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THE ROLES OF WORK MOTIVATION AND JOB INVOLVEMENT ON THE RELATIONSHIP BETWEEN CONTEXTUAL FACTORS AND CREATIVE BEHAVIOR

By:

DARATUL AMBIA BINTI CHE MIT

Thesis submitted to the
Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
in Fulfillment of the Requirement for the degree of Doctor of Philosophy
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ABSTRACT

The main purpose of this study was to investigate the factors that influence creative behavior among Malaysian researchers. Specifically, it investigated the mediating effect of work motivation on the relationships between the contextual factors, namely stressors, autonomy, culture, reward and supervisory style on creative behavior; the effect of work motivation on creative behavior; and the moderating effect of job involvement on the relationships between stressors, autonomy, culture, reward and supervisory style, and work motivation. Creativity is considered as the seed of innovation, where innovativeness has been considered as one of the fundamentals for organizational competitiveness. Acknowledging the importance of creative behavior on innovation, this study was carried out to investigate its predictors, and to include work motivation as the mediating factor and job involvement as the moderating variable between the contextual factors and work motivation. Accordingly, this study was based on the self-determination theory (SDT) and the organizational support theory (OST) to position the possible relationships between the variables in the research framework. A total of 201 researchers, representing a response rate of 40.8%, participated in this study. Data were collected via questionnaires. PLS-SEM was used to analyze the data and test the hypotheses. This study found that the level of creative behavior among the researchers was high. Statistical results showed that the relationship between stressors, work motivation, creative behavior as well as the relationship between autonomy, work motivation and creative behavior were supported. Work motivation was also found to be positively related to creative behavior. Empirical support was also found for the moderating effect of job involvement on the relationships between stressors and supervisory styles and work motivation. The theoretical and practical implications alongside recommendations for future research are discussed.

Keywords: creative behavior, work motivation, job involvement, contextual factors and self-determination theory
ABSTRAK

Tujuan utama kajian ini adalah untuk mengkaji faktor-faktor yang mempengaruhi tingkah laku kreatif dalam kalangan penyelidik di Malaysia. Secara khususnya, ia bertujuan untuk mengkaji kesan pengantara motivasi kerja pada hubungan antara faktor-faktor kontekstual iaitu stressor, autonomi, budaya, ganjaran dan gaya penyeliaan dengan tingkah laku kreatif; kesan motivasi kerja terhadap tingkah laku kreatif; dan kesan penyederhana penglibatan kerja pada hubungan antara stressor, autonomi, budaya, ganjaran dan gaya penyeliaan dengan motivasi kerja. Kreativiti dianggap sebagai asas kepada inovasi yang mana inovasi dianggap sebagai salah satu perkara yang penting bagi daya saing organisasi. Menyedari akan kepentingan tingkah laku kreatif ke atas inovasi, kajian ini dijalankan untuk mengkaji faktor-faktor yang menyumbang kepada tingkah laku kreatif; dan motivasi kerja sebagai faktor pengantara, serta penglibatan kerja sebagai faktor penyederhana antara faktor-faktor kontekstual dan motivasi kerja. Oleh itu, kajian ini dilaksanakan berdasarkan kepada teori penentuan diri dan teori sokongan organisasi untuk memeta dan meletakkan hubungan antara pemboleh ubah dalam rangka kerja penyelidikan. Seramai 201 orang penyelidik telah terlibat dalam kajian ini dan iamewakili kadar respons sebanyak 40.8%. Data kajian telah dikumpul melalui kaedah soal selidik, manakala perisian PLS-SEM telah digunakan untuk menganalisis data dan menguji hipotesis. Dalam kajian ini, didapati bahawa tahap tingkah laku kreatif dalam kalangan para penyelidik adalah tinggi. Keputusan statistik menunjukkan bahawa hubungan antara stressor, motivasi kerja, tingkah laku kreatif serta hubungan antara autonomi, motivasi kerja dan tingkah laku kreatif adalah disokong. Motivasi kerja juga didapati mempunyai hubungan yang positif dengan tingkah laku kreatif. Manakala sokongan empirikal juga memberi kesan penyederhana terhadap penglibatan kerja pada hubungan antara stressor dan gaya penyeliaan dengan motivasi kerja. Implikasi teoretikal dan praktikal serta cadangan kajian pada masa hadapan turut dibincangkan dalam kajian ini.

