INTEGRATING TECHNOSTRESS CREATORS AND INHIBITORS IN USING ACCOUNTING INFORMATION SYSTEM TO IMPROVE JOB SATISFACTION AND TASK PERFORMANCE

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UNIVERSITI TEKNOLOGI MALAYSIA
INTEGRATING TECHNOSTRESS CREATORS AND INHIBITORS IN USING ACCOUNTING INFORMATION SYSTEM TO IMPROVE JOB SATISFACTION AND TASK PERFORMANCE

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A thesis submitted in fulfilment of the requirements for the award of the degree of Doctor of Philosophy

International Business School
Universiti Teknologi Malaysia

JUNE 2015
I dedicate this work to Allah the Almighty and the Prophet of Islam, Muhammad Rasool Allah, as well as my beloved mother (Hajiya Aishatu Mohammed) and father (Late Alhaji Mohammed Saganuwan Abubakar).
ACKNOWLEDGEMENT

In preparing this thesis, I was in contact with many people, researchers, academicians, and practitioners. They have contributed towards my understanding and thoughts. In particular, I wish to express my sincere appreciation to my main thesis supervisor, Associate Professor Dr. Wan Khairuzzaman Wan Ismail, for encouragement, guidance, critics and friendship. Also, same appreciation extends to my co-supervisor, Dr. Ungku Norulkamar Ungku Ahmad, without their continued support and interest, this final graduate thesis would not have been the same as presented here.

I am indebted to Universiti Teknologi Malaysia (UTM) for providing high quality research experiences and very rich library materials enjoined. I must acknowledge the assistance and support from staff members of International Business School, UTM, KL Campus. I am also appreciative of Mendeley, Endnote, Raosoft Calculator and Smart-PLS 2.0 software applications for the great roles in organising literature and data analysis. I owe an exceptional support from TETFUND Nigeria and Management of Federal Polytechnic Bida, especially Alhaji Abdullahi Sule.

The participants of this study from Nigeria listed companies are appreciated. Hanif Haghshenas and Dr. Kabir Maitama Kura are of great assistance in conceptualisation and data analysis. Comments on early drafts of this study from the colleagues at UTM, notably Obaji Nkem Okpa, Ringa Kaingu Ringa, Dr Shehu I. A, Dr Siadu Mohammed, Dr A. M. Kasim, R. Olabumi, M. A. Ndaliman, R. B. Salau are appreciated. A study such as this could not be successfully completed without the assistance of A. A. Sayleke, M. A. Yawa, M. Abdul-lateef, O. O. Kamoru and R. L. Sheikh-Lemu as Research Assistants whose contributions have made the data collection of this study possible.

My deepest appreciation goes to my beloved Hajiya Hadiza Mohammed and Zarahdeen Umar Saganuwan for their sacrifices and support. The continual support from entire family greatly appreciated. Thank you to my friends Umar A. Zukogi, Ibrahim Yabagi, Mahmood D. Y. Sani, Dalhatu Abubakar, M. M. Mohammed, Haruna Salihu and many others who are not specifically mentioned due to lack of space.
ABSTRACT

It has been established that technostress adversely affect the professionals’ job satisfaction and performance. However, the impact of technostress which imposes additional stress on the professionals such as accountants is yet to be reflected. In this study, technostress and Accounting Information System (AIS) literature were reviewed to synthesize the relationship in order to identify information characteristics that exacerbate higher technostress on users of AIS. The researcher evaluates the relationship of AIS information characteristics on technostress creators and its consequences on the outcomes (job satisfaction and task performance) of accountants through the person-environment fit theory. Specifically, the study is conducted (a) to investigate the relationship between AIS information characteristics as antecedents of technostress creators; (b) to ascertain any relationship between technostress creators and inhibitors with the outcomes of accountants using AIS; and (c) to examine the moderating role of the technostress inhibitors in the relationship between technostress creators and outcomes of accountants using AIS. Survey questionnaire was distributed to accountants in listed companies in Nigeria. A three-stage sampling technique (cluster, stratified and random) was applied to collect data from 296 accountants. A structural equation modeling software (SmartPLS-M) was applied to examine the direct and moderating effects of hypotheses. The results from this study failed to support hypothesized relationships between the two AIS information characteristics (scope and timeliness) and technostress creators. Aggregation and integration were confirmed to have a significant positive relationship with technostress creators. Hence they are predictors of AIS stressors. The findings further confirmed significant negative relationship between technostress creators and task performance, while technostress creators were also found to have significant positive relationship with job satisfaction. Significant positive association between technostress inhibitors and outcomes were found as hypothesised. In addition, technostress inhibitors were also found to moderate the relationship between technostress creators and task performance. Based on the findings, the research makes several theoretical contributions and provides further insights on the antecedents and outcomes of technostress research. Managers can identify where and when AIS stress is likely to occur and the buffering role of technostress inhibitors in this regard. Several potential avenues for future research were identified and proposed.
ABSTRAK

Telah terbukti bahawa teknostres menjejaskan kepuasan bekerja dan prestasi golongan profesional. Walau bagaimanapun, kesan teknostres yang memberikan stres tambahan kepada golongan profesional seperti akauntan masih belum ketara. Dalam kajian ini teknostres dan literatur Sistem Maklumat Perakaunan (AIS) ditinjau untuk mensintesiskan hubungan bagi mengenal pasti ciri-ciri informasi yang lebih memperburuk lagi teknostres kepada pengguna AIS. Penyelidik telah menilai hubungan ciri-ciri maklumat AIS dengan pencipta teknostres dan akibatnya kepada hasil (kepuasan bekerja dan prestasi kerja) akauntan berdasarkan teori orang-lingkungan sepadan. Secara khusus, kajian ini dilanjutkan (a) untuk mengkaji hubungan antara ciri-ciri maklumat AIS sebagai antecedent pencipta teknostres; (b) untuk memastikan mana-mana hubungan antara pencipta teknostres dan perencat dengan hasil akauntan menggunakan AIS; dan (c) untuk mengkaji peranan sederhana perencat teknostres dalam hubungan antara pencipta teknostres dengan hasil akauntan menggunakan AIS. Soal selidik kajian ini tidak menyokong hipotesis hubungan antara kedua-dua ciri maklumat AIS (skop dan ketepatan masa) dengan pencipta teknostres. Pengagregatan dan integrasi telah disahkan mempunyai hubungan positif yang signifikan dengan pencipta teknostres. Oleh itu, kedua-duanya (pengagregatan dan integrasi) merupakan peramal stres AIS. Hasil kajian selanjutnya mengesahkan hubungan negatif yang signifikan antara pencipta teknostres dengan prestasi kerja. Selain itu, pencipta teknostres juga didapati mempunyai hubungan positif yang signifikan dengan kepuasan bekerja. Perkaitan positif yang signifikan antara perencat teknostres dengan hasil didapati sebagai hipotesis. Di samping itu, perencat teknostres juga didapati menyederhanakan hubungan antara pencipta teknostres dengan prestasi kerja. Berdasarkan dapatan kajian, kajian ini memberikan beberapa sumbangan teori dan menawarkan kefahaman yang lebih mendalam tentang antecedent dan hasil penyelidikan teknostres. Para pengurus boleh mengenal pasti di mana dan bila stres AIS mungkin berlaku dan peranan penyangga perencat teknostres dalam hal ini. Beberapa halatuju yang berpotensi telah dikenal pasti dan dicadangkan untuk kajian akan datang.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DECLARATION</td>
<td></td>
<td>ii</td>
</tr>
<tr>
<td>DEDICATION</td>
<td></td>
<td>iii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td></td>
<td>iv</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td></td>
<td>v</td>
</tr>
<tr>
<td>ABSTRAK</td>
<td></td>
<td>vi</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td></td>
<td>vii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td></td>
<td>xiii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td></td>
<td>xv</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td></td>
<td>xvi</td>
</tr>
<tr>
<td>LIST OF APPENDICES</td>
<td></td>
<td>xviii</td>
</tr>
</tbody>
</table>

