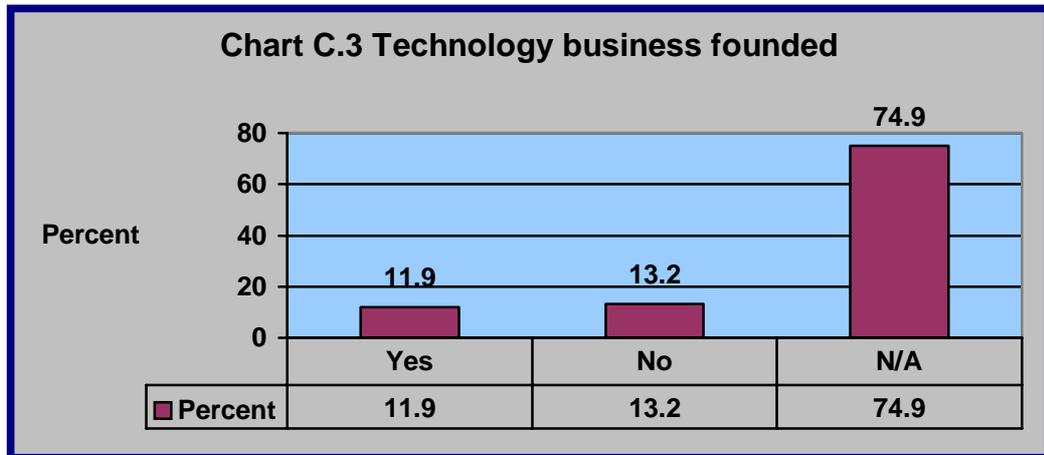
1.1.1. Age distribution



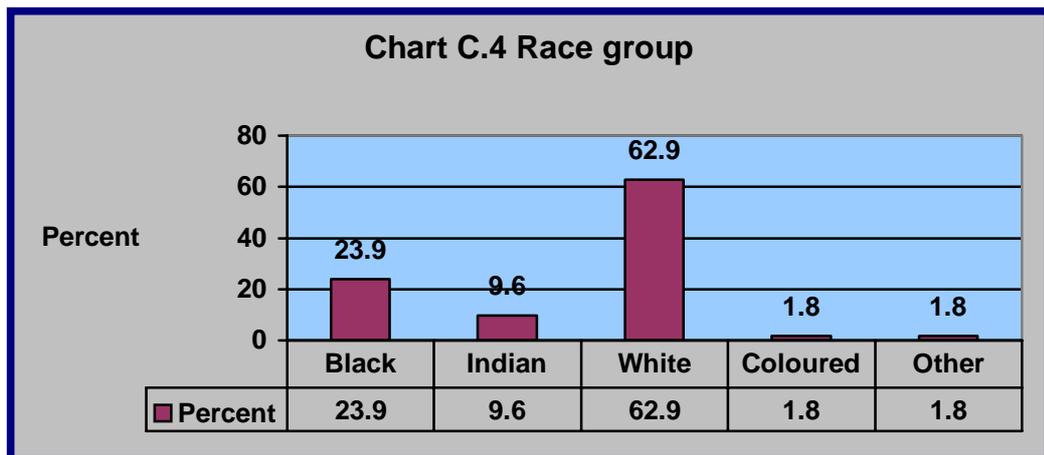
1.1.2. Founded any business before



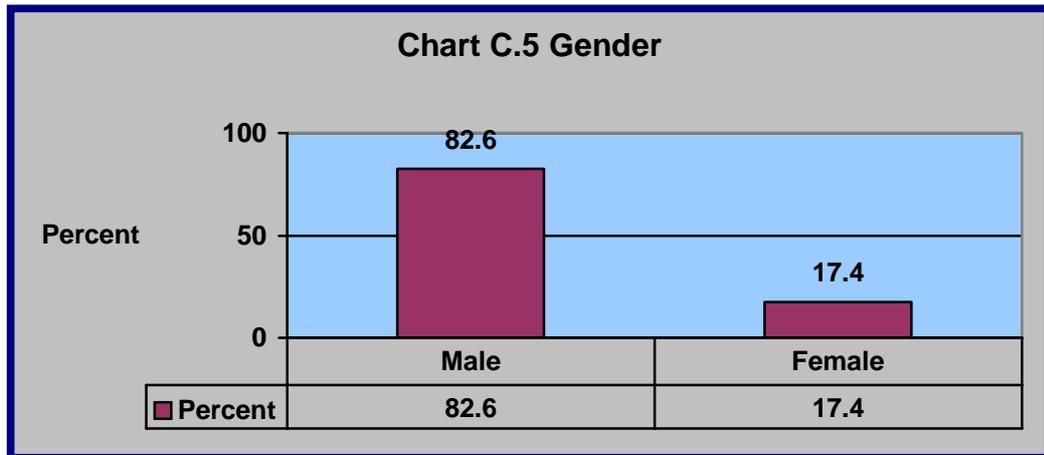
1.1.3. Technological business founded



1.1.4. Race group

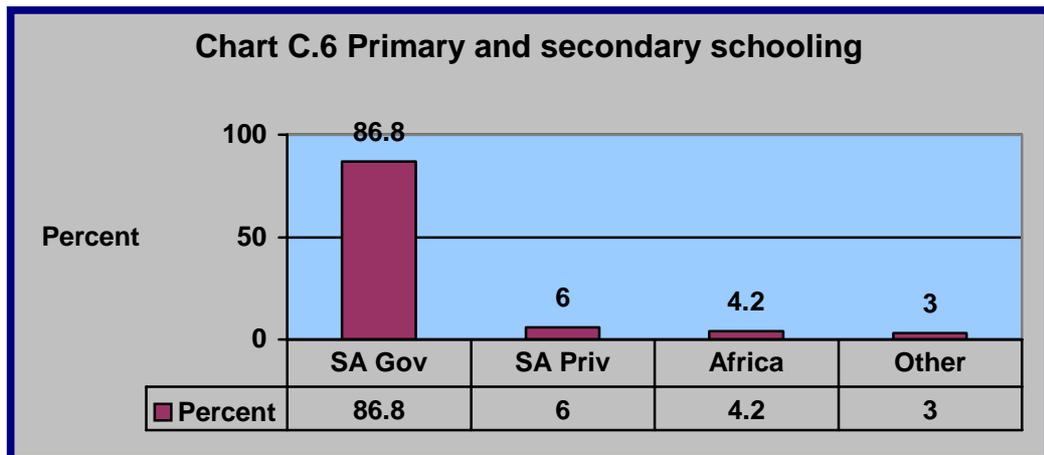


1.1.5 Gender

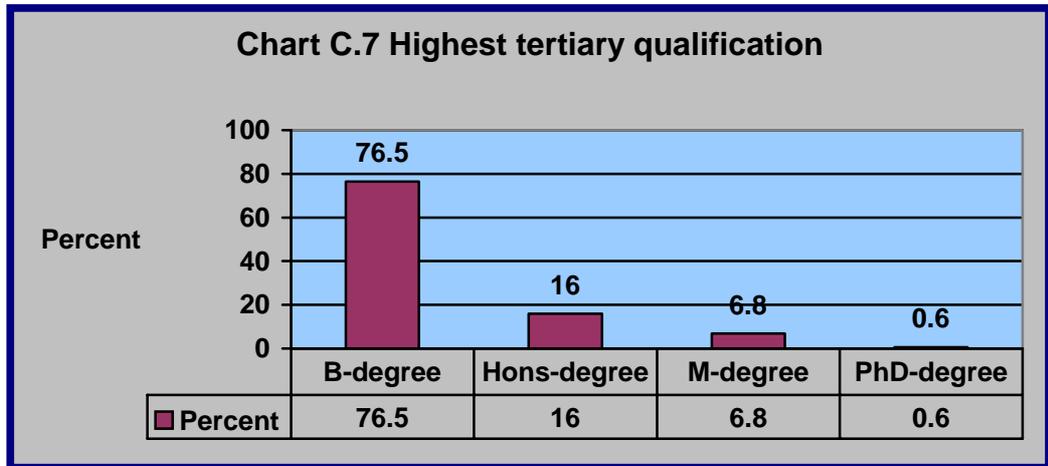


1.2. Basic training and educational profile

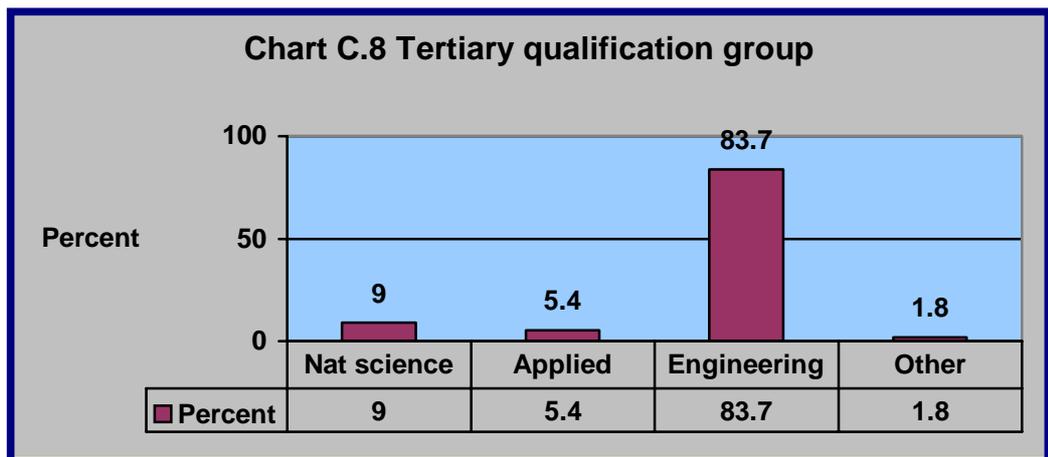
1.2.1. Primary and secondary schooling history



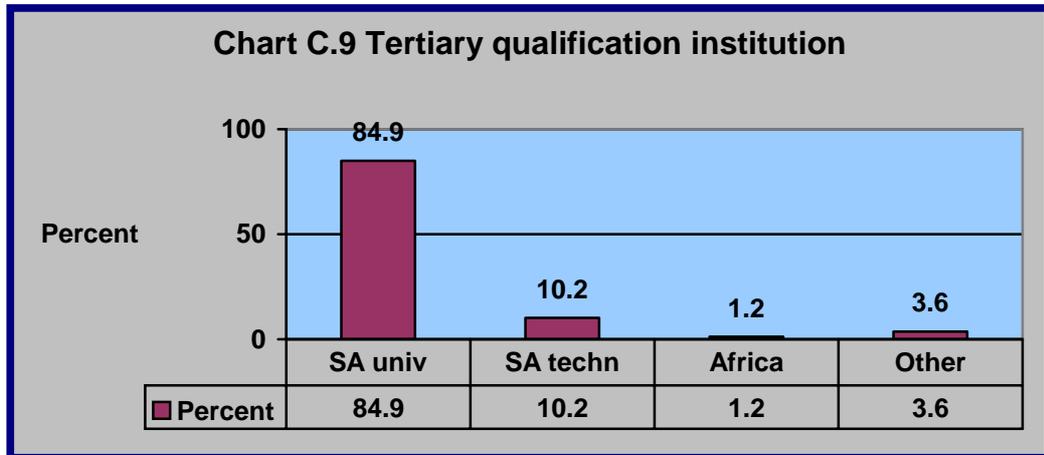
1.2.2. Highest tertiary qualification



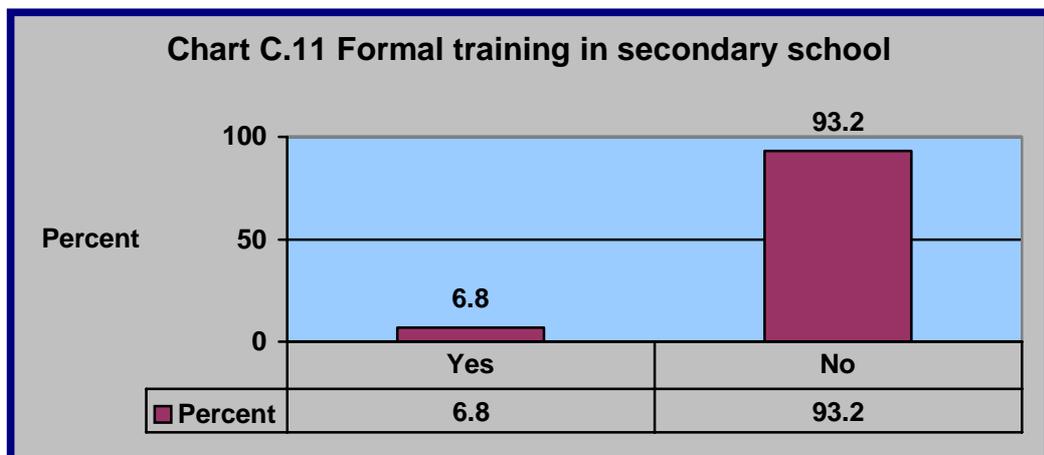
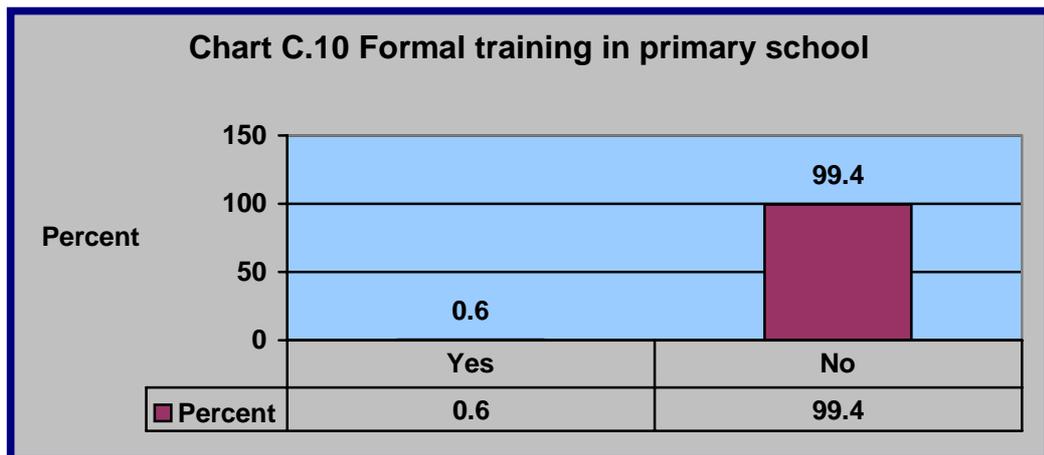
1.2.3. Tertiary qualification grouping

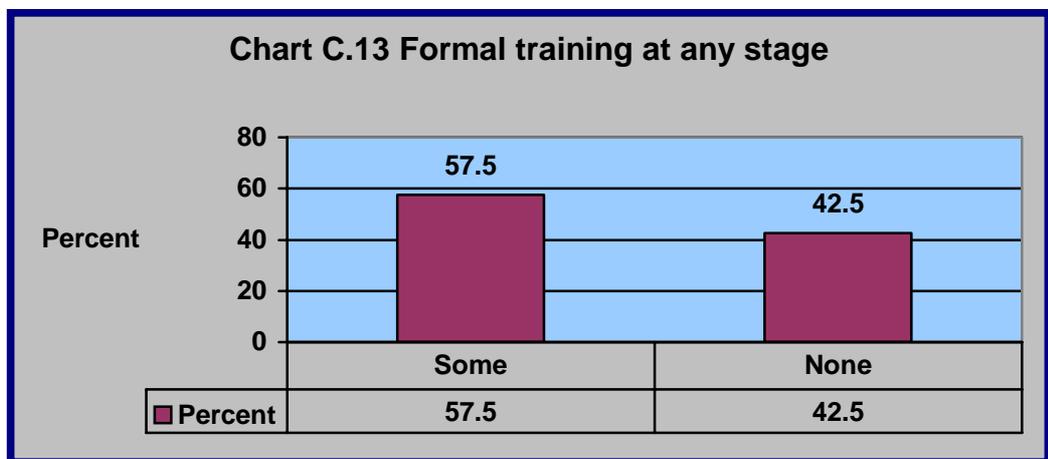
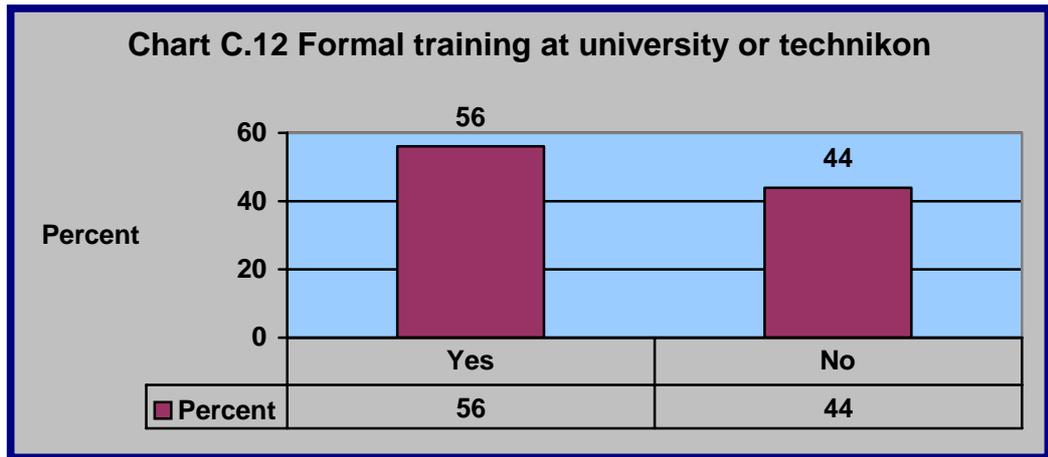


1.2.4. Tertiary qualification institution



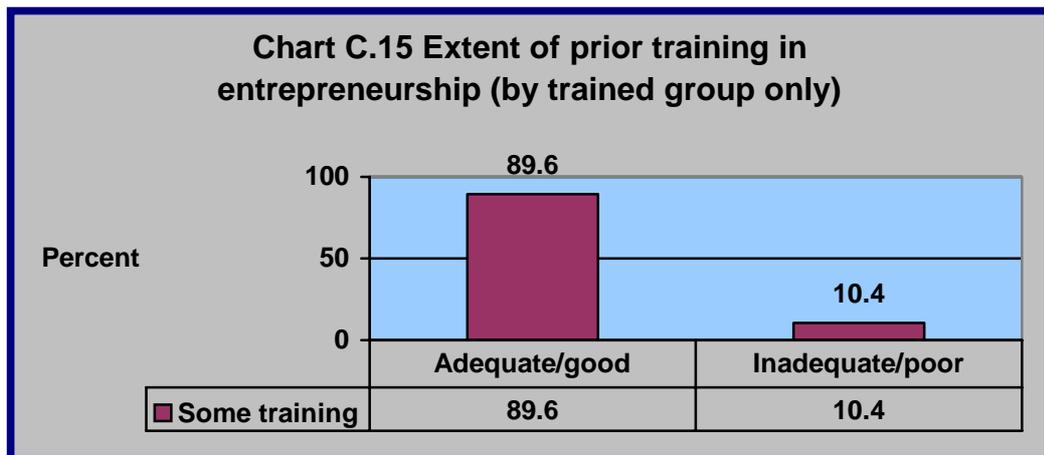
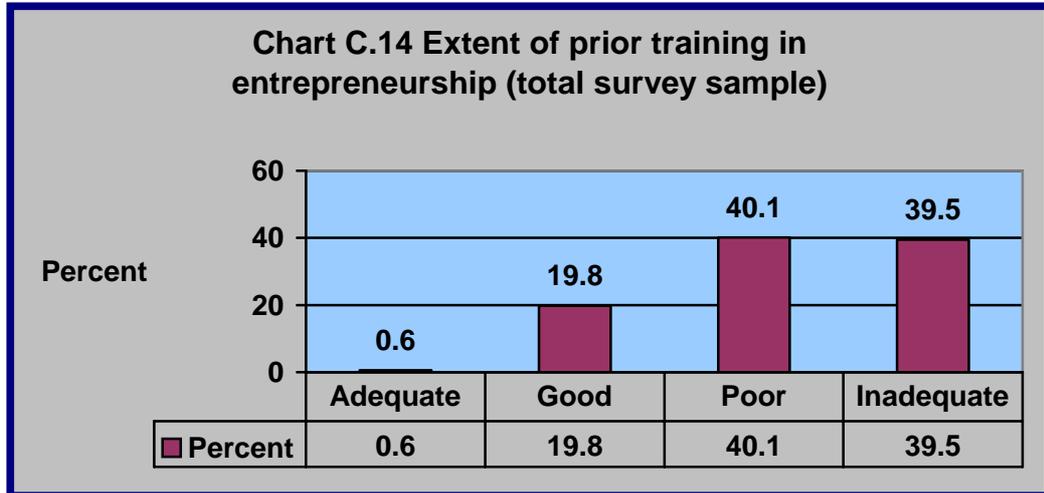
1.2.5. Formal training history in entrepreneurship



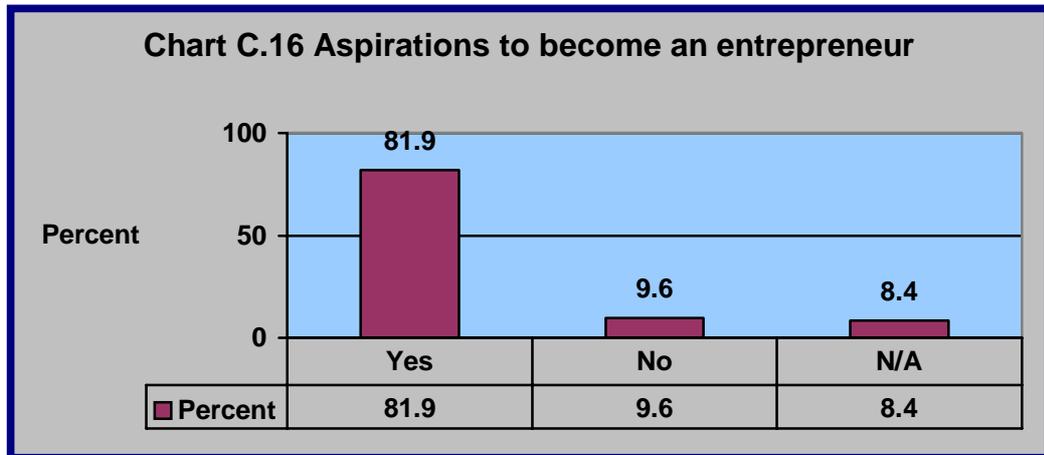


1.3. Assessment of importance of training and education in entrepreneurship

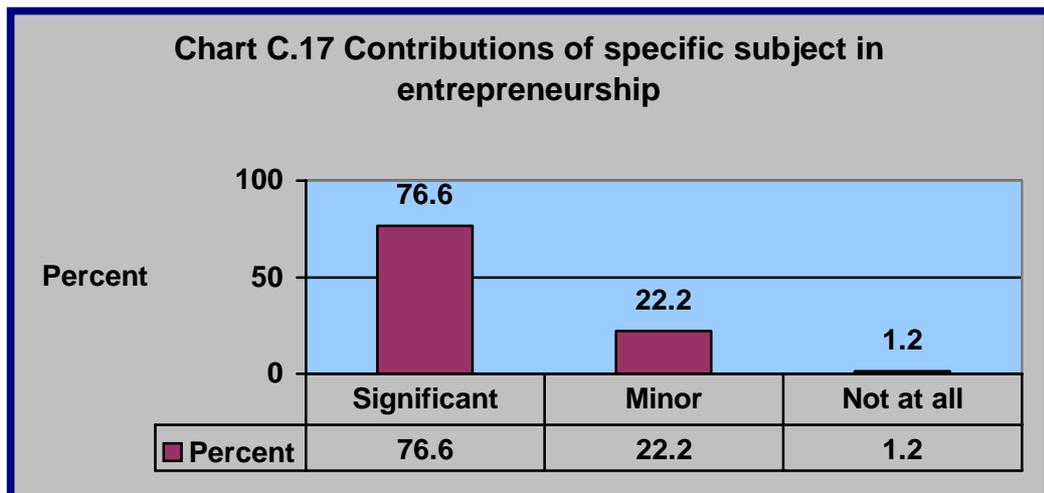
1.3.1. Extent of prior formal training in entrepreneurship