Kata kunci: tingkah laku kreatif, motivasi kerja, penglibatan kerja, faktor-faktor Kontekstual dan teori penentuan diri
ACKNOWLEDGEMENT

First and foremost, my sincere gratitude goes to Allah, The Most Gracious, The Most Merciful. Praise be upon his Prophet Muhammad (SAW).

Firstly, I am especially indebted to my supervisors, Associate Professor Dr. Faridahwati Mohd Shamsudin, Associate Professor Dr. Chandrakantan a/l Subramaniam and Professor Dr. Razli Che Razak for their patience, motivation and immense knowledge. Their extensive personal and professional guidance helped me in all the time of research and writing of this thesis. Besides, I would especially like to thank my most respected Dean, Professor Dr. Rushamie Zien and Dr. Faizal and the team for their endless support and encouragement and their faith in me to see me through this process. My sincere thanks go to my friends and relatives, Fitriah, Hanissah, Nazlina, Dr. Hoe and many other individuals (you know who you are) who have contributed directly or indirectly throughout this process. Thank you for your help and prayers.

Nobody has been more important to me in the pursuit of this project than the members of my family. I would like to thank my parents, although they are not with us anymore, their love and guidance remain with me in whatever I pursue. Most importantly, I wish to thank my husband, Mohamad Saidin Ismail, and my wonderful children, Nazirul Aiman, Nur Batrisyia, Alif Danial, Sufiyyah and Nazif Ilham, who provide unending inspiration and unconditional love.
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<table>
<thead>
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<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>STD</td>
<td>Self-determination Theory</td>
</tr>
<tr>
<td>OST</td>
<td>Organizational Support Theory</td>
</tr>
<tr>
<td>S &amp; T</td>
<td>Science and Technology</td>
</tr>
<tr>
<td>R &amp; D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>AVE</td>
<td>Average Variance Extract</td>
</tr>
<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
</tr>
<tr>
<td>CR</td>
<td>Composite Reliability</td>
</tr>
<tr>
<td>EFA</td>
<td>Exploratory Factor Analysis</td>
</tr>
<tr>
<td>PLS</td>
<td>Partial Least Square</td>
</tr>
<tr>
<td>PLS-SEM</td>
<td>Partial Least Square Structural Equation Modelling</td>
</tr>
<tr>
<td>SD</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>SE</td>
<td>Standard Error</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Science</td>
</tr>
<tr>
<td>VIF</td>
<td>Variance Inflation Factor</td>
</tr>
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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Organizations worldwide depend on their ability to create, improve, and sustain their competitive advantage to ensure their long-term survival (Ford & Gioia, 1995; Lopez-Claros, Altinger, Blanke, Dreznik & Mia, 2007). It can be argued that one of the ways companies can achieve their competitive advantage is through the acts of innovation (Chen & Kaufmann, 2008; Mumford, 2000), which include introducing new technologies and new ways of doing things, new product designs and also new production processes, new marketing approaches as well as a new way of conducting training.

Although the extent to which an organization is able to innovate and sustain its competitive advantage is determined by multiple factors, innovation is often rooted in the creative ideas of individual employees (George & Zhou, 2001; Mumford, 2000). The agenda of creating, sustaining, and improving competitive advantage through people motivates organizations to discover various alternatives to employ the full potential of their employees. One of the alternatives is through enhancing employees’ creativity. Enhancing employees’ creativity is considered a necessity for any organization to succeed (Amabile, 1988; Kanter, 1983; Kim, 2000; Shalley, 1995). Employees who are highly creative and innovative are the most invaluable resources that can help organizations generate new ideas and produce useful
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Behavior, 60, 179-184.