## 1 INTRODUCTION

1.1 Overview  
1.2 Background of the study  
1.3 Problem Statement  
1.4 Research Questions  
1.5 Research Objectives  
1.6 Significance of Study  
  1.6.1 Theoretical Contribution  
  1.6.2 Practical Contributions  
1.7 Scope of the Study  
1.8 Operational Definition  
  1.8.1 Accounting information system  
  1.8.2 Accounting Information Characteristics  
    1.8.2.1 Scope  
    1.8.2.2 Aggregation
1.8.2.3 Timeliness
1.8.2.4 Integration
1.8.3 Technostress
1.8.4 Technostress Creators
1.8.5 Technostress Inhibitors
1.8.6 Job Satisfaction
1.8.7 Task Performance
1.9 Structure of Remaining Chapters
1.10 Summary

2 LITERATURE REVIEW

2.1 Introduction
2.2 Stress and Work
  2.2.1 Stress
  2.2.2 Work-related Stress
2.3 Technostress
  2.3.1 Symptoms of Technostress
  2.3.2 Sources of Technostress
  2.3.3 Antecedents and Consequences of Technostress
    2.3.3.1 Antecedents of Technostress
    2.3.3.2 Consequences of Technostress
  2.3.4 Components of Technostress and its Effect on Professionals
    2.3.4.1 Techno-overload
    2.3.4.2 Techno-invasion
    2.3.4.3 Techno-complexity
    2.3.4.4 Techno-insecurity
    2.3.4.5 Techno-uncertainty
2.4 Technostress Inhibitors
  2.4.1 Literacy Facilitation
  2.4.2 Technical Support
  2.4.3 Technology Involvement
  2.4.4 Innovation Support
2.5 The Impact of Technostress on Job Satisfaction and Performance
  2.5.1 Job Satisfaction
  2.5.2 Task Performance
2.5.3  Reducing the Effects of Technostress on Outcomes  56

2.6  Accounting Information System  59

2.6.1  Change Process in Accounting and AIS Technostress  62
  2.6.1.1  CBN Cashless Policy  63

2.6.2  AIS Information Characteristics  65
  2.6.2.1  Scope  68
  2.6.2.2  Aggregation  69
  2.6.2.3  Timeliness  69
  2.6.2.4  Integration  70

2.6.3  Empirical Studies of AIS  71

2.7  Technostress in AIS  76

2.8  Literature Gap  79

2.9  Research Framework  82

2.10  Underpinning Theory  85
  2.10.1  Person-environment fit theory  86

2.11  Hypotheses Development  88
  2.11.1  AIS Information Characteristics and
          Technostress Creators  88
    2.11.1.1  Scope and technostress creators  89
    2.11.1.2  Aggregation and Technostress Creators  91
    2.11.1.3  Timeliness and Technostress Creators  93
    2.11.1.4  Integration and Technostress Creators  94

2.11.2  Technostress Creators and Outcomes  95
  2.11.2.1  Technostress Creators and Job
          Satisfaction  96
  2.11.2.2  Technostress Creators and Task
          Performance  97

2.11.3  Technostress Inhibitors and Outcomes  97

2.12  Summary  99

3  RESEARCH METHODOLOGY  101

3.1  Introduction  101

3.2  Research Paradigm  101

3.3  Research Design  103
    3.3.1  The Rationale of the study  104
    3.3.2  Type study  104
    3.3.3  The Study setting  105
4.3.2.3 Normality Test 143
4.3.2.4 Multicollinearity 145
4.3.2.5 Common Method Variance Test 146
4.3.2.6 T-test for Non-response Bias 147

4.4 Data Analysis 149
4.4.1 Assessment of PLS-SEM Path Model Results 149
4.4.2 Measurement Scales 150
   4.4.2.1 Individual item reliability 150
   4.4.2.2 Internal consistency reliability 150
   4.4.2.3 Content Validity 151
   4.4.2.4 Convergent Validity 152
   4.4.2.5 Discriminant Validity 155

4.5 Structural Model 163
   4.5.1 Path Coefficients 165
   4.5.2 Coefficient of Determination 166
   4.5.3 Assessment of Effect Size ($f^2$) 167
   4.5.4 Predictive Relevance 168