1.3.2. Aspirations to become an entrepreneur

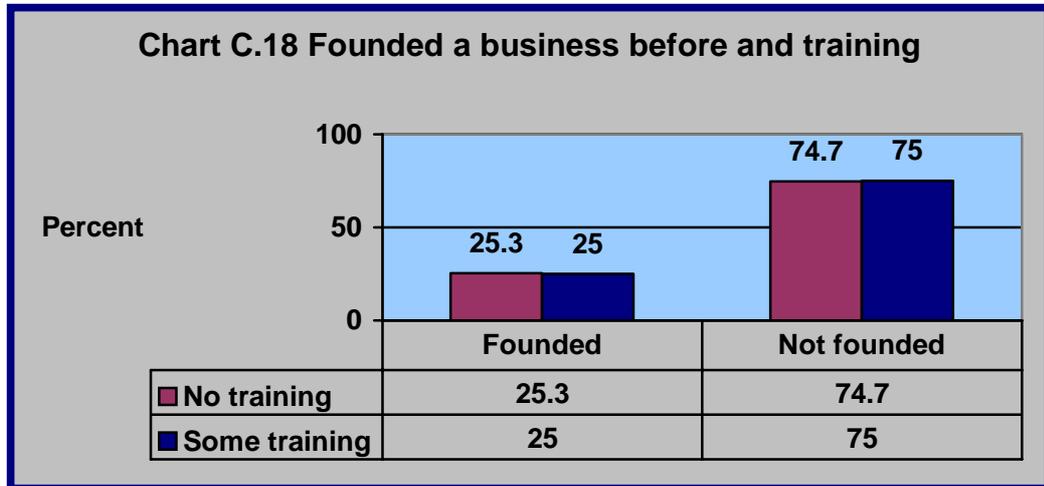


1.3.3. Contribution of specific subject in entrepreneurship



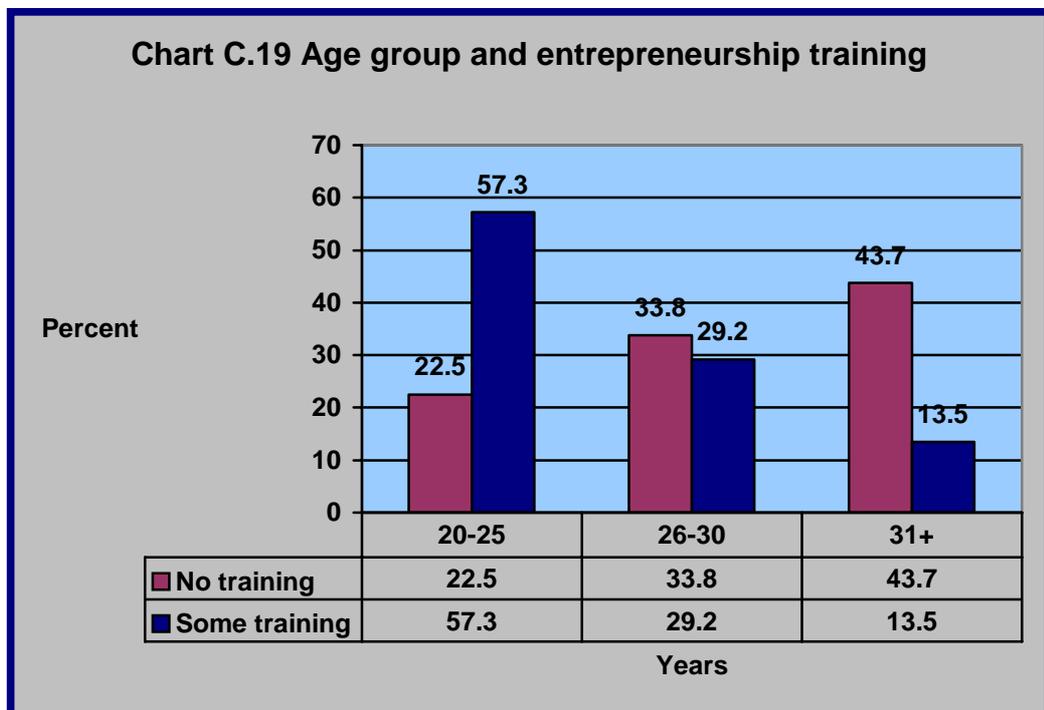
2. CORRELATION ANALYSIS

2.1. Founded a business before and entrepreneurship training



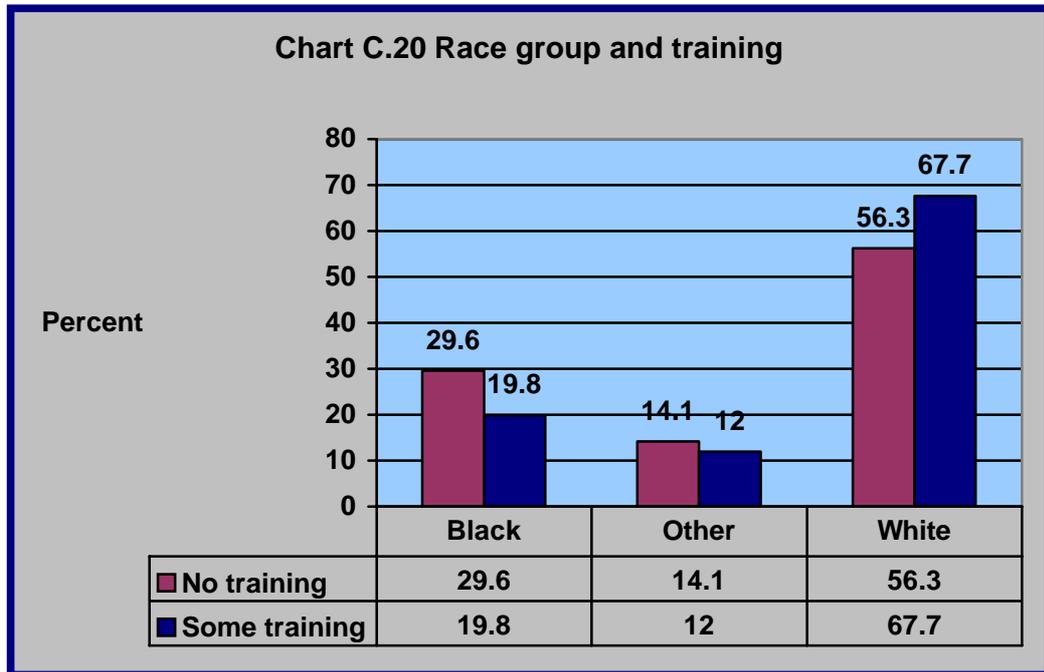
Chi-square value is 0.0027 and probability is 0.9587

2.2. Age and entrepreneurship training



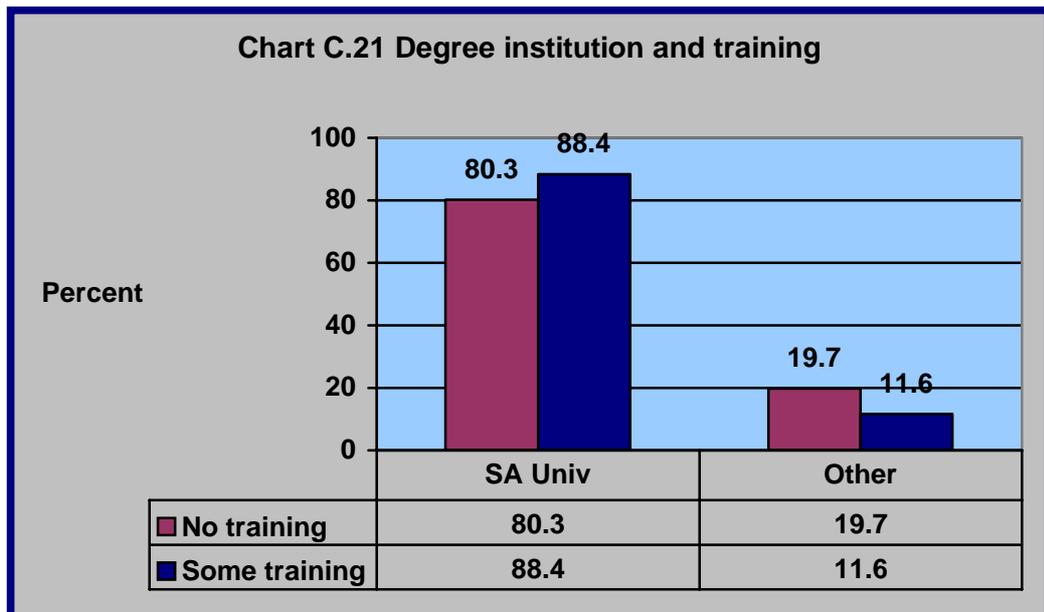
Chi-square value is 25.9325 and probability is 0.0001

2.3. Race group and training



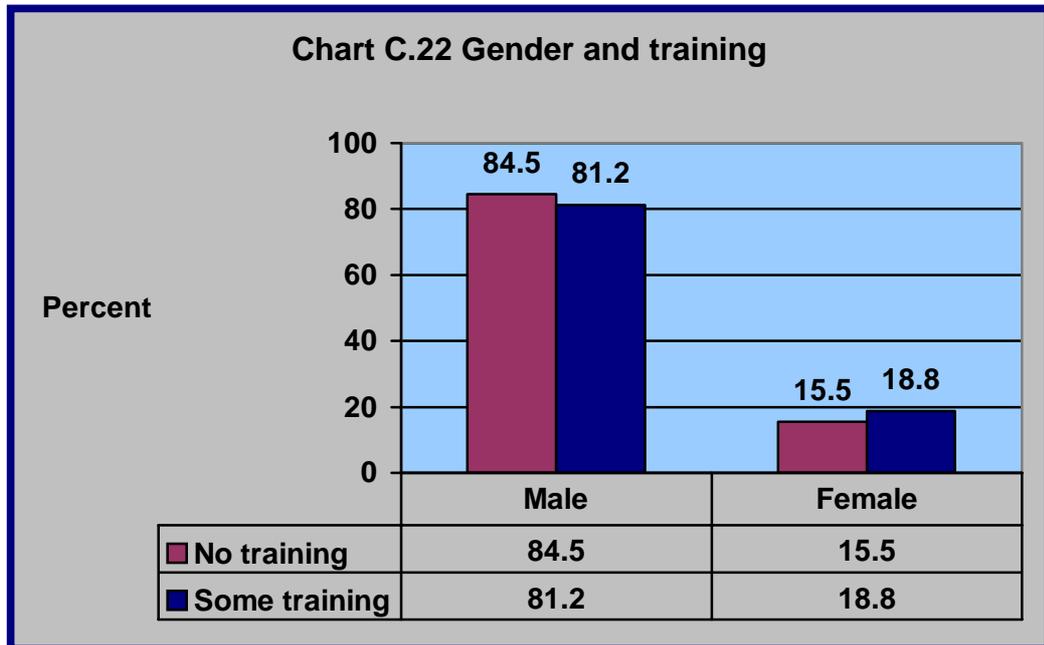
Chi-square value is 2.5488 and probability is 0.2796

2.4. Degree institution and training



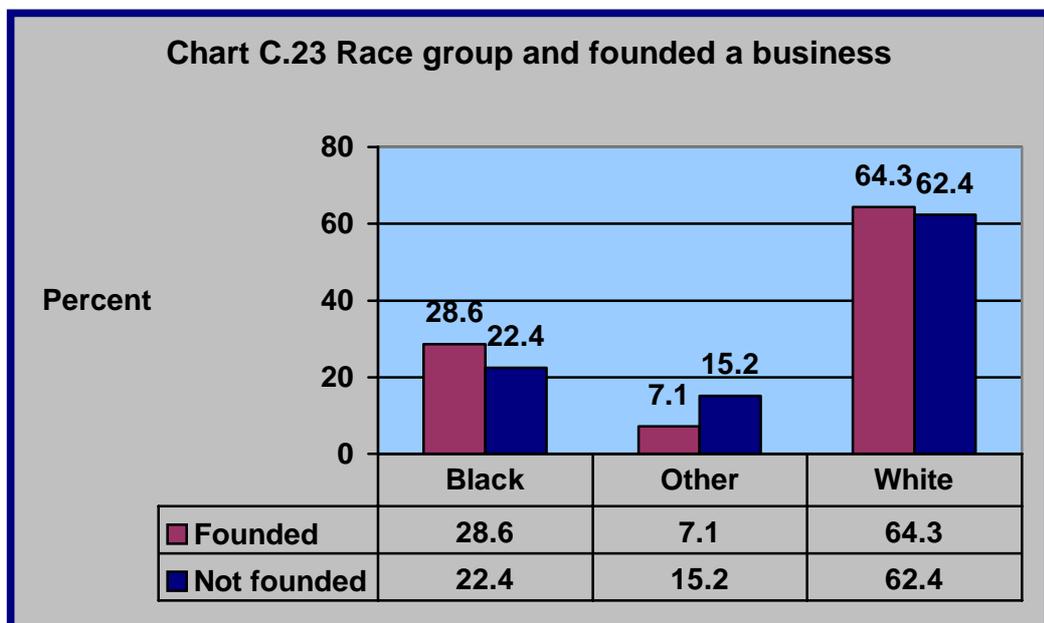
Chi-square value is 2.1043 and probability is 0.1469

2.5. Gender and training



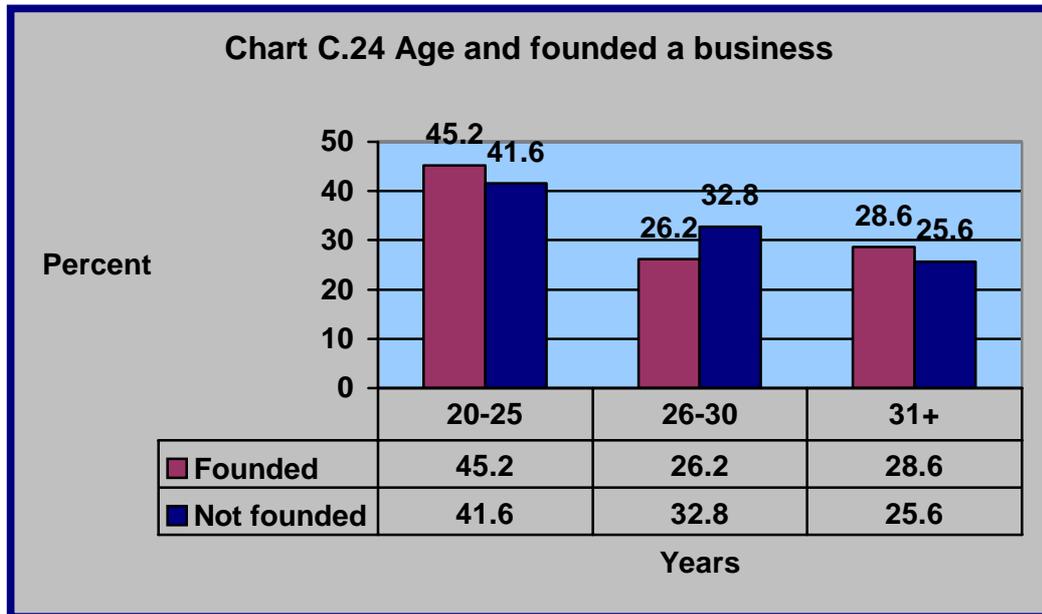
Chi-square value is 0.3017 and probability is 0.5828

2.6. Race group and founded a business



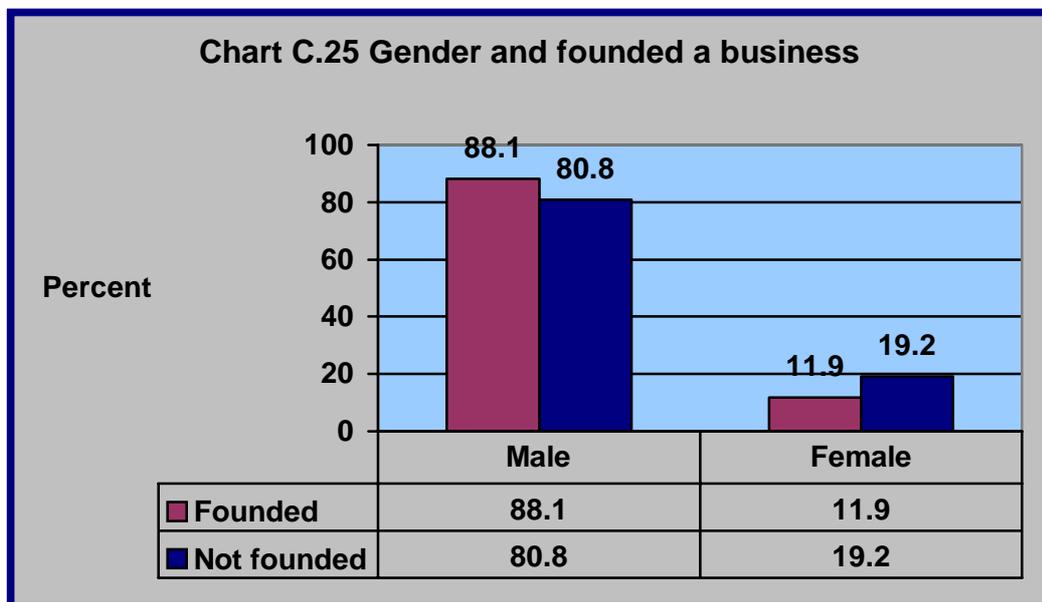
Chi-square value is 2.0668 and probability is 0.3558

2.7. Age and founded a business



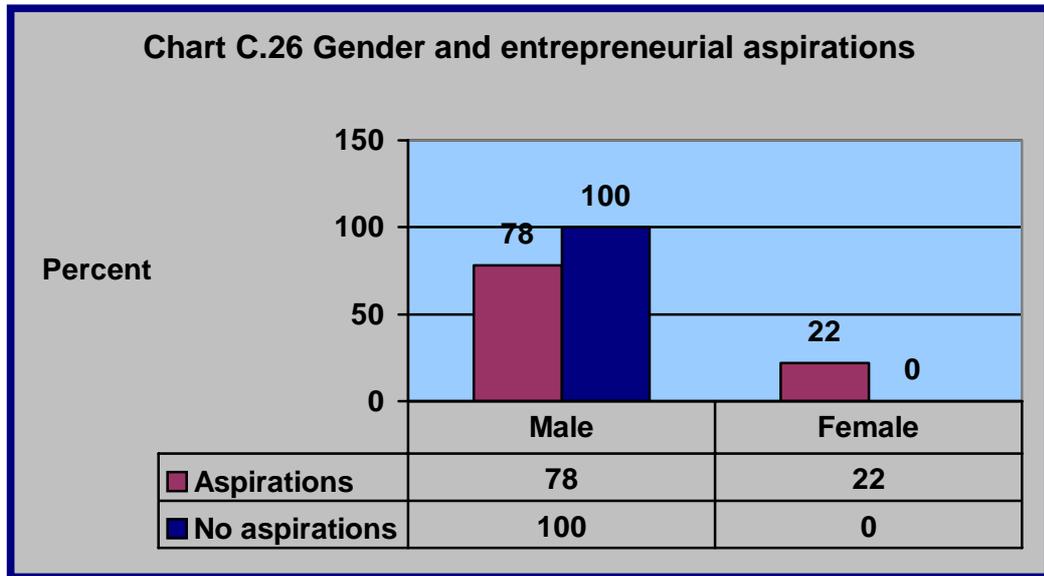
Chi-square value is 0.6643 and probability is 0.7246

2.8. Gender and founded a business



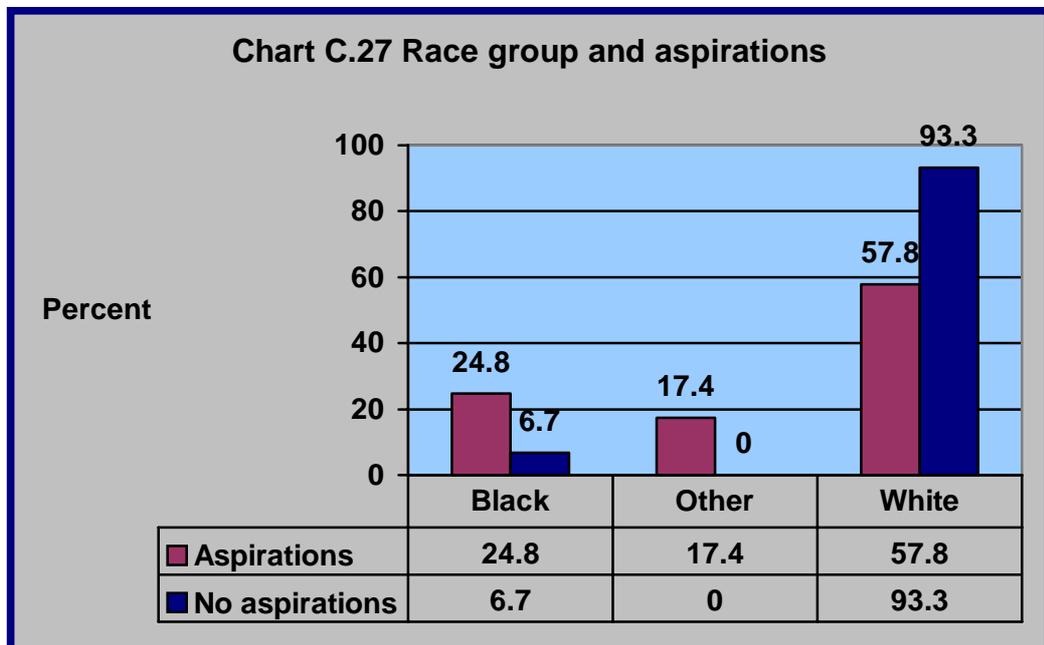
Chi-square value is 1.1659 and probability is 0.2802

2.9. Gender and entrepreneurial aspirations



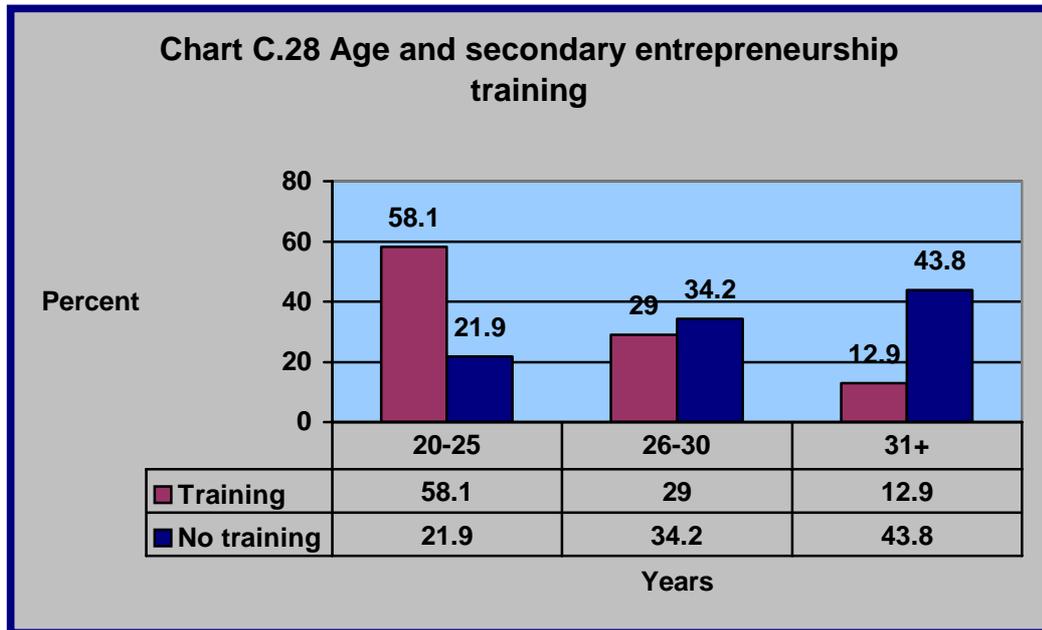
Chi-square value is 4.0954 and probability is 0.0430

2.10. Race group and entrepreneurial aspirations



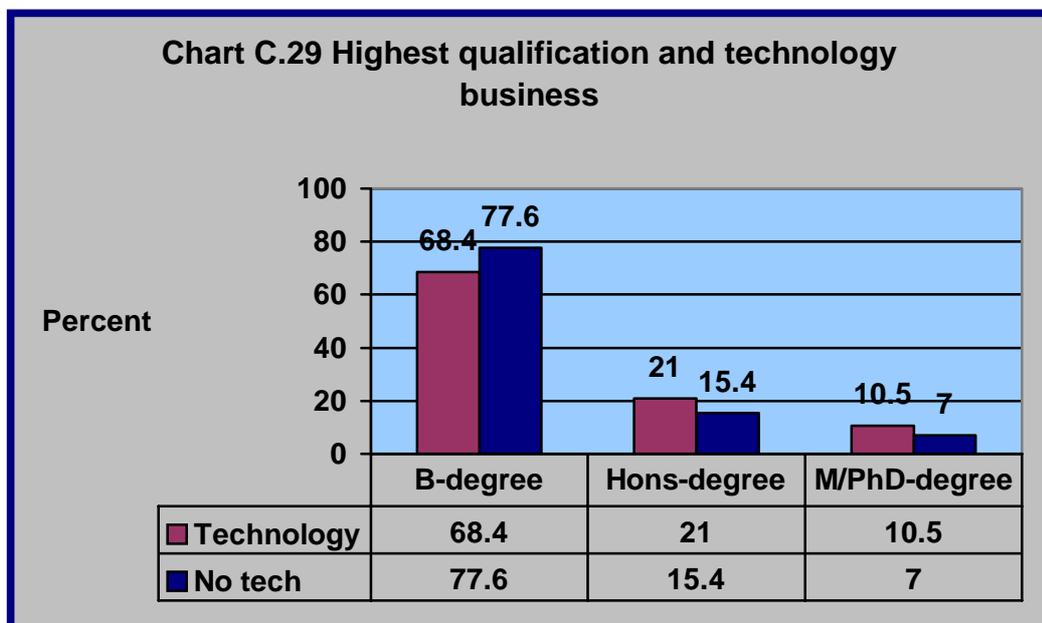
Chi-square value is 7.2098 and probability is 0.0272

2.11. Age and university/technikon entrepreneurship training



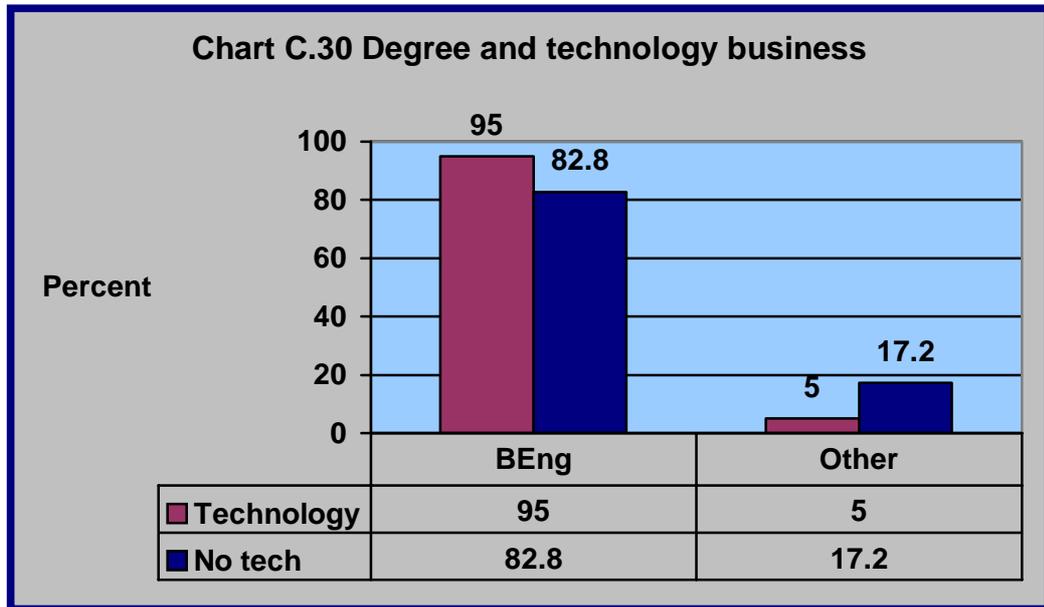
Chi-square value is 27.7902 and probability is 0.0001