Dear Respondent,

RESEARCH ON THE CONTEXTUAL FACTORS, WORK MOTIVATION AND CREATIVE BEHAVIOR OF MALAYSIAN RESEARCHERS

Referring to the above matter, I would like to obtain your invaluable response and support in affiliation with my study. I am a lecturer from Universiti Utara Malaysia and my area of interest is human resource management/organizational behavior.

As part of my study, I am conducting a survey to examine how factors such as supervisory style, job design, stressors, and culture of the organization influence work motivation of the researchers, as well as creative behavior at work. I have undertaken this study because of the belief that the selected contextual factors play important role in determining work motivation and later influence the expression of creative behavior.

Your help in completing and returning this questionnaire is most appreciated! Completing the questionnaire would take about 20 minutes of your time. All responses to this questionnaire will be kept confidential. Results will be used only for academic purposes with no specific individuals identified. I am most grateful if you could complete the attached questionnaire at your earliest, hopefully, within the next seven days. Please return the questionnaire in the self-addressed envelope provided or return it to the designated contact person in your organization.

When the study has been completed, a copy of the report can be made available to you. If you would like a copy, please provide your name and address on the last page of the questionnaire.

Thank you very much for your time and assistance.

Yours sincerely,

DARATUL AMBIA CHE MIT
Universiti Utara Malaysia
Tel No: 0195043164
E-mail: daratul@uum.edu.my
APPENDIX B

SECTION A

Please answer the following questions by circling or putting (/) mark on the number that best represents your opinion of the following statements.

<table>
<thead>
<tr>
<th>Q1</th>
<th>How accurately each of the following statements describe how you perform your work:</th>
<th>Strongly Disagree (1)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I try to find out new ideas about technologies, work processes, and products.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>I suggest creative ideas.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>I am the first person among my coworkers to try new ideas and methods.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>I do my job with very creative and practical ways.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>I try to approach solving a certain problem with new ideas or methods.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

SECTION B

Please answer the following questions by circling or putting (/) mark on the number that best represents your opinion of the following statements.

<table>
<thead>
<tr>
<th>Q2</th>
<th>Based on the perception you have about your organization and the way employees (your boss, teammates, other managers, CEO, etc.) interact with you and among themselves, indicate to what extent you agree with each of the following statements:</th>
<th>Strongly Disagree (1)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>This organization is always moving towards the development of new answers.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Proposing new ideas is NOT the best strategy to succeed in this organization.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>This organization is open and responsive to change.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>I understand the rules for the distribution of rewards.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>People on this team are always searching for fresh, new ways of looking at problems.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>This organization will continue its path of success by strictly adhering to standards and current procedures.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>This organization encourages people to behave creatively.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>The rewards system is unfair.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Someone who suggests a new method will probably be heard and supported by managers.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>This organization provides resources to help in the application of new ideas</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Members are encouraged to share resources.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>The rewards system of this firm encourages teamwork.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>People in this organization should always check with a superior before introducing a change to an existing procedure.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Members are encouraged to cooperate with each other in order to innovate.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>Assistance in developing new ideas is generally available.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>This organization is always moving toward the development of new methods.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>The rewards system of this organization encourages trust among team members.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>In general, this organization is a very innovative organization.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
19 In general, this organization rewards risk taking.
20 There seems to be a high level of conflict in this organization.
21 Proposing new methodologies is NOT the best strategy to succeed in this organization.
22 This organization rewards creative people.
23 Someone who brings a new idea is likely to be heard and supported by superiors.
24 This organization gives its employees freedom to execute their work.
25 The “tone” of the working environment contains humor/playfulness.