4.6 Testing the Relationship of AIS Information Characteristics with Technostress Creators 169

4.7 Testing the Relationship of Technostress Creators and Inhibitors with Outcomes 170

4.8 Testing Moderating Effects 170
   4.8.1 Effect Size of Moderation 173

4.9 Summary of Findings 174

4.10 Summary 175

5 DISCUSSION AND CONCLUSIONS 176
5.1 Introduction 176
5.2 Recapitulation of the Research and Findings 177
5.3 Discussion of Results 178
   5.3.1 AIS information as Antecedents to Technostress Creators 178
      5.3.1.1 Scope as a Predictor 179
      5.3.1.2 Aggregation as a Predictor 181
      5.3.1.3 Timeliness as a Predictor 182
      5.3.1.4 Integration as a Predictor 183
   5.3.2 The Relationship of Technostress Creators and
# LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE NO.</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Selected definitions of stress</td>
<td>22</td>
</tr>
<tr>
<td>2.2</td>
<td>Summary of review on technostress</td>
<td>58</td>
</tr>
<tr>
<td>2.3</td>
<td>Summary of AIS Characteristics</td>
<td>66</td>
</tr>
<tr>
<td>2.4</td>
<td>Summary of review on AIS</td>
<td>73</td>
</tr>
<tr>
<td>3.1</td>
<td>Measurement Scale</td>
<td>108</td>
</tr>
<tr>
<td>3.2</td>
<td>Survey Items Related to Job Satisfaction</td>
<td>109</td>
</tr>
<tr>
<td>3.3</td>
<td>Survey Items Related to Task Performance</td>
<td>110</td>
</tr>
<tr>
<td>3.4</td>
<td>Survey Items Related to Technostress Creators (TS.CR)</td>
<td>110</td>
</tr>
<tr>
<td>3.5</td>
<td>Survey Items Related to Technostress Inhibitors (TS.IR)</td>
<td>113</td>
</tr>
<tr>
<td>3.6</td>
<td>Items Related to AIS information characteristics</td>
<td>114</td>
</tr>
<tr>
<td>3.7</td>
<td>Listed Companies and Estimated Population</td>
<td>120</td>
</tr>
<tr>
<td>3.8</td>
<td>Sample Size of Sectors</td>
<td>124</td>
</tr>
<tr>
<td>3.9</td>
<td>Summary of Sampling Procedures</td>
<td>125</td>
</tr>
<tr>
<td>4.1</td>
<td>Pilot Survey Response Rate</td>
<td>131</td>
</tr>
<tr>
<td>4.2</td>
<td>A Profile of the Pilot Survey Sample Respondents</td>
<td>133</td>
</tr>
<tr>
<td>4.3</td>
<td>Variables Cronbach's Alpha for the Pilot Survey</td>
<td>134</td>
</tr>
<tr>
<td>4.4</td>
<td>Cronbach's Alpha for Pilot Test Instrument</td>
<td>134</td>
</tr>
<tr>
<td>4.5</td>
<td>Scale Statistics</td>
<td>135</td>
</tr>
<tr>
<td>4.6</td>
<td>Main Survey Response Rates</td>
<td>136</td>
</tr>
<tr>
<td>4.7</td>
<td>Profile of Respondents</td>
<td>138</td>
</tr>
<tr>
<td>4.8</td>
<td>Years of Working Experience</td>
<td>139</td>
</tr>
<tr>
<td>4.9</td>
<td>Working Experience with Computer</td>
<td>140</td>
</tr>
<tr>
<td>4.10</td>
<td>Computer Confidence</td>
<td>141</td>
</tr>
<tr>
<td>4.11</td>
<td>Missing Values</td>
<td>142</td>
</tr>
<tr>
<td>4.12</td>
<td>Results of Skewness and Kurtosis Analysis Descriptive Statistics</td>
<td>144</td>
</tr>
<tr>
<td>4.13</td>
<td>Tolerance and Variance Inflation Factors (VIF)</td>
<td>145</td>
</tr>
<tr>
<td>4.14</td>
<td>Results of Independent-Samples T-test for Non-Response Bias</td>
<td>148</td>
</tr>
<tr>
<td>4.15</td>
<td>A Two-Step Process of PLS Path Model Assessment</td>
<td>149</td>
</tr>
<tr>
<td>4.16</td>
<td>Measurement model evaluation results</td>
<td>153</td>
</tr>
<tr>
<td>4.17</td>
<td>Discriminant validity assessment</td>
<td>157</td>
</tr>
<tr>
<td>4.18</td>
<td>Cross Loading</td>
<td>159</td>
</tr>
<tr>
<td>4.19</td>
<td>Structural model</td>
<td>165</td>
</tr>
<tr>
<td>4.20</td>
<td>Coefficient Determination</td>
<td>166</td>
</tr>
<tr>
<td>4.21</td>
<td>Effect Sizes ($f^2$)</td>
<td>167</td>
</tr>
<tr>
<td>4.22</td>
<td>Predictive Relevance</td>
<td>168</td>
</tr>
<tr>
<td>4.23</td>
<td>Effect Sizes ($f^2$) of Moderation</td>
<td>173</td>
</tr>
<tr>
<td>4.24</td>
<td>Results of Hypotheses Testing</td>
<td>174</td>
</tr>
</tbody>
</table>
### LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE NO.</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Technological Antecedents and Implications. Source: (Ayyagari, et al., 2011)</td>
<td>33</td>
</tr>
<tr>
<td>2.2</td>
<td>The Impact of Technostress on Role Stress and Productivity Source: (Tarafdar, et al., 2007).</td>
<td>34</td>
</tr>
<tr>
<td>2.3</td>
<td>Conceptual Model for Understanding Technostress Source: (Ragu-Nathan, et al., 2008).</td>
<td>35</td>
</tr>
<tr>
<td>2.4</td>
<td>Creating, Conditions, Outcome and Inhibiting Mechanisms of Technostress Source: (Tarafdar, et al., 2011b).</td>
<td>37</td>
</tr>
<tr>
<td>2.5</td>
<td>AIS and Management Functions. (Source: Yau and Auyeung, 1995)</td>
<td>61</td>
</tr>
<tr>
<td>2.6</td>
<td>Mode of Payment Source: Central Bank of Nigeria Annual Report 2011</td>
<td>64</td>
</tr>
<tr>
<td>2.7</td>
<td>Performance of AIS in Organisation.</td>
<td>72</td>
</tr>
<tr>
<td>2.8</td>
<td>Quadruple Helix AIS Performance</td>
<td>79</td>
</tr>
<tr>
<td>2.9</td>
<td>Summary of Gaps in the Literature</td>
<td>82</td>
</tr>
<tr>
<td>2.10</td>
<td>First Phase of Framework</td>
<td>83</td>
</tr>
<tr>
<td>2.11</td>
<td>Second Phase of Framework</td>
<td>83</td>
</tr>
<tr>
<td>2.12</td>
<td>Research Framework</td>
<td>85</td>
</tr>
<tr>
<td>2.13</td>
<td>Research Framework</td>
<td>85</td>
</tr>
<tr>
<td>3.1</td>
<td>Research Design (Source: Adapted from Sekaran and Bougie (2010)</td>
<td>103</td>
</tr>
<tr>
<td>4.1</td>
<td>Breakdown of Response Rate by Sector</td>
<td>137</td>
</tr>
<tr>
<td>4.2</td>
<td>Measurement Model</td>
<td>163</td>
</tr>
<tr>
<td>4.3</td>
<td>Structural Equation Model</td>
<td>164</td>
</tr>
<tr>
<td>4.4</td>
<td>Interaction Effect of Technostress Creators and Technostress Inhibitors on Task Performance</td>
<td>172</td>
</tr>
</tbody>
</table>
# LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-D</td>
<td>Abilities-demands</td>
</tr>
<tr>
<td>AIS</td>
<td>Accounting Information System</td>
</tr>
<tr>
<td>AIS.A</td>
<td>Aggregation</td>
</tr>
<tr>
<td>AIS.I</td>
<td>Integration</td>
</tr>
<tr>
<td>AIS.S</td>
<td>Scope</td>
</tr>
<tr>
<td>AIS.T</td>
<td>Timeliness</td>
</tr>
<tr>
<td>AMOS</td>
<td>Analysis of Moment Structures</td>
</tr>
<tr>
<td>ASEm</td>
<td>Alternative Securities Market</td>
</tr>
<tr>
<td>AVE</td>
<td>Average Variance Extracted</td>
</tr>
<tr>
<td>CAC</td>
<td>Corporate Affair Commission</td>
</tr>
<tr>
<td>CAMA</td>
<td>Company and Allied Matters Act</td>
</tr>
<tr>
<td>CBN</td>
<td>Central Bank of Nigeria</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
</tr>
<tr>
<td>CR</td>
<td>Composite Reliability</td>
</tr>
<tr>
<td>DV</td>
<td>Dependent Variable</td>
</tr>
<tr>
<td>ERP</td>
<td>Enterprise Resource Planning</td>
</tr>
<tr>
<td>FPB</td>
<td>Federal Polytechnic Bida</td>
</tr>
<tr>
<td>GoF</td>
<td>Goodness-of-Fit</td>
</tr>
<tr>
<td>GSR</td>
<td>Galvanic Skin Response</td>
</tr>
<tr>
<td>HIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>HSE</td>
<td>Health and Safety Executive</td>
</tr>
<tr>
<td>ICTs</td>
<td>Information Communication Technologies</td>
</tr>
<tr>
<td>IV</td>
<td>Independent Variable</td>
</tr>
<tr>
<td>IS</td>
<td>Information System</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>JS</td>
<td>Job Satisfaction</td>
</tr>
<tr>
<td>MIS</td>
<td>Management Information System</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>MLE</td>
<td>Maximum Likelihood Estimation</td>
</tr>
<tr>
<td>MV</td>
<td>Moderator Variable</td>
</tr>
<tr>
<td>NSE</td>
<td>Nigerian Stock Exchange</td>
</tr>
<tr>
<td>PDA</td>
<td>Personal Digital Assistant</td>
</tr>
<tr>
<td>P-E</td>
<td>Person-Environment</td>
</tr>
<tr>
<td>PMS</td>
<td>Priority Management Systems</td>
</tr>
<tr>
<td>SD</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>SmartPLS-SEM</td>
<td>Smart Partial Least Square-Structural Equation Modeling</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Science</td>
</tr>
<tr>
<td>T.COMP</td>
<td>Techno-Complexity</td>
</tr>
<tr>
<td>T.INST</td>
<td>Techno-Insecurity</td>
</tr>
<tr>
<td>T.INVS</td>
<td>Techno-Invasion</td>
</tr>
<tr>
<td>T.OVLD</td>
<td>Techno-Overload</td>
</tr>
<tr>
<td>T.UCTY</td>
<td>Techno-Uncertainty</td>
</tr>
<tr>
<td>TI.IS</td>
<td>Innovation Support</td>
</tr>
<tr>
<td>TI.LS</td>
<td>Literacy Support</td>
</tr>
<tr>
<td>TI.TI</td>
<td>Technology Involvement</td>
</tr>
<tr>
<td>TI.TS</td>
<td>Technical Support</td>
</tr>
<tr>
<td>TP</td>
<td>Task Performance</td>
</tr>
<tr>
<td>TS.CR</td>
<td>Technostress Creators</td>
</tr>
<tr>
<td>TS.IR</td>
<td>Technostress Inhibitors</td>
</tr>
<tr>
<td>V-S</td>
<td>Values-supplies.</td>
</tr>
</tbody>
</table>
# LIST OF APPENDICES