2.12. Highest qualification and technology business



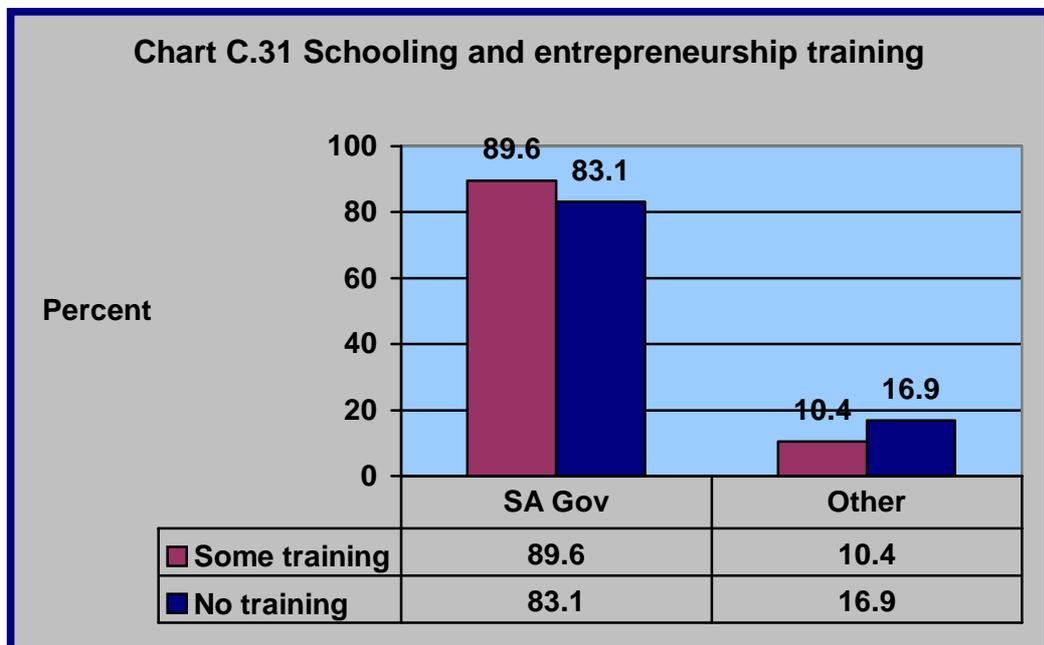
Chi-square value is 2.1813 and probability is 0.7025

2.13. Degree and technology business



Chi-square value is 2.6066 and probability is 0.2716

2.14. Schooling and entrepreneurship training



Chi-square value is 1.5005 and probability is 0.2206

APPENDIX D
ENTREPRENEUR
QUESTIONNAIRE
RESULTS

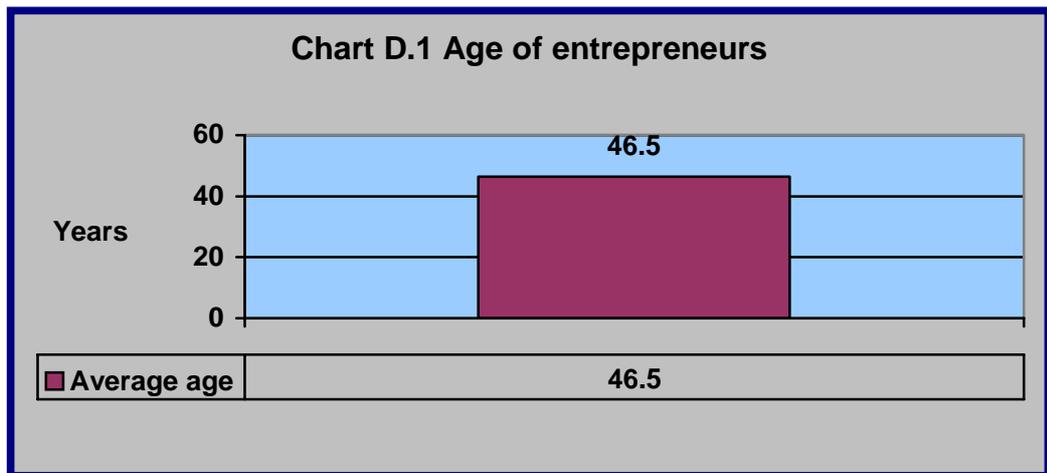
APPENDIX D

ENTREPRENEUR QUESTIONNAIRE RESULTS

1. FREQUENCY ANALYSIS

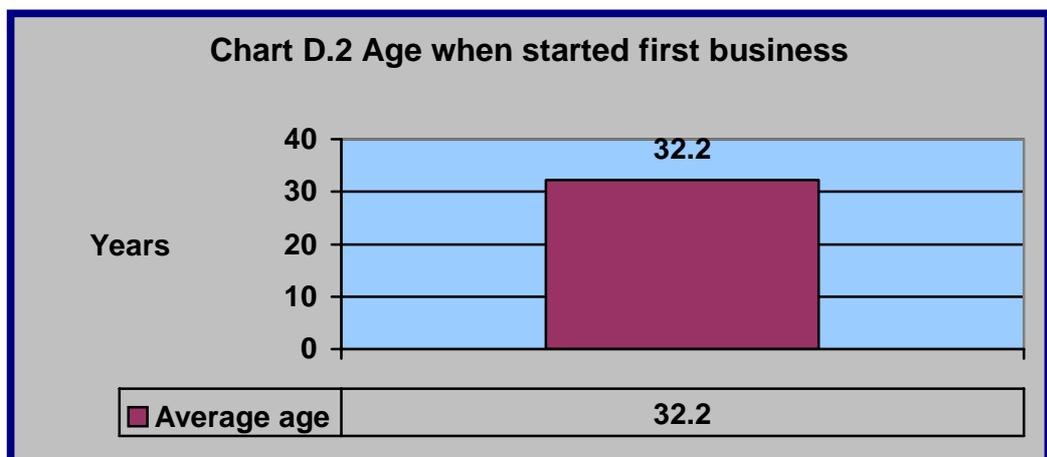
1.1. Entrepreneurs

1.1.1. Age of entrepreneurs (V2)



- Standard deviation: 10.99
- Minimum: 23
- Maximum: 75

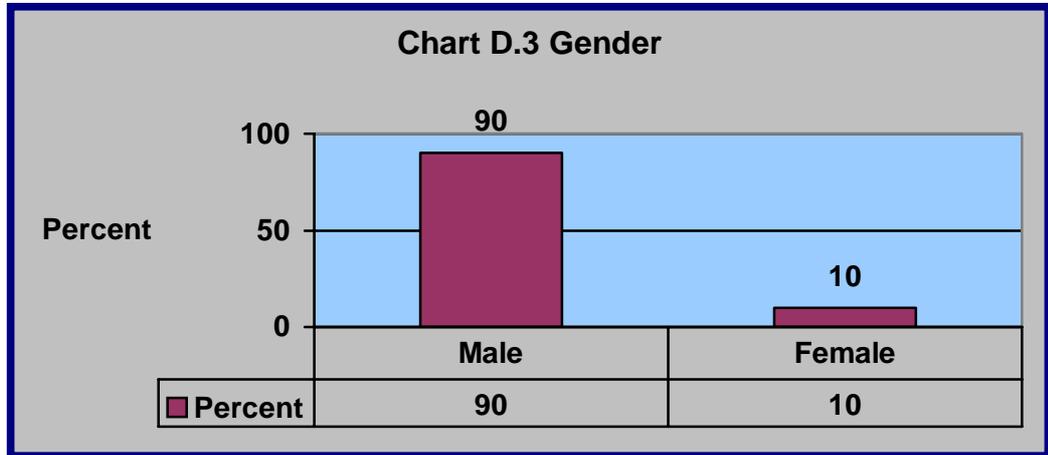
1.1.2. Age when started first business (V3)



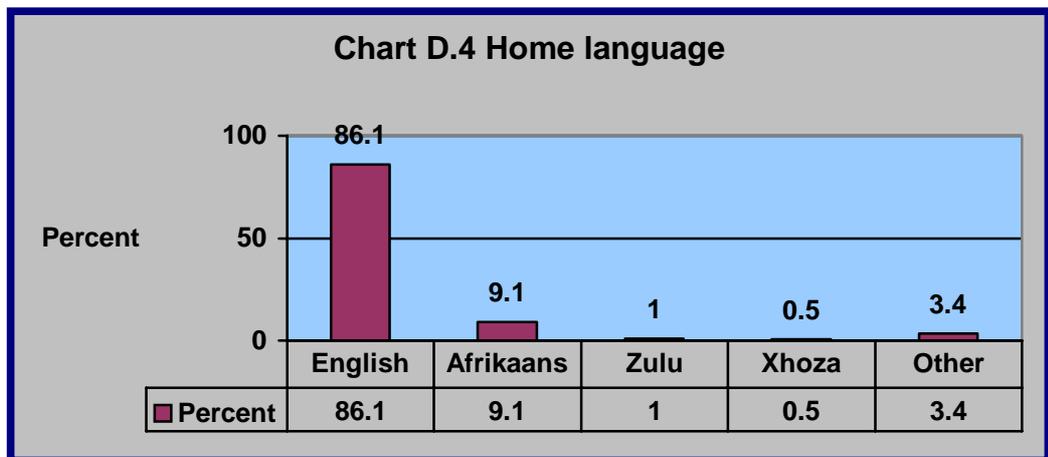
- Standard deviation: 8.89
- Minimum: 6

- Maximum: 60

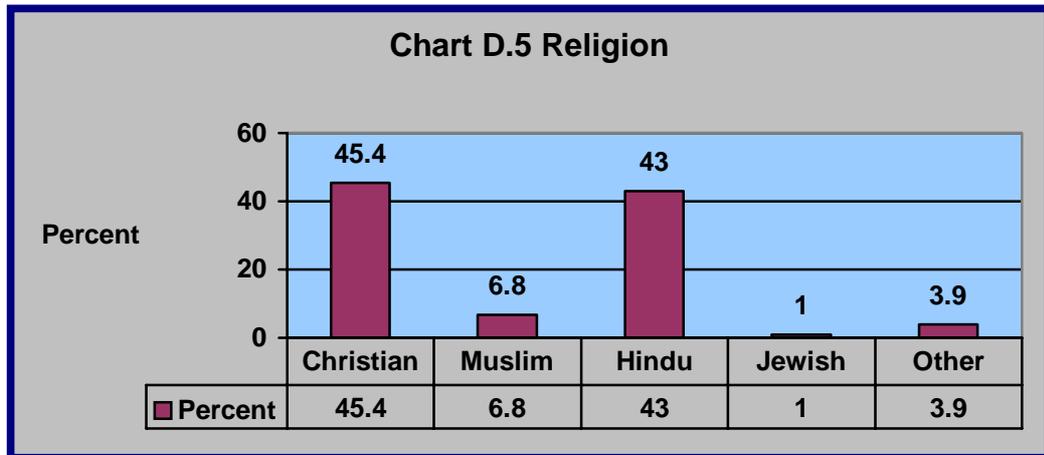
1.1.3. Gender (V4)



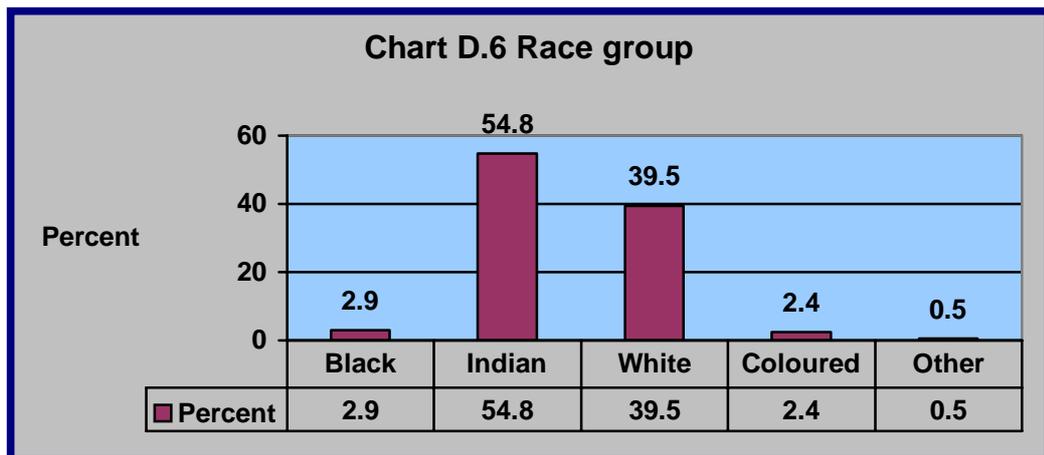
1.1.4. Home language (V5)



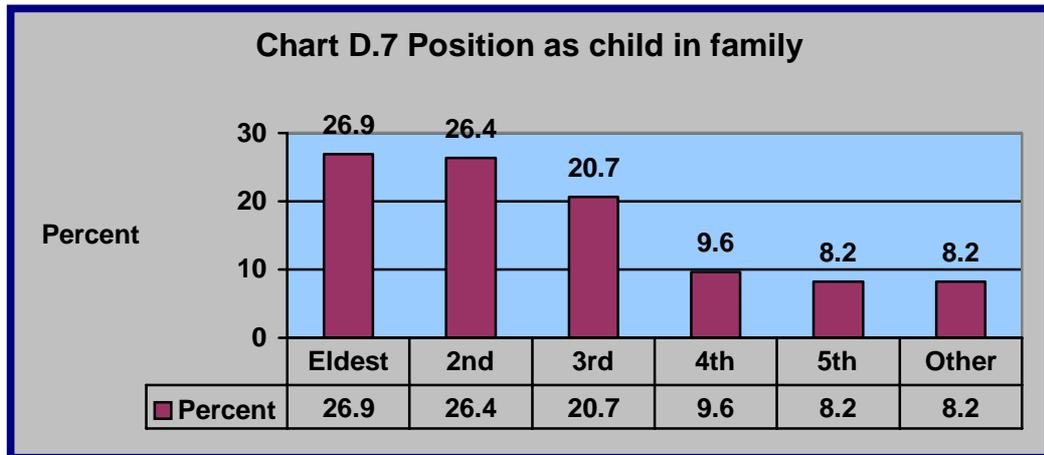
1.1.5. Religion (V6)



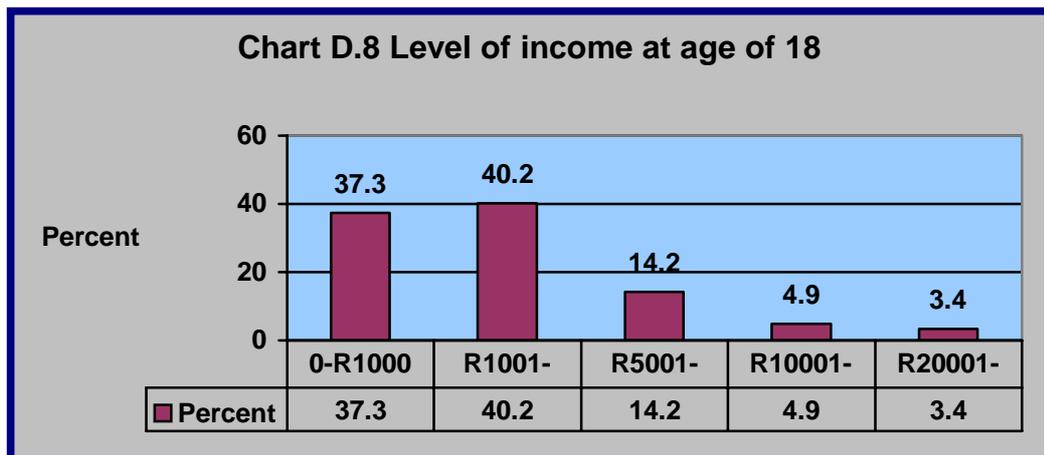
1.1.6. Race group (V7)



1.1.7. Position as child in family (V8)

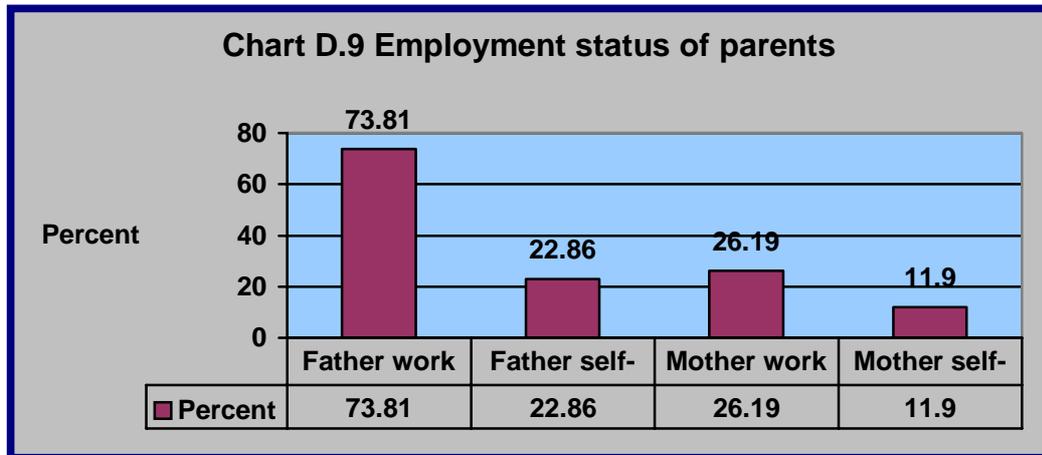


1.1.8. Level of income at age of 18 (V9)



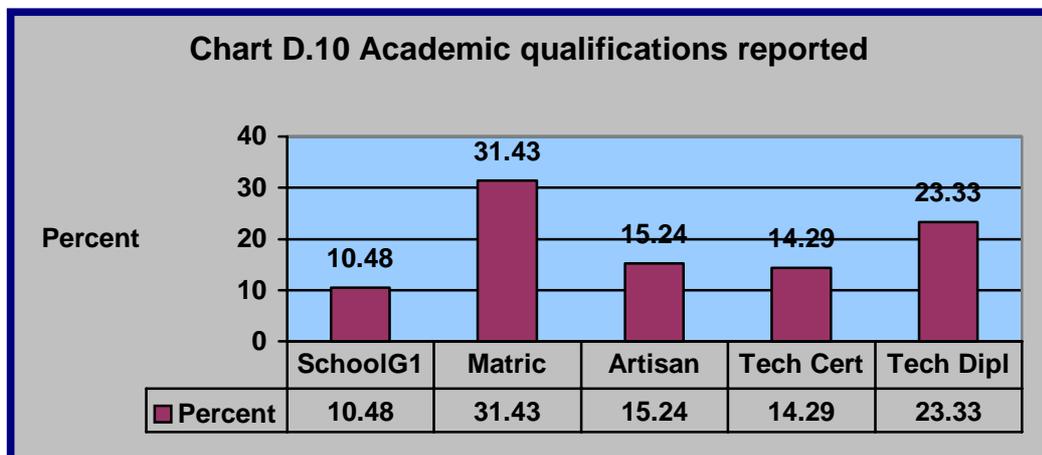
- 0 – R1,000
- R1,001 – R5,000
- R5,001 – R10,000
- R10,001 – R20,000
- R20,001 – more

1.1.9. Employment status of parents (V10-V13)

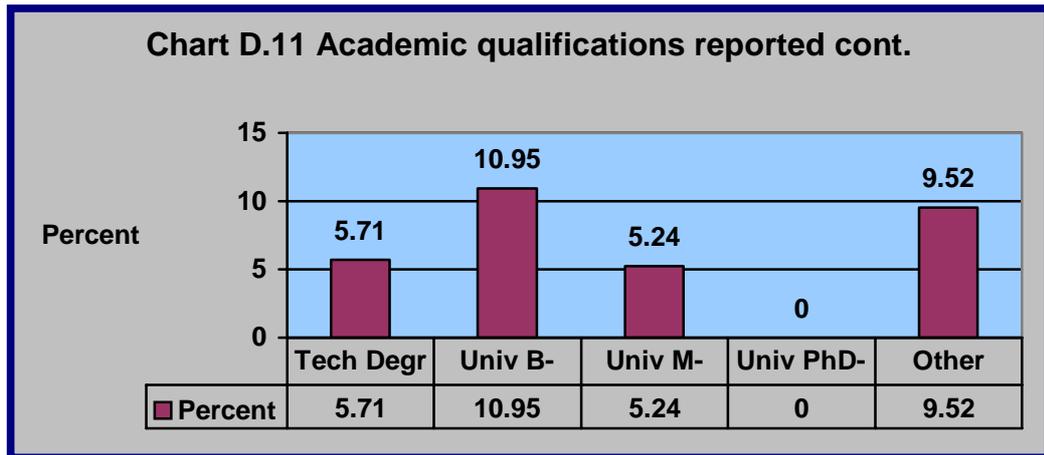


- *Father worked*
- *Father self-employed*
- *Mother worked*
- *Mother self-employed*

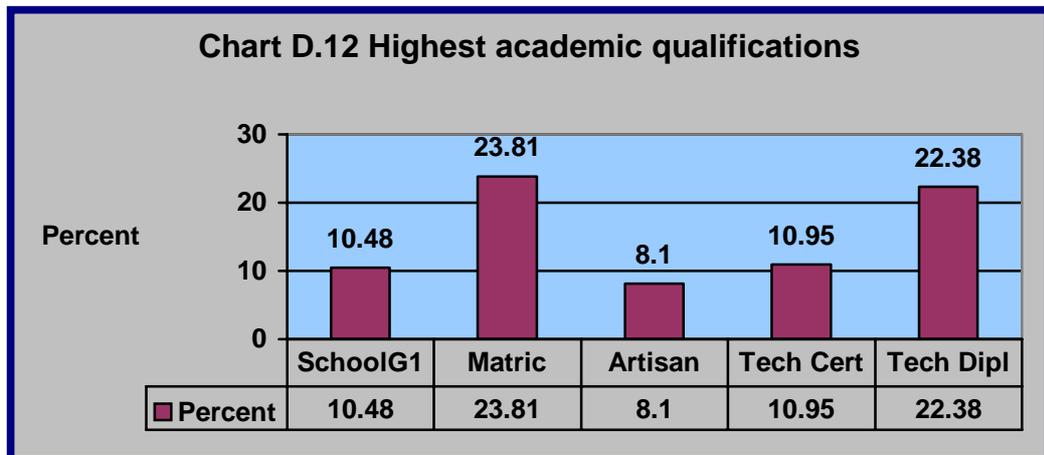
1.1.10. Academic qualifications (V14-V23)



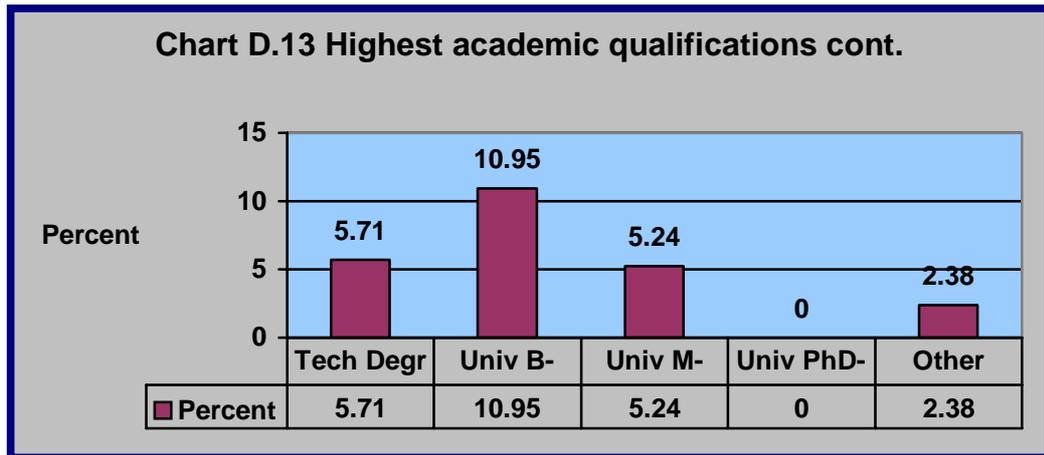
- *School grade 11*
- *School grade 12*
- *Artisan*
- *Technical College certificate*
- *Technikon diploma*



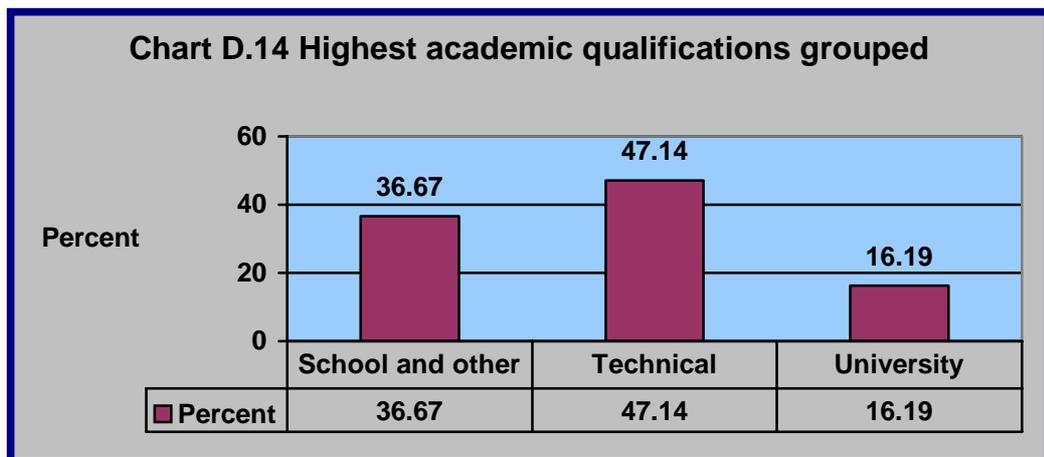
- *Technikon degree*
- *University B-degree*
- *University M-degree*
- *University PhD-degree*
- *Other*