<table>
<thead>
<tr>
<th>Q3</th>
<th>How strongly do you agree or disagree with each of the following statements about the rewards system utilized in your organization?</th>
<th>Strongly Disagree (1)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The opportunity to receive a reward for performing my work played a significant role in directing my efforts.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I am motivated by the opportunity to receive monetary reward.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>While performing my work, I felt pressured to meet someone else’s specifications on how to do my work.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The reward offered was reasonable for this job.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I felt compelled to perform well because of the incentives I was guaranteed to receive.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q4</th>
<th>How strongly do you agree or disagree with each of the following statements about your motivation to perform your work?</th>
<th>Never/Almost Always True of Me (1)</th>
<th>Almost Always True of Me (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am not that concerned about what other people think of my work.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I prefer having someone set clear goals for me in my work.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The more difficult the problem, the more I enjoy trying to solve it.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I am keenly aware of the income goals I have for myself.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I want my work to provide me with opportunities for increasing my knowledge and skills.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>To me, success means doing better than other people.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I prefer to figure things out for myself.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>No matter what the outcome of a project, I am satisfied if I feel I gained a new experience.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I enjoy relatively simple, straightforward tasks.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I am keenly aware of the goals I have for myself.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Curiosity is the driving force behind much of what I do.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I’m less concerned with what work I do than what I get for it.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I enjoy tackling problems that are completely new to me.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>I prefer work I know I can do well over work that stretches my abilities.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>I’m concerned about how other people are going to react to my ideas.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I seldom think about salary and promotions.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>I’m more comfortable when I can set my own goals.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>I believe that there is no point in doing a good job if nobody else knows about it.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>I am strongly motivated by the money I can earn.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>It is important for me to be able to do what I most enjoy.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
I prefer working on projects with clearly specified procedures.  

As long as I can do I enjoy, I'm not that concerned about exactly what I'm paid.  

I enjoy doing work that is so absorbing that I forget about anything else.  

I am strongly motivated by the recognition I can earn from other people.  

I have to feel that I am earning something for what I do.  

I enjoy trying to solve complex problems.  

It is important for me to have a platform for self-expression.  

I want to find out how good I really can be at my work.  

I want other people to find out how good I really can be at my work.  

SECTION C  
Please answer the following questions by circling or putting (1) mark on the number that best represents your opinion of the following statements.

<table>
<thead>
<tr>
<th>Q5</th>
<th>How strongly do you agree or disagree with each of the following statements about your supervisor/immediate boss?</th>
<th>Strongly Disagree (1)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>My supervisor helps me solve work-related problems.</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>2</td>
<td>My supervisor encourages me to develop new skills.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>My supervisor keeps informed about how employees think and feel about things.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>My supervisor encourages employees to participate in important decisions.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>My supervisor praises good work.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>My supervisor encourages employees to speak up when they disagree with a decision.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>My supervisor refuses to explain his or her actions.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>My supervisor rewards me for good performance.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>My supervisor always seems to be around checking on my work.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>My supervisor tells me what shall be done and how it shall be done.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>My supervisor never gives me a chance to make important decisions on my own.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>My supervisor leaves it up to me to decide how to go about doing my job.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Q6</th>
<th>How strongly do you agree or disagree with each of the following statements about your job?</th>
<th>Strongly Disagree (1)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>My job permits me to decide on how I go about doing it.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The job denies me any chance to use my personal initiatives or judgment in carrying out the work.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The job gives me considerable opportunity for independence and freedom in how I do the work.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The actual work itself provides me with clues about how well I am doing aside from “feedback” from my supervisors or peers.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Just doing the work required by the job provides many chances for me to figure out how well I am doing.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>The job itself provides very few clues about whether or not I am performing well.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Q7  How strongly do you agree or disagree with each of the following statements about your job? | Very False (1) | Very True (7)  
---|---|---
1. At work, my responsibilities seem to change from day to day and I have little control of the changes. | 1 2 3 4 5 6 7 |
2. The explanation of what has to be done is not always very clear. | 1 2 3 4 5 6 7 |
3. There are no specific evaluation criteria set up and I just don't know what is expected of me. | 1 2 3 4 5 6 7 |
4. I may report to two or more supervisors who are as different as night and day. They may each desire 100 percent of my time. What is acceptable for one is inappropriate for the other. | 1 2 3 4 5 6 7 |
5. The rigorous demand of work, especially overtime, sometimes requires me to cancel activities with my family and friends. The demands may also infringe upon my basic responsibilities in the home. | 1 2 3 4 5 6 7 |
6. Deadlines, deadlines, and always deadlines. | 1 2 3 4 5 6 7 |
7. I may find myself with a pile of work on my desk and everything I was due yesterday. | 1 2 3 4 5 6 7 |
8. Simply put, I am always given either too much work or too little time to finish it! | 1 2 3 4 5 6 7 |

SECTION D

Please answer the following questions by circling or putting (/) mark on the number that best represents your opinion of the following statements.