<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Research Questionnaire</td>
<td>229</td>
</tr>
<tr>
<td>B</td>
<td>Extract of 2011/12 FACTBOOK: NSE</td>
<td>235</td>
</tr>
<tr>
<td>C</td>
<td>List of Companies on Nigerian Stock Exchange</td>
<td>249</td>
</tr>
<tr>
<td>D</td>
<td>Extracted Signs and Symptom of Stress</td>
<td>256</td>
</tr>
<tr>
<td>E</td>
<td>Sample Size Calculation</td>
<td>258</td>
</tr>
<tr>
<td>F</td>
<td>Normality Test</td>
<td>259</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

1.1 Overview

The stress problem associated with technology usage was identified by Brod (1984) as technostress. Many scholars in this field have published articles on issues surrounding technostress among the users of technology. For example, Weil and Rosen (1997) posited that today, information communication technologies (ICTs) is no longer a novelty, but an integral part of our lives and people cannot function without it. Similarly, Brod (1984) cautioned that our love for ICTs is blind and we devote long hours on it at work and play without seeing the possible consequences of its usage. Wang et al. (2008) research study revealed that the use of technology causes technostress which led to health related problems such as cardiac arrest, migraine headaches and hypertension. The symptoms and effects of technostress include persistent negative thinking, momentary confusion, inability to concentrate, poor judgment, distorted ideas, mental fatigue depression, anxiety, irritability and impatience.

Technology is an innovation or intervention that has undoubtedly brought about efficiency and effectiveness in human and organisational activities. The users’ are expected to benefit from fast, better, reliable and easy ways of accomplishing tasks with less cost to the organization among others (Krubu and Osawaru, 2011). Therefore, individuals and organisations enthusiastically embraced its applications and have made it increasingly indispensable to carry out their activities (Tarafdar et al., 2011b). The use of technology and its effects (technostress) has been studied in the most human endeavour, professionals are no exception. However, the professionals who use technology in discharging their responsibilities experience more technostress than other end-user (Agbu
and Simeon, 2011; Ayyagari, 2007; 2012; Schuldt and Totten, 2008). The effects of technostress on professionals have multiplier effects on the organizational productivity because they are likely to experience absenteeism and staff turnover (Tarafdar et al., 2011b).

Today, the complex nature of technology that professionals’ use in their task performance has changed the process of their work significantly and also created a multitasking situation for them, which in turn has created tension and induced stress (Tarafdar et al., 2007). In addition, Tarafdar et al. (2007) identify five components of technostress as techno-overload, techno-invasion, techno-complexity, techno-uncertainty and techno-insecurity as the creator of stress in technology usage. Notwithstanding, an effective management of technology usage cushion the effect of the stress associated with it. Thus, the introduction of technology in the workplace is expected to improve the efficiency and effectiveness of professionals which will in turn improve organisational performance. Therefore, technology is expected to create satisfaction in the job and as well improve the task performance of the professionals.

Griffin and Clarke (2011) simply assert that job satisfaction is the degree to which people find gratification or fulfilment in their work while task performance is the actions that add to organisational goals which are under the individual’s control (Rotundo and Sackett, 2002). Technology assists both the employees and the organisation to the aforementioned. However, Thomée et al. (2007) confirmed that combining technologies to accomplish tasks in an organisation was associated with prolonged technostress and have serious impact on the psychological health of the user.

More so, the use of technologies to perform tasks in the organisation by the professionals today has been the dominant trend to increase their efficiency and effectiveness. The introduction of accounting information system (AIS) in organisations is aimed at improving accountants’ task performance of planning, control functions and decision making as well as finding fulfilment in their job. Nevertheless, the recognition that technology can create stress in the professionals is a testimony that it is capable of creating dissatisfaction in them and affects their productivity. This is evident in studies by Tarafdar, et al. (2011b) and Agboola (2011) that technology usage affects job satisfaction and performance. Furthermore, Al-kasswana (2012) found that AIS usage influence professional satisfaction and performance. Therefore, the performance of AIS in organisations can be put to questioning as the effect of technostress on the accountants’
job satisfaction and task performance are yet to be integrated into AIS performance vis-a-vis organisational performance. Consequently, this study attempts to investigate the role of AIS information characteristics in inducing stress in accountants and its impact on job satisfaction and task performance of accountants in the listed companies.