- *School grade 11 (highest)*
- *School grade 12 (highest)*
- *Artisan (highest)*
- *Technical College certificate (highest)*
- *Technikon diploma (highest)*

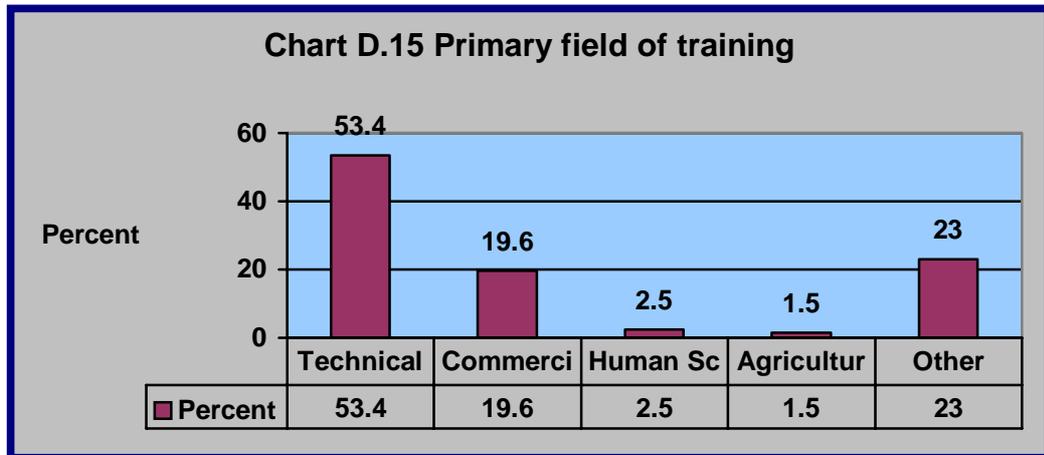


- *Technikon degree (highest)*
- *University B-degree (highest)*
- *University M-degree (highest)*
- *University PhD-degree (highest)*
- *Other (highest)*



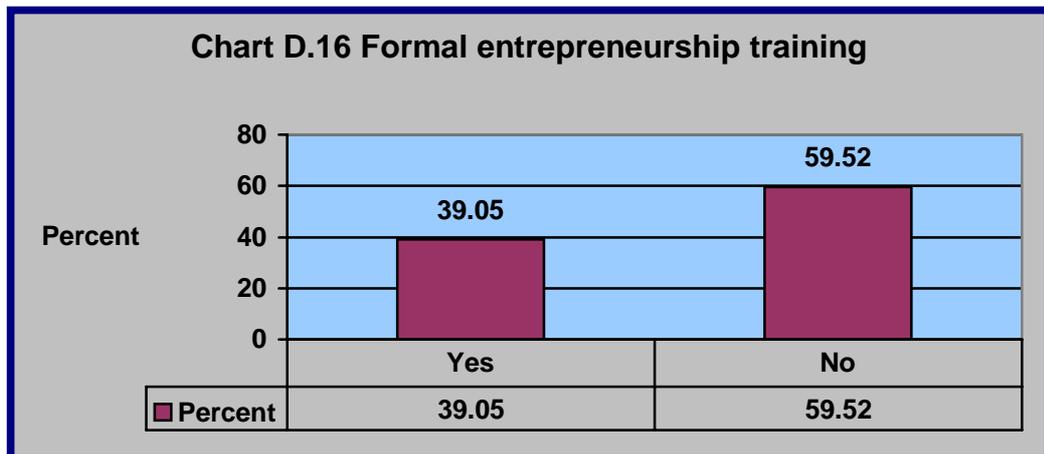
- *School and other: Grades 1-11, grade 12 and other*
- *Technical: Artisan, Technical College certificate, Technikon diploma and degree*
- *University: B-, M- and PhD-degrees*

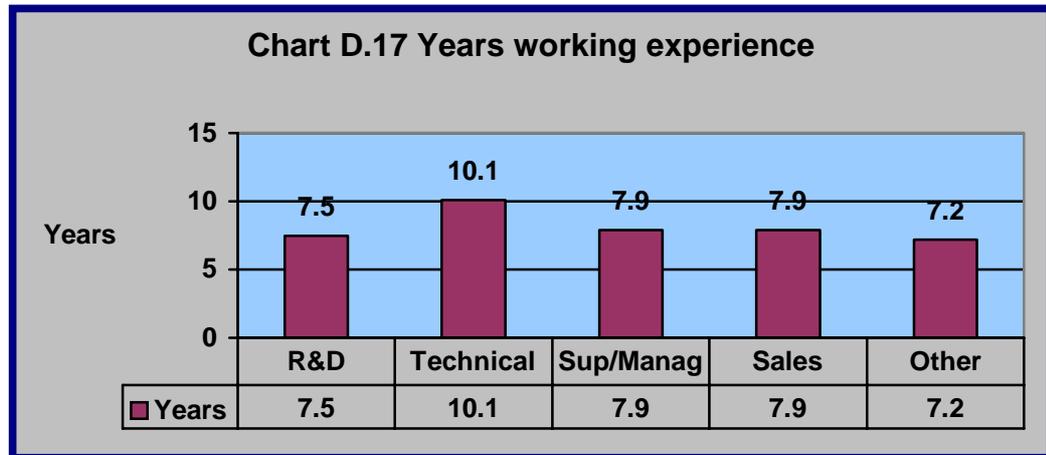
1.1.11. Primary field of training (V24)



- *Technical*
- *Commercial*
- *Human science*
- *Agriculture*
- *Other*

1.1.12. Formal entrepreneurship training (V25)



1.1.13. Years experience (V26-V30)**Research and Development:**

- Standard deviation: 8.7
- Minimum: 0
- Maximum: 30

Technical:

- Standard deviation: 6.8
- Minimum: 0
- Maximum: 30

Supervisory/Managerial:

- Standard deviation: 6.7
- Minimum: 0
- Maximum: 30

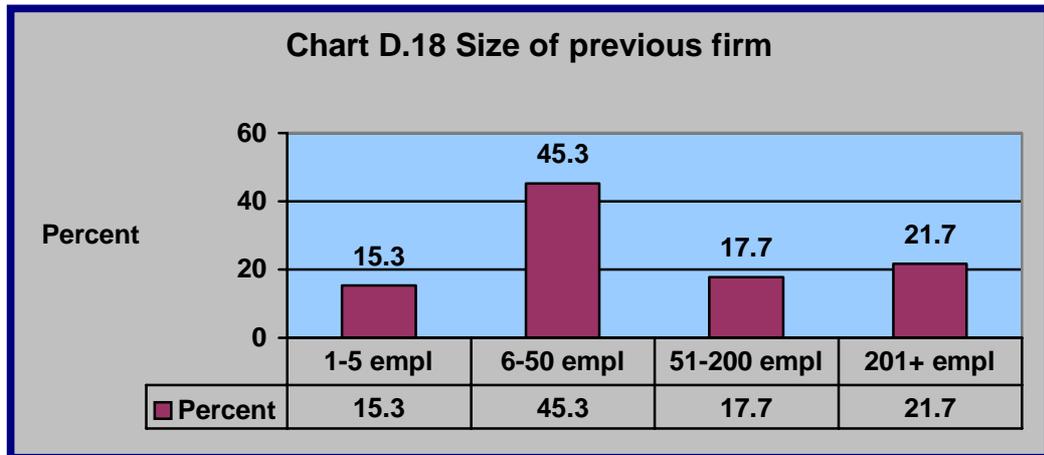
Sales:

- Standard deviation: 7.7
- Minimum: 0
- Maximum: 35

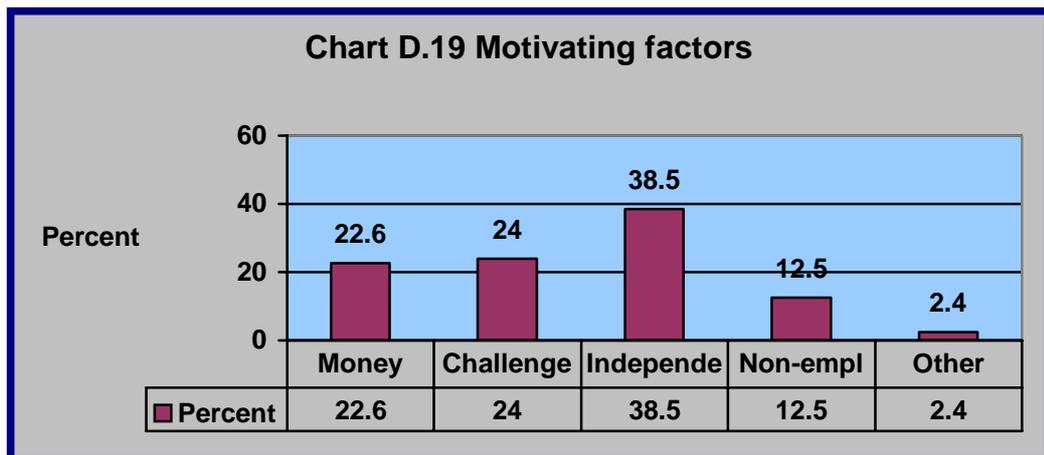
Other:

- Standard deviation: 6.3
- Minimum: 0
- Maximum: 30

1.1.14. Size of previous firm (V31)

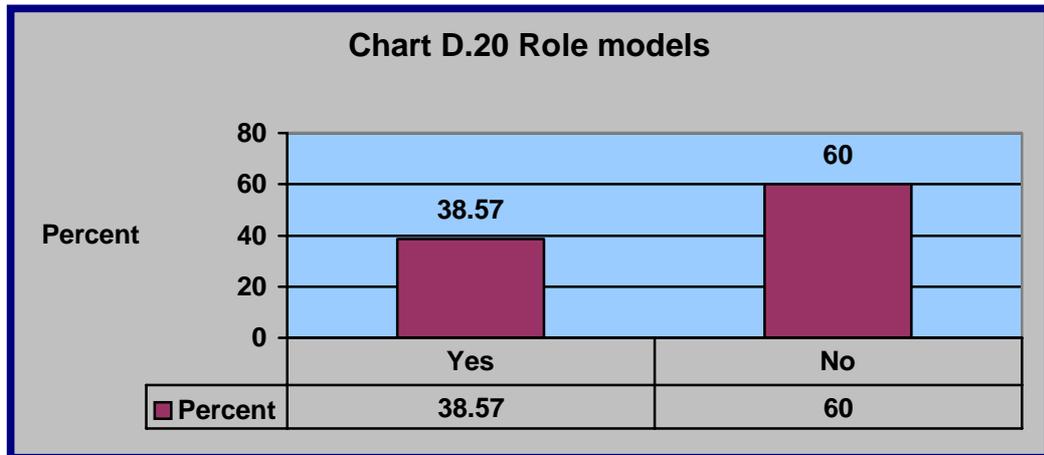


1.1.15. Motivating factors (V32)

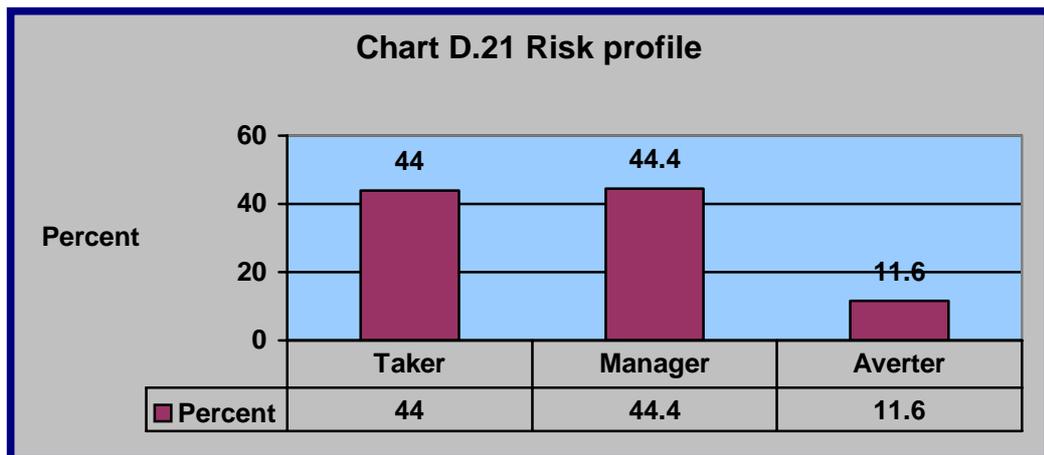


- *Money*
- *Challenge*
- *Independence*
- *Non-employment*
- *Other*

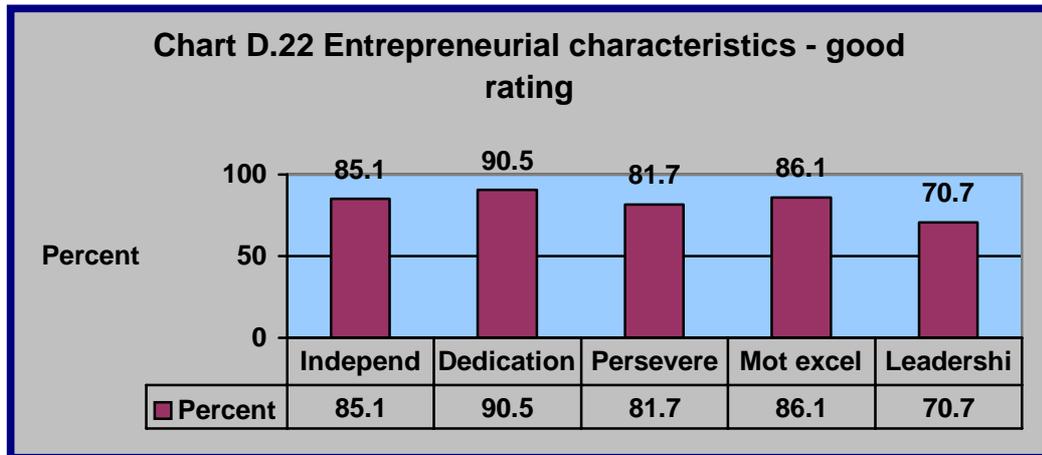
1.1.16. Role models (V33)



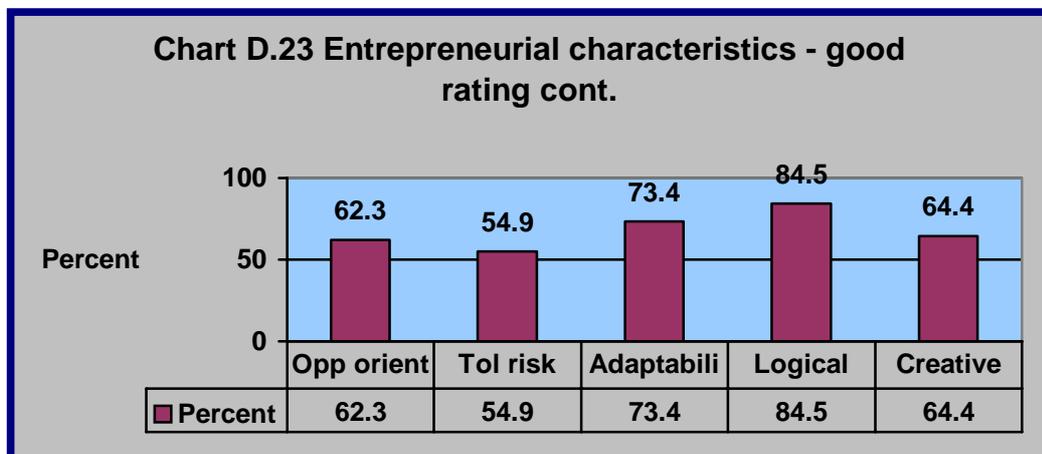
1.1.17. Risk profile (V34)



1.1.18. Entrepreneurial characteristics (V35-V44)

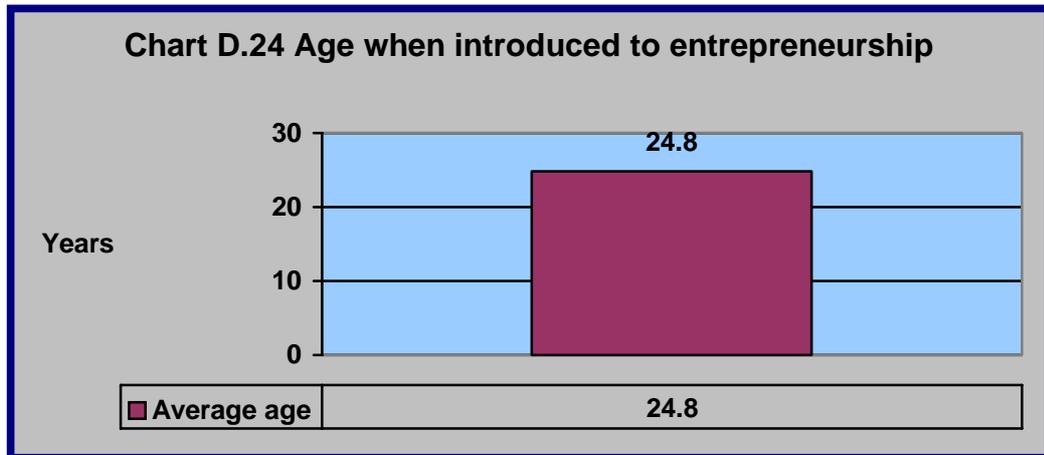


- *Independence*
- *Dedication*
- *Perseverance*
- *Motivation to excel*
- *Leadership*



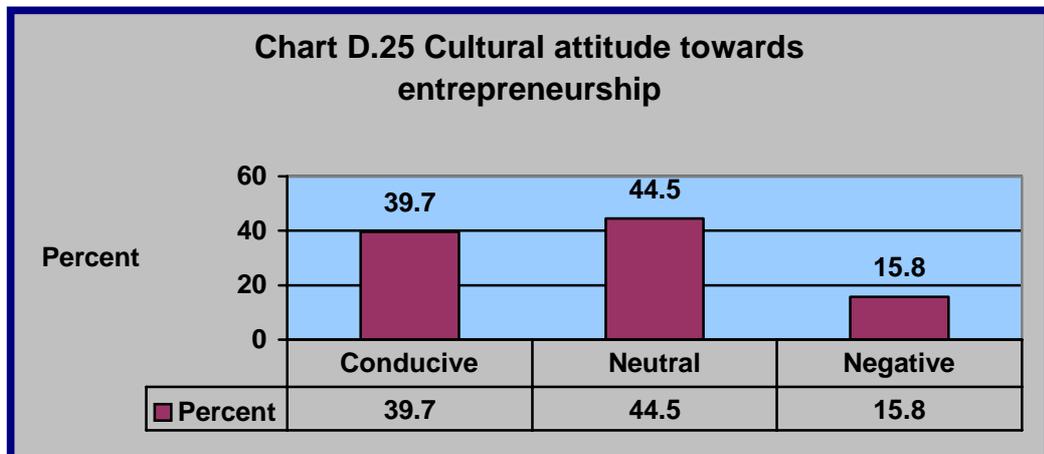
- *Opportunity orientated*
- *Tolerance of risk*
- *Adaptability*
- *Logical*
- *Creative*

1.1.19. Age when introduced to entrepreneurship (V45)



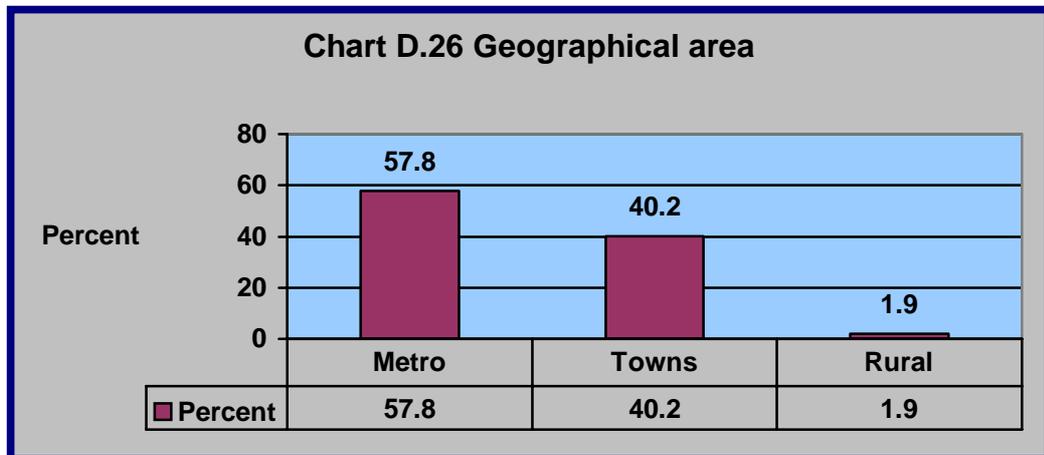
- Standard deviation: 8.0
- Minimum: 7
- Maximum: 55

1.1.20. Cultural attitude towards entrepreneurship (V46)

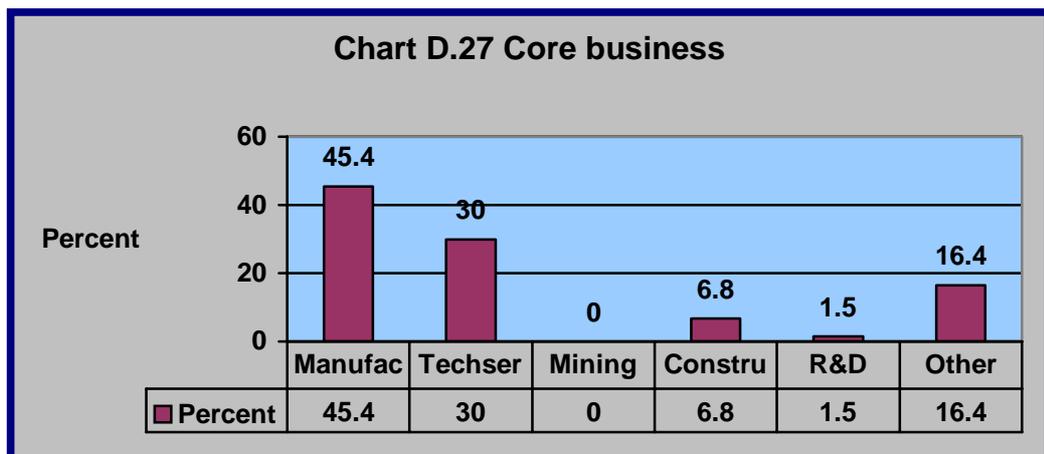


1.2. Enterprise detail

1.2.1. Geographical area (V47)

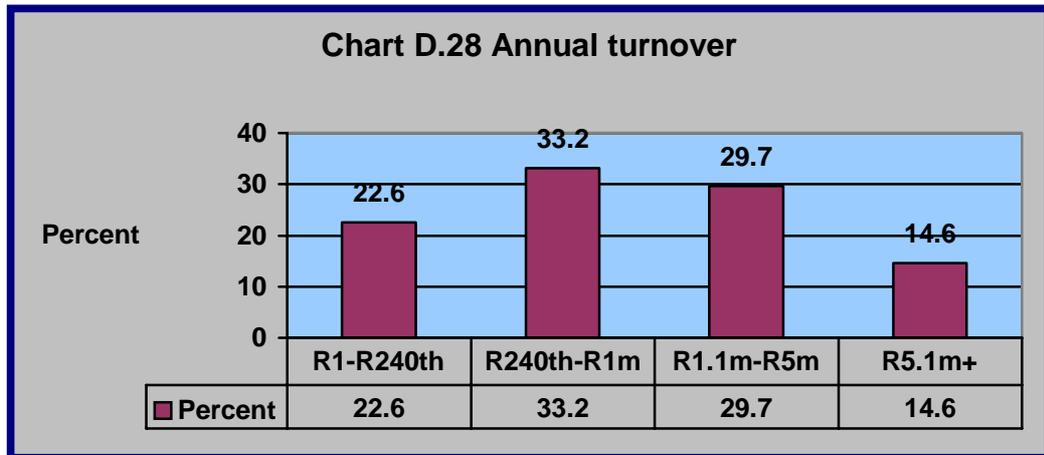


1.2.2. Core business (V48)

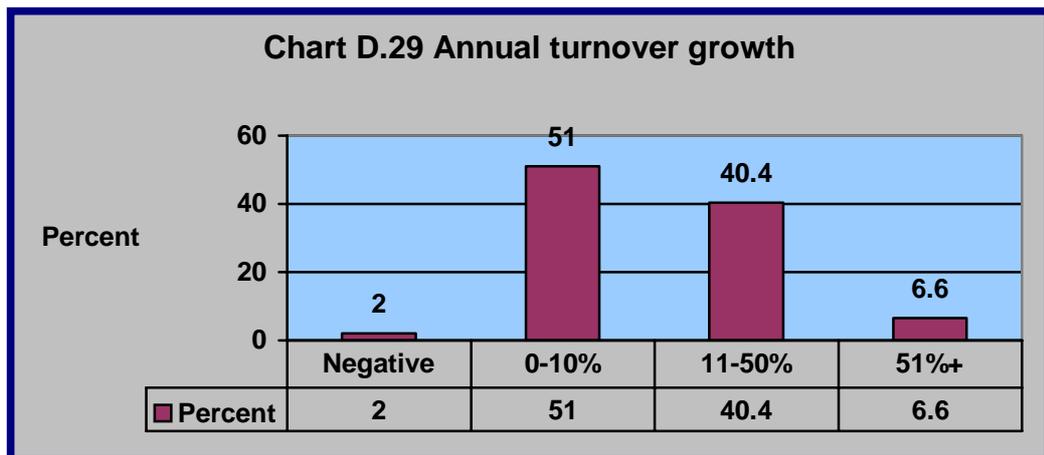


- *Manufacturing*
- *Technical services*
- *Mining*
- *Construction*
- *R & D*
- *Other*