Q8  Below are a number of statements each of which you may agree or disagree with depending on your own personal evaluation of your present job. Please indicate the degree of your agreement or disagreement with each statement: | Strongly Disagree (1) | Strongly Agree (6)  
---|---|---
1. The most important things that happen to me involve my present job. | 1 2 3 4 5 6 |
2. I'll stay overtime to finish my job, even if I'm not paid for it. | 1 2 3 4 5 6 |
3. To me, my job is only a small part of who I am. | 1 2 3 4 5 6 |
4. I am very much involved personally in my job. | 1 2 3 4 5 6 |
5. Generally, I avoid taking on extra duties and responsibilities in my job. | 1 2 3 4 5 6 |
6. I live, eat, and breathe my job. | 1 2 3 4 5 6 |
7. Sometimes I'd like to kick myself for the mistakes I make in my job. | 1 2 3 4 5 6 |
8. Most of my interests are centered around my job. | 1 2 3 4 5 6 |
9. I have very strong ties with my present job which would be very difficult to break. | 1 2 3 4 5 6 |
10. Usually I feel detached from my job. | 1 2 3 4 5 6 |
11. Most of my personal life goals are job-oriented. | 1 2 3 4 5 6 |
12. I feel depressed when I fail at something connected with my job. | 1 2 3 4 5 6 |
13. I consider my job to be very central to my existence. | 1 2 3 4 5 6 |
14. I have other activities which are more satisfying than my job. | 1 2 3 4 5 6 |
15. I like to be absorbed in my job most of the time. | 1 2 3 4 5 6 |
### SECTION E

**Please fill in the blank.**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is your current position in the company?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>How long have you been in the current position?</td>
<td>Years</td>
</tr>
<tr>
<td>3</td>
<td>How long have you been with the company?</td>
<td>Years</td>
</tr>
<tr>
<td>4</td>
<td>Your gender: Male (M) or Female (F)</td>
<td>(Please state M or F)</td>
</tr>
<tr>
<td>5</td>
<td>Your age is:</td>
<td>Years</td>
</tr>
<tr>
<td>6</td>
<td>Your highest level of education is:</td>
<td>Doctorate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Masters</td>
</tr>
<tr>
<td></td>
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<td>Degree</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPM/STPM/Diploma</td>
</tr>
<tr>
<td>7</td>
<td>Experience in R &amp; D.</td>
<td>Year</td>
</tr>
<tr>
<td>8</td>
<td>State your achievement throughout your career as a researcher:</td>
<td>Year</td>
</tr>
</tbody>
</table>
Please use this space to write any comment you wish to make.

THANK YOU VERY MUCH FOR YOUR KIND COOPERATION
### APPENDIX C

#### Total Variance Explained

<table>
<thead>
<tr>
<th>Component</th>
<th>Total Variance Explained</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial Eigenvalues</td>
<td>Extraction Sums of Squared Loadings</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>2</td>
<td>8.238</td>
<td>8.407</td>
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<tr>
<td>3</td>
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APPENDIX C: continued

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F tests – Linear multiple regression: Fixed model, $R^2$ deviation from zero

Analysis: A priori: Compute required sample size

Input:
- Effect size $f^2$ = 0.15
- $\alpha$ err prob = 0.05
- Power (1- $\beta$ err prob) = 0.95
- Number of predictors = 7

Output:
- Noncentrality parameter $\lambda$ = 22.9500000
- Critical F = 2.0732820
- Numerator df = 7
- Denominator df = 145
- Total sample size = 153
- Actual power = 0.9503254