1.2 Background of the study

The introduction of AIS in organisations is aimed at improving accountants’ task performance. Undoubtedly, the role of control accounting/accountants within the organisation and interface with dominant external agents outside the organisation makes it/them integral part of organisations (Burchell et al., 1980). Therefore, accountant’s job satisfaction and task performance with AIS has implications on organisational performance. Sori (2009) described AIS as a wide range of accounting applications that collect and store raw data (inputs), process the data (procedures) and information (outputs) that serve accounting purpose. He further defined AIS as a data collection and processing procedures which generates desirable information for the users. This implies that AIS usage affects management accounting, financial accounting, taxation and auditing in transactions of accounts receivable, accounts payable, payroll, budgeting and inventory.

According to Grande et al. (2011), AIS is a tool that is incorporated into information technology, which is designed to assist in managing and controlling topics related to the organisation’s economic-financial transactions. It helps accountants understand their roles better in the organisations because it reduces uncertainty before decisions are reached. In addition, it is possible to gauge the risk of some operations or predicts future earnings with sophisticated statistical software applications. Accordingly, AIS is expected to provide accurate, reliable and consistent information to make intelligent and effective organizational decisions (Emeka-Nwokeji, 2012).

The performance of AIS is based on its information characteristics and these information characteristics are classified by Chenhall and Morris (1986) into scope, timeliness, aggregation and integration. Nevertheless, several factors have been found to influence AIS performance, like organisational strategy, job satisfaction, infrastructure, training, demography, among others. One factor that yet is to receive little attention is the effect of AIS information characteristics on technostressors, especially among the
accountants in the listed companies. For instance, information overload is one of the problems of AIS (Tsui and Gul, 1996) which Mollanazari and Abdolkarimi (2012) claimed that is capable of affecting its performance.

Consequently, technostress associated with AIS usage may affect accountants in discharging their responsibilities in organisations, especially those in the listed companies. Summarily, AIS usage has helped in no small measure to improve the information requirements and decisions making in the organisations.

1.3 Problem statement

There is a problem associated with the usage of AIS which is evident in the research findings of AIS performance in organisations. AIS is a complex subsystem of management information system (MIS) that works together and requires the users to use many applications to obtain varieties of information for planning, control functions and decision-making. Hence, authors agreed that its performance is determined by the technology itself, organisational strategy and culture, that is the fit between AIS organizational strategy, and culture (Romney and Steinbart, 2015; Al-kasswana, 2012; Mollanazari and Abdolkarimi, 2012). However, it has been observed that these studies do not take into account the impact of negative effect of multitasking processes, constant connectivity, information overload, continual skill upgrades, technical problems as well as related issues of job insecurity placed on the accountants through AIS usage.

Nonetheless, this results in studies of AIS having somewhat mixed outcomes with respect to organisational performance. For example, Soudani (2012) claimed that the introduction of AIS improves organisation’s performance in Spain, Finland, Malaysia, Pakistan and Iran. Fowzia and Nasrin (2011a) in their study of financial institutions and non-governmental organization attested to this claim. Onaolapo and Odetayo (2012) discovered that AIS was effective, but its relationship with organizational performance was weak. Similarly, Jawabreh and Alrabei (2012) revealed that there is no relationship between AIS and management functions in the study of five-star hotels in Malaysia. In addition, Grande et al. (2011) studied SMEs using AIS and confirmed that it has little impact on the organisational performance and high impact on fiscal and banking transactions. However, evaluation of the performance of this system by Sajady et al.
(2012) revealed that it impacts positively on manager’s decision making, internal control system, quality of financial reporting and facilitate a financial transaction process in the Bangladesh organizations.

Thus, the mixed outcomes from these studies suggest that the impact of AIS usage on its performance is inconclusive because the impact of technostress on its users is yet to be integrated in AIS research. Specifically, the relationship of AIS information characteristics to technostressors is yet to be explored even though there are noticeable evidence in AIS studies indicating relationships of its information characteristics with technostressors. For example, Al-Fudail and Miller (2007) assert that use of AIS is associated with technical problems which Dillard and Yuthas (2002) confirmed that makes it difficult to access and use its information. Also, scope as an information characteristic of AIS has the attribute of information overload (Galbraith, 1973; Gul and Tsui, 1992; Naranjo-gil, 2004) which Mollanazari and Abdolkarimi (2012) cautioned can lead to ineffectiveness of AIS in organisation. Furthermore, Masrom et al. (2011) claimed that the misuse and abuse of organisations’ computers and operating systems are exposed to, affects the accuracy and accessibility of AIS information. In addition, Stanton et al., (2002) claimed that the transparency brought about by AIS has social and psychological effects on some users. These and many more are clear indications that AIS information characteristics (scope, aggregation, timeliness and integration) can exacerbate technostressors. However, scholars have provided little theoretical explanation on AIS information characteristics as antecedents of technostressors. Therefore, there is a need to investigate the relationship of AIS information characteristics on technostressors.

Again, theoretical evidence exists that technostressors that make users of technology to work faster and longer, feel incompetent on new software, experience invasion of personal life and become a threat to employment and work ambiguity (technostress creators) affect users’ job outcomes (Tarafdar et al., 2007). Therefore, the effect of technostress creators on productivity (Tarafdar et al., 2007) job satisfaction, organisational commitment and continuance commitment (Ragu-Nathan et al., 2008), psychological and IS related outcomes (Tarafdar et al., 2011), performance (Tarafdar et al., 2014) have been investigated. However, task performance which measures the proficiency with which employees perform their organisational core activities (technical) are yet to be used as consequence of technostress. Hence, there is a need to investigate the task performance as consequence of technostressors. This implies there is a relationship
between AIS technostress (AIS information characteristics on technostressors) and on task performance in organisations.

Emphatically, research models are provided to solve technostress problems among users of technologies in organisations. Researchers have provided specific models on the consequences of technostress (Tarafdar et al., 2007; Ragu-Nathan et al., 2008) and antecedents of technostress (Ayyagari 2007; 2012; Ayyagari et al., 2011) of general technology usage. In addition, models of specific technology such as mobile phone (Hung et al, 2011), salesperson technology (Tarafdar et al., 2014), teledmedicine communication (Yan et al., 2013) and ERP (Allayne, 2012; Hayashi, 2011) were provided. Similarly, AIS research field has provide models on the performance of AIS in relation to SMEs (Grande et al., 2011; Allah et al., 2012), AIS design (Boulianne, 2007), quality of information (Sami et al., 2011), organisational effectiveness (Onaolapo and Odetayo, 2012; Sajady et al., 2008), management functions processes (Jawabreh and Alrabei, 2012), ERP (Daoud and Triki, 2013), contextual variables (Choe and Lee, 1993), strategy (Naranjo-gil, 2004), Electronic Medical Record (Alexander and Dietrich, 2008), social network analysis (Worrell et al., 2013) and data quality (Xu, 2003). However, these fields of research (AIS and technostress) are yet to provide a model to assess AIS technostress of the users. Further, Vaassen and Hunton (2009) emphasised that there are many areas to be explored in AIS research because it is eclectic in nature. Thus, there is a need to provide AIS technostress model to assess the technostress experienced by the accountants using AIS.