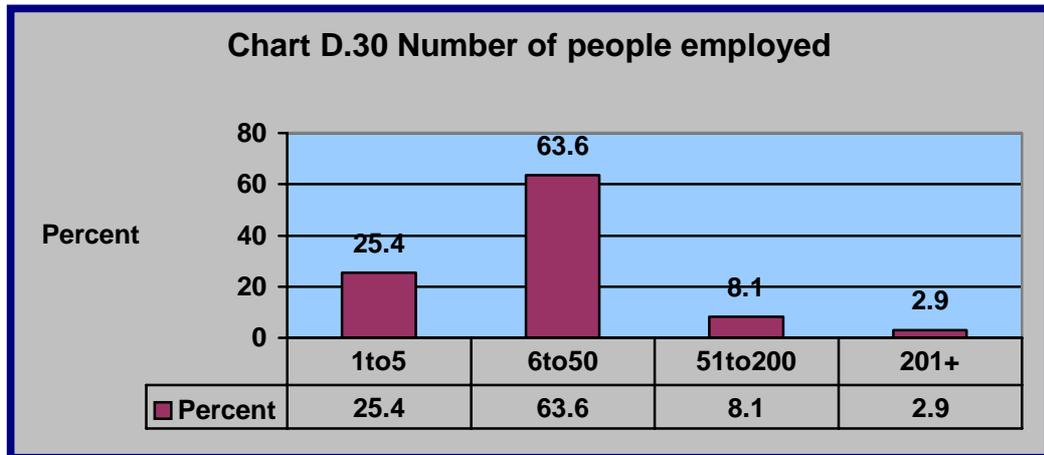
1.2.3. Annual turnover (V49)



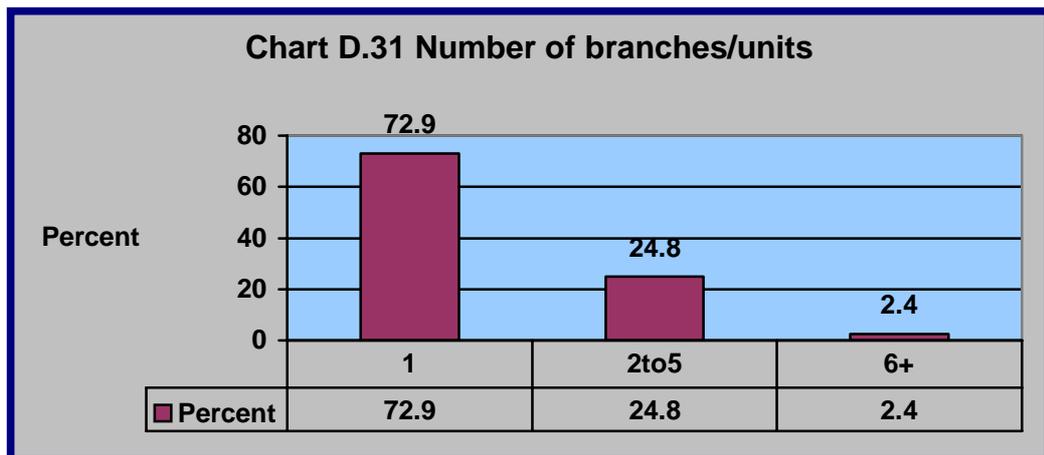
1.2.4. Annual turnover growth (V50)



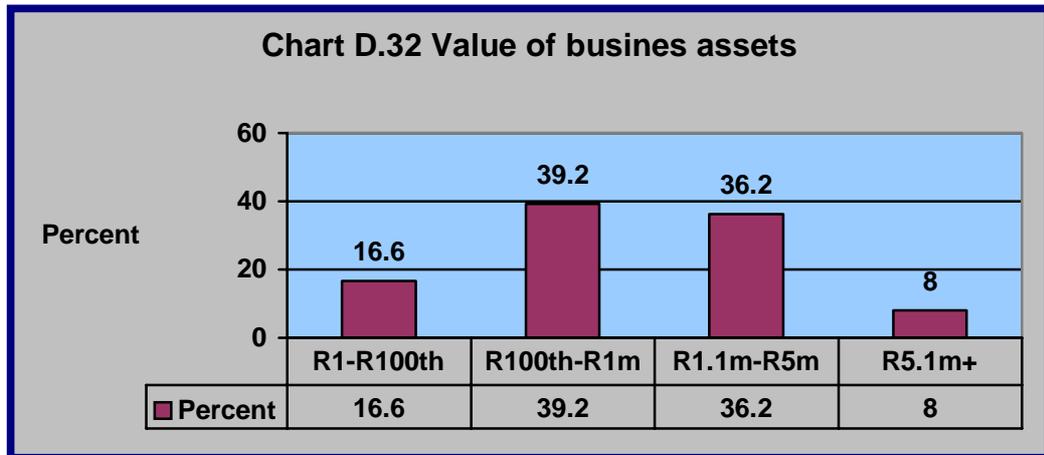
1.2.5. Number of people employed (V51)



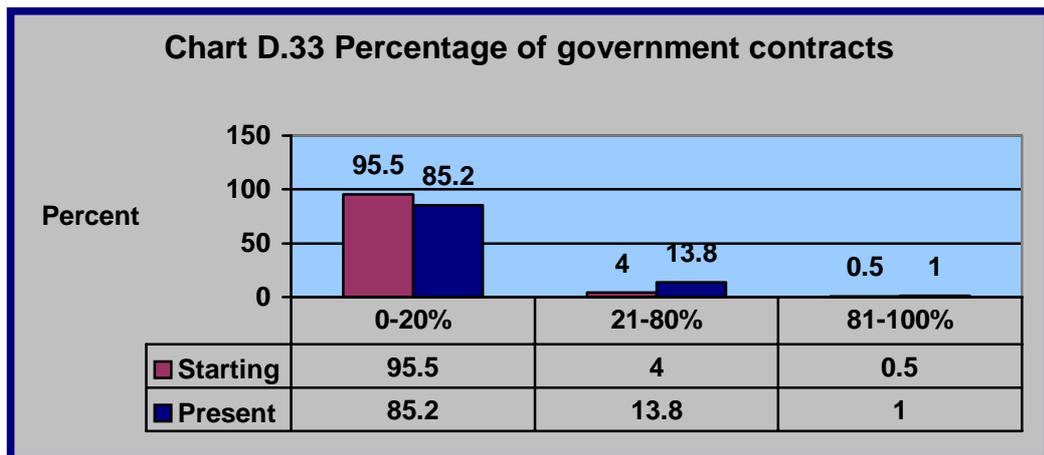
1.2.6. Number of branches/units (V52)



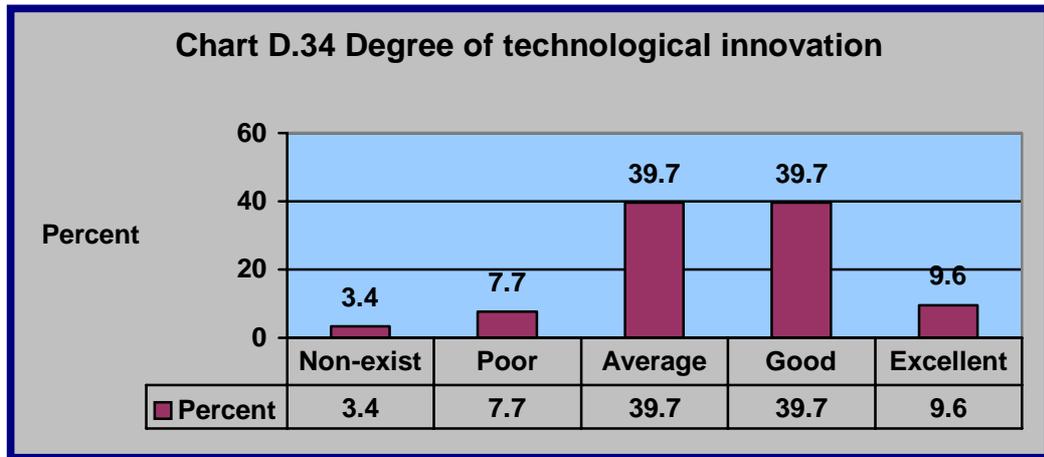
1.2.7. Value of business assets (V53)



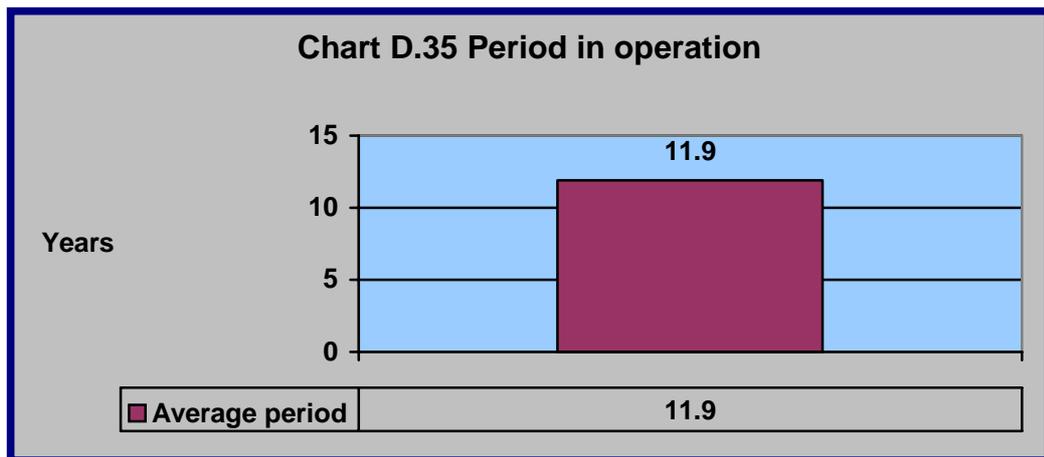
1.2.8. Percentage of Government contracts (V54-V55)



1.2.9. Degree of technological innovation (V56)

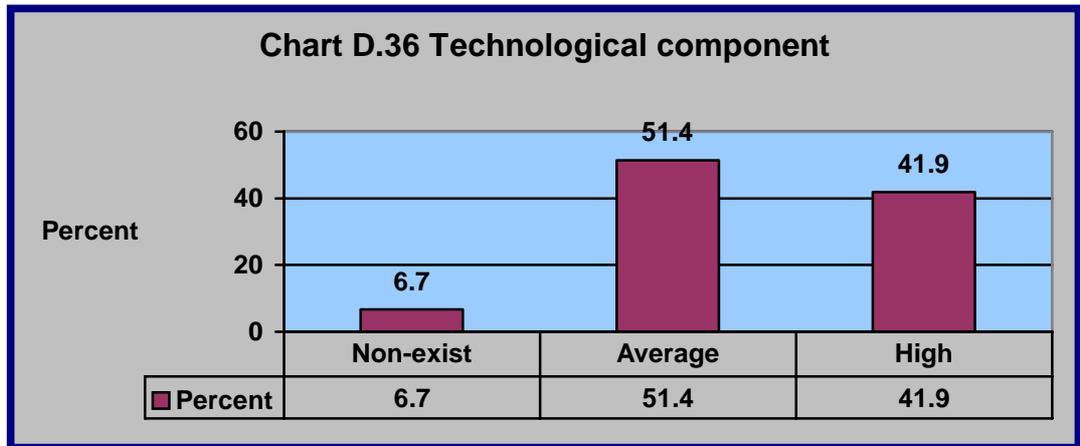


1.2.10. Period in operation (V57)



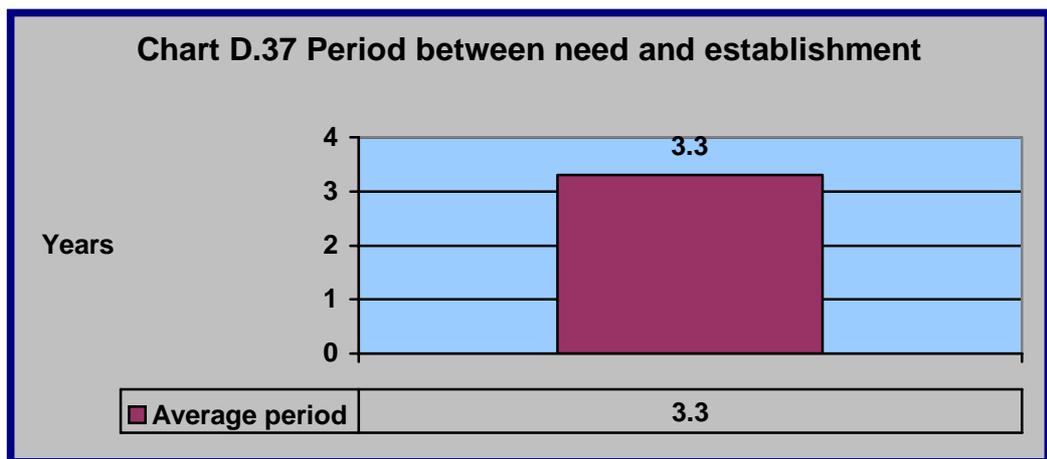
- Standard deviation: 9.4
- Minimum: 1
- Maximum: 57

1.2.11. Technological component (V58)



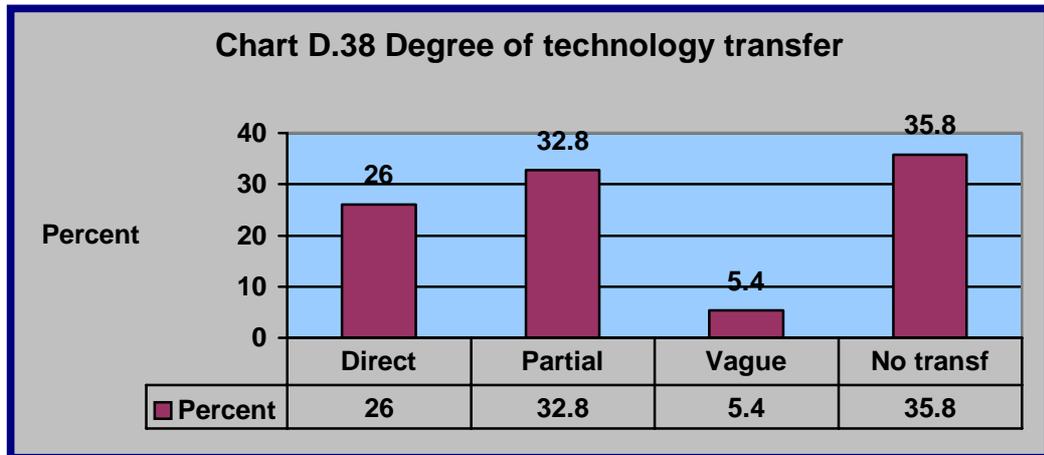
1.3. Formation of new enterprise

1.3.1. Period between need and establishment (V59)

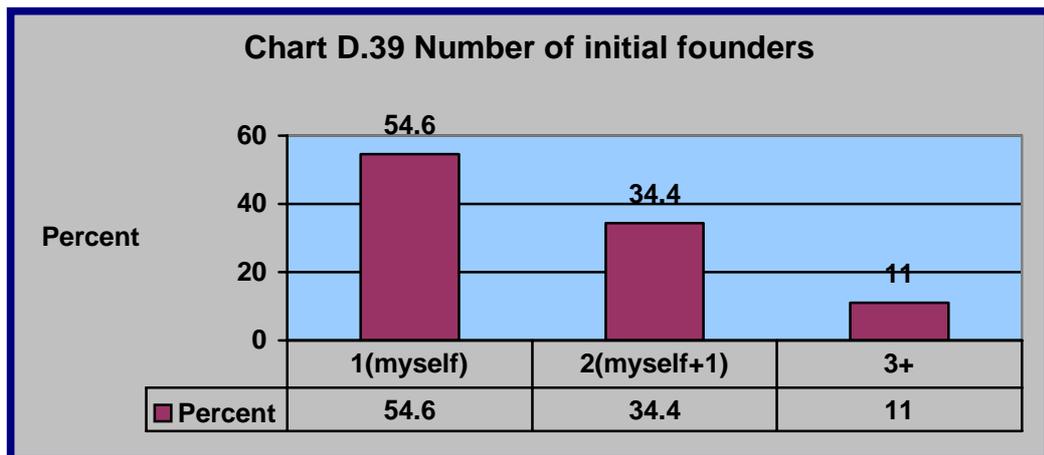


- Standard deviation: 4.0
- Minimum: 0
- Maximum: 25

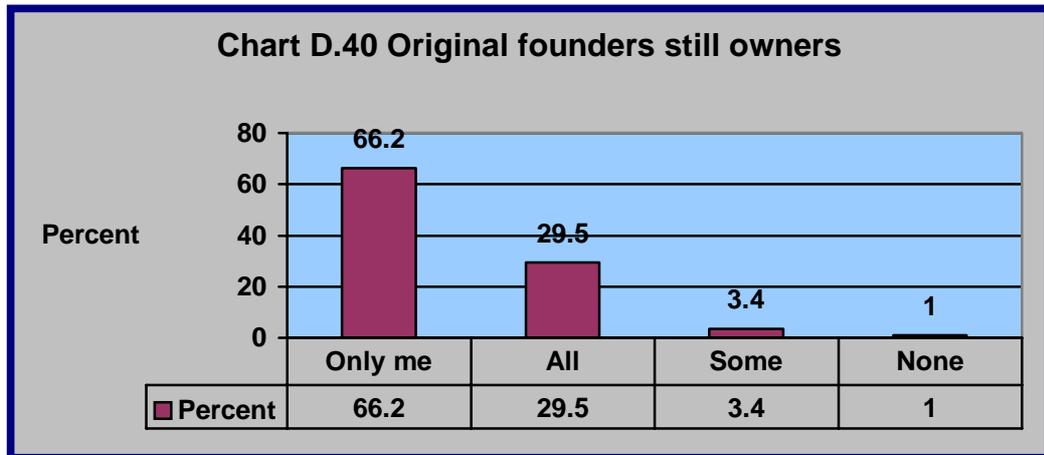
1.3.2. Degree of technology transfer (V60)



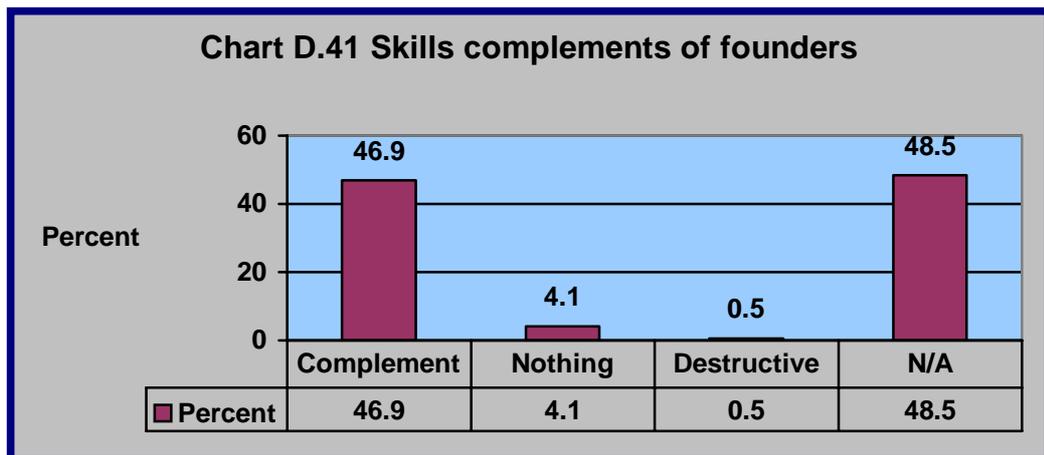
1.3.3. Number of initial founders (V61)



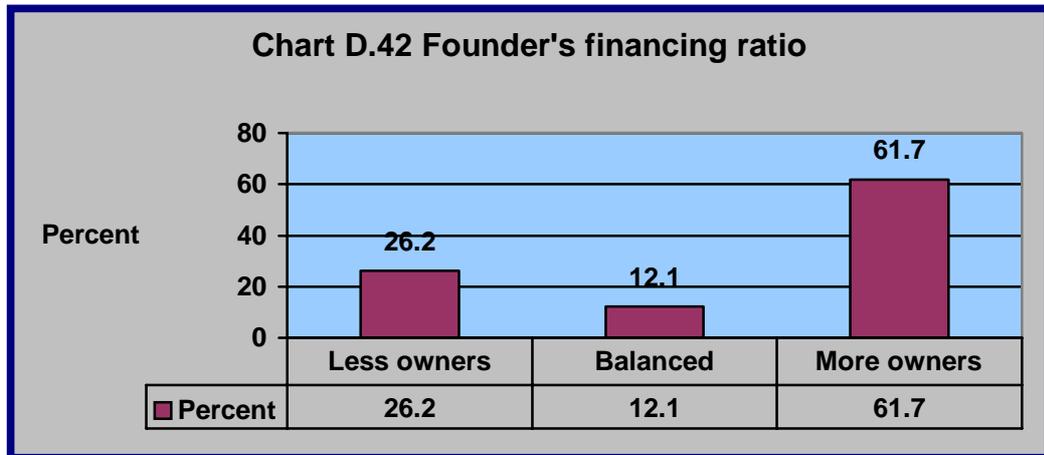
1.3.4. Original founders still owners (V62)



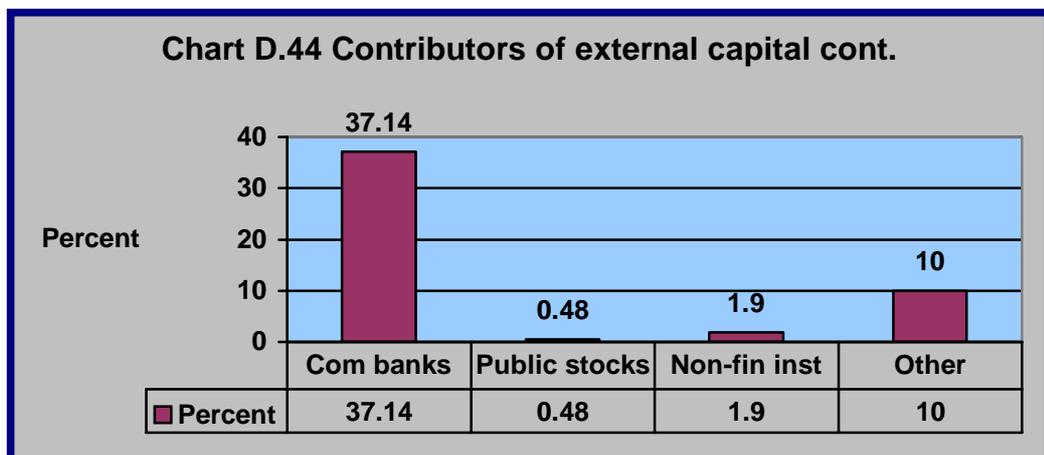
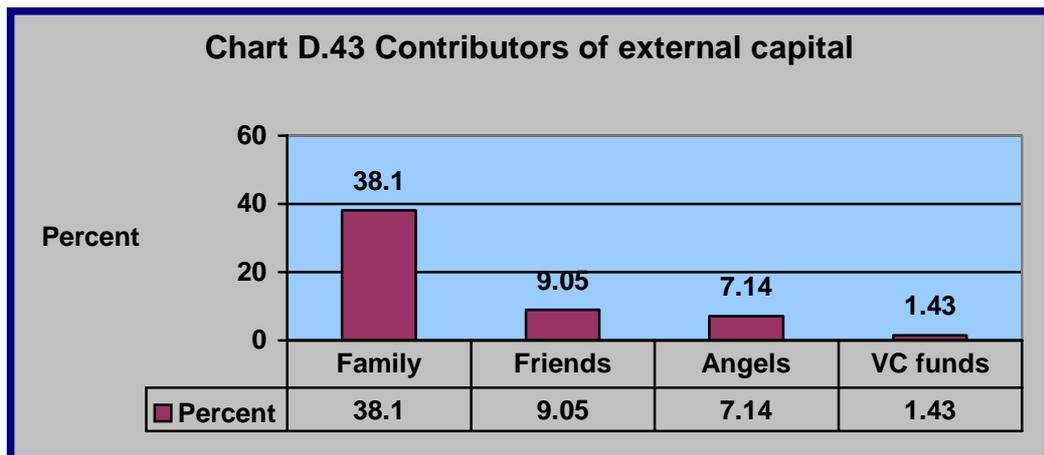
1.3.5. Skills complements of founders (V63)



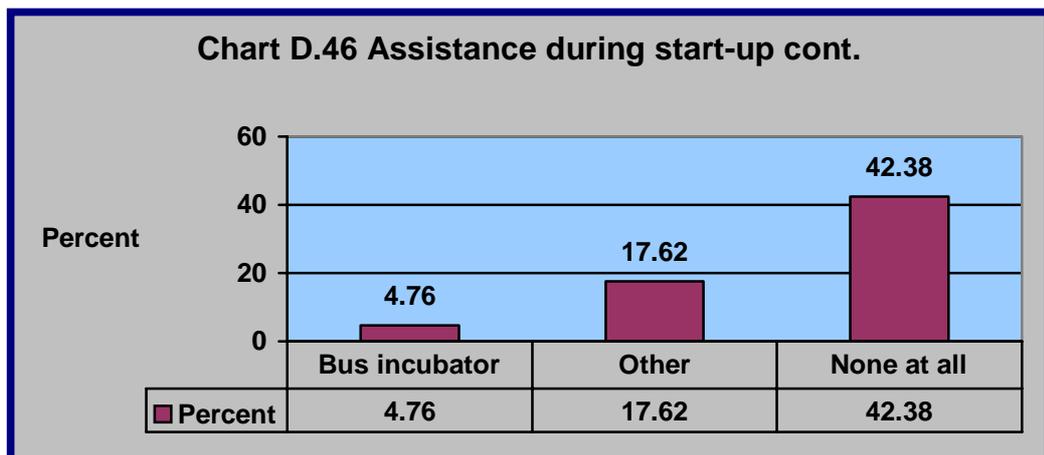
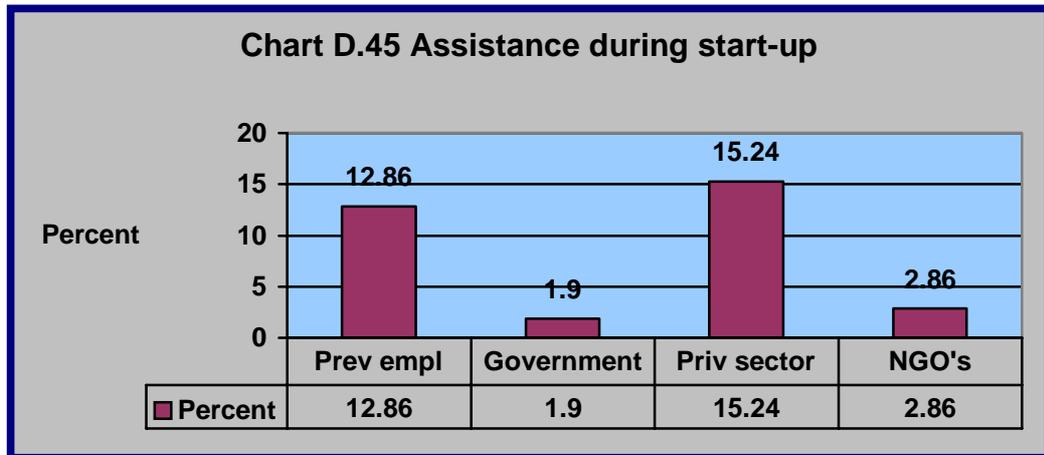
1.3.6. Founders' financing ratio (V64)