Furthermore, a study by Al-Fudail and Mellar (2008) revealed that inadequate or insufficient training and technical support are listed among the hindrance of AIS usage in organisations. These difficulties of AIS usage require reduction mechanism to improve its performance and these mechanisms are referred to as technostress inhibitors. However, empirical evidence shows that the technostress inhibitors increase job satisfaction (Tarafdar et al., 2011b). Similarly, Ayyagari (2012) confirmed that better technology management strategy increases job satisfaction and performance of users of technologies. Consequently, other variables including human factors have been studied in relation to performance of AIS in organisations but little effort is made to investigate the relationships and interactions of technostress inhibitors in the relationship between AIS technostress and job outcomes (job satisfaction and task performance) of accountants using AIS.
Contextually in Nigeria, research studies confirmed that professionals generally experienced technostress. For example, Kajogbola (2004) asserts that higher technostress was experienced among the professionals due to inadequacy of communication and network infrastructures, problems associated with technical and management supports in the organizations and obsolescence of available technology. Adegoke (2014) concurred but added that lack of interest and supports from the part of government worsen the technostress in Nigeria. Notwithstanding, Onaolapo & Odetayo (2012) reported that AIS usage in construction industry revealed that its impact on task performance was positive even though they added that the correlation was weak.

Similarly, Ogah (2013) investigated Union of Bank of Nigeria Plc. and found that AIS has led to effective decision making, enhanced quality of financial transactions and reporting but recommends that human and other factors required investigation to improve its performance in organisations. More specifically, Odoh et al. (2013) studied empirically the effect of technostress on job performance of accountants and managers in Nigeria banks and the performance these professionals (accountants and managers) were affected by technostress, but the study, although replication, did not explain how the gadgets exacerbate technostress on these professionals. Therefore, based on these revelations, the pervasiveness of AIS usage in organisations in Nigeria is certain but in view of these situational problems in Nigeria, accountants interacting with AIS may experience technostress. This suggests a need for research study into technostress associated with the use of AIS in Nigeria.

However, the possible cause to deficiency of research on AIS technostress might be that AIS research only accounts for ‘what technology can do for you’, however the negative effect of technostress on its performance is yet to be accounted for (what technology can do to you). Likewise, there is scarcity of research studies within the Nigeria context to provide a distinct understanding of the complexities and difficulties that is unique to the accountants’ job satisfaction and task performance using AIS in the listed companies. More so, the technostress inhibitors that will play important roles in reducing or counterbalancing the effects of technostress in AIS usage, especially as it relates to outcomes (job satisfaction and task performance), are perhaps lacking or inadequate in organisations using AIS in Nigeria. Hence, in this study, the integration of the concept of technostress into AIS performance has been practically subjected to test and validated among the accountants using AIS in listed companies in Nigeria. Then, person-environment (P-E) fit theory by Lewin’s axiom is used to explain the relationships
between AIS usage and accountants’ skills and motives to predict outcomes of their performance vis-à-vis organisational performance.

1.4 Research questions

In the light of the problems highlighted above, the following research questions are raised to be addressed:

RQ1: What is the relationship between AIS information characteristics and technostress creators of accountants using AIS?
RQ2: What is the relationship between technostress creators and job satisfaction and task performance of accountants using AIS?
RQ3: Do technostress inhibitors have relationship with job satisfaction and task performance of accountants using AIS?
RQ4: Do technostress inhibitors moderate the relationship between technostress creators and job satisfaction and task performance?

1.5 Research objectives

Based on the research questions raised above, the general objective of this study is to examine the effects of AIS technostress on job outcomes and the buffering role of technostress inhibitors in the relationships. However, the specific of objectives of this study are as follows:

1) To investigate the relationship between AIS information characteristics (scope, aggregation, timeliness and integration) as antecedents of technostress creators.
2) To ascertain the effect of the relationship between technostress creators and technostress inhibitors on outcomes (job satisfaction and task performance) of accountants using AIS.
3) To determine the moderating role of the technostress inhibitors in the relationship between technostress creators and outcomes of accountants using AIS.
1.6 Significance of Study

The findings of this study provides theoretical, practical and methodological implications to both research streams of technostress and AIS. Specifically, the findings from this research will be useful to AIS research stream, management of organisations and accountants using AIS, principally the listed companies in Nigeria.

1.6.1 Theoretical Contribution

Previous research investigated effects of technostress on both professional and other end-users in terms of general technology usage in the work places (e.g., Ayyagari, 2007, Wang et al., 2008, Ragu-Nathan et al., 2008). Recently, technostress of some specific technologies, ERP (Alleye, 2012; Hayashi, 2011) and telemedicine communication (Yan et al., 2013) were investigated as suggested by Ayaggari (2007). The present study investigated the relationship of AIS information characteristics on technostressors of accountants using AIS in organisations. Specifically, this study contributes to the growing body of research on technostress (the dark side of technology) by using scope, aggregation, timeliness and integration (AIS information characteristics) as antecedents of AIS technostress to determine the characteristic that exacerbate technostress of accountants. In addition, aggregation information characteristic of AIS was identified to impose high stress on technostressors.

Researchers (e.g. Tarafdar et al., 2007; Ragu-Nathan et al., 2008; Ahmad et al., 2012) have studied consequences of technostress in work places to determine the effect of technostress on the performance of employees using technologies to discharge organisational responsibility. They used many variables like job satisfaction, organisation commitment, job performance, productivity, etc. but effect of technostress on task performance has received little attention in this research field. Therefore, this study contributes to technostress research by introducing task performance as consequence of technostress. Also, prior research have shown an adverse relationship between technostress creators and job satisfaction among technology users (Ragu-Nathan et al., 2008; Tarafdar et al., 2011). In this study, the relationship between technostress creators and job satisfaction is found not to be significant, which has added to technostress literature. This may be due to the level of development in Nigeria (c.f. Rehman et al.,
2012), contextual issues in organisations (Herzberg, 1987) and occupational level of respondents at the work place (Miles et al., 1996).