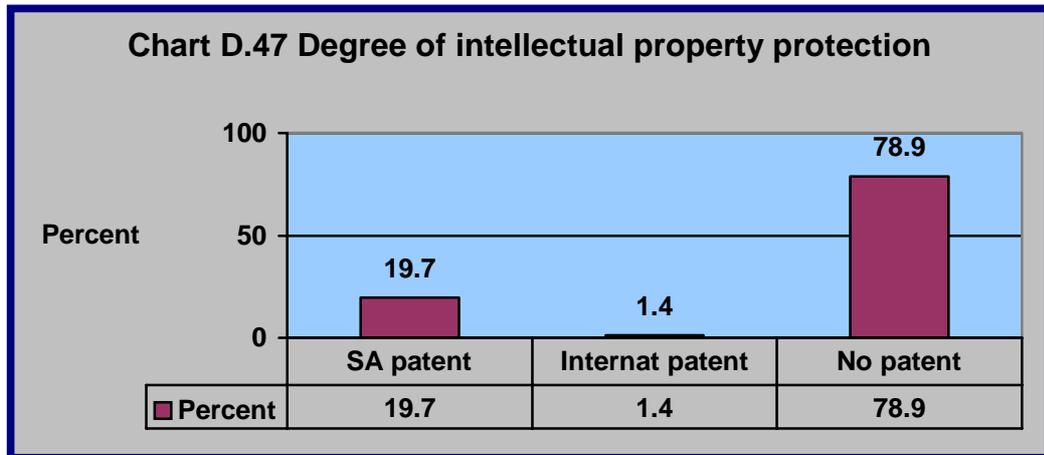
1.3.7. Contributors of external capital (V65-V72)



1.3.8. Assistance during start-up (V73-V790)

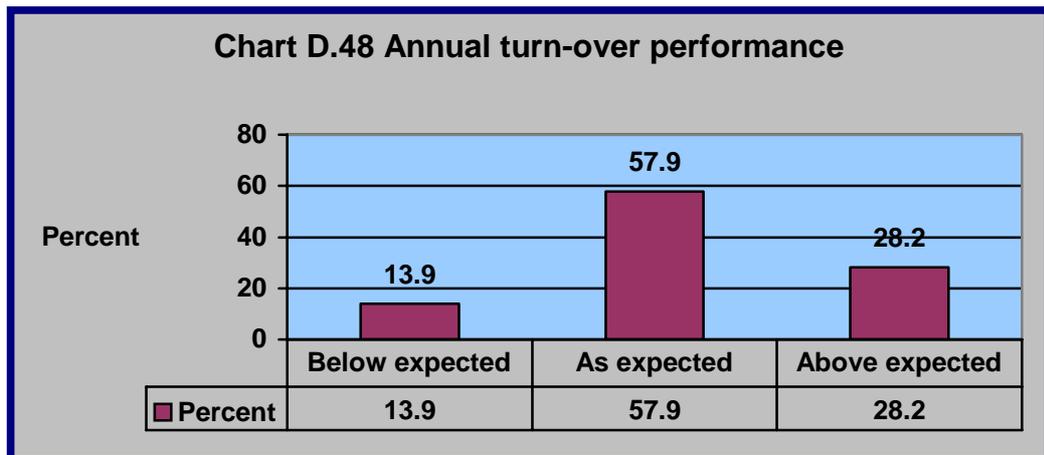


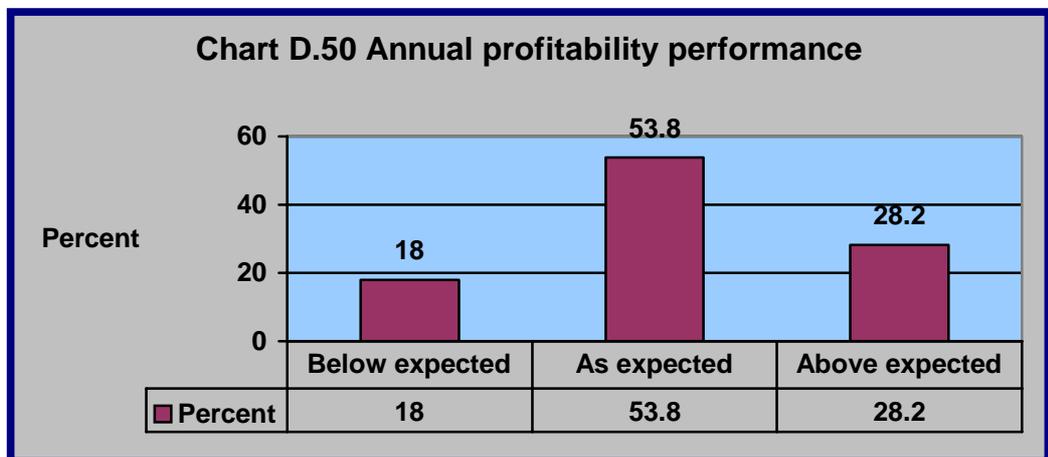
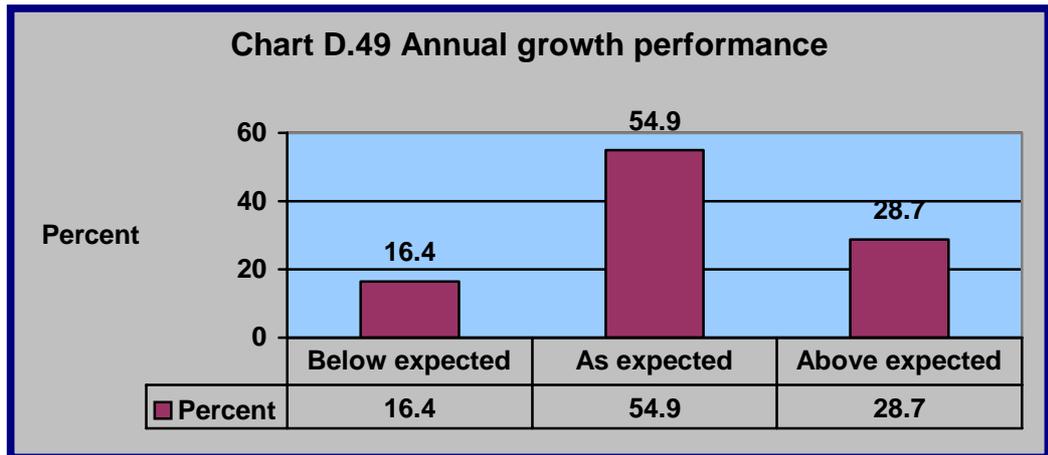
1.3.9. Degree of intellectual property protection (V80)



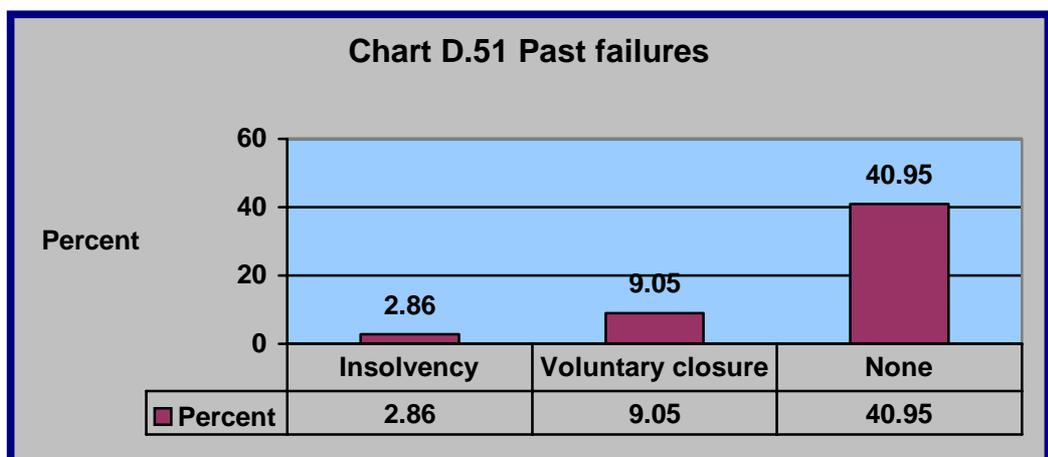
1.4. New enterprise success

1.4.1. Performance against projections (V81-V83)

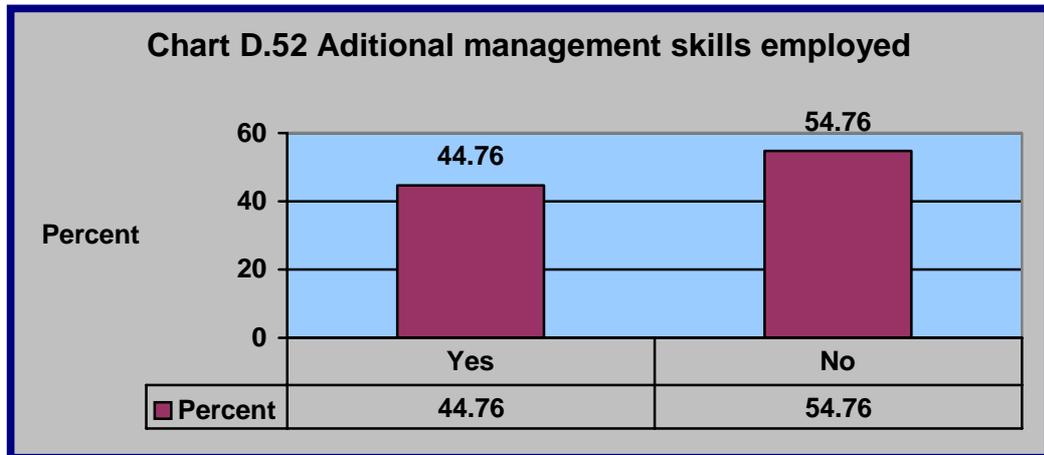




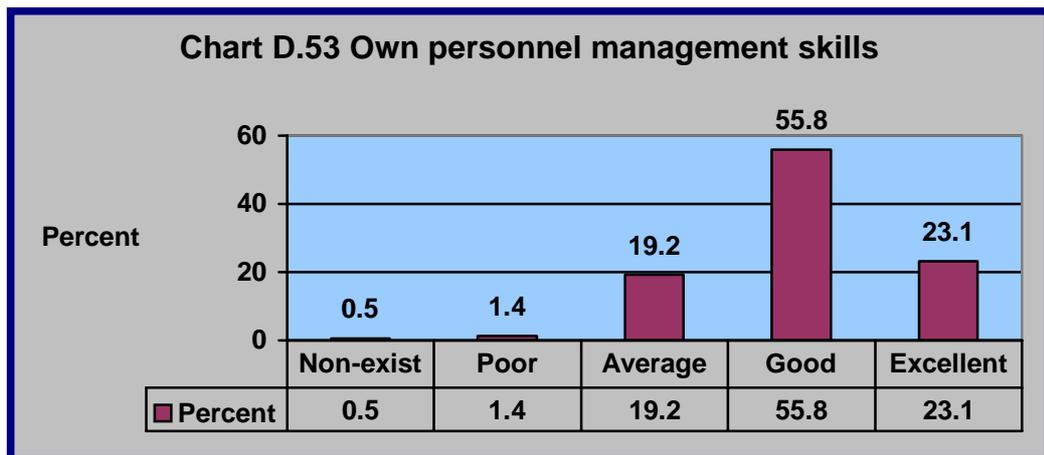
1.4.2. Past failures (V84-V86)



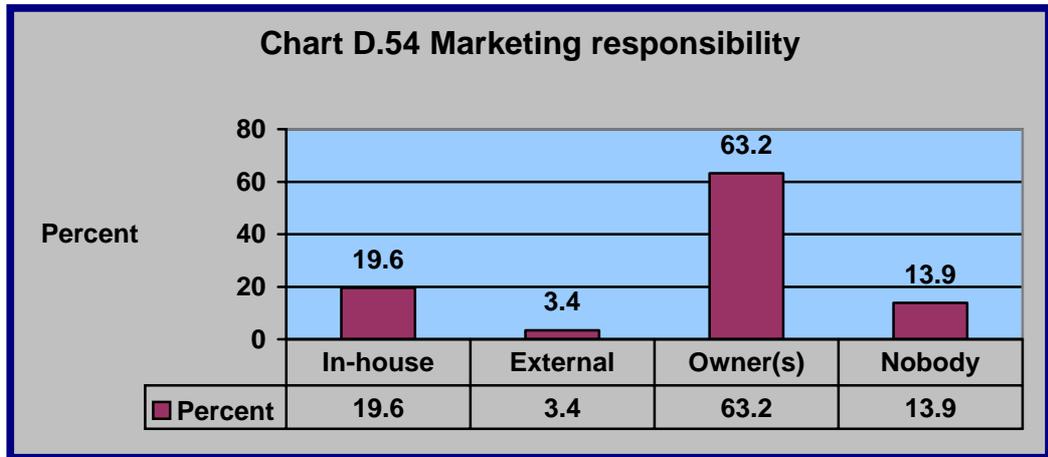
1.4.3. Additional management skills employed (V87)



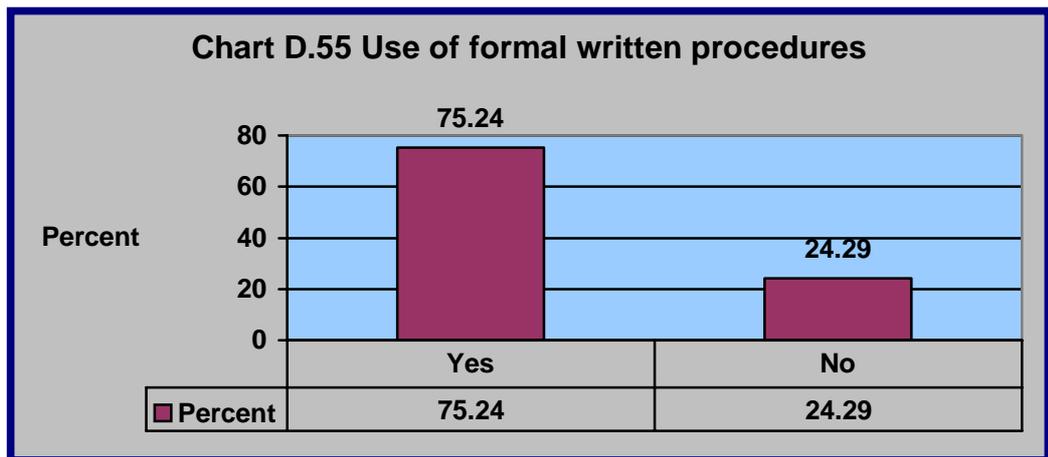
1.4.4. Own personnel management skills (V88)



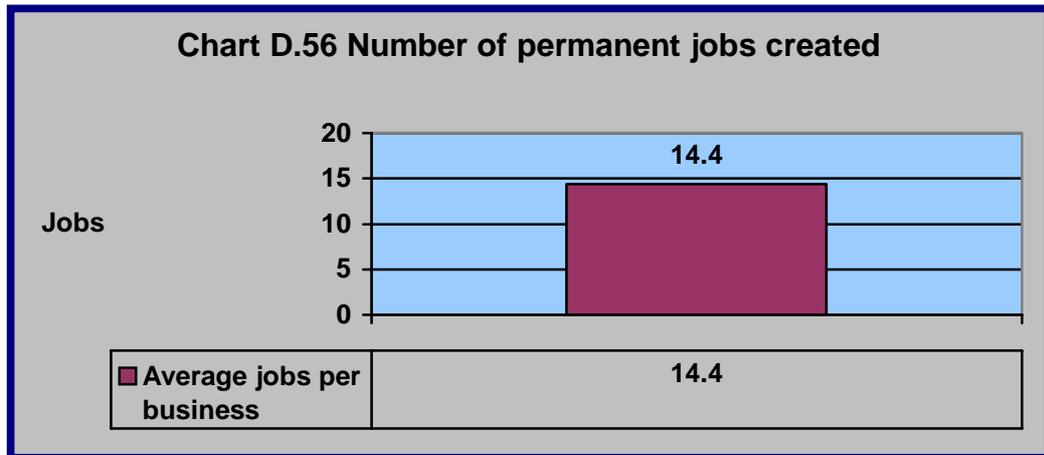
1.4.5. Marketing responsibility (V89)



1.4.6. Use of formal written procedures (V90)

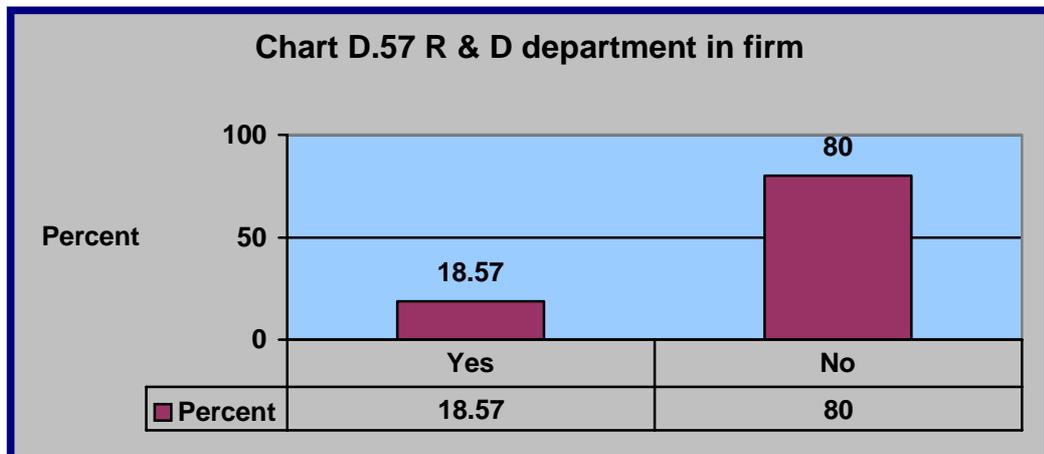


1.4.7. Number of permanent jobs created (V91)

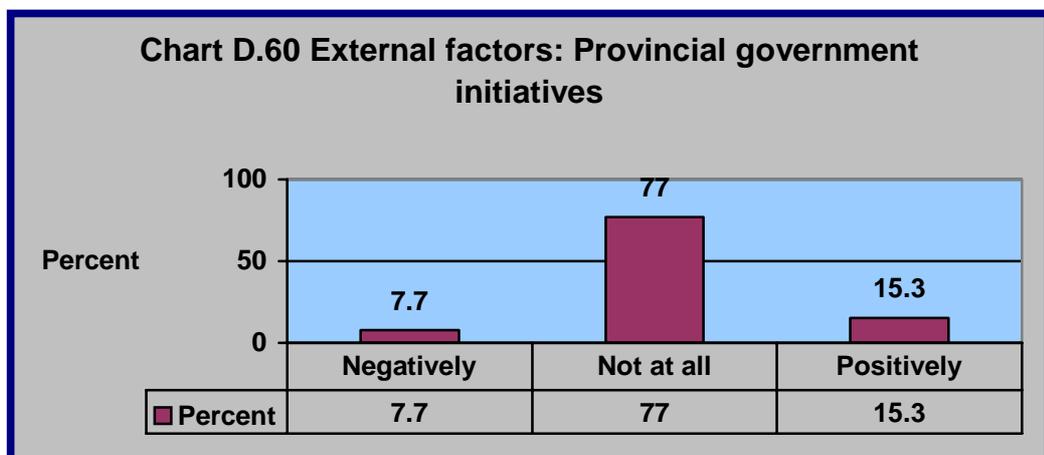
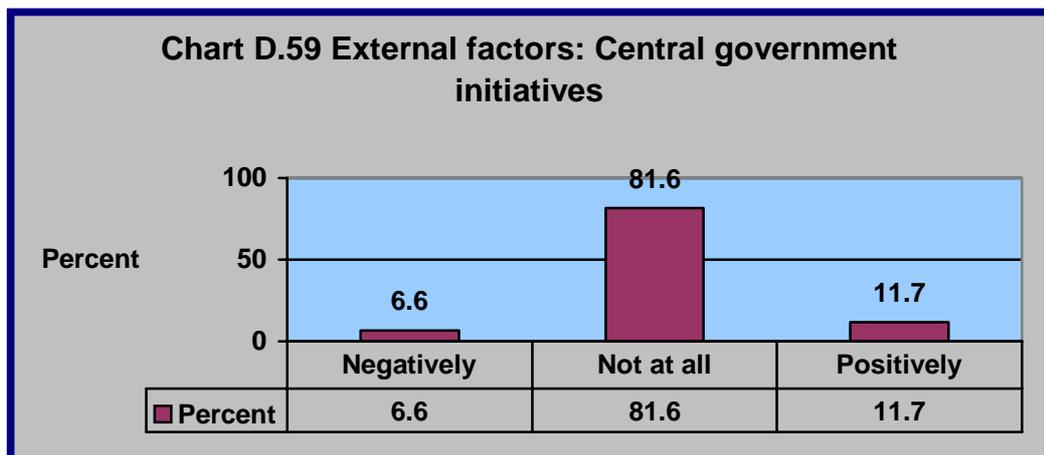
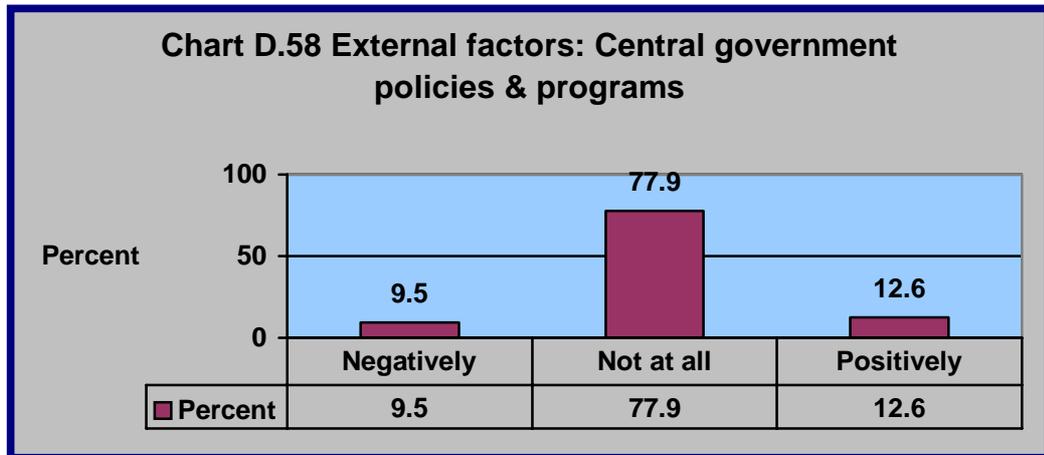


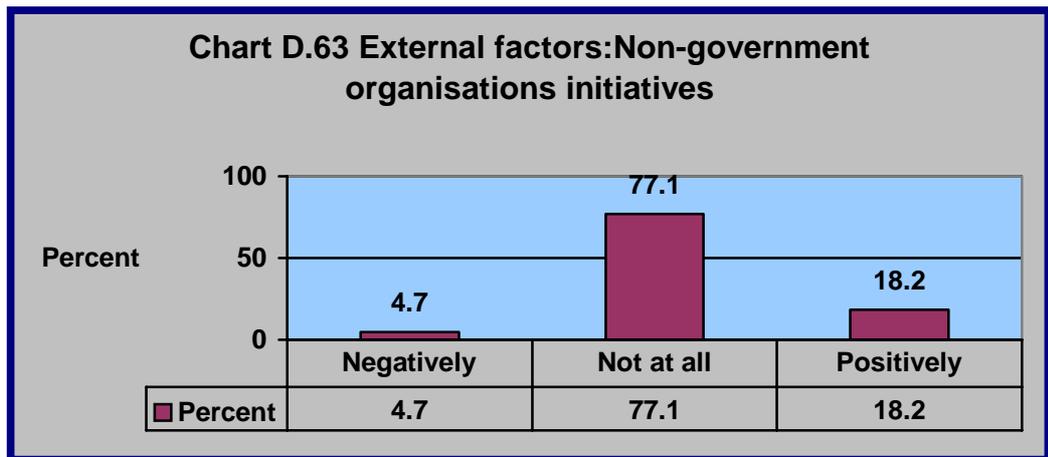
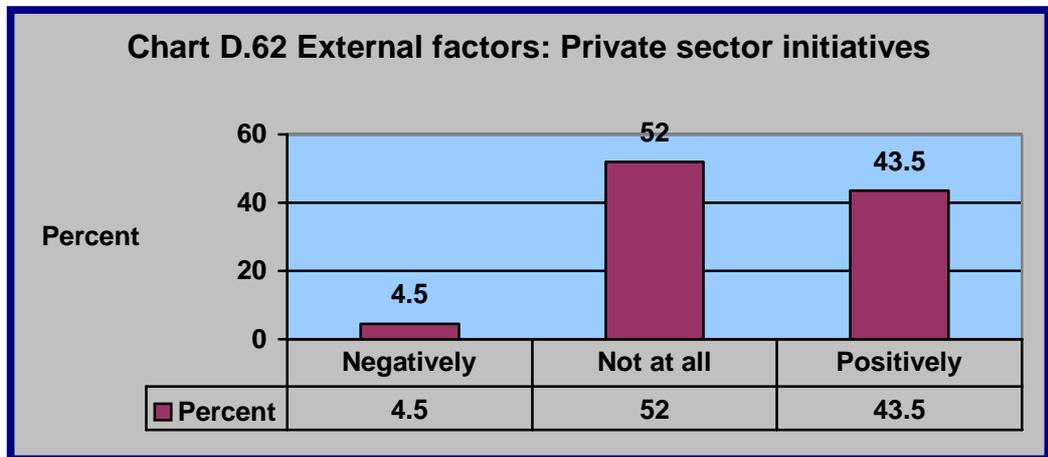
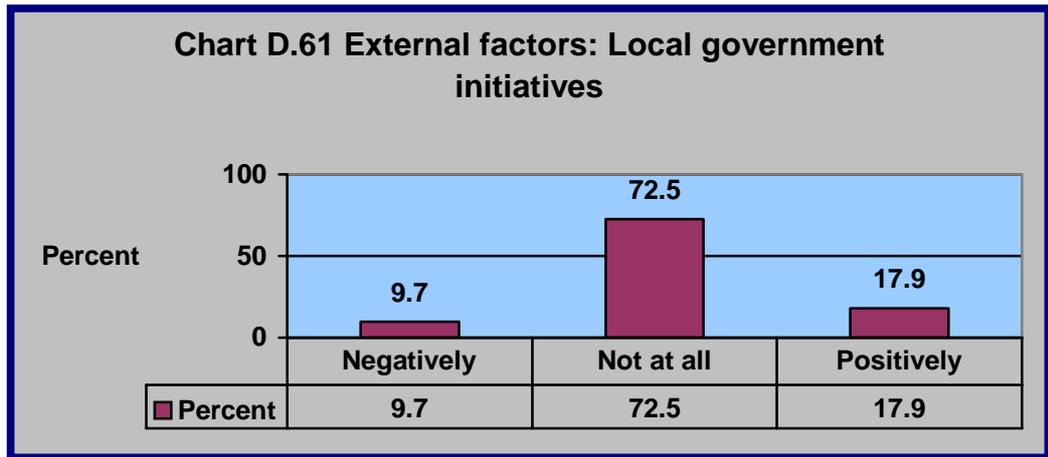
- Standard deviation: 71.6
- Minimum: 0
- Maximum: 1000

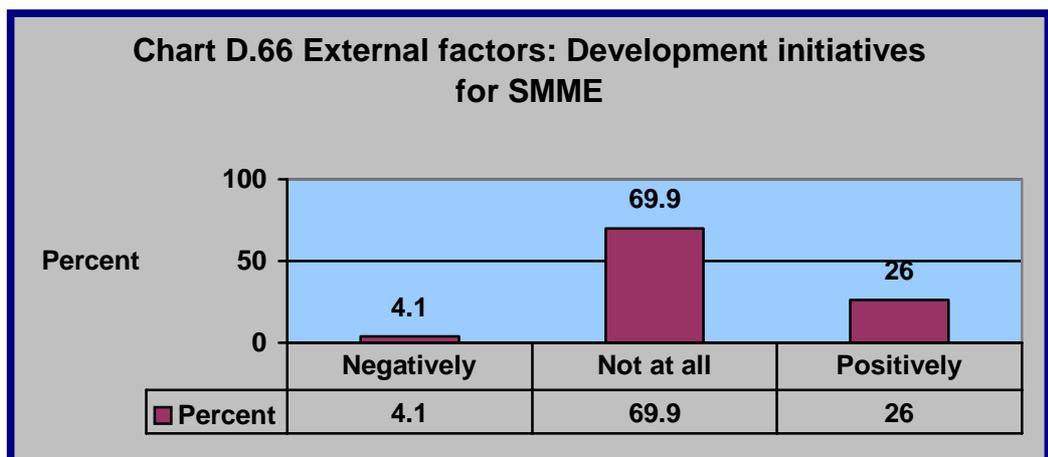
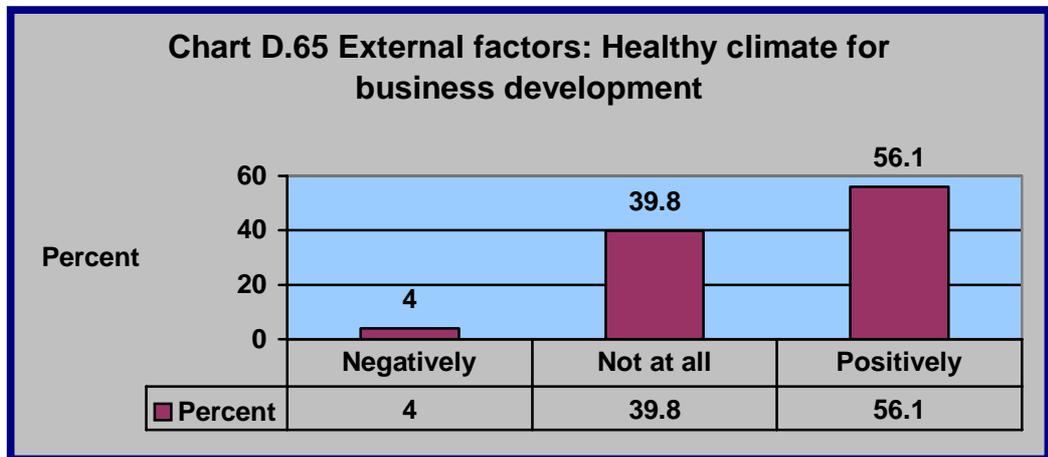
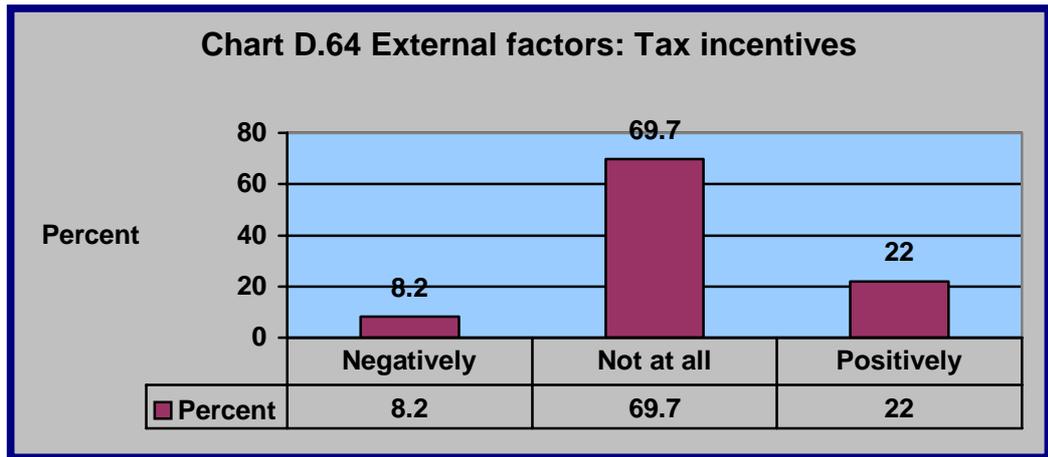
1.4.8. Research and development department in firm (V92)

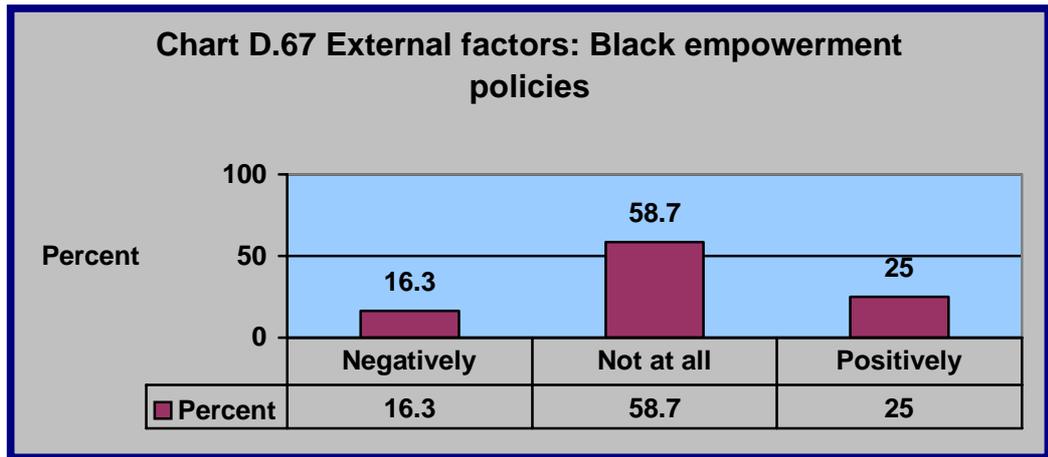


1.4.9. External factors affecting new business success (V93-V102)

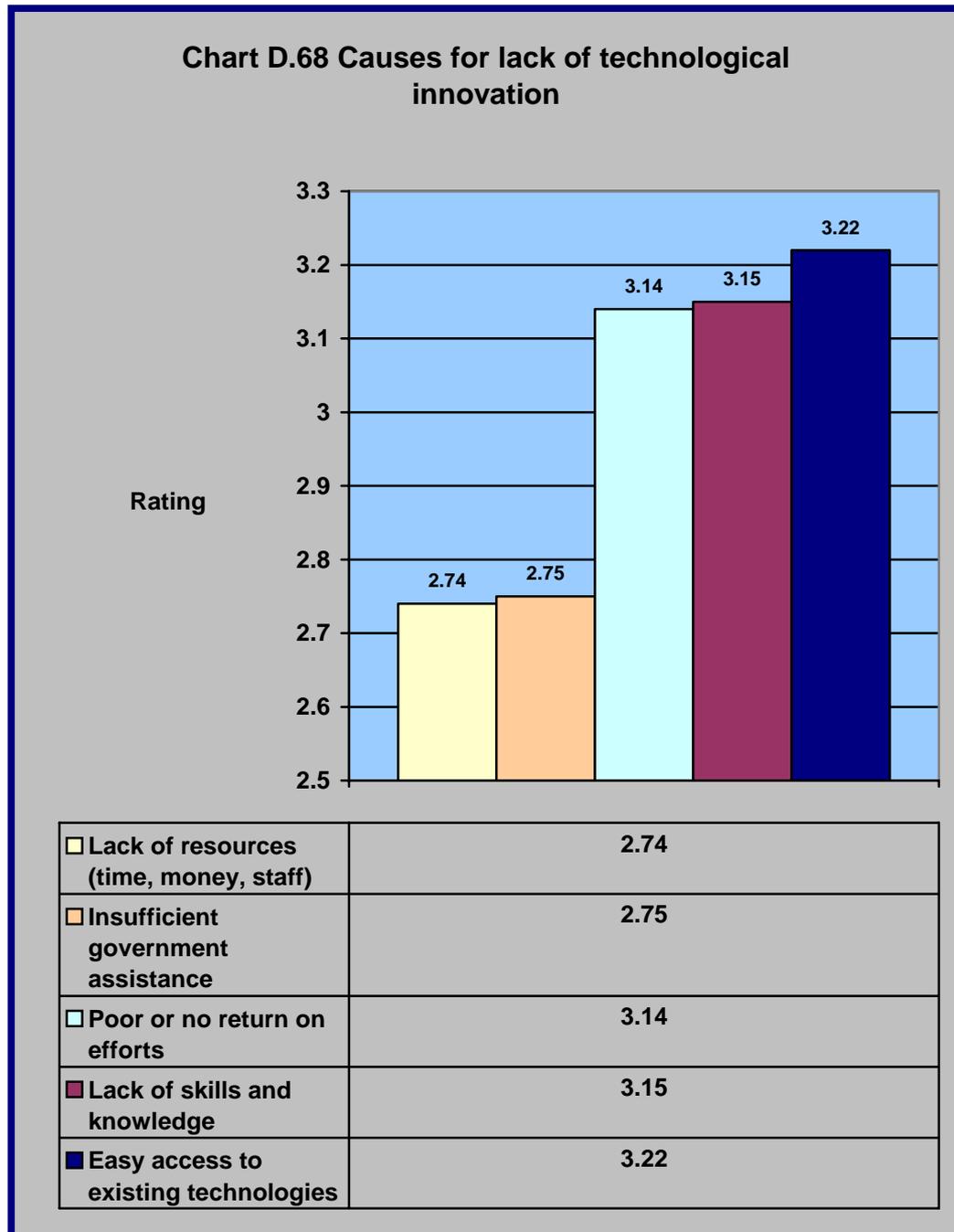




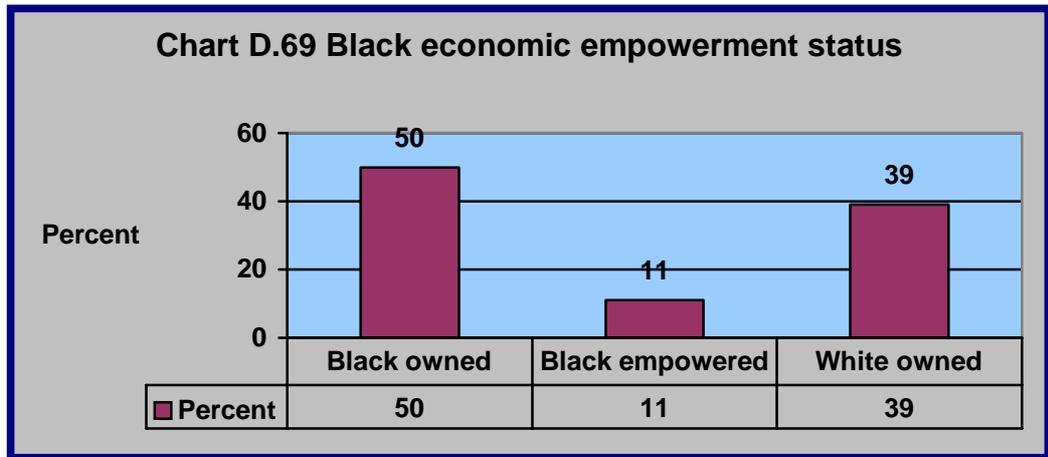




1.4.10. Causes for lack of technological innovation in SA firms (V103-V107)



1.4.11. **Black economic empowerment status (V108)**



1.4.12. Causes for technological business failures (V109-V118)

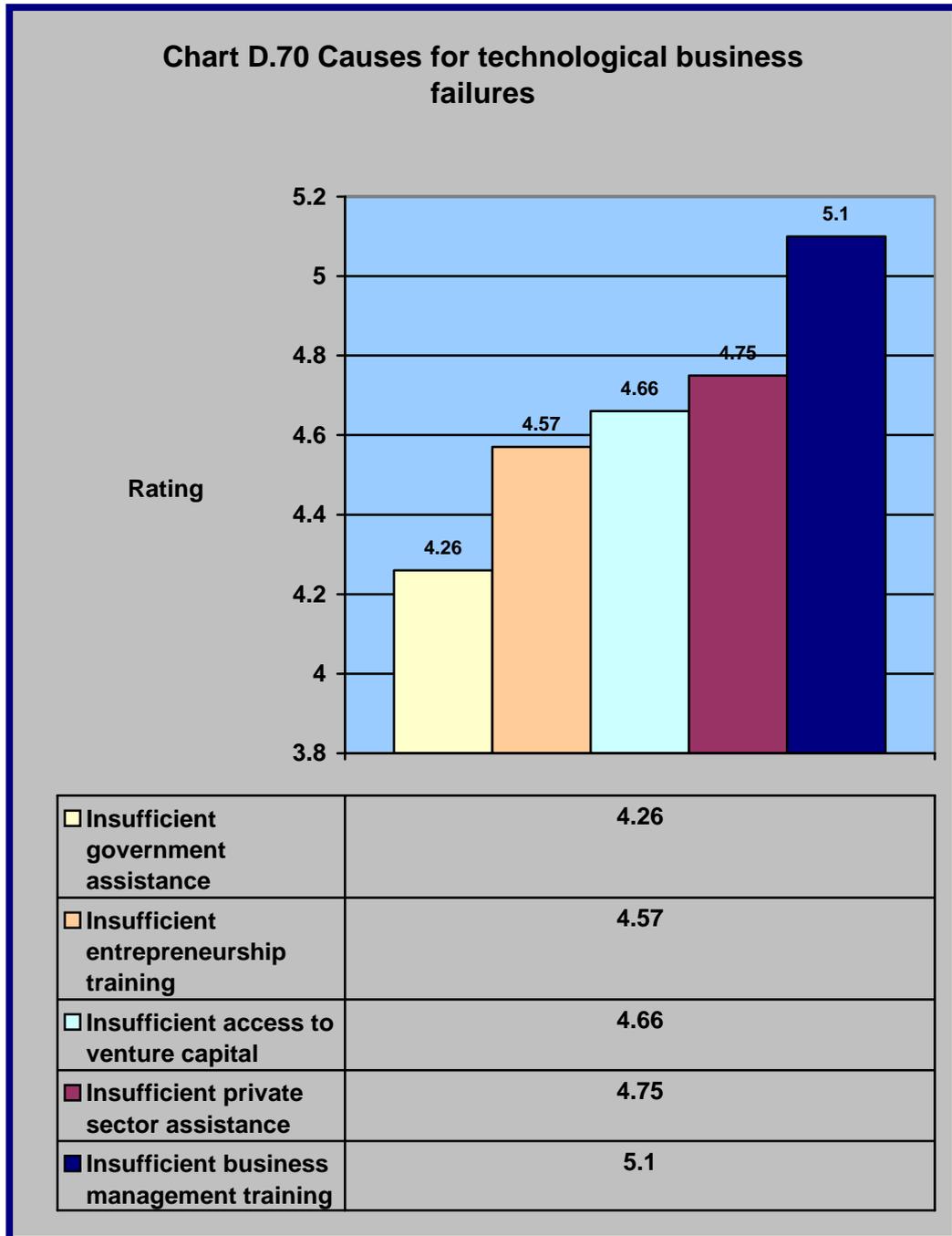
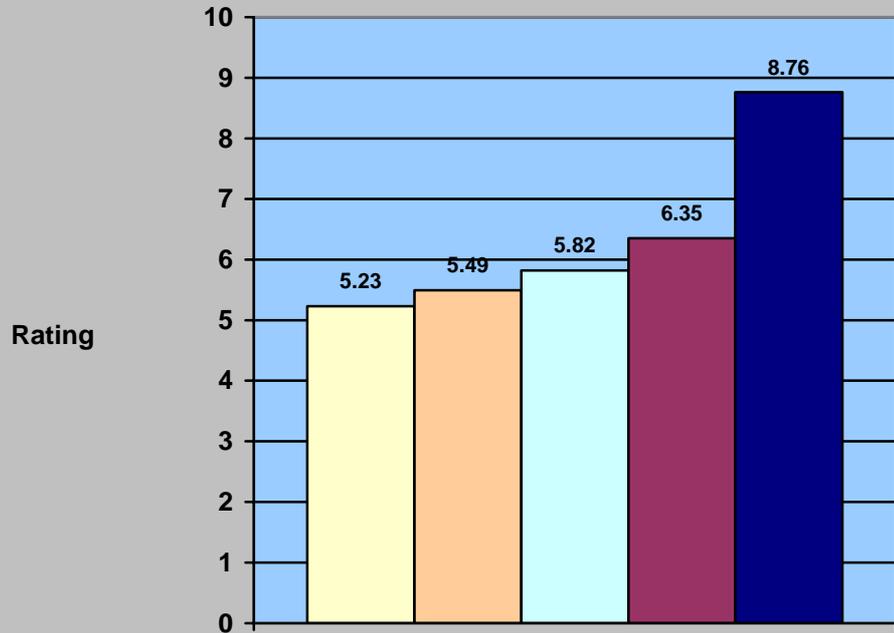
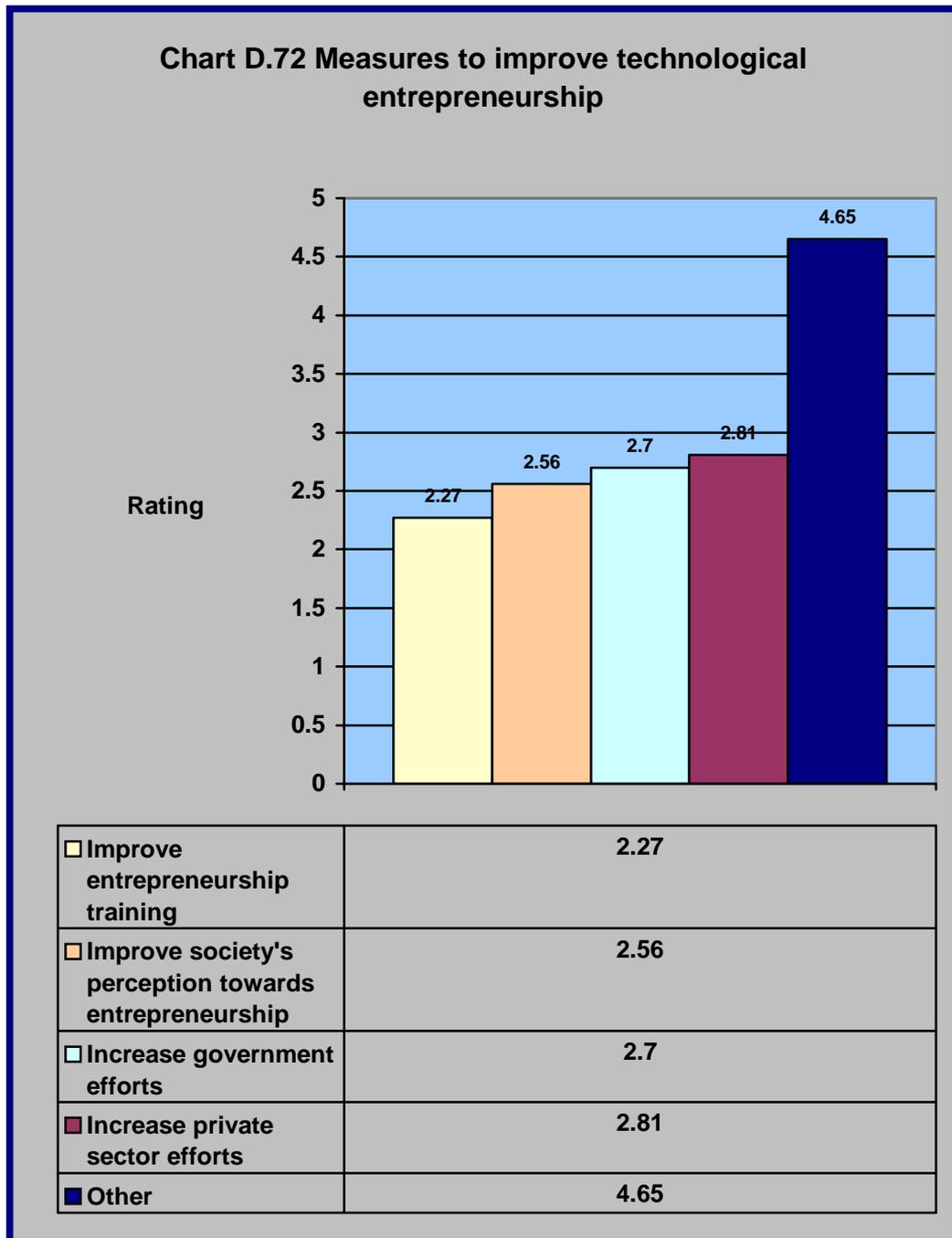


Chart D.71 Causes for technological business failures continued



Non-sympathetic culture towards entrepreneurship	5.23
Insufficient availability of mentorship programs	5.49
Insufficient tax incentives	5.82
Racial and sexual discrimination	6.35
Other	8.76

1.4.13. Rating of measures to improve technological entrepreneurship (V124-V128)



2. CORRELATION ANALYSIS

The independent (predictor) variables listed in the tables below met the 0.2000 significance level for entry into the model, either in the model regression or logistic chi-square techniques.

Furthermore, the independent variables are ranked in order from most significant to least significant correlation i.e. lowest r-square values to highest r-square values.

2.1 Multiple regression results: Entrepreneur

2.1.1 Dependent variable: Age when started new venture (V3) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	7.25	0.0028
V45	Age when introduced to entrepreneurship	0.49	0.0001
V2	Age	0.24	0.0001
vv24	Technical field of training	2.42	0.0081
V32B	Challenge as motivating factor	2.55	0.0412
vv33	Role model	-1.37	0.1679

2.1.2 Dependent variable: Formal training in entrepreneurship (V25) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	1.51	-0.69	0.2198
vv14	Qualification group	6.20	0.54	0.0128
vv5	English language	2.92	-0.75	0.0875

2.1.3 Dependent variable: Motivating factors (V32) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	0.03	0.07	0.8524
V34	Risk profile	10.73	-0.67	0.0011
vv24	Technical field of training	3.60	-0.52	0.0577

2.1.4 Dependent variable: Role model (V33) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	4.28	1.55	0.0385
vv4	Gender	6.54	-1.58	0.0105
V46	Attitude of culture	4.72	-0.52	0.0299
vv11	Father and mother self-employed	4.26	0.74	0.0390
vv25	Formal training in entrepreneurship	1.83	0.44	0.1766

2.1.5 Dependent variable: Risk profile (V34) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	1.53	0.0001
vv4	Gender	-0.26	0.0674
vv5	English language	0.34	0.1038
V7B	Indian race	-0.44	0.0328
V8	Position as child in the family	0.06	0.1001
vv11	Father and mother self-employed	0.19	0.1450
V6A	Christian religion	0.24	0.1370

2.1.6 Dependent variable: Entrepreneurial characteristics (V35-44) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	2.62	0.0001
V7B	Indian race	0.07	0.1341
V6B	Hindu religion	-0.08	0.1341
vv4	Gender	0.09	0.1815

2.1.7 Dependent variable: Age introduced to entrepreneurship (V45) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	11.84	0.0001
V2	Age	0.25	0.0001
vv11	Father and mother self-employed	-4.55	0.0001
V46	Attitude of culture	1.27	0.0915

2.1.8 Dependent variable: Attitude of culture (V46) – model linear regression

None of the independent variables met the 0.2000 significance level for entry into the model and therefore **no correlation** was found between attitude of culture and any of the independent variables chosen.