Different theories are used to explain the relationships among variables in the performance of AIS research in work place. However, this thesis contributes to AIS body of knowledge by using Person-Environment Fit Theory to explain the relationships in the AIS technostress model. Furthermore, some studies (Tarafdar et al., 2007; Ragu-Nathan et al., 2008) have used technostress creators and technostress inhibitors multi-dimensionally used but in this thesis they are uni-dimensionally on job satisfaction and task performance based on the principle of parsimony. Finally, there are different models in literature for assessing general technostress of technology usage (Tarafdar et al., 2007; Ragu-Nathan et al., 2008, Ayyagari, 2007) and specific models for assessing technostress of specific technology (Allayne, 2012; Yan et al., 2013). This thesis has provided a model for assessing AIS technostress among accountants.

1.6.2 Practical Contributions

AIS is a useful tool for task performance to all accountants that makes them to be more effective and efficient in terms of planning, control functions and decision making. Organisations, especially listed companies, will utilise the findings from this research to strategically promote the use of AIS among accountants by taking precaution against the technostress which is associated with psychosomatic illness, hypertension, negative attitude, isolation, etc. (c.f. Brillhart, 2004; Korac-Kakabadse et al., 2001). Consequently, this promotes quality of life of accountants which will in turn help the organisations achieve their objectives.

AIS has enhance the performance of accountants in organisations and researchers and management of organisations have shown interest in research works that improves its performance. Therefore, this study contributes to corporate governance by identifying AIS information characteristics as antecedents of technostress and the characteristic that impose high stress. For example, in Odoh’s et al. (2013) empirical studies, they recommended health measures, training positive attitude, infrastructural development, respect resistance and human relations to improve technostress of accountants and managers, which suggest research into the cause of the technostress. The study further
demonstrates that technostress inhibitors play a significant role in cushioning the effects of AIS technostress among accountants at workplace. This provides for healthy work environment that will account for quality of high volumes, manageable, timely and harmonised information from AIS at any time, any place. In effect, accountants will be more effective in planning, control functions and decision making.

The top management of organisations are always working towards the mission and visions of the organisations by designing plans for middle and lower management to implement. This is only possible with the support of staff members. Therefore, the model generated from this study is a useful tool for top management, especially the human resource managers in the listed companies in Nigeria, to use the findings as a diagnostic tool when developing appropriate strategies in coping with stress related issues. The study further helps the listed companies to support their plans and prepare the accountants to gain more knowledge and experiences in using AIS which is continually upgraded.

Although top management are also expected to minimize technostress, a positive relationship between AIS information characteristics and stressors indicates that the users are not making optimum use of the technology. Therefore, management will be propelled to necessary action to improve the use of the technology. In Nigeria, the Central Bank of Nigeria (CBN) recently made a policy that individuals and organisations should embrace e-transaction in financial dealings (see appendix G). This implies e-accounting and relates directly to AIS usage in organisation. Therefore, the findings of this research will smoothen the transition policy of Nigeria government by implementing the strategies in this study to cushion the effect of AIS technostress among accountants in the listed companies in Nigeria.

1.7 Scope of the Study

AIS consist of five categories: (1) Revenue, (2) Expenditure, (3) Reporting, (4) Production and (5) Human Resources Management (Aseervatham and Anandarajah, 2003). Therefore, this research study only covers human resources management aspect of AIS and it explains the effect of AIS technostress on accountants. Moreover, this study targeted only accountants within listed companies in Nigeria and the total population of this study comprised only of accountants using AIS in these companies.
This also study examines the negative effect (what technology can do to you) of technostress on job satisfaction and task performance of the accountants using AIS in listed companies in Nigeria. The study only explored the relationship between AIS information characteristics to technostress creators; technostress creators to job satisfaction and task performance, which is moderated by technostress inhibitors as an area of inquiry that has so far been inadequately addressed.

AIS information characteristics is studied under different situation, like centralised and decentralised, certainty and uncertainty, high task and low task, simple and sophisticated AIS etc. However, in this study AIS information characteristics is investigated with no emphasis on any of the situations which it has been studied. Furthermore, the scope of this study is limited only to the use of questionnaires which were delivered to the appropriate authorities of the selected companies for onward distribution and responding by the accountants using AIS only. Conversely, the accountants in these companies are used in both pilot and main survey.

Finally, this research limits its study only within companies listed on Nigeria Stock Exchange. This is because of lack of statistical records of most companies’ activities and location in Nigeria (UNCTAD, 2009). However, the statistical records regarding listed companies in Nigeria are handy in Nigeria Stock Exchange.

1.8 Operational Definition

For proper understanding and comprehension, this section describes the variables and how they are used or measured within the context of this study. The main variables include Accounting Information System, Accounting Information Characteristics, Technostress, Technostress Creators, Technostress Inhibitors, Job Satisfaction and Task Performance.
1.8.1 Accounting information system

Researchers have seen AIS from operational and system perspectives and define it on these bases. Romney and Steinbart (2015, p. 36) defined it as “organisation’s primary information system and that it provides users with the information they need to perform their jobs”. Similarly, Grande et al. (2011) also described AIS as organisational tools designed to help manage and control related activities of the organisations to make economic and financial decisions. Furthermore, Nicolaou (2000) defined AIS as a computer-based system that process financial information and supports decision tasks in the context of coordination and control of organizational activities. However, since AIS provides information to stakeholders, including accountants in organisations, concession should be given to these stakeholders in its implementation and usage. Consequently, AIS can be defined as an accounting applications that collect, process, sort, report and disseminate appropriately organisation’s information in a healthy manner to the stakeholders for effective performance of tasks.

1.8.2 Accounting Information Characteristics

Grande et al. (2011) asserts that AIS has the capacity to positively change organizational behaviour and performance at the same time. Similarly, Romney and Steinbart (2015) stated that AIS knowledge and skills are critical to accountants’ career success because interacting with AIS is one of the most important functions accountants perform in organisations. However, to ameliorate some of the unintended effects of ICT use, Ayyagari (2007) clarified that IS research concentrated on “what technology can do for you” while technostress research concentrated on “what technologies can do to you”. Therefore, since the model in this study is a tool to assess the technostress level of accountants using AIS, its information characteristics (scope, aggregation, timeliness and integration) are viewed from 'what AIS can do to you' instead of 'what AIS can do for you'. AIS information characteristics are explained as follows:
1.8.2.1 Scope

Scope refers to focus, quantification and time horizon in organization’s transactions. This means that information collected is focused on the event within or outside the organisation, which can be quantified in monetary terms and its relationship with the future. Based on this focus, information provided by scope information characteristics may perhaps causes information overload, which in turn lead to technostress. Therefore, in this study, scope is AIS information characteristic that burdens accountants with too much financial and non-financial information in the course of discharging their obligation to their organisations.

1.8.2.2 Aggregation

Aggregation refers to formal composition of temporal and functional area summation of data collected within periods of time or areas of interest. Aggregation is a periodic, functional or model way information is aggregated in time in organisations (Soudani, 2012) which Mollanazari and Abdolkarim (2012) claimed enhances the decisions of the users and contributing to higher performance. However, since aggregation depends mainly on information, too much or inadequate information can hinder accountants' decision and performance, which eventually leads to technostress. Therefore, aggregation in this study is AIS information characteristic that provides too much or inadequate information for composition of temporal and functional area summation of both broad and narrow scope data in decision making as well as performance for accountants.