2.1.9. Scaling of variables: Entrepreneur

V-no	Predictor (X)	Scaling	Parameter	Predicted (Y)	Scaling
V45	Age introduced	1-75	0.50	Age started V3	1-75
V2	Age	1-75	0.24		
Vv24	Technical training	Other = 0 TT = 1	2.42		
V32B	Challenge	Other = 0 Chal = 1	2.55		
Vv33	Role model	No = 0 Yes = 1	-1.37		
Qual	Qualifications	Sch = 1 Tech = 2 Univ = 3	0.54	Entrepreneur training V25	Yes = 1 No = 2
Vv5	Language	Other = 0 Eng = 1	-0.74		

V34	Risk profile	Taker = 1 Mgr = 2 Avert = 3	-0.67	Motivating factors V32	Money = 1 Chal = 2 Indep = 3 N-empl=4 Other = 5
Vv24	Technical training	Other = 0 TT = 1	-0.52		
Vv4	Gender	Fem = 0 Male = 1	-1.58	Role model V33	Yes = 1 No = 2
V46	Cultural attitude	Cond = 1 Neutr = 2 Neg = 3	-0.52		
S/em	Father & Mother self-employed	No = 0 Yes = 1	0.74		
Vv25	Entrepreneurship training	Yes = 1 No = 0	0.44		
Vv4	Gender	Fem = 0 Male = 1	-0.26	Risk profile V34	Taker = 1 Mgr = 2 Avert = 3
Vv5	Language	Other = 0 Eng = 1	0.34		
V7B	Indian race	Other = 0 Indian = 1	-0.44		
V8	Position in family	Eld = 1 2 nd = 2 3 rd = 3 4 th = 4 5 th = 5 Other = 5	0.06		
S/em	Father & Mother self-employed	No = 0 Yes = 1	0.18		
V6A	Hindu religion	Other = 0 Hindu = 1	0.24		
V7B	Indian race	Other = 0 Indian = 1	0.07	Entrepreneurial Characteristics V35 - 44	1 - 3
V6B	Other religion	Ch/Hi = 0 Other = 1	-0.08		
Vv4	Gender	Fem = 0 Male = 1	0.09		
V2	Age	1 - 75	0.25	Age introduced to entrepreneurship V45	1 - 75
S/em	Father & Mother self-employed	No = 0 Yes = 1	-4.54		
V46	Cultural attitude	Cond = 1 Neut = 2 Neg = 3	1.27		

2.2 Multiple regression results: New venture creation

2.2.1 Dependent variable: Period between idea and start-up (V59) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	3.16	0.1101
Qual	Qualifications	1.06	0.0287
V60	Technology transfer	-0.40	0.0441
Vv80	IP protection	1.34	0.0706
Vv58	Technological component	-1.59	0.0702
Vv5	Language	-1.99	0.0925
V8	Position in family	0.34	0.0717
V54	Government contracts at start-up	1.99	0.1058

2.2.2 Dependent variable: Technology transfer (V60) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	2.58	0.0001
V32A	Money as motivator	0.50	0.0002
Vv24	Technical field of training	-0.65	0.0020
V46	Attitude of culture	0.22	0.0403
V59	Period between idea and start-up	-0.04	0.0526
V34	Risk profile	-0.24	0.1338
V32B	Challenge as motivator	-0.39	0.1259
Vv58	Technological component	0.31	0.1012

2.2.3 Dependent variable: Founder financing (V64) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	9.80	-2.41	0.0017
S/em	Father and mother self-employed	3.33	0.67	0.0679
Vv24	Technical training	6.09	-0.86	0.0136
V6A	Hindu religion	5.87	-0.89	0.0154
V54	Government contracts at start-up	4.78	1.43	0.0288
Assist	Assistance during start-up	4.94	0.81	0.0263
Vv33	Role model	2.69	0.57	0.1011
V32B	Challenge as motivator	2.07	-0.60	0.1505

2.2.4 Dependent variable: External private financing (V65 – V67) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	7.48	3.75	0.0062
S/em	Father and mother self-employed	7.10	1.09	0.0077
V7A	White race	5.72	-0.92	0.0168
Vv58	Technological component	4.63	-0.79	0.0314
Vv5	Language	5.04	-1.27	0.0248
Vv4	Gender	3.47	1.26	0.0624
V2	Age	3.02	-0.03	0.0825
Qual	Qualifications	2.27	-0.38	0.1319
Assist	Assistance during start-up	2.77	0.67	0.0963
Vv24	Technical training	1.94	-0.52	0.1638
V34	Risk profile	1.75	-0.35	0.1857

2.2.5 Dependent variable: External commercial financing (V68 - V72) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	5.43	-3.53	0.0198
V7B	Indian race	2.97	-0.59	0.0850
Vv58	Technological component	5.76	-0.82	0.0164
V61	Number of founders	3.33	0.46	0.0681
V2	Age	6.20	0.04	0.0128
Vv9	Family income at 18 years	5.00	0.54	0.0254
V54	Government contracts at start-up	2.37	1.08	0.1240

2.2.6 Dependent variable: Previous employer assistance during start-up (V73) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	3.05	2.11	0.0810
V46	Attitude of culture	4.45	-1.24	0.0349
Vv47	Metropolitan	5.49	-2.00	0.0191
Vv25	Entrepreneurship training	3.71	-1.76	0.0539
V48B	Technical services	2.53	1.21	0.1118

2.2.7 Dependent variable: Private sector assistance during start-up (V75) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	8.23	-11.15	0.0041
V32A	Money as motivator	8.34	5.73	0.0039
V3	Age when started	3.53	0.11	0.0604
V32C	Independence as motivator	5.77	4.08	0.0163
Vv5	Language	4.18	2.69	0.0409
V61	Number of founders	3.47	1.18	0.0625
V32B	Challenge as motivator	2.81	2.86	0.0935
Priv	External private financing	3.71	1.52	0.0542
Vv33	Role model	2.97	-1.47	0.0849
Vv24	Technical training	3.28	1.60	0.0700
Vv4	Gender	2.59	-2.01	0.1073

2.2.8 Dependent variable: Business incubator assistance during start-up (V77) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	7.28	-24.49	0.0070
V32A	Money as motivator	6.59	14.27	0.0102
V3	Age when started	6.89	0.65	0.0086
S/em	Father and mother self-employed	5.00	7.01	0.0254
V45	Age introduced to entrepreneurship	3.19	-0.19	0.0739

2.2.9 Dependent variable: Business failures reported (V84-85) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	0.27	0.97	0.6043
Vv117	Insufficient tax incentives	8.15	-0.35	0.0043
V46	Attitude of culture	4.08	0.72	0.0434
V6A	Hindu religion	3.96	-1.23	0.0466
Vv33	Role model	4.02	1.09	0.0450
External	External factors during start-up	3.08	-1.36	0.0794
Vv24	Technical training	2.58	-0.89	0.1081
Vv111	Insufficient entrepreneurship training	2.05	0.17	0.1525

2.3.7. Scaling of variables: New venture creation

V-no	Predictor (X)	Scaling	Parameter	Predicted (Y)	Scaling
Qual	Qualifications	Sch = 1 Tech = 2 Univ = 3	1.06	Period between idea and start-up V59	1-75
V60	Technology transfer	Direct =1 Part = 2 Vague=3 None = 4	-0.40		
Vv80	IP protection	No = 0 Yes = 1	1.34		
Vv58	Technological component	Low = 1 High = 2	-1.59		
Vv5	Language	Other =0 Eng = 1	-1.99		
V8	Position in family	Eld = 1 2 nd = 2 3 rd = 3 4 th = 4 5 th = 5 Other =5	0.34		
V54	Government contracts at start-up	0-20%=1 21-100%=2	1.99		
V32A	Money as motivator	Other =0 Money=1	0.50	Technology transfer V60	Direct =1 Part = 2

					Vague=3 None = 4
Vv24	Technical field of training	Other =0 TT = 1	-0.65		
V46	Attitude of culture	Cond = 1 Neutr = 2 Neg = 3	0.22		
V59	Period between idea and start-up	1-75	-0.04		
V34	Risk profile	Taker =1 Mgr = 2 Avert = 3	-0.24		
V32B	Challenge as motivator	Other=0 Chal=1	-0.39		
Vv58	Technological component	Low = 0 High = 1	0.31		
S/em	Father and mother self-employed	No = 0 Yes = 1	0.67	Founder financing V64	0-20%= 1 21-80%=2 81-100%=3
Vv24	Technical training	Other =0 TT = 1	-0.86		
V6A	Hindu religion	Other =0 Hindu=1	-0.89		
V54	Government contracts at start-up	0-20%=1 21-100%=2	1.43		
Assist	Assistance during start-up	No = 0 Yes = 1	0.81		
Vv33	Role model	No = 0 Yes = 1	0.57		
V32B	Challenge as motivator	Other =0 Chal =1	-0.60		
S/em	Father and mother self-employed	No = 0 Yes = 1	1.09	External private financing V65 – V67	Yes = 1 No = 2
V7A	White race	Other =0 White =1	-0.92		
Vv58	Technological component	Low = 0 High = 1	-0.79		
Vv5	Language	Other =0 Eng = 1	-1.27		
Vv4	Gender	Fem = 0 Male =1	1.26		
V2	Age	1 - 75	-0.03		
Qual	Qualifications	Sch = 1 Tech = 2 Univ = 3	-0.38		
Assist	Assistance during start-up	No = 0 Yes = 1	0.67		
Vv24	Technical training	Other =0 TT = 1	-0.52		
V34	Risk profile	Taker =1 Mgr = 2 Avert = 3	-0.35		
V7B	Indian race	Other =0 Indian =1	-0.59	External commercial financing V68 – V72	Yes = 1 No = 2

Vv58	Technical component	Low = 0 High = 1	-0.82		
V61	Number of founders	One = 1 Two = 2 Three =3	0.46		
V2	Age	1 - 75	0.04		
Vv9	Family income at 18 years	<R1000=1 R1–R5=2 >R5000=3	0.54		
V54	Government contracts at start-up	0-20%=1 21-100%=2	1.08		
V46	Attitude of culture	Cond = 1 Neutr = 2 Neg = 3	-1.24	Previous employer assistance during start-up V73	Yes = 1 No = 2
Vv47	Metropolitan	Other =0 Metro =1	-2.00		
Vv25	Entrepreneurship training	No = 0 Yes = 1	-1.76		
V48B	Technical services	Other =0 TS = 1	1.21		
V32A	Money as motivator	Other =0 Money=1	5.73	Private sector assistance during start-up V75	Yes = 1 No = 2
V3	Age when started	1 - 75	0.11		
V32C	Independence as motivator	Other =0 Ind = 1	4.08		
Vv5	Language	Other =0 Eng = 1	2.69		
V61	Number of founders	One = 1 Two = 2 Three =3	1.18		
V32B	Challenge as motivator	Other =0 Chal = 1	2.86		
Priv	External private financing	Yes = 1 No = 2	1.52		
Vv33	Role model	No = 0 Yes = 1	-1.47		
Vv24	Technical training	Other =0 TT = 1	1.60		
Vv4	Gender	Fem = 0 Male = 1	-2.01		
V32A	Money as motivator	Other =0 Money=1	14.27	Business incubator assistance during start-up V77	Yes = 1 No = 2
V3	Age when started	1 - 75	0.65		
S/em	Father and mother self-employed	No = 0 Yes = 1	7.01		
V45	Age introduced to entrepreneurship	1 - 75	-0.19		
Vv117	Insufficient tax incentives	No =0 Yes = 1	-0.35	Business failures reported V84-85	Yes = 1 No = 2
V46	Attitude of culture	Cond = 1 Neutr = 2 Neg = 3	0.72		

V6A	Hindu religion	Other =0 Hindu =1	-1.23		
Vv33	Role model	No = 0 Yes = 1	1.09		
External	External factors during start-up	Neg = 1 None = 2 Pos = 3	-1.36		
Vv24	Technical training	Other =0 TT = 1	-0.89		
Vv111	Insufficient entrepreneurship training	No =0 Yes = 1	0.17		

2.3 Multiple regression results: Mature business

2.3.1 Dependent variable: Annual turn-over (V49) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	0.99	0.0143
V61	Number of founders	0.27	0.0100
V108	Black economic empowerment	0.22	0.0250
Vv25	Entrepreneurship training	-0.28	0.0756
V55	Government contracts at present	0.38	0.0518
Assist	Assistance during start-up	-0.33	0.0664
V48B	Technical services	-0.30	0.1179
V32D	Non-employment	-0.33	0.1487
V58	Technological component	0.19	0.1497

2.3.2 Dependent variable: Government contracts at present (V55) – logistic chi-square

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	0.11	-0.34	0.7343
V2	Age	3.42	0.04	0.0641
V6B	Other religion	3.62	2.29	0.0571
V48A	Manufacturing	1.82	-0.60	0.1774
Vv5	Language	3.58	1.19	0.0584
V7B	Indian race	4.74	-1.65	0.0294
V6A	Hindu religion	1.93	0.98	0.1643

2.3.3 Dependent variable: Technological innovation (V56) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	2.41	0.0001
V58	Technological component	13.77	0.0001
Vv24	Technical training	0.33	0.0088
V31	Size of previous firm	0.15	0.0320
Qual	Qualifications	-0.19	0.0297
Vv126	Increase efforts by private sector	-0.11	0.1036
V7B	Indian race	0.45	0.1849
V6A	Hindu religion	-0.39	0.0272

2.3.4 Dependent variable: Technological component (V58) – model linear regression

Warning: The sample frequency of this test is only 17. The validity of the model fit is questionable.

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	-0.64	0.1628
Qual	Qualifications	0.66	0.0399
Vv56	Technological innovation	0.52	0.0103
V48A	Manufacturing	-0.31	0.0043
Vv47	Metropolitan	-0.20	0.0922
V7A	White race	0.50	0.1899
Vv4	Gender	-0.55	0.0603
V26	R & D experience	-0.04	0.0659
V27	Technical experience	0.01	0.0975

2.3.5 Dependent variable: IP Protection (V80) – logistic chi-square

Warning: The sample frequency of this test is only 18. The validity of the model fit is questionable.

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	3.04	-3.89	0.0809
Vv58	Technological component	2.45	1.94	0.1172

2.3.6 Dependent variable: Number of jobs created (V91) – model linear regression

V-NO	VARIABLE	PARAMETER	PROBABILITY
-	Intercept	33.13	0.5644
V51	Number of people employed	35.73	0.0001
V52	Number of business units	46.77	0.0017
V46	Attitude of culture	-19.58	0.0775
Vv47	Geographical location	-25.19	0.0598
External	External factors during start-up	-33.00	0.0838
Vv80	IP protection	31.81	0.0850
V61	Number of initial founders	17.44	0.1260
V50	Annual turn-over growth	-15.93	0.1485
V64	Founder financing	9.78	0.1381
V34	Risk profile	-13.35	0.1974
V60	Technology transfer	-6.82	0.1832

2.3.7 Dependent variable: R & D department (V92) – logistic chi-square

Warning: The sample frequency of this test is only 21. The validity of the model fit is questionable.

V-NO	VARIABLE	CHI-SQUARE	PARAMETER	PROBABILITY
-	Intercept	3.61	-8.12	0.0573
V2	Age	5.32	0.27	0.0211
V60	Technology transfer	3.59	-3.52	0.0582

2.3.8. Scaling of variables: Mature business

V-no	Predictor (X)	Scaling	Parameter	Predicted (Y)	Scaling
V61	Number of founders	One = 1 Two = 2 Three = 3	0.27	Annual turn over V49	0 to 240 = 1 240 to 1m = 2 1.1 to 5m = 3 5m > = 4
V108	Black economic empowerment	BO = 1 BE = 2 WO = 3	0.22		
Vv25	Entrepreneurship training	No = 0 Yes = 1	-0.28		
V55	Government contracts at present	0-20% = 1 21-80% = 2 81-100% = 3	0.38		
Assist	Assistance during start-up	No = 0 Yes = 1	-0.33		
V48B	Technical services	Other = 0 TS = 1	-0.30		
V32D	Non-employment as motivator	Other = 0 N-emp = 1	-0.33		
V58	Technological component	Low = 1 High = 2	0.19		
V2	Age	1 - 75	0.04	Government contracts at present V55	0-20% = 1 21-100% = 2
V6B	Other religion	Ch/Hi = 0 Other = 1	2.29		
V48A	Manufacturing	Other = 0 Man = 1	-0.60		
Vv5	Language	Other = 0 English = 1	1.19		
V7B	Indian race	Other = 0 Indian = 1	-1.65		
V6A	Hindu religion	Other = 0 Hindu = 1	0.98		
V58	Technological component	Low = 1 High = 2	13.77	Technological innovation Vv56	Poor = 1 Aver = 2 Good = 3 Excel = 4
Vv24	Technical training	Other = 0 TT = 1	0.33		
V31	Size of previous firm	1 to 5 = 1 6 to 50 = 2 51 to 200 = 3	0.15		

		201 > = 4			
Qual	Qualifications	Sch = 1 Tech = 2 Univ = 3	-0.19		
Vv126	Increase efforts by private sector	Other = 0 Efforts = 1	-0.11		
V7B	Indian race	Other = 0 Indian = 1	0.45		
V6A	Hindu religion	Other = 0 Hindu = 1	-0.39		
Qual	Qualifications	Sch = 1 Tech = 2 Univ = 3	0.66	Technological component V58	Low = 1 High = 2
Vv56	Technological innovation	Low = 1 Ave = 2 Good = 3 Excel = 4	0.52		
V48A	Manufacturing	Other = 0 Man = 1	-0.31		
Vv47	Metropolitan	Other = 0 Metro = 1	-0.20		
V7A	White race	Other = 0 White = 1	0.50		
Vv4	Gender	Fem = 0 Male = 1	-0.55		
V26	R & D experience	1 – 75	-0.04		
V27	Technical experience	1 - 75	0.01		
Vv58	Technological component	Low = 1 High = 2	1.94	IP Protection V80	Yes= 1 No = 2
V51	Number of people employed	1 - 1000	35.73	Number of jobs created V91	1 - 1000
V52	Number of business units	One = 1 2 to 5 = 2 6 more = 3	46.77		
V46	Attitude of culture	Cond = 1 Neutr = 2 Neg = 3	-19.58		
Vv47	Metropolitan	Other = 0 Metro = 1	-25.19		
External	External factors during start-up	Neg = 1 None = 2 Pos = 3	-33.00		
Vv80	IP protection	No = 0 Yes = 1	31.81		
V61	Number of initial founders	One = 1 Two = 2 Three = 3	17.44		
V50	Annual turn-over growth	Neg = 1 1to10%=2 11-50%=3 51%> = 4	-15.93		
V64	Founder financing	0-20= 1 21-80=2 81-100%=3	9.78		
V34	Risk profile	Taker = 1 Mgr = 2	-13.35		

		Avert = 3			
V60	Technology transfer	Direct =1 Part = 2 Vague=3 None = 4	-6.82		
V2	Age	1 – 75	0.27	R & D department V92	Yes =1 No = 2
V60	Technology transfer	Direct =1 Part = 2 Vague=3 None = 4	-3.52		

APPENDIX E

**POSSIBLE CORRELATIONS:
ENTREPRENEUR**

APPENDIX E**POSSIBLE CORRELATIONS: ENTREPRENEUR**

CATEGORY	INDEPENDENT VARIABLE (PREDICTOR)	No	DEPENDENT VARIABLE (PREDICTED)	No
A1	Age	V2	Age when started new business	V3
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18, 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Motivating factors	V32		
	Role model	V33		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
A2	Age	V2	Formal training in entrepreneurship	V25
	Age when started new business	V3		
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Qualifications	V14-23		
	Primary field of training	V24		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
A3	Age	V2	Motivating factors	V32
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		

	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Size of last firm	V31		
	Role model	V33		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
A4	Age	V2	Role model	V33
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
A5	Age	V2	Risk profile	V34
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		

	Work experience (total number of years)	Sum of V26-30		
	Size of last firm	V31		
	Role model	V33		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
A6	Age	V2	Entrepreneurial characteristics	V35-44
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
A7	Age	V2	Age introduced to entrepreneurship	V45
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Attitude of culture	V46		
A8	Language	V5	Attitude of culture	V46
	Religion	V6		
	Race	V7		

APPENDIX F

**POSSIBLE CORRELATIONS:
NEW VENTURE
CREATION**

APPENDIX F**POSSIBLE CORRELATIONS: NEW VENTURE CREATION**

CATEGORY	INDEPENDENT VARIABLE (PREDICTOR)	No	DEPENDENT VARIABLE (PREDICTED)	No
B1	Age	V2	Period between idea and start-up	V59
	Age when started	V3		
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Work experience	V26-30		
	Size of last firm	V31		
	Motivating factors	V32		
	Role model	V33		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
	Government contracts at start-up	V54		
	Technological component	V58		
	Technology transfer	V60		
	Number of founders	V61		
	Initial finance	V64		
	External capital	V65-72		
	Assistance during start-up	V73-79		
	IP protection	V80		
B2	Age	V2	Technology transfer	V60
	Age when started	V3		
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		

	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Work experience	V26-30		
	Size of last firm	V31		
	Motivating factors	V32		
	Role model	V33		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
	Geographical location	V47		
	Core business	V48		
	Government contracts at start-up	V54		
	Technological component	V58		
	Period between idea and start-up	V59		
	Number of founders	V61		
	Initial finance	V64		
	External capital	V65-72		
	Assistance during start-up	V73-79		
	IP protection	V80		
B3	Age	V2	Initial financing	V64
	Age when started	V3		
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Motivating factors	V32		
	Role model	V33		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
	Government contracts at start-up	V54		
	Technology transfer	V60		

	Number of founders	V61		
	Assistance during start-up	V73-79		
B4	Age	V2	External financing	V65-72
	Age when started	V3		
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
	Government contracts at start-up	V54		
	Technological component	V58		
	Number of founders	V61		
	Assistance during start-up	V73-79		
B5	Age	V2	Start-up assistance	V73-79
	Age when started	V3		
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Motivating factors	V32		
	Role model	V33		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
	Geographical location	V47		

	Core business	V48		
	Government contracts at start-up	V54		
	Technological component	V58		
	Technology transfer	V60		
	Number of founders	V61		
	Initial financing	V64		
	External capital	V65-72		
B6	Age	V2	Business failures reported	Yes for V84 & 85
	Age when started	V3		
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Position in family	V8		
	Level of income @ 18	V9		
	Father self-employed	V11		
	Mother self-employed	V13		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Work experience	V26-30		
	Size of last firm	V31		
	Motivating factors	V32		
	Role model	V33		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
	External factors during initial years	V93-102		
	Causes for failures	V109-118		

APPENDIX G

POSSIBLE CORRELATIONS:

MATURE

BUSINESS

APPENDIX G**POSSIBLE CORRELATIONS: MATURE BUSINESS**

CATEGORY	INDEPENDENT VARIABLE (PREDICTOR)	No	DEPENDENT VARIABLE (PREDICTED)	No
C1	Formal training in entrepreneurship	V25	Annual turn over	V49
	Size of last firm	V31		
	Motivating factors	V32		
	Role model	V33		
	Risk profile	V34		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
	Geographical location	V47		
	Core business	V48		
	Government contracts at present	V55		
	Technological innovation	V56		
	Technological component	V58		
	Technology transfer	V60		
	Number of founders	V61		
	Foreign capital	V65-72		
	Assistance during start-up	V73-79		
	IP protection	V80		
External factors during initial years	V93-102			
Black economic empowerment	V108			
C2	Age	V2	Government contracts at present	V55
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Geographical location	V47		
	Core business	V48		
C3	Age	V2	Technological innovation	V56
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Qualifications	V14-23		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Work experience	V26-30		
	Size of last firm	V31		
	Age introduced to entrepreneurship	V45		
	Attitude of culture	V46		
	Geographical location	V47		
Core business	V48			

	Technological component	V58		
	IP protection	V80		
	Causes for lack of technological innovation	V103-107		
	Measures to improve technological entrepreneurship	V124-128		
C4	Age	V2	Technological component	V58
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Work experience: ▪ R & D	V26		
	Work experience: ▪ Technical	V27		
	Geographical location	V47		
	Core business	V48		
	Technological innovation	V56		
	Technology transfer	V60		
C5	Age	V2	IP Protection	V80
	Sex	V4		
	Language	V5		
	Religion	V6		
	Race	V7		
	Qualifications: ▪ School and other	V14, 15 & 23		
	Qualifications: ▪ Technical	V16, 17, 18 & 19,		
	Qualifications: ▪ University	V20, 21 & 22		
	Primary field of training	V24		
	Formal training in entrepreneurship	V25		
	Work experience: ▪ R & D	V26		
	Work experience: ▪ Technical	V27		
	Geographical location	V47		
	Core business	V48		
	Technological innovation	V56		
	Technological component	V58		
	Technology transfer	V60		
C6	Age when started	V3	Number of jobs created	V91
	Race	V7		
	Primary field of training	V24		
	Formal training in	V25		

	entrepreneurship			
	Motivating factors	V32		
	Risk profile	V34		
	Age when introduced	V45		
	Attitude of culture	V46		
	Geographical location	V47		
	Core business	V48		
	Annual turn over	V49		
	Annual turn over growth	V50		
	Number of people employed	V51		
	Number of branches	V52		
	Value of assets	V53		
	Government contracts at start-up	V54		
	Government contracts at present	V55		
	Technological innovation	V56		
	Period in operation	V57		
	Technological component	V58		
	Technology transfer	V60		
	Initial founders	V61		
	Initial financing	V64		
	External capital	V65-72		
	Assistance during start-up	V73-79		
	IP protection	V80		
	External factors	V93-102		
	Black economic empowerment	V108		
C7	Age	V2	Research & development department	V92
	Age when started	V3		
	Working experience: ▪ Research & development	V26		
	Technological innovation	V56		
	Years in operation	V57		
	Technological component	V58		
	Technology transfer	V60		
	IP protection	V80		
	Black economic empowerment	V108		