1.8.2.3 Timeliness

Timeliness is the quick provision of information and the regularity of reporting information systematically, which Cao et al. (2010) emphasised its importance in AIS usage. Furthermore, Seddon et al. (1999) and Kim (1988) asserts that performance and quality of information is highly related to its timeliness. However, since the focus of accounting discipline is to investigate ways of improving the timeliness for financial and
nonfinancial business reporting (Hunton, 2002), then there is a problem which may not be far-fetched from technical issues of hardware, software and internet. These technical problems are capable of creating frustration among accountants. Therefore, this study view the timeliness information characteristic of AIS as delaying or slowing in providing quick information and regularity of reporting information systematically to accountants.

1.8.2.4 Integration

Integration refer to an aspect of organisational control that harmonizes various segments within the subunits. According to Chenhall and Morris (1986); Rom and Rohde (2007) AIS enhances coordination of activities in organisations. It helps to provide information about organisation that reflect the interaction and coordination effects of several functions (Soudani, 2012). However, AIS can expose accountants to more or less information than they could handle or use for effective harmonisation of various subunits, which can lead to technostress. Therefore, in this study integration refers to inaccurate and/or inadequate available information of financial and non-financial activities for coordinating control and decision activities within and outside the organisation by accountants.

1.8.3 Technostress

Brod (1984) defined technostress as a modern disease, due to inability of users of technology in adapting to or coping with new technologies in a healthy manner which either manifests in the struggle to accept or over identification with computer technology. Weil and Rosen (1997) disagreed on the view that technostress is a disease but saw it as a relationship of users with computers or information technology influences their reaction to technology. They stated that technostress is experienced in two ways; direct (use of computers and other technological devices) and indirect (individual’s attitudes of invasion of privacy or job insecurity). The former is experienced as a result of inability to use the technology. In addition, they believe that people will want to be in control of their environment and this control is often reduced by introduction of technology usage at work. They confirmed that stress due to use of technology comes from the effort required to
learn how to use technology, breakdowns and lack of privacy. This approach brought in psychological concept into the study of technostress.

Shu *et al.* (2011) further described technostress as the negative impact on attitudes, thoughts, behaviours or body physiology that is caused either directly or indirectly by use of technology. In this study, therefore, technostress is described as the inability of accountants to adopt to or cope with, as well as their negative attitude to the use of computers and other technological devices in discharging their organisational obligations.

### 1.8.4 Technostress Creators

Tarafdar *et al.* (2007) explained how technology creates stress in users and identified five components as technostress creators, otherwise known as technostressors. The identified components are: techno-overload (forced the user to work faster for long hours), techno-invasion (reach out to the user anytime regardless of work hours), techno-complexity (intricate of the technology threatened users' skills), techno-insecurity (users feel threatened of being replaced by more skillful candidates) and techno-uncertainty (the pace of change makes the users unsettled). Drawing from their empirical evidence, it implies that the accountants using AIS to accomplish their organisational tasks are no exemption and this will hamper their job satisfaction and task performance. Therefore, in this study, AIS information characteristics are seen to force the accountants to work faster for long hours, to be reached out anytime regardless of work hours, and with threat on their skills and jobs due to the pace of change in AIS which makes them unsettled.

### 1.8.5 Technostress Inhibitors

According to Ragu-Nathan *et al.* (2008) technostress inhibitors offset the adverse effect of stress technology imposed on users due to use of technology. Technostress inhibitors are organisational mechanisms that impact on the effect of technostressors to reduce its effects. This in effect moderates the technostress situations and can be achieved through: 1) Provision of IS related knowledge that gives education to professionals in form of training and documentation on applications and systems to increase awareness of
users; 2) Support assistance rendered to users within the context of ICTs usage; 3) Early involvement of users in technology implementation reduce negative feelings about technology and in effect awakes their curiosity to use it; and 4) Innovative support to encourage users to experiment and learn with the technology in their possession. In the end it improves and moderates the effect of technostressors on job satisfaction and task performance. In this study therefore, technostress inhibitors are factors in organisations employed to counterbalance the effect AIS technostressors on job satisfaction and task performance of accountants using AIS in organisations.

### 1.8.6 Job Satisfaction

Job stress continues to be seen as an antecedent of job satisfaction, but the two constructs (job stress and job satisfaction) happen to be related yet distinct (Stanton et al., 2002). However, Moyes et al. (2011) described job satisfaction as how pleased a worker is with his or her position of employment in organisation. A more detail definition which is adapted in this study is provided by McShane and Glinow (2010) as an evaluation of perceived job characteristics, work environment, and emotional experiences of accountants using AIS in their workplace.

### 1.8.7 Task Performance

Largely, in organisational setting, role performance has the potential to build stress among employees and also capable of contributing to the dysfunctionality of outcomes in the form of low task performance (Agboola, 2011). Task performance refers to the proficiency with which individuals perform activities that are core (technical) to the organizational goals (Motowildo et al., 1997). Task performance is core to organisations, which an employee must oblige to remain in the employment. Therefore, individual task performance is highly relevant to organizations and to individual themselves. In this study, task performance is seen as the proficiency with which accountants perform their obligations in work place to meet organisational goals.
1.9 Structure of Remaining Chapters

The remainder of this thesis is organized as follows: Next, in chapter two, literature are reviewed regarding aspects of technostress which include definition of technostress and its effects, the components of technostress (techno-overload, techno-invasion, techno-complexity, techno-insecurity and techno-uncertainty), impact of technostress on the outcomes, AIS, AIS information characteristics, technostress in AIS usage, underlying theory, research framework and hypotheses development.

Chapter three describes and presents the research methodology as well as the justification of choices and uses. In addition, the research process, design, research instrument, method of pilot study, population, sample and data collection and data analysis methods.

Chapter 4 describes the analyses of data and findings of the study. It presents the pilot survey results, main survey descriptive statistics, main survey data analysis related to measurement model and the structural model of technology acceptance called the “Internet Acceptance Model” by using Smart Partial Least Square-Structural Equation Modeling (SmartPLS-SEM).

In chapter five, the key findings of the study are summarised based on the research objectives. Additionally, the research implications including theoretical, practical implications and methodological are discussed along with the limitations of the study and suggestions for further research.

1.10 Summary

The objective of this chapter is to provide an overview of the present study. The chapter discussed the research problem and research questions followed by the specification of the research objectives in the context of AIS technostress among accountants in Nigeria. The chapter highlighted the contributions of the study in terms of theory, practice and methodology. Finally, the chapter presented the structure of the thesis by briefly outlining the five chapters and defining the key terms used in the dissertation.
The next chapter reviews the literature and synthesises the findings of research in both technostress and AIS literature to highlight the research gaps in this study.


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